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## Promoting the lesser known

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Best Practice Guide to successful introduction of lesser known timber species

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Wageningen, November 2020





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# Colophon

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This guide is based on interviews and experiences gathered in two projects and additional literature review and was supported by the European Sustainable Tropical Timber Coalition’s (STTC) Lesser Known Species Consortium (2012-2016) and the project ‘Market introduction of Surinamese Lesser Known Timber Species in Europe’(2015-2018). Besides the STTC, the making of this guide was financially supported by the Dutch Centre for Imports from Developing Countries (CBI), the Sustainable Trade Initiative (IDH) and the Netherlands Embassy in Paramaribo, Suriname.

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CBI  
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EUROPEAN SUSTAINABLE TROPICAL TIMBER COALITION

STTC



## List of abbreviations

AAC	Annual Allowable Cut
ACTO	Amazon Cooperation Treaty Organization
CATIE	Center for Tropical Agricultural Research and Education
CBI	Center for the Imports from Developing Countries
CIFOR	Center for International Forestry Research
CIRAD	Agricultural Research Centre for International Development
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain of Custody
CSR	Corporate Social Responsibility
DDS	Due Diligence System
ETTF	European Timber Trade Organization
EUTR	EU Timber regulation
FAO	UN Food and Agriculture Organization
FAS	First And Second grade
FSC	Forest Stewardship Council
GFTN	Global Forest and Trade Network
IDH	Sustainable Trade Initiative
ITTO	International Tropical Timber Organization
LKTS	Lesser Known Timber Species
MC	Moisture Content
PAP	Project Affected People(s)
PEFC	Program for the Endorsement of Forest Certification
SBB	Foundation for Forest Management and Production Control
SFM	Sustainable Forest Management
SHR	Foundation for Timber Research
STPP	Sustainable Timber Procurement Policy
STTC	Sustainable Tropical Timber Coalition
TAA	The Amazon Alternative
TBI	Tropenbos International
TPAS	Timber Procurement Assessment System
WWF	World Wide Fund for Nature



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# 1 Introduction

Natural tropical forests can consist of thousands of different tree species. Ideally, with sustainable forest management (SFM) one looks at the full range of species present in the forest, and not just the few well-known species in the local and global marketplace. Using a broader range of species conforms demand to what natural forests can produce sustainably. Lesser known timber trees can often substitute the better-known species in terms of performance and aesthetics and even can be more cost effective because they may be abundant and underutilized till present. E.g. the many tree species - underutilized but available - with rich, truly exotic colors and textures may provide new market opportunities. The harvest and use of lesser known timber species (LKTS) can reduce pressure on well-known commercial timber species, contribute to maintaining the natural species composition, sustain biodiversity and increase the economic viability of sustainable forest management, which in return reduces the risk of forests being converted to other, more short-term profitable land uses. Promoting the market entry and use of LKTS in the global marketplace thus contributes to the basic concept of sustainable forest management.

## 1.1 From forests' perspective

For a sustained yield within SFM, several systems have been developed to determine the annual allowable cut (AAC) per hectare and the cycle in years to return for a second harvest (cutting cycle or rotation) in natural tropical forests. In practice, in many countries the annual cut is below this allowable cut. An important reason for this is that only a limited number of well-known tree species is accepted in international trade. To reduce the pressure on this limited number of commercial timber species, to sustain biodiversity and to maintain the forest composition, it is important to extent the harvest to a wider variety of species. Ideally, the harvest of the different species should be in line with the existing species composition to maintain the natural balance in these forest. This aim might even be considered an additional prerequisite for any forest act and (certification of) SFM.

Increasing the number of tree species to be included in the harvesting plans starts with including them in forest inventories as well. Aiming at the introduction of new timber species in mainstream (global) timber markets start with reliable data on the long-term availability of commercially interesting volume of the new species under consideration.

## 1.2 From markets' perspectives

As said, at the international marketplace only a limited number of timber species is well-known and traded. E.g. of the 240 timber species described as commercially interesting for the Dutch market, only about 60 species are actually used (SHR Academy, 2016). This is just a fraction of the species richness of the tropical forests, which is estimated at 40,000 tree species at least. Although the above mentioned figures are based on the market statistics from the Netherlands only, it reflects a global trend in international timber trade. The worldwide demand for a limited number of wood species may reduce the future availability of these species. Not only on the short run due to the felling of too many individuals of the same kind, but also on the long run because less mature trees are left in the forest to reproduce offspring to be harvested in future cutting cycles. As said, this may jeopardize the basic concepts of SFM, both from an ecological and an economic point of view.

