



A report on the strengthening of networking between relevant states and federal agencies to discuss and resolve issues on the conservation and sustainability of *Aquilaria malaccensis* in Malaysia, including the sharing of data

Lau Kah Hoo, Muhammad Alif Azyraf Azmi & Lillian Chua Swee Lian

#### PROJECT TITLE

**Establishment of Arboreta and Strengthening Institutional Network for the Conservation of *Aquilaria malaccensis* in Peninsular Malaysia**

CITES Tree Species Programme



## Contents

Abbreviations .....	ii
Acknowledgements .....	iii
Introduction .....	1
1. Identify potential collaborators.....	1
2. Meetings .....	1
3. Field works.....	2
4. Data sharing.....	4
5. CITES and national level meetings .....	4
6. Local collaboration .....	4
7. Institutional network improvement after the implementation of the CTSP project .....	5
8. Key strategies .....	6
Conclusion .....	6

## Abbreviations

A-PHSB	Forest Management and Sustainability Trust Fund Project
CoP	Conference of Parties
CTSP	CITES Tree Species Programme
DBH	Diameter at breast height
FDPM	Forestry Department of Peninsular Malaysia
FRIM	Forest Research Institute Malaysia
KeTSA	Ministry of Energy and Natural Resources
MA	Management Authority
MTIB	Malaysian Timber Industry Board
MYSA	Malaysian Space Agency
NGOs	Non-governmental organizations
PL	Project Leader
SA	Scientific Authority
SSFD	Selangor State Forestry Department
UPM	University Putra Malaysia

## **Acknowledgements**

The activities reported here were made possible with funding from the European Union through the CITES Tree Species Programme, and the Ministry of Energy and Natural Resources of Malaysia. The authors would like to thank the CITES Secretariat, especially to Dr. Haruko Okusu (Chief, Outreach and Projects Unit), Dr. Milena Sosa Schmidt (CITES Tree Species Programme Coordinator), and Mr. Thang Hooi Chiew (Regional Coordinator for Asia) for their kind assistance throughout the project. Not forgetting the entire project team members who worked tirelessly in ensuring the success of the project.

# **A report on the strengthening of networking between relevant states and federal agencies to discuss and resolve issues on the conservation and sustainability of *Aquilaria malaccensis* in Malaysia, including the sharing of data**

## **Introduction**

In 2019–2021, the Forest Research Institute Malaysia (FRIM) was granted a project entitled “Establishment of Arboreta and Strengthening Institutional Network for the Conservation of *Aquilaria malaccensis* in Peninsular Malaysia” under the CITES Tree Species Programme (CTSP). The objective of the project was to enhance conservation activities for *A. malaccensis* through the establishment of an institutional network and arboreta. Three outputs were expected to be achieved at the end of the project which were i) a network of institutions that is responsible for the conservation of *A. malaccensis*, ii) established arboreta of *A. malaccensis* in selected states, and iii) dissemination and sharing of the project results. This document was to report on item (i), which was to strengthen the existing network between pertinent government agencies in Malaysia towards the conservation of *A. malaccensis* in Malaysia through various approaches. It has to be noted that efforts to assemble different agencies to work on a common goal are a long-term process. Nevertheless, activities conducted under this project marked some of the initiatives, to begin with.

## **1. Identify potential collaborators**

The focus is to initiate some form of collaboration to discuss and resolve issues on the conservation and sustainability of *A. malaccensis* in Malaysia between relevant states and federal government agencies. As a start, potential institutions and management authorities needed to be identified. A meeting was called on the 9 January 2018 (before the commencement of the CTSP project), chaired by the Ministry of Energy and Natural Resources (KeTSA) (then the Ministry of Water, Land and Natural Resources) with representatives from three agencies, namely, the Forestry Department of Peninsular Malaysia (FDPM), the Malaysian Timber Industry Board (MTIB), and FRIM. Based on the meeting, FDPM had agreed to collaborate on the project and their scope was to propose a suitable area in the state of Selangor for the establishment of the Selangor arboretum and to prepare the budget required.

