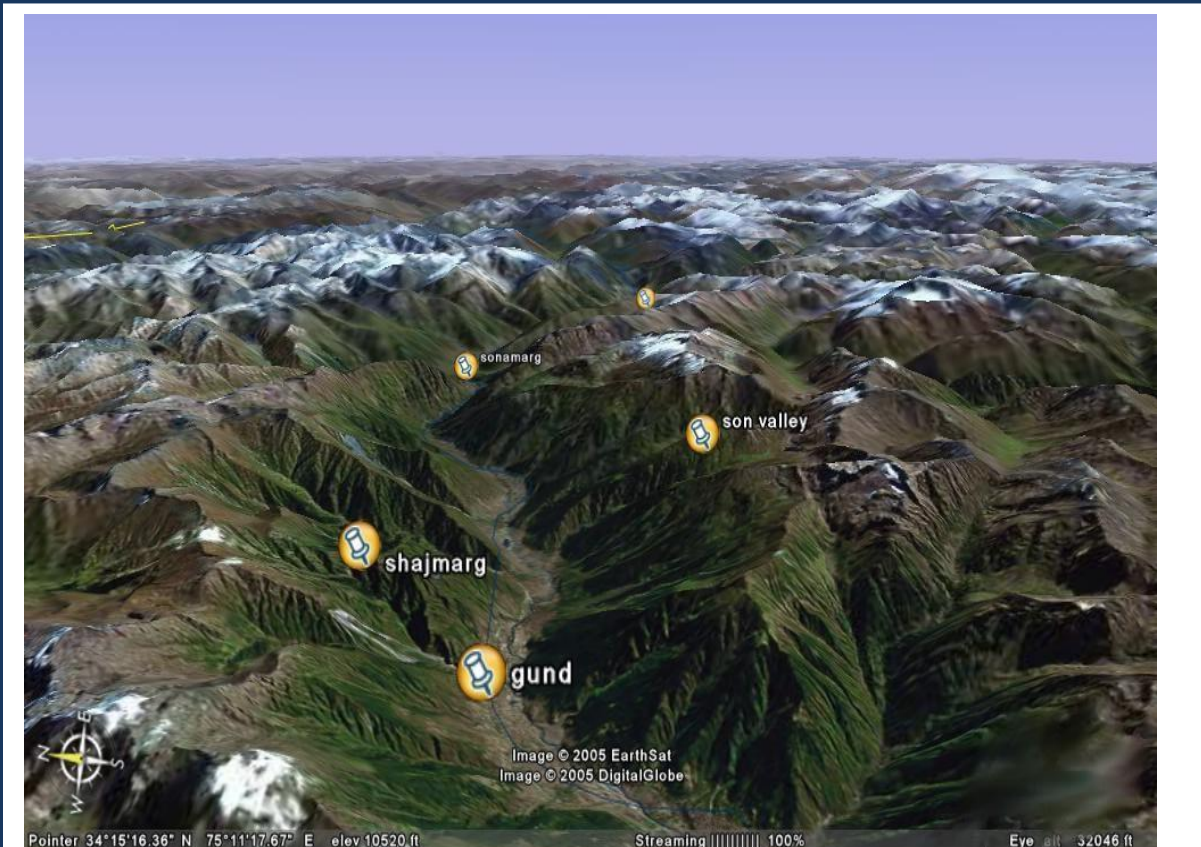


Vanaspati Van Project

SINDH FOREST DIVISION



Ariel View of Project Area, Sindh, Ganderbal

Source: Google Earth

BACKGROUND:

To overcome the over exploitation and to provide genuine raw material for Drug Industry, the Ministry of Health & Family Welfare, Department of ISM & H started a centrally aided scheme for development and conservation of Medicinal Plants on degraded and denuded forest waste land under 'Vanaspati Van Scheme', which will be implemented through Vanaspati Van Societies in the Country.

The state of J&K is bestowed by nature with wide varieties of plant species of sub-tropical, temperate, alpine and cold desert climates. The people of the state however, like people of other parts of the country have overexploited the natural resources for their gains, making many species endangered in their natural habitat.

