

Embassy of the Federal Republic
Of Germany in New Delhi

Dharamsala, 18th January, 2017

Application

For financial support in implementing a micro-project

1) Applicant Institution

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2) Legal form of applicant, year of establishment, number of members

Men-Tsee-Khang (Sowa-Rigpa) is a cultural, educational and charitable institute, registered under the Societies Registration Act XXI of 1860. The Institute was established by the Great XIII Dalai Lama in 1916. In 1961, the institute was re-established by His Holiness the XIV Dalai Lama in Dharamsala, India. The vision of the institute is to improve the lives of people by promoting and delivering Traditional Tibetan system of Medicine and Astro. Science practices.

3) Responsible Contact Persons (Name and Address)

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- 4) **PROJECT TITLE:** Cultivation and Preservation of High Altitude Medicinal Plants at Jispa, Lahaul & Spiti, Himachal Pradesh, India.

DESCRIPTION OF THE ACTION

BACKGROUND OF THE PREPARATION OF THE ACTION:

Since ancient times, the medicinal values of different herbs have been appreciated by almost every part of the world and among many different cultures. Historically, the plants we call herbs have been a keystone of human civilization. They have nurtured, sustained, and healed us and have improved the quality of life in so many ways. Healthy herbs have long been held an holistic place in our wellbeing. The therapeutic actions of herbal remedies are shaped by that complexity, making them safe and effective, due to which for more than ten thousands of years, people around the world have enjoyed the therapeutic effectiveness of herbs and uses it for healthy living. Modern science has also shown that many of them do indeed carry remarkable health benefits. Understanding the benefits of traditional medicines, which is largely plant based, the billions of people opt for plant based medicine as their primary form of health care. However, due to the unscientific extraction or over exploitation of herbs and deforestation, many significant medicinal plants are at even at risk of extinction.

So as to conserve and preserve the Medicinal plants which is being used in volumes for manufacturing of medicines and health care products. Men-Tsee-Khang (Sowa-Rigpa) has taken an initiative to cultivate Medicinal plants from 2001 in Sonada, Darjeeling and Leh on a rented plot. The small 300sq.m nursery is used to raise the seedlings and study of medicinal plants for medical students. Those lands which are under cultivation don't wholly meet the total need of raw materials for *Men-Tsee-Khang* (Sowa-Rigpa) for manufacturing medicines and nutraceutical products. Raw materials traded in markets are not of best quality. Therefore, Men-Tsee-khang (Sowa-Rigpa) proposed this project and Forest Department, Government of Himachal Pradesh has generously given over 1 hectare (Approx. 2.40 acre) land on lease for a period of 15 year to cultivate Medicinal Plants through Mahila Mandal and Local people and Government of Himachal has also assured that they will give out more land if required in future to expand the Medicinal Plants cultivation work. Such exercises should be implemented in order to improve quality by strictly following good agricultural and harvesting practices (GA & HP). In long run it helps in the supplement of qualitative medicinal plants and as well as preservation of genetic resources of medicinal plants. In future such cultivation of medicinal plants provides useful inputs for quality assurance practices and use of genuine medicinal plants are guaranteed

Recognizing the priorities and needs of Medicinal Plants, HAMP department in consultation with Materia Medica Department of Men-Tsee-Khang (Sowa-Rigpa) has planned to initially cultivate 21 Medical Plants to conserve, preserve and make them available to manufacture traditional medicines and health care products.

**List of High Altitude Medicinal Plants with the Medicinal uses for Jispa, Lahaul & Spiti,
H.P HAMP Project (2017-2018)**

S.no.	Botanical Names	Part uses	Medicinal uses
1.	<i>Hippophae rhamnoides</i>	Fruit	Treats lung diseases, blood coagulation and cysts and <i>Bad-Kan diseases</i> ; regenerate and improve blood circulation, clears the formation of mucus, dilutes and thinning the blood and prevent blood clotting.
2	<i>Aconitum heterophyllum</i>	Root	It counteracts poisoning caused by crabs, scorpions and snake bites. It treats contagious fever, bilious fever (<i>hot disorders</i>), and fever associated with <i>mKhris-pa</i> and inflammation of the intestines or colic. It relieves pain .
3	<i>Inula racemosa</i>	Root	It treats imbalance of <i>rLung</i> and blood disorders. It treats chronic gastric problems, and restores the digestives heat and increase appetite. It is also effective against unripe fever and contagious fevers.
4	<i>Saussurea lappa</i>	Root	It is used to treat disturbance of <i>rLung</i> and blood, flatulence, pulmonary disorders, obstruction of larynx, senseless tissues, <i>sKran</i> (tumours), <i>Bad Kan</i> disorders, dysentery and <i>Srog rLung</i> (mental disorders).
5	<i>Hyoscyamus niger</i>	Seeds	It relieves pain caused by pathogens in general, and severe toothache. It helps to treat pharyngitis and malignant ulcer. It also dries serous fluid accumulated in the extremities and stops diarrhea.
6	<i>Pedicularis oliveriana</i>	Flower	It helps in assembling the diffused toxins in the body and is useful in the treatment of meat poisoning , dysentery, hot disorders of the stomach, small intestine and <i>sMug-po</i> (complex disorders)

