

Government of Himachal Pradesh
Department of Forests.

No.FFE-B-C(16)-8/2005

Dated: Shimla-2, the 27 Nov., 2006.

NOTIFICATION

The Governor, Himachal Pradesh is pleased to notify the "Himachal Pradesh Medicinal Plants Sector Policy, 2006, approved by the State Cabinet vide Memo referred to above (under Item No.28), dated 25.05.2006, as per Annexure-"A", attached to this Notification.

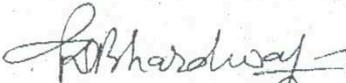
By Order,

Principal Secretary(Forests)to the
Govt. of Himachal Pradesh.

Endst.No.FFE-B-C(16)-8/2005

Dt: Shimla-2, the 27th November, 2006.

- 6465-6639 27/12/06
1. The Principal Secretary to the Hon'ble Chief Minister, H.P. Shimla-2.
 2. The Private Secretary to Hon'ble Chief Minister, H.P. Shimla-2.
 3. The Private Secretary to Hon'ble Forest Minister, H.P. Shimla-2.
 4. The P.S. to the Chief Secretary, H.P. Shimla-2.
 5. All the Administrative Secretaries to the Govt. of H.P. Shimla-2.
 6. The Principal Chief Conservator of Forests, H.P., Shimla-1.
 7. The Managing Director, H.P.S.F.C., SDA Complex, Shimla-9.
 8. The Secretary to Governor, Himachal Pradesh, Shimla-2.
 9. The Accountant General, H.P. Shimla-171 003.
 10. The Sr. Dy. Accountant General, H.P. Shimla-3.
 11. All the Deputy Commissioners in Himachal Pradesh.
 12. All the Conservator of Forests in Himachal Pradesh.
 13. Advisor(Forestry) Policy Analysis and Planning Unit Govt. of Himachal Pradesh, H.P. Forest Sector Reforms Project B-87, Phase-II, Sector-3, New Shimla-171009.
 14. The Director of Ayurveda, H.P. Shimla-171 009.
 15. All Members/Non Official Members/Special Invitees of Governing Body/Executive Committee of the H.P. Medicinal Plants Society.
 16. All the D.F. Cs in Himachal Pradesh.
 17. The Controller, Printing and Stationary Department, HP Shimla-9 with a request to publish the Notification in Extra- Ordinary Gazette at early date and also send 5 copies of the same to this Department.
 18. The GAC Section, H.P. Sectt., w.r.t. the Cabinet decision dated 25.05.2006 (Item No.28).
 19. Guard File (100 spare copies).


Under Secretary(Forests) to the
Govt. of Himachal Pradesh.

Annexure “A”
Himachal Pradesh Forestry Sector Medicinal Plants Policy, 2006
(Notified vide No. FFE-B-C(16)-8/2005 dated 27 Nov 2006)

(A policy for conserving and strengthening medicinal plant resource base in forest areas as well as out of forests for use towards enhancing health and livelihood security of the people of the State on sustainable basis)

1. PREAMBLE

Medicinal Plants, a major sub-set of the Minor Forest Produce, have been playing a very significant role in the health and livelihood security of the people of the State. However, various developmental and anthropogenic pressures on the forests, unscrupulous/unscientific exploitation of medicinal plants in the wake of their increasing national and global trade, inadequacy of management inputs by the largely timber-centric forestry sector, gradual erosion of local community’s role in management of the resource and lack of enabling legislation and any single agency to steer the sector have caused severe depletion of the medicinal plant resource base in the State, affecting the health and livelihood options of the rural poor. The situation in respect of medicinal plants and associated issues in the State may further aggravate unless corrective measures are put in place. This Policy aims to highlight the concerns related to medicinal plants growing in forests and set in motion comprehensive programmes for its long-term development. This Policy also aims to further the basic objectives of meeting the minor forest produce requirements of the rural and tribal populations as enshrined in the National Forest Policy, 1988 (sub-section 3.5 under section 3 i.e. essentials of forest management). The scope of the policy, therefore, covers mainly forest areas concerned with conservation and/ or use of medicinal plants.

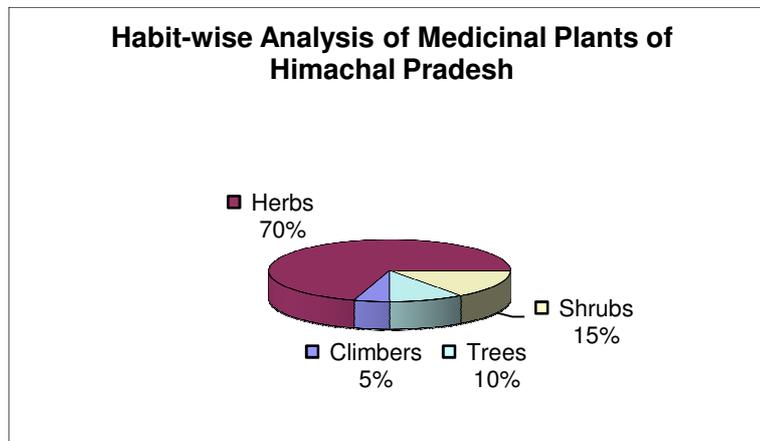
2. THE CONTEXT

The broad context requiring policy level intervention for development of the medicinal plant sector in the State is highlighted as under:

2.1. Medicinal Plant Richness in the State

That the North-West Himalayas are a treasure house of medicinal plants is a well known fact. The ancient scriptures and the mythology are replete with references about the healing plants from the Himalayas. Himachal Pradesh, a North-West Himalayan state having a geographical area of 55,673 Km² (about 1.7% of the country’s geographical area), aptly showcases this medicinal plant richness and diversity of the zone that is spread over its different agro-climatic zones and vegetation types stretching from an altitude of about 300 m along the Punjab plains to more than 6,000 m along the Inner Himalayan ranges. The state harbours more than 3500 species of flowering plants, out of which about 800 species are estimated to be used for some or the other medicinal purposes within and outside the State. A thorough documentation of plant based ethno-medicinal traditions in the state is likely to make many more additions to the list of medicinal plants.