As a result the need for conservation and development of genetic resources of these plants in a form of "Vanaspati Van" became obvious and necessary. It was in this context that **Vanaspati Van at Sindh Ganderbal Division (Sonamarg Baltal Belt)** was taken up by Indian Systems of Medicine, Family Welfare and Forest Department through Ministry of Health & Family Welfare GOI.

The aim of this project was conservation of rare and endangered species and to build awareness through communication, cooperation, education and training, thereby ensuring public support for long-term progress and viability.

The Project was managed by the advisory / Governing body constituted vide Govt. Order No: **765-HME of 2001** dated: **23-10-2001**, with Hon'ble Chief Minister (Incharge for Health and Medical Education) as its Chairman. The executive committee comprised of following members: -

- | | |
|---|------------------|
| 1. Principal Chief Conservator of Forests Kashmir | Chairman |
| 2. Director, Deptt. Of ISM | Member Secretary |
| 3. Nominee of Deptt. Of Family Welfare/RCH | Member |

Project Staff

Farm manager (DFO) executed the project, along with two range officers and four foresters in addition to one Deputy forester, three forest guards and four malis and a complimentary staff consisting of Accountant, Senior Assistant, Computer Assistant, Management Executive and three class four employees.

AIMS & OBJECTIVES

SHORT TERM OBJECTIVES:-

1. Conservation and development of Medicinal Plants in their natural habitat for sustainable use.
2. Ex-situ forming of endangered species to save them from extinction
3. Development and extension of technologies for species difficult to raise through artificial means.
4. Employment generation to people living in and around forests to minimize the exploitation of Medicinal Plants through illegal means.

LONG TERM OBJECTIVES:-

1. Fulfillment of broader objectives of productivity, equity and sustainability of plants of essence and having market value.
2. Carry out the research work on traditional local use of Medicinal Plants for its standardization.
3. Evolve system of sustainable harvesting, drying, grading and semi-processing of Medicinal Plants.
4. To impart knowledge of Medicinal Plants to small-scale entrepreneur and small-scale industries for taking up the preparations and marketing of simple home remedies.
5. To enhance production of species of commercial value to bridge gap between demands and supply and make the project sustainable after external assistance ceases.
6. The society will try to maintain and develop the project in tune with the National and International developments in the field of Medicinal Plants sector.

LOCATION AND SIZE: -

The project area is situated in the lap of western Himalayas and covers part of Manasbal and Sindh territorial ranges of Sindh forest division. The area falls within the administrative district of Srinagar and is about 339.69 Sq. Km. The area to be taken under this project is spread in different watersheds of two territorial ranges of Sindh and Manasbal with one overlapping Malhar soil conservation range.

AREA COVERED UNDER THE PROJECT :-

The total area to be covered under the project is 36424 hac. The net commercial area of the Division works out to 21077 hac.

ACTIVITIES UNDERTAKEN:

Efforts were directed to standardize the techniques of artificial regeneration to augment Identified endangered species on the verge of extinction and to find out standardized use of Medicinal Plants for taking up at commercial level. Integrated with line departments, private concerns and NGO's and collaboration with other institutions having similar aims and objectives like RRL, CIMAP, and SKUAST etc was ensured to achieve the objectives.

IN SITU CONSERVATION AND IMPROVEMENT:

An area of 6000 hectares was treated under in-situ conservation over five years of the project period. In order to stop the depleted of the resources due to over exploitation over past few years, activities were undertaken to augment the natural habitats to come up and multiply of their own in order to eliminate biotic interference through effective closure and to ensure in-situ soil and moisture conservation through contour furrows, staggered trenching, mulching. The available resources were augmented with seed broadcasting or plantation of a minimum of 200 plants per hectare.

The areas covered under this model are:

1. Shajmarg:	Sind
2. Son-Rasin:	Sind
3. Khodmarg:	Manasbal
4. Wangat:	Manasbal
5. Badipathri, Naranag:	Manasbal
6. Ramwari	Sind

EX SITU DEVELOPMENT TO AUGMENT NATURAL RESOURCES: -

Under ex-situ development selected species were raised by planting bulbs and rhizomes in forest areas. Three different models were adopted depending upon the requirements of individual species.

