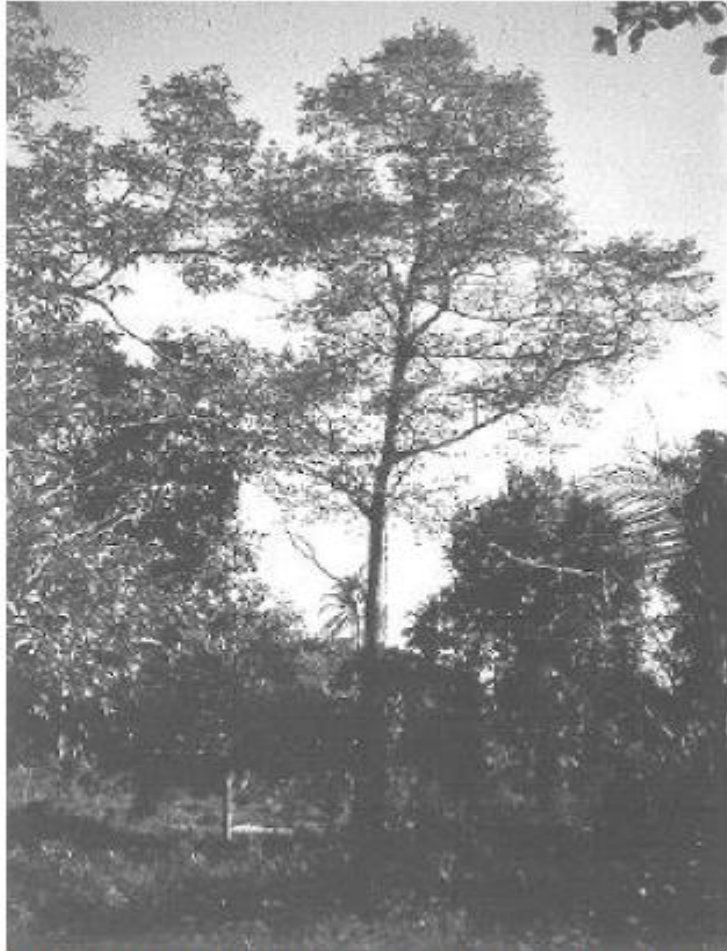


**HEART OF THE MATTER: AGARWOOD USE AND TRADE
AND CITES IMPLEMENTATION FOR *AQUILARIA MALACCENSIS***

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Credit TR.P Vietnam

**One of the few remaining full-grown *Aquilaria* trees
in southern Vietnam**

HARVEST, TRADE AND CITES IMPLEMENTATION WITHIN KEY AQUILARIA RANGE STATES- VIETNAM

Status and distribution

Although Vietnam was named as a range State for *Aquilaria malaccensis* in the supporting statement to the 1994 CITES listing proposal, Oldfield *et al.* (1998) and Heuveling van Beek (TRP, *in litt.* To TRAFFIC International, 2 May 2000) do not consider it a range State for this species. Vietnam is, however, a range State for *A. banaensae* and *A. crassna*, the latter one of 13 officially-listed endangered tree species in Vietnam (Heuveling van Beek and Phillips, 1999). It is considered Critically Endangered by Oldfield *et al.* (1998), the classification being largely based on the situation in Vietnam (other *A. crassna* range States are Cambodia, Lao PDR and Thailand). *Aquilaria* spp. are mainly located in the southern coastal forest fringes adjacent to the Cambodian border and the western part of Da Nang province along the Lao PDR border. Of particular importance are the coastal belts.

Quang Ninh; Ha Bac; Hoa Binh; Tuyen Quang; and Phu Quoc Island. The other main localities are in the central highlands, namely Ha Tinh, Kon Tum, Quang Nam-Da Nang, Binh Dinh, and Gia Lai. The Ministry of Forestry and the National Forest Planning Institute in Hanoi appear to have little information on the present status of *Aquilaria* spp. The Canadian-funded provincial forest inventory studies do not include *A. malaccensis*, and the CITES Management Authority in Hanoi (The Forest Protection Department) lacks definitive information on tree population trends. The Centre of Resource and Environmental studies (one of Vietnam's two CITES Scientific Authorities) at the University of Hanoi prepared an agarwood paper on behalf of TRAFFIC. The report maintained there was no direct correlation between *Aquilaria* populations and the general rate of deforestation; approximate forest cover is currently 27%.

Domestic use

According to traders interviewed, agarwood has been used for medicinal purposes for centuries and is included in the Vietnamese pharmacopoeia. The traditional trade was in the hands of guilds in places such as Thua Thein and Hue. However, although most indigenous medicine producers interviewed reported that they used agarwood if it could be acquired at an acceptable price, prices in 1999 meant that few local medicines comprised agarwood.

