The Sandalwood Trade: An Overview

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Abstract

Sandalwood (*Santalum album* L.; family: Santalaceae), one of the highly valued commercial tree species, is harvested largely for its aromatic heartwood and essential oil. The tree is referred to as "Chandana" in Sanskrit, and is commercially known as "East Indian Sandalwood." The oil extracted from the trees is considered to be unique, and is preferred over other ingredients for the preparations of perfumes, flavors, formulations, cosmetics, toiletries, beauty utilities and medicines. The species is one the highly threatened, traded, and important medicinal plant species and the part traded is wood. The trade of sandal is about 500–1000 MT traded during 2014–15 @ Rs. 10,000/kg. This chapter provides details of the part traded, classification of the traded part, overview of trade from brief on the historical trade, export, and import of the Sandalwood and Sandalwood oil.

Keywords

Export · Import · Sandal wood · Sandalwood oil · Trade

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10.1 Introduction

Sandalwood (*Santalum album* L.; family: Santalaceae), one of the highly valued commercial tree species, is harvested largely for its aromatic heartwood and essential oil. Sandalwood, called as "Chandana" in Sanskrit, is commercially known as "East Indian Sandalwood." The oil extracted from the Sandalwood trees is considered to be unique and is preferred over other options for the preparations of perfumes, flavors, formulations, cosmetics, toiletries, beauty utilities, and medicines. The species is habitually spread across from 30° N to 40° S, from the north Pacific Ocean (Hawaiian Archipelago) to south (New Zealand) and from east (Indonesia) to west (Juan Fernandez Island, Chile). It is believed that Sandalwood was introduced into India from Timor, Indonesia (Shetty 1977). More than 90% of the Sandalwood is distributed in the states of Karnataka and Tamil Nadu, covering around 9000 km^2 (Jain et al. 2003), of which more than 70% occurs in Karnataka (Srinivasan et al. 1992). The species is mostly found in dry deciduous and scrub forests. In Karnataka, *Santalum album* is estimated to be spread over an area of 5245 km^2 (Singh and Shankar 2007). The fragrant oil is extracted from the heartwood only from the matured trees. Sandalwood finds its applications in various fields, including religious purposes, medicinal purposes, incense sticks (*agarbattis*), perfumes, handicraft, carvings, etc. The value of a Sandalwood tree is largely determined by the weight of its heartwood and the concentration and composition of the oil contained within it (Doran et al. 2005). As per Goraya and Ved (2015) 500–1000 MT was traded during 2014–15 @ Rs. 10,000/kg. The chapter is going to provide an overall understanding of the sandalwood trade, the botanical identity of the species being traded, as well as educating the readers about the possible adulterants and substitutes. It also give insight to export, import, and commerce of wood and sandal oil.

10.2 About Sandalwood Tree and Current Situation

The present government policy pertaining to the management of Sandalwood goes back to the king's rule in Mysore, during which it was declared as a royal tree and the Sandalwood trade was monopolized in 1792. According to the prevailing rules in the southern states, except Kerala, Sandalwood continues to be a royal tree and trade in the wood is the monopoly of the state. Places such as Karnataka–Kerala–Tamil Nadu border have become havens for illegal trade in Sandalwood. Due to the extensive illegal cutting of native Sandalwood trees, this species has become vulnerable to extinction. In Karnataka, Sandalwood populations are sparse and devoid of larger girth classes; matured trees have been nearly vanished. Despite favorable conditions for its growth and natural regeneration in many forests of Karnataka and Tamil Nadu, both production and export of Sandalwood and its products have shown a steep decline. Sandalwood genetic resources in the regions are under threat, due to a variety of factors, including its high economic value both inside the country as well as in the international market (Rao et al. 2001). Sandalwood production in the country was found to be reduced from ~4000 tons/year in the 1960s to

<1000 tons during the 1990s (Ananthapadmanabha 2000) and 500 tons in 2007 (Gairola et al. 2008). Sandalwood oil has virtually disappeared from the international market and its place has been taken over by synthetic substitutes. Sandalwood bio-resources depletion at a rapid pace is due to various reasons, the gap between demand and production has widened tremendously. During 2001 and 2002, Karnataka and Tamil Nadu governments relaxed the existing rules and regulations related to Sandalwood in an effort to boost its production by encouraging private domestication. Despite the policy amendments favoring private growing of Sandalwood and its advantages as an agroforestry species, there prevail considerable skepticism on the economic prospects of Sandalwood cultivation due to the time lag in accruing returns from the tree and the high investments required for its protection.