To ensure a sustainable and profitable forest sector, the forest based industry should investigate and - as a result - absorb a wider range of timber tree species. The worldwide growing demand for legally sourced and (certified) sustainably produced timber provides an additional stimulus to encourage this development. Although traditionally customers prefer to stick to the species which they are familiar with, from interviews on the potential of Surinamese LKTS it became clear that both logging and timber processing companies are positive about the introduction of new species in their operations (Van Dijk, 2013).

This guide is based on the experiences and what we learned during the implementation of the project 'Market introduction of Surinamese Lesser Known Timber Species (LKTS) in Europe' but may be seen in a much broader context. While writing of this guide, in addition to our own experiences we consulted many other sources of information on the selection and market introduction of new timber species. Many of the 'lessons learned' may be useful to others who engage in similar projects and the guide may be helpful in support of these initiatives.

### 1.3 This Best Practice Guide & Lessons Learned

Following this introduction, in chapter 2 we describe the criteria for the selection of most promising LKTS, introduce the concept of the 'selection funnel' and the subsequent step to go through. The first step to be taken relates to the forest and an assessment of the available volume and stem quality of the LKTS considered to be included in harvesting and placed on the (international) market. Local knowledge from the country of origin on the processing and use of these new timbers may provide valuable information too.

Next criteria for selection are based on extensive literature review and the consultation of existing databases. You may be surprised to find out that not all LKTS are as 'lesser known' as thought. All these steps aim to limit the number of species for further research, realizing the high cost, time and effort these next steps will take.

Next, of the selected LKTS representative samples need to send to both specialized laboratories for technical research on wood properties and potential buyers for the practical testing. Simultaneously, now you also should start thinking about which export markets you aim to supply with these new species, create potential buyers' interest and build business relation (if not existing yet) and make sure you are aware of the import requirements of specific countries or regions. Verified legal sourcing of wood and wood products is the most common, but other may apply as well.

In chapter 3 we stress the importance of creating partnerships for the successful implementation of LKTS (practical) research and the market introduction of new species. It is recommended to include as many as possible parties along the trade-chain in the project, starting in the country of origin. Next, suggestions for possible partners and organizations to liaise with are listed: SFM supporting organizations, research and technical support institutes and organization that may support in the promotion and marketing of LKTS.

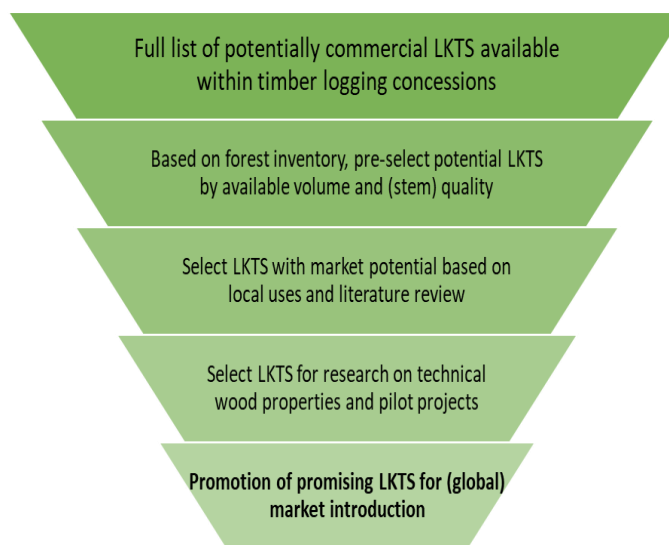
In chapter 4 we focus on the promotion and marketing of selected LKTS, describe some strategies you may implement and tools you may wish to apply. The concepts of comparison, grouping and substitution of timber species are explained, but also how you may make use of existing timber procurement policies in buyers' countries and/or the CSR policies of your potential clients. Further the importance of demonstration and practical pilot projects is described. To conclude, the final section is dealing with the importance of trustworthy communication in marketing. Several tools, both web-based and the use of media and free publicity are described.

Chapter 5 may be considered the most important of this guide. Here we present our experiences in implementing this project and the lessons we learned from it. And, avoiding similar pitfalls that may be on your way when engaging in alike LKTS projects. Fascinating reading!



