

**GOVERNMENT OF ARUNACHAL PRADESH
DEPARTMENT OF ENVIRONMENT AND FORESTS
ITANAGAR**

The 3rd July, 2015

THE ARUNACHAL PRADESH MEDICINAL AND AROMATIC PLANTS POLICY, 2015

No. SMPB/UNDP/293/2011/71

RESOLUTION

Preamble

- ❖ *Recognizing the richness of biodiversity and the unique geographical context of the State of Arunachal Pradesh ;*
- ❖ *Recognizing that the State is a treasure house of Medicinal and Aromatic Plants (MAPs) and houses more than 500 different species of MAPs ;*
- ❖ *Recognizing that MAPs sector has the potential to become the backbone of the economy of the State and thus streamlining and strengthening the trade regime to benefit the Government as well as the local community ;*
- ❖ *Conscious of the need for promoting traditional healthcare as well as the need for according legal recognition to the practitioners of traditional healthcare ;*
- ❖ *Acknowledging the need for a comprehensive forest sector policy with a special emphasis on MAPs based on a fresh approach of integrated natural resource management ;*
- ❖ *Realizing that the current unregulated regime for cultivation, collection, harvesting and marketing are inadequate and there is a need for improving and making it more proficient and effective ;*
- ❖ *Encouraging community participation in conservation and growth of MAPs and ensuring equitable benefits to the community ;*
- ❖ *Creatively use of Joint Forest Management and Anchal Samitis to integrate MAPs conservation as a major objective ;*
- ❖ *Protecting Traditional Knowledge and Traditional Ecological knowledge for the benefit of MAPs conservation and use ;*
- ❖ *Exploring the concept of certification to MAPs ;*

The State Government of Arunachal Pradesh hereby formulates and dedicates this Medicinal and Aromatic Policy to and for the people of Arunachal Pradesh :

1. BACKGROUND AND RATIONALE OF THE MAPS POLICY :

1.1. Ecological context : Arunachal Pradesh has 82% of the geographical area under forest cover and has the maximum forest density. The State is amongst the twelve mega biodiversity hotspots in the world. The State has 12% of the total recorded forest notified as Reserved Forest (RF). There are eight Wildlife Sanctuaries, One Orchid Sanctuary and two National Parks in the State. These harbor a rich source of medicinal and aromatic plants and therefore needs a special emphasis on their conservation taking into consideration the ecological importance of the State. This is in addition to the need of a comprehensive forest sector policy which needs to be formulated and thereby strengthening the MAPs regime.

1.2. Unique Community Context : The presence of tribal communities, each with a unique, social, cultural and economic milieu, diverse customs and traditions, dependence of the people on forests for livelihood along with a heritage of protecting forests having defined customary rights over forest land and use of natural resources presents a unique opportunity to the State for having such a Policy. The medicinal and aromatic plants sector has to follow a community driven and livelihood focused approach. The medicinal plants having a short rotational cycle and where potential returns are available within three to four years as compared to other timber species again reinforces that this sector offers an important opportunity to support additional livelihoods to the forest produce/product dependent communities of Arunachal Pradesh. Numerous people oriented institutions including traditional bodies and also formal bodies such as Eco Development Committees, Joint forest management and Anchal Samitis which exist with varied strengths can be creatively used for encouraging community participation in the development of the MAPs sector.

1.3. Rationale : The urgency for a policy for the conservation of MAPs in the state comes with the recognition that the economic, environmental, social and institutional circumstances are changing. MAPs can open avenues of economic growth in the emerging world market but are threatened in their natural habitats due to over exploitation and unsustainable practices. The State therefore is in need of a comprehensive MAPs policy based on a fresh approach of integrated natural resource management in line with the state, national and international developments in forest governance. The policies and programmes of the Government need to be made more responsive and capable, so that the valuable biodiversity in MAPs is protected and people dependent on them are not exploited. There should be a careful choice of past experiences both on management and institutions as well as exploring potential legal arrangements for mainstreaming conservation of MAPs. It shall be in consonance with the category of forests, the nature of land and existence of communities and their customs and social practices in a given location.

2. GOAL :

2.1. To achieve sustainable MAPs management while preserving its source at optimum levels in forests, wildlife, and biodiversity habitats; and to strive for enhanced livelihoods of the people of the state through the protection of traditional knowledge through the development of MAPs.