10.3 Sandal Tree and Part Traded

The traded part in sandal tree is its wood. The Sandalwood is harvested as either green logwood or deadwood. Wood is cleaned using jet of water or mechanical chain and classified into different groups before selling. Soundararajan et al. (2017) reported that commercialization of Sandalwood starts from extraction of mature trees from field, hammer marked and transportation to the nearest 'Final Cleaning Depot' under proper permit. Sandalwood trees are cleaned and stored in the depots and the particular regarding the weight of the 'final cleaned wood' is recorded. The quality of final cleaned wood including sapwood and sawn dust is classified based on government rules and regulations. According to the Karnataka Forest Manual Rule No. 95, Sandalwood is classified into 21 classes, namely Vilayat Budh, China Budh, Panjam, Ghotla, Ghathadla, Bagardad, Roots—Class I, Roots—Class II, Roots—Class III, Jaipokal—I, Jaipokal—II, Ain Bagar, China Sali or Large Chilta, Ain Chilta, Milwa Chlta, Hattari Chilta, Basola Bukni, Saw dust, White chips, Bark.

10.3.1 Adulterants

Adulterants of Sandalwood are dealt in detail in Chap. 6. Briefly, the most common materials used to dilute Sandalwood oil are the essential oils of other species of Sandalwood (resulting in a blended Sandalwood essential oil), as well as fractions of *Copaifera* species oil, *Cedrus atlantica* (Atlas cedar), and *Amyris balsamifera* (Amyris) oil. Sandalwood aroma chemical compounds that are synthesized chemically are often added to other oils to recreate Sandalwood oil's natural fragrance. Adulteration of Sandalwood oil can also often involve a technique called "stretching," where odorless solvents are added to Sandalwood oil to increase its quantity (Anonymous 2020b). Owing to its sensual quality, wide-ranging uses, and increased cost, Sandalwood oil is frequently adulterated with low-grade, cost-effective essential oils and synthetic or semisynthetic substitutes, for example Sandalore. Sandalwood oil adulteration is a major concern for regulatory organizations, oil

merchants, and also it is dangerous to human consumers. Mixing of synthetic additives may impact on the chemical configuration and physical characteristics of the Sandalwood oil, and thus could affect oil's quality and cause allergic reactions in consumers. The most frequent adulterants informed till date include cedarwood oil, castor oil, and low-grade oil from other species of *Santalum.*

10.3.2 Consumption of Sandalwood and Oil

The industries dealing with perfumery, medicine, attar preparations, scented chewing tobacco, mouth fresheners, soaps and toiletries, and incense sticks or joss sticks use Sandalwood and Sandalwood oil (Ananthapadmanabha 2011). Domestic use of Sandalwood is depicted in Fig. 10.1.