## 2 Potential LKTS: criteria for selection

The introduction of new timber species into mainstream markets takes time and effort - thus resources - and lots of commitment and persistence. Timber trade is rather traditional in which the saying “*the devil he knows is better than the ones he does not know*” is prevalent. This in itself is very much understood where it comes to timber being used in construction where e.g. strength and durability are conditional. Therefore, it is of great importance that new species meet expectations - related to its use - to avoid disappointment ..... or worse. Negative experiences can easily harm the image of the species at stake and may even result in a bad image for other LKTS, tropical timber or the use of timber in general. Depending on the available resources (time and money) it is therefore recommended to focus on the introduction of a limited selection of new species with the best potential for its aimed use, both in the marketplace and their contribution to the economic viability of SFM. Selection should be based on criteria such as supply, technical aspects and market requirements as visualized in the figure at the right: the LKTS selection funnel. Criteria for selection are described in more detail in this chapter.



### 2.1 Forest inventory and first assessment of potential species

A reliable and continuous supply both in quantity and quality is an important condition for the successful introduction of LKTS in the marketplace. Failed introductions of potential new species on the Dutch market were mainly due to an unreliable supply, both in volume and time (Van Dijk, 2013).

#### Assessment of the available volume of new species

To guarantee a reliable quantity both in volume and in time, reliable data on the volumes per species that can be harvested and marketed in the years to come, should be available (based on forest stock inventories). Based on these stock data, a first selection of potentially commercial species can be made. Apart from the available volume, continuity of supply is equal important, realizing the creed: ‘better less at constant volume over an extended period of time, opposed to high volumes at time followed by periods of no supply at all.’ Therefore, the distribution of new species over a larger area needs to be considered. If so, the first condition for the successful introduction of LKTS might be met (Van Dijk, 2013). For smaller operators in the supply chain this may be an important argument to engage in partnerships to meet these basic criteria.

Criteria for the primary selection of potential LKTS based in forest inventory data are:

- Overall harvestable volume (of good (log) quality);
- Availability over time;
- Wider geographical distribution of tree species at stake.

What is considered as sufficient volume over time ‘of good quality’ of course depends on the market demand and for what the new species is considered to be used. However, also for very exclusive uses and limited volume demand, continuity of supply and quality has to be ensured. Therefore, a species should be available from more than just one single concession and/or sawmill as to secure continuous supply.

### **Assessment of the stem quality**

While forest inventories primarily aim at the collection of data on diameter, length of the harvestable log (generally till the first heavy branch) and tree location in the cutting block to make an estimate of the available volume, a visual assessment of the quality of the stem is common as well. This includes a description of stem straightness or distortions, shape (cylindrical), height of buttresses (if any) and possibly hollow stems and other defects. While this information may be common knowledge for the traditionally harvested commercial species, for LKTS this information is of great value for a first screening of (export) market potential of new species.

The potential use of LKTS can be versatile, meaning that the primary assessment of the market potential of new species should be unconcealed, keeping all options open. New timbers may find their way in the markets for sawn timber, poles or logs for peeling (plywood logs). However, while at this early stage the future use of new timbers is not always known yet, a common reference for the quality assessment of logs relates to sawn timber. Therefore, the standard export quality of sawn timber would be the best starting point. In many tropical countries the FAS quality (First And Second grade)<sup>1</sup> is often used for export purposes. Later in the process the information on the quality can be refined based on experience with the species and the intended use. However, it should be noted that forest concessionaires and sawmill operators have a strong preference for buyers who are open to a mix of quality, dimension and species. This strongly improves their economic performance. Depending on the aimed end-uses, product standards (e.g. ISO, CE marking or European norms) can be useful as a tool to secure quality, dimensions and deviations.

Criteria for the basic quality screening of potential LKTS are:

- based on forest inventory: log size and stem quality, free from defect and distortions;
- based on local sawmill experience: basic wood workability and recovery rates;
- based on local uses: areas of potential use in the international market place.

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<sup>1</sup> The NHLA (National Hardwood Lumber Association) has described several timber grades. These grades are often used in tropical countries, although the final quality may vary depending on the application of the standard in practice.



## Assessment of available local knowledge

New timber trees that are considered LKTS in the global market may be well-known and widely used in local markets. Local sawmill operators and/or builders may have ample experience working with these timber species. Therefore, information on the local use of potential species for export markets may easily be obtained by visiting local sawmills and building sites to gain local knowledge and experiences from local practice. To get an idea on how these wood species have performed over a longer period of time, constructions from recent years may be visited as well. While doing so, one should consider the locally prevailing environmental conditions (climate, etc.) and the quality of the construction too, but - having said this - local knowledge and experiences are of great value in the assessment of the potential of LKTS.