7	<i>Juniperus communis</i>	Leaves	It is used against hot disorders of the kidneys, fluids accumulation in the joints and sudden swelling.
8	<i>Artemisia santolinifolia</i>	Leaves/ shoot tip	It is used for all epidemic or vulnerable diseases like diphtheria and sudden swelling, cramps due to intestinal worms. It is also beneficial in treating inflamed rashes and pimples.
9	<i>Cicerbita macrorhiza</i>	Root /leaf/flower/ fruit	It is useful in treating fever associated with <i>mKhris-pa</i> disorder, which cause the eyes and skin to become yellow. It treats hot disorders of the gall bladder that causes jaundice and treats various kinds of <i>mKhris-pa</i> disorders.
10	<i>Taraxacum officinale</i>	Entire plant	It is used for treating hot disorders of <i>rLung</i> , <i>mKhri-pa</i> and <i>Bad-Kan</i> and blood, chronic fever, dyspepsia due to improper diet, disorders of the blood, gall bladder and others.
11	<i>Podophyllum emodi</i>	Entire plant	It regulates the thinning of blood, improves <i>rLung</i> particularly dysfunction of downward- voiding <i>rLung</i> , eases the menstrual flow, treats uterus disorders, gynecological diseases and helps in delivery of the baby and placenta.
12	<i>Melilotus officinalis</i>	Entire plant	It is used as an antidote for fever caused due to poisoning, chronic fever, splenic cramps, diphtheria, sudden swelling and other infectious diseases.
13	<i>Tanacetum mutellinum</i>	Aerial part	It reduces swelling, heals lung –abscess (<i>Glo rnag</i>), and is effective for <i>Bras</i> (cancer), wounds and lung disorders. It is also beneficial for kidney functions.
14	<i>Rosa macrophylla</i>	Fruit / cortex	It treats diffused poison in the body, high toxic fever and hot disorder of the liver. The cortex is used to assemble diffused poison, serum and against disorder inflicted by demons.

15	<i>Myricaria germanica</i>	Leaf / stem	It treats high blood pressure, cough and contagious diseases.
16	<i>Rhododerndron sp.</i>	Flower / leaf	It treats <i>Bad-Kan</i> disorders by increasing the digestive heat. It treats intestine, poor kidney, lower back pain and leukorrhea.
17	<i>Medicago lupulina</i>	Leaf/ stem / flower/ fruit	It treats hot disorders of the lungs, coughs and heals wounds.
18	<i>Pulicaria insignis</i>	Flower	It alleviates pain in the upper body caused by blood combined with <i>rLung</i> . It treats <i>Gagg-pa</i> (diphtheria) and <i>Lhog-pa</i> (inflammation of tissues). It treats swelling caused by inflammation and infection.
19	<i>Selinum wallichianum</i>	Root / leaf/ flower/ fruit	It treats various hot disorders associated with heart, and hot disorders due to poisoning. It is beneficial in diminishing <i>rLung</i> and combined <i>Bad-Kan</i> and <i>rLung disorders</i> . It is also effective in balancing <i>rLung</i> .
20	<i>Meconopsis aculeata</i>	Entire herb	It treats the inflammation of bones or hot disorders associated with the bones. It helps to heal bone fracture and particularly fractured cranium. It supports spongy bones and alleviates pain in the ribs and upper part of the body
21	<i>Artemisia capillaris</i>	Leaf/ stem/ root	It is useful in treating pharyngitis, lung diseases, and swelling due to hot disorder.

OBJECTIVES OF THE ACTION:

- To Conserve and Preserve HAMPs (High Altitude Medicinal Plants), by mass cultivation at Jispa, Lahaul & Spiti HAMP site.
- To contribute to the economic growth through generation of employment through Mahila Mandal and local people in and around the Jispa
- To increase the availability of the medicinal plants use in Traditional Medicine and other sectors through traditional defined cultivation methods.
- To continue to meet the demands of patients taking traditional Sowa-Rigpa system of medicines treatment throughout India and abroad.
- To create awareness on the importance to conserve and preserve medicinal plants within the natural habitat.