3. PRINCIPLES :

3.1. Sustainable Development : Sustainable Development encompasses the four pillars of economic advancement, social development, environmental protection and cultural diversity. Sustainable Development refers to "improving the quality of human life in perpetuity, while living within the carrying capacity of supporting ecosystem, and not undermining the diversity and importance of other natural species and systems, indicating a positive change which does not undermine the environment or social systems on which we depend." The broad concern of sustainable development is thus to fulfill the essential needs of all human beings and all other species in an ecologically sound manner. The above shall form the bedrock of MAPs management requiring a coordinated approach to planning and execution.

3.2. Precautionary principle : The precautionary principle obligates the State to take appropriate measures to prevent environmental harm before it occurs, rather than repair damage that has already occurred. The precautionary principle applies where scientific evidence is uncertain and preliminary scientific evaluation indicates that there are reasonable grounds for potentially irreversible damage on the environment and human life. The principle shall be applied while MAPs are harvested and for the larger protection of valuable biodiversity and traditional knowledge related to MAPs.

3.3. Integrated Management : Integrated natural resource management is an essential ingredient of sustainable development and is of particular significance to the State where sustainable management of natural resources should incorporate economic, social, cultural and environmental values. Integrated approach recognizes the inter-relatedness of all natural resources and coordination of policies, programs, plans and projects in the exercise and performance of administrative and statutory functions by Government agencies, statutory authorities, local government bodies, and the community. The plans and programmes of different departments such as Forest Department, the State Biodiversity Board, Planning Department, and Horticulture Department, Rural Development Department and Panchayat Raj among others shall be coordinated for concerted management and sustainable use of MAPs.

3.4. Decentralized Governance : The State of Arunachal Pradesh being a special state under the Indian Constitution, with its indigenous population being tribal, the natural resource management shall be within the customary domain. The institutional arrangements including customary/Traditional institutions or more formal institutions such as Joint Forest Management Committees and the Anchal Samitis shall take a proactive role in bringing effective community support and participation. The empowerment of the stewards of the natural resources can be achieved only by a more secure intellectual property rights regime, improved access to financial resources, markets, information, training and equitable participation in political decision making. In the context of integrated natural resource management, decentralization pertains to the application of principles of good governance- transparency, rationality, accountability, reduction in time and costs and participation at the local level.

3.5. Gender and Equity : The sections of the society, who are the most dependent on forest resources for their livelihoods, should not be discriminated against in the development processes. Special efforts are required to provide equal space in institutions and mechanisms of decision making to bring to the forefront, the perceptions, attitudes and choices of all stakeholders especially the economically and socially backward. Equity in the context of this Policy refers to both equity in entitlements and participation of all stakeholders in processes of decision-making over management and control of forest resources. The role of women in the protection of MAPs is irreplaceable as they shall play a key role in the conservation and collection of MAPs.

3.6. Policy and Strategies as a continuous Process : Economic, environmental, social and institutional frameworks and resource needs are rapidly changing, within the State and at the national and global level. The MAPs policy and strategy thus need a regular review and adaptation to address these changes through appropriate institutions and processes.

4. POLICY MEASURES :

4.1. Legal status of MAPs : Medicinal and Aromatic plants have to be defined to bring the sector within the purview of a legal framework. The definition could include an inclusive list of species of MAPs that are of relevance to the state determined by their access by the community for different uses, commercial value, and status and need for conservation especially the degree of threat (whether they are in the rare, threatened or endangered (RET) categories) among others. Items in the inventory could be added or removed as per requirement by the State Government through a carefully designed scheduling and de-scheduling process. A separate chapter may be included within the Assam Forest Regulation itself for defining MAPs as a Subset of "forest produce or minor forest produce" and also to have an inclusive list of MAPs.

