European Timber Regulation (EUTR) - Demands between wood research and political requests
The **European Union Timber Regulation** (EUTR) requires obligations on businesses who trade in timber and timber related products. It applies to timber originating in the domestic (EU) market, as well as from third (non-EU) countries.

The **European Union Timber Regulation** (EUTR) requires obligations on businesses who trade in timber and timber related products. It applies to timber originating in the domestic (EU) market, as well as from third (non-EU) countries.
European Timber Regulation - EUTR
Obligations and scope

Regulation (EU) No 995/2010 of the European Parliament:

- It prohibits **trade in illegally logged** timber and timber products
- It requires EU traders who place timber products on the EU market for the first time to exercise „**due diligence***“
- In Germany **22,500** commercial suppliers are registered by the Federal Office for Agriculture and Food (BLE)

The regulation covers a wide range of timber products listed in its Annex using EU Customs code nomenclature.
European Timber Regulation

ANNEX
Timber and timber products as classified in the Combined Nomenclature in Annex I to Regulation (EEC) No. 2658/87

- 4401 Fuel wood, in logs, billets, pellets or similar forms;
- 4403 Wood (solid), not stripped, stripped of bark or two- or four-sided trimmed;
- 4406 Timber railway sleepers;
- 4407 Wood (sawn) or chipped lengthwise with a thickness exceeding 6 mm;
- 4408 Veneer sheets for plywood or for similar laminated wood
- 4410 Particle board, "oriented strand board" plates and similar plates
- 4411 Fibreboard of wood, agglomerated with resins or other organic substances;
- 4412 Plywood, veneered panels and similar laminated wood;
- 4415 Packing cases, boxes, and similar packing's
- 940330, 940340, 94035000, 940360 and 94039030 wood furniture
- Pulp and paper of chapters 47 and 48 of the Combined Nomenclature
European Timber Regulation – (EUTR)
Exceptions of timber products not subjected to the control

European Timber Regulation
ANNEX

Exceptions (!) of timber products not subjected to the control by the EUTR

- 4402 Charcoal (including charcoal from shells or nuts), also pressed together
- 4417 00 00 Brushes, wooden tools, tool bodies, tool handles
- 4419 Wood products used for table or kitchen
- 4420 Interiors of art of wood
- 49 Printed Books, newspapers, pictures and other products of printing papers
- 92 Musical instruments, parts and accessories of such articles
- 9401 Seating's
- 95 Toys, games and sports equipment
- 97 Works of art, collectors pieces and antiques
The Thünen Centre of Competence on the Origin of Timber

Participating institutes:

- Thünen Institute of Wood Research (TI-HF)
  - Macroscopic and microscopic wood identification
- Thünen Institute of Forest Genetic (TI-FG)
  - Genetic identification of wood species and origin
- Thünen Institute for International Forestry and Forest Economics (TI-WF)
  - Evaluation of certificates and timber market analyses
Competent authority
Federal Office for Agriculture and Food (BLE)

Competent authority in Germany
Federal Office for Agriculture and Food (BLE):

- **22,500** commercial traders = market participants in Germany
- Control of approx. 1% of the wood trading companies in Germany (risk analyses)
- employment of **20 inspectors**
- Sampling of two or three wood specimens for the analyses (species and origin) at the Thünen Centre of Competence
The Thünen Institute processes approximately **700** such requests for wood identification annually.

**Examples of daily requests: wood identification**

**Practical wood identification**

- **CITES Workshop, Hamburg 2017**
Requirements for a clear declaration
„Due diligence“

„Due diligence“
Declaration of the international traded timber according **EN 13 556**
„Nomenclature of timbers used in Europe“

Examples:
Spruce = **PCAB** (*Picea abies*)
Beech = **FASY** (*Fagus sylvatica*)
Sapele = **ENCY** (*Entandrophragma cylindricum*)
Afzelia = **AFXX** (*Afzelia spp.*)

- Based on the macroscopic and microscopic structures (wood anatomy), the timbers can be clearly distinguished / identified on the genus level
Development and application of computer-assisted wood identification systems

Commercial timbers, macroHOLZdata and CITESwoodID in the DELTA-INTKEY-System

- The databases contain descriptions and an interactive identification system for softwood and hardwood taxa common in the international trade.