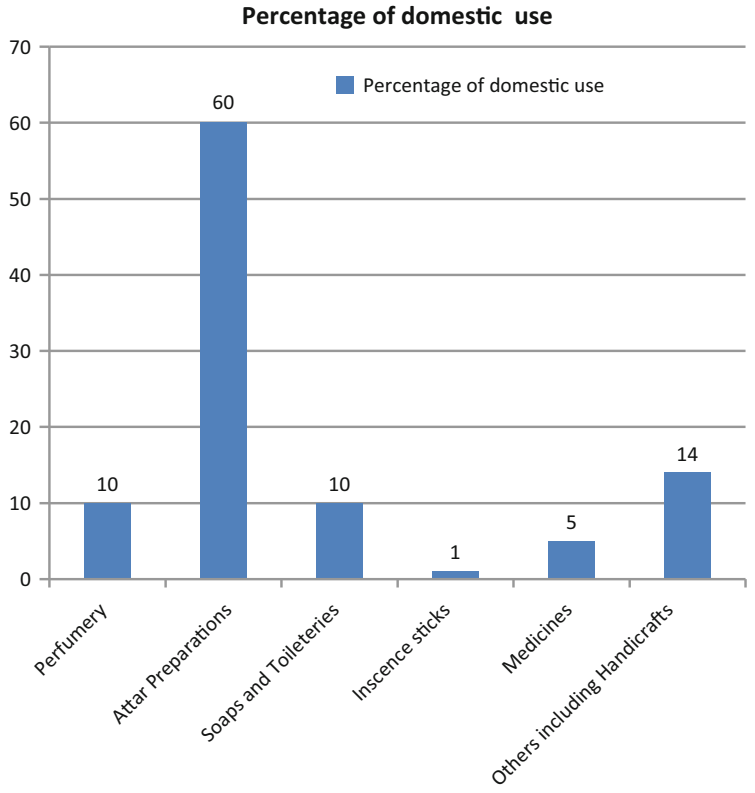

Fig. 10.1 Percentage of domestic use of Sandalwood

10.4 Sandalwood and Brief on Pricing Trend

10.4.1 Historical Trade in Price

The earliest Sandalwood trade was conducted during 1885–86. The Mysore Government (presently Karnataka state) had Sandalwood stock worth Rs. 1,56,321 (US $ 78,160) and selling realized a revenue of Rs. 74,598 (US$ 3730). During 1885–86, the Government of India exported Sandalwood stocks worth Rs. 4,44,241 (US$ 222,120) and imported value-added products worth Rs. 16,404 (US$ 8202) (Ananthapadmanabha and Gupta 2016).

During 1889–90, the export of wood increased to Rs. 10,08,152 (US$ 504,576), out of which the stock worth Rs. 7,70,791 was ported through Madras and the rest from Bombay port. At that time, the selling price for wood at Bombay was Rs. 120–180 per mound (10 lb). The price for Sandalwood oil was Rs. 8.5 (US$ 4.25) for 1 pound. During the beginning of twentieth century, that is 1907–08, around 85,000 lb. of wood was exported to different countries at value Rs. 10,00,000 (US$ 500,000). After the advent of the First World War, the export of wood was restricted to 2500 tons, of which 52% was sent to Germany, 18% was sent to the USA, and the rest to England and other countries (Ananthapadmanabha and Gupta 2016).

10.4.2 Price Trend During Twentieth Century

At the commencement of twentieth century, Sandalwood fetched a little over Rs. 400 per ton, which in the next few years scrambled to Rs. 500. In 1913, the prices shot up to Rs. 1000 per ton, which doubled Rs. 2000 per ton in the year 1914. The price of wood prior to the Second World War had aggrandized to Rs. 5000 a ton, which remained almost stable till 1957–58. The average price of Sandalwood has been pooled to 5-year period from 1962 to 2005. Average auction price of Sandalwood per metric ton (MT) from 1962 to 2005 and 2008 to 2015 in India are given in Tables 10.1 and 10.2, respectively.

Table 10.1 Average auction price of Sandalwood per MT from 1962 to 2005 (Source: Ananthapadmanabha and Gupta 2016)

Year	Rs.	US$	US$
1962–65	6874	1718	US$ 4
1965–70	10,910	2727.6	
1971–75	20,371	4074.36	
1976–80	33,776	2251.7	US$ 15
1991–95	2,20,000	8800	US$ 25
1995–2000	6,46,000	21,533	US$ 30
2000–06	21,50,000	56,578	US$ 38

Table 10.2 Average auction price of Sandalwood per MT from 2008 to 2015 (Ananthapadmanabha and Gupta 2016)

Year	Rs.	US$	US$
2008–10	54,00,000	103,864	US$ 52
2011–12	55,00,000	101,905	US$ 55
2013–14	82,67,887	135,917	US$ 60.8
2014–15	1,09,34,181	177,376	US$ 61.6

The average auction price from 2008 has increased very sharply due to high demand and short supply.