4.2. Access regime on MAPS, Rights and Concessions : The holders of the rights and concessions in forest areas will have the responsibility to identify themselves with the protection, development and management of forests in order to ensure the continuity of such rights and concessions. The recording of rights process in Reserved Forests and settlement of rights in Protected Areas or recognition of forest rights to minor forest produce under Forest Rights Act need to focus on right to access MAPs. Infract the FSO should be given a new set of standard operating procedures especially when access to MAPs is concerned for recording of rights after consultation with the communities' traditional authorities and in consonance with Working scheme/plan prepared by Forest Department (FD), Peoples' Biodiversity Registers (PBRs) under the Biodiversity (BD) Act as well as micro plans under JFM as well as any plan developed by Anchal Samiti/village authorities.

Unregulated access and collection of MAPs for bonafide livelihood needs by the community from Unclassed State Forest may be detrimental to sustenance of the resource. A regulatory regime, therefore, shall be introduced which defines 'bonafide personal use' and specifies the type of species and quantity allowed to be collected even for bonafide personal use after a thorough assessment of the needs of the community. The rights and concessions regarding access and use of MAPs also need to be included in the working scheme/plan for the management of forest to be prepared by the Forest Department in consultation with the community including the traditional authorities of such communities, the 'Gaon Buras'.

4.3. Classification of Medicinal Rich Forests : The functional classification of forests is important in the context of this Policy to promote appropriate land use for providing enhanced livelihood opportunities and improved conservation through MAPs.

4.3.1. Unclassed state forests, JFM and MAPs : The approach of Joint Forest Management (JFM) shall be reworked to elicit enthusiastic participation of the community and channelizing their efforts in conservation and sustainable use of MAPs especially in unclassified state forests where there is defacto control of communities over forests. The Joint Forest Management should be promoted as a suitable management option for unclassified forests to promote the sustainable conservation of MAPs. The micro plan of Joint Forest Management shall include the permissible quantity of the MAPs to be extracted by the community.

Corporation should act as the nodal trading agency for facilitating the above mentioned activities.

Further, the micro plan of Joint Forest Management shall be made in consonance with the larger working plan of the division as per the latest Working Plan Code. Such plans should also ensure that it is in consonance with other planning processes including PBRs under the BD Act as well as any plan developed by Anchal Samiti/village community.

4.3.2. Medicinal Plant Conservation Areas (MPCAs) and their institutions : A robust and legally backed framework shall be created for in-situ conservation in the form of Medicinal Plants Conservation Areas (MPCAs) with the involvement of the communities especially in the unclassified forests. The legal status of the land and the legality of transfer of community land should be addressed and shall be based on firm legal footing during the creation of Medicinal Plants Conservation Areas. Moreover, Guidelines must be issued by the state to give executive strength to activities of MPCAs and to ensure regular fund flow.

4.3.3. Village Forests and MAPs : The creation of Village Forest which would promote the management and growth of MAPs and socio economic development of the village should be specified. While framing the Rules, the social, economic and cultural needs of the community which will be involved in management of the village forest should be addressed.

Further, it shall be ensured that the mapping of the biodiversity of the area is done and the management concerns are addressed; the powers, duties, rights and responsibilities of the community, forest department and State Government are clearly defined; there is no contravention to the provisions of other participatory and forest management initiatives such as Joint Forest Management, Anchal Reserve Forest, Village Forest Reserves among others; the funding for carrying out the activities for development of the biodiversity of the area is timely and adequate; there is no contravention of the provisions of the Working Plan/Scheme; there are provisions for adjudication of disputes, appropriate forum for dispute resolution, appellate authority, manner of representation, penalty for contravening the provisions of the management plan or the Rules; it is sensitive to the fact that the community has control over the unclassified state forest; the village community is able to exercise reasonable autonomy in its functioning with facilitation support from the Government.

4.3.4. Conservation Reserves and Community Reserves under the Wild Life Protection Act : Community Reserves may be constituted on such lands outside National Parks or Sanctuaries or Conservation Reserves where community ownerships and control is undisputed such as family/clan owned forests among others for conservation of MAPs. Further, guidelines may be issued for preparation of management plan for the Community Reserves with emphasis on MAPs Conservation. This will have the strength of the Wildlife Protection Act and the State Government shall be committed to support such measures under the law.

Similarly, conservation reserves may also be created with the consent and assent of the community and Rules and institutions as envisaged under the Wildlife Act may be prepared for the management of such Conservation Reserve focusing on MAPs access, collection, conservation and management and benefit sharing. The rights and duty regime of the Committee, community, forest department, NGOs should be clearly defined in the Rules of such conservation reserves.