An analysis of the habits of the documented medicinal plants of the state shows that an overwhelming majority of these are herbs (70%), followed by shrubs (15%), trees (10%) and climbers (5%).



Source: FRLHT Database

Medicinal plant diversity in the state can also be appreciated from the fact that its medicinal plants are spread across more than 100 plant families with the highest represented families being *Asteraceae*, *Rosaceae*, *Ranunculaceae* and *Fabaceae*.

Complete knowledge about the medicinal plant diversity in the State and efforts at conservation of this rich resource base has the potential to put the State on the herbal map of the country drawing nature lovers or entrepreneurs from far and wide boosting State's economy.

2.2. Medicinal Plants and Health Security of Rural Communities

Ecosystem specific use of plants for health care is a very strong living tradition of our country. In Himachal Pradesh also people know the use of more than 800 plant species for health care purposes. These plants are spread across different agro-climatic zones in the State and make a significant contribution towards the human and veterinary health security in especially the rural areas of the state.

The people of the state enjoy customary 'right' to collect medicinal plants from State forests and common lands in their vicinity for their household health care needs. The depletion of these resources has already started affecting the traditional practices related to health care. On a different level, this depletion of the resource could result in permanent loss of the rich knowledge base associated with these plant based health care practices.

2.3. Trade of Medicinal Plants

2.3.1. The Global Profile: The global market for medicinal plant based raw drugs is estimated to be worth US\$ 1.03 billion per annum. India's export share in this global market is about 8% with China (24%) and USA (11%) being the leaders. However, India's global market share becomes negligible (0.3%) if the annual global herbal market

including medicines, cosme-ceuticals and food supplements valued at US\$ 62 billion is taken into consideration.

The global herbal trade is estimated to be growing at an annual rate of about 7%. Whereas, the likelihood of a proportional increase in India's share in the raw drug component is fairly high, a similar increase in its share in the finished product component is a big question mark. It is especially so in view of the stringent and non-favourable drug control legislations in the developed countries towards ISM (Indian Systems of Medicine) formulations.

2.3.2. The National Profile: A total of 880 species of medicinal plants have been documented to be in active trade in the country with an estimated volume of 1,28,000 tons of medicinal plant based raw material traded during the year 2001 (Anonymous, 2003, EXIM Bank). The major proportion of this plant-based raw material is consumed by our 8300 odd licensed units manufacturing herbal medicines and products across the country. Total annual turnover of the domestic herbal sector in the country for the year 2001 was estimated to be worth Rs. 4200 crores, out of which trade in medicinal plant based raw material was valued at a mere Rs. 384 crores. Raw material in case of about 85% of these 880 traded medicinal plant species is sourced from the wild.

The country also exported plant based crude drugs worth about Rs. 463 crores during the year 2001. An analysis of the statistics of foreign trade as published by the Directorate General of Commercial Intelligence and Statistics (DGCIS), GoI can be co-related to plants/ plant parts belonging to 48 medicinal plant species. Major export destinations for Indian medicinal plant based raw material include USA, Germany, Japan, UK, France, Taiwan, Italy, Pakistan and Hong Kong.

Taking into account the volumes of domestic trade and export of plant based raw material, the annual medicinal plant based trade was worth Rs. 850 crores during 2001. The national herbal sector is estimated to be growing at a rate of about 30% and was valued at Rs.5000 crores in 2004. The demand for herbal raw material is also showing a proportional increase and in the absence of any comprehensive policy inputs is likely to have serious implications on the medicinal plants resources in the State.

2.3.3. The State Profile: Some 2,500 tons of medicinal plants and parts thereof harvested from the State forests is officially exported out of the state every year. A parallel illicit trade in medicinal plants is also suspected. Besides the trade of medicinal plants harvested from the wild, some species are also cultivated for sale. The legal annual trade in medicinal plants in the State is worth about Rs. 10 crores at prevailing market prices. The state government receives an amount of about Rs. 40 lac per annum through issuance of export permits for this trade.

The trade in medicinal plants from the state involves about 165 species, growing wild or cultivated in the state. An important aspect of this trade is that 24 species out of the top 100 medicinal plant species traded in the country are found in the state. How much of these species is consumed by 70 odd pharmaceuticals in the State is not known. However, the significant impact medicinal plants have on the local economy is apparent from a study carried out in the buffer zone of Great Himalayan National Park. The study reveals that harvesting and trade of medicinal plants gets every household an average annual income of Rs. 14,000/- (Tandon, 1996).

The trade in medicinal plants in the State is largely unregulated, secretive and exploitative and takes place in the form of raw material. Even the post harvest handling of this raw material does not generally conform to the laid down standards resulting in low remuneration to the local people for their efforts to gather medicinal plants. The state, therefore, due to lack of any quality standards on export of its vast medicinal plant resources, loses on the potential returns from this sector. In the light of increasing demand of raw material, the medicinal plants sector holds a vast potential to augment rural livelihoods. The State also needs to recognize this sector as having immense potential to make significant contribution to the State's economy.

