



Non-Timber Forest Produces (NTFPs) of Kotra Tehsil of Udaipur District, Rajasthan

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Abstract: *Non-Timber Forest Produces (NTFPs) are biological resources derived from forests, managed plantations, and other similar sources. Many indigenous people in the world depend on NTFPs for their survival and livelihood. They play an important role in preventing forest loss by making a link between livelihoods and forest resources. The present study was carried out in Kotra tehsil of Udaipur district, Rajasthan. Major NTFPs of the area are Sitaphal, Mahua, Bahera, Arjun, Jamun, Ritha, Tendu, Imli, Karanj, Ber, Amla, Gwarpatha, Khair, Ratanjot, Kikoda.*

Keywords: *NTFPs, Sustainable livelihood, Tribal area, Kotra*

Introduction

Non-Timber Forest Produces (NTFPs) are biological resources derived from forests, managed plantations, and other similar sources. They are also known as Minor Forest Produces (MFPs) or Non-wood Forest Produce. Minor forest produces play an important role in not only sustainable livelihood and income but also for ensuring food security and reduce malnutrition in indigenous rural communities. As NTFPs come from a variety of plant parts, their amount in terms of production and utility may be higher than that of timber-based products (Chamberlein III, 2000). Certain tehsils of Southern Rajasthan produce high-quality NTFPs, with a diverse range of potential medicine, aromatic, and other economic products. Tribals have specific understanding of biodiversity as they rely for their sustenance and religio-cultural practices on nature. They not only use a wide range of NTFPs for domestic and trade purposes but also have a strong cultural and economic stake in countryside home industries with a focus on their own traditional lands and resources.

Data based on traditional knowledge of indigenous people have been used to identify new plant resources to provide new ideas to environmental planners, and as a tool for pharmacologists to select plant species for drug development. It helps to generate and document multidimensional perspectives of tribal life, culture, and traditions, as well as their effects on the surrounding environment. Ethnobotany also aims to preserve and protect all traditional beliefs and knowledge systems that encourage conservation-oriented practices and long-term resource management. This, in turn, will help to establish and offer a scientific foundation for long-term resource management, as well as appropriate welfare programs to help tribal populations improve their quality of life (Katewa and Jain, 2007).

A monitoring programme for sustainable NTFP harvesting, which includes the following steps, can be used to acquire a better knowledge of the ecological impact of NTFP extraction on the forest. Harvest evaluations and adjustments, species selection, forest inventory, yield studies, regeneration surveys, harvest assessments, and harvest adjustments (Peters, 1994).

It has been argued that traditional ecological knowledge (TEK) can be combined with scientific information to build successful management plans (Ticktin 2004). It is regarded as a "voluntary market tool" that promotes green consumerism by assuring sustainable forest management principles (SFM).

NTFPs offer additional source of income to the rural people (Giliba *et al.*, 2010; Ndangalasi *et al.*, 2007; Ros-Tonen and Wiersum, 2005). These studies show that the only way to achieve the goal is to make communities responsible and sensitive to protect forest resources, and approach of conservation by commercializing them. Significance of societal benefits that NTFPs provide in order to build incentives may also be taking into consideration. The aim of the study is to describe the availability and distribution pattern of NTFPs and their applications for sustainable development of tribals and locals in the area.



Study Area:

The study was carried out in Kotra tehsil of Udaipur district in Rajasthan. The tehsil headquarter is at Kotra village which is located 71 km towards west from Udaipur city. The entire Kotra tehsil is included in Tribal Sub-Plan. Agriculture, cattle, and forest product collection are the mainstays of these communities' livelihoods. The Phulwari WLS is partially situated in Kotra tehsil. Economic activities and livelihood opportunities in Kotra tehsil are limited with small land holding.

Materials and Methods:

Exploratory surveys were carried out in the study area to document NTFPs. Interviews were taken to explore indigenous knowledge. Questionnaire was made to take valuable information about the use of NTFPs, their harvesting and processing methods. Tribal “gunis” were also contacted to find out local herbs. Important NTFPs were identified and information obtained by visiting local markets, *Van Upaj Mandi* (Udaipur), LAMPS, Panchayat and the Forest Department (market value) and NGOs. Secondary data was gathered from reports, publications and official records.