Land owned by the Government, such areas which are rich in MAPs diversity and where communities have been traditionally conserving, regenerating and managing forests, may be declared as a Conservation Reserve. Synergies should be built between the forest department and the community for the management of Conservation Reserves as well as the community reserves.

4.3.5. Community Forest Resource and Conservation and Management Plan under FRA : The Gram Sabha or any other traditional village institution may delineate Community Forest Resource in the manner provided in Forest Rights Act and make rules for the management, protection, regeneration of medicinal plants diversity. A Committee may also be formed by the Gram Sabha or the Traditional Village Institution to ensure the protection of such Community Forest Resource. The Committee is now mandated to prepare a conservation and management plan wherein specific measures may be undertaken to conserve and propagate MAPs. Such plans in fact needs to be integrated into existing micro plans or working or other statutory backed plans, however it is the Village plan that will gain supremacy in term of the conservation and management mandate.

The right of communities to protect, regenerate, conserve and manage a Community Forest Resource may be used appropriately wherever there is a legal uncertainty as far as the custodianship of land is concerned specifically since the definition of a USF potentially raises some confusion between the de-jure and de facto position of forest land.

4.3.6. Biodiversity heritage sites as a repository of MAPs : Those areas comprising of rare and endangered species of MPAs should be constituted as Biodiversity Heritage Sites (BHS) and should be managed by the local community through enabling rules under the Biological Diversity Act in consultation with the Central Government. The selection and management of areas may be done, as per rules framed by State Biodiversity Board. In case of the presence of Rare , Endangered and Threatened species, medicinal Plants Conservation Areas(MPCAs) may be Declared as Biodiversity Heritage Sites.

4.3.7. Role of Gram Panchayat and Anchal Samitis in MAPs : The state shall frame enabling Rules for the management of Village Forest Reserve (VFR) and Anchal Reserve Forest (ARF) under the Arunachal Pradesh Anchal Forest Reserve (Constitution and Management) Act, 1975. The Rules should lay special emphasis on conservation and management of MAPs species in the Area.

4.4. Schedule of royalty on MAPs species : The schedule of royalties for collection of Non Timber Forest Products (NTFP) including MAPs for commercial purposes shall be revised on a periodic basis and published in every forest division with the assistance of Division Forest Officer and in consultation with the Horticulture department as well. Moreover, a separate list of MAPs which are of high commercial value and allowed to be traded needs to be prepared and rates of royalties for each one shall be fixed. The list needs

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to take into account the specification of the working plans of the forest divisions such as total quantity allowed for collection, manner of harvest, season of harvest areas in the forest division from where collection is to be done and any other stipulation which promotes sustainable use and conservation of the species.

The list should also be compared with the DGFT (Director General of Foreign Trade) list of Exports/Imports, the IUCN (International Union of Conservation of Nature) RED list as well as the Appendices to CITES in order to avoid an illegal export scenario in the future. There should be regular updating of this schedule by the Forest Department so that MAPs species which are doing well may be de-scheduled and collectors are allowed to procure them from the wild.

Assistance from the State Biodiversity Board, Arunachal Pradesh State Medicinal Plants Board, local communities, traditional healers, research institutions dealing with Medicinal and Aromatic Plants shall be taken in this regard. A proper threat assessment of the MAPs available in the state is to be done on an urgent basis.

4.5. Market Control Mechanisms for MAPs : Market control mechanism shall be put in place where the paramount needs of the local community and enabling environment for the local trader shall be addressed to promote sustainable use and trade of medicinal plants keeping the sustainability and livelihood concerns in mind. The State Medicinal Plants Board shall be made as the nodal trading agency for facilitating commercialization of MAPs by the community which should include activities such as local level processing, facilities for storage, local transportation, constituting cooperatives and federations, setting up of medicinal mandis for purchase and sale etc.