Markets and prices

Interviews were conducted with several traders and official export houses. Numerous large branch and trunk sections were observed for sale, but the availability of quality agarwood chips and segments was extremely limited and much more expensive in comparison to prices in India, Indonesia and Singapore. Traders stated that higher prices reflected higher grades but this was not confirmed by interviews held with traders in Singapore. They could, however, be a consequence of the higher risks and costs associated with illegally transporting agarwood into Vietnam from Lao PDR and Cambodia and of exporting it illegally. Grade-one and grade-two agarwood segments are offered for sale at USD3500/kg and USD2000/kg, respectively. In the mid-1980s,

grade-one and grade-two segments were available for USD1200-1700/kg (USD1733-2455/kg, when adjusted to 1998 value). Grade-five segments can be bought for approximately USD200/kg and grade six (largely immature wood) can be bought for around USD100/kg. Wood sold for carving, although often fake, can still sell for up to USD400/kg, according to one sculpture trader. Gradeone powder is offered for around USD200/kg, grade-two for around USD100/kg and grades five and six sell for as little as USD25-30/kg. Medicinal agarwood (*Ky Nam*) is obtained from the roots of resinous trees and is highly sought after. *Ky Nam* was observed for sale in Ho Chi Minh City, primarily for export to Japan, for between USD2000-10 000/kg. Recent quotes for *Ky Nam* are up to USD15 000/kg (H. Heuveling van Beek, TRP, *in litt.* to TRAFFIC International, 2 May 2000).

Agarwood oil distillation is limited: surveys of the large essential oil distilleries revealed that they do not produce agarwood oil. However, there are one or two agarwood distilleries on the outskirts of Ho Chi Minh City (one managed by an immigrant from Taiwan) and also one or two reportedly in Da Nang Province. All of the oil distillers interviewed reported that agarwood prices have increased dramatically during the past five years. One Vietnamese distiller reported that production of one litre of agarwood oil required 500-1000 kg of low-grade agarwood and would sell for around USD7000. Recent (2000) quotes for high-grade oil (available only to order) are USD15 000/litre (H. Heuveling van Beek, TRP, *in litt.* To TRAFFIC International, 2 May 2000). There are reports of a company based in Ho Chi Minh City that invested over USD100 000 several years ago in the construction of a sophisticated distillation facility. The company had a buy-back arrangement with a Saudi Arabian importer who offered the fixed price of USD5000/kg for oil. The deal apparently collapsed and the unit has mostly remained idle. The Essential Oil Enterprise in Hanoi is part of the Ministry of Science and Technology and Environment and is equipped with good laboratory and extraction facilities under a United Nations project. This enterprise has undertaken research on agarwood oil. It is likely to be the only facility in Vietnam capable of evaluating oil samples.

International trade

There appears to have been little international interest in the trade of Vietnamese agarwood before the Vietnam War (Nguyen van Minh, 1969). Trade in agarwood expanded rapidly between 1973 and 1990, with many of the main government trading agencies officially participating. The majority of exports involved three companies, but a number of other private and public companies also traded agarwood. Very few of these companies are reported to be involved in the trade today and there are reportedly two to three licensed agarwood traders in Ho Chi Minh City, Da Nang and Hanoi, and perhaps as many again operating illegally or semi-legally.

Before the 1991 harvest and trade ban (see below), the combined value of annual agarwood exports from Vietnam was estimated at USD10-15 million annually. Official trade data indicate an export growth from approximately five tonnes per year in the early 1970s to 50 t in the mid-1980s. More recent exports are estimated to have decreased to around 10 t annually. Declared unit values of these exports were very low (less than USD50-100/kg), suggesting significant under-invoicing. CITES annual report data for Singapore show the re-export of 1.2 t of *Aquilaria malaccensis* chips, 0.7 t of powder and 0.5 t of timber in 1995. As Vietnam is not believed to be a range State for *A. malaccensis*, these shipments are likely to have contained other *Aquilaria* species. They were re-exported from Singapore to four different countries/territories. No additional trade involving Vietnam has been reported in CITES annual report data. Traders interviewed in Singapore reported that the majority of Vietnamese agarwood actually came from Lao PDR or Cambodia and this observation is supported by TRP (Heuveling van Beek and Phillips, 1999). According to Taiwan's Customs data, Vietnam was second only to Indonesia as a

source of *Aquilaria* spp., with approximately 532 t of agarwood imported from Vietnam from 1993 to 1998. These imports increased considerably over this six-year period, from approximately 20 t in 1993 to approximately 85 t in 1994, and reaching 137 t in 1998 .

