

**TRADE IN MEDICINAL AND AROMATIC PLANTS IN INDIA****Gouthami<sup>1</sup>, Subrahmanya Padyana<sup>2</sup>**

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**ABSTRACT**

Plants have been used since ancient times to heal and cure diseases and to improve health and wellbeing. Collection and trade of medicinal and aromatic plant species (MAP's) is age old practice throughout the world to increase household income. Over harvestings decreased their populations and a number of species became threatened in natural habitat. Survey was conducted on trade of such threatened MAP's from wild in all over India. Information was collected on MAP's trade ,channels involved and profit at each level of transaction. Even after ban on commercial exploitation of some MAP's ,trade continued through illegal ways. Rapidly rising exports of medicinal plants during the past decade attests to worldwide interest in these products as well as in traditional health systems. Thirty percent of the drugs sold worldwide contain compounds derived from plant material.

**KEY WORDS** - Illegal Trade, Threatened MAP's, Trade channels.

**INTRODUCTION**

India is a hub of the wild collected plant medicine industry in Asia, but key species have declined due to over-collection to supply domestic and foreign medicinal markets, according to IUCN and Traffic researchers. Medicinal and Aromatic plants have been the historical mainstay of traditional healthcare practices across

major societies and are still used today by 75-80% of the world population for their primary health care needs. As per a published report of NMPB out of 6500 medicinal plant species traditionally used by Indian communities, only 1622 botanicals corresponding to 1178 plant species are found to be in all India trade. Of

these 42% are herbs , 27% are trees and 31% are shrubs and climbers. Only 242 species witness high volume trade annually. A study revealed that nearly 90% of the medicinal plants used by the local communities in India are sourced from the wild. This study also revealed that approximately 72% of the medicinal plant species and 50% of the annual quantities consumed as herbal raw drugs by the domestic herbal industry are also sourced from the wild.

#### **AIMS AND OBJECTIVES**

- 1) To provide an overview of the markets for MAP's and their requirements in order to highlight both the opportunities that exist for developing countries.
- 2) To indicate what needs to be done in order to expand these opportunities further.
- 3) To support developing countries in their efforts to develop and improve their medicinal plant industries.
- 4) Assist them to make informed decisions on the development of their medicinal plant industry and the products they produce from the plant material that is harvested.

#### **MATERIALS AND METHODS**

#### **Commonly Traded MAP's in India**

##### **1) Jatamansi                      Nardostachys (Jatamansi)**

Jatamansi is an important medicinal plant in India and endemic to Himalayan mountain ranges. It is found at an elevation of 2200 -4800 m above sea level. It is found in Himachal Pradesh, Uttarakand, Sikkim and Arunachal Pradesh.

Jatamansi is mainly traded for its roots that are used for treatment of Epilepsy ,as an Antiseptic for curing diabetes and all heart related ailments.

The Rhizomes of Jatamansi are collected by local harvesters throughout the alpine meadows of the Himalayas and are air dried .Rhizomes are traded through well established marketing chains from the Himalayas to cities in the plains if india as well as to western countries where it is in high demand.

##### **2) Taxus Wallichiana (Himalayan yew)**

Taxus Wallichiana is widespread in the Himalyas. It is found in the states of Uttarakhand, Meghalaya and Manipur.

The species has been heavily exploited for its leaves and bark which are used to produce the anti-cancer drug (Paclitaxel) and other similar drugs. It

is used to procure Taxol for the treatment of ovarian cancer.

*Taxus Wallichiana* a population decline upto 90% has been reported in India.

### 3) **Picrorhiza Kurroa (Katuki )**

Katuki occurs in Alpine meadows and glacial, rocky beds at altitudes between 3200 to 4500m above sea level. It forms dense patches in fairly moist, well exposed slopes in Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim.

*P.kurroa* is highly valued in Ayurvedic medicine systems. It is been used traditionally to treat liver ailments, Dyspepsia, chronic diarrhoea and upper respiratory tract ailments. In modern medicine it is used in the treatment of hepatic disorders, gastric troubles, Anaemia, Asthma and pregnancy related problems.

The rising demand, limited cultivation and reckless collection from the wild has rendered *P.kurroa* a critically Endangered plant species.

### 4) **Dioscorea deltoides (Nepal Yam)**

Distributed at altitudes of 550 – 3100 m above sea level. It is found in Arunachal Pradesh, Sikkim, Assam, Meghalaya, Jammu Kashmir, Himachal

Pradesh and Uttarkhand. Useful part is Rhizomes or bulbils.