## **2. Meetings**

With the commencement of the CTSP project on 1 February 2019, eight meetings had taken place to discuss the sites in the states of Selangor and Perak (now Pahang) arboreta. Four internal (within FRIM) and four external (with collaborators) meetings were conducted for the purpose. The external meetings were to discuss the potential site of the Selangor arboretum and other pertinent issues on *A. malaccensis* (Figure 1). In 2020, four sites had been proposed by the Selangor State Forestry Department (SSFD) as the site for the Selangor arboretum, namely, the Sungai Lalang Forest Reserve, Kanching, Kundang, and Batu Arang. Upon visiting these sites, it was found that none of the sites was suitable due to unmet planting design and uncertainty of land status. According to SSFD, deciding on a suitable site for plantation was not easy nowadays, as land has become scarce in the state. Generally, for a site to be established as an *A. malaccensis* arboretum, the site had to be relatively safe from poachers, having proper access roads, and having a clearly defined land status. Due to that, the site had to be changed, and Bukit Hari, FRIM, was selected after a series of internal discussions and site visits.

Meanwhile, the internal meetings were to discuss the new location of the Perak arboretum, which had to be changed to Maran, Pahang, due to insufficient funds for setting up the

arboretum in the Bidor Research Station. With that, the project worked with another ongoing project funded by FDP – ‘*Membangunkan Strategi Pemuliharaan Dan Menambahbaik Kualiti Hasil Spesies Aquilaria Terpilih Secara Lestari Di Malaysia*’ (Developing conservation strategies and improving the product sustainability of selected *Aquilaria* species in Malaysia) to strategize conservation approaches through the establishment of the Pahang arboretum as well as other means of actions.



Figure 1. In one of the meetings with the Selangor State Forestry Department to identify the Selangor arboretum site. Photo: Siti Fariezza Khairi Thaw.

### 3. Field works

The importance of field works was not limited to collecting planting materials but also as means for FRIM to make a connection with forest managers at the states level. Between 2019–2021, 25 collecting trips involving 37 visitations (Table 1) were carried out in the states of Kedah, Pulau Pinang, Perak, Selangor, Negeri Sembilan, Melaka, Johor, Pahang, Terengganu, and Kelantan with 17 district forest offices and ranger offices, two federal agencies, two state forestry department, one botanic garden, and one private learning institution involved (Figure 2). At the district forest offices, information on the status, health and condition of the species populations were exchanged between forestry officers and FRIM. Staff from the forestry departments had given their full cooperation and provided useful maps each time before the start of the field work. While it is the authority of the district forest offices to manage the forests and conduct patrols, fresh and up-to-date information provided by FRIM gathered from field works is crucial for them. Being a targeted species by harvesters, enforcers need to move swiftly to curb any illegal activities.

Table 1. List of field works conducted for planting materials collection.

No.	Visitation dates	State
1.	15–19 April 2019	Kedah
2.	10–12 June 2019	Melaka
3.	10–12 June 2019	Negeri Sembilan
4.	20 June 2019	Selangor
5.	24–28 June 2019	Kelantan
6.	24–28 June 2019	Terengganu
7.	8–12 July 2019	Pahang
8.	8–12 July 2019	Johor
9.	15–17 July 2019	Pulau Pinang

