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WORKSHOP PROCEEDINGS

Consultative Workshop on Sustainable Trade, Standards and
Certification Schemes in Medicinal and Aromatic Plants in India

WWF-India Secretariat, New Delhi

29 March 2016

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Syzygium cumini, a tree native to the Indian subcontinent used for controlling blood pressure and gingivitis

Inset cover photos of medicinal plants

© Rawal Medherbs

Top row (L-R): *Saussurea costus*, *Swertia chirata*, *Piper longum*

Bottom row (L-R): *Solanum surattense*, *Wrightia tinctoria*



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Executive Summary

It is estimated that 70-80% people worldwide rely chiefly on traditional, largely herbal medicine to meet their primary health-care needs. Traditional herbal medicine has been practised in India and China since ancient times. India is also one of the world's leading exporters of Medicinal and Aromatic Plants (MAP) and herbal products, second only to China. With globalisation of economies, this industry is expected to grow. Despite its advantageous position, India's share of the USD 62 billion global market is less than half a percent. The increasing demand for wild plants as ingredients in food, cosmetics, health supplements, and medicinal and aromatic products poses major ecological and social challenges which include species sustainability. However, despite a growing demand, the medicinal plant stakeholders need to develop more robust and viable ecological and social standards. The pressure on potentially vulnerable plant species can endanger local ecosystems and the livelihoods of collectors, who often belong to the poorest social groups in the countries of origin. On the other hand, the plant and plant products collectors and small and marginal traders do not receive the real benefits due to systemic drawbacks and lack of institutional supports.

As a response to these concerns, the FairWild Foundation, set up in 2008 to improvise and carry out ISSC-MAP (International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants) criteria, is now working with partners worldwide to improve the conservation, management and sustainable use of wild plants in trade, as well as the livelihoods of rural harvesters involved in collection. The FairWild Standard contributes to the implementation of existing regulatory frameworks provided by national resource management systems, as well as, by international conventions such as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and the CBD (Convention on Biological Diversity). The FairWild principles have been found useful in carrying out NDFs (Non-Detrimental Finding) under CITES and has provided essential tools towards the CBD's core aim of conservation of biological resources, including their sustainable use and fair sharing of benefits resulting from such use. The FairWild Standard provides governmental and non-governmental organisations, representing indigenous and local communities, and the private sector with the means to achieve these CBD objectives within their projects and operations focusing on wild plant collection. Further, the comprehensive nature of the FairWild Standard and the flexibility in its implementation make the FairWild Foundation an ideal partner for governments, companies, NGOs and community-based plant sourcing operations for working towards fulfillment of the GSPC (Global Strategy for Plant Conservation) targets. The FairWild Standard includes access benefit sharing elements as important components of sustainable use practices in the FairWild Standard text and in the related Performance Indicators.

However, there is a long way to go. A parallel can be drawn with the FSC (Forestry Stewardship Council) systems which are now well established and used effectively for timber trade certification. The parallel and lesson learning from the FSC scheme could help in refining the systems for MAPs certifications. However, a

system has to be established first. Any system will be most durable if this backed up by collaborative forces. The current situation demands attention from the central government, respective state governments, medicinal plants boards, biodiversity boards, market players, local communities and other sectors dependent on the market. The existing legal provision indicates greater legal support and policy vision for conservation and management of MAP species.

Through the workshop, we created a forum where all major stakeholders would ponder over all emerging significant issues that needed to be addressed if every stakeholder of medicinal and aromatic plants sector has to get socially and economically justifiable share in the trade, while we must ensure the plants sustain. The response from the stakeholders was overwhelming and the long way considered previously suddenly has started appearing shorter. We will keep the momentum on. A force multiplier is the straight recommendation in the least.

10 June 2016



Dr. Shekhar Kumar Niraj,
Head, TRAFFIC India,
WWF-India Secretariat

I. Inaugural

Asia is a major producer and consumer of MAPs (Medicinal and Aromatic Plants) with trade making a significant contribution to national economies. India is the world's second largest exporter of MAPs, next to China, with many species threatened by overharvesting. The stakeholders in India through various public statements have voiced their concern and have agreed that action is needed. Meanwhile, interest in sustainable and fair trade products is growing – particularly in export markets such as Japan, the European Union, and the USA, but increasingly also in India's own urban hubs.

