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

Twenty-second meeting of the Plants Committee
Tbilisi (Georgia), 19-23 October 2015

Agarwood-producing taxa (*Aquilaria* spp. and *Gyrinops* spp.)

REPORT OF THE ASIAN REGIONAL WORKSHOP ON THE MANAGEMENT OF WILD AND PLANTED AGARWOOD TAXA

1. This document has been submitted by the Secretariat in relation to agenda item 17.5.

Report of the Asian Regional Workshop on the Management of Wild and Planted Agarwood Taxa

Guwahati, Assam, India, 19–23 January 2015

Workshop participants visit a municipal park, where agarwood-producing trees grow in abundance as part of a mixed forest.

Introduction

Agarwood is a resinous wood that forms in species of *Aquilaria, Gyrinops* and several other genera native to Southeast Asia. These species produce a dark aromatic resin in response to infection by a type of fungal mould. The resin-embedded wood, called agarwood, is highly valued for its fragrance and is used to produce incense, perfumes and various other products. Prices of up to US$2 million per kg of woodchips have been recorded for the highest-quality agarwood.

Aquilaria malaccensis, the primary source of agarwood, was listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1995. All other agarwood-producing species of the genera *Aquilaria and Gyrinops* were listed in Appendix II in 2004, and their listings entered into force on 12 January 2005.

Over the years, range States and importing countries have made significant progress in implementing CITES in relation to agarwood-producing tree species. This workshop was organized by the secretariats of CITES and the International Tropical Timber Organization (ITTO) and hosted by the Ministry of Environment, Forests and Climate Change of the Government of India. CITES and ITTO jointly funded the workshop, the latter through the ITTO–CITES Programme, a long-running collaborative effort funded by a range of donors led by the European Union to build capacity to implement CITES listings of tropical tree species.

The workshop originated as Decision 15.95 (Rev.CoP16) of the CITES Conference of the Parties, as follows:

Directed to the Secretariat

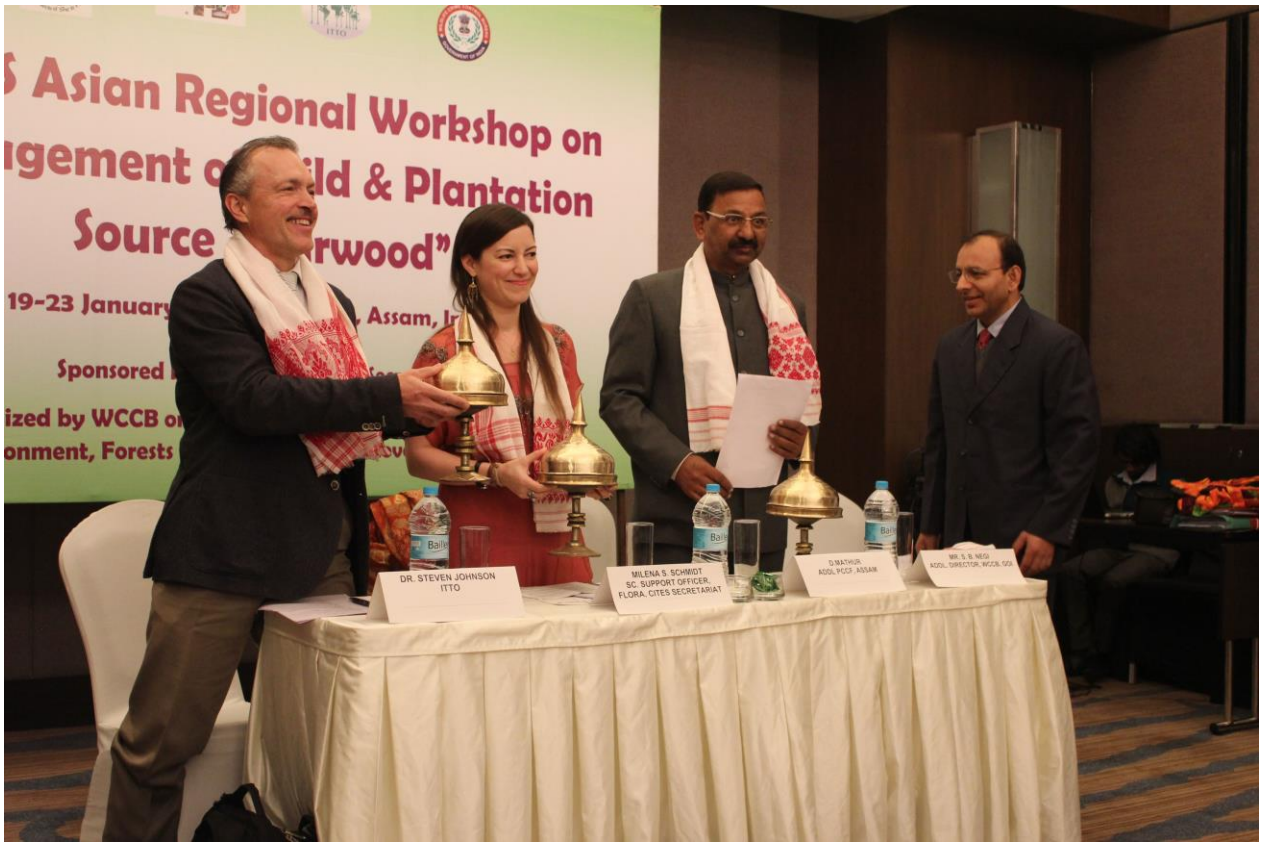
15.95 (Rev. CoP16)	*Subject to external funding, the Secretariat shall, in cooperation with the agarwood range States and the Plants Committee, organize a workshop to share experiences, discuss management of wild and plantation-source agarwood, identify and agree on strategies that balance the conservation and use of the wild populations, while relieving the pressure on these by using the planted material*.

The purpose of the workshop was to make further progress on:

- the management and conservation of agarwood-producing species;
- the formulation of non-detriment findings (NDFs);
- the adoption of management strategies that integrate the overall management of agarwood-producing natural forests with plantations of agarwood-producing species; and
- strengthening the agarwood stakeholder communication network.

The workshop focused on *Aquilaria* and *Gyrinops*, the two genera most commonly used in the production of agarwood. Forty participants from 15 countries attended (Annex 1), including representatives of most range States. The agenda of the workshop is attached as Annex 2.

Opening session



Steve Johnson (left), Milena Sosa Schmidt, D. Mathur and S.B. Negi during the opening session.

Opening remarks were made by S.B. Negi, Additional Director, Wildlife Crime Control Bureau in the Government of India; Milena Sosa Schmidt, Scientific Support Officer for Flora, CITES Secretariat; Steven Johnson, Assistant Director of Trade and Industry, ITTO Secretariat; and D. Mathur, Additional Principal Chief Conservator of Forests, Assam.

A number of technical presentations were made during this session, as summarized below.[1]

CoP16 decisions and the NDF formulation process

by **Milena Sosa Schmidt**

Dr Sosa Schmidt provided background on the purpose and functioning of NDFs and noted various decisions by the CITES Conference of the Parties on agarwood-producing trees. Ms Sosa Schmidt commented that replacing natural forests with plantations could be viewed as a management failure because natural forests contain essential genetic material for maintaining the vigour of plantations in the long term. Focusing only on the plantation resource, she said, also risked the loss of natural forest that, if conserved, could ensure the long-term viability of the agarwood industry. It is essential, she said, to integrate the management of natural forests and plantations in national forest management plans, paying particular attention to agarwood-producing populations in the wild.