It is used in Cardiovascular disorders, Central nervous system disorders, diseases of bones and joints, Metabolic and digestive disorders. It also cures diarrhoea, abdominal pain, Dysfunctional changes in the female reproductive system and skin diseases. It is a Endangered medicinal plant .Commercially exploited for the extraction of Diosgenin a precursor of steroidal drugs.

### 5) **Pterocarpus santalinus (Red sanders)**

Red sandalwood also called Red sanders. It is found in states of AP, Tamil nadu and Karnataka. Its timber is used to make furniture, musical instruments and carvings. The species has also been harvested for pharmaceutical and medicinal purposes.

In powdered form, it is used for the treatment of diabetes to reduce bleeding and to alleviate swelling and pain. The extraction of older trees for heartwood has left the remaining population skewed towards younger trees. This has further led to reduced regeneration and an increase in the occurrence of inbreeding. Illegal trade



and habitat loss are also adversely affecting the population structure of the species.

### 6) **Aquilaria Malaccensis (Agarwood)**

A. Malaccensis is a large evergreen tree which is found in North east India. The species is targeted extensively for its valuable resin created in response to fungal infection, known as Agarwood.

The majority of the wood produced from A. Malaccensis is processed to make oil, perfumes and cosmetics products. Wood chips are processed into powder which forms the raw material to create incense sticks.

#### **DISCUSSION**

It is also advised that species recovery programmes should be implemented for Critically Endangered species to be reintroduced back to their natural habitat. Establishing *in situ* regeneration blocks can play a vital role towards achieving this. These blocks can also act as nodes for wild propagation of the species in surrounding areas as well.

The high demand for herbal drugs has led to rampant collection of MAP's from the wild, leading to depletion of biodiversity. In order to understand the threats to these vulnerable species

due to excess extraction from the wild, it is important to monitor the MAP trade and develop policies and practices that will lead to long term sustainable collection and fair trade of the species without endangering their future in the wild.

Collection and trade of these MAP's from the wild. These initiatives may enhance investment in education, health and food security which could play key role in building resilience among rural communities to fight against biodiversity loss and climatic vulnerability.

#### **Conservation and Trade of MAP's in India**

- The Wild population of many medicinal plants is believed to be drastically declining due to increased exploitation, bringing many of these species to the brink of Extinction.
- These diverse herbal raw drugs are collected from the wild, cultivated or imported and transported through various trade channels to different parts of the country for use by the domestic herbal industry processing for export or retail sale.
- The policies and regulatory regimes applicable to the medicinal plant sector in the country is given below.

**1) The Wildlife Protection Act,1972.**

This Act prohibits export of the following six species groups (Plant species are listed in schedule- VI of the act, which prohibits picking and uprooting of listed species growing in the wild).

**2) The Biological Diversity Act,2002.**

It deals with Regulations related to obtaining permission for export and trade of Biological resources. Section 38 of the act empowers the central government to notify red listed species and prohibit or regulate collection thereof for any purpose in consultation with the concerned state government.

**3) Indian Forest Act-1927.**

In this the procedures that are related to storage, transit and export of MAP's .Under this Act, each state government has been vested with the power to create their own rules to regulate the transit of forest produce including MAP's.

**4) The EXIM Policy.**

The policy provisions for MAP's is decided in consultation with the Government of India and the management Authority for CITES implementation in the country on the basis of threats to the wild population

of these plants due to indiscriminate trade. Under this existing policy, the export of 29 plants, portions and their derivatives and extracts obtained from the wild, except formulations, is prohibited.

**5) Trade of plants listed in CITES Appendices.**

For cultivation of CITES Appendix I species, the nursery where the plants acquired are maintained and multiplied must be registered with the Assistant CITES Management Authority. Foreign trade in respect of species listed in Appendix II and III of CITES whether wild or cultivated is regulated only to the extent that the exporter needs to have a Certificate of legal possession issued by Jurisdictional DFO, and the export is subject to CITES provisions.

**CONCLUSION**

Illegal MAP's trade continues in different parts of India even after imposing ban, to restrict it. Thousands of plant of these species are uprooted every year through destructive harvesting system. Complete ban on MAP's collection seems impossible. On the other hand conservation of natural resources is also important issue to restrict biodiversity loss. Furthermore ,collection practices should also ensure

the long term survival of wild populations and their associated habitats. Rotational harvesting after few years interval may be useful. Cultivation of such species should be promoted, as it is viable option to meet the increasing demand, improvement in socioeconomy and conservation of these species. If MAP's cultivation starts once, illegal collection will automatically discouraged.

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