TRAFFIC, as a division of WWF-India, and a country office of the global wildlife trade network, organised the one-day workshop attended by various stakeholders from the corporate, academia, government and non-governmental sectors with the objective to improve the understanding of standards and certification schemes, with a focus on FairWild— a wild plant sustainable harvesting Standard—and to develop a shared vision and action plan for the uptake of sustainable wild-harvesting and trade measures in India.

Shri Ajit M. Sharan, Secretary to the Government of India, Ministry of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy) during his opening remarks at the workshop said, “MAPs trade chains are complex, involving numerous entities such as collectors/farmers, middlemen, wholesalers, retailers, pharmaceutical companies etc. Stakeholder groups at various levels need technical support to manage MAPs resources sustainably and increase income to collectors. I am glad that this workshop has brought together various stakeholders at one forum to discuss and map out the best possible strategy to manage MAPs trade effectively and sustainably.”



Dr. S. K. Khanduri, IG (Wildlife), MoEFCC (Ministry of Environment, Forests and Climate Change) said, “The pattern of use of medicinal plants has changed and evolved over the years and it is important to recognise this trend. It is important to bring to MAPs the same level of importance that is attached to timber in forest management. Consultations such as this one form an important part in understanding the various issues involved in the MAPs trade in and from India across the range of stakeholders.”

WWF-India Secretary General and Chief Executive Office, Mr Ravi Singh, said, “The regulation of trade in MAPs is vital for conserving the variety of medicinal plant species that are the bedrock of many livelihoods and form an important part of the health sector in India. The involvement of important stakeholders like NGOS and research organisations is key to achieving success in the MAPs conservation sector.”

Dr. Shekhar Kumar Niraj, Head of TRAFFIC’s India office added, “To provide a framework to guide such initiatives, the FairWild Standard was developed by TRAFFIC, WWF, IUCN and other partners through a global multi-stakeholder consultation process involving experts from community groups, businesses, governments, science and social purpose organisations. The FairWild Standard has been recognised as a best practice tool to support implementation of CBD’s GSPC. In India’s North-Western Ghats, TRAFFIC in partnership with AERF (Applied Environmental Research Foundation), is working with local communities for conservation and sustainable use of sacred grove areas. To expand the project’s impact and share the lessons learned from the experience in the Western Ghats, TRAFFIC aims to promote further the uptake of the FairWild Standard by India’s MAP industry.”

II. Technical Sessions

India's progress on MAPs conservation and development- challenges ahead

Dr. Manoj Kumar Sarkar, Former APCCF, TNFD

Dr. Manoj Kumar Sarkar presented a historical perspective of MAPs, where he stated that India ranks second globally in exports contributing 0.5%, compared to 15% market share by China. Dr. Sarkar justified the need for enhanced dialogues on sustainable trade and conservation of MAPs by saying that nearly 70% of the collection process involves destructive and unsustainable practices in India. He stated that from 960 MAPs traded in India, 132 MAPs are threatened and 29 species from seven genus and one family have been included in the negatively listed plants under the DGFT EXIM policy (Directorate General of Foreign Trade Export-Import policy). He listed some of the common problems in regulating trade in MAPs as:

- No inventories
- No collection procedures or protocols
- No standard cultivation procedures outlined or adhered to
- No monitoring of production
- No control on price and lack of standardised pricing mechanisms
- Lack of proper surveillance on wild plant collection versus cultivated plant harvest

Dr. Sarkar further went on to explain about the trade and conservation status of various species, including those whose consumption exceeds 10MT every year. He spoke about the production models of Uttarakhand, Rajasthan/Gujarat and Madhya Pradesh/Chhattisgarh and questioned sustainability of MAPs, benefits to local communities, revenue model- when more than 85% of MAPs which are gathered from forest areas are owned by the government-, the benefits to the local community, the present certification process and status of endemic MAPs.



