

STATE MEDICINAL PLANT BOARD

A National Level Body as Medicinal Plant Board was set up vide Resolution No. 18020/19/97 dated 24 November 2000 by the Department of Indian System of Medicine & Homeopathy, Ministry of Health and Family Welfare, Government of India to look after formulation of Policy, Overall coordination and to ensure sustained availability of medicinal plants, their in-situ and exsitu conservation and to harness their export potential.

Subsequently, the State Government of Sikkim constituted the State Medicinal Plants Board vide Notification No. 100/FEWD dated 10.06.2002 under the chairmanship of the Chief Minister and the Minister, Forests, Environment and Wildlife as Vice Chairman, members drawn from departments like Health and Family Welfare, Science and Technology, Agriculture, Horticulture, Forest, members from Regional Research Centre (Ayurvedic), Botanical Survey of India and two non official members. The Principal CCF-cum-Secretary Forests was appointed as the Chief Executive Officer and Member Secretary of the Board. Standing Finance Committee and Technical Advisory Committee were constituted under the chairmanship of the Principal CCF-cum-Secretary forests under the State Medicinal Plants Board.

The State Medicinal Plant Board has been constituted oversees formulation of projects/schemes related to medicinal plants, implementation of such schemes for cultivation of medicinal plants, their collection, storage and marketing, research, protocol for cultivation and quality control and protection of Intellectual Property Rights and other issues related to the medicinal plants.

The National Medicinal Plant Board under the Ministry of Health and Family Welfare, Department of Indian System of Medicine & Homeopathy has 13 project proposals submitted by Forests, Environment and Wildlife Department, Government of Sikkim with total financial outlay of Rs. 274.00 lakhs out of which Rs. 115.00 lakhs has been released for taking up the project for the year 2002-2003. Project locations, project cost and amount released by

Government of India for first year's operation are as follows.

Sl. No.	Project Location	Project Cost (Rupees in Lacs)	Project Duration	Amount Released by Govt. of India (Rupees in Lacs)
1	Dombang, North Sikkim	20.00	3 years	08.00
2	Thangu Forest, North Sikkim	25.00	3 years	08.00
3	Zema Forest, North Sikkim	25.00	3 years	08.00
4	Rateychu Forest, East Sikkim	21.00	3 years	08.00
5	Tamze Forest, East Sikkim	23.00	3 years	08.00
6	Pangolakha Forest, East Sikkim	20.00	3 years	08.00
7	Tendong Biodiversity Park, South Sikkim	20.00	3 years	08.00

<i>Sl. No.</i>	<i>Project Location</i>	<i>Project Cost (Rupees in Lacs)</i>	<i>Project Duration</i>	<i>Amount Released by Govt. of India (Rupees in Lacs)</i>
8	<i>Rabongla Forest, South Sikkim</i>	20.00	3 years	09.00
9	<i>Kitam South Sikkim</i>	20.00	3 years	10.00
10	<i>Menam Wildlife Sanctuary, South Sikkim</i>	20.00	3 years	10.00
11	<i>Guransey/Nunthaley, West Sikkim</i>	20.00	3 years	10.00
12	<i>Khechoperi/Chhangey, West Sikkim</i>	20.00	3 years	10.00
13	<i>Barsey Rhododendron Sanctuary, West Sikkim</i>	20.00	3 years	10.00
	Total	274.00		115.00

In addition to above, the National Medicinal Plant Board has sanctioned Rs. 10.00 lacs for strengthening the State Medicinal Plant Board.

State Medicinal Plant Board has approved the proposal for creation of herbal gardens at 13 specified locations all over the state and first phase of works are already under progress. Once these herbal gardens are established, the people of Sikkim especially farmers can also cultivate these medicinal plants by obtaining planting materials from these herbal gardens. Sikkim harbours over 1200 medicinal plants out of which only 424 species have been identified and documented. Identification and documentation of the remaining species will also be taken up on priority.

The financial progress of the project till 31st march 2003 (First Year) is as follows.

