Incense Tree (*Aquilaria sinensis*)

Species Action Plan

2023-2027

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Compiled by the Agriculture, Fisheries and Conservation Department

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1. Introduction

Trees of the genus *Aquilaria* produce a dark aromatic resin at wounds as a reaction against fungal infection. Sections of tree trunks or branches that contain patches of such fragrant, resinous wood enter into the trade under the name "agarwood" (沉香木). The Incense Tree, *Aquilaria sinensis* (Lour.) Spreng. (土沉香/牙香樹/白木香), is a major source of premium-priced agarwood, which is mainly used as sculpting materials and perfume ingredients in Mainland China. The balm (resin) produced and accumulated from the wood is also traditionally utilised as a precious Chinese medicine called "Chen Xiang" (沉香). The strong monetary incentive for harvesting has led to a sharp decline in the wild population of large Incense Trees in Southern China.

A. sinensis is currently categorised as "Vulnerable" in the International Union for Conservation of Nature (IUCN)'s Red List of Threatened Plants[1]. The genus *Aquilaria* is listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). At the national level, the species is listed as an endangered species in the "China Plant Red Data Book: Rare and Endangered Plants" and on the country's "List of Wild Plants under State Protection (Category II)". In Hong Kong SAR, *A. sinensis* is protected from unauthorised vandalism, damages or felling under the Forests and Countryside Ordinance (Cap. 96), and the Country Parks and Special Areas Regulations (Cap. 208A) if they are found within Country Parks and Special Areas. Depending on the circumstances of individual cases, the Hong Kong Police Force (the Police) may initiate prosecutions under the Theft Ordinance (Cap. 210), which imposes a heavier penalty. Being listed in Appendix II to the CITES, the international trade of agarwood is scrutinised by a licensing system and regulated under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586), which is the local legislation that gives effect to CITES.

The Incense Tree population in Hong Kong is regarded as one of the best remaining healthy populations in China. Due to the profitability of highly-priced agarwood products, the number of illegal felling of Incense Trees rose significantly in the early 2010s and reached a climax (134 recorded cases) in 2014. In response to the rising threats to local Incense Trees, the Agriculture, Fisheruies and Conservation Department (AFCD) collaborated with different Government conservation authorities, enforcement agencies, academic institutions, NGOs, and local communities, and devised a Species Action Plan 2018-2022 (SAP 2018-2022) in Jun 2018 to provide a pragmatic framework

[1] IUCN's Red List of Threatened Plants (https://www.iucnredlist.org/fr/species/32382/2817115)

of conservation measures to achieve the long-term viability and sustainability of the local Incense Tree population.

With the timeframe of the SAP 2018-2022 coming to the end, the actions taken are reviewed for their effectiveness in conserving *A. sinensis* in Hong Kong. Based on the review outcome, a follow-up SAP 2023-2027 is proposed to refine the pragmatic framework of conservation measures set out previously and achieve the long-term viability and sustainability of the local *A. sinensis* population.

2. Background Information

2.1 Taxonomy

The Incense Tree is under the following taxonomic hierarchy (Cronquist, 1988):

Class Magnoliopsida
Order Myrtales[2]*
Family Thymelaeaceae
Genus *Aquilaria*
Species *Aquilaria sinensis* (Lour.) Spreng.

To date, there are 21 *Aquilaria* species recorded (Lee & Mohamed, 2016). They are mostly distributed in Southeast Asia, of which two species, *A. sinensis* and *A. yunnanensis*, are native to China (Yin *et al.*, 2016). It is generally challenging to distinguish *A. sinensis* from other *Aquilaria* species solely from morphology as they share similar morphological features (Feng *et al.*, 2019). Fortunately, the advancement of DNA barcoding and genomic technologies in recent years could supplement and assist the species identification among the genus *Aquilaria* (Zhao and Zhao, 2007; Zhang et al., 2010; Zou et al., 2012; Jiao *et al.*, 2014; Lee *et al.*, 2016; Wang et al., 2016; Li *et al.*, 2018; Feng *et al.*, 2019; Deng *et al.*, 2020; Nong *et al.*, 2020).