Model - I: Degraded forest areas with tree cover from 20 to 40% falling on exposed sites were taken up for treatment under this model. Rhizomes, root cuttings and rooted plants from nurseries (as per availability) or from certified organizations are being used for development. Planting was done in staggered contour trenches with at least 1200 No's per hectare. Species like Dioscorea, Verbascum, Artemesia, Ricinis communis, Digitalis, Ephedra, Aconitium etc have been taken up in this model.

Model - II: Activities under this model were undertaken in low-density areas where vegetal cover (top canopy) is about 20% only. Medicinal plant species especially those regenerating through bulbs are being planted in patches at an average of 2000 plants per hectare. Medicinal Plants like Colchicum, Veleriana, Rheum sp. were taken up under this model.

Model - III: Areas having only 10% or less vegetation (top canopy) cover were covered under this model. Plantation was undertaken in staggered contour trenches on an average of 1100 plants per hectare. In refractory areas necessary shade was created by raising non-timber forests produce species like Ficus, Erica, Robinia, Prunus, Taxus, Morus and other plants of essence. Plantation at 3m x 3m spacing in sloppy areas and at 4m x 5m in moderate to flat areas will be carried out in 90cm x 45cm x 45cms staggered contour trenches or (45cm)³ Pits with about 1100 plants per hectare. Medicinal Plants like Artemesia, Podophyllum, Verbascum, Datura, Atropa, salvia, althea etc. were planted in pits at 2m x 2m spacing with about 2500 plants per hectare.

Areas covered under model II & III:

- | | |
|---------------------|----------|
| 1. Urpash: | Manasbal |
| 2. Gagangeer: | Manasbal |
| 3. Nilgar Baltal II | Sind |
| 4. Gund | Sind |

EX-SITU ON FARMING:

Three demonstration Centers (High Tech Nurseries) over an area of about 10 hacs were taken up, out of which two covering an area of 5 hectares were completed at Malhar and Dedrinbal at Ganderbal. Another nursery was set up at at Baltal. These nurseries were establishment for production of quality planting material for indigenous and high demand Medicinal Plants. Standard package practices were developed for adaptation in field by the local farmers to boost the economy of the individual farmers in particular and state in general. Each of

the nurseries was enclosed by chain like fencing. Drip and sprinkler irrigation was used for irrigation purposes.

1. The work on these nurseries was taken up on scientific lines and only quality seed and planting material has been used.
2. Bio fertilizers were used in each of the farms.
3. Integrated pest control management approach was adopted in each of the nurseries.

NURSERY AT MALHAR, GANDERBAL: An area of 1.76 hecets of land was brought under ex-situ farming High tech nursery at Malhar Extension. The nursery has been frequented by research scholars, scientists, and farmers. Various extinct species were developed on the nursery and experimentation with other rare species is going on. Plantation was made on scientifically developed beds and the results too have been encouraging.

NURSERY AT DEDRINI BAGH, GANDERBAL: Demonstration center at Malhar was established over 3 hectares of land.

NURSERY AT BALTAL: Nursery at Baltal was established over 5 hectares of land in Oct 2004.

Herbs Taken up for Conservation at Various places in the Project Area:

S.No	Herb	Local Name	Location
1	Aconitum heterophyllum	Atees	Sagimarg
2	Picorhiza Kuroa	Kutki	Sagimarg
3	Saussurea Costus	Kuth	Kodhmarg, Naranag, Sagimarg, Son Rasin,
4	Dioscorea deltoidea	Krench	Urpash
5	Colchicum luteum	Suranjan	Urpash
6	Podophyllum emodi.. Hexadrum	Vanwangun, Bankakri	Urpash, Wangat, Naranag, Son Resin, Sagimarg
7	Lavetaria cashmiriyana	Sazmul	Urpash, Naranag
8	Rheum emodi	Pambchalan	Urpash, Naranag, Sagimarg
9	Valeriana Walichii	Mushkbala	Wangat, Naranag, Kodhmarg
10	Artemisia	Tethwan	Urpash
11	Berberies lycium	Rasoult	Dedribagh
12	Datura stramonium	Datur	Son Resin
13	Berginia leguta	Zakhmihayat	Urpash
14	Jurnica dolomoca	Dhoop	Naranag, Sagimarg
15	Prunella vulgaris	Kalvoth	Urposh

EMPLOYMENT GENERATION:

The project has not only improved the living conditions of the locals but also provided employment to locals.