Question from the floor: According to Resolution Conf. 16.10, artificially propagated agarwood does not need an NDF. Could you please clarify? *Response*: This is a key issue for this workshop. Before

[1] *All presentations in this and the following session can be downloaded at www.itto.int/outputs.*

issuing export permits authorizing the export of specimens of species listed in Appendix II, you need to make an NDF. The Resolution to which you refer recognizes that the current definition of "artificially propagated" does not fit the management of agarwood plantations. Nevertheless, an NDF always needs to be made for both plantations and natural forests prior to authorizing the export of such material. Making an NDF should be easier and quicker for plantations because normally the CITES Management Authority keeps a national register and verifies the operation; this methodical collection and registration of data facilitates the making of an NDF. On the other hand, the data necessary for making NDFs for populations in the wild are not always complete or available. That's why both working groups this week need to discuss how to make NDFs for assessing the sustainability of the harvest from the wild and from plantations.

How plantations can balance the harvest in natural forests

by **Steven Johnson**

Dr Johnson gave an overview of the ITTO–CITES Programme, which is currently in its second phase, with a third phase envisaged. The ITTO–CITES Programme has supported activities in Malaysia and Indonesia focusing on agarwood, and more are in the pipeline. Dr Johnson also spoke in general about the pros and cons of plantations in sustainable development. If done correctly, plantations can ensure a sustainable supply of products while alleviating pressure on natural forests. On the other hand, the profitability of plantations can encourage the over-exploitation and conversion of remaining natural forests; moreover, it is often difficult to reproduce the quality of naturally produced materials in plantations. Thus, plantation investment programmes should be accompanied by efforts to ensure the sustainable management of remaining natural forests, which are the repositories of genetic material for the continued improvement of plantations.

Management and silviculture of natural agarwood

by **Nandang Prihadi**

Manager, Natural Resources and Conservation Office of Central Kalimantan, Directorate General of Forest Protection and Nature Conservation, Ministry of Forestry, Indonesia

Mr Prihadi asserted three basic steps in sustainably managing (wild) agarwood-producing trees: 1) survey, inventory and monitoring; 2) developing a database using the information generated in step 1; and 3) calculating a sustainable harvest. He outlined the process employed in Indonesia to develop and agree on the agarwood harvest and export quotas, involving, among other things, population surveys; the preparation of a draft harvest quota by the CITES Scientific Authority; discussions in focus groups involving a range of stakeholder groups; and submission of the agreed harvest quota to the CITES Management Authority, which also convenes stakeholders to ensure that the quota is agreed by consensus.

Comment from the floor: Although this sort of internal process for quota-setting is time-consuming, a consultative approach is essential, and it has the advantage of increasing transparency for both exporters and importers. Also, the quota system facilitates administration, and the big advantage is that you make the NDF only once—at the time of setting the quota volume.

Plantation-grown agarwood—potential, resources and management

by **Duangduen Sripotar**

Flora Officer, Plant Varieties Protection Division, Department of Agriculture, Thailand

Ms Sripotar described the development of an electronic process for agarwood registration in Thailand, which began in 2014. The registration process has three objectives: 1) to manage the potential and supply of agarwood production; 2) to facilitate outreach for agarwood farmers; and 3) to ensure that the export of agarwood complies with relevant laws and CITES regulations. Because the export of wild agarwood is prohibited in Thailand, if a farmer's plantation overlaps with a protected area, that farmer does not qualify for an export permit. The rules for the registration process are yet to be established, however.

Issues of definition related to agarwood plantations

by **Shareefa Al-Salem**

CITES Management Authority of Kuwait Environment Public Authority, Biodiversity Conservation Department, Kuwait

Ms Al-Salem explained that agarwood stakeholders had convened two workshops—one in Kuwait and the other in Indonesia—to modify the CITES definitions of "under controlled conditions" and "artificially propagated" as they apply to agarwood. The 16th meeting of the Conference of the Parties was satisfied with the outcomes of the workshops and adopted Resolution Conf. 16.10 to define these two terms as they apply to agarwood.

Managing agarwood-producing species in natural forest and in plantations

by **Dr Jatin Kalita**

Scientist, Biotechnology Division, CSIR-North East Institute of Science and Technology, Assam, India

Dr Kalita summarized the natural distribution of agarwood-producing species in India and various research activities into aspects such as seed germination, inoculation techniques and intercropping. Creating awareness of intercropping with medicinal and aromatic plants is important for attracting farmers to plant more agarwood trees. Such intercrops provide planters with an interim return; otherwise, they have to wait a minimum of 10–15 years for returns from their agarwood plantations. Dr Kalita stressed the important role of the wood borer, *Zeuzera conferta*, in the fungal infection process. Besides playing an important microbial role, *Z. conferta* may have a significant catalytic role in developing pathogenicity and good-quality agar (resins) in *Aquilaria malaccensis.*

Session 2: Country reports

Bangladesh

by **Abdul Mabud**

Assistant Chief Conservative of Forests, Department of Forests, Bangladesh

and

Mohammed Shahid Ullah

Divisional Forest Officer, Forest Research Institute, Bangladesh

Bangladesh's sparse natural agarwood resources (*Aquilaria malaccensis*) in the northeast of the country are under threat of extinction, and no data are available on the management of these populations. An estimated 6000 hectares of government-owned plantations have been established by the Forest Department since the early 1990s. In addition, there are many small-scale private plantations established on private land, homesteads, and fallow and marginal lands, but no data are available on these. Bangladesh exports agarwood chips, dust and oil produced only from private plantations; in 2014, the country exported a total of 123.75 tonnes of chips. The moratorium on felling trees in natural forests, including agarwood-producing trees, is due to expire in 2015 but may be extended for another 20 years. The agarwood is artificially induced in planted trees, and the main method for doing this is "nailing".

Question from the floor: The natural forests are threatened with extinction. Are you exporting from the wild? *Response*: No, we export only from private plantations, and not from government plantations. *Question*: Do you make NDFs? *Response*: No.

Bhutan

by **Norbu Gyeltshen**

Senior Research Officer, Research and Development Center, Bhur, Bhutan

and

Kinzang Dhendup

Officer-in-charge, Research and Development Sub Center, Darla, Bhutan

Bhutan does not export or import agarwood. It has a known resource of *Aquilaria malaccensis* of 2341 plants in the wild, 2487 plants in plantations, 827 plants in research plots, 15 000 plants in nurseries and 2443 plants in home gardens. The first *Aquilaria malaccensis* plantations were established in 2001, and harvesting to produce incense and medicines for domestic consumption is allowed. International trade in agarwood is prohibited by law because of a lack of information on the sustainable yield of populations in the wild and in plantations.

Cambodia

by **Samnang Chhum**

Department of Wildlife and Biodiversity

Forestry Administration, Ministry of Agriculture, Forestry and Fisheries

Cambodia

Cambodia's wild agarwood resource covered about 1 million hectares in three regions in 2001; it has declined since then, but there is a lack of information on the wild population. In the face of the decline of the natural resource, people began establishing agarwood (*Aquilaria crassna*) plantations, especially in five provinces, but the total area of these plantations is unknown. A process has started to establish a plantation registry.