- Macroscopic and microscopic characters for the wood identification.
Description and illustrations of **Bangkirai** for the microscopic wood identification
The database Commercial timbers
Microscopic identification and description of Massaranduba

- Description and illustrations of Massaranduba for the microscopic wood identification
The Thünen Centre of Competence on the Origin of Timber
Scientific reports regarding the EUTR

Daily submissions of samples from the fields

- Wood trade (75%)
- Customs and environmental agencies (22%)
- NGOs (2%)
- Private consumer (1%)

Increasing identification of lesser known species, especially in products that are manufactured in Asia

Detailed market survey/observation of the internationally traded timber
The Thünen Centre of Competence on the Origin of Timber

Scientific reports regarding the EUTR

Thünen Centre of Competence on the Origin of Timber
Wood identification of internationally traded timber

- Private
- NGOs
- Competent authorities
- Timber traders

Total number of expertises (wood anatomy) 2,146
including approx. 12,500 individual samples
Evaluation of the results

Wood identification

Assortments:
- 4403 Wood (solid)
- 4407 Wood (sawn)
- 4408 Veneer sheets

The declarations to the wood species were almost completely correct!

Assortment:
- 4412 plywood

Plywood consisting of European and Asian species (temperate zone) as well as plantation timbers (as birch, poplar or eucalyptus) were almost correctly declared!

Plywood consisting of tropical timber often show incorrect or missing declarations

Assortments:
- Wood furniture

Problems with incorrect or missing declaration are mainly occurred by garden furniture produced in South East Asia.
The Thünen Centre of Competence on the Origin of Timber
Examples of microscopic wood identification

- False declaration of components (armrests) for garden furniture (declaration: eucalypt)

Microscopic transverse section of *Eukalyptus globulus*

Microscopic transverse section of *Berlinia spp. = Ebiara*
### The Thünen Centre of Competence on the Origin of Timber

