

Herbal Sector in India: Current Scenario

1.1. INTRODUCTION

Medicinal plants have been the mainstay of traditional health care practices across all societies for centuries. A very significant population in the developing countries continues to thrive upon the herbal drugs, which could be gathered from nature almost free. India also has very strong traditional health care practices that are represented by the classical systems of medicine like Ayurveda, Siddha, Unani, and Swa-rigpa on one hand, and by a very diverse area-specific and community-specific folk healthcare practices on the other. The major commonality of the Indian classical and the folk health care traditions is their dependence upon the raw material derived from a large diversity of plant species, which is estimated to be about 6,500 species.

The practice of classical health care streams in India has undergone a major transformation as "the practice of the individual physician identifying drugs and preparing medicines himself for the use of his patients has been largely supplanted by the pharmaceutical industry... He (the practitioner) prefers to buy it straight from the market..." (Anon., 1978). This transformation in the practice of traditional medical systems has necessitated the collection of medicinal plants from the wild through millions of herb gatherers from different parts of the country in commercial quantities and transport these to 8600 odd licensed herbal units located in different parts of the country. This commercial collection of herbal raw drugs has given rise to a thriving medicinal plant based economy, both at the local level and the national level. It has, however, put the wild populations of many medicinal plants species under stress.

The global interest in herbal health care is concurrently undergoing a change. The plant based traditional health care practices that were believed to be on the decline till recently due to increasing reach of modern health care systems, are witnessing a strong global resurgence, despite "the traditional medicines attracting whole spectrum of reactions from 'uncritical enthusiasm to uninformed scepticism' on account of safety, efficacy, quality, etc." (WHO, 2002). This resurgence is witnessing increased use of complementary and alternative medicine in developed countries also. Health is now being increasingly seen as not only the absence of sickness, but also seen to encompass general well being of the person; and herbs are believed to provide this holistic health care.

This renewed global interest in herbal health care has started a race amongst the traditional societies with strong herbal based health care traditions to grab a pie in the increasing global trade of herbal raw drugs as well as the finished herbal products. The recent positioning of herbs as 'herbs for wellness' has surprised even the diehard sceptics when Global Wellness Institute sponsored study, in September 2014, has valued the 2013 global wellness economy at US\$3.4

trillion (Bodekar, 2015). The medicinal plants, Bodekar (2015) opines, are no more mere niche filling sources of alternative medicines, but 'have now become the source of a whole new range of products and approaches designed to promote well being, reduce the effects of ageing, increase energy levels and general vitality, promote skin health, add power to nutrition, and combat stress'. Many of these wellness requirements are met through using medicinal plants in and as 'functional foods'.

The transformation of Indian classical health care practices increasingly depending upon ready to use commercially prepared herbal formulations on one hand, and the resurgence of global interest in herbal based wellness on the other is directly dependent on uninterrupted supplies of medicinal plants. Whereas some medicinal plants have been brought under commercial cultivation, major diversity of medicinal plants continues to be sourced from forests. The increasing harvesting pressure has already brought many medicinal plant species under red-listed categories. It has become necessary to know the annual consumption levels of the herbal raw drugs and the trends of their use to effectively manage the resource for ensuring sustainable supplies of authentic and quality botanical raw drugs to the herbal industry, folk users and growing global markets.

1.2. PREVIOUS ASSESSMENTS OF DEMAND AND SUPPLY OF MEDICINAL PLANTS IN INDIA

The commercialization of the production of classical ASU formulations requiring large quantities of wild harvested, cultivated or imported herbal raw drugs has witnessed the emergence of a thriving raw drug trade. Some of the herbal raw drug mandis (markets) in the country, like Khari Baoli in Delhi, are in operation for more than two centuries. The irony is that there has been no system at national level to maintain record of either the diversity of medicinal plant species or their quantities in trade. All along, the number of herbal raw drugs and the corresponding medicinal plant species in trade has been a matter of opinion with the estimates of such numbers varying from just 400 (Anon., 2000) to 1500 (Jain, 1996) to 'more than 2000 fruits, leaves, shrubs, minerals, metals as well as animals' in use only in Unani medicine (Bode & Maarten, 2004), to 2500 (Chauhan, 1999) to 7500 (Pushpangadan, 1995). However, none of these publications provides a list of traded herbal raw drugs at national levels.

