

The Agar Wood Industry: Yet to Utilize in Bangladesh

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Abstract

Agar wood is one of the most expensive non-timber wood products of the world. It has a series of names around the Asia and Pacific region. Bangladesh is producing three major products namely Agar-wood, Agar-oil and Agar dust/powder in Agar wood sector. It has multidimensional uses in perfume, cosmetics and medicine sector. Agar wood has traditional, religious moreover cultural uses in different parts of the world. Major Agar wood producing countries are India, Malaysia, Indonesia, Vietnam, Cambodia, Laos, Brunei, Singapore and Bangladesh. Major market/consumers of Agar wood are the Middle East (UAE, KSA and other Arabian countries) and North East Asian countries (Taiwan, Japan and Korean Republic). It has a long history in Moulvi Bazar and nearby districts of Bangladesh too. A very few constraints are creating hurdles toward flourishing this sector in Bangladesh. In this study we would be very much concentrated to identify development barriers of Agar wood sector in Bangladesh and generate few recommendations in this regard. Proper regulatory support from the government could play a very vital role to make it one of the major foreign currency earning sectors for Bangladesh.

Keywords: Agar-wood; Agar-oil; Perfume; Medicine; Culture; Middle East; North East Asian Countries; Premium Sector

Introduction

Agar wood commonly known as Gaharu in Malaysia, Jinko and Jinkoh in Japan, Adlerholz in Germany, Bois d'Aigle in France, Pau d'Aguila in Portugal, Chen Xiang in China, Ood/Oudh and Oodh in UAE, Eaglewood/Aloeswood and Gaharu in Indonesia [1]. Agar wood is a fragrant and highly valuable wood found in Aquilariaspecies of the Thymelaeaceae family. There are 15 species of agar wood around the world [2]. Agar wood is mainly traded in three forms wood chips, wood dust/powder and Agar-oil.

Multidimensional uses of Agar wood may be described as Agar-oil/ Dihn al oudh, Arabian perfumes (oil based) and French-style perfumes as body fragrance. Agar wood Chips/oudh, bakhoor, Scented chips, Arabian perfumes in sprays and French-style perfumes as clothes fragrance. Agar wood chips/oudh, bakhoor, Scented chips, Sprays as house fragrance. Agar woodchips, oudh, Bakhoor, Scented chips to receive honored guests Antonopoulou et al. [3]

Major Agar wood producing countries of the world are India, Indonesia, Malaysia, Hong Kong, Australia, Laos, China, Myanmar, Singapore, Thailand and Vietnam. Globally there are two major market regions for Agarwood consumption, north-east Asia and the markets of Taiwan, Japan, and the Republic of Korea, and west Asia or the "Middle East" which centers on the countries of the Arabian Peninsula.

International market price of Agar wood chips is US \$ 20 to US \$ 6000 per kilo based on its quality [4]. Distilled agar oil valued as high as US\$ 30,000 per kilogram and the wood itself worth up to US\$ 10,000 per kilogram [1].

Production of Agar wood was started about 400 years ago in the Suzanagar union under Barolekha Upzila of Moulvibazar district in Bangladesh. Previously they were producing forest based Agar-wood only. But due to limited access on forest based Agar wood they started social cultivation of Agar wood in their household lands. As a result finding best quality Agar wood became a time consuming process. Therefore they started production of Agar-oil from ten to fifteen years young trees.

With such a long history; Agar wood sector of Bangladesh does

not flourished accordingly due to few policy anomalies and other constraints. In this study we would be very much concentrated to identify development barriers of Agar wood sector in Bangladesh and generate few recommendations in this regard.

Literature Review

Agar wood and its essential oil gained great cultural and religious significance in ancient civilizations around the world being mentioned throughout one of the world's oldest written texts, (the Sanskrit Vedas from India). In as early as the 3rd century, the chronicle Nan Zhouyiwuzhi (Strange things from the South) written by Wa Zhen of the Eastern Wu Dynasty mentioned agar wood produced in the Rinancommandery, now Central Vietnam, and how people collected it in the mountains. Starting in 1580 after Nguyễn Hoàng took control over the central provinces of modern Vietnam; he encouraged trade with other countries, specifically China and Japan. Agar wood was exported in three varieties: Calambac (kynam in Vietnamese), tram huong (slightly harder and slightly more abundant), and agar wood proper. A pound of Calambac bought 15 taels in Hoi an could be sold 600 taels in Nagasaki. The Nguyễn Lords soon established a Royal Monopoly over the sale of Calambac. This monopoly helped fund the Nguyễn state finances during the early years of the Nguyễn rule [5]