**Examples of microscopic wood identification**

<table>
<thead>
<tr>
<th>Genus / Species</th>
<th>Family</th>
<th>Trade Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pterygota</em> spp.</td>
<td>STERCULIACEAE</td>
<td>KASAH</td>
<td>7</td>
</tr>
<tr>
<td><em>Acacia mangium</em></td>
<td>FABACEAE-MIMOSOIDEAE</td>
<td>MANGIUM</td>
<td>1</td>
</tr>
<tr>
<td><em>Heritiera</em> spp.</td>
<td>STERCULIACEAE</td>
<td>MENGKULANG</td>
<td>2</td>
</tr>
<tr>
<td><em>Bhesa</em> spp.</td>
<td>CELASTRACEAE</td>
<td>BIKU-BIKU</td>
<td>1</td>
</tr>
<tr>
<td><em>Sterculia</em> spp.</td>
<td>STERCULIACEAE</td>
<td>KELUMPANG</td>
<td>1</td>
</tr>
<tr>
<td><em>Palaquium</em> spp.</td>
<td>SAPOTACEAE</td>
<td>NYATOH</td>
<td>1</td>
</tr>
<tr>
<td><em>Scaphium</em> spp.</td>
<td>STERCULIACEAE</td>
<td>KEMBANG-SEMANGKOK</td>
<td>12</td>
</tr>
<tr>
<td><em>Terminalia</em> spp.</td>
<td>COMBRETACEAE</td>
<td>KETAPANG</td>
<td>1</td>
</tr>
<tr>
<td><em>Casearia</em> spp.</td>
<td>FLACOURTIACEAE</td>
<td>TAPION KIRABAS</td>
<td>1</td>
</tr>
<tr>
<td><em>Parashorea</em> spp.</td>
<td>DIPTEROCARPACEAE</td>
<td>URAT MATA</td>
<td>1</td>
</tr>
<tr>
<td><em>Shorea</em> subg. <em>Shorea</em></td>
<td>DIPTEROCARPACEAE</td>
<td>YELLOW BALAU</td>
<td>2</td>
</tr>
<tr>
<td><em>Sindora</em> spp.</td>
<td>FABACEAE-CAESALPINIOIDEAE</td>
<td>SEPETIR</td>
<td>2</td>
</tr>
<tr>
<td><em>Swintonia</em> spp.</td>
<td>ANACARDIACEAE</td>
<td>MERPAUH</td>
<td>1</td>
</tr>
<tr>
<td><em>Canarium</em> spp., <em>Dacryodes</em> spp.</td>
<td>BURSERACEAE</td>
<td>KEDONDONG</td>
<td>10</td>
</tr>
<tr>
<td><em>Durio</em> spp.</td>
<td>BOMBACACEAE</td>
<td>DURIAN</td>
<td>2</td>
</tr>
<tr>
<td><em>Parinari</em> spp.</td>
<td>CHRYSOBALANACEAE</td>
<td>MERBATU</td>
<td>1</td>
</tr>
<tr>
<td><em>Horsfieldia</em> spp.</td>
<td>MYRISTICACEAE</td>
<td>PENARAHAN</td>
<td>1</td>
</tr>
<tr>
<td><em>Anisoptera</em> spp.</td>
<td>DIPTEROCARPACEAE</td>
<td>MERSAWA</td>
<td>1</td>
</tr>
<tr>
<td><em>Cinnamomum</em> spp., <em>Persea</em> spp.</td>
<td>LAURACEAE</td>
<td>MEDANG</td>
<td>3</td>
</tr>
<tr>
<td><em>Pentace</em> spp.</td>
<td>TILIACEAE</td>
<td>MELUNAK</td>
<td>1</td>
</tr>
</tbody>
</table>

- **20 different botanical taxa** are identified for 52 components of a folding table!

**Slide 17**

PD Dr. habil. Gerald Koch
CITES-Workshop, Hamburg_2017
The Thünen Centre of Competence on the Origin of Timber
Examples of microscopic wood identification

- Anatomical identification of **individual veneer layers** (< 0.2 mm thickness) in plywood
The Thuenen Centre of Competence on the Origin of Timber
Tropical timber regularly identified in plywood from South East Asia

<table>
<thead>
<tr>
<th>Botanical genus / Family</th>
<th>Trade name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Alstonia</em> spp. / APOCYNACEAE</td>
<td>Pulai</td>
</tr>
<tr>
<td><em>Aucoumea klaineana</em> / BURSERACEAE</td>
<td>Okoumé</td>
</tr>
<tr>
<td><em>Beilschmiedia</em> spp. / LAUARACEAE</td>
<td>Medang</td>
</tr>
<tr>
<td><em>Campnosperma</em> spp. / ANACARDIACEAE</td>
<td>Terentang</td>
</tr>
<tr>
<td><em>Canarium</em> spp. / BURSERACEAE</td>
<td>Kedongdong</td>
</tr>
<tr>
<td><em>Endospermum</em> spp. / ANACARDIACEAE</td>
<td>Sesendok</td>
</tr>
<tr>
<td><em>Ochanostachys amentacea</em> / OLACACEAE</td>
<td>Petaling</td>
</tr>
<tr>
<td><em>Octomeles sumatrana</em> / DATISCACEAE</td>
<td>Binuang</td>
</tr>
<tr>
<td><em>Palaquium</em> spp. / SAPOTACEAE</td>
<td>Nyatoh</td>
</tr>
<tr>
<td><em>Pentaspadon</em> spp. / ANACARDIACEAE</td>
<td>Pelaju</td>
</tr>
<tr>
<td><em>Shorea</em> spp. subg. <em>Rubroshorea</em> / DIPTEROCARPACEAE</td>
<td>Red Meranti</td>
</tr>
<tr>
<td><em>Swintonia</em> spp. / ANACARDIACEAE</td>
<td>Merpauh</td>
</tr>
</tbody>
</table>
Identification of timber in fibre and particle boards
Characterization of anatomical / morphological features

