The sustainable management of forests is crucial for preserving the Congo Basin rainforests. To ensure that sustainable forest management (SFM) can continue well into the future, it is essential to diversify timber harvests. In central Africa a few species are harvested disproportionally, diminishing their abundance in the forests and threatening their existence. Sapelli, or African mahogany, is listed as “endangered” on the IUCN Red List, due to overexploitation. Azobé is another example of an overexploited species. It is currently listed as “vulnerable” on the IUCN Red List.

To protect these species, it is vital to diversify timber harvests through the inclusion of lesser known timber species (LKTS). By doing so, the pressure on current commercial species will be reduced.

Diversification is vital for forest health. The enormous biodiversity in tropical rainforest heavily leans on the biodiversity of trees. If tree species are lost, animals that are dependent on that species for food or shelter will follow suit. This has cascading effects on the whole ecological web of the forest. Therefore, it is vital to retain this biodiversity. Biodiverse areas are generally also more resilient to disturbances as their complexity gives them great adaptive abilities. This is very important in the face of climate change. Harvest diversification helps safeguard:

- Commercial species
- Forest diversity
- Species dependent on commercial tree species
- Forest resilience

Many lesser known timber species have properties exceeding those of current “generalist” commercial species.

As such, harvest diversification is vital for the long-term success of SFM. FSC is committed to diversification of timber harvests and is working on promoting the use of LKTS from the Congo Basin.

CRITERIA FOR LKTS TO BE BROUGHT TO THE MARKET To select new LKTS species, it is vital to do research into their usability. Before any species can enter the market, several criteria need to be evaluated:

- Timber availability
- Technical specifications
- Applicability

Timber availability
For a species to be interesting for the market, it is vital that this species is both temporally and spatially widely available in the forest concessions. This guarantees sustained and continuous supplies.

Technical specifications
For many of the LKTS species, technical specifications have been investigated by CIRAD. They have publicly available datasheets with crucial technical information.
FSC wants to support initiatives which promote the use of LKTS timber. Alternatives for current commercial species listed here are applications ranging from indoor to outdoor and from decorative to constructions works. They can be checked in CIRAD datasheets and at the Lesser Known Timber Species site. Availability is always in exploitable volume over the next ten years, and is spread over all FSC-certified concessions in the Congo Basin.

These species are only a small sample of the variety that Congo Basin forests have to offer. Using underutilized species for products is a great method of showing a companies’ commitment to sustainability. Due to the great variety in aesthetics between species, products made from underutilized species exhibit a unique character. More information on each of the species can be found on the Lesser Known Timber Species website.

**APPLICABILITY**

- Machining and assembly information (Blunting effects, sawing tools, assembly recommendations)
- Drying behaviour (Drying rates, risks of deformation, potential drying schedules)
- Machining and assembly information (Blunting effects, sawing tools, assembly recommendations)
- Architecture (Materials for walls, roofs, floors, doors)
- Carpentry (Materials for furniture, doors, windows)
- Vehicle construction (Materials for frames, boxes, crates)
- Heavy construction, bridges, decking, sleepers
- Hydraulic works, bridges, heavy carpentry, fresh water hydraulic works, sleepers, floors
- Electrical conductors (Materials for cables, switches, sockets)
- Marine applications in contact with water (Materials for boats, canoes, piers)
- Applications in contact with water (Materials for boats, canoes, piers)
- Applications in contact with water (Materials for boats, canoes, piers)
- Limpil (Techniques of timber species)
- Usefulness (Applications of timber species)
- Appearance of timber (Colour, grain)
- Durability (Resistance to water, fungi and termites)
- Mechanical properties (Stress-resistance, elasticity)
- Physical properties (Density, hardness, stability)
- Processing characteristics (Treatability)
- Drying behaviour (Drying rates, risks of deformation, potential drying schedules)
- Machining and assembly information (Blunting effects, sawing tools, assembly recommendations)

**MORE INFORMATION**

For more information regarding LKTS species in the Congo Basin and their possibilities, you can contact:

- Supply LKTS Congo Basin: Nathalie Bovville, FSC Africa, n.boville@fsc.org
- International markets: LKTS Ben Romein, FSC The Netherlands, b.romein@fsc.nl

