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INTRODUCTION

1.1 Background

Timber is the most valuable renewable natural resource commodity. The annual turnover of the trade in timber is estimated at more than USD300 billion.

It is estimated that forestry crimes, including corporate crimes and illegal logging account for USD51 – 152 billion\(^1\). The scale of illegality varies from country to country, and is dependent on several factors which include the quality of forest policy, legal framework, institutional capacity and capability, good governance, etc.

The negative impacts of illegal logging and illegal timber trade of this valuable commodity can create serious problems:

- Illegal logging and illegal timber trade and organised crime - organised crime syndicates are largely responsible for illegal logging in many countries\(^2\)
- Government revenue losses – global estimates indicate that organised crime groups launder USD30-100 billion worth of illegal timber annually\(^2\)
- Poverty – governments, deprived of revenue due to illegal logging, have fewer resources to invest in social and public policies
- Unfair competition – illegal logging and illegal trade can distort the market and reduce the profitability of legal goods; in 2002, the World Bank put this cost at more than USD10 billion per year
- Unplanned, uncontrolled and unsustainable forest management; forest destruction – competition with other forest land use including conversion for agriculture, infrastructure development, mining, etc. cause forest degradation and deforestation.
- Corruption and bribery – criminal networks use corruption and bribery to facilitate the illegal movement of timber. The annual global cost of corruption in the forestry sector is estimated at USD29 billion\(^3\)
- Conflict – the proceeds of illegal logging may be used to support and fund conflict\(^1\).


Guidelines for verifying timber legality for customs

International action against illegal logging and illegal timber trade has been growing for many years. In 2014, the United Nations Commission on Crime Prevention and Criminal Justice (CCPCJ) adopted a resolution, strongly encouraging Member States to make illicit trafficking in forest products, including timber, a serious crime.

One main area of concern is cross-border timber trade, especially where illegal timber could enter the supply chain and be mixed with legal timber sourced domestically and from overseas. The role of customs is crucial in ensuring that only legal timber is imported, exported and transits.

Few mechanisms at the international level combat illegal timber trade. The most widespread and effective is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a treaty that aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

These Guidelines resulted from two sets of recommendations made by the Customs Cooperation Council. The first, “Concerning Actions Against Cross Border Environmental Offences” which was issued on 28th June 2008 recommended that customs officials, in particular frontline officials, should be given basic and specialised training programmes. The second, “Recommendations on the Declaration on the Illegal Wildlife Trade” issued in June 2014 encouraged customs to continue dialogue and enhance co-operation with non-governmental organisations (NGOs) and encouraged customs authorities to develop new tools and guidelines to support frontline customs officers in their daily work. In 2011, the WCO Policy Commission endorsed five key risk areas for customs enforcement—revenue, security, Intellectual Property Rights (IPR), Health and Safety, drugs and environment—which all relate to the trade in timber. Many of these risks are inter-linked.

1.2 Purpose and Scope

These Guidelines are intended for worldwide use, with the aim of facilitating knowledge and information sharing, analysis and operating procedures to combat cross border timber crime. The Guidelines cover the whole chain of events, providing information to assist in determining risk analysis, best practices and procedures for customs and other enforcement agencies. The main target audiences are customs and other enforcement officers, commerce decision makers, crime scene investigators, law enforcement officials, scientists, prosecutors and the judiciary, among others. It is hoped that use of the Guidelines will lead to more timely facilitation of cross-border timber trade, thorough and effective controls and investigations, and where appropriate, result in increased legal timber trade and corresponding reduction in illegal timber trade.

Accompanying the Guidelines is a best practice flow diagram (from the United Nations Office on Drugs and Crime (UNODC) Best Practice Guide for Forensic Timber Identification) is included to lead frontline officers through steps that should be completed when dealing with a load or shipment containing timber that is passing through a border checkpoint.
The Guidelines are divided into five chapters.

Chapter One: Aimed at improving the knowledge and understanding of customs senior management on the problems and issues of forestry and timber trade that impact the environment, resources, revenue and livelihoods of its people. Customs senior management may consider revisions to its standard operating procedures, processes, risks profiling and assessments, etc. as relevant in the light of the concerns raised.

Chapter Two: Relevant for customs, including those operating at the borders to help increase their effectiveness and efficiency in controlling timber trade.

Chapter Three: Assist the user to determine the legality of timber products that they may encounter.

Chapter Four: Provides further information on various measures and facilities that customs can call upon to assist in determining the legality of a timber shipment.

Chapter Five: Provides further information on tools and networks that can assist customs in enhancing their efficiency in controlling the trade.

1.3 Illegal logging crime scenarios

Illegal logging and illegal timber trade occurs when timber is harvested, transported, processed, bought, or sold in violation or circumvention of national or sub-national laws and includes administrative infractions. Illegal logging can occur on a small scale carried out by a single individual with a chainsaw to a large scale involving the illegal harvest of timber conducted by corporations. Government officials at local and national levels, companies and local people can all have a role to play in illegal forest activities and trade.

• Companies trading illegally logged timber may have a market advantage over their competitors since illegal logs can be sold at lower prices, depressing the profitability of legally harvested wood⁴.

• Local people may derive direct income from illegal forest activities⁵.

• Government officials, often with very modest official salaries, may receive bribes to allow illegal logging and illegal timber trade⁶.

Many of these logs enter the supply chain, either domestically, in transit, for processing in another country before going to a final market destination, or direct to the final destination.


Guidelines for verifying timber legality for customs

Logs in the supply chain are harvested from government or privately owned local forests or timber plantations, or derived from imports. Illegal logging can occur in any type of forest: such as those designated for timber production, forest reserves, water catchment areas, environmental and conservation forests including protected areas and national parks, etc.

Global trade in illegally extracted timber is a multibillion-dollar industry. Estimates of the proportions and impact on global timber production vary according to which studies are referenced, but it is thought that:

- 20 to 40% of worldwide timber production comes from illegally harvested timber.
- The economic loss to the global economy (to states, industries and forest owners) is estimated at between USD10 to 30 billion or some 10 to 30% of the total global timber trade per year.
- Illegal timber trade forces prices down globally by around 7 to 16% and damages the public image of the forest sector and timber products overall.

Points to note:

- Logging operations occur in all countries which have a forest ecosystem, not just those with tropical forests, although international focus has primarily been on tropical forests.
- The main producers of timber for global trade are countries with substantial forests, such as Russia, Finland, Chile, New Zealand (for temperate timber species), countries in the Congo basin (Cameroon, Democratic Republic of the Congo (DRC), Ghana, Republic of Congo), and Southeast Asia (Malaysia, Indonesia), and Oceania (Papua New Guinea).
- There are many instances of cross border timber trade occurring between neighbouring countries, some of which might enter the global timber supply chain. Even though the volumes involved might not be substantial, the impact of any illegality can be disproportionate due to the impact on local communities, indigenous peoples, livelihoods and national economy.

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1.4 Illegal logging and the illegal timber trade problem

If the law had been breached at any point within the timber trade chain, the traded timber should be considered as illegal. This applies equally to illegally harvested timber which is later given a legal permit or timber which has been legally harvested and is linked to illegal activity (e.g. corruption and bribery to avoid high tariffs, complex bureaucratic and administrative burdens, laundering of protected species, etc.).

There is no specific convention that controls all the international trade in timber. However some timber species fall under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). However, some countries e.g. United States (Lacey Act), the European Union (EU Timber Regulation) and Australia (Illegal Logging Prohibition Act) have taken unilateral measures to reduce illegal logging and exclude illegal timber products from their markets.

 Custodians across the globe have reported significant seizures of timber⁹. In Asia, mainly Red Sandalwood *Pterocarpus santalinus*, and Rosewood *Dalbergia* spp. (CITES Appendix II) were seized.

2013

- In 2013, a transnational controlled delivery operation involving customs in China, Hong Kong SAR and India, seized two target containers loaded with seven tonnes of Red Sandalwood in Xiamen, China. A further 19 tonnes of the logs were recovered in the subsequent investigation by China Customs.

- Between October and November 2013, Singapore Customs together with the Agri-Food & Veterinary Authority and the CITES Management Authority for Singapore conducted a series of operations resulting in the seizure of three containers of 45 tonnes of Red Sandalwood. The consignments were in transit through Singapore from India and were falsely declared as "hot lime pickles" and "casting wheels".

- India Customs managed to intercept four containers with 132 tonnes of Red Sandalwood before they could be smuggled out of the country in October 2013.

- An attempt to smuggle 1,055 kg of Red Sandalwood, concealed in the false bottom of a truck, from India to China was foiled by customs and police in Nepal.

- In the Port of Jebel Ali, United Arab Emirates (UAE), Dubai Customs detected several containers with Red Sandalwood en route from India to the Far East.

- In 2013 Mexico Customs seized 479 tonnes of protected Rosewood in seaports across the country.

- The Port Control Unit in the Port of Manzanillo, Panama, established under the UNODC-WCO Container Control Programme stopped five containers with Rosewood before their export to China and Hong Kong SAR.

---

In Iquitos, Peru, customs officers intercepted several vessels loaded with protected and regulated timber.

In July 2013, 725 kg of Red Sandalwood were seized at the airport in New Delhi, India, from 29 passengers. The timber was recovered in the form of small cut logs from their luggage by customs. This group of passengers was about to board a flight to China.

In the same month, 11 passengers carrying 308 kg of Red Sandalwood in their luggage were intercepted by customs at Mumbai Airport.

Hong Kong Customs reported several seizures of Red Sandalwood from passengers arriving on flights from India.

Officers from the United Kingdom Border Force at London Heathrow Airport identified and intercepted several consignments with Red Sandalwood arriving from India. The weight of the shipments ranged between 20 kg and nearly two tonnes. In two cases, the logs were concealed in the middle of rolled up carpets. The consignments were destined respectively for Greece, Hong Kong SAR, Portugal and the United Kingdom.

In 2016, 7.44 tonnes of Red Sandalwood logs were seized in Bangalore. In a follow-up intervention in Bangalore, an additional 0.40 tonnes of Red Sandalwood were seized.

In 2016, a sea freight container was called back from Chennai, which resulted in the seizure of 7.49 tonnes of Red Sandalwood. The contents had been declared as granite slabs; Red Sandalwood weighing 11.75 tonnes was seized after being incorrectly declared as fresh vegetables; Red Sandalwood weighing 11.13 tonnes, incorrectly declared as automobile parts, was seized; 18.93 tonnes of Red Sandalwood were seized after being incorrectly declared as air compressors and agricultural machinery. This also resulted in the arrest of one person.

In a separate case, Red Sandalwood transported in a lorry from Hoskote, near Bengaluru, to Tuticorin, was seized. The seizure yielded 6.9 tonnes of Red Sandalwood which were hidden beneath bags containing gloves. The final destination is believed to have been Dubai.

In Nagpur, a seizure resulted in uncovering 14.05 tonnes of Red Sandalwood, and in a related intervention, 11 tonnes were seized and three persons were arrested.

A container was intercepted by Indian Customs, which resulted in the recovery of Red Sandalwood logs weighing 8.93 tonnes. Two persons were arrested.

Hong Kong customs seized Rosewood and Red Sandalwood timber originating from UAE, Malaysia and Thailand, including Red Sandalwood originating from India, Malaysia and Morocco between 2015 and 2016. The number of smuggling cases recorded in 2015 was 24, and 28 in 2016. However, the weight of the seized amount decreased from 1.064 million kg in 2015 down to 122,100 kg in 2016.
Precious wood is not only smuggled in large quantities using trucks, containers and vessels but also in air cargo, express courier and air passenger luggage. In most cases smugglers relied on mis-declaration of goods. For some countries, false declarations are not uncommon, as are the use of fake customs and commercial documents.

Illegality occurs when national legislation is contravened. The CITES Convention – governing international trade in listed wild plants and animals – is only enforceable through the enactment and implementation of national legislation. Illegality, therefore involves infractions against a range of legislations that govern trade and the use of resources. There is no universally accepted definition of illegal logging and the illegal timber trade. Illegality strictly refers to anything that occurs in violation of the legal framework of a country. However, there are many standards, templates and guidance that give insight into the legislation that customs and enforcement agencies can use to inform their approach to risk management of timber trade.

**Points to note:**

- The trade can be large or small, but the impact on the resource, the country and local people can be huge.
- Shipments of timber can occur in trucks, containers, ships. Precious woods are also smuggled by air cargo, express courier and in air passenger luggage.
- Mis-declaration of goods and using false and fake documents are among the common modus operandi employed by smugglers.
Example of a legality guidance: WWF Global Forest and Trade Network (GFTN)-TRAFFIC’s Common Framework for Assessing Legality for Forestry Operations, Timber Processing and Trade

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<th>Access, use rights and tenure</th>
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<td>The company is legally registered with the relevant administrative authorities</td>
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<td>Criterion 1.2</td>
<td>Use, access and tenure rights applications are subject to stated pre-conditions within the laws and regulations</td>
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<tr>
<td>Criterion 1.3</td>
<td>Clear evidence of forest and/or land use, access and tenure rights shall be demonstrated in accordance with laws and regulations</td>
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<td>Criterion 1.4</td>
<td>Use, access and tenure rights are subject to stated conditions within the laws and regulations</td>
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<th>Harvesting regulations</th>
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<td>Forest Management Plan in accordance with the government policies, guidelines and regulatory requirements, approved by relevant authority</td>
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<td>Criterion 2.2</td>
<td>Harvesting/timber licence with stated conditions in accordance with the government policies, guidelines and regulatory requirements, approved by relevant authority</td>
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<td>Criterion 2.3</td>
<td>The company implements harvest operations in accordance with the legally prescribed silvicultural system and relevant regulations</td>
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<th>Transportation of logs and wood products</th>
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<td>Criterion 3.1</td>
<td>Clear evidence of documents and licences for companies and carriers involved in timber products transportation shall be demonstrated in accordance with the laws and regulations</td>
</tr>
<tr>
<td>Criterion 3.2</td>
<td>Clear evidence of documents and corresponding markings of timber products for transport shall be demonstrated by companies and carriers in accordance with the laws and regulations</td>
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<th>Processing regulations</th>
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<td>Criterion 4.1</td>
<td>Clear evidence of documents and licences for companies involved in timber processing shall be demonstrated in accordance with the laws and regulations</td>
</tr>
<tr>
<td>Criterion 4.2</td>
<td>Timber processing companies are subject to stated conditions within the laws and regulations</td>
</tr>
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**Principle 5**  
**Import and export regulations**  
Criterion 5.1  
Clear evidence of licence/permit of company involved in import and export shall be demonstrated in accordance with the laws and regulations  
Criterion 5.2  
Clear evidence of official documents of timber products for import and export shall be demonstrated by companies and carriers in accordance with the laws and regulations  
Criterion 5.3  
Timber products import, and export companies are subject to stated conditions within the laws and regulations

**Principle 6**  
**Environmental regulations**  
Criterion 6.1  
State/company conducts environmental impact assessments or other required assessments within the laws and regulations  
Criterion 6.2  
State/company takes mitigation measures on negative environmental parameters in accordance with the laws and regulations