Recommendation

- Prioritising a total inventory of MAPs in the country
- Undertaking an analysis of MAPs in India, with sustainable trade concerns and benefit to health care as important considerations
- Looking at strategic and technological issues in MAPs conservation and sustainable trade
- Conducting resource surveys

Good field collection practices for the sustainable harvesting of MAPs

Smt. Shomita Biswas, CEO, National Medicinal Plant Board, Ministry of AYUSH

Smt. Shomita Biswas CEO, NMPB (National Medicinal Plant Board), Ministry of AYUSH in her presentation emphasised on the need for a sustainable way to harvest Medicinal Plants (MPs), with 960 species popular in trade where roots (31%) and whole plant (17%) are used by various pharmaceutical industries, drug manufacturers, herbal teas and other industries. Smt. Biswas outlined the objectives of GFCP (Good Field Collection Practices) as encouraging conservation and sustainable utilization, ensuring consistency in the quality, community involvement, capacity building training and benefit sharing to optimise equitable returns to the collectors and other stakeholders simultaneously, documenting required information related to medicinal plant produce.



Smt. Biswas also mentioned that NMPB schemes incorporate GFCPs. She pointed out that the NMPB insists that regeneration of species be an important part of any proposal submitted to them. Smt. Biswas stressed the need for finding substitutes for threatened plants and encourage resource augmentation of threatened species while recommending the need for an urgent update on current policies and legislation. Also recommending medicinal plants to be incorporated in the working plans of Forest Department, capacity building training program for local communities and ensuring market linkages and opportunities for fair trade that include certification scheme.

Recommendations

- The need to look at the impact of current legislations and policies
- Ratio of state to medicinal plant collectors, how many MAPs are collected
- How actively the Panchayats are involved in the implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2007
- Mainstreaming medicinal plants into working plans of states
- Developing market linkages
- Development of a working plan for the Forest Departments
- Need of upgrading the skills of collectors
- Ensuring capacity building
- Creating more opportunities of fair trade
- Creating species wise certification scheme

Panel discussion: Are the current practices, followed by manufacturers of MAPs products in India promoting fair trade and sustainability?

Moderator: Dr. A J T Johnsingh, Senior Advisor, WWF-India

Panelists: Shri Jitender Kumar (Director, ICAR), Shri Amit Aggarwal (Director, Natural Remedies), Shri Sajid Ahmed (Chief of Projects, Hamdard)

The discussions revolved along the lines of fair trade and sustainability where the panelists concurred that it is imperative to have distribution and ecological parameters of wild-sourced MAPs species, keeping into account the rising trade in MAPs. Trusteeship and responsibility of different stakeholders were also brought into the purview. Improper harvest and storage practices affecting quality of the plant and the product was another concern highlighted, by pointing out loss in efficacy while using said product which in the long term may affect the credibility and loss of faith in not only the medicine but also in Ayurveda.

The purchasing power of the Indian consumer was discussed and correlated with equity benefit sharing, especially with high prices incurred to ensure quality. It was agreeable to all present that neither the farmer nor the trader should suffer any losses and the burden of cost should also not fall on the average consumer who currently values an economical product. However a shift in trend with the upper and upper middle class was observed by a few members of the



industry, wherein quality was considered supreme over quantity, generally denoted by the tag of 'organic', where the consumer has been seen willing to pay a premium price for assurance of quality. It was also observed that a lot of waste is generated with improper harvest methods, despite good prices being given for the product, thereby raising the question as to the trickle down of revenue.

The need for a mechanism to distinguish between wild and cultivated plants was discussed as well as if there is a consensus on MAPs to be at a sustainable level versus an optimal level. The role of various stakeholders was brought to the purview and the question asked if the industry has actively been able to propagate the same. A concern was put forth by the industry where a need has been felt to support manufacturers, especially those who want to help with the conservation of endangered species but are inhibited through various current regulations.

The Madhya Pradesh State Biodiversity Board was cited as an example where access benefit MOU was signed with Dabur. Buy-back agreements' safeguarding the farmers was also touted as a good way of ensuring fair trade. It was agreed that for initiatives like these or other similar work across different states and industry players, there is a need to hold inter-ministerial dialogue to have a cohesive, smooth system in place.

Recommendations

- Creating a certification system with provisions to safeguard quality which will also be easily understood by the consumer
- Equity sharing model involving all stakeholders be developed for standards and certification process
- Constituting a committee that is inclusive of all stakeholders to resolve issues of interdepartmental nature
- A more accessible list of plants with conservation status' that can be referred to by the manufacturers

Drawing parallels from Forest Stewardship Council standard and certification system considering precautionary principles for MAPs in India

Dr. Sudhanshu Gupta, Chief Conservator of Forests, Tamil Nadu Forest Department

Dr. Gupta's presentation concentrated on taking lessons from the FSC system and whether the FSC system could be extended to cultivated MAPs, especially addressing the issues of sustainability and market implications. He clarified that the forest certification scheme is primarily a marketing concept which has been implemented outside forest areas.