4.5.1. Recognition of local trader through a due process : Any person(s) trading in MAPs in the forest division shall be recognized through a due process with the office of the Division Forest Officer. A recognition certificate or any other formal recognition process may be adopted to be issued to every local trader. No trader who is not recognized in the forest division shall be allowed to procure medicinal plants for commercial purposes from any forest division or/ from any person. The first charge for trading shall be with the local community. The State Medicinal Plant Board should also be informed of the local traders of every forest division and species they are trading in through a self auditing process. The State Medicinal Plant Board should also be authorized to prescribe species which cannot be accessed for commercial use and publish it in every forest division with the assistance of Division Forest Officer. The contours for bonafide personal use by communities of MAPs should be determined during the settlement of rights process so that this may be separated from commercial utilization.

4.5.2. Pricing support and MAPs : A minimum support price for each MAPs species may be fixed subject to revision from time to time. The criteria for fixing prices should be availability, quality, source from which it is procured, demand and rates in the national and international market. A minimum support price should also be prescribed for the indigenous local collectors and cultivators which would be distributed by the Forest Corporation to underwrite any possible losses.

4.5.3. Issuance of transit pass : The provisions of the Arunachal Pradesh State Biodiversity Rules (APSBR) need to be implemented in the state at the earliest so that provisions on access of biological resources including MAPs, issue of trade permits and transit passes given within the Assam Forest Regulation can be made compatible with the above mentioned rules.

4.6. Regulatory and Institutional Support : A Certificate of Origin may be given after due scrutiny for cultivated varieties by the DFO or District Horticulture Officer or Agriculture Officer under the overall supervision of the SMPB. Those Plants listed in the IUCN Red list, list of threatened species notified by National Biodiversity Authority or the botanical survey of India, any other list of threatened species that may be prepared and duly notified in future may be banned for extraction from threats of the State.

4.7. SMPB as the Nodal Body in the State for MAPs Policy Implementation : SMPB should function as an independent body with officials drawn on deputation from the Forest Department, Horticulture Department, Health Department etc, instead of post being held on additional charge or ex-officio basis as all the Medicinal Plants are of forest origin, the Board should be headed by a senior forest officer on state deputation from forest department.

SMPB should be made a statutory authority, with enabling provisions made under the biodiversity act or any other relevant Act and should be chaired by a person having knowledge of MAPs, their management, marketing etc, to be selected from the forest department.

The SMPB shall be strengthened as a professional, Technical and Managerial Body, providing support to PRIs, relevant Government departments and other stakeholders for assisting them in fulfilling their roles and responsibilities for sustainable conservation and management of MAPs. The nodal agency- State Medicinal Plant Board will be designated to promote in-situ and ex-situ conservation of MAPs, value

addition and processing, develop 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 sector. In this regard co-ordination between Forest, Agriculture, Horticulture, Ayurveda Departments, Forest Corporation, self-help groups, federation of user groups, NGOs, PRIs, trade and development Co-operatives, financial institution, shall be done by the SMPB. Linkages with universities, NGOs, private/ traditional practitioners and other institutions for research support on cultivation, screening of plants, harvesting time and cycle will be developed.

4.8. Traditional Medicinal System, Herbal Tourism : Traditional medicinal systems can be revived for health and herbal tourism which will largely benefit the conservation and sustainable utilization of MAPs within the State. Infrastructural support including research facilities and traditional healing centers shall be created for facilitating investment in the sector. Capacity and skill development is integral in fetching opportunities for the local communities in the health and tourism sector. The State Biodiversity Board in consultation with the State Medicinal Plants Board and forest department shall form guidelines to assist the Biodiversity Management Committees in drafting a health and health tourism code.

4.9. Conservation of Biodiversity including MAPs : The Biodiversity Act, 2002 very clearly defines biodiversity to mean- species diversity, genetic diversity and ecosystem diversity. It should be used as an important legal tool in the protection of MAPs since they form a part of all three kinds of diversities mentioned in the Biodiversity Act. The State Biodiversity Board shall also have the mandate of creating awareness about the concept of prior informed consent and benefit sharing to all the respective communities before they share their information with outsiders. The Convention on Biological Diversity 1992 has emphasized on the incentives for the conservation and sustainable use of biological diversity and traditional knowledge. The benefit sharing arrangement should be framed accordingly on mutually agreed terms.

