

**TRAFFIC**

**FACTSHEET**

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# AGARWOOD

**FACTSHEET ON INDIA'S AGARWOOD IN  
ILLEGAL WILDLIFE TRADE**







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Agarwood is the common name for the resinous aromatic resin formed in the heartwood of the genera *Aquilaria* and *Gyrinops* of the family Thymalaeaceae (Naef, 2011). The genera *Aquilaria* (Liu, *et al.*, 2017) is found in South and Southeast Asia (Persoon, and van Beek, 2008). Of the 21 known *Aquilaria* species found across the globe, about 13 are known to generate the resin in agarwood (Lee and Mohamed, 2016) in response to injury and infection by a specific fungus (López-Sampson and Page, 2018).

India is home to three species, namely *A. khasiana*, *A. macrophylla*, and *A. malaccensis* (Nath, *et al.*, 2020) and of

these *Aquilaria khasiana* and *Aquilaria malaccensis* are agarwood-producing species (Lee and Mohamed, 2016; Harvey-Brown, *et al.*, 2018). Agarwood is called 'Agar' in Hindi, 'Akil' in Tamil, 'Sanchi' in Assamese, and 'Agor Gach/Gas' in Bengali.

Agarwood is highly prized due to its medicinal traits and perfumery characteristics (Du, *et al.*, 2022) and for use in religious and cultural practices (López-Sampson and Page, 2018). To meet the agarwood demand, the species has suffered adversely due to unsustainable harvest (Persoon, and van Beek, 2008) and illegal trade (Nath, *et al.*, 2020).

## DO YOU KNOW?

- Agarwood is one of the most expensive woods in the world. The extensive medicinal, aromatic, and religious uses, have given agarwood the title of "Wood of the Gods (Mir, *et al.*, 2017; Naziz, *et al.*, 2019).
- The Sanskrit word for incense is *Agarbhatti*, derived from agarwood (*Agāru*) (López-Sampson and Page, 2018).
- *Aquilaria malaccensis*, one of the source species of agarwood, is the state tree of Tripura.
- Assam is known as the "agarwood capital" of India, owing to techniques used to inoculate and filter out the resin.
- The infection of *Aquilaria* heartwood with fungi species due to a wound or damage results in resin production which is then used (López-Sampson and Page, 2018; Du *et al.*, 2022).



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## SIZE, HABITAT, DISTRIBUTION AND POPULATION STATUS:

| AGARWOOD PRODUCING SPECIES | AVERAGE SIZE   | HABITAT   | DISTRIBUTION   | POPULATION TREND |
|----------------------------|--|---|--|------------------|
| <i>A. khasiana</i>         | 5m high, rarely exceeding 18m (Mir, <i>et al.</i> , 2017). | Subtropical broad-leaved dense evergreen forest (Mir, <i>et al.</i> , 2017).  | Endemic to the Khasi hills of Meghalaya (Harvey-Brown, <i>et al.</i> , 2018).  | ↓                |
| <i>A. malaccensis</i>      | Grow up to a height of 40 m.                               | Foothills and slopes of evergreen, and semi-evergreen forests at altitudes of up to 1000m (Harvey-Brown, <i>et al.</i> , 2018) (Barden, <i>et al.</i> , 2000) | Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and West Bengal (Harvey-Brown, <i>et al.</i> , 2018; Barden, <i>et al.</i> , 2000)<br><br>Also cultivated in the Western Ghats. | ↓                |

## CONSERVATION STATUS

| AGARWOOD PRODUCING SPECIES | WILDLIFE (PROTECTION) ACT, 1972 | CITES*      | IUCN*                 |
|----------------------------|---------------------------------|-------------|-----------------------|
| <i>A. khasiana</i>         | Schedule IV*                    | Appendix II | Critically Endangered |
| <i>A. malaccensis</i>      | Schedule IV*                    | Appendix II | Critically Endangered |

\*Convention on International Trade in Endangered Species of Wild Fauna and Flora

\*International Union for Conservation of Nature (IUCN)

\*as per the amendment to the Act in December 2022

The Export-Import (EXIM) Policy of India, restricts the import and export of agarwood derivatives, due to its listing in Appendix II of CITES. Any violations of the

provisions of the EXIM policy make the goods liable for confiscation and the individual(s) liable to punishment under the Customs Act, 1962.