**Principle 7**  
**Conservation regulations**  
Criterion 7.1  
State/company conducts conservation assessment/evaluation within the laws and regulations  
Criterion 7.2  
State/company takes mitigation measures on negative conservation values in accordance with the laws and regulations

**Principle 8**  
**Social regulations**  
Criterion 8.1  
Company maintains or strengthens socio-economic welfare of local communities/indigenous people in accordance with the laws and regulations  
Criterion 8.2  
Company recognises legal or customary rights of indigenous/local people in accordance with the laws and regulations  
Criterion 8.3  
Company complies with the laws and regulations on its employees’ and workers’ rights  
Criterion 8.4  
Company complies with the laws and regulations of its employees’ and workers’ welfare

**Principle 9**  
**Taxes, fees and royalties**  
Criterion 9.1  
The company fills in its tax returns in accordance with its effective professional activity  
Criterion 9.2  
Clear evidence of current paid taxes, fees and royalties in a timely manner shall be demonstrated by the company in accordance with the laws and regulations
Among the categories of legislation that should be considered are:

**Access, use rights and tenure, and harvesting regulations**
1. Corrupt practices to obtain licence for tenure and harvesting
2. Timber cut or removed without the required licence or in breach of a harvesting licence or law. This includes timber that is stolen
3. Illegal logging in protected areas

**Transportation of logs and wood products**
1. Falsifying markings or not having any legitimate markings on the products to be transported
2. Falsifying and having fake documentation that accompany the logs and timber products

**Processing**
1. Mis-recording and falsifying information and data in systems to track movement of logs into and out of processing centres

**Import, export and transit**
1. Circumventing procedures for trade by relevant regulatory agencies, including forestry departments, timber trade regulatory authorities, customs, airport authority, commerce, agriculture, etc.
2. Timber, or any product(s) containing timber, bought, sold, exported, or imported and processed in breach of the laws, including laws implemented under CITES

**Taxes, fees and royalties**
1. Payment to relevant government authorities, not paid, and not paid in a timely manner, from harvesting, transport, processing, trade and import and export, and without proper receipts or falsifying receipts and using fake receipts

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**Points to note**

- Availability of traceability systems to track the movement of logs and timber products are useful tools to help the check on legality.
- Many governments lack the legislation and mechanisms necessary to trace the movement of processed timber products, apart from logs.
- Voluntary systems are available, these include voluntary certification chain-of-custody systems from non-governmental organisations (NGOs) and the private sector, etc. which can provide information on the legality of a timber product.
- Authorisation to harvest or trade logs or timber products may have been secured with relevant documentation through the corrupt application of laws and administrative procedures.
- It is important that customs and regulatory authorities know the range of costs and prices in both local and overseas markets (including along the supply chain) so that they can effectively monitor any valuation which has been provided for a consignment.
Table XX – Example of profit trends, where known

Table 1: The proceeds of Papua’s logging crimes

<table>
<thead>
<tr>
<th>Participant</th>
<th>Amount Received</th>
<th>% Increase from Original Purchase Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment made to local community in Papua</td>
<td>USD11.00/m³</td>
<td></td>
</tr>
<tr>
<td>Price of log at point of export in Papua</td>
<td>USD120.00/m³</td>
<td></td>
</tr>
<tr>
<td>Price of log on arrival in China</td>
<td>USD240.00/m³</td>
<td></td>
</tr>
<tr>
<td>Flooring price in China*</td>
<td>USD468.00</td>
<td></td>
</tr>
<tr>
<td>Retail price in UK or USA*</td>
<td>USD2,288.00</td>
<td></td>
</tr>
</tbody>
</table>

* Figure is for 26 square metres of flooring, the average amount produced from one cubic metre of logs. Figures are from 2005.

Table 2: Value Chain for Peruvian Mahogany, per cubic metre (USD)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Amount Received</th>
<th>% Increase from Original Purchase Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loggers/Indigenous Community</td>
<td>USD70</td>
<td></td>
</tr>
<tr>
<td>Merchant/Vendor/ Habilitador</td>
<td>USD155</td>
<td>121%</td>
</tr>
<tr>
<td>Headman/Patron</td>
<td>USD626</td>
<td>794%</td>
</tr>
<tr>
<td>Sawmill</td>
<td>USD1,251</td>
<td>1687%</td>
</tr>
<tr>
<td>Exporter</td>
<td>USD1,804</td>
<td>2477%</td>
</tr>
<tr>
<td>Importer</td>
<td>USD3,710</td>
<td>5200%</td>
</tr>
</tbody>
</table>

Table 3: Value Chain for West African Rosewood, per 10 tonne container (USD)

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logger to Middleman</td>
<td>USD17 to USD34</td>
</tr>
<tr>
<td>Middleman to Exporter</td>
<td>USD4,900 to USD6,550</td>
</tr>
<tr>
<td>Exporter to Chinese Company</td>
<td>USD9,800 to USD11,500</td>
</tr>
</tbody>
</table>

Illegal logging generally falls into two broad categories:

- illegal origin (ownership, title or origin)
- a lack of compliance in harvesting, processing, and trade regulations

The following are examples of activities that have been identified or included in some definitions of illegal logging:

- Logging trees in areas without proper permission. This may include instances where authorities allocate harvesting rights without adequate compensation, or consultation with local people.
  - Logging of protected species.
  - Logging in prohibited areas (such as steep slopes, riverbanks and water catchments, etc.) and in totally protected forests such as national parks and preserves.
  - Logging in contravention of the specifications laid out in the concession permit or harvesting licence (e.g. the harvesting of volumes below or above the specifications, or before or after the authorised logging period).
    - Harvesting wood of a size or from species which are not covered by the concession permit.
    - Trespass or theft, logging in forests without the legal right to do so.
    - Violations, bribes and deception during the bidding process to acquire rights to a forest concession.
    - Illegal documentation (including trade documents).

Over 30 different illegal logging and illicit wood laundering methods have been identified by UNEP and INTERPOL. Reports on national and regional infractions by type, where available; examples of nation-wide illegality in forests, supply chain and trade – quotes from press, information from forestry departments – especially locations of infractions and types of infractions

1.5 Main bilateral flows or smuggling routes of illegal timber

Figure 3: Main flows of Rosewood logs and timber seizures (tonnes), 2005–2015

Figure 4: Main global trade flows of round wood and sawn wood at high risk of illegality, 2014 (million USD)

Source: World WISE

Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The dotted lines represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir have not yet been agreed upon by the parties. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas). The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined.

INTERPOL’s Project Leaf (Law Enforcement Assistance for Forests) found that many of those arrested and prosecuted between 2012 and 2015 were low-level offenders. Although such individuals are easier to identify and investigate, increased focus on high level offenders will be more effective in fighting the “business” of forestry crime.

**Figure 5:** Main illegal trade flows of round wood and sawn wood within Southeast Asia, 2014 (million USD)

**Figure 6:** Project LEAF’s prosecutions for forestry crime, 2012–2015

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Logs to be processed by a Chinese company in Lambarené, Gabon | © Deng Jia / WWF
1.6 Law enforcement best practice flow diagram for timber
(From UNODC Best Practice Guide for Forensic Timber Identification\textsuperscript{17})

The (UNODC) Best Practice Guide for Forensic Timber Identification best practice flow diagram (Figure 7) has been developed to lead law enforcement officials through the steps that should be completed when dealing with a load or shipment containing timber which is passing through a checkpoint, such as an international border crossing. This flow diagram represents an ideal case; however, in reality, the processes might need adjustment to suit local conditions.

The specific agency and law enforcement personnel involved in undertaking each step may vary, depending on their jurisdiction in that location. If an inspection takes place at an international border crossing, it is likely that the personnel carrying this out will form part of a co-ordinated border management program (CBM). In some locations, customs might be responsible for carrying out the inspection of a shipment, with the police taking over any case that requires a criminal investigation. In other circumstances, customs may only deal with document checking, with separate agencies responsible for undertaking physical inspections.

The flow diagram is designed to cover the general principles of dealing with timber at checkpoints and users should consider how each recommended step fits into their own organisational structure and division of responsibilities. In cases where there is any contradiction between the recommendations presented here and any local or national requirements, law enforcement officers must comply with the requirements of their jurisdiction.

The flow diagram is separated into three colour-coded, distinct sections:

<table>
<thead>
<tr>
<th>Administrative verification (light blue): refers to the document checking that must be completed prior to any physical examination or sampling of a timber load.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical verification (blue): refers to the process of checking whether the actual materials present in the shipment are consistent with the documentation and that all required documentation has been provided given the physical nature of the shipment.</td>
</tr>
<tr>
<td>Investigation (deep blue): an investigation will begin if and when any inconsistencies or concerns are raised as a result of the administration and physical verification processes.</td>
</tr>
</tbody>
</table>

\textbf{Bold and underlined phrases indicate links to supporting documentation, which is available through the dynamic e-version of this flow diagram}\textsuperscript{17}


\textit{Phrases in italics are further explained in the glossary.}

\textsuperscript{17} https://www.unodc.org/documents/Wildlife/Guide_Timber.pdf
Figure 7: Illegal timber verification decision tree for frontline officers

1. Risk analysis/profiling (Doc.I) and selection for administrative examination
   * Consider:
     - Region or country of origin/transit
     - Time of day/day of the week and port of entry used
     - Scientific vs. common names used
     - Previous compliance history (importer, exporter, transporter, logging company)
     - Description vs. Harmonized Systems (HS) code
     - Declared contents value vs. cost of transportation
     - Random administrative examination

2. Administrative examination
   * Examine available documents (e.g., permits/certificates, invoices, customs, transport documents) and consider:
     - Are any documents missing?
     - Are all documents authentic?
     - Are all CITES permits/certificates valid and authentic (Doc.II)?
     - Is all information consistent between documents? e.g., names, valuations (declared value vs. transportation costs, durable vs. insured values), etc.
     - Consider known smuggling patterns (Doc.III)
     - Notify all concerned authorities if any documents are falsely declared

3. Physical examination
   * Observe claimed identification on declaration, consider synonyms and common names.
   * Undertake Rapid Field identification of the timber (Doc.IV)
   * Use all tools and support available
   * Take notes, photographs and preserve the scene
   * Consider other evidence which could indicate probable origin of shipment e.g. newspapers in the container from a particular country
   * If insects are found, consider consultation with quarantine experts who may be able to provide location information based on insect identification

3.2 Define forensic questions that require answering to determine if timber is controlled
   * Points to prove (Doc.V)
     - Genus
     - Species
     - Provenance (origin)
     - Age or Individual

3.3 Is further expert forensic identification warranted and are sufficient funds available to cover analyses?

3.4 Obtain expert forensic identification (Doc.VI)
   * Communicate with service provider (Doc.VII)
     - Obtain shipment if required and consider logistics
     - Take appropriate samples
     - Submit for analysis and receive identification result

3.5 Document the decision making process
   * Proceed according to declared species
   * Consider required improvements to facilitate identification in future

4. Did the results of the physical examination indicate sufficient grounds to seize the shipment?

   Yes
   * Go to box 8

   No
   * Go to box 5
Introduction

6. CITES species (Doc VIII)
* Check:
  - CITES appendices, annotations (Doc IX)
  - and exemptions (Doc X)
  - Relevant HS codes (Doc XI)

5. What kind of species does the shipment contain?

7. Non-CITES species
* Check control in country of origin, consider:
  - Logging and export bans (Doc XII)
  - Producer country legislation/requirements (WEB 14)

6.1 Is a CITES permit/certificate needed?

7.1 Is species controlled in country of origin?

6.2 Check CITES permit/certificate requirements
* Appendix I (Doc XIII):
  Import & export permit/export certificate
* Appendix II (Doc XIV):
  Export permit/export certificate
* Appendix III (Doc XV):
  Export permit or certificate of origin

6.3 Has a valid permit/certificate been provided?

8. Open an investigation
* Consider logistics (Doc XVI)
* Seize shipment
* Conduct investigation according to best-practice (Doc XVII) and comply with all local requirements
* Notify all concerned authorities if any documents are falsely declared

8.1 Does case require expert forensic identification of timber or other materials?

8.2 Define forensic questions
* Points to prove (Doc V)
  - Genus
  - Species
  - Provenance (origin)
  - Age or individual

6.3 Obtain expert forensic identification (Doc VII)
* Communicate with service provider (Doc VII)
* Take samples (Doc XVIII)
  - Timber
  - Other material e.g. foliage, insects, soil, mould
* Submit for analysis and receive identification result

Glossary

Expert forensic identification: Scientific identification undertaken by experts according to strict standards; required for court proceedings; often a lengthy process; not always required to establish grounds for further investigation (see rapid field identification).

Rapid field identification: Tools and identification techniques available to non-experts; used to quickly establish a legal basis for intervention (e.g. seizure, provision of charging documents etc.); less accurate than expert forensic identification but adequate to establish grounds for further investigation.

WEB 14: http://www.timbertradeportal.com/
RISK PROFILING

2.1 Introduction

In general, an exporter, re-exporter or importer must submit an export declaration and official documents to customs (as described by the customs Law of a country), as well as the appropriate shipping, insurance and commercial documents. Customs authorities generally tend to rely mostly on the export, re-export or import declaration when checking a cargo for conformity and legality. Export, re-export and import declarations include information on the contents and the value of the shipment, the ports of loading, transit and unloading, the type of commercial contract, and details of the consignor and consignee. For timber, the information subject to control by customs may include the origin of the timber, the size (diameters and length), volume, species and the product classification.

Although customs is responsible for checking the conformity and legality of timber—insofar as the Customs Law requires—in certain countries, some of these responsibilities may be delegated to other agencies.

For the export of timber, an export licence or permit may be required, and the responsibility for issuance and inspection is usually delegated to agencies dealing with the timber industry. Customs then has the role of verification of the permit before releasing the shipment. The exporter’s and re-exporter’s application for a timber export permit must be accompanied by supporting documentation. These supporting documents are treated as verification that the timber product is legally fit for export (e.g. that the timber has been legally harvested and removed from the forest). Acceptance of an export declaration by customs is dependent upon the exporter holding a valid export licence; hence, the approved export declaration form can be viewed as an umbrella document that provides some indication of the legality of the product.

For the import of timber an import licence or permit may be required, and the responsibility for issuance and inspection is usually delegated to agencies managing the timber industry. Customs then has the role of verification of the permit before releasing the shipment. The importers’ application for a timber import permit must be accompanied by supporting documentation. These supporting documents are treated as verification that the timber product is legally fit for import. It should be noted that the information contained on the supporting documents used to obtain an import permit is usually far less comprehensive than is required for exports.

LOCALISATION - INSERT BOX

Coordinated Border Management nationally – any dedicated support for log and timber trade for export, import and transit – ministry, agencies involved, and endorsement needed

LOCALISATION - INSERT BOX

Export licence – endorse on customs declaration form, link to transport removal pass, issued by respective forest departments, etc.