Explaining the three main types of certifications – Fair Trade, Group and Chain of Custody – Dr. Gupta drew parallels of certification type evolving along the years from being process oriented to product centric. Branding according to him plays an important role in this with the logo being a recognisable brand ambassador, which can also be country specific, conveying a message of trust and quality to the consumer as well as affirming the corporate's stance as one which lays emphasis on sustainability. He made it clear that from a market perspective the concept of sustainability stands not only till the time there is an adequate supply but also till the market can absorb the said supply.

Dr Gupta pointed out that an integrated approach involving stakeholders is an important lesson that the medicinal plant industry can take from the FSC certification system citing examples of incentives and compensation to the farmers. Dr Gupta also recommended the need to comply with international standards and regulations and formulate standard operating procedures and guidelines to be part of India's national strategy for MAPs.

Recommendations

- Development of a national plan for cultivated MAPs which becomes a workable model, which ultimately leads to production
- Doing a thorough assessment of costs, acceptability and the scope of said workable model, which is obliterate many challenges faced in the conservation of MAPs

- Cultivation of MAPs should be implemented to the fullest extent and promoted in order to promote sustainability of wild MAPs

FairWild Standard and Certification in India

Dr. Shekhar Kumar Niraj, Head, TRAFFIC India

Dr. Niraj explained the FairWild Standards and Certification systems, elaborating on the structure, principles, indicators and criteria applicable to wild plant. He said that the standards can be taken up by anyone who wishes to demonstrate their commitment to sustainable collection, social responsibility and fair trade principles.

The purpose of the FairWild Standard, as explained by Dr. Niraj, is to ensure continued use and long term survival of wild species and populations in their habitats, while respecting traditions and cultures, and supporting the livelihoods of all stakeholders, in particular collectors and workers. As the FairWild Standard addresses ecological, social and economic requirements for sustainable wild collection it can be implemented in different ways: as guidance for resource management, supporting development and implementation of regulatory and policy frameworks, serving as a basis for internal monitoring and reporting and through a certification system for buyers.



Recommendations

- Relevant stakeholders exploring the possibility of the implementation of the FairWild Standard in the country
- Working with various stakeholders, especially the Ministry of AYUSH and the National Medicinal Plant Board to assess the high volume, high risk species which can be brought under the purview of the said standards and certifications
- Marketing FairWild among the consumers in India
- Development of an identification protocol for MAPs in India, which will also help in narrowing down the endangered species

AERF-TRAFFIC's work in Medicinal and Aromatic Plants conservation

Shri Jayant Sarnaik, Deputy Director, Applied Environmental Research Foundation

Shri Sarnaik, while presenting the work being carried out on the target species of *Terminalia chebula*, *Terminalia bellirica* and *Tinospora cordifolia*, in Bhimashankar Wildlife Sanctuary and Ratnagiri Wildlife Sanctuary, said that the first two species have already been certified under FairWild Standards and Certification.

Mr Sarnaik stressed the need of undertaking a situational analysis and resource assessment for MAPs under the standards, as well as about developing value chain. He showcased the conservation and spillover aspect of FairWild Standards citing the example of the Indian Giant Squirrel (*Ratufa indica*) and Malabar Pied Hornbill (*Anthracoceros coronatus*) in the collection areas.

Recommendations

- Capacity Building workshops for medicinal plant conservation
- Keeping with one of the principles of FairWild, looking at assessments of habitat and species conservation impact and integrating it with any working plan looking at sustainability of MAPs

Intertwining collectors' stakes, consumers' aspirations and conservational needs

Dr. Bala Prasad, Managing Director, TRIFED

Dr. Bala Prasad juxtaposed the trade in MAPs, along with the implementation of Good Field Collection Practices and expectations of the consumer, by indicating that exports have grown by more than 30% than domestic use in recent years and in this regard quoted a CERPA (Centre for Research, Planning and Action) study which had looked at 162 commonly used plants in trade.