2.2 General description

Major morphological characteristics of *A. sinensis* are shown in **Annex I**. Incense Tree is often named "Pak Muk Heung" (白木香) because of its white to yellowish wood. It is an evergreen tree which can grow up to 15 – 20 m tall, and its branchlets are terete, puberulous and glabrescent. It has a smooth tree bark of greyish to dark grey colours. Its leaves are alternately arranged and obovate, with 15 to 20 pairs of inconspicuous and

[2] Order Malvales if following APG IV, Angiosperm Phylogeny Group (2016)

nearly parallel lateral veins. Flowers of the species are small, green and fragrant, and there are 10 petals and 10 stamens in one whorl. Its fruits are woody capsules with an outer covering of short grey hairs, opening in two flat valves when ripen, and hanging down like green pendants.

2.3 Biology and ecology

Incense Tree occurs in semi-evergreen monsoon forest up to altitudes of 400 m (Harvey-Brown, 2018). It has a flowering season from March to May and a fruiting season from September to October (Hong Kong Herbarium & South China Botanical Garden, 2008). Chen *et al*. (2016) reported that noctuid and pyralid moths are the most effective pollinators of *A. sinensis,* while hornets may play an important role in its long-distance seed dispersal. Nevertheless, based on the analyses of genetic markers, Zou *et al*. (2012) suggested that gene flow between populations of *A. sinensis* could be restricted due to factors such as low seed dispersal and isolation of populations.

The mature trees (usually over 15 years) of *A. sinensis* may produce a dark aromatic resin (**Annex II**) as a response to wounding or fungal infection (Liu *et al*., 2013), but not all of the trees that have wounds would be naturally infected by fungi. In a natural environment, wounds of the trees could be caused by insect attacks, lightning strikes, animal grazing and microbial invasion, but there are also various artificial wounding and inoculation methods adopted by farmers to induce resin production (Rahman & Basak, 1980; Liu *et al*., 2013; Azren *et al*., 2019; Tan *et al.* 2019). Resin-impregnated heartwood (i.e., agarwood) that is fragrant has been a highly valuable non-timber forest product excessively demanded for the production of medicines, incense and perfumes across Asia and the Middle East (Barden *et al*., 2000; Mitra *et al*., 2007). The resin in agarwood is also a precious Chinese medicine called “Chen Xiang”, which has reported medicinal effects as a sedative and carminative, and to relieve gastric problems, coughs, high fever and rheumatism (Liu *et al*., 2013; Hashim *et al*., 2016; Wang *et al*., 2018). *A. sinensis* has, therefore, been regarded as an important medicinal plant since thousands of years ago (He *et al*., 2005). Production of “Chen Xiang” is, however, a slow process. Thus, the supply of agarwood from wild sources is far less than the market demand (Liu *et al*., 2013; Azren *et al*., 2019). Due to its rarity, agarwood has also become a popular collectable item sold in auction markets. High-quality agarwood products could be sold for up to US$ 10,000 or even US$ 100,000 per kg, whereas distilled Agarwood oil may fetch up to US$ 30,000 per kg (Tian *et al*., 2009; TRAFFIC, 2012; Wang *et al*., 2021).

2.4 Population status

2.4.1 Mainland China

Natural populations of *A. sinensis* in the Mainland have severely diminished due to uncontrolled exploitation, habitat destruction and the lack of effective recovery plans. The remaining viable populations of the species are found only in a few mountainous regions in Hainan and Guangdong provinces (Tian *et al.*, 2009; Zou *et al*., 2012). Some of these existing populations may have originated from cultivation as agarwood production and trading were once very well-developed, especially in the Guangdong Province in the early days. To cope with the immense demand for agarwood and preserve natural *A. sinensis* population, over 20 million *A. sinensis* have been widely cultivated in Hainan, Guangdong and Yunnan provinces (Liu *et al.*, 2013).

2.4.2 Hong Kong

Hong Kong has some of the best remaining healthy populations of *A. sinensis* in China. Seedlings and young *A. sinensis* are commonly seen throughout the countryside of Hong Kong. However, these populations are currently under threats of illegal felling. AFCD has therefore devised an *A. sinensis* Species Action Plan in 2018 to conserve this species.