Harvest and trade controls

The Government of Vietnam has undertaken several measures to regulate the trade in agarwood. These include the establishment of quota systems (licensed traders were each typically allocated a quota of one tonne of agarwood) and a blanket ban on the harvesting and trade of all *Aquilaria* spp. (*Decree No. 431 TN/XNK*, 30 April 1991, followed by *Decree No. 858 KH/XNK*, 5 August, 1991, which specifically prohibits the harvesting of *A. crassna*). These controls were largely unsuccessful and resulted in the privatization of the official trading companies. Today, only the harvesting and trade of *A. crassna* is prohibited in Vietnam, by *Decree No. 18 (HDBT) Vietnam Wildlife Protection, 1992*. The Chairman of the Council of Ministers, in accordance with the Minister of Forestry, may permit the exploitation of *A. crassna* under special circumstances, such as scientific research. The export of agarwood oil is not prohibited.

Illegal trade

The CITES Management Authority is unaware of any agarwood seizures since 1991. However, there have been reports of several seizures of illegally harvested agarwood (likely to be *A. crassna*) in recent years, and it is reported that this confiscated wood is likely to have been reintroduced into the domestic agarwood market. It is thought probable that since the ban on the harvesting and trade of *A. crassna*, at least some of the agarwood traded has been *A. crassna* and has hence been illegal.

Cultivation

Government plantations exist in Ha Tinh, Kon Tum and Phu Quoc Island. One trader reported a joint venture with a Japanese enterprise to grow *Aquilaria* in Da Lat. TRP has successfully implemented a pilot project 'Sustainable Agarwood Production in Vietnamese Rainforests', which is being undertaken in two southern locations (Ba Nui and Phu Quoc), and which is now expanding to the central highlands of Kon Tum Province. TRP found that *Aquilaria* can artificially be induced to yield agarwood at a rate 10 times faster than in nature. These results indicate that agarwood plantations have the potential to be developed into agroforestry enterprises providing long-term and stable sources of agarwood, which could provide an opportunity to generate revenue for low-income families living in and around project areas.



Credit: TRP Vietnam, 1998

Cultivated agarwood tree growing in Vietnam

CONCLUSION

Agarwood has been valued, used and traded internationally for more than 2000 years. Concerns regarding declining agarwood supplies and the impacts of trade on *Aquilariaspecies*, eight of which are considered to be threatened, are far more recent. The first CITES listing of an agarwood-producing species - *A. malaccensis* - did not take place until 1994. Implementation of this CITES listing thus far has been inconsistent and in some cases absent entirely. Exporting range States are not uniformly implementing CITES export permit requirements for *A. malaccensis*, do not appear to be making non-detriment findings, and in some cases are issuing CITES permits to cover shipments of *Aquilariaspecies* other than *A. malaccensis*.

Only two consumer countries are regularly recording imports in CITES annual report data. Despite the shortcomings described above, the inclusion of *Aquilaria malaccensis* in CITES Appendix II has increased the transparency of the international agarwood trade somewhat. In addition, it seems likely to have increased the ability of Indonesia and Malaysia to control their exports of *A. malaccensis* and other *Aquilaria* species. Concern remains, however, regarding excessive and illegal exploitation and trade of *Aquilariaspecies*, including *A. malaccensis*, for agarwood. With six *Aquilariaspecies* already considered to be threatened by overexploitation and no signs that demand for agarwood will decline, it is imperative that additional steps be taken by range States and consumers to improve CITES implementation for *A. malaccensis* and to address overexploitation and illegal trade in this and other *Aquilariaspecies*.

These findings were described in an interim report submitted to the CITES Plants Committee and a final project document distributed by the CITES Secretariat to range States. During the Eleventh Meeting of the Conference of the Parties to CITES, the Plants Committee was directed to continue its review of the genus *Aquilaria*. Specifically, the Plants Committee was directed to: address the problem of distinguishing between different *Aquilaria* species in trade; identify additional measures, besides improved identification, that may improve reporting accuracy for *A. malaccensis*; and determine whether other species in the genus qualify for inclusion in CITES Appendix II (Com. 11.26). This decision is an important step towards achieving the sustainable use and trade of *A. malaccensis* and other agarwood-producing *Aquilaria* species.

Available information indicates that, failing a change in current harvest and trade patterns, the availability of agarwood and wild populations of the species that produce it will continue to decline. Co-ordinated and co-operative action to reverse this trend is required on the part of range and consumer country governments, businesses engaged in agarwood harvests, trade and related industries, research institutions, conservation organizations, and others concerned with sustainable use of these and other forest species. To fail to act otherwise seems likely to further threaten *Aquilaria malaccensis* and other *Aquilaria* species, and to reduce both Asia's forest biodiversity and its forest-based economic opportunities.