PROJECT ACTIVITIES AND OUTPUT:

The project will take place in the Jispa, Lahaul & Spiti, Himachal Pradesh, India. It will include procurement of seeds, equipments, manpower, arrangement of transportation, building of Mini green house, office cum shelter hut for the site supervisor and the labors, fencing, irrigation facilities to cultivate medicinal plants and also to give herbal cultivation and plantation training.

This project will help to conserve and preserve medicinal plants and make fine quality raw herbal materials available to manufacture herbal medicines and herbal products of Men-Tsee-Khang (Sowa-Rigpa). Employment generation and generate awareness of the medicinal plants and its methods of cultivation.

TIME FRAME:

As per the project implementation plan, this project will commence immediately after the procurement of funds for a period of one year and 3 months (Project start date: 12th May, 2017 and project completion date on first week of August 2018).

SOIL PHYSICO-CHEMICAL PROPERTIES AT JISPA, HAMP SITE:

Based on the result obtained through soil testing, it was revealed that the HAMP cultivation site showed the optimum pH range between 5.5 to 7. Further soil analysis showed that Clay and silt are significantly negatively correlated with the altitude, whereas the sand positively correlated with the altitude. Soil testing for future land on leased to be given by Forest Department, Government of Himachal Pradesh will carry on when required funds are made available.

TARGET GROUPS AND BENEFICIARIES:

The World Health Organization (WHO) estimates that 80 % of the world's population presently uses herbal medicine for some aspect of primary health care .The World Health Organization recognizes the contribution of traditional medicine and its importance to conserve and preserve it. Inorder to do so, it has become imporant to first conserve and preserve RET (Rare, Endangered and Threatened) plants by cultivating them.

1) CONSERVATION AND PRESERVATION MEDICINAL PLANTS:

Due to the unscientific or over exploitation of Medicinal plants and deforestation, many significant Medicinal plants are at risk of extinction. This project will help to conserve and preserve high altitude medicinal plants by initially cultivating 21 significant medicinal plants and then gradually expanding the project by cultivating more number of selected medicinal plants.

2) GENERATION OF EMPLOYMENT OPPORTUNITIES:

Men-Tsee-Khang (Sowa-Rigpa) has currently 4 staff working on HAMP project and upon the procurement of the all the required resources to start the project. This project will further generate employment opportunities to and through the Mahila Mandal and local people of Jispa. This will generate around 10 additional employment opportunities immediately and continue to grow and develop more number of the employment opportunities with the expansion of the project.

3) ENCOURAGE HERB GROWERS:

By providing workshops and trainings to cultivate high altitude medicinal plants and sharing the benefits and importances of the medicinal plants to the local community people, which would encourage the localities to grow and cultivate herbs.

4) SOCIAL WELFARE BENEFICIARIES

Men-Tsee-Khang (Sowa-Rigpa) Social Welfare programs include providing free healthcare to Tibetan refugees and nearby localities at the cultivation site of Jispa. Organizing workshops and trainings on Medicinal plants.

5) INTERNATIONAL COMMUNITY

Men-Tsee-Khang (Sowa-Rigpa) is supporting the health and wellbeing of the international community by providing access to one of the oldest medical systems. Like many traditional forms of medicine, Sowa-Rigpa Medicine is safe, low cost and it is a sustainable form of medicine.

(b) Development-policy objective of the project (if applicable also with a view to tangibly improving the lives of the beneficiaries in the relevant community/area):

- Generation of employment opportunities through Mahila Mandal and local communities of Jispa, Lahaul & Spiti, H.P, India.
- Creating awareness of conservation and preservation of high altitude medicinal plants and its health benefits to the people in and around Jispa, Lahaul & Spiti, H.P, India.
- Promoting healthy life to local communities to the people in and around Jispa by providing free Sowa-Rigpa health care medicines.

TIME LINE FOR THE PROJECT: (May 2017 – August 2018)

NO.	Stages	Months															
		5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
1	Preparation of Soils and composting	■	■														
2	Sowing Methods: Seedling/ Grafting/Cutting		■	■													
3	Mini Greenhouse & Shade House		■	■													
4	Water Management			■	■	■	■										
5	Medicinal plant health Management				■	■	■	■	■	■	■	■	■	■	■		
6	Harvesting															■	
7	Post harvesting																■

- 1. Preparation of Soils:** To prepare the varieties of soils such as sand, loam and clay soils. Also to prepare the manure or composed the soils for the plants.
- 2. Sowing Methods or seedling:** The seeds are best sown as soon as they are ripe, in a cold frame or warm strategy.
- 3. Vegetative Propagation:** a) Through cuttings, b) Through grafting and c) Through stumps
- 4. Mini Green House:** The seeds sown in the nurseries beds and polythene bags should be treated in a greenhouse for better growth and healthy plants
- 5. Shade House:** While in the nursery the plant should be treated in the shade house to protect it from the strong intensity of the sunlight in summer.
- 6. Transplanting and Aftercare:** Trans planting in case of nursery raised seedling or sapling is done according to seasons or favorable seasons or times, when the plants reach about it stage of transplant time. Regular weeding and watering is needed to the plant after transplanted into fields.