The first serious attempt at national level to assess the demand and supply of medicinal plants in the country was



made by the National Medicinal Plant Board (NMPB) during 2001-02, when it commissioned a study through Centre for Research, Planning and Action (CERPA) to understand annual trade levels of selected 162 medicinal plant species. Thereafter, Export Import (EXIM) Bank commissioned a study to assess 'export potential of medicinal plants' through the Foundation for Revitalization of Local Health Traditions (FRLHT) in 2003. This study resulted in enlisting 1200 raw drug entities pertaining to 880 medicinal plant species in trade, including 42 species under foreign trade for the year 2001. The CERPA study assessed the demand of herbal raw drugs in the country for the year 1999-2000 at 2,34,675 MT including the material exported with a trade value of 1275.68 crore (CERPA, 2002). The EXIM Bank study, on the other hand, estimated the total consumption of herbal raw drugs in the country, including exports, for the year 2001 as 1,28,000 MT with a trade value of Rs. 847 crore (EXIM Bank, 2003). This study also projected a 10% annual growth of the herbal sector in the country.

Both these studies, even though brought the subject of medicinal plant trade in the country in focus, were largely indicative. The CERPA study based its findings mainly on the responses from selected manufacturing units in respect of pre-identified set of species. Similarly, the estimation of domestic consumption under the EXIM Bank study was based on the total turnover of the industry. In between there have been efforts by various organisations at undertaking market analysis related to levels of trade and prevailing prices of important medicinal plants. However, such studies have been of a scale and spread that has failed to make any significant addition to the knowledge on the subject at the national level.

The NMPB, thereafter in 2006-07, commissioned a national study to assess demand and supply of medicinal plants in India. That study, carried out by FRLHT, for the first time brought various intricacies in the herbal sector to the fore and added to the understanding of the subject related to the diversity of raw drug entities in trade, their botanical correlation, volume of annual trade and supply sources. A total of 1389 botanical entities corresponding to 960 plant species were enlisted under trade in that study. The focus provided by the report of this study resulted in initiation of research programs on many species of conservation concern. It also triggered large scale plantation programs in respect of 'Guggal', 'Asoka' and 'Dashamoola' group of species.

The medicinal plant sector is a very dynamic and intricate sector and the status of demand and supply of medicinal plants needs to be periodically assessed. The need for periodic review has become more important in view of the increased global interest in herbals for wellness. Moreover, there is always a scope to improve upon the findings brought out in the various works on the subject carried out earlier.

The complexity of the herbal sector, especially for India, still needs to be completely understood. Even now there is not much clarity about the chain of custody of a large number of species. The sources of many red-listed species are not known giving rise to doubts about authenticity of the material. Most of the herbal raw material still continues to be collected from the length and breadth of the country under different names, traded under different names and used under the classical sanskritized names, creating issues about their botanical identity. Many species are traded as imported from other countries viz. 'Banslochan Singapuri', 'Shatavari Nepali', etc. with no corresponding record of such imports. There is, therefore, a need to further refine the botanical correlations of the herbal raw drugs in trade. More data needs to be collected on medicinal plant species under cultivation and their share in the raw drug trade. There is also a need to assess demand of important medicinal herbs by parts traded to provide better inputs for management of species of conservation concern. Similarly, supply chain in respect of some

important raw drug entities could be worked out in detail for better appreciation of the intricacies of the trade web. There is also a need to develop better understanding of the botanicals under foreign trade.

Relative opacity of the operations at the level of gatherers, traders and industry makes the assessment of demand and supply very complicated. In most of the cases, there is a general reluctance to share samples of the material in trade or in use making species-wise assessment of demand and supply challenging. Any attempt to study the demand and supply of medicinal plants, therefore, requires a fair understanding of these intricacies to arrive at reliable conclusions.