Question from the floor: Is there any information on exports? *Response*: That is outside the scope of my duties. The small-scale wood exporters are across the border, and the trade is mostly illegal. Therefore, we are struggling to strengthen law enforcement. An NDF has been done for one plantation.

China

by **Zhong Hai**

Program Officer, The Endangered Species Import and Export Management Office, State Forestry Administration, China

A population survey of the wild population was conducted in 2012; it found more than 70 000 plants in Guangdong Province and nearly 60 000 in Hainan, with smaller quantities in some other provinces. A large number of agarwood plantations have been established in the last ten years. The Chinese government pays considerable attention to agarwood conservation. Wild populations of *Aquilaria sinensis* and *A. yunnanensis* are found in the south of the country. Plantations can alleviate pressure on wild populations and satisfy market demand. China is also working to improve technology for the sustainable use of agarwood-producing trees.

Comment from the floor: China has started to control imports of agarwood. For incense, it doesn't import directly but instead buys from Taiwan Province of China. Malaysia and Indonesia export to Taiwan Province of China, and Taiwan Province of China exports incense to mainland China. Agarwood from the wild is used for wood carving.

India

by **Rajib Kr. Borah**

Rain Forest Research Institute, Indian Council of Forestry Research and Education, Ministry of Environment, Forests and Climate Change, Government of India, Assam, India

India does not permit the harvesting of agarwood in the wild. The agarwood species found in India are *Aquilaria malaccensis* (synonym *A. agallocha*) and *A. khasiana*. India does not export agarwood harvested in the wild in India, but it does re-export agarwood products. An inventory of wild agarwood resources is underway; it is known that few specimens remain in the wild. The Ministry of

Environment, Forests and Climate Change has a draft policy on the trade of agarwood. An NDF for plantation-grown agarwood is being prepared and will be ready by the end of 2015 or in 2016. In northeast India there are an estimated 9–10 million *Aquilaria* trees in plantations, and there is also interest in growing agarwood in south India. The most effective fungus for inoculation has been identified.

Question from the floor: Is there an NDF? *Response*: No, India only permits the re-export of agarwood, but it is working on the production of a national inventory and an NDF. *Question*: Are you planning to re-open exports? *Response*: We are currently assessing this, and we will soon know the status of the population in the wild. *Comment*: India has 9–10 million trees and an effective inoculation method, but what is the point if we cannot use the product? Everything is in place, but there are no exports. *Response*: We are awaiting completion (within two years) of the population survey of agarwood resources in the wild; then we will be able to determine what trade can be permitted. *Question*: Why is the export of plantation-grown agarwood not permitted? Definitions in CITES were changed to allow the export of artificially propagated agarwood. *Response*: The wild population was almost wiped out because of uncontrolled harvesting and trade. The problem is controlling the harvest in the wild. *Comment*: Even when you have plantations, you still need an NDF. If a transparent chain of custody can be established, then it should be possible to allow international trade from plantations. It is a matter of sitting with plantation owners and establishing robust chain-of-custody processes and reopening exports in particular areas, even before the national inventory is completed. *Comment*: In Assam, a chain of custody has been established; all that is needed is for this process to be recognized by the Ministry of Environment, Forests and Climate Change. *Comment*: We—the federal and state governments and growers—need to sit together on this to find a way to enable international trade in a transparent and proper manner. There is also a reforestation programme as part of the overall management of agarwood in India.

Indonesia

by **Maman Turjaman**

Senior researcher, Center for Conservation and Rehabilitation Research and Development (FORDA), Indonesia

Indonesia has more agarwood biodiversity than many other countries, with populations of *Aquilaria beccaria*, *A. cumingiana, A. filaria, A. hirta*, *A. malaccensis*, *A. microcarpa*, *A. tomentosa, Gyrinops audate, G. decipiens, G. landermanii, G. podocarpus, G. salicifolia* and *G. versteegii.*

Projects conducted under the ITTO–CITES Programme have increased information on the distribution of species of *Aquilaria* and *Gyrinops* in Indonesia, although such surveys are expensive and it has not been possible to cover the entire range of distribution in the country. A project for the ex-situ genetic conservation of agarwood-producing trees is underway. A questionnaire on agarwood plantation resources was sent to district forest offices; so far there has been a 30% response rate, and the total number of trees in the sample is 3.5 million. Infestation by a leaf-eater insect (*Heortia vitessoides*) is a significant problem in plantations, and a remedial strategy is to plant lemon grass. Plantations are projected to produce 6 million kg of agarwood by 2020. Nearly 700 000 kg of agarwood products (*A. filaria* and *A. malaccensis*) were exported in 2013; the biggest importers were Singapore, Saudi Arabia and Taiwan Province of China. An NDF is done yearly at the time of setting harvest and export quotas.

Question from the floor: You have many species in the wild, but you seem to export only two species. Do you raise the seedlings of other species? *Response*: we have many species in the wild but we concentrate on *A. malaccensis*, *A. filaria* and *Gyrinops versteegii*. Other species are not yet harvested

and we do not have databases or inventories. We concentrate on *A. malaccensis* and *A. filaria* in plantations, too. The market is asking for *A. malaccensis*, and the other species are in less demand. *Question*: What is the quality of the agarwood you export? *Response*: About 80% of exports could be classed as low quality, 5–7% as good quality, and the remainder as medium quality.

Malaysia

by **Zahari Hamid**

Malaysian Timber Industry Board, Malaysia

The following information pertains to Peninsular Malaysia, which has both planted and wild populations. The *Aquilaria* population is depleting in the wild. There are four significant species: *A. malaccensis* (the most common species), *A. hirta*, *A. microcarpa* and *A. beccariana*. The law requires registration of agarwood plantations; 53 companies or individuals are registered as planters, and 984 hectares are registered, with a total of 959 500 standing trees (the majority aged 3–8 years). The main planted species are *A. crassna*, *A. subintegra* and *A. malaccensis*. Registration is renewed annually after site audits by a technical committee. The Management Authority will issue certificates to agarwood planters after receiving site technical audit reports, and registration is renewed annually. To encourage smallholder planters to register, the law has been amended so that no fee is payable for plantations of fewer than 2000 standing trees and areas less than 2 hectares in size. The national quota is 200 000 kg sourced from the wild.

Sarawak is another CITES Management Authority for timber products in Malaysia, and it is in the process of doing an NDF for agarwood-producing species.

Myanmar

by **Phyo Zim Mon Naing**

Staff Officer, Natural Forest and Plantation Division, Forest Department, Myanmar

Forest inventory data indicate that two species, *Aquilaria agallocha* and *A. malaccensis*, are widely distributed in Myanmar. Both are declared as reserved trees under the law, and the extraction of agarwood is strictly prohibited. Local people have been establishing agarwood plantations for more than 25 years. Currently, 34 475 agarwood-producing trees in home gardens and 680 hectares of industrial plantations are registered with the Forestry Department.

Question from the floor: Do you have data on exports from Myanmar? *Response*: We cannot export agarwood products because the first industrial plantations were established only in 2006, and at a large scale from 2010, so we are at an initial stage. Agarwood is a protected species in the wild.