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# THREATS

## HABITAT DESTRUCTION AND FRAGMENTATION

Forest fires, as observed in Meghalaya, and the infrastructure development and

expansion in habitats of *Aquilaria* are impacting the species (Mir, *et al.*, 2017).

## TRADE AND OVER-EXPLOITATION

Agarwood is among the world's most commercially valuable plant species (Naziz, *et al.*, 2019). The *Aquilaria* spp. is threatened by illegal harvesting and trade of agarwood in India (Blanchett, *et al.*, 2015; Harvey-Brown, *et al.*, 2018). The species is exploited for its valuable aromatic heartwood, a source of 'agaru' and agar oil, the most preferred raw materials in perfumery and traditional medicines. It is used in treating ailments like asthma, colic, chest congestion, diarrhoea, body ache, and rheumatism and is also known for its anti-cancer properties.

There are different grades of agarwood which fetches a wide range of prices. While there is high-value agarwood, there is also the lower-value agarwood used for making incense sticks.

Agarwood has been overexploited throughout its range for its fragrant heartwood, threatening its population. It continues to be traded in significant quantities to and from India. According to the CITES Trade Database, from 2017 to 2021, India exported over 141 tonnes (exporter-reported quantity) of agarwood to United Arab Emirates, Kuwait, Oman, Qatar, Saudi Arabia, Singapore, and

Thailand. The United Arab Emirates imported more than half of the overall reported quantities. India imported more than 142 tonnes of agarwood simultaneously (importer reported quantity) from Australia, Saudi Arabia, Qatar, Lao People's Democratic Republic, United Arab Emirates, Malaysia, Thailand, Singapore, Indonesia, Bhutan, Switzerland, France, and Viet Nam. Over one-third of the agarwood was imported from Indonesia and Singapore. The large quantity of derivatives in trade highlights agarwood demand in international markets and India's position in the trade.

**ILLEGAL TRADE:** The illegal trade of agarwood and its derivatives has continued in India, with more than 1.25 tonnes and 6 litres of oil/derivatives reportedly seized in six states of India between 2017 and 2021. Assam, Delhi, Kerala, Maharashtra, Telangana, and West Bengal have reported incidences of agarwood smuggling to Bahrain, Saudi Arabia, Kuwait, Thailand, and the United Arab Emirates.

Agarwood is among the world's most commercially valuable plant species that is threatened due to over-exploitation for its valuable aromatic heartwood.



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# CONSERVATION EFFORTS

- In 1991, under the EXIM Policy published by the Directorate General of Foreign Trade, the Government of India prohibited the export of all wood products and derivatives of the agarwood species at the time.
- In 1995, *A. malaccensis* was included in CITES Appendix II in response to the proposal made by the Government of India to regulate the international trade of the species within sustainable limits. The listing came into effect in 1995. *Aquilaria khasiana* was included in Appendix II of CITES in the year 2005.
- In 2020, the Government of Assam notified '*The Assam Agarwood Promotion Policy 2020*', (in effect from 1 January 2021) to ensure agarwood's sustainable utilisation and trade. The policy promotes cultivation practices and research on the sustainable harvesting of the species and conservation of wild agarwood populations.

# SECURING THE FUTURE

- The conservation and monitoring of wild *Aquilaria* populations within their range is essential for species survival in the wild. Estimating the species' population in the wild for the range states such as Assam, Arunachal Pradesh, Meghalaya, Tripura, Mizoram and Nagaland would be a crucial first step in developing strategies to conserve them within their natural habitat.
- The habitat occupied by *Aquilaria* species is vulnerable to land-use changes, degradation and forest fires that threaten the species. It is essential to implement measures to mitigate this threat by creating awareness among the local communities and encouraging them to protect the species.
- Though the cultivation of *Aquilaria* in plantations is being promoted, there is a need to evaluate the quality of agar oil produced through an artificial inoculation process. While efforts should be made to develop processes for monitoring traceable and sustainable trade while ensuring economic benefits to the local communities.
- It is crucial to generate awareness among consumers of agarwood regarding the conservation of *Aquilaria* and address the unsustainable exploitation from wild and illegal harvest and trade of the product.

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TRAFFIC is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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