LOCALISATION - INSERT BOX

Flow charts for national and regional processes on licence approval for timber export, imports
Illegal timber can only be identified through appropriate intervention at some point along the timber supply chain. Political will, and individual actions by frontline customs and other enforcement agencies’ officials can help to stop illegal timber trade.

Customs, and other organisations that form part of a Coordinated Border Management (CBM) programme where applicable, are well placed to intervene since imported products are subject to verification processes such as document checking and physical examination. The best practice flow diagram has been developed to aid frontline decision making relating to illegal timber (see Figure 7).

Given the large amount of trade and the wide remit of customs agencies, along with random routine checks, strategic risk assessments and trend analyses are necessary to determine which loads should be subject to further scrutiny. As the first and last line of defence against smuggling, fraud, and detection of various illegalities that could transpire during the processes of export, re-export, transit and import, customs administrations can make an important contribution to combating illegal logging and the resultant trade.

While most forest-related crimes lie outside the purview of customs, violations of Customs Law in the trade of forest products are not inconsiderable and take a variety of forms. Customs and other enforcement agencies which are part of the CBM, should consider the correlation of the following information categories during documentation checks and inspections:

- **Value of the consignment** – low valuation of a higher value product, transfer pricing.
- **HS code** – tariff evasion
  - Undervaluing export prices and volumes and tax evasion;
  - Export and import of timber in contravention of national bans or restrictions (See Annex 5);
  - Misclassification of wood products and species;
- **Species** – CITES and nationally protected species
  - Export, transit and import of tree species banned under international and national laws and regulations;
  - The validity of CITES documents (which can be checked with the appropriate CITES Management Authority).
- **Consignee and consignor** – legal registration with authorities
  - Identification of the importers, carriers, brokers and/or exporters involved in timber shipments.
  - History of companies and personnel involved, including data from previous audits and/or visits.
  - The activities of relevant companies and personnel, what types of timber are required or could be required for the company business.
- **Port of entry, transit and exit** – including barter trade – scrutiny by authorities

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18 If there are policies and legislations or administrative arrangements for barter trade and conditions to aid customs
Other considerations include:

- Bribery
- Export without a licence or other necessary documents or missing documents
- Use of fraudulent documents for export
- Illegality on land and on the high seas: Re-routing, and tampering with cargo
- Import without the necessary documents and missing documents
- Use of faked documents for import
- Volumes of timber shipments passing through specific checkpoints (import, re-export, export and transit)
- Areas from which and to where timber movements are made
- Incomplete and falsifying information in documentations

2.2 Modus operandi for customs officers

Detecting forest crimes such as illegal logging, is theoretically very simple. For example, a customs officer stops a truck of wood without documents, the wood is seized, confiscated and the truck driver is charged. But things start getting complex when organised crime is behind the illegal timber trade.

Risk indicator of the involvement of organised crime for a customs officer could be:

- Timber/Loads to check for smuggling can take a long time to unload and may deter action from being taken due to the need to ensure trade flows go smoothly
- Incorrect conversion of imperial (inches, feet and yards) to metric (millimetres, centimetres, meters) measurements
- Falsified or fake import and export documentation
- Incorrect and incomplete export, re-export and import documentation
- Unauthorised amendments to import/export documentation
- Falsified or fake CITES documentation
- Processing location
- Missing documentation
- Accompanying documents show different countries of origin
- Weight of shipment exceeds that of declared commodity
- No proper description of goods
- Timber/Loads coming from sensitive/suspect countries of origin or transit in terms of smuggling
- Use of an unusual route
- Declared species unusual in trade
- Species on documentation does not occur in country of origin
- Incorrect name of species or species does not exist
- Timber/Load has remained in transit for unusual lengths of time in sensitive countries
- Any cash payments
- No importer details shown, only freight agents
- Unusual delivery instructions
- Request for urgent handling
- Transhipment/transit, where CITES and other supporting documentation may not be required
- Falsification, fake or issuance of certificate of origin by unidentified agency or chamber of commerce
Example 1 (misclassification of wood products and species):

Some Russian timber exporters were found to have declared consignments of industrial hardwood as pulpwood logs or fuelwood to avoid paying the appropriate export tax.

A report\textsuperscript{19} on illegal logging and corruption and trade in the Russian Far East found that some Russian timber exporters were declaring their consignments as pulpwood logs or fuelwood when they were actually exporting industrial hardwood to reduce their payment of export taxes. To avoid taxes, exporters were also misclassifying consignments as regular pine rather than valuable Siberian and Korean pine\textsuperscript{20}.

Example 2 (misclassification of species):

During inspection of sawn timber stored in the Free Trade Zone of a Malaysian port, officials found that transshipment documents failed to identify the species of wood concerned. Half of the timber was found to be Ramin (\textit{Gonystylus} spp.), thought to be of Indonesian origin. Ramin is listed in Appendix II of CITES which must be accompanied by a CITES permit. The port authority was instructed to seize the timber.

\textbf{LOCALISATION - INSERT BOX}

More examples – Nationally and elsewhere, as relevant


2.3 Checklist for customs officers

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Specifications</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Export Country</td>
<td>Are there any sanctions, export bans or restrictions in place?</td>
<td>Understand national policies and laws of exporting and processing/transit countries. There is no one source to get such information. Suggest checking websites of the organisations mentioned in Chapter 5.</td>
</tr>
<tr>
<td></td>
<td>Example Indonesia: export ban for round wood, and rough sawn timber; Mozambique: export ban for first class species (see Annex 5 on logging and export bans). (Definition of round wood = felled, de-branched tree in log form that has not been further processed)</td>
<td></td>
</tr>
<tr>
<td>2. Destination</td>
<td>Is the destination one of the main import countries for suspicious trade of illegal timber?</td>
<td>Awareness of studies, analysis of international trade, check WCO, UNODC, INTERPOL, websites and closed user groups communications. Check websites of NGOs working on forestry issues (See Chapter 5).</td>
</tr>
<tr>
<td>4. Type of timber</td>
<td>Species (see chapter 3) and common names or trade names</td>
<td>Check CITES and national species protection listings.</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>HS code versus description (see chapter 3)</td>
<td>Check on tariffs, especially products with high tariffs.</td>
</tr>
<tr>
<td></td>
<td>With and without tax, duties, licences needed</td>
<td>May require basic identification training to increase level of suspicion before calling in experts/resource persons to help in species identification.</td>
</tr>
<tr>
<td></td>
<td>Volume (see Annex 6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eventually inspection and verification (see Annex 3)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Documents</th>
<th>In general documents which assure the legal origin of timber, for example:</th>
<th>Additional supporting document for re-export of imported products is the customs export declaration form of the country of origin.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Designated agency to issue licence/permit for export and import: which office(s) of the agency is approved to issue the licence/permit; stamps used, signatory persons; verify type and validity of the documents</td>
<td>Phytosanitary certificates can assist in species identification, HS code description and confirm volumes.</td>
</tr>
<tr>
<td></td>
<td>Export CITES Permits (see Annex 1)</td>
<td>V-legal timber export licence from Indonesia Licensing Authority for all timber exports.</td>
</tr>
<tr>
<td></td>
<td>In certain countries (e.g. Malaysia, Indonesia), customs can ask for Export Permit Certificates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phytosanitary Certificates (see Annex 3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For Case Study examples, see Annex 4</td>
<td></td>
</tr>
</tbody>
</table>
Guidelines for verifying timber legality for customs

Customs should work with other enforcement agencies and officers under the Coordinated Border Management (CBM) mechanism for timber trade controls and enforcement. If such a mechanism is not available, action should be taken to form and activate a CBM.

Customs should either have an internal analytical division or seek information and analysis from specialist government agencies such as forestry departments and timber trade regulatory agencies, or even NGOs.

The analysis should use the forest and timber trade statistics of a country, for export, imports and transit. The information needs include:

- Species harvested and processed in the country
- Species of timber and timber products exported
- Volumes (usually expressed in cubic metres (m³))
- HS code of products exported
- Exporting and re-exporting countries
- Importing countries
- HS codes of products imported

Such analysis will help in risk assessment, risk profiling, and documentation checks.

Customs should consider standardising the procedures and process for requesting additional documentation for verification as necessary. These should not be limited to commercial, financial and shipping documents and should include government documents including customs export declaration form from the country of export.

Phytosanitary certificates and respective government agency inspections for disease can help to verify the identification of timber species, including those which are CITES listed. These are in addition to the assistance of forestry departments and any national timber trade regulatory agencies.
WOOD GUIDE

3.1 Introduction

Enforcement of CITES regulations and national legislation requires the identification of the species in trade. The list of timber species which are listed in the CITES appendices can be found in Annex 2. Readers should check the CITES website (http://www.cites.org/eng/app/appendices.php) for current listings on a regular basis.

As mentioned in the previous section, analysis of a country’s timber trade statistics and discussions with their local forestry department, timber trade regulatory authorities and NGOs should give a preliminary list of possible timber species (including CITES listed timber species) which are likely to be imported, exported, re-exported and in transit for the country. (See Annex 7 for List of protected/prohibited tree species in Malaysia as an example).

LOCALISATION - INSERT BOX

National CITES listed timber species found in the country. Its forms of export, found in neighbouring countries, other CITES listed species imported into the country and its forms in trade.

LOCALISATION - INSERT BOX

National customs and other agencies which can support customs through the Coordinated Border Management agencies with assistance in timber checking, identification of species and descriptions of products in trade. Agencies working with customs at the border can assist in timber identification and checking to species level. It should be noted that national agencies may not be expert on timber species imported from other regions. Customs and enforcement agencies would require assistance in timber species identification from a network of supporting agencies with expertise on timber species in each country and region that trades with the country.
3.2 Harmonised codes for timber and timber products

The official customs statistics as reported by national statistics departments follow the Harmonized Tariff Classification System (HS) of the World Customs Organization (WCO). These are standard six-digit codes that all WCO members use across the world. Individual countries have the option of extending the classification codes to ten digits for their own purposes, and to 8 digits for export purposes. Each country can have more detailed product classifications after seven-digit level down to 10 digits, and each country’s designated codes may differ from another. Commodity tariff codes are regularly updated by WCO.

Table 4: Some generic codes in use at the four-digit international level for wood related products

<table>
<thead>
<tr>
<th>HS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Vegetable plaiting materials, vegetable products not elsewhere specified or included</td>
</tr>
<tr>
<td>4401</td>
<td>Fuel wood, in logs, in billets, in twigs, in faggots or in similar forms; wood in chips or particles; sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms</td>
</tr>
<tr>
<td>4402</td>
<td>Wood charcoal (including shell or nut charcoal) whether or not agglomerated</td>
</tr>
<tr>
<td>4403</td>
<td>Wood in the rough, whether or not stripped of bark or sapwood, or roughly squared</td>
</tr>
<tr>
<td>4404</td>
<td>Hoopwood, split poles, piles, pickets and stakes of wood, pointed, roughly trimmed wooden sticks for walking sticks, etc. chipwood and the like</td>
</tr>
<tr>
<td>4406</td>
<td>Railway or tramway sleepers (cross-ties) of wood</td>
</tr>
<tr>
<td>4407</td>
<td>Wood sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed, of a thickness exceeding 6 mm</td>
</tr>
<tr>
<td>4408</td>
<td>Sheets for veneering (including those obtained by slicing laminated wood), for plywood or for other similar laminated wood and other wood, sawn lengthwise, sliced or peeled, whether or not planed, sanded, spiced or end-jointed, of a thickness not exceeding 6 mm</td>
</tr>
<tr>
<td>4409</td>
<td>Wood (including strips and friezes for parquet flooring, not assembled) continuously shaped (tongued, grooved, rebated, chamfered, V-jointed, beaded, moulded, rounded or the like) along any of its edges, ends or faces, whether or not planed, sanded or end-jointed</td>
</tr>
<tr>
<td>4410</td>
<td>Particleboard, oriented strand board (OSB) and similar board (for example, waferboard) of wood or other ligneous materials, whether or not agglomerated with resins or other organic binding substances</td>
</tr>
<tr>
<td>4411</td>
<td>Fibreboard of wood or other ligneous materials, whether or not bonded with resins or other organic substances</td>
</tr>
<tr>
<td>4412</td>
<td>Plywood, veneered panels and similar laminated wood</td>
</tr>
<tr>
<td>4413</td>
<td>Densified wood, in blocks, plates, strips or profile shapes</td>
</tr>
<tr>
<td>4414</td>
<td>Wooden frames for paintings, photographs, mirrors or similar objects</td>
</tr>
<tr>
<td>4415</td>
<td>Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; pallet collars of wood. (Not packing material used exclusively as packing material to support, protect or carry another product placed on the market.)</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>4416</td>
<td>Casks, barrels, vats, tubs and other coopers’ products and parts thereof, of wood, including staves</td>
</tr>
<tr>
<td>4417</td>
<td>Tools, tool bodies, tool handles, broom or brush bodies and handles, of wood, boot or shoe lasts and trees of wood</td>
</tr>
<tr>
<td>4418</td>
<td>Builders’ joinery and carpentry of wood, including cellular wood panels, assembled flooring panels, shingles and shakes</td>
</tr>
<tr>
<td>4420</td>
<td>Wood marquetry and inlaid wood, cases etc. for jewellery or cutlery and similar articles, statuettes and other ornaments, of wood, wood furniture nesoi</td>
</tr>
<tr>
<td>4421</td>
<td>Articles of wood, Nesoi</td>
</tr>
<tr>
<td>47</td>
<td>Pulp or wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard</td>
</tr>
<tr>
<td>9403 30</td>
<td>Other furniture and parts thereof (9403): Wooden furniture of a kind used in offices (30)</td>
</tr>
<tr>
<td>9403 50</td>
<td>Other furniture and parts thereof (9403): Wooden furniture of a kind used in the bedroom (50 00)</td>
</tr>
<tr>
<td>9403 60</td>
<td>Other furniture and parts thereof (9403): Other wooden furniture (60)</td>
</tr>
<tr>
<td>9403 90</td>
<td>Other furniture and parts thereof (9403): Parts (90)</td>
</tr>
<tr>
<td>9406 00</td>
<td>Prefabricated buildings (9406 00)</td>
</tr>
</tbody>
</table>
3.3 Identification of timber products in trade

Prior to requesting the identification of a timber sample, you should collate all the information you have (e.g. country of origin) and ensure you have checked any CITES listing and understand the scope of this. This may influence which questions you ask:

**Identification to species or genus level**
What species/genus\(^2\) is it? — no information on the sample is available.
Is it species/genus X? — to confirm that the sample matches a listed species / genus.

**Geographical information**
Which country is the sample from? — necessary when only specific populations are CITES-listed.
Is the sample from a particular timber concession, region or group of trees? — to confirm if the timber comes from trees or concessions which have been identified for export.

**Source**
Is the sample from artificially propagated (cultivated) or wild-sourced timber? — to confirm if certain sources of timber are in trade.

**Age**
How old is the sample? — to confirm if the timber pre-dates implementation of any applicable legislation. You should also check the location of the nearest laboratory/institute which is competent to carry out identification tests; whether verified vouchered samples or comparative reference profiles/databases are in place to aid identification; what the charges are per sample and what is considered one sample (e.g. one paintbrush or a batch of paintbrushes); and how long the test will take.