Nepal

by **Navin Giri**

Under Secretary, Department of Forest, Ministry of Forests and Soil Conservation, Nepal

and

Dol Raj Luitel

Department of Plant Resources, Nepal

No agarwood-producing species have been recorded in the wild in Nepal. There is no specific policy on agarwood, but there have been some efforts to establish plantations. One person has planted 15 hectares with agarwood in a mixed plantation and established a nursery. There are about 600 mature trees in home gardens, and these are the sources of seeds for the nursery. To facilitate the industry, a study is needed on the potential for large-scale production, and the government should start a registration process.

Thailand

by **Sumalee Tongdonae**

Agricultural Research Officer, Department of Agriculture, Thailand

Thailand has agarwood populations in the wild and in plantations, but harvesting in the wild is not permitted. There are four agarwood-producing species: *Aquilaria crassna*, *A. hirta, A. malaccensis* and *Gyrinops vidalii*. In 2013, Thailand exported 8000 kg of agarwood oil and 15 000 kg of agarwood chips; the largest export destination was the United Arab Emirates. The harvesting of agarwood is not permitted in protected areas, but it is allowed on private land. There is no quota for exporting agarwood from the wild.

Question from the floor: Are you exporting from plantations? *Response*: Yes, we export from plantations, but not from the wild. *Question*: Have you made an NDF? *Response*: No, but we have surveyed the wild population, and we have surveyed all plantations in the country; all plantations are registered and verified and have management plans, and this allows sustainability assessments. *Comment*: So that is a kind of NDF. *Question*: How do you classify trees growing in home gardens—wild or plantation? *Response*: When considering applications for export we ask for land licences. If it is found that the agarwood was produced on land not classified as a protected area, export is permitted.

Viet Nam

by **Thai Truyen**

Southern Representative, Office of Viet Nam CITES Management Authority, Viet Nam

Viet Nam has four agarwood-producing species: *Aquilaria crassna*, *A. baillonii*, *A. banaensis* and *A. rugosa*. *A. crassna* represents 90% of the overall agarwood population in Viet Nam, and it is the most important species in plantations and home gardens. The first plantations were established in the 1980s, and there are about 18 000 hectares of plantations (90% of which are *A. crassna*) and more than 1 million agar-producing trees in home gardens. More than 300 000 kg of agarwood chips,

sawdust, logs and wood pieces were exported in 2009–2014, sourced from plantations and home and forest gardens. No agarwood harvested in the wild is exported because it is protected in Viet Nam.

Question from the floor: Which species produced the best-quality agarwood? *Response*: *A. crassna*. This species is protected in the wild, but it fetches prices of up to US$2 million per kg, so you cannot completely cut out illegal harvesting. All national parks in which *A. crassna* occurs have conservation plans for the species because it is protected. Some areas have re-introduction programmes to plant indigenous agarwood-producing trees in the forest to increase the wild population. We also hope that by flooding the market with plantation-grown agarwood we will reduce demand from the wild. We have agreements with other ASEAN countries—Cambodia and Lao PDR—to stop the illegal trade, and we have signed a memorandum of understanding with China on border control. *Question*: For all presenters, is it possible to produce the highest-quality agarwood in plantations? *Response*: Plantations produce agarwood of only low quality.

Current agarwood trade trends

by **Didik Purwito**

Team Leader, ITTO–CITES Project on Agarwood, Phase 2, Center for Conservation and Rehabilitation Research and Development (FORDA), Indonesia

Mashur bin Mohammad Alias

Chair, Indonesian Agarwood Association, and Ministry of Forestry, Indonesia

and **Nandang Prihadi**

Manager, Natural Resources and Conservation Office of Central Kalimantan, Directorate General of Forest Protection and Nature Conservation, Ministry of Forestry, Indonesia

Introduction (Mashur bin Mohammad Alias)

Since 2012 I have been assisting the Indonesian Government in ensuring that the trade of agarwood is legal and sustainably managed. I am chair of the Indonesian Flora and Fauna Exporters' Association, and since 2013 I have been with the Ministry of Environment and Forestry. I apologize that the minister was unable to attend, and he sends his regards and asked me to represent Indonesia. We developed a paper, which will be presented by Mr Didik.

Paper synopsis (Didik Purwito)

There are three expectations on the agarwood trade:

1) Sustainability, which itself has three aspects—continuity of supply (either from the wild or from plantations); the use of NDFs and the precautionary principle in conformity with Articles II and IV of CITES; and the sustainability of traditionally dedicated agarwood resources used by communities.
2) Traceability and legality—practices should conform with national laws, and the CITES permitting system should be in place. Harvesters, collectors and traders should be registered or certified. Parties should develop registration systems for plantations, as mandated in Res. Confr. 16.10. Through the ITTO–CITES Programme, Indonesia has an activity to develop a registration system, and a draft has been produced and field-tested. Part of Indonesia's efforts to ensure traceability (i.e. the process for developing quotas) was explained yesterday.
3) Quality and type of products—agarwood is traded in several raw and finished forms (incense, perfumes, etc.). Retail products are now in demand—e.g. 0.5 kg and 1 kg woodchip packages, as well as wooden products such as bracelets. Indonesia's CITES Management Authority has registered traders/exporters but is yet to develop a product label. The development of the agarwood glossary is assisting inspection and control by the CITES Management Authority.

Demand for agarwood is increasing in Singapore, China and the Middle East. There is also an increase in the uses of agarwood, and its value is increasing. Agarwood can be thought of as "green forest gold" because of its high value for communities and traders. The greatest demand is for wild agarwood, but plantation products are also increasing in popularity. Customers in Japan are interested in large sections of branches and trunks for use in personal shrines. Customers in the Middle East seek smaller pieces, such as branches, trunks and chips. Some agarwood collectors look for interesting natural shapes, and it is possible to make statues by curving agarwood stems and roots. Large, heavy agarwood pieces can achieve very high prices; prices are highest for agarwood that sinks in water. Such items are in high demand mainly among the Chinese and Arabs. Other

agarwood products include medicines, cosmetics, incense, preservatives, beads, tea, soap, oil, perfumes and decorative and religious objects.

Field trip

Workshop participants inspect an agarwood plantation in northeastern Assam.

Field-trip summary

by Syed Abdul Quavi

Assam Agarwood Association, Assam, India

As part of the workshop, participants undertook a two-day field trip to visit agarwood plantations and home gardens in rural Assam.