2.4. Scope for Converting Important Species into Knowledge Products

The rare and high value medicinal plant species of the State and the rich ethno-medicinal knowledge of its people regarding use of such species for various health care needs has a great potential of converting these into finished/ semi-finished value-added products before export out of the state.

2.5. Conservation Status of Medicinal Plants in the State

About two-third geographical area of the hill state of Himachal is a designated forest. It is these forests that harbour the major medicinal plant diversity in the state. Sound health of these forests is, therefore, necessary for continued availability of medicinal plants in desired quantities. However, due to various anthropogenic pressures, the forests are getting degraded and fragmented posing serious risk of extinction to many high value medicinal plant species in the state. Moreover, more than 90% of the species traded in the State are harvested from the wild. To make the matters worse, most of these species are harvested destructively and indiscriminately. The recent large scale dying of *Taxus wallichiana* trees in the state due to reckless lopping for its needles is one of the many examples.

Cultivation is limited to only a few species (*Kuth*, *Pushkarmool*, *Taxus*, *Basanti*) and is yet to make significant contribution to the total traded volumes in the State.

As per rapid threat assessment studies carried out during 1998 and 2003 by FRLHT in association with State Forest Department and the various Research Institutes in the State, a large number of species need immediate management intervention to ensure their existence. These threat assessment studies, using the threat criteria developed by the IUCN (International Union for Conservation of Nature and Natural Resources), have categorized 60 medicinal plant species from the state as Red-listed (12 species being 'Critically Endangered', 21 species being 'Endangered' and 27 species being 'Vulnerable'). More medicinal plant species need to be brought under the scope of these studies to formulate strategies for their management and sustainable harvest.

In the timber tree-focussed scheme of management of forests, conservation of medicinal plants has never been a management priority in the past. This has resulted in gradual deterioration in the medicinal plant resource base in the state. It is, therefore, imperative

to initiate appropriate conservation and resource augmentation measures for long-term availability of these plants.

2.6. Institutional Mechanism

The medicinal plant sector in the state suffers from multiplicity of agencies involved in conservation, research, and usage of the resource base. Busy as these agencies are in pursuing their major organisational agenda, the development of medicinal plant sector obviously takes a back seat. There is little co-ordination between these agencies regarding programmes to develop this sector resulting in either duplication of efforts in some areas or total neglect in other areas. The traditions related to community management of the resource have since long been excluded from the so-called scientific management approach and the communities no more feel involved in this management.

Of late, a number of international conventions having bearing on conservation, sustainable harvest and fair trade of medicinal plants have resulted in various guidelines concerned with the sector. Absence of a suitable nodal agency in the State to host queries by various stakeholders and provide them information about these guidelines and other related legislation has left many a prospective partner in the sector confused.

The sectoral and non-participative approach to development and management of the herbal sector continues severely hindering the initiative to comprehensively plan, co-ordinate and steer this sector towards a prime socio-economic sector in the State.

2.7. Legal Framework

The herbal sector in the State is governed under various sets of legislations related to management, harvest and trade of the medicinal plants. These legislations are more of a means to control than to facilitate development of this sector. The PFM rules and the recent legislation on Panchayati Raj do seek meaningful community involvement in management of the resources. However, the necessity and role of VFDSs formed under PFM rules need to be re-considered in view of the Panchayat sub-committees formed under PRIs. Similarly, the existing legislation and guidelines need to be revisited and modified to facilitate development of the sector.

3. POLICY VISION AND OBJECTIVES

The Policy visualizes Himachal Pradesh to become a major herbal state in the country by 2025 with -

- recognition of the medicinal plant resources of the state as very important forest produce.
- sizeable rural and urban populations deriving their livelihoods from this sector and significant contribution made by this sector to the State's economy.
- enabling legislation and institutional mechanisms to develop this sector firmly in place.

- the germplasm of medicinal plant diversity of the state conserved in its natural habitat.

The following objectives have been set to fulfil the policy vision:

- To conserve and augment the State's rich medicinal plant resource in its natural habitat through adaptive and participatory management with linkages to the sustainable use of this resource for commercial and research purposes.
- To develop agro-techniques of traded species and encourage organic cultivation of commercially important species on private lands.
- To develop a system of pricing the wild harvest so as to reflect both the conservation costs and the community benefits.
- To encourage public-private-community partnership for building capacity for cultivation, value addition and processing of raw material before export from the state.
- To put in place an integrated and sensitive institutional mechanism for development of herbal sector in the State via effective involvement of all stakeholder groups in management (conservation, cultivation, sustainable use, value addition and trade) of medicinal plant resources of the State.
- To network with other North-Western Himalayan states to push community oriented reforms in the medicinal plant sector and form alliances for better collaboration and co-ordination on policy issues, marketing and value addition operations.
- To revisit and suitably modify the existing legislation/ bring in new legislation to facilitate development of the herbal sector in the State.
- To establish a quality certification regime.
- To develop a cadre of trained manpower for development of the sector.
- To promote the use of commercially viable medicinal plants available in the State by the state owned and private pharmaceutical units and subsidiaries engaged in value addition.
- To document the available knowledge on ethno medicinal plants.
- To develop linkages with existing and potentially prospective markets through HPSFC, Ltd. and co-operative sector.
- To maximize yield of medicinal plants through sustainable natural and artificial regeneration and scientific exploitation.