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\(^2\) A genus is a taxonomic rank used in the biological classification of living and fossil organisms in biology. In the hierarchy of biological classification, genus comes above species and below family. In binomial nomenclature, the genus name forms the first part of the binomial species name for each species within the genus. From Wikipedia.

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There are a number of identification techniques available:

**ANATOMIC IDENTIFICATION**

Where the characteristics (type, distribution and arrangement) of the wood’s physical structure are used to identify the wood sample. This method can identify the sample to genus and/or family level and sometimes to species level depending on expertise and availability of validated reference samples.

This uses either:

* **Macroscopic characteristics**
  Visible to the unaided eye or with the help of a hand lens x10 power and above.
  This type of identification can be carried out in the field; OR

* **Microscopic characteristics**
  Used to examine characteristics which are too small to be seen by the unaided eye or with a hand lens. These characteristics, which may include identification of fibres, can only be seen with a light or electron microscope in a laboratory. When identifying a wood sample using anatomical characteristics it is necessary to understand which plane (referred to as “face”, “section” or “surface”) you are looking at. The transverse or cross section is the most useful for viewing the wood's structure. If the sample has been heavily processed or is very thinly sliced, there may be difficulty in identifying it.

For anatomical identification where possible take samples that are at least 2–3 cm² in size.
CHEMICAL IDENTIFICATION

There are a number of different techniques available:

**Mass spectrometry**
Analysis of the chemicals synthesised by a plant. This produces a chemical profile which can be matched against reference material/datasets. This method can potentially identify a sample to species/genus level and differentiate between cultivated versus wild material if sufficient reference material and databases are available.

**Radiocarbon dating**
Used to calculate the age of the sample.

**Stable Isotopes**
Measurement of the ratios of different stable isotopes to produce an isotopic fingerprint that often relates to specific geographic and climatic variables. This method can be used to identify geographic provenance.

**Near Infrared spectroscopy (NIRS)**
This method measures the chemical characteristics in a sample after it has been subjected to near infrared electromagnetic energy. This method can be used to identify different species within a genus and region and individuals of different genera but is dependent on sufficient validated reference samples being available.

**Genetic identification**
DNA analysis can usually identify a sample to species level and may allow the determination of provenance if sufficient comparative reference profiles are available. Methods include:

DNA sequencing (or DNA bar coding) — this method generates a DNA sequence for a specific gene that is typically characteristic of the taxon or geographic region of origin of the sample. The DNA sequence for an unknown sample can be compared against reference data to allow identification. This method can be used to identify a sample to species, genus and family level and occasionally broad geographic origin.

DNA profiling (or DNA fingerprinting) — this method is used to identify genetic differences among biological populations or individuals. DNA profiles can be used to provide a unique identification for individual trees, or to assign a sample to its population of origin. The method can also be used as the basis for exclusion testing in supply chain authentication applications.

OTHER TECHNIQUES

**Nano technology**
Nano particles can be used to mark timber at various processing points. These markers can be embedded in a clear spray and applied to live trees or cut logs. These markers can also be mixed into wood treatment products so that wood is marked as it is treated. In either case, the marker stays with the wood as it moves along the supply chain. It is invisible to the naked eye both on the surface and in the bulk of the wood, but can be detected at any point using a special hand-held detector. There are many types of nano markers available such as UV dyes, and ceramic particles appear to have the features that are suitable for use in the timber industry.

**Visual aids**
Detector dogs

Automated machine vision
A technique still in the prototype stage that uses a handheld device to take an image of the wood's surface allowing comparison against verified reference samples.

3.4 Rapid field identification
(Extracted from UNODC Best Practice Guide for Forensic Timber Identification)

Once a shipment, load, premises or other area warrants further investigation, a search needs to be done.

Searches must be undertaken in strict compliance with all applicable laws, policies and procedures. Failure to follow correct protocols can lead to evidence being judged inadmissible which may jeopardize the entire case.

Those undertaking searches must know the nature and purpose of the search and the type of evidence they are looking for. Search officers are responsible for complying with the law and ensuring that they do not search beyond the statutory limitations imposed. They must remember that the power to search is limited to the extent that is reasonably required for the purposes of discovering and securing evidence. Search officers must also fully understand their powers of seizure and their power to take samples.

Searches can include the search of containers and their cargo, vehicles or premises. The search method can vary according to the reason for the examination. Regardless, all searches should be carried out methodically and thoroughly. Set procedures should always be followed when searches are conducted.

Some countries and organisations might already have comprehensive search guidance procedures in place that law enforcement officials could draw upon. Access to these search guidelines is often restricted to the law enforcement community. Broad considerations for law enforcement authorities engaged in different types of searches are included in Annex 4.

The inspection search must STOP at the first indication of a crime and inform the investigation team to conduct further investigations; for example, when the first timber item is uncovered in a container, vehicle, etc. that should otherwise not contain wood, or when a rapid field identification result suggests potential criminal activity. Officers are encouraged to use the information contained in the UNODC Forensics Timber Guide to complement search guidance procedures that might be available to them through their respective organisations.

Expert forensic identification of timber can be costly and time consuming. Frontline law enforcement officers need to be able to undertake an initial rapid field identification to determine whether a particular timber load warrants expert forensic identification. The results of this initial rapid field identification is necessarily preliminary. Subsequent definitive forensic identification will eventually be required to support a prosecution case. Initial rapid field identification needs to provide officers with enough information to indicate whether there is due cause to investigate further.
ARRANGEMENTS AGAINST ILLEGAL TIMBER TRADE

4.1 CITES

The United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a multilateral treaty to protect endangered plants and animals. With more than 180 Parties, CITES remains one of the world’s most powerful tools for biodiversity conservation through the regulation of international trade in wild fauna and flora. CITES regulates international trade in over 35,000 species of plants and animals, including their products and derivatives, ensuring their survival in the wild through strictly regulating legal trade and combating illegal trade. The degree of monitoring and protection status given to a specimen depends on whether the species concerned is listed under CITES Appendix I, II or III. Appendix I listed species are generally prohibited from trade, while Appendix II specimens are subject to controls and determination of sustainability of the species in the wild, and Appendix III listings are requests by a CITES party for assistance in monitoring trade in specimens traded from their country.

Although CITES is legally binding on the Parties, it does not take the place of national laws. Rather it provides a framework to be respected by each Party, which must adopt its own domestic legislation to ensure that CITES can be implemented at the national level.

An important element of the CITES framework is the creation or identification of national agencies charged with the administration and execution of CITES obligations. Specifically, the Convention requires that, at the time of accession to CITES, Parties identify the relevant agencies (CITES Article IX). Each CITES signatory must designate a Management Authority23 (or Authorities) to issue permits or certificates, as well as a Scientific Authority (or Authorities) to be consulted in certain cases on the sustainability of the species in trade before permits or certificates are issued. This information is then made available to the Secretariat and to all other Parties, thus creating a directory.

Article IX, paragraph 1 (a), specifies that each Party to the Convention is required to designate a domestic agency mandated with the management of CITES. Its responsibilities include the:

• Authorisation and issuing of permits and certificates of approval;
• Communication of information to other Parties and the CITES Secretariat; and
• Reporting on CITES compliance matters.

The way in which the Management and Scientific Authorities are designed and designated is left to the discretion of the individual Party.

The arrangements in this guide are not exhaustive. See Annex 1 for more details about CITES.

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23 The current designated CITES Management Authorities can be found in this link: https://cites.org/eng/cms/index.php/component/c
4.2 Forest Stewardship Council (FSC)\(^{24}\)

FSC stands for Forest Stewardship Council; it is an international not-for-profit, multi-stakeholder organisation established in 1993 and was created to set the environmental and social standards for responsibly managed forests. The FSC sets forth principles and criteria for forest management standards, and has market-based labels, both of which are independently audited. FSC sets the standards for responsible forest management and valuing ecosystem services which are monitored by FSC accredited certification bodies and independent auditors to ensure adherence to the FSC standards through an accreditation and certification system. A product labelling system then rewards responsible forest managers. FSC maintains its system credibility through three certifications—forest management/controlled wood; chain of custody (COC); and trademark and labelling.

4.3 Programme for the Endorsement of Forest Certification Schemes (PEFC)\(^{25}\)

PEFC is a worldwide, not-for-profit, non-government organisation established in 1999 to promote sustainable forest management through forest certification and labelling of forest-based products. PEFC has a voluntary mechanism to promote sustainable forest management to provide independent, third party certification of good practices. It is an alliance of domestic forest certification systems with global representation and an international chain of custody. PEFC maintains its system credibility through two certifications—sustainable forest management; and chain of custody (COC). PEFC develops international standards for forest management, chain of custody, standard setting, logo usage, certification and accreditation, etc. PEFC Council provides endorsement of national forest certification schemes which are required to comply with PEFC Council requirements and are subject to regular evaluations.

4.4 Malaysian Timber Certification Scheme (MTCS)\(^{26}\)

The Malaysian Timber Certification Council (MTCC) started in January 1999 as an independent organisation to develop and operate the Malaysian Timber Certification Scheme (MTCS). As a voluntary national scheme, the MTCS provides for independent assessment of forest management practices, to ensure the sustainable management of Malaysia’s natural forest and forest plantations, as well as to meet the demand for certified timber products. Physical field assessments are carried out by an independent third-party assessor/certification body (CB) notified under the MTCS. MTCC has no jurisdiction and involvement over the work of the CB.

The MTCS has been endorsed by the Programme for the Endorsement of Forest Certification (PEFC) schemes, the largest forest certification programme, representing more than 300 million ha. of certified forests worldwide. The MTCS is also the first tropical timber certification scheme in the Asia Pacific region to be endorsed by the PEFC.

\(^{24}\) https://ic.fsc.org/en
\(^{25}\) https://pefc.org/
\(^{26}\) https://mtcc.com.my/
4.5 EU FLEGT Action Plan

The European Union Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan is the European Union’s (EU) response to concerns about illegal logging and deforestation. Adopted in 2003, the Action Plan recognises that consumer countries contribute to the illegal logging problem through their demand for timber and wood-based products. The Plan encompasses seven measures:

- Development co-operation with producing countries—through actions that promote and implement solutions that are equitable and enhance transparency, and that build capacity and support policy reform.

- Promote trade in legal timber—through the development and implementation of multilateral collaboration frameworks (VPAs) that include the establishment of legality assurance licence systems (TLAS).

- Promote public procurement policies—that consider the legality of timber products.

- Support private sector initiatives—to address illegal logging, including through corporate social responsibility practices, voluntary code of conduct and development and implementation of voluntary licensing schemes.

- Support and promote safeguards on investments—to encourage banks and financial institutions investing in the forest sector to develop due care and screening procedures to avoid projects that could potentially encourage illegal logging.

- Use existing or upcoming legal instruments—to support the Plan, for example, the EU Illegal Timber Regulation.

- Work to define and address conflict timber.

Overall, the Action Plan seeks to develop markets for legal wood products in Europe, and establish bilateral partnerships (Voluntary Partnership Agreements, or VPAs) with producing countries to build their capacity and support reforms in the governance of their forest sectors to reduce the production of illegally harvested timber. The VPAs also seek to establish and implement tracking and licensing systems, called Legality Assurance Systems, to ensure that only legally produced products enter the European Union.

4.6 European Timber Regulation

The EU Timber Regulation came into force on 3rd March 2013 and prohibits the placement of illegally harvested timber on the internal market. It is not a border measure, but applies equally to timber originating from within the EU. It establishes a requirement for operators who place timber for the first time on the internal market to exercise due diligence to minimise the risk that they are placing illegally harvested timber on the market.

Operators may choose to fulfil their obligations by using a due diligence system established and maintained by a European Commission-registered monitoring organisation (e.g. “NEPCon” and “Conlegno”). The EU Timber Regulation applies to a wide range of timber and timber products, including logs, sawn wood, veneer sheets, manufactured items and pulp and paper.

28 http://www.euflegt.efi.int/eutr
In cases of doubt, there are certain Institutions and Centres in the EU (e.g. the Thünen Centre of Competence on the origin of Timber in Hamburg) which can determine the species and origin of imported timber, examine the proof of legality and analyse international timber trade routes. The work of the Centres comes in when paperwork and customs checks are no longer enough on their own—providing support in identifying the timber species and verifying the declaration of origin.

One of the key priorities is the creation of a database for conducting genetic comparisons of timber origin. Testing is not restricted to logs but can also be carried out with processed timber such as furniture, particleboard and to a certain extent even paper.

The Thünen Centre of Competence in Hamburg draws on one of the world’s largest wood collections, comprising over 35,000 specimens and 50,000 microscopic preparations. In the field of timber species identification alone, around 400 enquiries are processed and over 1,000 samples are tested each year. A sharp increase in these figures is expected due to the new Timber Regulation. Enquiries come from the timber trade, customs authorities and conservation organisations. But consumers can also contact the Centre if, for example, they are unsure whether window frames declared as Meranti *Shorea* spp. are indeed made of this valuable timber species.

4.7 US Lacey Act

The United States has also made important moves to address imports of illegal timber by amending their illegal wildlife trade legislation. The Lacey Act which dates from 1900 was amended in 2008 to include plants, specifically targeting the import and trade of illegally sourced timber. The purpose of the Lacey Act Amendment is to prevent the trade in illegally harvested timber and to prevent trade in wood products from illegally harvested timber. The Lacey Act makes it unlawful to trade in any plant that is taken, possessed, transported, or sold in violation of the laws of the United States, a State, Indian Tribe, or any foreign law that protects plants. It applies to both interstate and foreign commerce. The Act supplements other laws in reinforcing penalties against falsifying documents, accounts or records of any plant covered by the Act. All trade of plant species into the United States requires an import declaration, with only a few types of commerce exempted from the declaration.

4.8 Australia Illegal Logging Prohibition Act

Australia’s illegal logging legislation was made law in 2012 which comprises a high-level prohibition act called the Illegal Logging Prohibition Act 2012 and a due diligence process that businesses must undertake. The law was designed to support the trade in legally harvested timber and timber products into the Australian timber market. The law does not discriminate between imports and domestically grown raw logs. A heavy penalty of fines and jail terms are imposed on individuals or corporations, plus forfeiture of the timber products and raw logs applies when they are found to have been imported or processed illegally logged timber and have done so knowingly, intentionally or recklessly. The regulation requires importers of regulated timber products and domestic processors of raw logs to have a complying due diligence system in place to minimise the risk of importing or processing illegally logged timber.

4.9 Japan Clean Wood Act

The Japanese act was implemented on 20th May 2017. The act is meant to ensure that domestic and imported wood are harvested legally. The government of Japan will begin to register companies

that procure domestic and import foreign forestry products. The Act recognises legality based on the policies of the government of the country that is the source of the wood. An official English version could not be found on the internet, but various analysis and reports are available on the web\textsuperscript{31,32}.