- Microscopic identification of individual vessel types and tracheids in fibreboard (MDF)
<table>
<thead>
<tr>
<th>Botanical genus / Family</th>
<th>Trade name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Alniphyllum</em> spp. / STYRACACEAE</td>
<td>Fortunes China-bells</td>
</tr>
<tr>
<td><em>Alnus</em> spp. / BETULACEAE</td>
<td>Erle / alder</td>
</tr>
<tr>
<td><em>Betula</em> spp. / BETULACEAE</td>
<td>Birke / birch</td>
</tr>
<tr>
<td><em>Eucalyptus</em> spp. / MYRTACEAE</td>
<td>Eukalyptus / eucalypt</td>
</tr>
<tr>
<td><em>Fagus sylvatica</em> / FAGACEAE</td>
<td>Buche / beech</td>
</tr>
<tr>
<td><em>Liquidambar</em> spp. / HAMAMELIDACEAE</td>
<td>Amberbaum / Sweet gum</td>
</tr>
<tr>
<td><em>Liriodendron</em> spp. / MAGNOLIACEAE</td>
<td>Tulpenbaum / Tulip wood</td>
</tr>
<tr>
<td><em>Magnolia</em> spp. / MAGNOLIACEAE</td>
<td>Magnolie</td>
</tr>
<tr>
<td><em>Nyssa</em> spp. / NYSSACEAE</td>
<td>Kirung</td>
</tr>
<tr>
<td><em>Picea</em> spp. / PINACEAE</td>
<td>Fichte / spruce</td>
</tr>
<tr>
<td><em>Pinus</em> spp. / PINACEAE</td>
<td>Kiefer / pine</td>
</tr>
<tr>
<td><em>Populus</em> spp. / SALICACEAE</td>
<td>Pappel / poplar</td>
</tr>
<tr>
<td><em>Pseudotsuga menziesii</em> / PINACEAE</td>
<td>Douglasie / Douglas-fir</td>
</tr>
<tr>
<td><em>Schima</em> spp. / THEACEAE</td>
<td>Schima / samak</td>
</tr>
<tr>
<td><em>Tilia</em> spp. / MALVACEAE</td>
<td>Linde / lime</td>
</tr>
</tbody>
</table>
Identification of tropical timber in pulp and paper
Characterization of anatomical - morphological features

- Preparation of **macerated** (= separated) cell-elements and fibres

- Individual types of vessels for the identification of acacia, machang and red meranti in pulp and paper
- Determination of the size of pits in macerated vessel elements

*Acacia mangium*  *Mangifera* spp.  *Shorea* subg. *Rubroshorea*
European Timber Regulation
First case of illegal logging prosecuted by the BLE

- Import of **Wengé** (89 logs, about 200 m³) from the Democratic Republic of Congo (DRC) in April 2013 via the port of Antwerp (Belgium)
- Trading of the logs to **Germany** and the **Czech Republic**
- Use of “hidden” **GPS transmitters** by Greenpeace to follow the “illegal” export
- Evidence of **manipulated documents** (letterhead) by the BLE
- **Contract penalty** for the sawmills
Outlook

International cooperation and development of databases

- Establishment of the **Thuenen Centre of Competence on the Origin of Wood**
- Further development of the **computer-assisted identification systems** and **databases**
- National and international **training courses** in the field of macroscopic and microscopic wood identification

**Contact address:**
PD Dr. habil. Gerald Koch
**Thuenen Institute of Wood Research**
**Thuenen Centre of Competence on the Origin of Wood**
Leuschnerstr. 91
D-21031 Hamburg
gerald.koch@thuenen.de