4. POLICY PRINCIPLES AND STRATEGIES

The policy vision and objectives are proposed to be realized through the following policy principles and strategies:

4.1. Management of the Resource in its Natural Habitat

Himachal Pradesh has been traditionally known as a treasure house of high value medicinal plants used in both the local folk health traditions and in the Indian Systems of Medicine. However, even as concerns about fast depletion of this resource are being voiced, the degradation continues at even faster pace. Comprehensive documentation of

the diversity of medicinal plants is not available and their conservation status is not known. Further, the state is yet to develop and put to practice specific adaptive and participatory management measures for conservation, planned augmentation or sustainable harvest of medicinal plants. Of late the 'ownership of minor forest produce' including medicinal plants has been endowed to the Panchayats vide section 4 (m) (ii) of "The Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996" and the Panchayats act as 'institutions of self-government', there is a need to clearly bring out their role in conservation of medicinal plants. It is in this scenario that the policy outlines the following:

4.1.1. Conservation of Wild Gene Pool in the Forest and Community Land Gene Banks: The State can be classified into 4 broad agro-climatic zones based on the large altitudinal range in the State. Each of these agro-climatic zones contains a variety of unique vegetation and forest types housing the rich diversity of medicinal plants in the State. It is only these natural settings that have the capability to conserve the vast intra-specific variations within a species. *In situ* conservation has come to be widely regarded as the only viable and cost effective measure to allow the species to follow the natural evolutionary course in interaction with their habitat and within themselves. FRLHT, in collaboration with the State Forest Departments and the local communities, has demonstrated a successful model of such *in situ* conservation of medicinal plants in peninsular Indian states. The model, suitably modified to incorporate the state specific needs, can be adopted to begin with. Relatively undisturbed areas of known medicinal plant diversity can be taken up as immediate response for this purpose and the network extended or modified as more and more information on the subject becomes available. Medicinal Plant Conservation Areas (MPCAs), established as *in situ* conservation reserves, across all major forest types spanning all agro-climatic zones in the State will go a long way in conserving the total medicinal plant diversity in the State.

The State shall, in collaboration with the local communities and other resource user groups, select and establish in situ medicinal plant conservation reserves to capture and conserve the total medicinal plant diversity in the State.

4.1.2. Documentation of Diversity and Status of Medicinal Plants: The existing information on the medicinal plant diversity in the State is sketchy and lies scattered with various research institutes across the State. Whereas the existing information needs to be compiled, a comprehensive programme to document the diversity and current status of medicinal plants in the State needs to be initiated. Adequately trained local communities can be of great help in development of such database in a time bound manner. The database so developed will be a key tool in designing and developing programmes for sustainable use of medicinal plants for value addition to fetch higher economic returns to the state.

Programme for development of centralized database on diversity and status of medicinal plants in the State along with setting up of physical and virtual herbarium of these species will be initiated.

4.1.3. Bio-chemical and Genetic Variability Studies on Priority Species: Bio-chemical and genetic variability studies are a means to arrive at the conservation and commercial

value of different populations of the species and to use the best germplasm for cultivation and in further genetic improvement studies. These studies assume a very high priority in view of the fast dwindling populations of many high value species of the State and imminent need to conserve these on one hand and to bring these under cultivation on the other. The red-listed medicinal plant species of the State will, of course, make the priority candidates for such studies and the MPCAs will provide the initial platform to start the studies from.

The State shall initiate via reputed Indian Scientific Institutions bio-chemical and genetic variability studies on prioritized species to identify the best germplasm for conservation and cultivation.

4.1.4. Augmentation of the Wild Medicinal Plant Resources: The indiscriminately exploited forest areas, especially near habitations, known to harbour good populations of medicinal plants in the past need to be rehabilitated. This can be achieved by adapting the forest management practices to the benefit of these species and/ or by augmenting wild populations of medicinal plant species through planting. It is especially important as about 66% of the total geographical area of the State is under forests and very limited land is available outside forests for cultivation of medicinal plants. This rehabilitation can, however, take place only if the local communities find a stake in this activity and become responsible partners in this programme. One of the ways to create such a stake for the community is through developing these depleted forests as Medicinal Plant Propagation Areas (MPPAs) under the State Participatory Forest Management (PFM) Regulations with all the harvest proceeds going to the participating community. PRIs as instruments of local self-government and the State Forest Department as the primary facilitating agency need to play a key responsible role in this programme. The programme will provide a worthwhile income generation opportunity especially to the rural communities.

Programme to develop scientific management practices in favour of medicinal plants and to augment wild populations of medicinal plants in responsible partnership with the local communities through PRIs in accordance with PFM guidelines will be initiated.

4.1.5. Harvesting of Resources from the Wild: The principle of harvest from the wild being followed as at present seems to be making wild collections ‘somehow’, ‘anyhow’ and ‘before others’. Whereas general harvesting guidelines in respect of Minor Forest Produce including medicinal plants are included in the Forest Working Plans and specific legislation in case of Chamba and Mandi States (The Chamba Minor Forest Produce Exploitation and Export Act 2003S and Mandi Minor Forest Produce Exploitation and Export Act 1997S) is available, these have been seldom applied. The indiscriminate harvesting practice in the state has led many a high value medicinal plant species to the risk of extinction. Whereas the need for harvest from the wild, being linked to livelihood security of rural populations is recognized, the wild populations can still be conserved by i) developing and disseminating sustainable harvest methods through field agencies and research institutes, ii) by effectively regulating the wild harvests of high risk species through formulating comprehensive participatory resource management plans, harvesting guidelines and enabling legislation. With the ownership of minor forest produce now endowed to the Panchayats, these have to be oriented to take greater responsibility towards

ensuring that the harvesting of medicinal plants is carried out in sustainable manner and unscrupulous collections and trade is kept under check.

