CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

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Twelfth meeting of the Plants Committee
Leiden (The Netherlands), 13-17 May 2002

Follow-up of CoP11 Decisions

*AQUILARIA* SPP.

1. This document has been prepared by TRAFFIC Oceania.

# Agarwood (Gaharu) Harvest and Trade in New Guinea [Papua New Guinea and the Indonesian province of Papua (formerly Irian Jaya)]

An information document prepared by TRAFFIC Oceania for the Twelfth Meeting of the CITES Plants Committee, with reference to CITES Decisions 11.112 and 11.113 regarding *Aquilaria* spp.

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Background: The island of New Guinea is split into two political entities. The western half of the island is the Indonesian province of Papua (formerly known as Irian Jaya), and is a known source area for wild species of flora and fauna in trade. At present, Papua is believed to be the single most important source for agarwood (gaharu) harvested in Indonesia (Indonesian Directorate of Forest Protection and Nature Conservation, *in litt.* to TRAFFIC Oceania, 2002).

The independent state of Papua New Guinea (PNG) has been targeted by agarwood harvesters and traders since around 1997. In 2001, the PNG Forest Authority set up an Inter-Agency Committee (IAC) to specifically discuss the trade in eaglewood (agarwood/gaharu). This IAC includes representatives from the PNG Department of Environment and Conservation (PNG's CITES Management Authority), PNG Internal Revenue Commission and the PNG Forest Research Institute, as well as the CITES Plants Committee representative (Dr Osia Gideon) based at the University of PNG. So far, the IAC has had two meetings, with a third planned for late May 2002. TRAFFIC Oceania and WWF South Pacific Programme have been involved with the IAC as observers, and launched the report *The Final Frontier: Towards Sustainable Management of Papua New Guinea's Agarwood Resource* in conjunction with the PNG Forest Authority in October 2001.

Species in trade: When harvesting began in PNG in 1997, government authorities presumed the species being harvested for agarwood to be *Aquilaria filaria*, which had been recorded from several locations on the Indonesian side of the border. Herbarium specimens collected in PNG's East Sepik and Sandaun Provinces, from trees that produce agarwood, were identified in 2001 as *Gyrinops ledermannii* Domke on the basis of flowering and fruiting material.

At present, there are three agarwood-producing species known from New Guinea: *Aquilaria filaria*, *Gyrinops versteegii* and *G. ledermannii.* The former two are only recorded from Papua (Irian Jaya), however it is conceivable that these two species also occur in PNG and also that there are more agarwood-producing species than presently known.

Indonesian export quotas for agarwood (gaharu) are divided into two broad categories:

a) CITES export quota for *Aquilaria malaccensis* and associated species harvested from the provinces of Sumatra, Kalimantan, Sulawesi and Nusa Tenggara (total for 2002: 75 tonnes);

b) Non-CITES export quota for *Aquilaria filaria* harvested from the provinces of Papua (Irian Jaya) and Maluku (total for 2002: 125 tonnes).

The Indonesian non-CITES gaharu export quota assumes that all gaharu harvested from Papua is derived from *A. filaria*. However, during field surveys in southern Papua province in 2001, TRAFFIC recorded several vernacular names for gaharu, with indications of different habitat and physical characteristics. These included:

*Gaharu beringin* – Large girth, found in lowland swampy areas, away from river. Wood is less dense, has high water content, and contains less residual oil after drying compared to *gaharu cabut*.

*Gaharu cabut* – Also known as *gaharu asli* or authentic gaharu, one villager identified it as the botanical drawing from the TRAFFIC/WWF report from PNG; gaharu found in roots. Said to be found in border areas near Amanab (PNG). Gaharu can be harvested even from small trees.

*Gaharu sirsak* – Habitat characterised by calf-high humus.

*Gaharu rotan/tali* – A variety of gaharu with a climbing/vine habit, but does not produce high quality product. Long roots are dug up in search for resinous wood.

*Gaharu buaya* – Equivalent in name to the 'crocodile (Tok Pisin: *puk-puk*) gaharu' from PNG, with the origin coming from the wood's status as 'false gaharu' rather than the fact that the tree is often found in crocodile habitat areas. *Gaharu buaya* can be 'black' like high-quality 'real' gaharu, but has a stronger, more pungent smell.

