



NDF WORKSHOP
WG 1 – Trees
CASE STUDY 3 SUMMARY
Aquilaria malaccensis
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AGARWOOD (*AQUILARIA MALACCENSIS*) IN MALAYSIA

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The phytogeographical region for *Aquilaria malaccensis* comprises India, Myanmar, Sumatra, Peninsular Malaysia, Singapore, Borneo and the Philippines. In Malaysia, the species is widespread in the lowland dipterocarp and mixed dipterocarp forests at altitudes of up to 270 m. This species is absent from Sarawak.

In Malaysia, agarwood is treated as a minor forest produce and is not subjected to a cutting cycle. Trees with a diameter size of less than 20 cm and trees in flower and fruit are not allowed to be harvested. A Standard of Procedures has been developed to control and monitor harvesting, processing and trade activities. Trial planting of *Aquilaria malaccensis*, both as part of the government and private sector initiatives, is being conducted in Peninsular Malaysia, Sabah and Sarawak. There are general laws that govern agarwood collection, processing, manufacturing and trade.

The criteria, parameters and/or indicators used to prepare the non-detriment finding for *Aquilaria malaccensis* are :-

- density and demography of selected populations occurring in the various Permanent Sample Plots (PSPs) and plots laid out for national forest inventories (NFIs);
- harvesting limits employed under the Standard of Procedures; and
- pattern and level of exploitation for international trade, including trade statistics.

The data for density and demographic patterns are obtained from field evaluation on the above-mentioned plots and plots established for academic research. For the plots established under PSP and NFI, the published data is data that has been analysed. National Forest Inventories are conducted only for Peninsular Malaysia.

There are several major difficulties encountered in the process of preparing an NDF. Very little is known about the population distribution pattern, demography, ecology, flowering phenology, reproductive behaviour, fruit production, recruitment and regeneration patterns, natural mortality and

mortality/regeneration caused by damage to trunk of *Aquilaria malaccensis*. Its widespread but low density occurrence exacerbates the situation. Likewise there is hardly any information on the response and rate of infection in naturally occurring trees, quality of infected resinwood and recovery rates of chips particularly those used for oil production. The grade of the resin in trees cannot be easily determined with full certainty and infected trees lack definitive external signs indicating the grade of the resin. This leads to indiscriminate harvesting which poses many problems to sustainability and regulation of legal harvest.

The scenario for other species of *Aquilaria* is even more acute. The discord between taxon recognition and the inability of the industry/trade to segregate harvest products according to taxon as required by CITES should be addressed. Any procedures that aim to control harvesting must take into cognizance the above limitations.

There are some management intervention such as licensing and establishment of cultivated *Aquilaria*. Malaysia has yet to produce agarwood from these cultivated trees. In view of the above problems, the criteria, parameters and/or indicators currently used to prepare the non-detriment finding for *Aquilaria malaccensis* are deemed to be appropriate. The data quantity and quality for NDF can only be evaluated with respect to current stocking.