5)

(a) Finance plan enclosed? Yes No

Please See Appendix A

(b) Is overall finance guaranteed? Yes No

6)

(a) Amount applied for in <local currency>: **INR 1,420,349.40**

(b) Own funds and possible third-party funds: **INR 61,600.00**

(c) Total expenditure of project: **INR 1,481,949.00**

Budget details attached in appendix A and appendix B

(d) Other contributions by applicant to project implementation (e.g. work, land or buildings):

Please see appendix C and D

Forest Department, Government of Himachal Pradesh has given over 1 hectare (Approx 2.40 acre) land on lease for a period of 15 years for the cultivation of High Altitude Medicinal Plants (HAMP project) and Food and Accommodation arrangement and salary for one staff will be borne by Men-Tsee-Khang (Sowa-Rigpa)

(e) Probable follow-up costs: **< INR 664,556.00 > please see Appendix E**

(f) Follow-up costs can be financed by applicant or third party:

Yes No

7) **Project** has not yet commenced

Commenced on <>

8) (a) Project start: <12th May, 2017>

(b) Project end: < First week of August 2018 >

9) Have you applied for or received any other public funds for this project?

Yes No

If so, from what institution and how much? <>

<Place Dharamsala, Date> 18th, January 2017 <1. Signature> <2. Signature>

Appendix A: BUDGET FOR THE PROJECT:

A. Fund Seeking from German Embassy

Expenses for the Cultivation of High Altitude Medicinal Plants at Jispa, H.P, North India

S.No	Description	Months/ Units	Rate	Amount
1	Equipment Cost			95,500.00
2	Cost of maintenance			20,000.00
3	Cost of seedling, seeds etc.			70,000.00
5	Plumbing			10,000.00
6	Training and workshop			72,500.00
8	Transportation	8	1,800.00	14,400.00
9	Communication-Telephone, Fax etc.	10	400.00	4,000.00
10	Wages for 12 labors	4	15,000.00	720,000.00
11	Salary for the site Supervisor	12	20,000.00	240,000.00
12	Fencing as per the quotation (Appendix F)			10,380.00
13	Labor huts (4 in each hut)	3	25,000.00	75,000.00
14	Soil testing for plot 2			40,000.00
15	Site supervisor winter allowance	6	1,200.00	7,200.00
	Total Amount			1,378,980.00
	Contingencies@3%			41,369.40
	Total Amount in INR			1,420,349.40

Equipment Cost:

S.No	Particulars	Rate	Unit	Qty	Amount
1	Spade	200.00	Per piece	7	1,400.00
2	Pickaxe	500.00	Per piece	7	3,500.00
3	Garden Scoop	180.00	Per piece	5	900.00
4	Three tined Rake	500.00	Per piece	10	5,000.00
5	Shovels	300.00	Per piece	5	1,500.00
6	Net nylon shading	100.00	Meter	5	500.00
7	Soil Tiling tools	1,500.00	Per piece	7	10,500.00
8	Water pipe	300.00	Meter	4	1,200.00
9	Poly bag	15.00	Per piece	3000	45,000.00
10	Poly tray	500.00	Per piece	50	25,000.00
11	Sickle	100.00	Per piece	10	1,000.00
	Total				95,500.00

Appendix B: Own Fund

S.No	Description	Months	Rate	Amount for 1 year
1	Soil testing for plot 1 (Jispa, HAMP site)			40,000.00
2	HRA for the supervisor	12	1,800	21,600.00
	Total Amount			61,600.00

Appendix E: Probable follow up Cost for the year 2018-2019

S.No	Description	Months/ Units	Rate	Amount
1	Cost of maintenance			10,000.00
2	Cost of seedling, seeds etc.			50,000.00
3	Plumbing			10,000.00
4	Transportation	6	1,800.00	10,800.00
5	Communication-Telephone, Fax etc.	10	400.00	4,000.00
6	Wages for 5 labors	4	15,000.00	300,000.00
7	Salary for the site Supervisor	12	21,000.00	252,000.00
8	Site supervisor winter allowance	6	1,400.00	8,400.00
	Total Amount			645,200.00
	Contingencies@3%			19,356.00
	Total Amount in INR			664,556.00