Looking at the consumer aspirations, he said that quality, sustained availability, authenticity, organic certification (to gain consumer confidence) and appropriate pricing are important criteria that should be of priority. From the conservation point of view, he laid emphasis on protection working circles and preservation plots, skill development and capacity building of MAP gatherers on for sustainable harvesting and management techniques for conserving threatened species.



Dr. Prasad spoke about the need for establishing small scale value addition units in tribal areas, along with adequate priority given to the development of technology for the same, as opposed to large scale units which, according to him, will prove to be a strain on natural resources of the area. He explained the marketing support provided to tribals by TRIFED, especially incorporating the minimum price support and suggested it be an inclusion as a livelihood opportunity in Forest Management Plan.

Recommendations

- Encouraging resource augmentation
- A change in uniform transit rules

- Encouraging sustainable livelihood
- Establishing a complete market chain from village level to state level with at least one processing zone
- Increasing spread of the minimum support price scheme
- Strengthening the institution and encouraging good field collection practices, which can also be species specific, to combat the current mostly destructive practices

Good Agricultural Practices and Good Field Collection Practices, Voluntary certification schemes for quality assurance of MAP

Dr. Satyabrata Maiti, Former Director, Directorate of Medicinal and Aromatic Plants Research (ICAR) and Consultant, Quality Council of India

Dr. Satyabrata Maiti in his presentation highlighted the importance of GACP, developed by NMPB under the Ministry of AYUSH in 2009 which was drawn from the World Health Organisation's 2003 report on GACP.

Dr. Maiti explained the present certification scheme collaboratively developed between NMPB and QCI (Quality Council of India) where the cost for certification is borne by NMPB, which includes an evaluation of the collection practices. He emphasised the need for documenting MPs in trade, as well as, implementing GACP for MAPs. He also spoke about the challenges involved in exporting raw medicinal plants and products, as well as problems encountered in implementation of certification schemes. Dr. Maiti said that one of the objectives of developing the certification scheme was to ensure the quality of produce at the farm or wild collection levels, with the other two objectives being promoting uniformity in the operations of the certification process and creating a link between certification bodies and producers/collectors. He specified that the scheme is open to both individuals and organisations.

Recommendations

- Developing GAP and GFCP guidelines for raw materials production
- Creating awareness among stakeholders about certification schemes
- Creating species-wise GAP and GFCP protocols

III. Group Discussion and Recommendations

The group discussion, moderated by Dr. Bala Prasad and Dr. Shekhar Kumar Niraj, included inputs from various stakeholders present who outlined both challenges as well as suggestions on strengthening the cause of MAPs conservation in the country. Invoking the earlier discussions of the day, this session concentrated on bringing forth key recommendations to help in



the overarching cause of MAPs sustainability along with betterment of medicinal plant trade in the country.

Recommendations

A. MAPs sustainability – Collaborating with NMPB and National Biodiversity Authority, organisations/institutions such as TRAFFIC, FRLHT, WII and TRIFED can look at the implementation of the following points.

- Survey of plants and their products in trade as well as assessing their status to define limits of extraction for species with high risk
- Undertake feasibility studies for cultivation in high risk species
- Listing priority species for conservation at state and central levels, especially short rotation crops
- NMPB to formulate guidelines to identify the more trade demanded plant materials
- Developing species specific good field collection practices and training modules for collectors in regional language
- NMPB to undertake a scoping study to distinguish between plants which are wild sourced and cultivated
- Developing a sustainable resource use working model for MAPs with an incentive based system for use
- Encouraging resource augmentation and value assessment of specific species
- The NMPB and Forest Departments may work together to identify areas and local medicinal plant species which can be cultivated/promoted in wastelands within the Forest Department
- Need for a comprehensive plan and policy for storage units to minimize losses occurred during storage, especially for forest produce, which currently may not be harvested at sustainable levels

B. Standards and certifications, which include FairTrade Practices

- Promoting a certification system with stakeholders as drivers and then for the industry to scale it up. The principles of certification system needed to be well defined and rigorous so that the compliance could be measurable and objective. TRAFFIC suggested a large-scale implementation of the FairWild Standards and Certification, which is currently being piloted near Bhimashankar Wildlife Sanctuary and Ratnagiri

Wildlife Sanctuary for two species- *Terminalia chebula* and *Terminalia bellerica*. The successful example can be replicated with other species.