Financial

Rupees in lakhs

<i>Sl. No</i>	<i>Project Location</i>	<i>Project Cost</i>	<i>Project Duration (2002-05)</i>	<i>Amount released till 31.3.2003</i>	<i>Spent upto 31.3.2003</i>
1	<i>Dombang/Zyakuphuyak North Sikkim</i>	20.00	3 years	14.50	8.32
2	<i>Thangu Forest, North Sikkim</i>	25.00	3 years	16.00	8.10
3	<i>Zema Forest, North Sikkim</i>	25.00	3 years	16.00	8.10
4	<i>Rateychu Forest, East Sikkim</i>	21.00	3 years	15.00	7.87
5	<i>Tamze Forest, East Sikkim</i>	23.00	3 years	16.00	7.85
6	<i>Pangolakha Forest, East Sikkim</i>	20.00	3 years	14.00	7.89
7	<i>Tendong Biodiversity Park, South Sikkim</i>	20.00	3 years	13.00	7.47
8	<i>Rabongla Forest, South Sikkim</i>	20.00	3 years	14.00	8.45
9	<i>Kitam South Sikkim</i>	20.00	3 years	15.00	7.14
10	<i>Menam Wildlife Sanctuary, South Sikkim</i>	20.00	3 years	15.00	7.14
11	<i>Guransey/Nunthaley, West Sikkim</i>	20.00	3 years	15.00	9.47
12	<i>Khechoperi/Chhangey, West Sikkim</i>	20.00	3 years	15.00	7.48
	Total	254.00		178.50	95.28

Status Report on Development of Medicinal Plants under State medicinal Plants Board

The Government of India, Ministry of Health and Family Welfare, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH), National Medicinal Plants Board, has conveyed sanction of 13 (Thirteen) Nos. of Project Proposal submitted by the Forest, Env. & Wildlife, Department, Government of Sikkim, for Rs. 274.00 lakhs in respect of Ex-situ and In-situ Cultivation of Medicinal Plants and Rs. 10.00 lakhs for strengthening of Nucleus Centre. The detail of receipt of fund by the State Medicinal Plants Board, Sikkim for the year 2001 - 2003 and 2003 - 2004. The detail statement of receipt of fund, expenditure and proposed amount to be sanction by the Board for 13 (Thirteen) Nos. of Project Proposal & establishment of Nucleus Centre (SMPB) have been workout and enumerated as under.

SL NO	Project NO.	TITLE OF PROJECT (Herbal Gardens)	Project Period Years	Total Amt. Sanctioned (Rs. in lakh)	Amount released in 1st & 2nd Installment (Rs. in Lakh)	Expenditure as on 31st March, 2004 (Rs. In lakh)
1	2	3	4	5	6	7
1	104/ 2002	Ex situ conservation of medicinal plants and other activities in Dombang Valley/Ziakhuphyak forests in N. Sikkim	2002-03 TO 2004-05	20.00	14.50	14.32
2	105/ 2002	Ex situ conservation of medicinal plants and other activities in Thangu forests in N. Sikkim	DO	20.00	16.00	16.10
3	106/ 2002	Ex situ conservation of medicinal plants and other activities in Zema forests in North Sikkim	DO	20.00	16.00	16.10
4	107/ 2002	Ex situ conservation of medicinal plants and other activities in Rateychu forests in East Sikkim	DO	20.00	15.00	14.87
5	108/ 2002	Ex situ conservation of medicinal plants and other activities in Tamze forests in East Sikkim	DO	20.00	16.00	15.85
6	109/ 2002	Ex situ conservation of medicinal plants and other activities in Kyongnosla forests in East Sikkim	DO	20.00	14.00	13.89
7	115/ 2002	Ex situ conservation of medicinal plants and other activities in State Biodiversity Park South Sikkim	DO	20.00	13.00	12.47
8	116/20 02	Ex situ conservation of medicinal plants and other activities in Samduptse forests in S. Sikkim	DO	20.00	14.00	13.45