Result and Discussion:

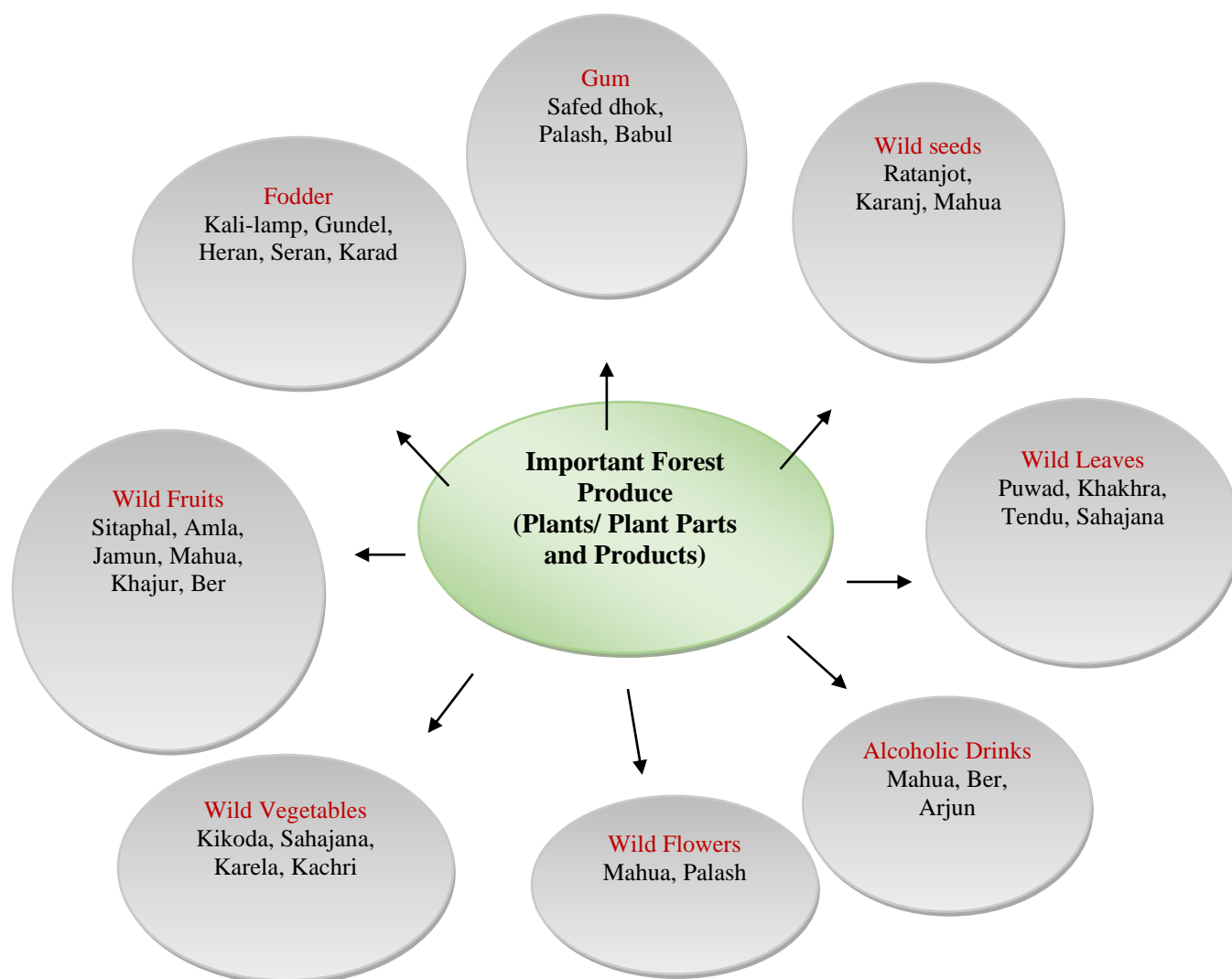
A total of 43 species belonging to 21 families have been reported from the study area.