- All attempts to make the certification process cost effective. NMPB could initially support the cost of certification partly or wholly either via subsidy or discount. It was felt that large scale businesses should ideally absorb the costs, or at least major parts of it, taking the pressure off the farmers and the consumer.
- The formation of MAPs clusters has been incorporated in the Centrally Sponsored Scheme of the National Mission on Medicinal Plants Operational Guidelines which are to follow GACPs through synergistic linkage with production and supply of quality planting material, processing, quality testing, certification, warehousing and marketing for meeting the demands of the AYUSH industry and for exports of value added items. The same can be linked to the working model and certification schemes, recommended above for MAPs. This material emerging from such clusters, with the required certification will then also find greater acceptability in the international market, thereby leading to a substantial increase in export.
- Expanding the present list of 10 species for minimum price support within the standards without any compromise on the sustainability aspects of the species and their habitats.
- Involvement of National Biodiversity Authority, Biodiversity Management Committees, NGOs and scientific organizations in capacity building and skill development works.

C. Capacity building and sensitisation

- Need for identifying and engaging more taxonomists in the area of identification of MAP species
- Need for imparting training on collection, labeling and trading aspects to farmers and traders
- Need for mass campaigns spreading awareness amongst the masses, especially Forest Department about MAPs and their conservation and sustainability, especially on the importance of certifications

D. Strengthening law and policy for effective conservation of MAPs

- Constituting a committee to review existing policies and regulations, particularly, the Biodiversity Act 2002, WPA 1972, CITES listed Indian species, and EXIM Policy of India. The committee may constitute of stakeholders such as NGOs working for Medicinal plants, key industry players, along with various government bodies and ministries such as NMPB, Ministry of AYUSH, MoEFCC, Ministry of Commerce and Industry, Ministry of Finance, Ministry of Health.
 - a. Currently only six plant species are listed in Schedule VI of the WPA 1972. There is a need to revise the current listing and the related provisions in order to be reflective of the changing ground situations. Post surveys and analysis of MAPs (as suggested above in A), the relevant institutions may present a set of recommendations to the committee on the status of the listed plants and recommendations on inclusion of new species or exclusion of the existing species from the WPA 1972 based on an agreed

format of assessment which is quantified based on criteria's of population and habitat preference

- b. The negative list of the 29 species in the EXIM needs revision with the current trade and conservation scenarios. A number of species which are popular in trade and thus heavily exploited remain excluded from the negative list of species.
 - c. The above can also form the basis for proposing changes to CITES Appendices.
- While the Biodiversity Act 2002 has been considered powerful, it was felt that there was a need for the Act to be made available in the regional languages for better understanding by the communities involved in MAPs cultivation and trade.
 - Greater levels of collaboration between NGOs and the State Medicinal Plant Boards, of which the latter was admitted to having administrative problems. The workshop recommended easing out of such administrative difficulties as NGOs are important stakeholders in MAPs sector.

Appendix A - List of participants

S. No.	Name	Designation	Institution
1	A. Pragatheesh	Wildlife Inspector	WCCB
2	Ajay Bhatnagar	Snr. General Manager	Hamdard
3	Ajith M. Sharan	Secretary AYUSH	Ministry of AYUSH, Govt. of India
4	Amit Agrawal	Director	Natural Remedies
5	Amit Bhatnagar	Deputy General Manager	TRIFED
6	Ananda Banerjee	Conservation Journalist	Mint
7	Asad Mueed	Director	Hamdard Labs
8	Auro Shashwat	NRM Associate	UNDP
9	Bala Prasad	Managing Director	TRIFED
10	C S Kotteswaran	Wildlife Correspondent	Deccan Chronicle, Chennai
11	Darshan Kumar	Deputy Manager	Hamdard
12	Dr. A J T Johnsingh	Advisor	WWF-India
13	Dr. Amarinder Kaur	PCCF	Haryana Forest Department
14	Dr. Diwakar Sharma	Director, Prog. Mngmt., M&E	WWF-India
15	Dr. G S Cheema	Plant breeder	PALL, Ludhiana
16	Dr. G V R Joseph	Asst. Director	CCRAS, Ministry of AYUSH
17	Dr. Gian Singh	Consultant	FEDMAPS
18	Dr. Jitendra Kumar	Director	ICAR-Directorate of Medicinal and Aromatic Plants
19	Dr. M K Ranjitsinh	Former Member Secretary	Project Tiger Task Force
20	Dr. M. K. Sarkar	Add.PCCF (Retd.)	Tamil Nadu Forest Department
21	Dr. Nitin	Scientific Officer	PCIMSH
22	Dr. Rajeev K Sharma	Director	PCIMSH
23	Dr. S D Singh	CCF, CEO DPGS	Dept of Environment, Govt. of NCT of Delhi
24	Dr. S. K. Joshi	GM- R&D	Hamdard
25	Dr. S. K. Khanduri	IG (WL)	MoEFCC
26	Dr. S. K. Verma	Principal Scientist	Centre for Cellular and Molecular Biology
27	Dr. U. V. Ghate	Director	Covenant Centre for Development
28	Dr. Vivek Saxena	OSD-cum-Chief General Manager	Haryana Forest Development Corporation Ltd.
29	Himanshu Malhotra	Director	Multi-media
30	Jagdish Chander	CCF	Haryana Forest Department
31	Jahangir Alam	Consultant, Market Research	FEDMAPS
32	Janak Raj Rawal	President	FEDMAPS