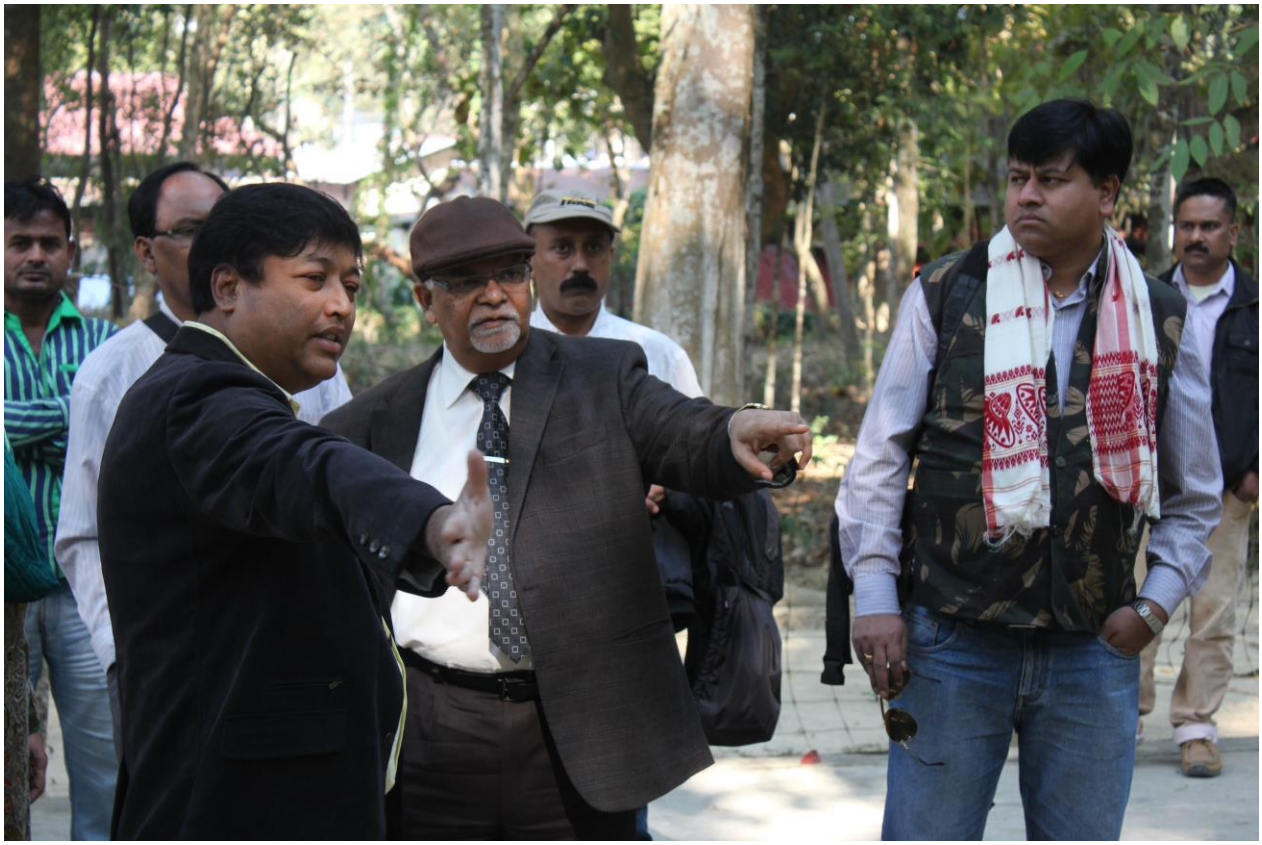
Assam has about 1800 hectares of private agarwood plantations containing about 3.8 million trees; in addition, agarwood-producing trees are increasingly being used as shade trees in tea gardens. No artificial inoculation methods are used in upper Assam; the percentage of natural infection is high and thus it is viable to grow agarwood-producing trees in home gardens. The annual agarwood yield cannot be ascertained accurately, and production is variable, depending on the rate of infection. In Assam, agarwood production is largely a cottage Industry, and agarwood processing is common in homes during the lean season (when the main food crop harvest is over). Many women are employed and self-employed in this processing.

Assam's 2002 rules for the felling of trees on "Non-Forest" land provide the basis for the harvest of agarwood in the state, and a plantation registration system is in place. Even if there is no registration at the time of harvest, the plantation is verified by two government agencies (the Revenue or Land Record Department and the Forest Department).

Workshop participants visited plantations owned by Ajmal Agarwood, and various other plantations and gardens. They were also able to observe local women working to extract agarwood from plantation-grown wood, and a local enterprise that extracts agarwood oil from agarwood chips.

Workers extract agarwood from plantation-grown agarwood trees in a village in northeastern Assam.

On visiting various agarwood plantation sites in Assam during the field trip, the Indian CITES Management Authority, Mr Vinod Ranjan, expressed satisfaction in the system employed by the Government of Assam for the harvesting of agarwood plantations and the chain of custody, and he indicated that CITES export permits would be able to be issued accordingly.



Syed Abdul Quavi of the Assam Agarwood Association (left) and Vinod Ranjan, India's CITES Management Authority (middle), discuss aspects of agarwood plantation-growing during the field trip.

Recommendations

Workshop participants formed two working groups to consider the sustainable management of agarwood in natural forests (Working Group I—*Annex 3*) and plantations (Working Group II—*Annex 4*). The recommendations put forward by the two working groups were discussed and agreed in the final plenary session. The recommendations below constitute an amalgamation and edited version of the two sets of agreed recommendations.

- There is no current need to amend the guidance on NDFs for agarwood.
- Where possible, range States should be encouraged to generate data on *Aquilaria* and *Gyrinops* species in addition to *Aquilaria malaccensis*.
- Range States with small populations of agarwood-producing species in the wild and which do not allow commercial use from the wild should be encouraged to generate, record and compile biological, ecological and law-enforcement information on these populations for future use in management and recovery programmes.
- Plantation programmes should be encouraged to contribute to the recovery of agarwood-producing populations in the wild, involving local communities to the extent possible.
- The vegetative propagation of agarwood-producing species should be studied as a possible means of reducing pressure on the harvesting of agarwood seed and seedlings in natural forests.
- Indonesia and Malaysia, which are currently exporting agarwood harvested in the wild, should continue using the system of voluntarily established national export quotas, and they should continue to conduct regular forest inventories.
- The illegal harvesting and poaching of agarwood-producing populations in the wild should be addressed.
- Range States should cooperate to build capacity in forest law enforcement to ensure the protection of agarwood-producing trees in the wild.
- The identification of agarwood products in trade remains challenging. The amended glossary on agarwood, when agreed by the Plants Committee, should be made available to range States to assist in the identification of agarwood products in trade.
- The management of plantations and natural forests should be coordinated to ensure the genetic diversity and vigour of agarwood-producing populations and the conservation of wild populations.
- Those range States that do not have policies on artificially propagated agarwood trees should be encouraged to develop such policies.
- Where planters and owners have properly registered their plantations, and a verification system is in place, planters and owners could be allowed to export if national legislation permits.
- Range States should be encouraged to offer incentives (e.g. a waiving of fees or improved taxation arrangements) to planters for registering their plantations.
- Range States should promote the sustainable production and trade of agarwood, especially through the coordinated sustainable management of agarwood plantations and the conservation and sustainable management of agarwood-producing trees in the wild.
- Range States and agarwood producers should develop networking to enable the sharing of technologies as well as agarwood planting materials.

- Range States should be encouraged to make use of improved planting stock (using germplasm collection materials) in enrichment planting in natural forests to help maintain and increase the genetic diversity of wild populations.
- Range States should be encouraged to implement the above-mentioned recommendations, seeking assistance where necessary, including from the ITTO–CITES Programme by submitting project proposals for possible approval and funding.

Draft decisions

Based on their recommendations, workshop participants agreed on the following draft decisions to be considered to be considered at the 22nd meeting of the Plants Committee (PC22, Georgia, October, 2015) and agreed at the 17th meeting of the Conference of the Parties to CITES (CoP17, South Africa, October, 2016).

Directed to range States

17.XX Subject to available funding, generate, record and compile biological and ecological data as well as information on the illegal logging and poaching of agarwood species populations remaining in the wild. Report this information at the regional agarwood workshop referred to in Dec. 17.XX and agree on regional priorities to ensure the survival of populations of agarwood-producing species in the wild.