Export statistics from the PNG Forest Authority show that 9,778kg (approximately 10 tonnes) of eaglewood (gaharu) were shipped legally from PNG in (calendar year) 2001. No cargo was identified at species-specific level. At present, there is no quota set for regulating PNG harvest and trade (export) by species nor harvesting area, neither is there a quota for total exports of gaharu 'product'. All legal exports of Eaglewood (Agarwood, Gaharu) from PNG in 2001 were destined for Singapore (PNG Forest Authority, *in litt.* to TRAFFIC Oceania 2002).

As of 14th February 2002, the PNG Forest Authority imposed a 10% levy on all exports of Eaglewood (Agarwood, Gaharu). The stated purpose of this levy is: "for forest management and development and research of the Eaglewood industry and all levy payments shall be held in a trust account established by the Papua New Guinea Forest Authority and applied for the purpose aforesaid" (PNG National Gazette No. G 31, 14/2/02).

**CITES Decision 11.112**

The Plants Committee shall continue its review of the genus *Aquilaria*, in order to:

a) determine how species within the genus may be distinguished from each other when in trade, particularly when traded as agarwood;

b) determine measures, other than improved identification, that might improve accurate reporting of trade in specimens of *Aquilaria malaccensis*; and

c) determine whether additional species in the genus should be included in Appendix II of the Convention, either because of similarity of appearance or because their biological and trade status qualify them for inclusion in Appendix II.

With reference to Dec. 11.112, all observations made by TRAFFIC in Papua (ID) and PNG suggest that there are no obvious distinctions between species when traded at 'product' level. Indonesia's dual quota system separates *A. malaccensis* from *A. filaria* by virtue of the two species natural distribution. However, by including additional species (*A. beccariana*, *A. microcarpa*, *A. hirta* and *Gyrinops versteegii*) within the CITES export quota for *A. malaccensis*, the Indonesian management system allows harvest and export data of *A. malaccensis* to be confused with other species. The assumption that all gaharu harvested from Papua and Maluku provinces are sourced from *A. filaria* could also be misleading, and requires ground-truthing as soon as possible. Whether additional species within the Genus Aquilaria, and indeed the Genus Gyrinops, should be included in Appendix II needs careful consideration with regard to the best means to implement the listing, given the current difficulties of identification. Although some expert traders claim that smell alone is enough to distinguish between grades of gaharu, if not individual species, it is unlikely that a non-expert would be able to correctly identify the different species (at product level) for enforcement purposes.

**CITES Decision 11.113**

If it is determined, as a result of this review, that additional species should be included in Appendix II, the Plants Committee shall specify which species should be included in Appendix II under the provisions of Article II, paragraph 2 (a), and which species should be included in Appendix II under the provisions of Article II, paragraph 2 (b).

With reference to Dec. 11.113, if a Party wished to propose the listing of additional agarwood-producing species on Appendix II, TRAFFIC believes that both *A. filaria* and *G. ledermannii* would satisfy the criteria for inclusion in accordance with Article II, paragraph 2 (b) of the Convention.

Potential for CITES Appendix III listing: CITES authorities in both Indonesia and PNG have indicated concerns over management of the gaharu harvest (legal, illegal and unregulated) in Papua (ID) and PNG. If Parties remain concerned over a lack of information on population status at species level, then until that information is available the situation on both sides of New Guinea presents an opportunity for listing both *A. filaria* and *G. ledermannii* in Appendix III to increase the ability of Parties to monitoring trade in these species. If both Indonesia and Papua New Guinea agree to list their populations in Appendix III, the effectiveness of the listing's implementation would be greatly enhanced if Singapore, as the main importing country for legal exports from Indonesia and PNG (Directorate of Forest Protection and Nature Conservation [Indonesian CITES MA], *in litt.* to TRAFFIC Oceania 2002; PNG Forest Authority, *in litt.* to TRAFFIC Oceania 2002), offered its support to implement the listing by monitoring imports from both countries. Monitoring of cross-border trade between PNG and Papua (ID), would also need to be enhanced to effectively implement the listing, as would co-operation with all agarwood importing and exporting states.