Sustainable harvest system and effective community (panchayat) managed regulatory mechanism shall be put in place for harvesting of medicinal plants from the wild.

4.1.6. Pricing of Wild Harvest: Another issue linked to harvest from the wild is that of pricing of the produce for commercial purposes. At present, medicinal plants sourced from the wild command a market price largely based on the labour involved in such collections plus a token royalty charged by the State Forest Department. The conservation costs, the environmental costs and the community benefits are not reflected while arriving at royalty or price of this raw material. The low prices at which the raw material from the wild is available, is one sure deterrent to picking up of cultivation of medicinal plants in the State. The State has, therefore, a case to rationalize the royalty rates of the raw material sourced from the wild in a way so as to reflect the conservation (protection, augmentation and management), environmental (quotient of damage to ecology during harvesting) and the community benefit (opportunity cost of retaining the particular landuse) values in the royalty calculations.

A system to rationalize royalty rates reflecting the conservation, environmental and community benefit values shall be worked out in consultation with various stake holders to get fair remuneration to the State and its people.

4.1.7. Encouragement to Ethical Bio-Prospecting: The rich medicinal plant diversity in the State has the prospect of throwing up species for use in treatment of various ailments. This rich resource base would need to be opened up for bio-prospecting. The *in situ* conservation areas could act as the bases for initiating this research through reputed Indian Scientific Institutions in line with provisions of National Biodiversity Act, 2002 so that all IPR related issue could be taken care of.

Ethical bio-prospecting through Indian Scientific Institutions and in line with the provisions of the National Biodiversity Act, 2002 shall be encouraged.

4.1.8. Establishment of Medicinal Plant Education Parks: Conservation of medicinal plants is still an upcoming field and there is general inadequacy of appreciation of the subject and the rich Indian heritage linked to the subject. The occurrence of medicinal plants in nature is sometimes so scattered that theoretical explanations about their conservation needs does not make much impact. A well designed medicinal plant education park exhibiting live specimens of medicinal plants as per important themes of traditional and local value alongwith appropriate signage is a potential tool to educate people about various aspects related to medicinal plants. Conceived well, these parks can also function as *ex situ* conservation sites for high priority species of the zone and can supply medicinal plant seedlings of local relevance to the people through attached nurseries.

Medicinal plant educational parks with attached nurseries shall be established in all agro-climatic zones of the State.

4.1.9. Establishment of Germplasm Banks: Whereas the policy recognizes that there can be no better germplasm bank than the *in situ* conservation areas of medicinal plants, one of the immediate causes for cultivation of medicinal plants not picking up is the non-availability of certified and high quality seed or planting material. To service people across the State, suitably located germplasm banks would need to be established in all the agro-climatic zones of the State. Certification protocols for different species would also need to be developed. Authentic planting material for stocking these germplasm banks could be accessed from the *in situ* conservation areas providing a direct economic incentive to the local communities involved in management of these areas.

Conveniently located seed-cum-germplasm banks would be established in each of the four agro-climatic zones of the State with certification protocols in place for supply of certified seed and quality planting material to user groups.

4.2. Cultivation

Cultivation of high priority medicinal plant species outside the forest areas is considered as one of the ways to off-load some of the pressure from the fast depleting wild resources and to provide good alternative cropping options to the farming community. Cultivation of medicinal plants in the State has failed to pick up due to non-availability of certified planting material, information gaps on agro-techniques, exploitative market mechanisms and non-clarity related to the regulatory mechanisms. In the wake of WTO regulations laying down conditions to the international trade of medicinal plants collected from the wild, export potential for organically cultivated medicinal plants has enormously increased. The policy aims at encouraging cultivation of medicinal plants in the State:

4.2.1. Selection and breeding of economically important species: Many Himalayan species of medicinal plants command a very high price in trade. Attempts to domesticate some of these species have already been made. However, suitability of the germplasm sourced from the wild for different zones in the State has not been assessed. Selection and breeding of species for cultivation suitability in different areas and for high alkaloid contents is considered an important step in the direction of making cultivation of such species remunerative.

The State shall facilitate, through reputed research organizations, industrial houses(using medicinal plants as raw material), initiation of trials on the selection and breeding, propagation and harvesting of native, economically important medicinal plant species.

4.2.2. Standardization of agro-techniques for priority species: The work on agro-techniques on many high priority species has been carried out in the past by many research institutes in the State. However, most of this work is based on limited trials, is scattered and is in scientific language. Such trials for many priority species are yet to be undertaken. A farmer friendly comprehensive manual on cultivation of high priority medicinal plant species on commercial scale is the need of the hour.

Multi-centric trials for standardizing agro-techniques for priority species shall be initiated through universities and research institutes and standardized techniques published in the form of farmer friendly manuals.

4.2.3. Organic Cultivation of medicinal plants: The nature provides its own checks and balances to save plants from insect attacks and diseases and provides ample nutrients for their optimum growth. However, susceptibility to disease and pest attack and intent to grow more may lead the farmer to use chemical fertilizers, insecticides and fungicides. Medicinal plants, because of their pharmaceutical and cosmoceutical use, need to be grown without the use of any chemical inputs. WTO protocol also stresses that only that plant material could be exported that carries the tag of 'organically grown'. Trials at organic cultivation of commercial crops have been made and need to be initiated for medicinal plants too. Organic cultivation of medicinal plants has to be a community response and undertaken by every grower.