Agar wood also known as the 'Wood of the Gods' has at least a 3,000 year history in the Middle East, Japan and China [6]. There are references of agar wood in many ancient literature and religious scriptures. The Indian poet Kalidasa once wrote: "Beautiful ladies, preparing themselves for the feast of pleasures, cleanse themselves with the yellow powder of sandal, clear and pure, freshen their breast

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with pleasant aromas, and suspended their dark hair in the smoke of burning Aloeswood". Agar wood is an integral part of culture and religious landscape of Hindus, Buddhists, Muslim, Christians, Taos, Sufies etc. In addition, it is widely used in medicinal practices of Ayurveda, Unani, Arabic, Tibetan, Sufi and Chinese. The followers of Buddha believe that the burning of Agar-wood and taking in its aroma helps one reach the ultimate stage of meditation and hence use it accordingly. It has found a mention in the 8th century tomes of Shahin Muslims. The word 'aloes' has been mentioned several times in the Old Testament of Christians [7].

The earliest record of agar wood in Japanese texts dates back to the year 595 AD, in the Nihon-shoki (Chronicles of Japan) which records the following entry:

"...aloeswood drifted ashore on the island of Awaji (near Kobe). It was six feet in circumference. The people of the island, being unacquainted with aloeswood, used it with other firewood to burn for cooking; the smoky vapour spread its perfume far and wide. In wonderment, they presented it to the Empress".

When the agar wood arrived at the royal court, Prince Shotoku recognized it as jin-koh, the use of which had been introduced to Japan along with Buddhism in the middle of the 6th Century, via the Korean peninsula. Agar wood fragrance was central to incense offerings of Buddhist rituals, which became incorporated into State ceremonies and imperial court functions during the Nara period (710-794 AD), a tradition that continued until the Meiji Restoration (1868) after which the tradition of offering incense during imperial functions was abandoned [8].

Methodology

Local entrepreneurs claim that the agar wood is a four hundred years old industry at Suzanagar, Baralekha, Moulvibazar. But it has no official documents or literature to probe their claims. Even there are no official data about trade volume of agar wood from Bangladesh to justify its importance in the Bangladesh economy. As a result we will try to analyze this sector based on available global/regional documents. Here we will be depending upon secondary materials to discuss about the uses of agar wood, agar-oil, and global market trend of this industry.

To know that current status of agar wood industry of Bangladesh we have conducted a stakeholder consultation meeting at Suzanagar Union Parishad Complex on May 21, 2013 with about fifty entrepreneurs of the said sector. We have collected primary data through a questionnaire from the participants of that stakeholder's consultation meeting. Source of our primary data is that consultation meeting and their written feedback by filling up the questionnaire.

Objective of the Study

- There is a scarcity of literature to know about the agarwood industry of Bangladesh. Only a few studies were being conducted like Akter and Neelim [9] Agarwood Plantation at BRAC Tea Estate: Introduction, Environmental Factors and Financial Analysis. Akter et al. [10] first objective of this study is to discuss about the agar wood industry, types of products, uses of the products producing, major consumer markets, and global market trend of this sector based of available local and international resources.

- Secondly we would like to know details about local agar industry; current status of the sector.

- Thirdly we would like to identify development barriers of

Bangladesh agar wood industry and recommend potential way forward.

Sampling

There are about 100 operational units (factory) of agar wood in Bangladesh mainly Suzanagar and adjoining area [11] so our total population size is 100 in this study.

We can target the "Perfume & Incense Cluster" located at Suzanagar union of Baralekha upzila under Moulvi bazar district. We invited 50 entrepreneurs of that cluster through the "Baralekha Agar Ator Bohomokhi Samabay Samity (the association of the factory owners)". Thirty entrepreneurs attended the meeting including the President, Former President, Founder President, Members of the Board of Directors of that Association. So our sample size is 30. It is 30% of the total population. This is a standard size of sample to represent the total population.

Agar wood Industry of Bangladesh

There are about 100 enterprises producing agar wood and agar-oil in Bangladesh. These are mainly based at Baralekhaupzila of Moulvibazar district of Bangladesh. Previously their primary source of raw materials (agar wood tree) was government and social forests. But currently they are using trees from their own cultivated gardens. An agar woodtree requires 12-15 years to be used as raw materials. About 8-10 years old tree have to be selecting for ironing (Putting iron rod inside the tree). About 100 to 150 kg iron rod is required for ironing a medium size agar wood tree. It took about 3-4 years after ironing a tree to be used for extracting agar-oil.