An e-auction conducted by Karnataka Forest Department in April 2016 gave a shocking news of the steep increase in the average price of heartwood to over 1.25 crores per ton (US$ 189,393) and it was likely that within next few years the average price of heartwood may reach over 1.40 crores (US$ 200,000). The increase in price is due to short supply against demand with this trend in increase in price the Sandalwood oil price may also go up to 3,60,000/kg (US$ 5300), prohibiting use in many formulations (Ananthapadmanabha and Gupta 2016).

As per Karnataka Government, fixed price per kilogram of various classes of the Sandalwood during 2014–2015 are Vilayat Budh (Class I billets) sold at highest price @ Rs 6050, followed by China Budh (Class II billets) @ Rs. 6410, Panjam @ Rs. 5810, Ghotla (billets of short length) @ Rs. 6410, Ghatbadla @ 5820, Bagardad @ Rs. 5600, Roots—Class I @ Rs. 4100, Roots—Class II @ 4150, Roots—Class III @ 4250, Jaipokal—I @ 5160, Jaipokal—II @ 4900, Ain Bagar @ 5500, China Sali or Large Chilta @ 4350, Ain Chilta @ 3655, Milwa Chlta @ 2350, Hattari Chilta 2153, Basola Bukni @ Rs. 1728, and Saw dust @ Rs. 750 (Soundararajan et al. 2017).

10.5 Price Trend of Sandalwood Oil

Sandalwood oil price during prewar was only Rs 5 per kg (US$ 3.5), the prices of Sandalwood oil was reasonable to some extent till 1960. During the period 1961 to 1973 the price remained to be about Rs. 99.6 to 293.6 (US$ 20 to 35) per kg. But in 1974, the price of Sandalwood oil shot up to Rs 1245 (US$ 150) per kg. During 1977–78 the price of oil came down to Rs 1132 (US$ 135); however the price stepped up again from 1980. From 1990 to 2000 the price of Sandalwood oil increased from Rs. 1678 to 26,065 (US$ 200 to US$ 580). The price of Sandalwood oil increased sharply from 2001 to 2008, Rs. 29,211 to 75,000 (US$ 650 to US$ 1500). With the increase of Sandalwood auction price, legal distilled Sandalwood oil price in 2014–2015 was more than Rs 2,30,000 (US$ 3500). The price of oil will increase further due to high demand and short supply.

Due to the progress in the developed and the developing nations, synthetic resolution is a perceived threat to continued use of natural products in the perfumery industry. This threat has been created by the presence of multinational companies

dominating the fragrance industries; however, smaller companies still provide specialist services to the industry and to its customers.

Since Indian Sandalwood is in short supply, the users are buying natural Sandalwood oil obtained from different species, like *S. spicatum, S. lanceolatum, S. austrocaledonicum* and *S. yasi*, though the santalol content is less. *Osyris lanceolata* an East African wood also belongs to the family Santalaceae, the oil obtained from it is called East African Sandalwood oil, it contains less amount of santalol compared to Indian Sandalwood, and is used as one of the alternate for Indian Sandalwood.

Prior to 1970s, Karnataka, India was generating more than 2000 tons of Sandalwood per annum. Later, there was a collapse of the state's Sandalwood population, leading to obtaining of Sandalwood from the neighboring state, Tamil Nadu. In recent years, Indian Sandalwood export has decreased to 2550 cubic meters in the year 2011–-2012 and 800 cubic meters in the year 2014–2015. Indian Sandalwood has been exported to Canada, China People's Republic, France, Guyana, Hong Kong, Japan, Malaysia, Nepal, Philippines, Saudi Arabia, Singapore, Sweden, Switzerland, Taiwan, Thailand, Trinidad, the United Arab Emirates, the United Kingdom, and the United States of America. The major importers of Indian Sandalwood are Hong Kong, Japan, Saudi Arabia, Singapore, the United Arab Emirates, and the United States of America. The export of Indian Sandalwood in 2003–2004 was 1.78 cubic meters (thousands) for a value of Rs. 192.67 lakhs and it was noted drop exports during the year 2014–2015, wherein 0.8 cubic meters (thousands) was exported for a value of 188.69 lakhs.