Locally, in the country of origin, universities and libraries, research institutes, laboratories and wood specialists, and vocational training centres where tree spotters and wood workers are being trained, may prove to be a valuable source of information as well. All these sources should be considered and explored when investigating the market potential of LKTS.

Similar to locally available information on the timber species at stake, historical - sometimes anecdotal - information (see text box) may support the decision on whether or not to start the next level of LKTS research.

The next level of LKTS research focusses on the (technical) wood properties. This information may be available from existing sources (literature review) or should be investigated by specialized laboratory research on the hereto provided wood samples of the LKTS. This search for technical information is described in the next section of this guide.

'New' timber species in the international marketplace are sometimes well-known in local markets already. Therefore, local sawmills may be able to provide valuable information on stem quality and primary processing of LKTS. Local markets often process and use timber that are considered LKTS in global trade.

Many of the tree species that are nowadays considered LKTS may have been well-known in recent times. Talking about the LKTS from the Suriname project with Jan Dubelaar, retired SHR wood specialist, he remarked that till the moment that large quantities of a limited number of high quality timbers from Malaysia and Indonesia began dominating the European timber market in the early seventies of the former century, wood workers in the Netherlands were very much accustomed to work with these species. Although much of this experience is lost over recent decades, senior wood workers still know. Therefore, Jan argues that "many of the LKTS from Suriname are in fact being 're-introduced' and skilled senior wood workers may contribute significantly to make this a success."

## 2.2 In search for technical information

The decision of potential buyers to consider the introduction and use of LKTS is mainly based on the availability of technical information, practical experience and reference species to which the new species compare. This includes information on potential applications (end-uses) and what commercial species these new species can supplement or replace (Bakker, 2010; Van Dijk, 2013; Eastin and Wright, 1998). Therefore to successfully market LKTS, the wood properties and what it can be used for need to be identified in an early stage. As mentioned, this may be (partly) based on local knowledge and practical experience with the species in the country of origin, complemented and supported by literature review. However, in most cases additional wood technical research (laboratory tests) might be needed.

## Literature search

As mentioned before, it is likely that the LKTS considered for market introduction are not ‘totally new’ and information may already be available on several aspects. This can be found on the internet, in literature or at local institutes like universities and research centers in countries of origin. This may specifically be the case in producer-countries with which historical timber trade relations that may even originate from colonial era’s, e.g. like those between the Netherlands and Suriname.

Recommended internet websites worth visiting:

- At CIRAD Tropix (<http://tropix.cirad.fr/en>) software can be downloaded containing reliable timber descriptions and technical characteristics of 245 tropical species from the three geographical regions: the Amazon, the Congo basin and S-E Asia. The software is available in English and French at the cost of € 120,-. Single species’ data sheets can be downloaded for free.
- The Woodexplorer (<http://www.thewoodexplorer.com/>) contains information on 1.650 species. In the free trial version full details of 35 species can be accessed. In the paid version information on more species (\$ 4,99) or all species (\$9,99) can be found.
- On the ITTO website on promotional species (<http://www.tropicaltimber.info/>) you can search for properties of tropical timber species, use, availability, and compare between species.
- FSC Denmark maintains an LKTS database, launched in 2016, containing information on more than 200 species ([www.lesserknowntimberspecies.com](http://www.lesserknowntimberspecies.com)), and includes descriptions of demonstration projects as well.
- The database [www.houtdatabase.nl](http://www.houtdatabase.nl) contains information on more than 200 timber species which can be used in residential and commercial construction and waterworks. Unfortunately, the technical information is only available in Dutch, descriptions of demonstration projects with LKTS are available in English.
- The technical series ‘technical information for the processing of 134 wood species of Bolivia’ (<http://www.siforestal.org.pe/Archivo/Manual%20de%20identificacion.pdf>), contains information on a large number of LKTS from Bolivia (and the wider Amazon region).

## Laboratory research

If required information is not readily available from literature study and internet search, additional laboratory research should fill this gap. This research can be done in two phases: at first research on primary basic properties and if these properties are satisfying a second research on use dependent properties. In this way, resources can be saved if the outcomes of the first-stage research do not justify second-stage practical testing of the new species.

Consider executing the laboratory research in the country of origin, if specialized laboratories with a good reputation exist or can easily be established at e.g. a university or research center. This contributes to capacity development in the country of origin and ensures that the outcomes stay close to where the species grows.

Primary properties on which information is needed are:

1. Density green (kg/m<sup>3</sup>); Density at 12% moisture content (MC) (kg/m<sup>3</sup>);
2. Durability (above ground and with soil contact);
3. Shrinkage wet - 0% MC: radial (%), tangential (%), ratio rad/tan.