Res. Conf. 9.25 (Rev.) on Inclusion of Species in Appendix III recommends under a) ii) and iii) that Parties ensure that national regulations are in place to prevent and restrict exploitation and to control trade, in conjunction with adequate national enforcement measures to implement these regulations. While Indonesia has a legislated management system in place, PNG has yet to develop policy on harvest and trade to guide development of appropriate legislation. However, the geographic separateness of *A. filaria* and *G. ledermannii*, in that they are restricted to New Guinea, would follow Res. Conf. 9.25 a) iv) if they were listed in tandem. To follow Res. Conf. 9.25 b) and c), interested Parties would need to focus on the relationship between PNG, Indonesia and Singapore as the three main countries known to be involved in the trade of *A. filaria* and *G. ledermannii*. If the Plants Committee sees fit to support this course of action by the three countries concerned, consultation and planning as recommended by Res. Conf. 9.25 d) could be done prior to COP 12.

**Recommended actions**

a) by the CITES Plants Committee:

- *Ground-truthing of populations in agarwood harvesting areas:* TRAFFIC recommends that the Plants Committee support, with particular reference to identifying sources of funds and expertise, the priorities identified by the Aquilaria Working Group discussions at PC 11 regarding the need to develop "standard methods of determining population status for the purpose of setting quotas for agarwood producing taxa". Such a methodology should follow guidelines set out in Inf. Doc. 11.3, which outlines a precautionary framework compatible with the process of making a CITES non-detriment finding, irrespective of whether the species being harvested is currently listed on Appendix II. Once developed and trialed in one or more agarwood source countries, the methodology could be adapted for application in other agarwood source areas. Ground-truthing of harvesting areas would not only allow for an assessment of population levels and appropriate quotas, but it would also provide opportunities to verify species' identification and collection of voucher specimens.

- *Conduct further field research on gaharu trade dynamics, including assessment of consumer demand in major import and re-exporting states such as Taiwan, Singapore, Japan, United Arab Emirates and Saudi Arabia:* To understand the magnitude of threat to existing gaharu resources in New Guinea and other priority source areas, current

market demand needs to be thoroughly assessed. Additional information would need to be collected in time for a fully considered decision on whether to list additional species on Appendix II to be made by COP 13.

b) at national level in Papua New Guinea and Indonesia:

- *Develop regulatory mechanisms and enforcement/management capacity in PNG:* As part of the development of a National Management Strategy on agarwood-producing species, more comprehensive regulatory mechanisms to control and monitor harvesting and trade of agarwood are required. This should include adequate legislative provisions, appropriate personnel, resources and prioritisation by relevant PNG authorities. Further enhancement of co-operative efforts between PNG and Indonesia, and between PNG and Singapore, would also benefit the management of agarwood harvest and trade.

- *Taxonomic research and species identification:* In addition to the taxonomic review of the Genus Aquilaria, the accurate botanical identification/description of agarwood-producing species recorded (and anecdotally reported) in other parts of Papua New Guinea and eastern Indonesia should be undertaken. The generic distinction between *Aquilaria* and *Gyrinops* still requires some clarification, but in terms of species identification would not complicate any decisions made regarding regulation of trade at the species level.

c) by importing countries:

- *Improved implementation of trade controls:* In addition to better implementation of regulatory mechanisms in source countries, it would be worth considering what could be done to strengthen implementation of trade controls at the point of import. The agarwood/gaharu industry should also be encouraged to participate in developing workable trade controls in support of sustainable management principles.

**Acknowledgements**

TRAFFIC Oceania's work in Papua New Guinea and Papua was conducted in conjunction with WWF, and was supported financially, in part, by the USA (through the CITES Secretariat and the Plants Committee).

Addendum

To assist in the review of how species might be distinguished from each other when traded as Agarwood, TRAFFIC facilitated the provision of Agarwood (gaharu) samples (collected from *Gyrinops ledermannii* trees in Papua New Guinea) which have been received by Dr Barbara Gravendeel for analysis at Leiden University. The Indonesian CITES MA has begun collecting gaharu samples from the different harvesting areas throughout the archipelago with the intention to provide them to the same researcher.