Indian Sandalwood import is also increasing every year. Above 20 cubic meters of Sandalwood has been imported from various countries in the year 2011–2012; 790 cubic meters of Sandalwood has been imported in the 2014–2015. Sandalwood has been imported from Australia, Fiji Island, Gabon, Germany, Hong Kong, Indonesia, Kenya, Malaysia, Russia, Taiwan, Tanzania Republic, Tunisia, the United Arab Emirates, and Vanuatu Republic. The major exporter of Sandalwood is Australia, Tanzania Republic, and Vanuatu Republic. Australia and Tanzania are two countries from where Sandalwood is imported.

The Sandalwood oil trade is being carried out from ancient times and used to be exported to Egypt, Greece, and Rome. Hence the demand for the oil of Sandalwood was limited. India continued to export Sandalwood and its oil till 1914 without any hindrance in its trade. Most of the Sandalwood was exported to Germany, where oil used to be distilled by modern steam distillation techniques and supplied to different parts of the world. With the outbreak of the First World War, exports to Germany completely stopped due to lack of shipping space for more bulky wood.

The Sandalwood oil was fetching handsome prices in those days. Therefore, Australia also extracted Sandalwood oil from different species of the tree and referring it to be Sandalwood oil, entered into the world market. They tried to market it as Sandalwood oil, but it could not compete with the Indian produce.

To face this stiff competition, the Indian traders agreed to sell their oil jointly to foreign countries. In this way, the fall in prices of Indian oil was checked for the time being. This arrangement, however, did not last long. The United States was one of

the important buyers for Indian Sandalwood oil. Although, there was an import duty of 20%, it was not charged on the Sandalwood oil exported from India. This facilitated Indian Sandalwood oil to compete with the other countries operating in the US markets. However, the import duty on oil was further increased from 20% to 25% in September 1922. The Mysore Government, therefore, entered into an agreement with M/s Bush & Co., in New York, to distil the oil in the US, on its behalf from the wood exported by the Mysore Government.

During the period, oil of Sandalwood from a number of species was also available in the market. Despite this, India maintained its monopoly in this trade till 1950. Later on, the Indian government banned the export of Sandalwood with the result; Oil industry was set up in Indonesia and 8 to 7 tons of Sandalwood oil was produced.

In Indonesia, there are two factories situated in Kupang. Their production of Sandalwood oil during 1978 was reported to be about 6 tons. These two units have a total export potential of producing about 30 tons of Sandalwood oil per annum. During early 1920, the quality of Indonesian Sandalwood oil was very inferior as Indonesian factories were distilling the heartwood along with the bark and sapwood. But after acquiring the technical knowhow from the USA and Germany, the factories in Indonesia are reported to be producing quality oil which is almost similar to that of the east Indian Sandalwood oil. Thus, Indonesia has emerged as a new competitor to India in the world markets. The Sandalwood oil exported from Indonesia being cheaper, the USA is prompted to import bulk of its requirement from Indonesia.

It has also been reported that a firm, namely, Singapore Essential Oils Distillation Ltd., Singapore, has also come up in November 1967 and now it is distilling Sandalwood oil from Sandalwood chips obtained mainly from Indonesia. They are exporting the Sandalwood oil to West European countries and their production capacity is stated to be 6–10 tons per annum. Another firm namely Indah Co. Ltd., (I.C.L.) was also established in Singapore as a joint venture with Singapore in early 1969 by Mr. Tsai, a business from Indonesia (in Indonesian language *Indah* means "beautiful"). This factory has a total distillation capacity of 18,000 L of Sandalwood oil and envisages a production of 20,000 L of Sandalwood oil per annum in the near future. The oil so obtained is reported by a London analyst as "in our opinion this is a genuine Sandalwood oil of East – Indian type" and is satisfying the requirements of British Standards specification No 2999/30/1939." Singapore is reported to be going better in production of Sandalwood oil. Some Chinese interests in Singapore have installed stainless steel equipment and as a result are offering a comparatively better produce to the US market. They are also offering a variety called U.S.P. oil with over 90% percent of santalol contents as total alcohols. A Singapore firm has installed stainless steel equipment with over 90% of santalol contents as total alcohols.