AWARENESS PROGRAMMES:

Mass awareness and training programs were undertaken from time to time to generate awareness amongst the masses regarding cultivation and propagation of medicinal herbs.

1. Two-day National Level Workshop at Hotel Broadway, Srinagar (2002): The workshop was attended by 150 participants including delegates from all over the country in addition to the representatives from Department of Ayush, Ministry of Health and Family Welfare, GOI. Hon'ble Minister for Health was the Chief Guest on the occasion.
2. Five-day National Level Training Program at EDI (2003): A five day National Level Training Program was organized in association with NIAM, Rajasthan at Srinagar. The program was attended by 100 participants including officers from Forest Department, Department of Health and Medical Education, RRL, Universities and other line Departments. Hon'ble Minister of State for Health was the Chief Guest on the occasion.
3. One-day Training Program at FRI, Jammu (2004): The program was organized in collaboration with Forest Research Institute, Jammu and was attended by 150 participants. Principal Chief Conservator Forests, J&K was the Chief Guest on the occasion.
4. Arranged a number of visits of farmers to the demonstration centers at Dedrinbagh and Malhar Ganderbal to impart training viz techniques of raising up medicinal herbs on private lands.
5. One Day National Level Seminar in association with State Medicinal Plants Board at Tagore Hall, Srinagar. The Program was participated by 350 participants including a team from Ministry of Health, Govt. of India.

PEOPLE'S PARTICIPATION: -

In order to increase involvement of people and emphasis on employment generation and to reverse the trend of exploitation and degradation of forest resources Van committees were constituted consisting of members of Panchayat, Village Development Committees, Progressive farmers and local people in effecting closure of areas. Local MLA's and Van Committees were also involved in the planning process and identification of areas for execution of the works.

VILLAGE VAN COMMITTEES:

The Project was implemented with the help of Village Committees (Van Committees). In this regard six Van Committees were constituted as under:

S.No	Area	Chairperson	No. of Members
1.	Gagangir	Mohammad Ibrahim Shiekh	10
2.	Wangat	Ghulam Qadir Mir	11
3.	Sonamarg	Ghulam Nabi Jabbar	12
4.	Ramwari Gund	Mohammad Sidiq Kaloo	10
5.	Kulan	Mr. Moulvi Abdul Hamid Sheikh	9
6.	Urpash	Ms. Roshan Ara	9
7.	Naranag	Abdul Qayoom Jagal	11

ENTRY POINT ACTIVITIES:

Entry point activities were undertaken in the project area as envisaged under the guidelines. In this regard one Community Sanitary Unit (Toilet and Bathroom) was constructed at Urpash, Ganderbal in consultation with the concerned MLA and Van Committee of the area. The unit caters to the needs of about 100 families.

In addition to this 90 Gas stoves were distributed amongst the locals in consultation with the concerned MLA's/ Van Committees and Sarpanchs of the area as per the following breakup:

S.No	Area	No. of Gas Stoves	Beneficiaries
1.	Wangat	20	20
2	Sonamarg	10	10
3	Ramwari Gund	20	20
4	Kulan	20	20
5	Urpash	20	20

Check dams have been constructed for water retention and to arrest soil erosion at various places in the project area. Check dams covering 1990 Cubic meters, were constructed at the following places:

S.No	Location	Size
1	Hung Gund	314 cu mts
2	Sind Reson	280 cu mts

3	Worposh, Manasbal	500 cu mts
4	Wangat, Manasbal	181 cu mts
5	Badipatri, Manasbal	94 cu mts

Survey of the Area: A survey of various compartments of the area was got undertaken by M/S MS Consultancy Services before taking up work in these areas for feasibility and technical consultancy of various species that existed or could be taken up for conservation and development.