If the outcomes of the research on these basic properties meet the criteria for certain end-uses, the other properties needed for these uses can be studied in more detail. Which properties should be tested, depends on the end-use.

Examples of use dependent properties are:

1. Strength class: if structural use is considered;
2. Processing properties: timber drying, dimensional stability and workability;
3. Gluing properties, also including finger jointing and lamination;
4. Paintability: if windows/doors/frames use is considered;
5. Fire class: if cladding/ceilings use for buildings is considered;
6. Calibration curve / hygroscopic properties;
7. Acoustic and thermal isolation.

These are some of the main use dependent properties. It is not a complete list, but it can be seen as a starting point.

## 2.3 Determine and opening potential markets

To make sure the right LKTS are selected to fill a gap in the market, the species might first be proposed to and discussed with existing (and potential) trade relations (buyers) of the supplying company.

Interviews with timber traders in Suriname learned that most of them have clear ideas, lots of information and (personal) experiences on market opportunities for 'new' species for export (Van Dijk, 2013). Ideally, this 'orientation on markets' should already be done before or simultaneous with the gathering of technical information. By sending test-orders to existing trade partners, they can get a first impression of the 'new' timber and may become motivated to facilitate additional research and practical scale testing.

### **Global market introduction of 'locally prized woods' from Tanzania**

The Mpingo Conservation & Development Initiative (MCDI) conducted a research on the international market potential of five LKTS - locally prized woods - from Tanzania. First they made an inventory of the technical properties of the species, for what applications they can be used, which species they compare to, i.e. can supplement or replace, and prerequisites of the most important sectors in which they can be introduced. Then, they identified 31 companies that were willing to participate in this effort and sent out samples of the five species to them for 'first judgement' and feedback. Of these 31 companies, 15 requested a second sample. Therefore the MCDI concluded there is potential for the five species in western markets, also given that a reliable volume of high quality timber of these species can be harvested and timely exported to manufacturers (MCDI, 2014).

In February 2014 the MCDI employed a Timber Marketing Officer responsible for timber sales from community forest reserves. This officer was able to recruit eight new clients and several traders expressed their interest. This increase in demand led to a price competition in which customers offered higher prices than the government royalty rate to secure hardwood timber supplies. After closing the tenders, village leaders signed contracts with the winning bidders and by the end of 2014 the first harvesting of certified timber from these community forests started (Wills, 2014; MCDI, s.a).

According to experiences gained by The Amazon Alternative (TAA) a successful introduction of lesser known species needs (next to quality, quantity and availability) - or at least contribute - to solving an existing problem. The new species can for example be an alternative for traditionally well-known species in low availability or an alternative for known species from non-certified forests (Van Dijk, 2013). Or if the species has special features, a high quality, secured supply and maybe even a better price, it can contribute to supply diversification and risk mitigation.

Further, to avoid unpleasant surprises in a later stage, start exploring the import conditions and regulations that apply to put the timber on the market in targeted country/countries. All imports of timber and most wood-based products into the European market should comply with the EU Timber Regulation (EUTR) and are subject to a Due Diligence screening by the European buyer. E.g. the same counts for the US Lacey Act, the Australian Illegal Logging Prohibition Act (ILPA) and since July 1<sup>st</sup>, 2020, The new Forest Law adopted by the National People's Congress of China that stipulates that, according to the article 65 "no unit or individual may purchase, process or transport timber that he/she clearly knows was illegally felled in forest regions".

This has consequences for wood purchases at national level, as well as at international level. Additional to this, importing countries may ask for different Phytosanitary certificates for custom clearance. Be aware that other import requirement may apply. To avoid these or similar limitations in trade, it is recommended to establish early and solid business-to-business (B2B) relations with potential buyers. Suggestions for doing so are described in chapter 3.

### 3 Partnerships and support

The introduction of ‘new’ species on the market will take time and needs effort. More parties cooperating helps the process and increases the success rate. Partners can facilitate the market introduction of new species via their networks, help with publicity, funding, etc. Partnerships could also facilitate additional research on the technical aspects and potential uses of LKTS.