Yugoslavia is another new exporter, through their performance in 1970 was reported to be not as high as it was in 1969, when they exported 7855 lbs. of oil. Nepal also made some shipments of Sandalwood oil, but the interest of buyers appears to be falling off in their produce. Market sources confirmed that most suppliers do not have Agmark certification which in other words explains the establishment of Indian quality mark. Apart from Indonesian Sandalwood oil, New Caledonian Sandalwood oil has also entered the world market and is competing with

the Sandalwood oil of Indian origin. However, the detailed information on new Caledonian Sandalwood oil is not readily available.

10.6 Domestic Market

The first factory was started at Bangalore in May 1916 and the other at Mysore in 1917. Since then, the Mysore Government stopped auctioning of Sandalwood in 1917. By 1921, for every ton of Sandalwood distilled and sold as oil by the state government, it is estimated that it obtained nearly 50% more price than the auction price of 1 ton of Sandalwood. This attracted attention of other Indian distillers, some of whom started factories with modern techniques of steam distillation. One such factory was started at Kuppam (Andhra Pradesh) and another at Kannauj near Kanpur by the year 1921. Thus, the Mysore Government's factories were the pioneers in modern distillation. In 1930, high pressure steam distillation was tried. This gave higher output and was more economical, saving both time and fuel. Later on, the Mysore Government started another factory at Shimoga, with a supplementary distilling at Bhadravati where surplus steam was available (Anonymous 1984).

In the world markets, a new substitute (a product commercially synthesized and commonly known as Sandela) has also entered and is available at cheaper rates than common Sandalwood oil offered by any country and being used only in the cheap oriental types of perfumes. Chemical hazards of this substitute have not yet been studied (Anonymous 1984).

10.7 Production in Trade

According to Directorate of Marketing & Inspection, Ministry of Rural Development, Karnataka, contributed to the extent of 74% to the total production of Sandalwood oil in India in the year 1963–84, when its production was about 116.29 tons. In the year 1969–70, it reached the peak when India produced about 165 tons of Sandalwood oil. The contribution of Karnataka state was about 73% and Andhra Pradesh contributed around 11%, while Tamil Nadu and Uttar Pradesh contributed only about 5.2% and 9.1%, respectively. After 1969–70, the country's production looked downward and it decreased to about 156 tons in 1970–71. In the year 1972–73, it increased slightly to 163 tons. Thereafter, the production declined continuously to be 133, 97.73, and 90 tons during 1973–74, 1975–76, and 1976–77, respectively. In 1977–78 about 112 tons of Sandalwood oil was estimated to be produced in the country. But during 1978–79 and 1979–80, the trend remained downward with production declining to only 82 and 69 tons, respectively (Anonymous 1984).

As per the Soundararajan et al. (2017), the Indian Sandalwood oil export started as early as in the 1960s. During the period 1996–97, 11.52 kg of Sandalwood oil was exported at the value of Rs. 95.48 lakhs. After a decade, during 2006–2007, the export decreased to 3.07 kg at the value of Rs. 737.83 and in 2014–2015, 0.64 kg

Table 10.3 Indian Sandalwood oil exports

Sl. no.	Year	Quantity in kg (thousand)	Rupees in lakhs	US$ in million
1	1996–97	11.52	95.48	0.27
2	1997–98	27.93	110.56	0.3
3	1998–99	2.75	29.29	0.07
4	1999–2000	7.03	66.59	0.15
5	2000–01	17.67	51.2	0.11
6	2001–02	4.77	35.47	0.07
7	2002–03	13.65	76.56	0.16
8	2003–04	3.14	521.34	1.13
9	2004–05	9.67	1047.90	2.33
10	2005–06	5.71	913.2	2.06
11	2006–07	3.07	737.06	1.61
12	2007–08	6.48	606.83	1.5
13	2008–09	2.49	719.35	1.69
14	2009–10	3.78	29.65	0.06
15	2010–11	2.13	25.36	0.06
16	2011–12	1.11	105.07	0.22
17	2012–13	0.25	30.85	0.06
18	2013–14	0.42	56.26	0.09
19	2014–15	0.64	314.28	0.51
20	2015–16	0.01	0.64	0