2.5 Distribution

The species is native to Southern China, restricted to Yunnan, Guangdong, Guangxi and Hainan Island (Yin *et al.*, 2016; Harvey-Brown, 2018). Locally, it is known that *A. sinensis* was once widely planted in Hong Kong for producing the raw materials of incense, which were then traded to regions such as the Mainland, Southeast Asia and places as far away as Arabia (Iu, 1983). The incense industry was likely the origin of Hong Kong's Chinese name "fragrant harbour" or "harbour exporting incense" (Iu, 1983; Liu *et al.*, 2013). Since *A. sinensis* regenerates in the wild with vigour in the local environment, the species is often considered native to Hong Kong. AFCD has been keeping records of *A. sinensis* encountered in routine vegetation surveys. To date, over 5,000 mature *A. sinensis* have been recorded by AFCD. This species is generally found in lowland habitats all over Hong Kong (e.g., New Territories, Lantau, Lamma and Hong Kong Island), and it is particularly abundant in mature woodlands near rural villages in the New Territories and outlying islands. The species was also recorded in 89 out of the 116 Fung Shui woods surveyed by AFCD in 2002-2003 (Yip *et al*, 2004).

2.6 Conservation

Under the Forests and Countryside Ordinance (Cap. 96), any person who unlawfully

fells or damages any trees on Government land is liable to a maximum penalty of $25,000 fine and one-year imprisonment. The Country Parks and Special Areas Regulations (Cap. 208A) also prohibits cutting, picking or uprooting of any plants, including *A. sinensis*, in Country Parks and Special Areas. The maximum penalty is a $2,000 fine and imprisonment for three months. To deter poachers from illegally felling *A. sinensis*, Theft Ordinance (Cap. 210) is usually used to prosecute offenders involved in illegal felling of *A. sinensis* as it imposes a heavier penalty with a maximum of 10-year imprisonment. The prosecution figures in the past ten years (2013 – 2022) are listed in **Annex III**. Most of the prosecution cases involved two-way permit holders, as well as some illegal immigrants and few Hong Kong residents. As *A. sinensis* is listed as CITES Appendix II, any person found guilty of importing, exporting or re-exporting *A. sinensis* specimen without the required licence is liable to a maximum fine of $1 million and imprisonment for seven years under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

2.7 Threats

The depletion of the wild populations of *A. sinensis* in Southern China had exacerbated the shortage of agarwood in the Mainland, and thus an extension of illegal exploitation to Hong Kong. The facilitated access across the boundary between Hong Kong and mainland China and the enormous influx of visitors have also enhanced cross-boundary crimes, including illegal felling of *A. sinensis* for harvesting agarwood (Jim, 2015). In the past, poachers often wounded the trees to induce resin production, marked the wounds, and returned after several years to harvest agarwood. However, with the increasing demand for agarwood, poachers to date tend to indiscriminately cut down the trees to search for agarwood even though the quantity of agarwood obtained from each felling is usually extremely low (Soehartono and Newton, 2001). In some cases, they also return to the remaining living stump in an attempt to harvest agarwood.

2.8 Stakeholders

AFCD, the Police and the Customs and Excise Department (C&ED) have stepped up collaboration to jointly investigate and combat illegal activities related to the felling of *A. sinensis*. Relevant departments have also enhanced liaison and communication with concern groups, villagers residing near *A. sinensis* and hikers, to gather intelligence on illegal activities related to the felling of *A. sinensis*. The Police conducts criminal investigations into all suspected cases while AFCD renders assistance in inspecting the exhibits, providing expert advice and serving as an expert witness on the identification of the trees concerned in the court proceedings. C&ED and AFCD also work in tandem to

enforce the import and export/re-export control under Cap. 586. The two enforcement agencies have conducted a series of joint operations at export control points to combat the smuggling of endangered species, including agarwood.

Several NGOs and education institutes are also actively involving in the conservation/publicity issues associated with *A. sinensis*. For example, the Association for the Ecological and Cultural Conservation of *Aquilaria sinensis* has conducted numerous joint patrols and site investigations with AFCD and shared useful intelligence with the enforcement agents. The Shiu-ying Hu Herbarium of the Chinese University of Hong Kong also conducted STEAM education programmes with the support of AFCD.