4.10 INTERPOL Project Law Enforcement Assistance for Forests (LEAF)\textsuperscript{33}

LEAF is an INTERPOL project combating illegal logging and organised forest crime. The project is financially supported by the Norwegian Agency for Development (NORAD). INTERPOL is also working closely with the United Nations Environment Programme (UNEP) and its GRID Arendal centre in Norway.

Project LEAF:

- Recognises the danger posed by illegal logging to the world’s forests—habitat destruction, species extinction, and climate change
- Supports countries in working towards forest sustainability and the management of carbon emissions
- Acknowledges that there is a direct relationship between illegal logging and deforestation rates.

Activities of Project LEAF:

**Capacity building:**
- Training programmes
- Manuals and guides

**Strategic analysis:**
- Develop a global picture of illegal logging including source regions, transit routes, destinations, modus operandi, and key players
- Support cross-border police operations

4.11 Non-governmental Organisations (NGOs)

There are various non-governmental organisations like TRAFFIC, WWF, Forest Trends, Greenpeace, Environmental Investigation Agency, Chatham House, etc. that have activities, tools and products on legal and illegal harvesting and timber trade. The concerted and very important efforts of these NGOs, who informed and lobbied their governments to use trade incentives, have been instrumental in the development of the previously mentioned arrangements.

Environmental NGOs have also played an important part in raising political awareness of the issue, and they continue to be important actors in monitoring, detecting, and analysing illegal forestry activities, associated illegal trade, and other forest crimes. NGOs can provide information, support capacity building and training, facilitate networking, etc.

This list is not exhaustive and is meant to be a guide. Readers are encouraged to check the websites of these NGOs and others they come across for more information of interest on forest issues, harvesting, timber trade, illegality and corruption.

\textsuperscript{31} http://forestlegality.org/blog/japan’s-new-legal-timber-law
\textsuperscript{32} http://www.euflegt.efi.int/publications/a-comparison-of-the-japanese-clean-wood-act-and-the-eu-timber-regulation
\textsuperscript{33} https://www.interpol.int/Crime-areas/Environmental-crime/Projects/Project-Leaf
YOU ARE NOT ALONE

5.1 Partnership and resources

Since timber identification is a technical skill, customs officials will need support from other agencies and organisations for help.

There are many types of organisations that can help in identification of timber products and species. Government research institutes on forestry are highly qualified and can provide experts to assist. Universities’ forestry faculties are another. In Malaysia, other government agencies such as the specialist agencies on timber (e.g. Malaysian Timber Industry Board (MTIB), Sarawak Timber Industry Development Corporation (STIDC) and Forestry Departments) are usually ready to help in inter-agency cooperation. Once the protocols for assistance are developed and agreed between agencies, it is usually straightforward to ask for assistance.

NGOs with specialists in forestry, forestry auditing companies, certification bodies, etc. are some of the other organisations which can assist customs. See lists in previous sections.

If laboratory investigation is needed, especially for import countries—there are a series of institutes (see Table 5 below) which can help in chemical, DNA, isotope and wood anatomy identification of timber to species level.

Table 5: Organisations and institutions that can provide assistance in timber species identification using technology

<table>
<thead>
<tr>
<th>Country</th>
<th>Institute</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Anatomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DNA</td>
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<tr>
<td></td>
<td></td>
<td>Isotope</td>
</tr>
<tr>
<td>Australia</td>
<td>University of Adelaide</td>
<td>•</td>
</tr>
<tr>
<td>Belgium</td>
<td>Laboratory for Wood Biology and Xylarium, Royal Museum for Central Africa</td>
<td></td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Forest Products Laboratory, University of Costa Rica</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Finnish Museum of Natural History, Wood Laboratory</td>
<td>(•)</td>
</tr>
<tr>
<td>Germany</td>
<td>TÜV Rheinland Agroislab</td>
<td>•</td>
</tr>
<tr>
<td>Germany</td>
<td>Thünen Institute for Wood Technology and Wood Biology</td>
<td>•</td>
</tr>
<tr>
<td>Germany</td>
<td>Centre of Wood Science, University of Hamburg</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>National Research Council</td>
<td>•</td>
</tr>
<tr>
<td>Poland</td>
<td>University of Warsaw Botanic Garden</td>
<td>•</td>
</tr>
<tr>
<td>Mexico</td>
<td>Biology Institute, National Autonomous University of Mexico</td>
<td>•</td>
</tr>
</tbody>
</table>
**Guidelines for verifying timber legality for customs**

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
<th>(*)</th>
<th>(*)</th>
<th>(*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>Customs Port of Rotterdam and Customs Laboratory</td>
<td></td>
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<tr>
<td>Netherlands</td>
<td>Naturalis Biodiversity Centre</td>
<td></td>
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<tr>
<td>Singapore</td>
<td>Double Helix Tracking Technologies</td>
<td></td>
<td></td>
<td>(*)</td>
</tr>
<tr>
<td>Sweden</td>
<td>Swedish Museum of Natural History, Centre for Genetic Identification</td>
<td></td>
<td></td>
<td>(+)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Royal Botanic Gardens Kew</td>
<td></td>
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<tr>
<td>United Kingdom</td>
<td>European Plant Science Laboratory</td>
<td></td>
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</tr>
<tr>
<td>United Kingdom</td>
<td>TRACE Wildlife Forensics Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>National Fish and Wildlife Service Forensic Lab</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>United States</td>
<td>Reston Stable Isotope Laboratory, US Geological Survey</td>
<td></td>
<td></td>
<td>(*)</td>
</tr>
<tr>
<td>United States</td>
<td>US Forest Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

(*) Have expertise in this technique, however no direct experience with CITES-listed timber species

* Do not carry out actual testing, but work with partners to develop traceability systems

### 5.2 Other partners and useful tools

**WCO Regional Liaison Office (RILO) network**—The exchange of intelligence at national, regional and international levels is a critical mechanism to render enforcement actions by customs authorities more effective and to secure the optimum use of available resources. At the strategic level, the WCO has incorporated the aim of intelligence exchange among all stakeholders, recognising the contribution this objective has in furthering the protection of society, public health and safety. Today the RILO network has grown to 11 offices providing effective coverage throughout all six WCO regions. The RILO networks are in the following regions: Eastern and Central Europe, Western Europe, Commonwealth of Independent States (CIS), North Africa, Central Africa, West Africa, Eastern and Southern Africa, Middle East, Asia-Pacific, the Caribbean and South America.

Each RILO office covers a number of members within the region concerned and is staffed by personnel from those affiliated Member States as well as the host administration where the regional office is housed.

At the operational level, the RILO network supports its Member Customs administration by responding to requests for intelligence or operational support, designing and implementing target-orientated intelligence analysis projects and regional intelligence-led operations, acting as focal point for intelligence exchange, providing capacity building programmes, facilitating mutual the administrative assistance and promoting and maintaining regional co-operation with other law enforcement agencies and organisations in accordance with any rules or provisions established by the Enforcement Committee or the Council, and managing the Customs Enforcement Network (CEN).
You are not alone

WCO Customs Enforcement Network (CEN)—database of customs seizures and offences worldwide. Seizure records can be analysed to help improve enforcement efforts. Reported seizures include only those made by customs, joint customs and police units and other law enforcement agencies that have customs powers. WCO is continuously working with members to improve data collection, its quality and information sharing. CEN is dedicated to the promotion of innovation, notably in the development of its tools and instruments. The CEN includes three standalone applications created especially for the customs community, compatible and complimentary in nature, providing the latest technology as well as analytical abilities to meet the challenges associated with the fight against illegal trade successfully.

WCO (CENcomm, Environet) – CENcomm is WCO’s secured communications tool which is accessible via the internet. The web-based communications system allows for the exchange of messages via encrypted channels with personal login and password. It is only accessible to Closed User Groups (CUG) for the duration of their active operation or project. Examples of Closed User Groups are “ENVIRONET” and “WIRE”. ENVIRONET is a real-time communications tool for information exchange and co-operation in environmental issues among customs administrations, competent national agencies, international organisations and their regional networks. ENVIRONET aims to share best practices, provide downloadable training materials, identification guides, manuals, and other background information valuable for environmental enforcement. Information exchanges cover seizures, and possible ongoing trafficking, discussion forums on specific topics and assistance by experts from international organisations, competent national authorities and experienced customs officers.

United Nations Office on Drugs and Crime (UNODC) Global Programme for combating wildlife and forest crime—Wildlife inter-regional enforcement group (WIRE) Group. This programme is a response to the need for intensified co-operation in the investigation of transnational criminal networks. It aims to create platforms for law enforcement professionals, such as WIRE – Police, WIRE – Prosecution, WIRE – Customs—to develop ties with their direct counterparts.

The WCO-UNODC Container Control Programme (CCP) was established in March 2006 to address the needs of the global enforcement community to monitor the movement of containerised cargo in a more effective and efficient way. With more than 600 million global container movements reported annually, of which only an estimated 2% are inspected, CCP plays an important role in addressing the risks related to the low inspection rates and facilitating legitimate trade. The increase in legitimate containerised maritime trade is threatened, more than ever, by international organised crime operating along legal maritime trade supply chains. Web-based secure information exchange systems, developed and continued by the WCO, have played a crucial role in supporting the global CCP to intercept illicit goods in the trade supply chain and to enhance global co-operation and information exchange.

The Programme launches Port Control Units (PCUs) in selected sea and dry ports by integrating the representatives of various enforcement agencies in a single working body. To be able to identify the high-risk containers, the officers receive training in profiling and targeting using modern risk-based working methodologies. They are also trained in the areas of drugs and precursor chemicals, counterfeit goods, smuggling of strategic goods, nuclear materials, weapons and CITES-related infringements.
Guidelines for verifying timber legality for customs

United Nations Convention against Transnational Organized Crime—Also known as the Palermo Convention, the United Nations Convention against Transnational Organized Crime is the main instrument in the fight against transnational organised crime, including illegal trade in fauna, flora, and their parts and derivatives. At the time of its adoption, the General Assembly of the United Nations, in the preamble to its resolution 55/25 of 15th November 2000, recognised the Convention as “an effective tool and the necessary legal framework for international co-operation” in combating such criminal activities as the illegal trafficking of protected species of wild flora and fauna, in furtherance of the principle of CITES.

United Nations Convention against Corruption—To assess the applicability of the United Nations Convention against Corruption, it would be useful to bear in mind that corruption can occur at all stages of a process of exploitation of natural and other resources—before, during and after.

The UNODC’s Law Enforcement, Organized Crime and Anti-Money Laundering Unit is responsible for carrying out the global programme against money-laundering, proceeds of crime and the financing of terrorism. The unit has the capacity and a special mandate to assist Member States in ratifying and implementing the international standards relating to money-laundering and financing of terrorism. The unit can provide assistance on detecting, seizing and confiscating illicit proceeds, etc.

Established networks, tools and communication mechanisms

- Wildlife Enforcement Networks
- Scientific and Forensic Networks
- Wildlife Incident Support Team
- CITES Secretariat (https://cites.org/)
- INTERPOL Project LEAF (https://www.interpol.int/Crime-areas/Environmental-crime/Projects/Project-Leaf)
- ITTO (http://www.itto.int/)
ANNEX 1

All about CITES: https://cites.org/eng

What is CITES?

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

Widespread information nowadays about the endangered status of many prominent species, such as the tiger and elephants, might make the need for such a convention seem obvious. But at the time when the ideas for CITES were first formed, in the 1960s, international discussion on the regulation of wildlife trade for conservation purposes was something relatively new. With hindsight, the need for CITES is clear. Annually, international wildlife trade is estimated to be worth billions of dollars and to include hundreds of millions of plant and animal specimens. The trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them, including food products, exotic leather goods, wooden musical instruments, timber, tourist curios and medicines. Levels of exploitation of some animal and plant species are high and the trade in them, together with other factors, such as habitat loss, is capable of heavily depleting their populations and even bringing some species close to extinction. Many wildlife species in trade are not endangered, but the existence of an agreement to ensure the sustainability of the trade is important to safeguard these resources for the future.

Because the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international co-operation to safeguard certain species from over-exploitation. CITES was conceived in the spirit of such co-operation. Today, it accords varying degrees of protection to more than 35,000 species of animals and plants, whether they are traded as live specimens, fur coats or dried herbs.

CITES is an international agreement to which States and regional economic integration organisations adhere voluntarily. States that have agreed to be bound by the Convention (“joined” CITES) are known as Parties. Although CITES is legally binding on the Parties—in other words they must implement the Convention—it does not take the place of national laws. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

For many years CITES has been among the conservation agreements with the largest membership, currently (August 2018) 183 Parties. The CITES Secretariat has also entered into Memorandums of Understanding (MOU) with a number of international governmental and non-governmental organisations to collaborate on joint activities together, such as with the Convention on Biological Diversity (CBD), FAO, INTERPOL, International Tropical Timber Organization (ITTO), etc.

How CITES works

CITES works by subjecting international trade in specimens of selected species to certain controls. All import, export, re-export and introduction from the sea of species covered by the Convention must be authorised through a licensing system. Each Party to the Convention must designate one or more Management Authorities in charge of administering that licensing system and one or more Scientific Authorities to advise them on the effects of trade on the status of the species.

34 https://www.cites.org/eng/disc/coop.php
The species covered by CITES are listed in three appendices, according to the degree of protection they need.

**Appendices I and II**

Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled to avoid utilisation incompatible with their survival.

The Conference of the Parties (CoP), which is the supreme decision-making body of the Convention and comprises all its Parties, has agreed in Resolution Conf. 9.24 (Rev. CoP17) on a set of biological and trade criteria to help determine whether a species should be included in Appendices I or II. At each regular meeting of the CoP, Parties submit proposals based on those criteria to amend these two appendices. Those amendment proposals are discussed and then submitted to a vote. The Convention also allows for amendments by a postal procedure between meetings of the CoP (see Article XV, paragraph 2, of the Convention), but this procedure is rarely used.

**Appendix III**

This Appendix contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade. Changes to Appendix III follow a distinct procedure from changes to Appendices I and II, as each Party is entitled to make unilateral amendments to it.

A specimen of a CITES-listed species may be imported into or exported (or re-exported) from a state party to the Convention only if the appropriate document has been obtained and presented for clearance at the port of entry or exit. There is some variation of the requirements from one country to another and it is always necessary to check on the national laws that may be stricter, but the basic conditions that apply for Appendices I and II are described below.

**Appendix I specimens**

1. An import permit issued by the Management Authority of the state of import is required. This may be issued only if the specimen is not to be used for primarily commercial purposes and if the import will be for purposes that are not detrimental to the survival of the species. In the case of a live animal or plant, the Scientific Authority must be satisfied that the proposed recipient is suitably equipped to house and care for it.

2. An export permit or re-export certificate issued by the Management Authority of the state of export or re-export is also required. An export permit may be issued only if the specimen was legally obtained; the trade will not be detrimental to the survival of the species; and an import permit has already been issued.

   A re-export certificate may be issued only if the specimen was imported in accordance with the provisions of the Convention and, in the case of a live animal or plant, if an import permit has been issued.

   In the case of a live animal or plant, it must be prepared and shipped to minimise any risk of injury, damage to health or cruel treatment.
Appendix II specimens

1. An export permit or re-export certificate issued by the Management Authority of the state of the export or re-export is required.