17.XX Develop policies to encourage the sustainable trade of parts and derivatives of agarwood-producing species derived from artificial inoculation.

Directed to the Secretariat

17.XX Subject to external funding, the Secretariat, in cooperation with agarwood range States and the Plants Committee's regional representative for Asia, shall organize a regional workshop to: continue the work referred to in Decision 15.95 (Rev. CoP16), with an emphasis on how range States can cooperate to ensure the long-term survival of agarwood-producing species in the wild through agarwood plantation programmes that integrate forest recovery programmes; and develop an agarwood network for sharing information on planting stocks, management, technologies and other information.

17.XX The ITTO–CITES Programme, if a third phase is funded, will provide technical assistance to agarwood range States, including through possible project proposals on agarwood to be developed/considered at the regional workshop specified in 17.XX. Range States will agree on priority areas of work during the workshop.

17.XX The Secretariat will report to the Plants Committee meeting on the implementation of Decisions 17.XX and 17.XX prior to the 18th meeting of the Conference of the Parties to CITES.

Annex 1

List of participants

No.	Name	Country	Professional background, Position, CITES MA or SA, Institution	Office Address
1.	Mr. Mohammed Shahid Ullah	Bangladesh	Divisional Forest Officer, Forest Research Institute	Chittagong, Ministry of Environment of Forests and Environment, Bangladesh
2	Mr. Abdul Mabud	Bangladesh	Assistant Chief Conservative of Forests	Department of Forests
3	Mr. Norbu Gyeltshen	Bhutan	Senior Research Officer	Research and Development Center, Bhur
4	Mr. Kingzang Dendup	Bhutan	Officer-in-charge	Research and Development Sub Center, Darla
5	Mr. Chhum Samnang	Cambodia	(**SA**) Forestry Administration, Ministry of Agriculture Forestry and Fisheries	Forestry Administration #40, Preah Norodom Boulevard, Sangkat Phsa Kandal II, Khan Daun Penh, Phnom Penh, Cambodia
6	Mr. ZHONG Hai	China	Program Officer, The Endangered Species Import & Export Management Office (HQ of the CITES MA of P.R. China)	State Forestry Administration 18 Hepingli Dongjie Beijing 100714 P.R. China
7	Dr. Maman Turjaman	Indonesia	A senior researcher, FORDA	Center for Conservation and Rehabilitation R&D (FORDA), Jalan Gunung Batu No. 5, Bogor, INDONESIA.
8	Mr. Didik Purwito	Indonesia	Team Leader for ITTOCITES phase-2 project on Agarwood (FORDA)	Center for Conservation and Rehabilitation R&D (FORDA), Jalan Gunung Batu No. 5, Bogor, INDONESIA.
9	Dr. Nandang Prihadi	Indonesia	Manager, Natural Resources and Conservation Office of Central Kalimantan (BKSDA Kalimantan Tengah)	Directorate General of Forest Protection and Nature Conservation, Ministry of Forestry, Jalan Yos Sudarso No. 3 Palangka Raya 73112 Kalimantan Tengah, Indonesia
10	Ms. Shareefa Al-Salem	Kuwait	CITES MA of Kuwait Environment Public Authority. Regional representative for Asia – CITES Plants Committee	Environment Public Authority Biodiversity Conservation Dept., Po Box 24395 Safat 13104, Kuwait Telephone : +965 25428022
11	Mr. Zahari Hamid	Malaysia	Malaysian Timber Industry Board (MTIB) (MA)	Menara PGRM No.8 Jalan Pudu Ulu Cheras 50728, Kuala Lumpur

12	Lillian Swee-Lian Chua	Malaysia	Botanist. Senior researcher. (SA)- Forest Research Institute Malaysia (FRIM)	Forest Research Institute Malaysia 52109 KEPONG Selangor
13	Mr. Roslan B. Rani	Malaysia	Principal Assistant Director, International Affairs Division. ITTO-CITES activity lead: Capacity building of Forestry Department Peninsular Malaysia's staff in identifying Aquilaria to species level and in the grading of Agarwood	Forestry Department Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia
14	Mr. Phyo ZIn Mon Naing	Myanmar	Staff Officer (SA) Natural Forest and Plantation Division, Forest Department	Building No.39, Forest Department, Nay Pty Taw, Myanmar
15	Mr. Navin Giri	Nepal	Under Secretary (Technical). (MA) Department of Forest, Ministry of Forests and Soil Conservation	GPO Box 3987, Singha Durbar, Kathmandu, Nepal
16	Mr. Dol Raj Luitel	Nepal	Department of Plant Resources (SA)	Department of Plant Resources P.O. Box 2270 Thapathali, Kathmandu, Nepal
17	Ms. Sumalee Tongdonae	Thailand	Agricultural Research Officer, Professional Level, CITES MA of Thailand for Flora, Dept. of Agriculture	Department of Agriculture 50 Paholyothin Rd. Ladyao, Chatuchak, Bangkok 10900 Thailand
18	Ms. Duangduen Sripot	Thailand	Botanist. Flora Officer (MA) Plant varieties Protection Division,	Department of Agriculture Chatuchak, Bangkok 10900 Thailand
19	Nguyen Manh Ha	Vietnam	Senior researcher, (SA) Centre for Natural Resources and Environmental Studies (CRES)	Viet Nam National University 19 Le Thanh Tong Street Hanoi, Viet Nam
20	Mr. Thai Truyen	Viet Nam	(MA) Southern Representative Office of Viet Nam CITES Management Authority	3rd Floor, Building 12, Vo Van Kiet Street, Nguyen Thai Binh Ward, District 1, Ho Chi Minh City - Viet Nam

21	Dr. Milena Sosa Schmidt	Switzerland	Biologist – Botanist Senior Scientific Officer (Flora) - CITES Secretariat UNEP-CITES ITTO-CITES programme CITES focal point	International Environment House 11-13, chemin des Anémones 1219 Châtelaine – Genève Switzerland
22	Dr. Steven Johnson	Japan	Assistant Director, Trade and Industry Division, ITTO Secretariat	5F, Int'l Organizations Center, Pacifico-Yokohama, 1-1-1 Minato Mirai, Nishi-ku, Yokohama, 220-0012 Japan
23	Ms. Kanako Ishii	Japan	Program Assistant, ITTO-CITES Program, ITTO	5F, Int'l Organizations Center, Pacifico-Yokohama, 1-1-1 Minato Mirai, Nishi-ku, Yokohama, 220-0012 Japan
24	Mr. Thang Hooi Chiew	Malaysia	ITTO-CITES Regional Coordinator for Asia	No.1, Jalan 6/13 Petaling Jaya, 46000 Selangor Darul Ehsan, Malaysia
25	Mr. Alastair Sarre	Australia	Sarre et al. Pty Ltd.	PO Box 291, Hahndorf SA 5245, Australia
26	Mr. Tarun Kathula	India	Project Officer, GoI-UNDP-GEF Godavari Project Management Unit	Ministry of Environment, Forests & Climate Change New Delhi, India
27	Mr. Shiv Pal Singh	India	Joint Director (Wildlife)	Ministry of Environment, Forests & Climate Change, 5th Floor, Jal Wing, Ali Ganj, Jor Bagh Road New Delhi – 110 003 India
28	Mr. QUAVI Syed Abdul	India	Assam Agarwood Associations	H-2, Shankar Madhav Path, Japorigog, Assam Guwahati – 781005 India