3. Action Plan

3.1 Aim

This action plan aims to refine the SAP 2018-2022 and provide a pragmatic framework of conservation measures in the coming five years to ensure the long-term viability and sustainability of the local *A. sinensis* population.

3.2 Objectives

(i) To step up enforcement actions against illegal tree felling and establish long-term monitoring of important populations;
(ii) To augment surveillance and enforcement in the countryside;
(iii) To facilitate boundary control against agarwood smuggling;
(iv) To foster effective communication and cooperation with the Mainland enforcement agents;
(v) To strengthen protection for high-risk specimens;
(vi) To restore the damaged populations and establish new populations;
(vii) To improve scientific knowledge; and
(viii) To raise public awareness regarding the cultural and conservation values of the species

3.3 Timeframe

The actions are to be taken from 2023 to 2027, and will be refined over consecutive five-year plans.

3.4 Actions

3.4.1 RISK-BASED PATROL AND MONITORING OF IMPORTANT POPULATIONS

AFCD has been conducting regular patrols in country parks and special areas to deter illegal activities, including illegal felling of *A. sinensis*. To step up efforts in combating the illegal felling cases outside country parks and special areas, AFCD set up an Incense Tree Patrol Team (the Patrol Team) in 2018 to conduct patrols specifically at locations with important Incense Tree populations. Since then, AFCD has conducted over 900 patrols in the territory and conducted a series of intensive systematic surveys on the baseline information, including sizes, conditions and distribution of *A. sinensis* in Hong Kong.

Based on the information gathered from the surveys by the Patrol Team, AFCD has identified a number of strategic locations with high *A. sinensis* density. High-precision

Global Positioning System is deployed to record the locations and conditions of the Incense Trees over time. The data gathered is then integrated and analysed in an internal Geographic Information System (GIS). This long-term monitoring measure, together with intelligence from various sources (e.g. the Police and concern group), could provide invaluable information about *A. sinensis* population in Hong Kong and assist AFCD in formulating the risk-based patrol strategy (**Fig. 1**). When signs of irregularities are found, the Patrol Team reports the case to the Police promptly for further investigations. Joint operations between AFCD and Police have also been increased to deter illegal felling of *A. sinensis* at black spots.

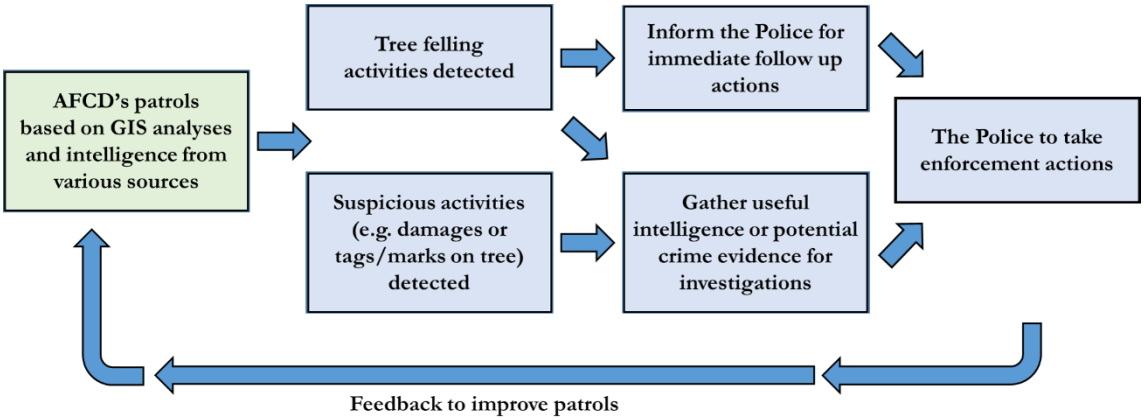

Fig. 1. A schematic diagram showing the risk-based approach for patrols.

In 2023-2027, AFCD will continue to conduct patrols using a risk-based approach, targeting healthy populations and black spots.