Wild Collection of Medicinal Plants



Cultivation of Medicinal Plants



Herbal Raw Drug Mandi

1.3. THE PRESENT STUDY

As the herbal sector in the country is on a path of fast growth, there is a need to have a close watch on the annual demand and supply of medicinal plants, so as to plan measures for a sustainable resource supply. It is in this context that the NMPB assigned this study to the Indian Council of Forestry Research & Education (ICFRE) to re-assess the demand and supply of medicinal plants in the country. ICFRE has undertaken this study in strategic partnership with FRLHT, an organization that has developed comprehensive database pertaining to the medicinal plants and has a long experience of carrying out such other studies.

The major objective of this study was to review the status of knowledge in respect of demand and supply of medicinal plants in the country, find out the gaps and try to address these gaps on the basis of focused field surveys, interactions with various stakeholder groups and analysis of available information and field data.

The Expected Outcomes from the study are enlisted as under:

- i. Assessment of the current supply of medicinal plant raw materials of various species in India from different sources including (a) wild sources and wastelands, (b) cultivation, and © import from other countries.
- ii. Determination of the demand of medicinal plant raw materials of various species from various quarters including (a) household demand/ traditional healers demand, (b) demand of trade and industry, and (c) for exports.
- iii. Review, study and bring out the following:
 - a. Analysis of the current regulatory framework applicable to the Indian medicinal plant based industry in the context of domestic and international trade.
 - b. Capturing of the major stakeholders in supply chain of medicinal plants, their strengths/ needs in the context of contemporary, business environment.
 - c. Undertaking SWOT analysis of the Indian traditional medicine industry and the Indian medicinal plants sector.

- d. Assessment of the current pricing structure including local taxes/VAT/ custom duty at various stages of trade for certain selected species and trend analysis of top 50 species.
- e. Suggesting measures and modalities to capture profile of the major traders/ wholesalers and the prevalent trading practices in major herbal mandis in India towards upgradation of practices to improve quality of raw material supply.
- f. Suggestive approach towards rationalization/ fine tuning of HS coding system in respect of herbal raw drugs used in Ayurveda, Siddha & Unani (ASU) industry.

Herbal raw drug consumption data in respect of domestic herbal industry of India for the year 2014-15 has been worked out based on stratified sampling of 692 domestic herbal units. Foreign trade data for ten years i.e. from 2005-06 to 2014-15, has been procured from the Directorate General of Commercial Intelligence and Statistics (DGCIS) and analyzed. Estimate of consumption by rural households has been arrived at on the basis of a sample survey of 2450 households spread across 15 states. The report has also attempted a first in highlighting sizeable consumption of herbal raw drugs by folk healers and traditional practitioners, many of whom proudly showed very old medical manuscripts in the possession of their families. More than 40 herbal raw drug mandis of different types and categories were visited and data gathered on the diversity of herbal raw drugs in trade, trade chains of important herbal entities, and pricing. Various sites in the country have been visited to gather first hand data on the cultivation and wild collections. Legal and policy structure, including the ITC (HS) Code system, has been reviewed and analyzed from the perspective of growth of herbal sector.



The draft report was presented in the national consultation specially convened on 23 March 2016 at Dehradun to share highlights of the study with representatives of different stake holder groups and to seek their comments and inputs on different outputs of the study. The draft report was thereafter modified to incorporate views expressed by the stake holders. The highlights of the draft final report were presented to NMPB's specially convened committee with the Secretary AYUSH as chairperson and subject matter experts, representatives of herbal industry, traders and officers of the NMPB as members on 01 September 2016. The comments/ suggestions by the Secretary AYUSH and other members of the committee were duly incorporated to further refine the report and to bring it to its present form.

The output of the study has been organized in 12 subject-specific chapters with Chapters 11 and 12 containing the synthesis and recommendations. A consolidated inventory of the 1178 medicinal plant species recorded in trade, with trade and API names and popular synonyms, has been appended for easy referencing.