4.10. Promoting and preserving Traditional Knowledge for MAPs : Traditional Knowledge has not been defined in Indian Law. A definition of traditional knowledge should be drawn up based on domestic parameters and international law. Traditional knowledge on MAPs should be linked to the concept of community intellectual property mentioned in Forest Rights Act in order to secure the rights in favor of the community. Further, traditional knowledge related to biological resources is protected under the biological diversity act. The preparations of people's biodiversity register (PBRs) needs to be expedited. Further linkages need to be established between the knowledge recorded in the People's Biodiversity Registers especially with regards to MAPs and the community intellectual property. Further rules may be framed for preventing the unauthorized access of the Traditional Knowledge recorded in the people's Biodiversity Registers and the community intellectual property by any person or body other than the indigenous local community.

If these PBRs are linked to the Traditional Knowledge Digital Library, then the Knowledge could be prevented from being misappropriate with adequate benefit sharing mechanism as prescribed within the APSBR for the local communities.

4.11. Promoting and preserving Traditional Ecological Knowledge in relation to MAPs : Traditional Ecological Knowledge is vital to the conservation and use of MAPs. This knowledge would entail not only the knowledge of existence of MAPs but also knowledge of their uses, the means to cultivate and harvest them in a sustainable manner including the extraction of the medicinal properties from such MAPs. It is important to protect this knowledge in order that commercial utilization of MAPs as well as their conservation can be balanced. Therefore, such local traditions for conservation of biodiversity may also be documented in the People's Biodiversity Registers and thereby given legal protection. Being a part of Traditional Ecological Knowledge, sacred groves should also be given special recognition, preferably legal recognition in order to not only conserve local traditions with respect to medicinal plants but also help in effective conservation of biodiversity.

4.12. Formal and Legal recognition of traditional healers : There shall be a database of traditional healers maintained by the Biodiversity Management Committees and also updated and formally recorded at the State Medicinal Plant Board. Such healers should be given incentives to record their knowledge. This incentive maybe monetary but more importantly it is through recognition as done in other states such as Chhattisgarh. There should be sharing of knowledge with other healers of different tribes as well as training for younger generations in this discipline. A formal recognition system must emerge at the behest of state to recognized traditional healers based on knowledge, credentials, effectiveness and acceptance by the local community among others. Rules pertaining to such recognition shall be drafted for the state or the

term "indigenous medicine" should be made clear. This will go a long way in enhancing their social status and giving them due recognitions which they have been hitherto devoid of from the mainstream. Further, safeguards must be taken against persons faking knowledge of traditional medicine so that they do not get protection under the recognition process. The North East Folk Medicine Institute at Pasighat has been established by AYUSH as a central university and this could act as a nodal agency for registration or recognition of folk healers.

4.13. Protection and conservation of Rare, Endangered and Threatened (RET) species : The Forests Right Act, 2006 as well as the amendment to the Wildlife Protection Act in 2006 provides for two special categories namely critical wildlife habitat and critical tiger habitat that may be used for the preservation of rare, endangered and threatened species of MAPs. At present, 17 species are in the Rare, Endangered and Threatened (RET) category in the State. The areas of National Parks rich in rare and endangered species of MAPs may be identified by the State Medicinal plant Board with the help of the local community. Such areas may be declared as Critical Wildlife Habitats (CWH) as per the due process to protect the RET species of MAPs in its pristine habitat. Alternatively, the RET species in consultation with the State Medicinal plant Board may also be recommended as additions as "specified plants" to the Schedule-VI of the Wildlife Protection Act.

In fact a threat assessment of the MAPs diversity found in the forest division should be made. Such threat assessment should ideally also be compared with global availability of such species in order to be protected from an illegal export scenario. This comparison can be made with the DGFT list of Exports/Imports, the IUCN RED list as well as the Appendices to CITES. This exercise should be done in PAs, Reserve Forests and USF areas.

4.14. Creation of medicinal plants sustainable harvest protocol : Sustainable harvesting practices may be prescribed and distinguished for those species which are important to the community for sustenance and those species viable for commercial purpose. Sustainable harvest Medicinal plants protocol shall be developed by the State Medicinal Plants Board in consultation with related scientific agencies in the state such as State Forest Research Institute (SFRI) or at the national level. Such protocols should then be popularized far and wide in the state through media, school curriculum, folk songs, educational and research institutions among the key stakeholders such as farmers, forest department officials, indigenous, collectors etc. Accordingly the Forest training institutions including SFRI shall impart knowledge of medicinal plants to the new forest department recruits as well as conduct regular trainings with the ground level officers.