3.4.2 SURVEILLANCE IN THE WILD

To facilitate the collection of crime evidence and the deployment for swift enforcement action against illegal felling of *A. sinensis* in the countryside, AFCD has installed Infrared Sensor Camera Traps (IRSCT) at strategic locations (i.e. sites with a high density of *A. sinensis* or sites where illegal felling activities would be more likely) for the long-term monitoring and protection of *A. sinensis* at those locations. The IRSCTs are triggered by heat sensors. Once moving heat objects (e.g. human activities) are detected, the cameras will take pictures automatically and immediately send them to the security contractor hired by AFCD for round-the-clock instant inspection and screening. The security contractor would immediately report to AFCD and the Police if suspected illegal activities related to the felling of *A. sinensis* are detected. AFCD and the Police have formulated a joint operation protocol to facilitate swift enforcement actions upon detection of illegal activities by the IRSCTs.

To ensure swift enforcement actions, supports form residents living in the countryside are also vital. With the support of concern groups, stronger collaboration has been established with residents of rural areas where *A. sinensis* are found, to enhance intelligence exchange and facilitate early detection of illegal activities.

Since the implementation of the SAP, AFCD has installed over 50 IRSCTs at various strategic locations and detected over 35 cases of suspected illegal felling of *A. sinensis*. The information gathered, and experience obtained from the operations showed that the IRSCTs could effectively monitor the illegal felling of *A. sinensis*. AFCD would continue to identify suitable strategic locations to install IRSCTs to deter illegal felling of *A. sinensis*.

In 2023-2027, AFCD will continue to work closely with the Police in conducting 24-hour surveillance of A. sinensis at strategic locations using IRSCTs. AFCD and the Police will also continue building a collaborative network with countryside residents and encourage them to report any illegal felling activities in a timely manner.

3.4.3 BOUNDARY CONTROL

The import, export and re-export of agarwood products[3] are regulated under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) (the Ordinance). Under the Ordinance, all shipments of agarwood products must be accompanied with a valid permit issued under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and be inspected by an authorised officer upon landing in or prior to export from Hong Kong. The maximum penalty for violating the above licensing requirements is a fine of one million dollars, imprisonment for seven years and forfeiture of the specimens. AFCD enforces the control under the Ordinance and maintains close collaboration with C&ED at control points to combat smuggling activities of endangered species (including agarwood).

As agarwood carries fragrance, AFCD has trained and deployed detector dogs to assist in the detection of agarwood smuggling at control points. AFCD has also conducted training sessions to assist frontline staff of C&ED in identifying agarwood and detect relevant illegal activities.

[3] All *Aquilaria* species are Appendix II species under the Ordinance. In addition to live plants and dead whole plants, all parts and derivates of *Aquilaria* species are regulated under the Ordinance except: seeds and pollen; seedlings or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers; fruits; leaves; exhausted agarwood powder in all shapes; and finished products packaged and ready for retail trade (excluding woodchips, beads, prayer beads and carvings).

In 2023-2027, AFCD will continue to provide training for frontline staff of C&ED and train up detector dogs to assist in the detection of agarwood smuggling at control points.

3.4.4 COMMUNICATION WITH THE MAINLAND TO COMBAT ILLEGAL FELLING OF *A. SINENSIS*

To combat smuggling of items derived from *A. sinensis*, AFCD, C&ED, and the Police have stepped up joint efforts to strengthen export control and intelligence exchange with the enforcement agencies of the Mainland. AFCD also maintains close contact with its CITES counterpart in the Mainland, drawing their attention to the matter and requesting them to liaise with their relevant agencies to step up enforcement actions in the Mainland. An Incense Tree Enforcement Training Workshop, participated by Mainland government officials and enforcement staff, was organised by AFCD in July 2018 to facilitate and enhance capacity building, intelligence exchange, and further collaboration between Hong Kong and the Mainland in combating illegal felling and smuggling of *A. sinensis*. In November 2019, AFCD also visited Guangzhou and Dongguan to meet with Mainland government officials and researchers to have a better understanding of the latest development in the agarwood industry and market there.

In 2023-2027, AFCD, C&ED and the Police will continue the exchange and liaise with relevant Mainland authorities through various channels in combating illegal activities associated with A. sinensis.

