

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



Thirteenth meeting of the Plants Committee
Geneva (Switzerland), 12-15 August 2003

STATUS ASSESSMENT OF AGARWOOD PRODUCING SPECIES FOR IMPROVED CONSERVATION
AND NON DETRIMENTAL USE
(DRAFT)

IUCN, the newly formed Global Trees Campaign and TRAFFIC are developing two phases of conservation action to work towards non detrimental use of Agarwood producing species to improve their conservation status. The work will be undertaken in a two phase project which will:

in phase one:

collect up to date information on all Agarwood producing species;

assess the global status of all Agarwood producing species using the IUCN Red List Criteria (as requested and recommended by the 12th Meeting of Conference of the Parties to CITES);

identify gaps in conservation knowledge;

prioritise species for field assessments;

produce draft guidelines for standard monitoring of the status of *Aquilaria malaccensis* to feed into CITES non-detriment finding process;

refine the non detriment finding checksheet for plants using Agarwood as a case study;

in phase two:

undertake field assessments on species with limited information (as a priority those identified as 'Data Deficient' in the Red List Assessment);

finalise guidelines for standard monitoring of the status of *Aquilaria malaccensis* to feed into CITES non-detriment finding process;

continue developing non detriment finding checksheet for plants;

recommend priority actions for this group of trees;

test the CITES listing criteria for tree species.

Background

Current levels of exploitation for forest products may be a significant factor in increasing their threat of extinction. For years, trees of the genus *Aquilaria* have been the principle source of Agarwood, (also called eaglewood, *gaharu*, aloeswood amongst others), one of the most valuable forest products traded internationally. Trees that can produce Agarwood are found throughout South and Southeast Asia from India to as far east as Papua New Guinea.

Agarwood is used in traditional medicine systems such as Ayurvedic, Tibetan and Traditional East Asian medicine and its fragrance makes it a popular ingredient of perfumes. Agarwood is also burned to create incense for example in India, Japan and the Middle East. Less commonly, it can be used as an insect repellent and as an ingredient in wine.

When infected by certain fungi, *Aquilaria* trees, amongst others, produce Agarwood, the greatest volumes of resin being found in trees aged 50 years or more. However, as only infected trees produce Agarwood, uninfected trees are of negligible commercial value. If Agarwood is present, it exists in unpredictable quantities and qualities that can only be fully determined once the tree has been split open, this results in many trees being felled needlessly thus causing drastic declines in wild populations.

TRAFFIC studies show that demand for Agarwood is high and exceeds natural production. CITES Annual Report data, as analysed by TRAFFIC, show that 20 countries traded a total of over 5000 t of *Aquilaria malaccensis* alone between 1995-2001 (*A. malaccensis* was listed in Appendix II of CITES in 1994 and remains the only Agarwood producing species in the Appendices). Indonesia and Malaysia are the most important exporters of Agarwood from trees of several species, the majority is destined for the Middle East, Hong Kong and Taiwan. Although overall trade volumes may appear small in 'timber trade' terms, they are not small in monetary terms. Agarwood chips and segments may sell for several hundred to several thousand US dollars per kilogramme. The price of oil distilled from Agarwood is generally between five and ten thousand US dollars per kilogramme, but can be significantly more for Agarwood oil of exceptionally high quality.

As well as *Aquilaria*, there are four other genera in the Thymelacaeaceae family whose species produce Agarwood: *Aetoxylon*, *Gyrinops*, *Phaleria* and *Gonystylus*. A recent TRAFFIC study found that the species *Gyrinops ledermannii*, which occurs in Papua New Guinea, as producing this fragrant heartwood for the first time. Like other Agarwood species, only about 10% of mature *G. ledermannii* trees are likely to produce the fragrant resin that leads to Agarwood formation in the heartwood.

Although these genera are the focus of increasing attention from the conservation world, information on their distribution and status is limited. In an effort to address this, the 12th Meeting of the Conference of the Parties to CITES specifically requested that IUCN undertake an assessment of the global status of all Agarwood producing species using the current Red List Categories and Criteria (see CITES Decision 12.69). IUCN through its Species Survival Commission (SSC), has for four decades been assessing the conservation status of species, subspecies, varieties and even selected subpopulations on a global scale in order to highlight taxa threatened with extinction, and promote their conservation. The Global Trees Campaign is working to update the World List of Threatened Trees and fill priority gaps in tree Red Listing, helping to meet the CBD GSPC Target 2 on a preliminary evaluation of the conservation status of all plants by 2010.

Based on global status assessments of these species in 1997, using Red List Criteria from 1994, the threat statuses are as follows:

Aquilaria species (9 out of 15+ species assessed): 1 Critically Endangered, 2 Vulnerable and 1 Data Deficient – all species reported as potential Agarwood producers

Aetoxylon species (no. species = ?, none assessed) – 1+ species reported as producing Agarwood?