No.	Name	Country	Professional background, Position, CITES MA or SA, Institution	Office Address
1	Mr. Sh. Ashok Kumar	India	DIG (SU)	Ministry of Environment, Forests & Climate Change, 5th Floor, Jal Wing, Ali Ganj, Jor Bagh Road New Delhi– 110 003 India
2	Dr. Jatin Kalita	India	Scientist, Biotechnology Division CSIR-North East Institute of Science & Technology	Jorhat - 785 006 Assam, India
3	Dr. R.K. Borah	India	Rain Forest Research Institute, ICFRE, MoEF & CC, GoI, Jorhat, Assam.	Rain Forest Research Institute, ICFRE, MoEF & CC, GoI, Jorhat, Assam, India
4	BIN MOHAMMAD ALIAS Mashur	Indonesia	Ministry of Forestry (MA) And Indonesian Agarwood Association	Manggala Wanabakti Building, Block VII, 7th floor, Jalan Gatot Soebroto, Jakarta 13440, Indonesia
5	Mr. Mohammod Shahab Uddin	Indonesia		
6	SAMSU Anuar Nawi	Malaysia	Forester, Senior Assistant Director, Forest Management Division. ITTO-CITES activity lead : The Quantification of Dry and Wet Inland Gonystylus spp. (Ramin), Aquilaria spp. (Agarwood) and Intsia spp. (Merbau) in Peninsular Malaysia (2008)	Forestry Department Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia.
7	Dr. Mohd Noor Mahat	Malaysia	Senior Research Officer	Forest Research Institute Malaysia (FRIM), Kepong, 52109 Kuala Lumpur, Malaysia
8	KANWAL Deep	United Arab Emirates	Ajmal Perfume Manufacturing and Oudh Processing Industry (L.L.C)	Al Quoz Industrial Area No.3, Near to Oasis Centre, Dubai, UAE Dubai, 1082 United Arab Emirates
9	REBELLO Helen	United Arab	Ajmal Perfume Manufacturing and Oudh	Al Quoz Industrial Area No.3,

		Emirates	Processing Industry	Near to Oasis Centre, Dubai, UAE Dubai, 1082 United Arab Emirates

Special Guests:

1	Mr Vinod Ranjan	India	Additional Director General of Forests (Wildlife) & Director (Wildlife Preservation & WCCB). (MA of CITES, India)	Ministry of Environment, Forests & Climate Change, 5th Floor, Jal Wing, Ali Ganj, Jor Bagh Road New Delhi – 110 003
2	Mr. S.B. Negi	India	Additional Director, Wildlife Crime Control Bureau	Wildlife Crime Control Bureau, Ministry of Environment, Forests & Climate Change, Bhikaji Cama Place, Trikoot- I, 2nd Floor, New Delhi– 110 066.

Organizing Committee:

1	Mr. Abhijit Roy Chowdhury	India	Assistant Director, Wildlife Crime Control Bureau & Head, Organizing Committee	Wildlife Crime Control Bureau, Ministry of Environment, Forests & Climate Change, Govt. of India, 87, Tarun Nagar Road, Dispur, Guwahati -781005.
2	Ms. M. Geethanjali	India	Deputy Director, Wildlife Crime Control Bureau	WCCB (HQ) New Delhi

Annex 2

Workshop agenda

Asian Regional Workshop on Agarwood

Management of Wild and Plantation Source Agarwood

19 – 23 January 2015, Guwahati, Assam, India

Agenda

Day/Time	Agenda
18 January 2015	Arrival of Participants at Hotel Radisson, Gotanagar Guwahati
Day 1 – Monday, 19 January 2015 Morning	**08:00 – 09:00 WIB Registration**
	Plenary
	09:00 – 10:00 WIB Opening of the Workshop : Remarks by : 1. Welcome speech by Indian authorities (Vinod Ranjan). 2. Opening words by the CITES Secretariat (Milena Sosa Schmidt) 3. Opening words by the ITTO Secretariat (Steve Johnson) Group photo session
	10:00 – 10:15 Coffe break
	10:15 – 12:30 Presentations Chair : Mr. Thang Hooi Chiew, Malaysia 1. CoP16 Decisions and NDF formulation process– setting the basis for the workshop programme of work (by Milena Sosa Schmidt-CITES Secretariat). 2. How plantations can balance the harvest in the natural forests – general principles of a sustainable forest management (Steve Johnson-ITTO Secretariat). 3. Management and silviculture of natural agarwood forest (Mr Nandang Prihadi, Indonesia) 4. Plantation grown agarwood – potential and resources, management of plantations (Mss Duangduen Sripotar, Thailand). 5. Issues of definitions related with the Agarwood plantations (origin of plantation material, definition of artificially propagated and related matters) (Ms. Shareefa Al-Salem).
	12:30 – 14:00 Lunch
Afternoon	**14:00 – 17:00** Chair : Mr. Nguyen Manh Ha, Viet Nam 6. Current use and experiences of 7 range States on NDF formulation, natural forest management and Agarwood plantations (country report presentations, 5 slides maximum per range States) : a - Bangladesh b. - Bhutan c. - Cambodia d. - China e. - India f. - Indonesia g. - Malaysia

<table>
<tr><td></td><td colspan="2"></td></tr>
<tr><td></td><td colspan="2">19:00 – 20:30 WIB Welcome Gala Dinner</td></tr>
<tr><td rowspan="5">Day 2 – Tuesday, 20 January 2015

Morning

Afternoon</td><td colspan="2">09:00 – 12:30
Chair : India
7. Current use and experiences of 7 range States on NDF formulation, natural forest management and Agarwood plantations (country report presentations, 5 slides maximum per range States) – continues:
a. - Myanmar
b. - Nepal
c. - Thailand
d. - Vietnam

8. Current demand and trends on the agarwood international trade – (Mr. Mashur Bin Mohammad Alias, Indonesia).

9. Establishment of working groups</td></tr>
<tr><td colspan="2">12:30-14:00 Lunch</td></tr>
<tr><td colspan="2">14:00 – 17:00 Working groups</td></tr>
<tr><td>Working Group on Natural forest management – NDF. Co-Chairs : Mr. Nandang Prihadi, Indonesia; Milena Sosa Schmidt, CITES Secretariat
Issues to be discussed and reviewed:

1. Current practices of NDF formulation for wild source agarwood;

2. Management of agarwood natural forest; and

3. Current practices for NDF – wild sourced material; guideline for Agarwood NDF – usefulness and revisions.</td><td>Working Group on Plantations – NDF. Chairs : Mr. Mashur, Indonesia; Steve Johnson, ITTO Secretariat.

Issues to be discussed and reviewed:

1. Origin of its plantations material;

2. Current practices of NDF formulation for Management of agarwood plantations;

3. Definition of artificially propagated; guideline for Agarwood NDF – usefulness and revisions</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td rowspan="4">Day 3 – Wednesday 21 January 2015

Morning</td><td colspan="2">09:00 – 10:00 Working Group– morning - continue</td></tr>
<tr><td colspan="2">10:00 – 10:15 Coffe break</td></tr>
<tr><td colspan="2">10:15 – 12:30 Working Group – preparation of WG reports</td></tr>
<tr><td>Working Group on Natural forest management – NDF. Co-Chairs : Mr. Nandang Prihadi, Indonesia; Milena Sosa Schmidt, CITES Secretariat.