<i>SL NO</i>	<i>Project NO.</i>	<i>TITLE OF PROJECT</i> (Herbal Gardens)	<i>Project Period Years</i>	<i>Total Amt. Sanctioned (Rs. in lakh)</i>	<i>Amount released in Ist & 2nd Installment (Rs. in Lakh)</i>	<i>Expenditure as on 31st March, 2004 (Rs. In lakh)</i>
9	117/2002	<i>Ex situ conservation of medicinal plants and other activities in Kitam forests in South Sikkim</i>	DO	20.00	15.00	11.00
10	118/2002	<i>Ex situ conservation of medicinal plants and other activities in Menem Wildlife Sanctuary in South Sikkim</i>	DO	20.00	15.00	11.00
11	119/2002	<i>Ex situ conservation of medicinal plants and other activities in Gurasey/Nunthaley forests in West Sikkim</i>	DO	20.00	15.00	14.00
12	120/2002	<i>Ex situ conservation of medicinal plants and other activities in Yuksom/Khechoperi forests in West Sikkim</i>	DO	20.00	15.00	12.48
13	121/2002	<i>Ex situ conservation of medicinal plants and other activities in Barsey Rhododendron Sanctuary in West Sikkim</i>	DO	20.00	15.00	12.14
		<i>B) Nucleus Centre</i>			10.00	7.57

(I) Status including demand and supply position of identified species in the State:

1. *The Sikkim Himalaya represents extremely unique eco-system rich in medicinal plant wealth associated with Ayurveda, Folk, Homeopathy, Siddha, Amchi (Tibetan) and Unani system of medicines. It is reported to have more than 424 species of various medicinal plants, which have strong traditional system of medicines in Sikkim. As such the medicinal plants have traditionally occupied an important position in the socio-cultural, spiritual and medicinal arena of the people in the State. Due to the growing demand and importance of medicinal plants and their wide spread in the revitalization of local health tradition, it has become rather imperative to undertake thorough study, identification, survey, documentation and research. This could be achieved by conducting extensive field surveys of their availability of in the forest and outside forest areas. This endeavor, interalia, involves a fairly accurate and precise assessment of their demand & supply position including their markets and pricing. A comprehensive study has been conducted by the SMPB to assess the commercial potential of various medicinal plants, to gather a reliable data on the existing demand and supply position and price mechanism duly involving existing growers, primary collectors, traders and user networks; thereby covering the entire conceivable value chain.*

(a) The following mechanism was adopted by the SMPB for assessment of demand and supply of medicinal plants:

Initially, a baseline data register with different formats for catering to the needs of inventory enumeration records and collection of data from different stakeholders, through effective consultative process was prepared and adopted. The following stake holders were consulted during the process of collection of data base for identification of economically important species of medicinal plants with regards to potency and consequent value of the plants in terms of its value in usages and marketing potentials, demand and supply situation and pricing:

Forest Department Officials including the forest guards, nursery malies, watch and wards having proven good knowledge in the field.

Members of Joint Forest Management Committees (JFMCs), Eco-Development Committees (EDCs), Self-Help Groups (SHGs), Watershed Development Committees (WDCs).

Panchayats through distribution of Bio-diversity registers to enable them to identify and record every species of medicinal plants resources found and located in their respective areas and to record details of people practicing in local health tradition.

Traditional medical practitioners, institutions & associations of codified & folk system of medicine like Ayurvedic, Amchies, Folk Healers like traditional berth attendants, local bone setters, snake/ scorpion/poison healers, herbal healers engaged in providing relief to rural people suffering from common ailments like cold & cough, diarrhea, bronchitis, routine skin and eye irritations, veterinary healers etc.

NGOs and local growers with proven aptitude for promotion of traditional medicine through cultivation and domestication of medicinal plants.

Herbal manufacturers and community based herbal collectors.

Traders associated with medicinal plants trade.