Source: Export Import Data Bank Version 7.1 Tradestat, Government of India, Ministry of Commerce and Industry, Department of Commerce

exported for a value of Rs. 314.28 lakhs and 2015–2016 further declined to 0.01 kg at a value of 0.64 lakhs (Table 10.3).

Soundararajan et al. (2017) provided import data from 1996 to 2016. They quote that Sandalwood imports has been imported during the 1996–2016 (Table 10.4). Maximum quantity of Sandalwood oil has been imported in the year 2009–2010, weighing 43,270 kg and 34,440 kg in 2013–2014, and least amount of Sandalwood oil was imported during the years 1998–2000 (Table 10.4).

Indian Sandalwood oil has been exported to several countries of the world and also imported Sandalwood oil from some other countries.

10.8 Import and Export Policy on Sandalwood

Sandalwood and its product related import policy contains three chapters in Schedule–I. There is Section II, Chapter–12: Oil Seeds and Oleaginous Fruits, Miscellaneous Grains, Seeds and Fruit; Industrial or Medicinal Plants; Straw ad Fodder; Section–VI, Chapter–33; Essential Oils and Resinoids; Perfumery, Cosmetic or Toilet Preparations, Sections IX; Wood and Articles of Wood; Wood Charcoal; Cork and Articles of Cork; Manufacturers of Straw of Esparto or of

Table 10.4 Indian Sandalwood oil imports

Sl. no.	Year	Quantity in kg (thousand)	Rupees in lakhs	US$ in million
1	1996–97	0.96	10.32	0.03
2	1997–98	26.74	75.52	0.2
3	1998–99	0	1.31	0
4	1999–2000	0	0	0
5	2000–01	2.05	9.53	0.02
6	2001–02	0.41	1.74	0
7	2002–03	3.15	5.85	0.01
8	2003–04	5.3	150.44	0.33
9	2004–05	3.2	96.92	0.22
10	2005–06	1.41	140.02	0.32
11	2006–07	3.18	299.2	0.67
12	2007–08	19.64	1597.95	3.98
13	2008–09	61.1	2061.88	4.53
14	2009–10	43.27	1879.29	3.97
15	2010–11	27.15	4087.82	8.97
16	2011–12	29.19	5326.18	11.11
17	2012–13	30.75	7669.07	14.09
18	2013–14	34.44	9865.11	16.44
19	2014–15	26.95	7590.71	12.42
20	2015–16	2.24	621.4	0.99

Source: Export Import Data Bank Version 7.1 Tradestat, Government of India, Ministry of Commerce and Industry, Department of Commerce

Other Plating Materials; Basket ware and Wickerwork; Chapter-44: Wood and Articles of Wood; Wood Charcoal.

Sandalwood and its product related export policy contain three chapters in Schedule–II. There is Chapter–12. Oils Seeds and Oleaginous Fruits; Miscellaneous Grains, Seeds and Fruits; Industrial or Medicinal Plants; Straw and Fodder; Chapter–33. Essential Oils and Resinoids; Perfumery Cosmetics or Toilet preparations; Chapter–44. Wood and Articles of Wood; Wood Charcoal.