Table: List of Non-Timber Forest Produces (NTFPs) in Kotra Tehsil

S. No.	Botanical Name	Vernacular/ Local Name	Family	Plant part use
1	<i>Acacia catechu</i>	Kher	Fabaceae	Wood
2	<i>Acacia leucophloea</i>	Ronj	Fabaceae	Fruits, leaves, stem
3	<i>Acacia nilotica</i>	Babul	Fabaceae	Leaves, fruit, stem
4	<i>Aegle marmelos</i>	Bel patra	Rutaceae	Fruits
5	<i>Aloe vera</i>	Gwarpatha	Asphodelaceae	Flowers, fleshy leaves
6	<i>Annona squamosa</i>	Sitaphal	Annonaceae	Fruits
7	<i>Apluda mutica</i>	Gundel grass	Poaceae	Leaves
8	<i>Bauhinia variegata</i>	Kachnar	Fabaceae	Flowers
8	<i>Butea monosperma</i>	Khakhra (Palash)	Fabaceae	Flowers, leaves
9	<i>Caesalpinia bonduc</i>	Katkaranj	Fabaceae	Seed, Bark, Leaves
10	<i>Cassia tora</i>	Puwad	Fabaceae	Seeds, leaves
11	<i>Cordia dichotoma</i>	Gunda	Boraginaceae	Fruits
12	<i>Cucumis callosus</i>	Kachri	Cucurbitaceae	Fruits
13	<i>Diospyros melanoxylon</i>	Tendu	Ebenaceae	Fruit, leaves
14	<i>Eremopogon foveolatus</i>	Heran grass	Poaceae	Leaves
15	<i>Euphorbia royleana</i>	Danda thor	Euphorbiaceae	Plant
16	<i>Flacourtia indica</i>	Kankan	Salicaceae	Fruits
17	<i>Grewia tiliifolia</i>	Dhaman	Tiliaceae	Fruits
18	<i>Heteropogon contortus</i>	Kali-lamp, Shukarbala	Poaceae	Leaves
19	<i>Holoptelea integrifolia</i>	Churail	Ulmaceae	Seeds
20	<i>Jatropha curcas</i>	Ratanjot	Euphorbiaceae	Seed
21	<i>Madhuca longifolia</i>	Mahua	Sapotaceae	Flower, fruits
22	<i>Manilkara hexandra</i>	Rayan	Sapotaceae	Fruits
23	<i>Momordica charantia</i>	Karela	Cucurbitaceae	Fruits
24	<i>Momordica dioica</i>	Kikoda	Cucurbitaceae	Fruits
25	<i>Moringa oleifera</i>	Sahajana	Moringaceae	Fruits , leaves
26	<i>Phoenix sylvestris</i>	Khajur	Areaceae	Leaves, male inflorescence
27	<i>Phyllanthus emblica</i>	Amla	Phyllanthaceae	Fruit
28	<i>Pithecellobium dulce</i>	Kikar	Fabaceae	Fruits
29	<i>Pongamia pinnata</i>	Karanj	Fabaceae	Seed
30	<i>Prosopis cineraria</i>	Khejdi	Fabaceae	Fruits, leaves
31	<i>Prosopis juliflora</i>	Valayati babul	Fabaceae	Fruits
32	<i>Jatropha curcas</i>	Ratanjot	Euphorbiaceae	Seed, Nut
33	<i>Sapindus laurifolius</i>	Ritha	Sapindaceae	Fruits

34	<i>Syzygium cumini</i>	Jamun	Myrtaceae	Fruit
35	<i>Tamarindus indica</i>	Imli	Fabaceae	Fruits
36	<i>Terminalia arjuna</i>	Arjun	Combretaceae	Leaves
37	<i>Terminalia bellirica</i>	Bahera	Combretaceae	Fruits
38	<i>Anogeissus latifolia</i>	Safed dhok	Combretaceae	Stem
39	<i>Tinospora cordifolia</i>	Giloy	Menispermaceae	Stem
40	<i>Wrightia tinctoria</i>	Khirani	Apocynaceae	Wood
41	<i>Ziziphus nummularia</i>	Chhoti ber	Rhamnaceae	Fruits, leaves
42.	<i>Sehima nervosum</i>	Seran	Poaceae	Leaces
43.	<i>Dichanthium annulatum</i>	Karad	Poaceae	Leaves

The study area is rich in diverse NTFPs which contribute to the tribal and rural people mainly for their livelihood and to certain extent for income generation. Sitaphal, Khakhra (Palash), Arjun, Baheda, Imli, Chhoti ber, Safed Dhok, Puwad, Ratanjot, Ritha, Khajur, Rayan, Jamun Amla, Gwarpatha, Khair, Tendu are the chief NTFPs of the study area. A few decades ago the practice of using dried & ground figs (*Ficus carica*) mix with wheat flour to make chapatis was common during famine. A processing unit has been established by the forest department in Deola village in the tehsil for value addition. Processed products of sitaphal, ritha, dhok gum and honey generate income to benefit local population.



It was found that tribal and local people have a rich traditional knowledge of the use of NTFPs for their sustenance. NTFPs are renewable which also have potential to generate income for poverty alleviation to ensure food security. Harvesting and extraction of NTFPs is extremely environment friendly provided that its recovery and regeneration taken into consideration and their production is improved in order to make making them accessible for market. It was found that commercial cultivation of



NTFPs and their processing at local level through scientific methods is needed along with generating links of raw and finished goods to markets.

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