Issues to be discussed and reviewed:

4. Identifying main challenges and trends; and
5. Recommendations</td><td>Working Group on Plantations – NDF. Chairs : Mr. Mashur, Indonesia; Steve Johnson, ITTO Secretariat.

Issues to be discussed and reviewed:

4. Identifying main challenges and trends; and
5. Recommendations</td></tr>
</table>

Afternoon		
	12:30-14:00 Lunch	
	14:00 – 15:00 – Plenary Chair : Mr. Thang Hooi Chiew, Malaysia. Report of Working Groups and Discussion Formulation of Recommendations	
	15:30 – 16:00 - coffee break	
	16h00 – 17h00 – Plenary **Closing** the Asian Regional Workshop on Agarwood Management of Wild and Plantation Source Agarwood	
Day 4 - Thursday, 22 January 2015	**09:00 –** Field Trip to Upper Assam (250 kms).	
	12:30- On the way Ajmal Agarwood Plantation Modertoli & Jabrakhowa **13:30 – Lunch** at Jabrakhowa by Ajmal	
	18:00 - Check in at Borgoss Resort, Kaziranga and dinner	
Day 5 -Friday, 23 January 2015	**09:00 –** Field visit and cottage industry of agarwood, Lunch	
	12:30-13:50 – Lunch	
	14:00 - Back from filed trip Check in again at Radisson Hotel, Guwahati late evening	
Day 6 – Saturday 24 January 2015	Check out - Departure of Participants	

Annex 3

Working Group I: Sustainable agarwood natural forest management (unedited report)

Recognizing that national legislation is available;

Recognizing that survival of agarwood population in its natural habitat is essential therefore **Encouraging** Parties to use plantations to help relieving the pressure on the harvest of populations in the wild;

Acknowledging that Resolution Conf. 16.10 on Implementation of the Convention for agarwood-producing taxa says that *Regarding non-detriment findings (NDF)*

> *ENCOURAGES range States to make use of the agarwood NDF guidance as a reference while making NDFs for wild harvest of agarwood-producing taxa. The guidance should be available on the website of the Secretariat and be updated if necessary;*
>
> *DIRECTS Parties and the Secretariat to use the agarwood NDF guidance in capacity-building workshops and relevant training materials*;

Thus, the working group recommends to:

1. For time being, leave the current agarwood NDF guidance as it is without further revisions;
2. Whenever possible, range states encourage to generate data on *Aquilaria* and *Gyrinops spp. o*ther than *Aquilaria malaccensis*;
3. Encourage range States that have scarce populations in the wild and that don't allow any commercial use from the wild, to generate, record and compile all necessary biological, ecological and enforcement information on these populations, that in future could be used to establish management and recovery programmes;
4. Encourage plantation programmes to contribute to the recovery of agarwood producing population in the wild involving local communities to the extent possible;
5. Study the potential of vegetative propagations for reducing pressure of harvesting agarwood seed and seedling in natural forest;
6. Indonesia and Malaysia that are currently exporting agarwood from the wild to continue using the system of voluntarily established national export quotas and to continue doing forest inventories regularly;
7. Address illegal harvest and poaching agarwood producing populations in the wild
8. Undertake joint capacity building activities for enforcement of officials;
9. Identification agarwood products in trade remains challenging therefore glossary was adopted by the PC 20 in 2012 and is presented in document CoP16 Inf 3 would be necessary; Kuwait is to make the glossary available when agreed at the Plants Committee;
10. Reinforce genetic diversity and vigour of agarwood producing populations through coordinated management of plantations and of natural forests;
11. Consider the above-mentioned recommendations to submit proposals to the ITTO-CITES Programme for consideration and possible funding.

List of participants in Working Group I

1. Nandang Prihadi/Indonesia
2. Milena S. Schmidt/CITES
3. Shereefa al Salem/Kuwait
4. Hessa/Kuwait
5. Sumalee Tangdonae/Thailand
6. Nguyen Manh Ha/Viet Nam
7. Tharun Kathula/ India
8. Lilian Chua/Malaysia
9. Samsu Anuar/Malaysia
10. Zahari Hamid/Malaysia
11. Kneujang Dhendup/Bhutan
12. Doi Raj Luitel/Nepal
13. Mohammed Shahid Ullah/Bangladesh
14. Thang Hooi Chiew/ITTO

Working Group II: Sustainable agarwood plantation management (unedited report)

ISSUES DISCUSSED:

2. Origin of its plantation materials
    - Proper documentation of the planting source origin – species, types of planting materials (seedlings, wildings, tissue culture etc.) and its origin from wild or planted trees.
    - Establish breeding program or proper breeding strategy which includes:
        - Selection of parent trees/mother trees
        - Develop germplasm pool/bank
        - Develop seed production areas
        - Develop seedling seed orchard/clonal orchard
        - Final objective is to develop cultivated variety (Improved planting stock)
    - Create networking to allow sharing of information on the planting stocks
3. Current practice of NDF Formulation for Management of Agarwood Plantation
    - Many countries do not have NDF for plantation
    - A few have developed a registration systems

2. Definition of artificially propagated: guideline for Agarwood NDF –usefulness and revisions
    - Minimum NDF for artificially propagated Agarwood is to have proper registration system
    - Registration should have details of basic information of database such as owner, land status, source of planting materials, hectarage, number of stems, year of planting (age), yield and etc.
    - Should have verification system
    - NDF may vary among countries but minimum requirement must be fulfilled
    - Give incentives to farmer to register
4. Identifying main challenges and trends
    - To create standard grading system for Agarwood
    - How to control implementation of good technologies related to Agarwood production
    - How to control illegal trading and smuggling
    - How to control fraud in Agarwood trading

5. Recommendations

- Encourage range states which do not have policy on artificially propagated Agarwood trees to develop one.
- If proper registration and verification has been made accordingly, planters or owner of the plantations should be allowed to trade/export = (change text) – refer to conv.
- Range states are encouraged to give incentives to planters for registering their plantation – free registration, tax only collected after harvesting
- Range states should promote sustainable productions and trade of Agarwood especially through development of artificially propagated Agarwood trees (plantation)
- Develop networking for working together – sharing of technologies as well as materials
- Range states are encouraged to make use the germplasm collection materials for enrichment planting in the forest areas for conservation as well as broadening the genetic variation of the wild populations.

List of participants in Working Group II

1 Norbu Gyeltshen (Bhutan)
2 Chhum Samnang (Cambodia)
3 Zhong Hai (China)
4 Syed Abdul Quavi (India)
5 M. Geethanjali (India)
6 Maman Turjaman (Indonesia)
7 Didik Purwito (Indonesia)
8 Mashur Bin Mohammad Alias (Indonesia)
9 Mohammed Shahab Uddin (Malaysia)
10 Roslan Rani (Malaysia)
11 Zahari Hamid (Malaysia)
12 Mohd Noor Mahat (Malaysia)
13 Phyo Zin Mon Naing (Myanmar)
14 Navin Giri (Nepal)
15 Ms Sripot Duangduen (Thailand)
16 Ms Helen Rebello (United Arab Emirates)
17 Mr Deep Kanwal (United Arab Emirates)
18 Mr Abdul Mabud (Bangladesh)
19 Mr Thai Truyen (Viet Nam)