10.9 Case Study from the Industry, Karnataka Soaps and Detergents Limited (KSDL), India

Karnataka Soaps and Detergents Limited (KSDL) is an unlisted public company with its registered office of the company at Bangalore, Karnataka, and classified as a state government company. The company manufactures and markets toilet soaps, detergents, cosmetics, *agarbattis* (incense sticks), and Sandalwood products. Other major products are *agarbattis*, Sandalwood oil, detergents, talcum powder, and soaps. The makers of the iconic Mysore Sandal Soap, a household brand across south India, Karnataka Soaps and Detergents Limited (KSDL) is on a higher growth trajectory. The KSDL is eyeing a robust 20% topline growth during the current

fiscal, as its popularity and profitability, predominantly on account of the consistent production of its pure Sandalwood oil–based soap, proceed with great strides. In 2019, Karnataka Soaps and Detergents Limited's operating revenues range is over INR 500 crores. Its EBITDA has increased by 57.81% over the previous year (Anonymous 2020a).

10.9.1 KSDL History: High and Low

The Karnataka government–owned company was set up in 1916 by Nalwadi Krishnaraja Wodeyar, the then Maharaja of Mysore, and Mokshagundam Visvesvaraya, the then Dewan of Mysore, for Sandalwood oil extraction and export. An idea to use this oil to manufacture soaps took root in the mind of the Maharaja, supported by the Dewan, and validated by an industrial chemist Sosale Garalapuri Shastry, which led to the formation of the Mysore Sandal Soap In 1918.

The company was under loss between 1980 and 1990 when the marketing of its products was done by another state enterprise Mysore Sales International Limited (MSIL). However, the company got back control over its sales in 1990. It also received an interest-free, unsecured loan from the government of Karnataka during the year 1990–1996 amounting to Rs 3.5 crore. The company recovered losses and became profitable again. It has been 10 years now that the company has been consistently making profits. Its product portfolio consists of 91 products across categories (Anonymous 2020a).

10.9.2 KSDL Turnover

For the year 2017–18, KSDL reported a turnover of Rs 583 crore and increased it further to Rs 672 crore in 2018–19, a growth of 15.3% year-on-year. The net profit of the company almost doubled from Rs 67 crore in the year 2017–18 to around Rs 123 crore as in March 2019, a growth of 83.5% over the previous year. The company's top line growth is around 16.5% annually, which is much higher compared to the industry growth of 8–9%. In FY19, KSDL produced 13,000 metric tons of soaps across all brands and the company is aiming at a turnover of Rs 800 crore by March 2020. KSDL's market share in the soap market is a minuscule 1.8–2.5%. However, its share in the premium soap category is 12%, while the premium soap as a category accounts for 20% of the overall soap market in the country.

Mr. M. R. Ravikumar, MD, KSDL, quotes "The company holds 40% market share in Southern markets and commands huge popularity in the markets of Tamil Nadu, Andhra Pradesh and Telangana followed by Karnataka. Mysore Sandal Soap (75 g) remains to be the company's star product, contributing the most to its revenues." The company has obtained geographical indication (GI) tag for Sandalwood soaps.

10.9.3 Challenges Faced by KSDL

Being a government-owned company, KSDL is facing several challenges, such as a negligible marketing and advertising budget, which is limited to Rs 12–13 crore a year. However, this year, it has been hiked to Rs 20 crore (Anonymous 2020a).

10.10 Conclusion

There is a continuous decline in the production of Sandalwood, but the demand for natural products is increasing. The wood and the value-added products are not adequately available in the market. Sometimes the policies of the government also hinder the free flow of raw materials and the dependent industries have no option other than to seek alternatives. Due to these reasons, the sale price of wood and oil is fluctuating in both domestic and international markets. Due to progress in the developed and the developing nations, there is shift in the use of synthetic substitutes. Because of the synthetic revolution, there is a perceived threat to continued use of natural products in perfumery industry. This threat has been created by the presence of multinational companies seeking maximum profit at low cost, although these companies dominate the fragrance industry; however, smaller companies still provide specialist services to the industry and its customers. Customer market demands an imperative and an ever-increasing requisite.

Consumers have become more educated and knowledgeable and hence discerning with regard to chemical names on the product labels and feel more secure with natural products, especially in skin care and health products. This is attributable to both an inherent desire for the use of natural derivatives and adverse publicity resulting from sensitivity and allergic responses in some people to synthetic products. They have fear of adverse allergies due to synthetic usages.

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