3.4.5 PROTECTION OF HIGH-RISK SPECIMENS

Large and mature *A. sinensis* (e.g. trees with DBH ≥ 20 cm) could produce more vigorous seeds and are essential for continuing the populations of *A. sinensis*. They are also more likely to form agarwood and are more often poacher targets. To protect these important *A. sinensis* specimens from felling or damage, AFCD has been identifying suitable specimens in the territory to install Tree Protectors. To date, over 200 Tree Protectors have been installed at a number of locations with important *A. sinensis*, to protect them from felling or damage.

All Tree Protectors are tailor-made and installed according to the condition of each *A. sinensis* specimen. Adequate space between the tree and the Tree Protector was provided to prevent the Tree Protector from injuring the trunk or root systems of the tree. The designs of the Tree Protectors are illustrated in **Annex IV**. It should be noted that while the Tree Protectors may serve as a physical barrier surrounding the targeted tree to

discourage poachers from damaging it, there had been cases where the determined poachers damaged the Tree Protectors to access and damage the trees. Nevertheless, Tree Protectors could help identify high-risk trees to call for enhanced monitoring by the neighbourhood and serve as physical barriers to tree-cutting. AFCD had also modified the design of the Tree Protectors to enhance the protection provided to the trees, and Tree Protectors are still considered practicable to protect high-risk specimens in easily accessible locations.

AFCD has also engaged a local technology company to test integrating LoRa (Long Range) network in the Tree Protector for tree protection and monitoring. LoRa enables the long-range (several kilometres) transmission of information in locations with poor mobile network coverage, and the power consumption of LoRa is low. When the Tree Protector integrated with LoRa is disturbed, it would emit timely signals to alert AFCD or the Police. This could enhance the protection of high-risk *A. sinensis* specimens in remote areas where mobile network is poor or not readily available.

In 2023-2027, with due consideration of the condition of the trees and the suitability of the site, AFCD will continue to deploy various types of Tree Protectors and explore opportunities to integrate new technologies into the Tree Protectors to deter illegal felling of high-risk specimens.

3.4.6 ARTIFICIAL PROPAGATION AND REPLANTING

AFCD has endeavoured to enhance the planting of *A. sinensis* widely in country parks in recent years. Since 2009, AFCD has produced and planted over 130,000 *A. sinensis* seedlings in the Hong Kong countryside, which play an important role in the propagation of this species. Apart from replenishing the natural population, AFCD also provided seedlings to support various tree planting programmes, education or research activities in local schools and universities.

In 2023-2027, AFCD will continue to produce and replant A. sinensis seedlings to restore its population in the Hong Kong countryside. Seedlings will also be provided, if needed, to any planting, education or publicity programmes in secured places such as schools, within the boundary of institutions, government premises, urban parks, etc.

3.4.7 SCIENTIFIC STUDIES

AFCD has been supporting various research and scientific studies that could enhance the *A. sinensis* conservation in the past years. For example, AFCD has commissioned a

research institute to use a genomic approach to investigate the population structure of *A. sinensis* and to identify suitable genetic markers to differentiate different *A. sinensis* populations. AFCD has also supported a research project in molecular authentication of endangered timber samples funded by the Environment and Conservation Fund. This study investigates the application of genetic markers in differentiating different timber species and the products derived from them (including forfeited products of *Aquilaria* spp., donated by the Department to the institute for research purposes). These studies may assist enforcement authorities in combating the illegal import/export of endangered timber species, including *A. sinensis*.

In 2023-2027, AFCD will continue to encourage and support research institutions to conduct scientific studies that could enhance the conservation of the A. sinensis.

3.4.8 PUBLICITY AND EDUCATION

AFCD has been conducting publicity works related to *A. sinensis* conservation under the SAP 2018-2022. Posters related to *A. sinensis* conservation are displayed at various visitor centres, information boards of Country Parks and Control points, and agarwood specimens are displayed in the AFCD Endangered Species Resource Centre to convey the conservation message. AFCD also participated in the public seminars (e.g. the Science in the Public Service) and engaged the media and social media to raise public awareness of *A. sinensis* conservation. Different radio and video programmes on *A. sinensis* were conducted and broadcasted through the air, and promotional videos and posts were launched through social media to members of the public (**Annex V**).