Organic cultivation of medicinal plants in the State shall be initiated via grower cooperatives.

4.2.4. Market Information System: There is no mechanism in the State to inform the growers about the price or the demand of different species of medicinal plants in different markets. This is mainly because there is no nodal agency in the State to own this activity. Lack of this information hampers the effective positioning of the State on herbal map of the country and is also viewed as one of the causes for slow picking up of cultivation in the State.

The State shall designate a nodal agency preferably Himachal Pradesh State Forest Corporation and adequately strengthen it for gathering trade related information in consultation with Private Sector on medicinal plants and making it available to the resource user groups.

4.3. Trade and Enterprise

Trade practices related to medicinal plants have been traditionally complex and secretive with a chain of commission agents involved from the harvesting stage to the final destination of every plant/raw drug. In the process, the gatherers and producers of this resource receive only incidental charges for collection from the wild or subsistence prices for cultivated material. The non-availability of remunerative buy-back arrangements also affect the confidence of growers into going in for cultivation of medicinal plants. These trade practices are affecting the quality (as quantity being the principle, adulteration of the material takes place) and cultivation (being non-remunerative) of medicinal plants on one hand and development of value addition enterprise on the other. The Policy aims to improve the situation so that medicinal plant related trade and enterprise starts making significant contribution to the economy of the State especially of the rural areas.

4.3.1. Establishment of models for viable public-private-community partnerships: Himachal has a tremendous potential to reap much higher socio-economic benefits from the medicinal plant sector. Trade and enterprise of medicinal plants/ products is, however, intimately linked to remunerative returns to the producers. One of the ways it can become remunerative is to ensure buy back arrangements with the users of this produce. It can happen only if the user group is assured of getting agreed quantities year after year. Experience shows that working in isolation in the field is neither good for the managers of the resource, nor for collectors and producers of the resource. Public-private-community partnership in this effort, including effective involvement of the three State run Ayurvedic formularies and 70 odd private herbal units in the State, is seen as a viable proposition to get better deal for scientific cultivation and effective marketing.

The State shall establish models for viable public-private-community partnerships for cultivation, value addition and marketing of medicinal plant based enterprise.

4.3.2. Organize gatherers and producers: The trade in medicinal plants is highly exploitative. The collectors and producers of medicinal plants get only a negligible share in this multi-crore rupees business. One of the reasons for these low returns is that the gatherers of medicinal plants are poor rural households with little bargaining power. Often the medicinal plants harvesting by rural poor households end up towards repayment of the loan installments. With a little bargaining power, better returns could be obtained. The people need to be organized for this purpose. Some preliminary work at organizing people has already been done and VFDSs have been constituted under the PFM rules. Now the PRIs have also got a major mandate in respect of medicinal plants and their role in trade of medicinal plants needs to be fine-tuned. Actual user groups of the resource, for meeting domestic needs or for commercial purposes, can be identified and organized into community co-operatives/ societies for trade and enterprise development related to medicinal plants.

Viable models of community organization for trade and enterprise development in respect of medicinal plants will be developed.

4.3.3. Facilitating in situ Consumption and Buy-back Arrangements: The lack of remunerative buy-back arrangements is a major hurdle in promoting cultivation. The State has a large number of herbal based pharmaceutical units, including 3 under government sector. As at present these units procure most of their requirements from outside the State. There is a case for making these units source their requirements from the raw material available in the State. Only in case of shortfall in availability they should procure it from outside.

The State shall put in place mechanisms for ensuring that the herbal based pharmaceuticals in the State meet their raw drug requirements from the available raw material in the State.

4.3.4. Quality Certification and Fair Trade Practices: Medicinal plants need to pass through stringent quality checks to enable their export. The cultivated material needs to be certified by some accredited agency. The trade of the material also needs to follow fair trade practices. Whereas all these activities will help in promotion of 'Himachal Herb' type of brand for its raw material and value added products, it will need a specific nodal agency to coordinate and monitor these activities.

Mechanism for quality certification and fair trade practices will be put in place.

4.4. Health Security

Local communities have been taking care of their health care needs by using medicinal plants from their surroundings since ages. With the dwindling plant resources on one hand and the advent of so-called 'modern' health care system on the other, the age-old health care traditions are fast waning. The vast storehouse of accumulated knowledge about healing properties of plants lying with the folk healers is also facing a threat of permanent loss. People need to be reminded of their rich medico-cultural heritage and motivated to revive this heritage for their primary health care needs and passing on the associated knowledge trove to the next generations. One of the ways to promote the continuation of these traditions is by way of home/ community herbal gardens.

4.4.1. Promotion of home/ community herbal gardens: Availability of plants at hand is one of the ways to promote the use of plants for health care purposes. People can be educated about the use of plants for their primary health care needs and motivated to grow a mosaic of medicinal plants in their homesteads. Similar gardens can be established for the community also for use by the local herbal healers. These herbal gardens will help in re-establishing the fast vanishing bond between the local communities on one hand and their environment on the other.

The State shall initiate a programme to promote local use of ecosystem specific medicinal plants via home and community herbal gardens for health security in rural and urban areas.