An export permit may be issued only if the specimen was legally obtained and if the export will not be detrimental to the survival of the species.

A re-export certificate may be issued only if the specimen was imported in accordance with the Convention.

2. In the case of a live animal or plant, it must be prepared and shipped to minimise any risk of injury, damage to health or cruel treatment.

3. No import permit is needed unless required by national law.

In the case of specimens introduced from the sea, a certificate must be issued by the Management Authority of the State into which the specimens are being brought, for species listed in Appendix I or II. For further information, see the text of the Convention, Article III, paragraph 5 and Article IV, paragraph 6.

Appendix III specimens

1. In the case of trade from a state that included the species in Appendix III, an export permit issued by the Management Authority of that state is required. This may be issued only if the specimen was legally obtained and, in the case of a live animal or plant, if it will be prepared and shipped to minimise any risk of injury, damage to health or cruel treatment.

2. In the case of export from any other state, a certificate of origin issued by its Management Authority is required.

3. In the case of re-export, a re-export certificate issued by the state of re-export is required.

In its Article VII, the Convention allows or requires Parties to make certain exceptions to the general principles described above, notably in the following cases:

- for specimens in transit or being transshipped [see Resolution Conf. 9.7 (Rev. CoP15)];
- for specimens that were acquired before CITES provisions applied to them (known as pre-Convention specimens, see Resolution Conf. 13.6 (Rev. CoP16));
- for specimens that are personal or household effects [see Resolution Conf. 13.7 (Rev. CoP16)];
- for animals that were "bred in captivity"—see also Resolution Conf. 10.16 (Rev.);
- for plants that were "artificially propagated"—see also Resolution Conf. 11.11 (Rev. CoP15);
- for specimens that are destined for scientific research;
- for animals or plants forming part of a travelling collection or exhibition, such as a circus [see also Resolution Conf. 12.3 (Rev. CoP17)].

There are special rules in these cases and a permit or certificate will generally still be required. Anyone planning to import or export/re-export specimens of a CITES species should contact the national CITES Management Authorities of the countries of import and export/re-export for information on the rules that apply.

When a specimen of a CITES-listed species is transferred between a country that is a Party to CITES and a country that is not, the country that is a Party may accept documentation equivalent to the permits and certificates described above. All readers are directed to contact your national Management and Scientific Authorities for specific questions.

35 https://cites.org/eng/cms/index.php/component/c
### ANNEX 2

Timber species listed in CITES by appendix (as of 10/2012; excluding species used for medicinal, traditional or ornamental purposes) is available from [https://sustainableforestproducts.org/node/96](https://sustainableforestproducts.org/node/96)

<table>
<thead>
<tr>
<th>SCIENTIFIC NAME</th>
<th>LISTING APPLIES TO</th>
<th>NATURAL DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPENDIX I: TIMBER SPECIES THAT ARE THREATENED WITH EXTINCTION. TRADE IS PERMITTED, BUT UNDER VERY RESTRICTED CIRCUMSTANCES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abies guatemalensis</em></td>
<td>All parts and derivatives, including manufactured and finished products¹ from any country of origin.</td>
<td>Guatemala, Honduras, Mexico and El Salvador</td>
</tr>
<tr>
<td><em>Araucaria araucana</em></td>
<td>All parts and derivatives, including manufactured and finished products² from any country of origin.</td>
<td>Argentina, Chile</td>
</tr>
<tr>
<td><em>Balmea stormiae</em></td>
<td>All parts and derivatives.</td>
<td>Mexico, Guatemala, El Salvador, Honduras</td>
</tr>
<tr>
<td><em>Dalbergia nigra</em></td>
<td>All parts and derivatives, including manufactured and finished products³ from any country of origin.</td>
<td>Brazil</td>
</tr>
<tr>
<td><em>Fitzroya cupressoides</em> (Molina) I. M. Johnston</td>
<td>All parts and derivatives, including manufactured and finished products⁴. Logging ban in Chile since 1976.</td>
<td>Argentina, Chile</td>
</tr>
<tr>
<td><em>Pilgerodendron uviferum</em></td>
<td>All parts and derivatives, including manufactured and finished products⁵ from any country of origin.</td>
<td>Argentina, Chile</td>
</tr>
<tr>
<td><em>Podocarpus parlatorei</em></td>
<td>All parts and derivatives, including manufactured and finished products⁶ from any country of origin.</td>
<td>Argentina, Bolivia, Peru</td>
</tr>
<tr>
<td><strong>APPENDIX II: TRADE OF THESE SPECIES IS CONTROLLED AND REGULATED TO ENSURE THEIR SURVIVAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Aniba rosaeodora</em></td>
<td>Logs, lumber, plywood and veneer, from any country of origin.</td>
<td>Brazil, Colombia, Ecuador, Guyana, French Guiana, Peru, Surinam and Venezuela</td>
</tr>
<tr>
<td><em>Bulnesia sarmientoi</em></td>
<td>Logs, lumber, plywood and veneer from any country of origin.</td>
<td>Argentina, Bolivia, Paraguay</td>
</tr>
<tr>
<td><em>Caesalpinia echinata</em></td>
<td>Logs, lumber, veneer and unfinished wood articles from any country of origin.</td>
<td>Brazil</td>
</tr>
<tr>
<td><em>Caryocar costaricense</em></td>
<td>All parts and derivatives, including manufactured and finished products⁷ from any country of origin.</td>
<td>Colombia, Costa Rica, Panama, Venezuela</td>
</tr>
<tr>
<td>SCIENTIFIC NAME</td>
<td>LISTING APPLIES TO</td>
<td>NATURAL DISTRIBUTION</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Gonystylus spp.</td>
<td>All <em>Gonystylus</em> species, and to all parts and derivatives, including manufactured and finished products(^8) from any country of origin.</td>
<td>Brunei Darussalam, Fiji, Indonesia, Malaysia, Singapore, Solomon Islands, the Philippines</td>
</tr>
<tr>
<td>Guaiacum spp.</td>
<td>All <em>Guaiacum</em> species; all parts and derivatives from any country of origin except finished products packaged and ready for retail trade(^9).</td>
<td>Anguilla, Antigua, Barbuda, Bahamas, Barbados, Colombia, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, Venezuela</td>
</tr>
<tr>
<td>Oreomunnea pterocarpa</td>
<td>All parts and derivatives, including manufactured and finished products(^10) from any country of origin.</td>
<td>Costa Rica, possibly other Mesoamerican countries</td>
</tr>
<tr>
<td>Pericopsis elata</td>
<td>Logs, lumber and veneer.</td>
<td>Cameroon, Congo, Cote d'Ivoire, Democratic Republic of the Congo, Ghana, Nigeria</td>
</tr>
<tr>
<td>Platymiscium pleiostachyum</td>
<td>All parts and derivatives including manufactured and finished products(^11).</td>
<td>Costa Rica, El Salvador, Honduras, Nicaragua</td>
</tr>
<tr>
<td>Prunus africana</td>
<td>All parts and derivatives, except finished products packaged and ready for retail trade.</td>
<td>Angola, Burundi, Cameroon, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Kenya, Madagascar, Mozambique, Rwanda, South Africa, Sudan, Swaziland, Uganda, Tanzania, Zambia, Zimbabwe</td>
</tr>
<tr>
<td>Swietenia humilis</td>
<td>All parts and derivatives, including manufactured and finished products(^6)(^12) from any country of origin.</td>
<td>Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama</td>
</tr>
<tr>
<td>Swietenia macrophylla</td>
<td>Logs, lumber, plywood and veneer that originate in Latin America and the Caribbean with an exception for Brazil and Nicaragua. There is, however, an export ban in Brazil and Nicaragua.</td>
<td>Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guyana, French Guyana, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Venezuela</td>
</tr>
<tr>
<td>Swietenia mahagoni</td>
<td>Logs, lumber and veneer from any country of origin.</td>
<td>Anguilla, Antigua and Barbuda, Bahamas, Barbados, Cayman Islands, Colombia, Cuba, Dominican Republic, Grenada, Guadeloupe, Jamaica, Martinique, Montserrat, Peru, Trinidad and Tobago, United States, Venezuela</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Listing Applies To</td>
<td>Natural Distribution</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>APPENDIX III: SPECIES SUBJECT TO SPECIAL MANAGEMENT WITHIN A COUNTRY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cedrela fissilis</em></td>
<td>Logs, lumber and veneer from any country of origin.</td>
<td>Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Panama, Paraguay, Peru, Venezuela</td>
</tr>
<tr>
<td><em>Cedrela lilloi</em></td>
<td>Logs, lumber and veneer from any country of origin.</td>
<td>Argentina, Bolivia, Brazil, Paraguay, Peru</td>
</tr>
<tr>
<td><em>Cedrela odorata</em></td>
<td>Logs, lumber and veneer from any country of origin.</td>
<td>Antigua and Barbuda, Argentina, Barbados, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, French Guyana, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, Surinam, Venezuela</td>
</tr>
<tr>
<td><em>Dalbergia retusa</em></td>
<td>Logs, lumber and veneer that originate from Guatemala.</td>
<td>Pacific seaboard from Mexico to Panama</td>
</tr>
<tr>
<td><em>Dalbergia darienensis</em></td>
<td>Applies to products that originate from Panama. Applies to all parts and derivatives, except finished products ready for retail trade.</td>
<td>Colombia, Panama</td>
</tr>
<tr>
<td><em>Dalbergia louvelii</em></td>
<td>Logs, lumber, veneer. Applies to articles originating in any country.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Dalbergia monticola</em></td>
<td>Logs, lumber and veneer.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Dalbergia normandii</em></td>
<td>Logs, lumber and veneer.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Dalbergia purpurascent</em></td>
<td>Logs, lumber and veneer.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Dalbergia stevensonii</em></td>
<td>Logs, lumber and veneer that originate from Guatemala.</td>
<td>Southern Belize, Guatemala and Mexico</td>
</tr>
<tr>
<td><em>Dalbergia xerophila</em></td>
<td>Logs, lumber and veneer.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Diospyros spp.</em></td>
<td>All species of <em>Diospyros</em>. Logs, sawn wood and veneer sheets from any country.</td>
<td>Madagascar</td>
</tr>
<tr>
<td><em>Dipteryx panamensis</em></td>
<td>All parts and derivatives, including manufactured and finished products from any country of origin.</td>
<td>Nicaragua, Costa Rica, Panama and Colombia</td>
</tr>
</tbody>
</table>
1. Including building materials, cabinetmaking materials, charcoal, firewood, flooring, containers, fuel wood, furniture, joinery, matches, particleboard, plywood, pulp/paper products, roof shingles and veneer among other products.

2. Including construction material, flooring, furniture, joinery, plywood, pulp/paper products and railroad sleepers among other products.

3. Including bedroom furniture, billiard-cue butts, boat building, bobbins, boxes and crates, brush backs and handles, cabinetmaking materials, chairs, chests, decorative plywood, musical instruments, parts of musical instruments and veneer among other products.

4. Including agricultural implements, boat building materials, boxes, crates, containers, cabinetmaking materials, carvings, cigar boxes, construction materials, cooperages, flooring, fuel wood, furniture and furniture components, joinery, musical instruments, particleboard, pencils, piling, plywood, poles, pulp/paper products, shakes, shingles, sporting goods and toys among other products.

5. Including flooring, furniture, posts and timber.

6. Including timber.

7. Including railroad ties.

8. Including brush backs, building materials, ceilings, counter tops, door frames, dowels, flooring, furniture, joinery, mouldings, handles (e.g. brooms and umbrellas), panelling, picture frames, plywood, pool cues and racks, rulers, shoji screens, stair treads, stringers, tool handles, toys, trays, tripods, turnery, blinds, window frames among other products.

9. Including bearings and bushings, boat building materials, brush backs and handles, bush blocks, furniture, golf club heads, marine construction materials, railroad ties, shade rollers, tables, turnery, and wheels among other products.

10. Including a variety of products.

11. Including furniture, musical instruments, timber and veneer.

12. Including bearings and bushings, barge and dock fenders, boat construction articles, chemical derivatives, cogs and shafts, cross ties, fishing rods, flooring, furniture, heavy construction, railroad ties, tool handles, turnery and veneer among other products.

Notes: Logs are defined as all wood in the rough whether or not stripped of bark or sapwood, or roughly squared for processing. Lumber is defined as wood sawn lengthwise or produced by a profile-chipping process; normally exceeds 6 mm in thickness. Plywood is defined as three or more sheets of wood glued and pressed one on the other and generally disposed so that the grains of successive layers are at an angle. Veneer is defined as thin layers or sheets of wood of uniform thickness, usually peeled or sliced for use in plywood and furniture among other products.
ANNEX 3


The phytosanitary standard was first adopted by the Third Session of the Interim Commission on Phytosanitary Measures in April 2001 as Guidelines for phytosanitary certificates. This current version was revised and adopted by the Ninth Session of the Commission in April 2014 and published in 2016. The standard provides the requirements and guidelines for the preparation and issuance of phytosanitary certificates (phytosanitary certificates for export and phytosanitary certificates for re-export).

Specific guidance on requirements and components of a phytosanitary certification system to be established by national plant protection organizations (NPPOs) is provided in the ISPM 7 (Phytosanitary certification system).

BACKGROUND

Phytosanitary certification is used to attest that consignments meet phytosanitary import requirements and is applied to most plants, plant products and other regulated articles that are traded internationally. Phytosanitary certification contributes to the protection of plants, including cultivated and uncultivated/unmanaged plants and wild flora (including aquatic plants), habitats and ecosystems in the importing countries. Phytosanitary certification also facilitates international trade in plants, plant products and other regulated articles by providing an internationally agreed document and related procedures.

Article V.2(a) of the International Plant Protection Convention (IPPC) stipulates how phytosanitary certificates should be issued: Inspection and other related activities leading to issuance of phytosanitary certificates shall be carried out only by or under the authority of the official national plant protection organisation. The issuance of phytosanitary certificates shall be carried out by public officers who are technically qualified and duly authorised by the official national plant protection organisation to act on its behalf and under its control with such knowledge and information available to those officers that the authorities of importing contracting parties may accept the phytosanitary certificates with confidence as dependable documents.

This was clarified at the FAO Conference in 1997 during adoption of the 1997 revision of the IPPC: “It is understood that... “public officers who are technically qualified and duly authorized by the national plant protection organization” include officers from the national plant protection organization”. “Public” in this context means employed by a level of government, not by a private company. “Include officers from the national plant protection organization” means that the officer may be directly employed by the NPPO, but does not have to be directly employed by the NPPO.

The IPPC also states requirements for the use of model phytosanitary certificates (in Article V.3): Each contracting party undertakes not to require consignments of plants or plant products or other regulated articles imported into its territories to be accompanied by phytosanitary certificates inconsistent with the models set out in the Annex to this Convention. Any requirements for additional declarations shall be limited to those technically justified.
REQUIREMENTS FOR PHYTOSANITARY CERTIFICATION

1. Phytosanitary Certificates

1.1 Purpose of phytosanitary certificates

Phytosanitary certificates are issued to attest that plants, plant products or other regulated articles meet the phytosanitary import requirements of importing countries and are in conformity with the certifying statement. Phytosanitary certificates may also be issued to support re-export certification to other countries. Phytosanitary certificates should be issued only for these purposes.