AFCD also supported local organisations in conducting education programmes related to *A. sinensis*. For example, AFCD partnered with the Shiu-Ying Hu Herbarium of the Chinese University of Hong Kong to organise various STEAM education programmes to promote knowledge related to *A. sinensis* to local primary and secondary students. AFCD has also been providing *A. sinensis* seedlings/saplings to the Urban Renewal Authority for planting in public open spaces at their redevelopment sites and other departments for exhibition and education purposes.

In 2023-2027, AFCD will continue to support other departments, academic institutions and various NGOs conducting publicity and education programmes related to A. sinensis, and will also contribute to materials, seminars and technical support in these programmes, if needed.

3.5 Action timetable

#	**Action**	**Agency(-ies)**	**Timeframe**
1	Risk-based Patrols and Monitoring of Important Populations	AFCD*, HKPF, NGOs	Ongoing
2	Surveillance in the Wild	AFCD*, HKPF, villagers	Ongoing
3	Boundary Control	AFCD, C&ED	Ongoing
4	Communication with the Mainland to Combat Illegal Felling and Smuggling of Incense Trees	AFCD, HKPF, C&ED	Ongoing
5	Protection for High-risk Specimens	AFCD	Ongoing
6	Artificial Propagation and Replanting	AFCD, relevant departments and authorities, NGOs	Ongoing
7	Scientific Studies	AFCD, academic institutions	Ongoing
8	Publicity and Education	AFCD, relevant departments and authorities, academic institutions, NGOs	Ongoing

Remarks:
* indicates the leading agency
Abbreviations: AFCD – Agriculture, Fisheries and Conservation Department; C&ED – the Customs and Excise Department; HKPF – Hong Kong Police Force; NGO – Non-governmental Organisation
"Ongoing" refers to action currently being implemented and should continue

4. Implementation and Review

AFCD has consulted relevant stakeholders, including the government's enforcement agents (HKPF and C&ED) and NGOs, at the 6th Meeting of Wildlife Crime Task Force (WCTF) held on 16 March 2023 on the SAP 2023-2027. Stakeholders will be invited to review the SAP 2023-2027 through the platform of WCTF in late 2027. Interim review(s) of the plan may also be called for if necessary. Similar to the review on the SAP 2018-2022, the review will focus on the effectiveness of various measures to conserve the wild populations of *A. sinensis* in Hong Kong. Indicators of the review include the latest prosecution figures, the changes in the condition (i.e. remain intact / wounded / removed) of the trees in the long-term monitoring under Action 1, etc. However, sensitive information, such as the location data of the *A. sinensis* patches, IRSCTs, etc., will not be disclosed during the review.

Similar to the SAP 2018-2022, the majority of the funding required to put forward the actions under the SAP 2023-2027 will be provided by AFCD. The financial and manpower resources implications, the cost-effectiveness of various measures and the availability of long-term resources to sustain the intensive enforcement efforts would be key considerations in the future reviews.

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7. Annexes

Annex I – Features of *Aquilaria sinensis*

Whole tree

Tree barks

Leaves and flowers

Fruits

Annex II – Healthy and resin-impregnated heartwood of *A. sinensis*

Healthy heartwood

Resin-impregnated heartwood (agarwood)

Annex III – Police's figures of illegal felling or damaging of *A. sinensis* in the past ten years (2013 – 2022)

Year	Number of Reported Cases	Number Arrested (Person)	Number of Prosecutions (Case)	Number of Convictions (Case)
2013	96	41	21	18
2014	134	65	27	26
2015	120	16	4	3
2016	54	22	8	7
2017	56	9	2	1
2018	41	1	1	1
2019	32	0	0	0
2020	13	1	1	1
2021	3	0	0	0
2022	2	0	0	0

Annex IV – Different designs of Tree Protector

Bamboo Mesh Fence

Metallic Tree Guard

Metallic Tree Protective Device

Annex V – Publicity materials related to *A. sinensis*

The poster titled “No Unauthorised Tree Felling” displayed at Control Points

Public seminar participated to promote the conservation message of *A. sinensis* to members of the public.

Radio, video interviews, and other publicity materials related to the conservation of *A. sinensis* conducted under the SAP 2018-2022.