Sources
1. IUCN Red list (https://www.iucnredlist.org/)
2. CIRAD (https://tropix.cirad.fr/riches-disponibles)
3. Lesser Known Timber Species (https://www.lessernknowntimberspecies.com/)

**LKTS MAINLY SUITED FOR INTERIOR APPLICATIONS**

<table>
<thead>
<tr>
<th>Species</th>
<th>Technical specifications</th>
<th>Applications</th>
<th>Availability</th>
<th>Replacement for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraké</td>
<td>Limited durability and strength</td>
<td>Veneers, panelling, fibre boxes, boxes and crates</td>
<td>2.97 million m³</td>
<td>Okoumé, Ayous</td>
</tr>
<tr>
<td>Ilomba</td>
<td>Limited durability</td>
<td>Veneers, panelling, joinery and boxes and crates</td>
<td>2.35 million m³</td>
<td>Okoumé, Ayous</td>
</tr>
<tr>
<td>Bell</td>
<td>Distinctive look, relatively strong</td>
<td>High class cabinetwork and furniture, veneer flooring, inside stairs and house frames</td>
<td>902 thousand m³</td>
<td>Sapelli, Ayous in decorative applications, Tali and Azobé in construction work</td>
</tr>
<tr>
<td>Kosipo</td>
<td>Red brown with demarcated sapwoods, relatively durable</td>
<td>High class furniture, flooring, stairs, light carpentry</td>
<td>791 thousand m³</td>
<td>Sapelli, Ayous</td>
</tr>
<tr>
<td>Essia</td>
<td>Soft, red timber</td>
<td>Decorative veneers</td>
<td>576 thousand m³</td>
<td>Sapelli</td>
</tr>
<tr>
<td>Aïlé</td>
<td>Soft, limited durability</td>
<td>Veneer and plywood</td>
<td>532 thousand m³</td>
<td>Okoumé</td>
</tr>
</tbody>
</table>

**LKTS MAINLY SUITED FOR EXTERIOR APPLICATIONS**

<table>
<thead>
<tr>
<th>Species</th>
<th>Technical specifications</th>
<th>Applications</th>
<th>Availability</th>
<th>Replacement for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dabémé</td>
<td>Strong and durable</td>
<td>Heavy carpentry, house frames, vehicle and container flooring, stairs, industrial flooring, heavy furniture</td>
<td>1.35 million m³</td>
<td>Azobé, Tali</td>
</tr>
<tr>
<td>Eveus</td>
<td>Exceptionally strong and durable</td>
<td>Hydraulic works, bridges, heavy carpentry, industrial or heavy flooring</td>
<td>1.10 million m³</td>
<td>Azobé, Tali</td>
</tr>
<tr>
<td>Diania</td>
<td>Strong, limited durability to fungi or termites</td>
<td>Applications</td>
<td>856 thousand m³</td>
<td>Applications in contact with water</td>
</tr>
<tr>
<td>Onvong</td>
<td>Strong and durable</td>
<td>Heavy construction, bridges, decking, fresh water hydraulic works, sleepers</td>
<td>797 thousand m³</td>
<td>Azobé, Tali</td>
</tr>
<tr>
<td>Limbili</td>
<td>Relatively strong and durable</td>
<td>Heavy carpentry, ship building, flooring, joinery</td>
<td>732 thousand m³</td>
<td>Azobé, Tali</td>
</tr>
<tr>
<td>Alep</td>
<td>Strong, durable, useable in marine environments</td>
<td>Applications</td>
<td>826 thousand m³</td>
<td>Applications in contact with water</td>
</tr>
</tbody>
</table>

**Key information is**:
- Appearance of timber (Colour, grain)
- Durability (Resistance to water, fungi and termites)
- Mechanical properties (Stress-resistance, elasticity)
- Physical properties (Density, hardness, stability)
- Processing characteristics (Treatability)
- Drying behaviour (Drying rates, risks of deformation, potential drying schedules)
- Machining and assembly information (Blunting effects, sawing tools, assembly recommendations)