Research organizations, R&D centers,

All 13 Principal and Co-Principal Investigators of Herbal gardens, Territorial Divisional Forest Officers, concerned Forest Range officers attached with Non-Timber Forest Produce Division, other personnel of SMPB, members of the Self-help groups; Panchayats, JFMCs, EDCs, WDCs; enthusiastic farmers, collectors, traders, manufacturers.

Assessment and preparation of database for inventory of prioritized species of medicinal plants, its usages, demand and supply was undertaken through an effective and intensive consultation with the different stake holders as categorized above.

Traditional health knowledge data was collected on the basis of preventive, promotive and curative practices reflected in local home remedies, health related customs etc.

Field level surveys and identification of the economically important species in consonance with the demand and supply data were carried out in all four districts of the State. In this exercise, practically all the villages where farmers, collectors, traders and local health practitioners operating in the field in question were contacted and consulted.

References received from herbal drug manufacturers like Zandu Pharmacy, Good Health (P) Ltd, Dabur Ltd., etc. for supply of identified raw drugs from the State through the SMPB have also been taken into account.

(II) Registration mechanism of cultivators, traders and manufacturers in Sikkim state under SMPB:

The SMPB has broadly followed the mechanism formulated and issued by the National Medicinal Plants Board (NMPB) pertaining to registration of all type of stakeholders, viz, farmers, collectors, traders and manufacturers of medicinal plants with a view to regulate, organize and develop the medicinal plants sector in the State. The broad procedure adopted in this regard is as under:

Finalization of application format to be filled up by the applicants/ stake holders and Registration Certificate for use by the SMPB. One copy each of the above is enclosed for reference.

The completed application forms in four copies have to be submitted in the office of the SMPB.

The request for registration with SMPB by the stake holders in the above referred format are received by the SMPB. The DFO (NTFP) & Nodal Officer, SMPB gets the information and other details indicated in the application form verified by the respective Territorial Forest Divisions or the nearest Principal/Co-Principal Investigator of Herbal Garden of SMPB duly involving the JFMCs, EDCs, WDCs and local Panchayat. The applicants are also required to make available requisite identification certificate and land holding ownership document pertaining to the project land duly authenticated by the respective District Collect orate.

The applications are then scrutinized by the SMPB in the light of observations, comments and recommendations of the concerned

authorities referred as above. In the event of their being found in order, the Nodal Officer, SMPB forwards the same with his comments/ recommendation to the Chief Executive Officer - cum - Member Secretary, SMPB for his consideration and approval.

After obtaining the approval of the CEO/ M.S., SMPB, the applicant is registered with SMPB and a formal Registration Certificate is thereafter issued by the Nodal Officer, SMPB.

Registration fee of Rs.50/- per year with renewal charges of Rs.25/- is charged from the applicants for the same by the SMPB.

(III) Potential areas for project formulation:

a) Growth and development of medicinal plants sector in the state to tie up cultivators with traders and manufacturers with assured buy-back arrangements.

As on date, a total of 225 farmers/ growers/ collectors/ traders and manufacturers have been registered with the SMPB. Most of the farmers/ growers are keen on cultivation of medicinal plants in their lands. 8 farmers have already submitted their project proposal of contractual farming to the NMPB for seeking admissible financial assistance. In this regard, based on the response of other many farmers, it is hoped that about 50 of them would come forward for assistance under the contractual farming scheme. The SMPB has assisted the farmers in tying up with the traders and manufacturers for assured buy back arrangement who have submitted their proposals under the contractual farming scheme. The future growth in this regard greatly depends on the outcome of this initiative of the first set of applicants.

Good Health (P) Ltd, a leading herbal drug and cosmetics manufacturer, has recently established their small scale unit at Bordang, East Sikkim. The unit has approached the SMPB for additional supply of raw material on regular basis for their unit. Considering the unprecedented success in their endeavor, the promoters are actively considering to expand their unit and operations in the State.