1.2 Types and forms of phytosanitary certificates

In the Annex to the IPPC, there are two types of certificates: a “phytosanitary certificate” (see Annex 1 of this standard) for export purposes and a “phytosanitary certificate for re-export” (see Annex 2 of this standard) for re-export purposes.

A phytosanitary certificate for export is usually issued by the NPPO of the country of origin. A phytosanitary certificate for export describes the consignment and, through a certifying statement, additional declarations and treatment records, declares that the consignment meets phytosanitary import requirements. A phytosanitary certificate for export may also be issued in certain re-export situations for plants, plant products and other regulated articles originating in countries other than the country of re-export if compliance with the phytosanitary import requirements can be attested by the country of re-export (e.g. by inspection).

A phytosanitary certificate for re-export may be issued by the NPPO of the re-exporting country in the case where the commodity in the consignment was not grown or processed to change its nature in that country and only where an original phytosanitary certificate for export or a certified copy is available. The phytosanitary certificate for re-export provides the link to a phytosanitary certificate issued in a country of export and takes into account any changes in phytosanitary status that may have occurred in the country of re-export. Procedures for managing the issuance of the two types of phytosanitary certificates and the systems that ensure their legitimacy are the same.

According to Article V.2(b) of the IPPC, the IPPC model phytosanitary certificates provide standardised wording that shall be followed for the preparation of phytosanitary certificates. The standardisation of the phytosanitary certificates is necessary to ensure consistency, that they are easily recognised, and that essential information is reported. NPPOs are encouraged to use a single format for their phytosanitary certificates for export and a single format for phytosanitary certificates for re-export and to place a sample of the phytosanitary certificates’ format on the International Phytosanitary Portal (IPP) (https://www.ippc.int) in a manner that prevents falsification.

Phytosanitary certificates can be in paper form or, where it is accepted by the NPPO of the importing country, in electronic form.

Electronic phytosanitary certificates are the electronic equivalent of the wording and data of phytosanitary certificates in paper form, including the certifying statement, transmitted by authenticated and secure electronic means from the NPPO of the exporting country to the NPPO of the importing country. Electronic phytosanitary certification does not constitute text processing or other electronic generation of paper forms, which are then distributed non-electronically. Nor is it the transfer of an electronic version of the paper certificate (e.g. through e-mail).
NPPOs should apply safeguards against falsification of paper phytosanitary certificates, for example special papers, watermarks or special printing. When electronic certification is used, appropriate safeguards should also be applied.

Phytosanitary certificates are not valid until all requirements have been met and they are dated, signed and stamped, sealed, marked or completed electronically by the NPPO of the exporting or re-exporting country.

1.3 Outline of requirements

Phytosanitary certification is used to attest that consignments meet phytosanitary import requirements and is undertaken by an NPPO. A phytosanitary certificate for export or for re-export can be issued only by a public officer who is technically qualified and duly authorized by an NPPO.

A phytosanitary certificate for export is usually issued by the NPPO of the country where the plants, plant products or regulated articles were grown or processed. A phytosanitary certificate for re-export is issued by the NPPO of the country of re-export (a country where the commodity has not been grown or processed) when the consignment has not been subjected to the risk of infestation and complies with the phytosanitary import requirements of the importing country, and the original phytosanitary certificate or a certified copy is available.

NPPOs shall use the model phytosanitary certificates of the IPPC.

Where the required phytosanitary information exceeds the space available on the phytosanitary certificates, an attachment may be added with this information.

Phytosanitary certificates should accompany the consignment or may be transmitted by mail or other means, or where agreed between countries, NPPOs may use electronic phytosanitary certificates, using standardized language, structure of the message and exchange protocols.

Phytosanitary certificates may have a limited duration of validity. The NPPO of the exporting country or the importing country may make relevant stipulations.

Specific procedures should be followed in the case of replacement phytosanitary certificates, certified copies of phytosanitary certificates, and alterations to phytosanitary certificates. Invalid or fraudulent phytosanitary certificates should not be accepted.

Special consideration is given to situations of re-export, particularly when the issuance of a phytosanitary certificate for export is not required by the country of re-export and when specific phytosanitary measures need to be conducted in the country of origin.
ANNEX 4
Examples of case studies (wildlife and timber) and verification in practice

Case Study 1
INVESTIGATION AND INTELLIGENCE DISSEMINATION

On 13th July 2013, 30 packages totalling 905 kg arrived at London, Heathrow Airport consigned as air courier material from New Delhi in transit to Hong Kong.

The Customs invoice accompanying the shipment stated the contents were rugs and wooden handicrafts.

The shipment was selected for further examination due to the extremely heavy declared weight for an air courier shipment and the fact that the declared freight charges were higher than the declared value of the goods.

Photos and sample documents credit: © UK Border Force
Examination revealed wood logs wrapped in rubber carpets.

The wood was initially identified as Red Sandalwood *Pterocarpus santalinus* CITES II/EU Annex B. The identification was confirmed by the Thünen Institute of wood research in Hamburg, Germany.

Customs clearance presented for warehousing NO CITES documents presented.

A compliance audit of the Customs bonded warehouse revealed a second shipment of rugs and wooden handicrafts already customs cleared and in customs warehousing.

The second shipment was identical in size to the first with the same number of pieces and weight. The customs invoice accompanying the shipment was also identical to the first, apart from the date.

The seizure details including of consignee and consignors are disseminated sent as an intelligence package to INTERPOL via UK NCB.

Further investigations are undertaken on the declared consignor details using available customs computer systems.

Details of approximately 30 previous shipments to different importers in Hong Kong were identified. All the hard copy customs warehousing documents were recovered, all having almost identical commercial invoices.

Further dissemination of new intelligence sent to INTERPOL via UK NCB.

INTERPOL drafted first Purple notice for illegal CITES timber.

Both consignments totalling 1800 kg of Red Sandalwood confiscated.
A shipment of 211 kg of shrink wrapped timber arrived in a maritime container at the port of Southampton, United Kingdom on 6th January 2014.

The shipment was accompanied by the following bill of lading and commercial invoice.

No species declared on the Customs invoice, only the generic term “hardwood lumber blanks”.
Species details were clarified with customs import agent. A packing list was received which indicated that the species were “Ziricote” *Cordia dodecantha* which is not CITES controlled and “probably” Cocobolo or Black Rosewood *Dalbergia retusa* which is listed in CITES App II.

Samples of the different species were sent to Royal Botanic Gardens at Kew in London for identification. Identification confirmed as *Dalbergia retusa*.

No CITES export or EU CITES import permits were presented with the Customs import documents.

The *Dalbergia retusa* was subsequently confiscated and donated for enforcement training purposes.
On 4th April 2010, a container of round wood arrived in Rotterdam from Suriname. The bill of lading stated that the container had 37 pieces of round logs and 9 pieces of roots. Additional code in the customs form stated that there was no CITES specimen in the container. The container was selected for physical inspection due to narcotics risk.

No drugs were found. The wood was identified by the Customs Administration of the Netherlands (NL Customs) as Swietenia mahagoni (American mahogany) in violation of CITES II/EU Annex B. This was confirmed by the customs laboratory in Amsterdam and a wood anatomist.

When confronted that there were CITES specimens in the container, the importer gave a falsified species, Swietenia microfilia, which does not exist. In addition, the importer submitted supporting documents with an altered date from a Commissioner in Suriname, and not a CITES permit. The importer also had two large wood import businesses.

The public prosecutor authorised the involvement of the police in the case, resulting in the cooperation between enforcement agencies in NL. A criminal investigation was started with controlled delivery by placing a beacon on the container, and observation of the identified container of wood. The police also started a telephone tap. Five different locations were identified as a result of the investigation.
Enforcement agencies searched the premises and the customs mobile lab conducted field identification of the wood. The wood was suspected to have crossed the border into Germany, and the German public prosecutor’s office was brought into the investigation. In Germany, authorities also found a batch of Cocobolo timber from Guatemala, in violation of CITES III/EU Annex C.

Seizure of wood in NL for:
- Forgery (fraud)
- Infringement of CITES and EU Council regulations
- Infringement of Dutch legislation on the protection of flora & fauna

Seizure of wood in Germany for:
- Forgery (fraud)
- Infringement of CITES III/EU Annex C
CASE STUDY 3
EXAMPLE OF WILDLIFE TRAFFICKING VIA SEA CARGO

EVENTS

COUNTRY?: Elephants killed and ivory poached

? COUNTRY?: Ivory consolidation and transport to Kenya

March 2015

KENYA:
Mombasa’s Container freight station: cargo loading in container n. FCIU5235796. The cargo is declared as “11 tonnes of tea leaves” bound to LAOS PDR. The bill of lading is issued by “Indochina International Group Limited” to Laos-based Soupha Song Import-Export Company.

The CAPE MOSS container ship leaves Mombasa with container FCIU5235796 aboard

24 March 2015

SRI LANKA:
CAPE MOSS transits in Colombo’s port

6 April 2015

MALAYSIA:
CAPE MOSS transits in Port Klang Port

? April 2015

SINGAPORE:
CAPE MOSS arrives at Singapore’s port

19 April 2015

THAILAND:
The RHL FELICITAS arrives at Laem Chabang Port where customs seized 3 tonnes of raw elephant ivory tusks stashed under bags of tea leaves destined for LAOS PDR. An inter-agency panel has been created to investigate the case from origin to end market countries.

21 April 2015

25 April 2015

ISSUES, QUESTIONS

• Were the elephants killed in Kenya or in other countries?
• Were all the ivory tusks sourced in Kenya? Or did they have to cross international borders within Africa?
• A special agreement between Kenyan customs and tea exporters has apparently been in place since 2010 to speed up tea deliveries to market countries: cargoes are not scanned, but a customs officer is always present at time of loading.

• After leaving Colombo, the cargo movement was under watch as the authorities in Sri Lanka, Malaysia, Singapore and Thailand were informed of the suspicious cargo by a tip off from a “transport firm” which alerted authorities about a false shipping document.

• Was forensic DNA analysis utilised to establish if the ivory came from freshly killed elephants or from government stockpiles in Africa?
• Was anyone arrested?
• Had the cargo arrived in Laos undetected, which subsequent routes would have been taken to reach ivory manufacturers and retailers?
Case Study 4
EXAMPLE OF WILDLIFE TRAFFICKING VIA AIR CARGO

? COUNTRY?: Elephants killed and ivory poached

? COUNTRY/IES?: Ivory consolidation and transport

June 2014
NIGERIA:
“B.J.” person sends a 110 kg package to “S.S.” person in Viet Nam via airfreight; The airway bill declares goods as “private possessions”. B.J.’s package is loaded onto a plane

June 2014
QATAR:
B.J.’s package transit through Doha International Airport
Most likely the package is offloaded and moved onto another plane

10th June 2014
VIET NAM:
Customs officers at Ho Chi Minh City international airport find B.J.’s package suspicious and decide to open. 77 elephant tusks are seized.
An investigation was launched and no one has been arrested—no further information available.
If the package had reached S.S. unnoticed, would the ivory be sold in Viet Nam or continued its journey to China?

• Is the ivory from Nigeria? or from other neighbouring countries?

• Has the ivory already passed international borders?

• From which city was the package sent? Which freight forwarder was used?

• Are “private possessions” the only information available about the contents of the package? Is it sufficient for custom clearance?

• Was the package X-rayed? By whom?

• Was the package subjected to security inspections?

• Did it leave the airport?

• What is the role of the local customs administration?

• Why did Ho Chi Minh Customs find the package suspicious?

• Were forensic analyses done for the seized ivory to understand the provenance?

• Did Viet Nam Customs liaise with Nigeria Customs?

• Was “B.J.” or anyone else investigated and prosecuted for the crime?

• Where is the seized ivory?

22nd June 2014, VIET NAM’s customs officers at Ho Chi Minh City’s international airport discovered an additional 39 African Elephant tusks and about 100 ivory handicrafts hidden in a package allegedly shipped from “Africa” which passed undetected through several countries. The airway bill declared that the 90 kg package send by consignor “L.J.J.” to consignee “T.L.O.” in Viet Nam contained “food”.

Photo credit: © Viet Nam Customs
CASE STUDY 5
EXAMPLE OF WILDLIFE TRAFFICKING VIA PASSENGER AIRLINES

41 KG OF RHINO HORN HIDDEN IN PASSENGERS’ LUGGAGE
TRAVELLING FROM MOZAMBIQUE TO VIET NAM

TIMELINES & FACTS

 MOZAMBIQUE?
Rhino killed and horn poached

 MOZAMBIQUE?
Rhino horns consolidation and local transport

31st October 2014
MOZAMBIQUE:
Maputo airport—Two Vietnamese men, age 25 and 26, board a Qatar Airways flight to South Africa on their way to Hanoi, Viet Nam.

31st October 2014
SOUTH AFRICA:
Johannesburg airport—The luggage of the two Vietnamese men is taken out of the aircraft and held by the South African authorities. 34 large pieces of rhino horns, weighing a total of 41 kg, are found wrapped in blankets inside the two suitcases. The two men are arrested and the rhino horns seized.

[South African police suspect the horns originated from South African parks.
The two Vietnamese, believed linked to an international poaching ring, had been under surveillance before their arrest at the Johannesburg airport.
Some of Maputo airport’s security staff have been investigated for allegedly helping traffickers board their luggage without passing through the scanners.]