Gyrinops species (no. species = 6+, none assessed – 2+ species reported as producing Agarwood (*G. ledermannii*, *G. versteegii*))

Phaleria species (no. species = 2+, none assessed) - ? species produce Agarwood

Gonystylus (27 species in UNEP-WCMC trees database 15 assessed): 15 Vulnerable – 1 reported as producing Agarwood

Three genera have not been assessed at all, and for the other two genera, only certain species have been assessed but then using non quantitative criteria. The proposed assessment system will determine the *current* relative risk of extinction, and catalogue and highlight those taxa that are facing a higher risk of global extinction i.e. those listed as Critically Endangered, Endangered and Vulnerable, using the most up to date information.

In general, exporting countries have some harvest or export controls in place for *Aquilaria malaccensis*, nevertheless, implementation of these controls is difficult due to the scarcity of biological information. This is particularly so for this species when considering whether the 'non-detriment finding' can be made. This finding seeks to ensure that any export will not be detrimental to the survival of the species in the wild and is required prior to the issuance of a CITES export permit. To address this concern, the Meeting of the Conference of the Parties to CITES, under Decision 12.70, recommended that a standard method for monitoring of the status of this species in the field be developed to feed into the non-detriment finding process. IUCN and TRAFFIC have for many years been working to provide technical input into the CITES processes and recently, IUCN published *Guidance for CITES Scientific Authorities: Checklist to assist in making non-detriment findings for Appendix II exports*. Working together we aim to produce a set of guidelines for standard monitoring of status and to refine the non detriment finding checklist for plants, using *Aquilaria* as a case study. We propose to undertake the initial part of the work in Indonesia.

The First International Agarwood Conference, will be held in Ho Chi Minh City & An Giang Province, Viet Nam from November 10 - 15, 2003 and this meeting will provide an excellent opportunity to take these proposed actions forward. The conference will bring together stakeholders concerned with conservation, exploitation, trade, use and development of Agarwood [products], in order to examine the potential for agro-forestry, market and regulatory mechanisms, *Aquilaria* in-situ conservation, Agarwood community development close to and in *Aquilaria* habitat, and sustainability of supplies.

Proposed actions

Phase One

- For the Red List Global Status Assessment
 1. Prepare summary sheets, with relevant experts before the Agarwood conference, on the status of Agarwood producing species (approximately 20 species) to use as a basis for undertaking the Red List assessments.
 2. Hold a small working group during or after The First International Agarwood Conference to finalise the status for submission to the Red List Authorities for Agarwood producing species. The workshop should bring in a facilitator who has been trained in the application of the Red List criteria and if applicable the RAMAS Red List software (developed for IUCN to assist in accurate Red List categorisations).
 3. Identify gaps in knowledge on Agarwood producing species
- For the guidelines on a standard method for monitoring of the status of *Aquilaria malaccensis*, developed to feed into the non-detriment finding process
 1. Produce a draft set of guidelines to monitor the status of *Aquilaria malaccensis* to present to The First International Agarwood Conference for input and for subsequent development.
 2. Develop the non detriment finding checksheet for Agarwood producing species, not only those currently listed on CITES, but to ensure the long term sustainability of non listed species. Work with Scientific Authority staff to take and develop the parts of the approach that they find useful. Introduce this work at First International Agarwood Conference to identify future collaborators for longer term consultation.

Phase Two

1. Field status assessment work for populations categorised as 'Data Deficient'. This will provide information to accurately assess the global status of these species using the IUCN Red List criteria and also feed into the standard monitoring methods.
2. Continue field status assessment methodology.
3. Contribute to the evaluation of tree species, being undertaken for the CITES Plants Committee, using the new CITES Listing Criteria (CITES Decision 12.10).
4. Finalise non detriment finding revision
5. Recommend actions.

Objectives

In addition to assessing the global status of Agarwood producing species this two phase project will identify priorities for conservation action, feed directly into the CITES processes and recommend a series of actions to be undertaken.

The project will address targets of the Global Strategy for Plant Conservation of the Convention on Biological Diversity.

Target 2: A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels

Target 3: Development of models with protocols for plant conservation and sustainable use, based on research and practical experience

Target 11: No species of wild flora endangered by international trade

Target 12: 30 per cent of plant-based products derived from sources that are sustainably managed

Outputs (Phase one and Two)

Global assessments of all Agarwood producing species.

A standard method for monitoring of the status of *Aquilaria malaccensis* to feed into the CITES non-detriment finding process.

Refined non detriment finding checklist for plants, using Agarwood as a 'test case'.

Prioritised set of actions for Agarwood producing species.

Budget (phase one activities only)

Agarwood Red List costs Vietnam workshop November 2003

Based on 16 people, preparation of background material, travel, accommodation. **N.B. We are working with the Conference organisers to reduce this budget as far as possible

total	£20,000	33,000 USD
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Testing of Non Detriment Finding Guidelines for plants and development for Agarwood producing species

total £4,000 6,500 USD

Guidelines for in the field Status assessment methodology

total £10,000 16,400 USD

Information Sources (to finalise):

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Soehartono, T and Newton, A. C. 2000. Conservation and sustainable use of tropical trees in the genus Aquilaria. I Status and distribution in Indonesia. *Biological Conservation* 96 (2000) 83-94.

IUCN 2002. *2002 IUCN Red List of Threatened Species*. Downloaded 2003.

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