Enquiries received from large herbal drug manufacturers, pharmaceutical industries like Zandu Pharmacy, Dabur Ltd., etc. for establishment of drug processing units in the State are under active consideration of the SMPB/ State Government. This initiative would not only provide an assured market/ buy back arrangement on commercial basis for the cultivators and traders of locally produced medicinal plants and herbs but also help in their value addition. The SMPB is in the process of contacting other medium and major herbal traders and manufacturers for establishing their units/ sub units in the State. In this regard, the SMPB is particularly hopeful of establishment of a medium sized

processing unit of Zandu Pharmacy very shortly. There are few manufacturers in neighboring State of West Bengal who are keen to set up their Drug Processing units in Sikkim with assured buy-back arrangement.

(b) Extension activities.

8. *The development of medicinal plants sector with a view to utilize it on commercial lines on sustainable basis in a State like Sikkim is neither feasible nor viable without massive public involvement and willing support. This process also ensures protection of natural habitat by local communities and its accelerated coverage on their lands as alternative cash crops. In order to ensure this aspect including successful domestication and farming of medicinal plants on private land areas as alternative cash crops as a movement the SMPB has organized and conducted 17 extension and awareness programmes at Gangtok, Kyongnosla, Zema, Thongoo, Damthang, Karfector, Bagua, Barsey, Khechhiphery, Mainam, Guransay, etc. for the benefit of various individuals/agencies villagers/ farmers of neighboring areas/ Panchayats. Following inputs were the central theme of these programmes.*

To convince them on good financial returns on medicinal plants cultivation on their private lands and to adopt this practice as an alternate cash crop cultivation.

To encourage them to establish herbal farms for commercial cultivation of indigenous species of medicinal plants in their private lands duly utilizing the expertise and guidance of the SMPB.

To motivate them for providing reliable and accurate information for incorporation in the "Base Line Data Register" and "Panchayat Bio-diversity Register" available with the Panchayats/ Field Officials.

To utilize better agro techniques in consultation with the SMPB with a view to obtain optimum output.

To intimate SMPB on out break of plant pests and other diseases, if any.

To freely consult the SMPB for any technical input required for production of quality planting material, cultivation techniques its maintenance.

c) Training of Stakeholders:

The success of development of medicinal plants mission primarily depends on the effective & vibrant involvement and initiative of stakeholders. Duly realizing this, the SMPB has organized several training programmes and

workshops to promote technology and knowledge to the stakeholders like field functionaries of the state forest department, training of community based Para-taxonomists, tribal and other forests dwellers. These programmes were primarily focused on:

Identification, selection and availability of prioritized medicinal plants of their areas.

Cultivation techniques of high and low altitude medicinal plants including creation of nursery by adopting improved technologies for production of quality planting materials, techniques for raising medicinal plants in different agro-climatic zones. Developed printed reading materials in local language.

Raising awareness among the stake holders through 13 Herbal Gardens established by the SMPB and Medicinal Plants Awareness Center (Jari Buti Chetna Kendra).

Training for maintenance, harvesting, post-harvesting and storage of medicinal plants.

Exposing them through Herbarium and Raw Drug Museum, printed material, photographs, live specimen material developed for agro-techniques.

Motivating them for their willing cooperation and active involvement in creation of Home Herbal Gardens in every Panchayats unit.

Explaining the need, importance and requirement of proper preparation and periodic updating of Bio-diversity Register and Base Line data Register.

(IV) Status of State Drug Testing Laboratory:

In the 2nd annual meeting of the Governing Body of the SMPB, it was agreed that a state-of-the-art Drug Testing Laboratory should be established under the State Health Department. This was subsequently approved by the Government and work on the construction of its building has already begun from State resources. However, its final commissioning is expected to take a few years. In view of this crucial time gap, it is opined that for the intervening period the SMPB should identify a suitable existing Drug Testing Facility in any other sector for its usage after strengthening and due adaptation for our level of job for their current programmes. In this context, utilization of the existing small level Drug Testing Facility of the Manipal Institute of Technology, Majitar, East Sikkim has been under consideration. However, to make this facility tuned to the requirements of SMPB, the same would need further strengthening duly recognizing it to be a centre of excellence.