<b>No.</b>	<b>Visitation dates</b>	<b>State</b>
10.	5–7 August 2019	Perak
11.	13–16 August 2019	Pahang
12.	13–16 August 2019	Johor
13.	7–11 October 2019	Kelantan
14.	7–11 October 2019	Terengganu
15.	21–23 October 2019	Pulau Pinang
16.	25–29 November 2019	Kedah
17.	16–18 December 2019	Pulau Pinang
18.	20–24 January 2020	Pulau Pinang
19.	20–24 January 2020	Perak
20.	28–31 January 2020	Johor
21.	10–14 February 2020	Pulau Pinang
22.	10–14 February 2020	Perak
23.	24–28 February 2020	Pahang
24.	24–28 February 2020	Negeri Sembilan
25.	24–28 February 2020	Johor
26.	9–13 March 2020	Pulau Pinang
27.	9–13 March 2020	Perak
28.	29 June–3 July 2020	Kelantan
29.	3–7 August 2020	Pahang
30.	3–7 August 2020	Terengganu
31.	24–28 August 2020	Pahang
32.	24–28 August 2020	Johor
33.	1–4 September 2020	Perak
34.	28 September–2 October 2020	Terengganu
35.	5–9 October 2020	Johor
36.	24 March 2021	Pahang
37.	22–23 November 2021	Kuala Lumpur



Figure 2. In one of the field trips with the state forestry department to collect planting materials.  
Photo: Lau Kah Hoo.

#### **4. Data sharing**

One of the important aspects to ensure good collaboration among agencies is information sharing. Between 2020–2021, a meeting and data analysis were conducted to facilitate data sharing through a system known as Sistem FloraC, a system developed by FDPM and the Malaysian Space Agency (MYSA). Data included were tree distribution and diameter at breast height (DBH). These data were collected during field trips in collecting the seedlings, and thus are recent data. Data were also collated from district forest offices in each state. The system will be used in the management and conservation of CITES-listed tree species from Malaysia, with *A. malaccensis* and *A. hirta* among the first few species to be included in.

FRIM also shared and presented findings from the 'Conservation Action Plan For The Threatened Agarwood Species *Aquilaria malaccensis* (Thymelaeaceae) In Peninsular Malaysia' to FDPM during a meeting in September 2019 with the aim to describe scientific principles behind the establishment of the arboretum.

#### **5. CITES and national level meetings**

The Project Leader (PL) and co-PL, who are FRIM's Research Officers, attended national level meetings of CITES chaired by the KeTSA, namely, the CITES National Committee, *Mesyuarat Penyelarasan Isu-Isu CITES* (a meeting to discuss relevant CITES issues), and Conference of Parties (CoP) preparation meetings. FRIM is a CITES Scientific Authority (SA) in Malaysia and is responsible for providing technical advice to the ministry. With that also, the PL and co-PL would be furnished with up-to-date information and development related to CITES. A presentation was made on the project's background, objective and current progress to the Malaysian CITES Management and Scientific Authorities during the CITES National Committee meeting held on 17 December 2019. These types of meetings are important as platforms for information sharing and establishing new connections with other agencies.

#### **6. Local collaboration**

Under the FDPM, a trust fund was established with contribution from MTIB known as '*Akaun Amanah Projek Pengurusan Hutan Secara Berkekalan Jabatan Perhutanan Semenanjung Malaysia* (A-PHSB) (translated as Forest Management and Sustainability Trust Fund Project by the Forestry Department of Peninsular Malaysia). Based on a set of defined scopes, the trust fund was founded to fund projects that conduct activities toward forest management and sustainability in Peninsular Malaysia. FRIM was one of the recipients of the trust fund for the duration from 2021–2023, and the PL was invited to become a member of the project. Similarly, one of the project objectives was to work together with stakeholders and industry entrepreneurs for the conservation, industrialization, and enhancement of agarwood in Malaysia. The project itself was a collaboration between FRIM, FDPM, MTIB and University Putra Malaysia (UPM). Three internal meetings and one external meeting were held during the CTSP project duration whereby work plans were laid out (Figure 3). This project further benefited the CTSP project through networking expansion on various scopes that ultimately enhance the conservation of *A. malaccensis*. The establishment of the Pahang arboretum was the first collaboration activity between the project and A-PHSB. It is expected that the CTSP project's objectives could be further enhanced beyond the project's timeline under such a collaborative effort.