S. No.	Name	Designation	Institution
33	Jayant Sarnaik	Joint Director	AERF
34	Jitendra	Senior Correspondent	Down to Earth
35	Kamal Dutta	Joint Director	WCCB
36	Manish Uprety	Freelance Consultant	FRAS
37	Manisha Chodhary	Project Officer	UNDP
38	Mita Banerjee	CCF (Research)	SFRI
39	Nadisha Sidhu	Intern	UNDP
40	Nishant Verma	Deputy Director	WCCB
41	Om Prakash	Assistant Manager	TRIFED
42	P. Rajeswari	CCF	Andhra Pradesh Forest Department
43	Padmapriya Balakrishnan	Deputy CEO	NMPB, Ministry of AYUSH
44	Pushp Jain	Director	ERC
45	R Banerji	Feature Writer	Freelance
46	R Sethuraman	Deputy Manager	TRIFED
47	Rajeshwari	Plant breeder	PALL, Ludhiana
48	Ravi Singh	SG & CEO	WWF-India
49	Rejnitha Y H	DCF, Faridabad	Haryana Forest Department
50	Roy P. Thomas	Joint Director	MoEFCC
51	Ruchi Pant	UNDP	Programme Analyst
52	Rupinder Singh	Add.PCCF	Haryana Forest Department
53	S. S. Maiti	Deputy General Manager	TRIFED
54	Sajid Ahmed	Chief Projects	Hamdard
55	Sandeep Pahalwan	Senior Manager	TRIFED
56	Satish Thappar		FEDMAPS
57	Satyabrata Maiti	Expert	QCI
58	Shomita Biswas	CEO	NMPB, Ministry of AYUSH
59	Shonal Gupta	General Secretary	FEDMAPS
60	Somesh Arora	Former Commissioner of Customs	Amicus Rarus Law Consults
61	Subhash Chandra	Joint Secretary	Ministry of Mines
62	Sudhanshu Gupta	CCF	Tamil Nadu Forest Department
63	Tilottama Varma	IG	WCCB
64	Vishaish Uppal	Head, Sustainable Livelihoods and Governance	WWF-India
65	Zeba Jamil	Assistant Manager	TRIFED

Appendix B - Glossary

ABS	Access Benefit Sharing
AYUSH	Ayurveda, Yoga, Unnani, Siddha and Homeopathy
CBD	Convention on Biological Diversity
CEO	Chief Executive Officer
CERPA	Centre for Research, Planning and Action
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DGFT	Directorate General of Foreign Trade
EXIM	Export and Import Policy of India
FRLHT	Foundation for Revitalisation of Local Health Traditions
GACP	Good Agricultural Collection Practices
GAP	Good Agricultural Practices
GFCP	Good Field Collection Practices
GSPC	Global Strategy for Plant Conservation
IG	Inspector General
ISSC-MAP	International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants
IUCN	International Union for Conservation of Nature
MAPs	Medicinal and Aromatic Plants
MoEFCC	Ministry of Environment, Forests and Climate Change
MP	Medicinal Plants
MT	Metric Tonne
NDF	Non-detrimental Finding
NMPB	National Medicinal Plant Board
WPA 1972	Wildlife (Protection) Act, 1972

TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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