Local entrepreneurs are claiming that this is a 100% export oriented sector based on local raw materials and using indigenous technology. They are exporting about TK. 5.00 million [11] to TK. 100 million (the stakeholders consultation meeting) per year.

There are no official export data available for agar wood or agar-oil exporting from Bangladesh. Because most this sector is still remains as an unofficial/informal sector in Bangladesh. Entrepreneurs used to carry agar wood and agar-oil in their hand bags to Dubai or Mumbai (major regional markets) and sale in cash.

Few years back there were no HS (Harmonized System) Code in Bangladesh tariff line for agar wood or agar-oil for any international trade. Before 2-3 years the Export Promotion Bureau, Bangladesh took initiative to allocate HS Code (by the relevant government agency) for these products and facilitate formal trade of the sector.

Uses of Agar Products

Following items of the agar wood industry are using as -

- Agar wood pieces and sculptures: Agar wood pieces in natural shapes and sculptures are the highest value items in the consumer Market (The CITES Secretariat; PC - 15 Inf. 7; undated).

- Agar wood Chips: Agar wood chips are mainly used as raw materials in fragrance industry. A very small portion is using to make tea.

- Agar wood raw powder: Majority portion of agar wood raw powder is used for incense production, while a small portion is consuming by the end user as burning powder during prayers in Buddhist temples.

- Agar wood oil: Agar wood oil is used as raw materials in the perfume industry. It is an expensive item of this industry.

- Agar wood fragrances: Different types of agar wood fragrances (Agar wood oil, Dihn al oudh, Arabian perfumes, Scented chips, Sprays, Bakhoor etc.) are using as body fragrance, clothes fragrance, house fragrance and to receive honored guests [12].

- Agar wood beads: Agar wood pieces are also made into beads for religious purpose. Traditionally the Buddhist masters used rosary beads made from agar wood.

- Agar wood Medicines: Agar wood is used to manufacture several types of crude medicine, prepared medicine.

- Liquor with agar wood: Several types of liquor products are producing with agar wood. For example two kinds of liquor products produced by the Taiwan Tobacco and Liquor Corporation contain agar wood as an ingredient [13]

Market Trends of Agar Wood

International market of agar wood has experienced a number of booms and crashes over the years. In 1880, top grade agar wood was sold for up to US\$ 1 per kg. By 1905 price doubled to US \$ 2.20 per kg and then crashed to US \$ 0.30 in 1925 due to over production by Indonesia. In 1970s, best quality reached around 42.5 and then it raised strait into US \$ 1250 in 2000, US \$ 2500 in 2005 [14]. Current market price of distilled agar oil is up to US\$ 30, 000 per kilogram and wood itself up to US\$ 10,000 per kilogram respectively [1]

Findings

Major barriers towards development of Bangladesh agar wood industry are as follows:

- Absence policy support from the government: Till now this is not recognized as an industrial sector in any government policies like Industrial Policy, Import Policy, Export Policy, Investment policy, SME Loan Policy etc. As a result entrepreneurs are not getting any policy support including bank loan at concessional rate, cash incentives for export of an agro-processed product, Payment of electricity, gas and other utilities bill as an industrial line etc.

- Lack of government initiative to formalize the sector: During last 400 years agar wood items are exporting by the entrepreneurs from Suzanagar to Dubai or Mumbai. But all of these transactions are occurring in informal channel due to lack of official arrangement for formal export of agar wood product. As a result government is not getting revenue as well as the entrepreneurs are not getting government supports as exporter.

- High import duty charging by the importing countries: Generally government used to negotiate with the consumer countries to allow Duty Free and Quota Free (DFQF) market access to Bangladeshi products in respective countries. Till now importing countries are charging high duty on agar wood products but Bangladesh government has never negotiate the issue with any importing countries. High duty on formal import of agar wood product charging by the consumer countries may be another cause of informal trade of agar wood products.

- Limited access to the government forest while selling trees: There are hectares of agar wood forest owned by the government of Bangladesh in Sylhet, Chittagong, and Hill tracks region. Department of forestry used to sale these trees after a certain age. If local agar wood entrepreneurs (having processing plants) get these trees in tender or through a mechanism (so that foreign brokers or local agent of foreign

brokers cannot purchase) for further processing then the country may get more revenue out of it.