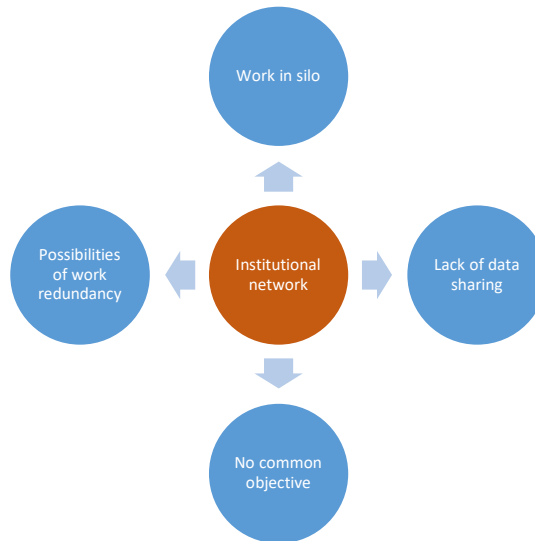




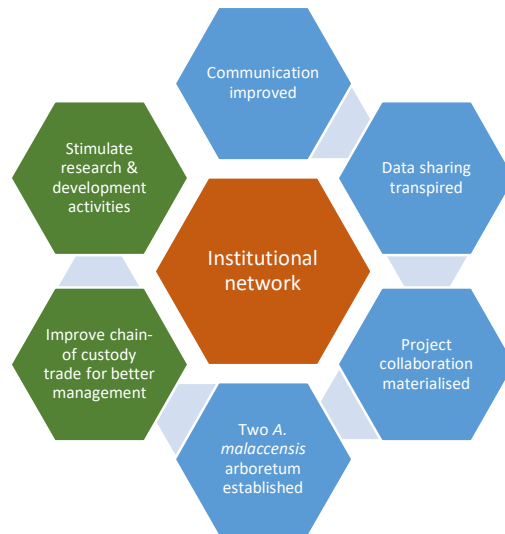
Figure 3. A virtual meeting with counterparts from the A-PHSB project. Photo: Lau Kah Hoo.

### 7. Institutional network improvement after the implementation of the CTSP project

Being a CITES-listed tree species, the welfare of *A. malaccensis* is overseen by three main agencies in Malaysia, namely, FDPM, MTIB and FRIM. FRIM and FDPM are the CITES SA of Malaysia, whereas MTIB is the CITES Management Authority (MA) of Malaysia. FDPM also serves as the MA. It has been observed that the agencies are rarely connected to each other, illustrating a lack of cooperation that led to some weaknesses (Figure 4a). Hence, through this project, several efforts had been taken to improve the situation as described under sections 1–6 as above. As portrayed in Figure 4b, some improvements were seen after the project implementation.



(a)



(b)

Figure 4. (a) Local scenario of the institutional network in *Aquilaria malaccensis* research and conservation works before the CTSP project implementation, (b) Improvement (in blue) and future expectation (in green) after the CTSP project implementation.

## 8. Key strategies

Six key strategies are proposed, as follows:

1. Enhance the existing network of collaboration with FDPM, state forestry departments and MTIB through research collaboration. Cross-agency works could also ensure better efficiency in conducting research and development activities.
2. Expand the network of collaboration with stakeholders outside of the government's circle such as with non-governmental organizations (NGOs) or private research institutions, including individual experts.
3. Share data between agencies to be more profound to ensure maximum utilization of collected data.
4. Continue involvement in global networks to ensure Malaysia stays relevant with other countries in terms of rare and threatened species management.
5. Involve district forest officers and forest rangers during field works to expedite plant-searching activities, exchange of information and forest reserves updates.
6. Work in tandem with relevant ministries to acquire advice and secure funding for conservation works.

## Conclusion

With the implementation of the CTSP project, several improvements were seen within the working environment of the agencies involved. Improved communication, data sharing and collaborations are some salient examples of good networking. Such a positive outlook should continue to be flourished for the betterment of species management and conservation. Therefore, it can be concluded that the project's objective was achieved.