[Doha, QATAR]

[Hanoi, VIET NAM]
# ANNEX 5

Logging and export bans (extracted from [http://www.forestlegality.org/content/logging-and-export-bans](http://www.forestlegality.org/content/logging-and-export-bans))

Please regularly check the website for updates.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>PRODUCT SCOPE</th>
<th>STATUS</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFRICA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td>Log export ban on more than 20 species of raw logs excluding Ayous.</td>
<td>1999–Present</td>
<td></td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>A ban on the export of logs, including teak.</td>
<td>1999–Present</td>
<td></td>
</tr>
<tr>
<td>Gabon</td>
<td>Export ban on logs, boules and through cut logs.</td>
<td>2010–Present</td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>A ban on felling, harvesting, and exportation of rosewood in 2014. A new national ban on rosewood export since 2017.</td>
<td>First enacted in 2014; Reactive 2017–Present</td>
<td></td>
</tr>
<tr>
<td>Madagascar</td>
<td>Export ban on unworked wood of valuable species such as palissandra and voamboana followed by periodic exceptions; Adopted a decree to stop the export of precious timber from October 2000 for three years (decree N. 11832 / 2000).</td>
<td>Undetermined (first enacted 1975)</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>Log export ban.</td>
<td>1976–Present</td>
<td></td>
</tr>
<tr>
<td><strong>AMERICAS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Log export ban; moratorium on mahogany (Swietenia macrophylla, CITES Appendix II) exports. Certain wood exports (e.g., imbuia, virola) are subject to specific rules and require prior authorisation from the Brazilian Institute of Environment and Natural Resources (Ibama) but plantation logs are allowed for export.</td>
<td>1969–Present</td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>Export of unprocessed forestry products is subject to restrictions and highly regulated (forest certification mainly).</td>
<td>1996–Present</td>
<td>WWF 2015.</td>
</tr>
<tr>
<td>Canada</td>
<td>Restrictions on log exports from British Columbia. There are a variety of federal and provincial regulations regarding log exports.</td>
<td>1906–Present</td>
<td>Shinn. 1993.</td>
</tr>
<tr>
<td>Colombia</td>
<td>Restrictions on log exports from natural forests. Only round wood from planted forests can be exported. Restrictions have not been well enforced, and large amounts of logs are still exported.</td>
<td>1997–Present</td>
<td></td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Log export ban, and export ban on roughly squared wood from specific species.</td>
<td>Undetermined (First enacted in 1986)</td>
<td></td>
</tr>
<tr>
<td>COUNTRY</td>
<td>PRODUCT SCOPE</td>
<td>STATUS</td>
<td>SOURCE</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>AMERICA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guatemala</td>
<td>Exports of logs of more than 11 cm in diameter are banned, unless they originate from plantations. Ban does not apply to furniture and processed products made from wood. Guatemala established a national red list of trees to protect in 2006. The 81 species in Category One are banned from export and commercial uses.</td>
<td>2006–Present</td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Precious hardwoods export ban (mahogany, royal cedar and pochote). Mahogany exports are allowed only in the form of sawn wood, plywood or veneered wood. Sawn wood exports require a licence.</td>
<td>Undetermined (First enacted 1997)</td>
<td></td>
</tr>
<tr>
<td>Panama</td>
<td>Export ban of logs, stumps, round wood or sawn wood of any species from natural forests, as well as from wood submerged in water.</td>
<td>2002–Present</td>
<td>WWF. 2015.</td>
</tr>
<tr>
<td>United States</td>
<td>Ban on exports of unprocessed round wood harvested from federal lands in Alaska; Forest Resources Conservation and Shortage Relief Act (1990): 100% export ban on logs from Federal lands west of the 100th meridian, except timber surplus to needs, and a ban in 1995 on log exports from state and other public lands (excluding Indian land) west of the 100th meridian.</td>
<td>1926–Present</td>
<td></td>
</tr>
<tr>
<td><strong>EUROPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albania</td>
<td>Ban of logging in all forests and the export of timber.</td>
<td>2016–Present</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>10-year ban on the exports of all types of raw logs.</td>
<td>2015–Present (applying to pine exports from 2017)</td>
<td></td>
</tr>
<tr>
<td><strong>ASIA PACIFIC</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td>Complete ban on exports of logs and rough timber since 1996, followed by a logging ban within the Permanent Forest Estate in 2002. January 2016 embargo on all timber exports to Viet Nam.</td>
<td>1996–Present</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>Complete ban on commercial logging in all natural forests.</td>
<td>2017–Present</td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>Log export ban in place since 1997. Certain wood and wood products are prohibited for export unless the specified requirements are met.</td>
<td>1997–Present</td>
<td></td>
</tr>
<tr>
<td>Laos</td>
<td>A total logging ban in natural forest areas, a harvesting ban for protected species and a ban on exporting round wood from natural forests, but plantation-grown timber can be harvested and exported with the proper paperwork.</td>
<td>First enacted in 1989; Reactive 2015–Present.</td>
<td></td>
</tr>
</tbody>
</table>
Guidelines for verifying timber legality for customs

<table>
<thead>
<tr>
<th>Country</th>
<th>Description</th>
<th>Date Enacted/Reactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>In 1972, a ban was imposed on the export of ten species, and expanded to a blanket ban in 1985 (Peninsular Malaysia). Temporary ban in Sabah from 1993–1996. Logging quota system implemented in Sarawak in 1992.</td>
<td>First enacted in 1972; Reactive 1985–Present</td>
</tr>
<tr>
<td>Myanmar</td>
<td>An export ban on raw logs of all species since 2014.</td>
<td>2014–Present</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Export ban on indigenous timber (native species from natural forests) logs and woodchips, with certain exceptions outlined in the 1949 Forestry Act and its 1993 and 2004 Amendments.</td>
<td>1993–Present</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Export ban on round logs for selected species since 1990. Logs can be exported from concessions given before 2010. There is ban on the export of logs from concessions given after 2010.</td>
<td>First enacted in 1990; Reactive 2010–Present</td>
</tr>
<tr>
<td>Philippines</td>
<td>Log export ban in place since 1986, expanded to include sawn wood in 1989. Since 1992, a national logging ban on timber extraction in old growth forests and in critical areas such as those on steep slopes (50%+), above 1,000 m elevation, stream banks (20 m sides), and wilderness areas primarily for conservation of biodiversity and gene pools. In 2011 an indefinite ban on the issuance of harvesting permits in natural forests throughout the country.</td>
<td>1986–Present</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Logging ban in all natural forests.</td>
<td>1990–Present</td>
</tr>
<tr>
<td>Thailand</td>
<td>Ban on timber harvesting and raw log exports from natural forests.</td>
<td>1989–Present</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Log export ban; export ban on sawn timber from natural forests.</td>
<td>1992–Present</td>
</tr>
</tbody>
</table>
Annexes

Annex 6
Conversion and timber measurement

Timber is traded in many different forms and often the amounts recorded on invoices, permits, etc. are in different unit codes (e.g. carvings, sawn wood, etc.). To assist you when verifying the quantity invoiced on the shipment’s documents matches the quantity recorded on the CITES permit or certificate, we recommend you use the following formulas.

A number of the units used are specific to certain countries and may not be used in your country e.g. board feet is a unit of volume often used in the USA and Canada.

For assistance, ask the trader whether they use any standard conversion rates or contact your CITES Scientific Authority or your local or national forestry/plant health agency. These conversions should also be made by the importer or exporter so that the total quantity of CITES regulated material recorded on the shipping documents is expressed in the same unit of measurement found on the CITES documentation.


---

CONVERT
Kilograms (kg) of timber to cubic metres (m³)
There are 450–700 kg of timber per cubic metre of timber. Use the guide figure of 600 kg

Conversion formula: 1,000 kg / 600 = m³

EXAMPLE
1,000 kg of timber:
1,000 kg divided by 600 = 1.67 m³ of timber

CONVERT
Cubic feet (cubic ft) to cubic metres (m³)
Square ft x thickness = cubic ft.
1 cubic ft = 0.02832 m³

Conversion formula:
cubic ft x thickness (ft) x 0.02832 = m³

EXAMPLE
10,000 cubic ft (approx. 1 inch thick):
10,000 sq. ft x 1/12 (12 inches in a foot) x 0.02832 = 23.6 m³ of timber

CONVERT
Square feet to square metres (m²)
Convert sq. ft to sq. metres (m²)
[sq. ft = length (ft) x width (ft)]

Conversion formula: 1 sq. ft x 0.0929 = m²

EXAMPLE
25,000 sq. feet of timber:
25,000 sq. ft x 0.0929 = 2,322.5 m² of timber

---

Guidelines for verifying timber legality for customs

**CONVERT**
Square metres (m²) to cubic metres (m³)
Convert sq. metres to cubic metres (m³)

**Conversion formula:** \( m^2 \times \text{thickness} = m^3 \)

**EXAMPLE**
25,000 m² of timber (veneer) (0.6mm thick):
25,000 m² \( \times \) 0.0006m = 15 m³ of timber

**CONVERT**
Volume of a cylinder (inches) to cubic metres (m³)
Convert volume of cylinder inches to cubic metres.

**N.B.** \( \pi \) \( (3.14) \times (\text{radius in inches})^2 \times (\text{length in inches}) \times (\text{total number of dowels}) = \text{cubic inches.} \)

**Conversion formula:**
\( (\text{cubic inches}) \times 0.0000164 = m^3 \text{ of dowel} \)

**EXAMPLE**
100,000 dowels (1/4 inches diameter) \( \times \) 16 inches in length:
Radius = 1/2 diameter \( \rightarrow \) 1/4 = 0.25 \( \times \) 1/2 = 0.125
\( (3.14) \times (0.125)^2 \times 16 \text{ inches} \times 100,000 = 78,500 \text{ cubic inches.} \)
\( (78,500 \text{ cubic inches}) \times 0.0000164 = 1.287 m^3 \)

**CONVERT**
Board feet (usually expressed as pie tablares (PT)) to cubic metres (m³)
There are 424 PT per cubic metre

**Conversion formula:** \( 1,000 \text{ PT} / 424 = m^3 \)

**EXAMPLE**
1,000 board feet (PT) of timber:
1,000 PT of timber divided by 424 = 2.36 m³ of timber
## ANNEX 7

Example of a list of Protected/Prohibited plant species in Malaysia\(^\text{37}\)

<table>
<thead>
<tr>
<th>PENINSULAR MALAYSIA</th>
<th>LOCAL NAME</th>
<th>SCIENTIFIC NAME</th>
<th>LOCAL NAME</th>
<th>SCIENTIFIC NAME</th>
<th>LOCAL NAME</th>
<th>PENINSULAR MALAYSIA</th>
<th>LOCAL NAME</th>
<th>SCIENTIFIC NAME</th>
<th>LOCAL NAME</th>
<th>SCIENTIFIC NAME</th>
<th>LOCAL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archidendron bubalirum</td>
<td>Kerdas</td>
<td>Rafflesia spp.</td>
<td>Bunga pakma</td>
<td>Shorea macrophylla, Shorea gysbertinana, Shorea pinangah</td>
<td>All Tengkawang/ Awang species</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archidendron jiringa</td>
<td>Jering</td>
<td>Dipterocarpus oblote</td>
<td>Ensurai</td>
<td>Mangifera spp.</td>
<td>All Asam family - Mangga or Macang Hutan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durio zibethinus</td>
<td>Durian</td>
<td>Shorea macrophylla</td>
<td>Engkabang jantong</td>
<td>Durio spp.</td>
<td>Durian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>Mangga</td>
<td>Shorea splendida</td>
<td>Engkabang bintang</td>
<td>Triomma spp., Daryodes spp. and Santiria spp., except Canarium spp.</td>
<td>All Kedondong species</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccaurea maingayi</td>
<td>Tampoi</td>
<td>Shorea helmsleyana</td>
<td>Engkabang gading</td>
<td>Dranontomelon spp.</td>
<td>Langsatu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccaurea sumatrana</td>
<td>Tampoi</td>
<td>Shorea simins</td>
<td>Engkabang terendak</td>
<td>Baccaurea spp.</td>
<td>Tampoi, Rambai and Belimbing Hutan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus rigidus</td>
<td>Temponek</td>
<td>Shorea palembanica</td>
<td>Engkabang asu</td>
<td>Artocarpus spp.</td>
<td>Terap, Buruni, Pulutan/ Cempedak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysoxylum spp.</td>
<td>Mersindok</td>
<td>Shorea stenopectera</td>
<td>Engkabang rusa</td>
<td>Nephelium spp.</td>
<td>Meritam and Rambutan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nephelium lappaceum</td>
<td>Rambutan Hutan</td>
<td>Shorea pinanga</td>
<td>Engkabang langai bukit</td>
<td>Paranechophelium spp.</td>
<td>Mata Kuching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcinia artoviridis</td>
<td>Asam Gelugor</td>
<td>Shorea ochracea</td>
<td>Raru</td>
<td>Aquilaria spp.</td>
<td>Gaharu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boucea macrophylla</td>
<td>Kundang Hutan</td>
<td>Ficus spp.</td>
<td>Pokok Ara</td>
<td>Koompassia spp.</td>
<td>Mengarisi/Tualang</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barringtonia spp.</td>
<td>Putat</td>
<td>Sonneratia alba</td>
<td>Perepat</td>
<td>Eusideroxylon zwageri</td>
<td>Belian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandoricum koetjape</td>
<td>Sentul</td>
<td>Sonneratia caseolaris</td>
<td>Pedada</td>
<td>Protoxylon malangai</td>
<td>Belian Malagangai</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ardisia spp.</td>
<td>Mata Pelanduk</td>
<td>Avicennia alba</td>
<td>Api-api hitam</td>
<td>Intsia palembanica and Sympetalandra borneensis</td>
<td>All Merbau species including Merbau Lalat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artocarpus heterophyllus</td>
<td>Nangka</td>
<td>Avicennia lanata</td>
<td>Api-api</td>
<td>N/A</td>
<td>All mangrove species</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aglaia spp.</td>
<td>Bekak</td>
<td>Avicennia marina</td>
<td>Api-api merah</td>
<td>N/A</td>
<td>Any trees marked by the Director for retention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Guide Names</th>
<th>Verification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koompassia excelsa</td>
<td><em>Koompassia excelsa</em></td>
<td>Tualang</td>
<td><em>Avicennia officinalis</em></td>
<td>Api-api sudu</td>
</tr>
<tr>
<td>Ficus spp.</td>
<td><em>Ficus</em> spp.</td>
<td>Ara</td>
<td><em>Lumnizera littorea</em></td>
<td>Teretum merah</td>
</tr>
<tr>
<td>Mangifera longipetiolata</td>
<td><em>Mangifera longipetiolata</em></td>
<td>Machang</td>
<td><em>Koompassia excelsa</em></td>
<td>Tapang / Tualang</td>
</tr>
<tr>
<td>Podocarpus spp.</td>
<td><em>Podocarpus</em> spp.</td>
<td>Podo</td>
<td><em>Actoxylon sympetalum</em></td>
<td>Kayu gahru</td>
</tr>
<tr>
<td>Dialium spp.</td>
<td><em>Dialium</em> spp.</td>
<td>Keranji</td>
<td><em>Aquilaria beccariana</em></td>
<td>Kayu gahru, engkaras (I)</td>
</tr>
<tr>
<td>Sterculia foetida</td>
<td><em>Sterculia foetida</em></td>
<td>Kelumpang Jari</td>
<td><em>Aquilaria malaccensis</em></td>
<td>Kayu gahru</td>
</tr>
<tr>
<td>Lithocarpus cyclophorus</td>
<td><em>Lithocarpus cyclophorus</em></td>
<td>Mempening Gajah</td>
<td><em>Aquilaria microcarpa</em></td>
<td>Kayu gahru</td>
</tr>
<tr>
<td>Knema spp.</td>
<td><em>Knema</em> spp.</td>
<td>Basong</td>
<td><em>Didesmandra aspera</em></td>
<td>Rhu Laut</td>
</tr>
<tr>
<td>Sterculia parvifolia</td>
<td><em>Sterculia parvifolia</em></td>
<td>Kelumpang</td>
<td><em>Rhododendron</em> spp.</td>
<td>Rhu Laut</td>
</tr>
<tr>
<td>Santiria alaevigata</td>
<td><em>Santiria alaevigata</em></td>
<td>Kedondong Gergaji Daun Licin</td>
<td><em>Nepenthes</em> spp.</td>
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TRAFFIC, the wildlife trade monitoring network, 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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