4.15. Potential for cultivation of MAPs remains unexplored : Organic cultivation of MAPs on private lands will be promoted through grower co-operatives. The concept of Certificate of Origin (COO) and Forest Management Unit certification (FMU) could be explored. The WHO Guidelines on Good Agricultural and Collection Practices for Medicinal Plants may also be adapted within the state.

There should be a mechanism to identify cultivated varieties from the wild varieties so that fees/royalty will not be charged. The certificate of origin which is meant for this purpose should be issued by the Divisional Forest Officer/ District Horticulture Officer. Registration of farmers and arrangements with Pharmaceutical Companies is also recommended. The role of Arunachal Pradesh Medicinal Plants Development Society and the practical aspects of the National Mission on Medicinal Plants need to be examined further for their potential in developing cultivation scenario in the state.

4.16. MAPs Based Industries : The State Government will develop incentives to encourage MAPs based enterprise to procure raw material from sources other than government forests. The MAPs based industries in rural areas will be regulated through Gram Sabha's or traditional village institutions. Special attention will be given to value addition and diversification of MAPs products. Value addition through high quality secondary and tertiary processing that reduces inefficiency and wastage and enhances the longevity of the forest based product will be promoted.

4.17. Initiating and promoting Certification of MAPs : Forest certification for MAPs would go a long way in developing this industry and ensuring quality products in the market. Criteria and Indicators will be developed for quality certification of MAPs and other NWFPs. This system will be based on global standards such as FSC and other such certifications standards and will be promoted in the state for MAPs export market.

4.18. Towards a state law on MAPs : If need be, the State Government may like to have a comprehensive State Act for regulating cultivation, extraction, transit and trade of MAPs will be made where inputs from Forest, Agriculture, Horticulture and Ayurveda Departments will necessarily be solicited.

4.19. Research and Development : The Government will promote cost effective research on MAPs sector that responds to the needs of local communities, Government agencies, local private investors and other stakeholders. Institutional co-ordination and collaboration between researchers and end users will be improved. Applied research on MAPs will be addressed through existing drug testing lab of AYUSH at Naharlagun which may also be utilized by standardization of AYUSH drugs. Participatory research relevant to sustainable MAPs management and enhancing livelihoods will be promoted. Appropriate rural technologies will be promoted for conservation and sustainable utilization of MAPs. Support must be given to the SMPB by way of infrastructure as well as agreements with pharmaceutical agencies which have the technical know-how to take care of research and development (R&D).

4.20. International Covenants and Agreements : India has signed a number of international agreements that influence the MAPs sector such as the Convention on Biological Diversity, World Trade Organization, Kyoto Protocol and Convention International Trade Endangered Species of fauna and flora and is party to other non-legally binding instruments such as the Forestry Principles and United Nations Forum on Forests. The State Government will meet its national obligations to these Agreements, Protocols and Conventions through enabling instruments such as executive orders, policy and legislative measures.

4.21. Administrative and Legal Changes : The Government will review the prevailing administrative and legal framework related to MAPs sector to determine the nature of legal reform that will be required to support the new MAPs policy. Necessary amendments in forest sector related Acts, Rules, Orders at the State level and suggestions at the Central Government level will be given priority to give effect to the MAPs Policy. It would be crucial to give legal authority to the SMPB as the nodal agency through enabling legislations such as the Environment Protection Act and should be chaired by a person having knowledge of MAPs, their Management, marketing etc, to be selected from the Forest Department/Allied Department.

The SMPB should also be supported through other strategic partnerships and human resources such as discipline experts and resource experts in order to promote MAPs conservation and sustainable use in a mission mode and more importantly to implement the MAPs Policy in the state.

4.22. Financial Support to the Sector : The implementation of the MAPs Policy and Strategy will require significant financial and human resources. The State Government will develop a long-term investment programme for MAPs sector funding, commensurate with the contribution of this sector to the State GDP, through public sector participation and need-based international funding, in addition to the regular budgetary allocation.

The State Government will also promote self-generating mechanisms on mobilization of resources such as value addition to forest products, market linkages and herbal tourism to supplement the financial resources to the sector.

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