4.5. Legal Reforms

In wake of the multiplicity of the legal and administrative provisions related to the sector, the policy recommends the examination of all the laws and guidelines governing this sector (state/ national/ international) and proposes a uniform appropriate legislation based on the basic principle of conservation, sustainable harvest and preservation and optimal utilization of resource in the state.

4.5.1. Management of the resource: In its resolve to move steadily towards a more participatory management of forest resources, the government of Himachal Pradesh has brought forth progressive legislations in the form of the PFM Rules and the notifications to devolve regulatory powers to the Panchayati Raj functionaries. However, in order to bring about real participation of the communities towards the management of their local forest resources, the whole gamut of legislations affecting the forest resources need to be streamlined towards achieving the objectives of this policy. The issues of defining of 'user groups' under PFM rules, land tenure for MPPA areas, adjustment of timing of final harvest in respect of annual/ short rotation species, sharing of usufructs etc. need to be fine tuned in view of special nature of medicinal plants. There is also a need to make the constitution of the village level institution for forest management as well as the powers

conferred upon the Panchayat Pradhans more broad based, with the Panchayat sub-committees playing a key role as the village level institutions.

The existing provisions related to participatory management of forest resources and empowerment of local communities will be rationalized with a view to make these effective instruments of forest resource management.

4.5.2. Regulatory framework for cultivation: Except for ‘kuth’, cultivation of which is regulated under the Wildlife (Protection) Act, 1972, no regulatory framework exists for cultivation of other medicinal plant species in the State. Most of the traded medicinal plant species of the State being accessed from the wild – and, therefore, forming ‘forest produce’ - it becomes very difficult for even the genuine growers to prove that a particular consignment of medicinal plants is of cultivation origin. Therefore, even the cultivated material could attract provisions of the Forest Produce (Transit) Rules, 1961 and the growers end up paying royalty/ permit fee to the state for trade of cultivated material. In the absence of any regulatory mechanism it is difficult even for the regulatory authorities to certify the source of the material and monitor the yield. With panchayats already endowed with ‘ownership’ of medicinal plants found in the wild, possibility of their role in regulatory mechanism for cultivated material can be explored. The issue definitely needs to be resolved to encourage cultivation.

The State shall work out effective regulatory mechanism and issue necessary guidelines to encourage cultivation of medicinal plants.

4.6. Institutional Mechanism

The medicinal plant sector has remained a largely neglected and little understood sector. Most of the supplies of medicinal plants (species-wise and quantum-wise) being met from the wild, the mandate to manage the resource has to lie with the Forest Department. However, at the Government of India level, medicinal plant sector is viewed as related to health care and, therefore, has been mandated under the Department of AYUSH, Ministry of Health. In addition to these two departments having extreme stakes - one related to conservation and the other to the use of the resource - there are a whole lot of other stakeholders related to this sector including the primary gatherers, folk healers, local traders, researchers and entrepreneurs. There is little dialogue amongst these various stakeholders often having conflicting stakes on the resource. No improvement in this sector is, therefore, possible without developing appropriate institutional mechanism, effective inter-sectoral linkages and a common strategy.

4.6.1. Designation of a Nodal Agency for the Sector: The State Forest Department, the State Department of Ayurveda and the various Research Institutes in the State have been pursuing their own agenda as far as the medicinal plant sector in the state has been concerned. In the absence of any single agency to steer this sector, the scattered and rudderless efforts made by various agencies to improve the sector have made little impact. Even within these various agencies, development of medicinal plant sector has never received any special attention. Experience suggests that this sector will continue to get neglected if it remains as a diluted activity of various concerned departments. Experience

also suggests that rooting of activities needing inter-sectoral linkages within any specific department invariably fails to yield desired results.

In this scenario, it would be desirable to provide appropriate focus to medicinal plant sector within the concerned departments and to set up an **independent autonomous authority** (in the form of *society*) to steer the medicinal plant development programme in the forest areas of the State. Whereas the constitution and mandate of this Authority/ Society is a matter of detail, it would be desirable if a senior Forest Officer heads the Authority since major emphasis related to the herbal sector will be on conservation, augmentation and sustainable harvesting of the resource and cultivation of priority species on forest land. Other staff of the Authority/ Society could be drawn from concerned departments or could be recruited afresh. This Society also needs to have fair representation from the various stakeholder groups including representatives of herb gatherers, farmers, folk healers, industry, traders, NGOs, research institutes etc. For administrative ease, the Forest Department may be designated to act as umbrella department.

Given adequate autonomy, the Society would be in an ideal position to establish inter-sectoral linkages including private partners and prepare comprehensive plans for development of this sector. This Society will also act as a service node for dissemination of information related to IPR issues, export regulations, legal provisions governing medicinal plants, cultivation etc. to various user groups. The Society shall also coordinate with neighbouring states and seek their cooperation in effective implementation of the policy instruments. Though the society would be an autonomous body, it will have adequate government “hold/ presence” and representation of other stakeholders, for the promotion of the herbal sector. Such an agency/ society would ensure that a coordinated and balanced approach is maintained for the promotion of *in situ* and *ex situ* conservation of medicinal plants, value addition and processing, development of market linkages for gathering trade related information and making it available to the resource user groups and to promote public-community-private partnerships in the herbal sector. The work would continue to be carried out by the respective Departments/ Organisations but the society would provide a focus and direction to the activities.

A State Medicinal Plants Board under the Department of Ayurveda was set up in the State vide GoHP, Dept. of Ayurveda Notification No. Ayu. Ja (6)-2/2001 dated 06 November 2001. This Board can continue to function under the overall operational policy framework for the sector or can be merged with the said autonomous Authority.