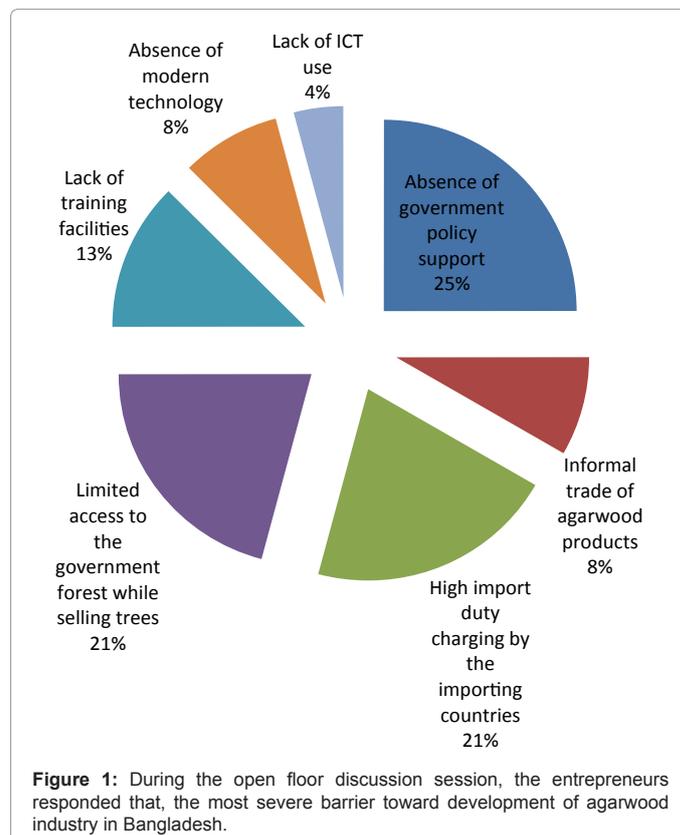
- Lack of training facilities: There are eight or more items producing by competitors like Malaysia, India, Indonesia etc. but due to lack of training and diversification knowledge Bangladeshi agar wood sector is producing only three items namely; agar wood chips, agar wood oil and agar wood powder/dust.

During the open floor discussion session, the entrepreneurs responded that, the most severe barrier toward development of agar wood industry in Bangladesh is -

- 25% responded that lack of government policy support.
- 21% responded that high import duty charging by the importing countries.
- 21% responded that limited access to the government forest while selling tress.
- 13% responded that lack of training facility and product diversification knowledge.
- 8% responded that lack of modern technology and technical knowhow.
- 8% responded that informal trade of agar wood items.
- 4% responded that absence of ICT use (Figure 1).

Recommendations

The government of Bangladesh/relevant agencies and other stakeholders may consider following recommendations to implement for development of Bangladeshi agar wood sector:



- Declaring agar wood as a priority sector: Government may consider declaring agar wood as a thrust sector in the National Industrial Policy (while revising) and a booster SME sector in the SME Policy Strategies.

- Initiative to formalize the sector: Government may take necessary initiative to facilitate formal export of agar wood items by training up the entrepreneurs and making necessary institutional arrangements.

- Negotiating with the importing countries for DFQF: The WTO Cell under ministry of commerce/the Ministry of foreign affairs may request the importing countries mainly UAE, KSA, Japan etc. to allow duty free and quota free market access to Bangladeshi agar wood product under the umbrella of WTO or bilateral trade negotiation.

- Ensuring industrial facilities and support to this sector: Concerned agencies may consider providing all sorts of industrial benefits including like long-term loan facilities, industrial rate of power, gas and other utilities services, and export incentives to the agar wood sector.

- Selling trees from the government forest to the real entrepreneurs: The Ministry of Environment and Forest, government of Bangladesh may take necessary policy initiatives to ensure that, all participants of the tender (during selling agar wood trees) are agar wood entrepreneurs for ensuring maximum benefit of the country.

- Comprehensive support for developing world class perfume industry: To ensure maximum value addition benefit government may provide comprehensive support under a package program to develop world class perfume industry in Bangladesh.

Conclusion

The remittance and the readymade garment are the main foreign currency earning sectors of Bangladesh. In human resource exporting sector we are exporting non-skilled workers as a result they are getting comparatively lower wages. In the readymade garment sector Bangladesh is producing mainly low yelled products. But agar wood sector is producing most expensive premium items of the world. So if Bangladesh can flourish this sector then it could be one of the major sources for earning foreign currency and boost up export figure of Bangladesh.

Limitations

Scarcity of literature about agar wood sector of Bangladesh both from scientific (botany) and from commercial (industry) aspects is the main limitation of this study to discuss local aspects more precisely.

Issues for Future Research

For utilizing full potentials of this sector further research shall be conducted on the following issues:

- There are 15 species of agar wood in the world; complete primary research is required to identify how many species of agar wood is available in Bangladesh.

- A comparative study is required to address the CITES/ environmental issues versus possibilities of increasing agar wood production through social forestry.

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