The State shall designate and suitably strengthen an interdisciplinary and autonomous nodal agency (in the form of society) for steering the overall development of herbal sector in the State under the aegis of Forest Department.

4.6.2. Funding: Implementation of any developmental sector largely depends upon the financial inputs available for development of the sector and a clearly defined implementation mechanism. Whereas the autonomous Authority will be responsible for preparing projects for generating necessary funds to execute its plans, a dedicated budget line will have to be created within the state budget to enable the Authority to remain operational. Funds can also be allocated for various conservation and educational activities related to medicinal plant sector from the CAT plans of the various state Hydro-electric Projects. Project funds would be sourced from Planning Commission, the State

Plan, various concerned Ministries and Departments like MoEF, MoHealth, MoRD, DST, DBT, NMPB etc. Funds could also be raised through projects submitted to international and national donors. The Society would also make efforts to raise funds through public-private-community partnerships.

A dedicated budget line to sustain administration of the Board will be created within the state plan budget.

Separate funds will be allocated from the CAT Plan funds towards conservation and educational activities related to medicinal plant sector.

4.6.3. Implementation Mechanism: An appropriate implementation mechanism involving the concerned departmental agencies with effective involvement of PRIs will be worked out. The strength of various concerned departments in the form of their field level presence will be exploited for facilitating implementation of the programmes under the policy. For Example State Forest Department would be responsible for all activities related to conservation, harvesting and augmentation of the resource, Research Organizations would be responsible for research on various aspects and State Ayurveda Department would be responsible for avenues for value addition and marketing tie ups etc.

A detailed participatory implementation mechanism will be worked out to implement the policy instruments.

4.6.4. Human Resource Development: The herbal sector in the state has suffered due to lack of focus and overview by the concerned agencies. Needless to say that trained manpower appreciative of various aspects of the medicinal plant sector is not available within any of the concerned agencies. There is, therefore, a need to evolve a training strategy for the frontline staff on all aspects of medicinal plants like cultivation, harvest, storage and marketing etc. Similar efforts would be made to train farmers/ NGOs and other clientele engaged in this activity. The institutions and universities having expertise would be identified for the purpose.

A comprehensive programme of capacity building of personnel from various implementing and associated agencies will be drawn and undertaken.

4.6.5. Orienting the Research on Medicinal Plants: Major research on medicinal plants in the State as on now is on cultivation of exotics species or a handful of native species in high commercial trade. There is little research on cultivation of ecologically sensitive and red listed native medicinal plant species. Similarly, there is no apparent research agenda related to addressing the *in situ* management of medicinal plants. The research agenda of the scientific institutions working on medicinal plants shall, therefore, need to be modified to facilitate the objectives of this policy. This would mean committing major proportion of the budget for medicinal plants for research on plants indigenous to the state of Himachal Pradesh as against the present trend of major budgetary resource allocation in favour of exotics.

The State shall ensure that the first charge of state sponsored research on medicinal plants will be on in situ management, cultivation, harvesting, value addition, quality certification and marketing of native medicinal plant species.

4.6.6. Monitoring Mechanism: Effective implementation of the policy would require its constant monitoring. It would be worthwhile to set up an interdisciplinary Task Force for monitoring at the macro level. This Task Force, comprising of elected representatives from all levels, representatives of concerned agencies, civil society organizations, and subject matter experts, will also guide drawing the development plan of the sector. At the micro level, the monitoring of implementation of programmes and activities will be carried out through participatory process involving PRIs, local community organisations and experts drawn from concerned agencies.

A detailed monitoring mechanism shall be evolved for monitoring the progress of both the policy instruments and the programmes under the policy.

4.6.7. Course Corrections: Since this is the maiden policy for developing medicinal plants in forest areas, there is a likelihood of views of some stakeholders might not have got adequately reflected in this policy. Moreover, with more information becoming available and technological developments taking place by the day, there will be need for course corrections. Some consultative mechanism for effecting these course corrections in the policy to keep it dynamic and contemporary will need to be developed.

Mechanism for course corrections of the policy through a process of wide public consultation will be developed and put in place.

4.7. Linkages with Other Policies

Since the herbal sector in the state has largely remained in the sectoral domain, each of the concerned agencies have some or the other sections of their sectoral policies implicitly or explicitly having a bearing on herbal sector. Suitable links with these policies will need to be established and contradictions, if any, will need to be ironed out. Similarly some other policies of the State and the Central governments viz. water policy, tourism policy, environment policy, land use policy etc. can be usefully linked to the herbal policy of the State. The Policy and Planning Unit of the State and the Medicinal Plants Board can be entrusted with this job.

Suitable links with the existing policies of the State and the Centre governments shall be established for effective implementation of the herbal policy.

4.8. Linkages with Neighbouring States

To avoid the undue socio-economic exploitative mechanisms and to check the illegal trade practices in the medicinal plants, there is every need to establish a coordination mechanism amongst the neighbouring states like Uttaranchal, Jammu & Kashmir and North-Eastern States having a potential medicinal plants resource and its virtual trade.

Also the coordination unit/ coordinating agency would ensure that the policies existing and perspective policies of these states are in conformity with each other, which will ensure the equitable development of medicinal plant based trade.

Suitable coordination with the neighbouring states by means of periodical review meetings in the areas of policy, conservation, cultivation, trade and marketing practices shall be ensured.