Involving a complete supply chain from forest to end sale of the product, increases the success rate of market introductions and acceptance of LKTS and so, ultimately, the overall contribution to the commercial viability of sustainable forest management. To build commitment of all partners and consolidate cooperation, there has to be a mutual interest (Van Dijk, 2013) for which a good starting point may be the use of already existing trade relations. Next, to ensure that partners are committed and can contribute to a successful introduction, it is suggested to establish working groups per country/region of origin of the LKTS and/or through the trade federation in the buyers’ country/region. From an early start of the initiative, all stakeholders should be informed - and where relevant involved - in the project. Apart from the involvement of timber trade partners, also project affected peoples (PAPs) and (local) public authorities should be involved from the start. Aiming at an increase of (new-) timber export volumes may require government officials involvement at several topics and levels.

Additional to these, both national and international partners might be considered for participation:

#### **SFM supporting organizations like:**

- ITTO has five user groups for which editorial panels provide information and support development programs ([www.tropicaltimber.info](http://www.tropicaltimber.info));
- Certification schemes like FSC and PEFC to ‘back up’ the promotion story;
- The Global Forest & Trade Network (GFTN), committed to producing and purchasing forest products from well-managed forests ([www.gftn.panda.org](http://www.gftn.panda.org));
- Development governmental and private agencies, including their local representatives (e.g. Embassies) which can potentially provide funding or market entry support;
- The Amazon Cooperation Treaty Organization (ACTO) coordinates studies and pilot projects on economic perspectives capable of generating income and opportunities for the Amazon region ([www.otca.info/portal/index.php?p=index](http://www.otca.info/portal/index.php?p=index));
- FAO, Food and Agriculture Organization of the United Nations, Forestry division ([www.fao.org/forestry/en](http://www.fao.org/forestry/en)).

#### **Research and technical support partners like:**

- Universities (including in the countries of origin);
- Wood research institutes, wood innovators and experts;
- The Tropical Agricultural Research and Higher Education Center (CATIE) ([www.catie.ac.cr](http://www.catie.ac.cr));
- The Center for International Forestry Research (CIFOR) ([www.cifor.org](http://www.cifor.org)).

**Promotional and marketing partners like:**

- Certification Schemes, including their national representatives;
- Associations of building and infrastructure companies;
- Timber trade federations;
- Woodworking federations;
- Forest product marketing organizations;
- Project developers / architects for pilot projects.

**The Consortium Tropical Timber (CCT) in the Netherlands**

In 2013 in the Netherlands the Consortium Tropical Timber was founded. It consists of FSC the Netherlands, four tropical timber importing companies, the certification body SKH and the European Sustainable Tropical Timber Coalition (STTC). The consortium started research on the potential of 15 LKTS from the Congo Basin region. Next to literature and laboratory research, the consortium initiated pilots to gain practical experiences with these species. The consortium launched a website to communicate their findings ([www.fsc.nl/lkts](http://www.fsc.nl/lkts)) and they make use of the network of the consortium members and social media.

The LKTS (Congo Basin) working group had an online meeting on August 27<sup>th</sup> 2020. An important result of that meeting was the selection of nine species to be introduced and promoted simultaneously in the main markets in Europe.

**The UK Environment Agency's LKTS National Framework**

The UK Environment Agency (EA) is a non-departmental public body, established in 1995 and sponsored by the United Kingdom government Department for Environment, Food and Rural Affairs (DEFRA). The EA initiated an LKTS National Framework to foster a partnership between contractors, engineering consultants and timber suppliers. The goal is to improve the quality of the delivered projects for waterways, flood defence, decking, food bridges, etc. Within the programme of the LKTS National Framework, the EA aims at diversification of the timber species and use more LKTS to support sustainable forestry worldwide. (<http://www.wijma.co.uk/about-wijma-uk/>)

## 4 Promotional activities

When the new timber species went through all previous criteria for selection - the selection funnel - they have to find their way in mainstream markets. This is challenging but also the key to success. In general, when there is no direct buyers' demand for other species and no shortage in known species, the market will 'play safe' and continue its preference for known species. Unless there are other unique selling points, for example ample availability of good quality combined with attractive pricing. Informing buyers in an early stage about the upcoming availability of promising new species within the context of (certified) sustainable management of tropical forests, understanding, sympathy and support can be created before these species are actually placed on the global marketplace already (Bakker, 2011).

"The promotion of lesser used species by individual species for specific purposes can be hard work, particularly if the potential customer is not short of a timber he is already using. The *'devil he knows is better than the ones he does not know'*."

(Plumptre, 1996)

Building buyers' trust in the new timber species is important for successful introduction. Providing knowledge based information on the technical properties and providing samples are important, but also sharing experiences on pilot projects is key.

### Promising new species from Bolivia

To develop a strategy for the promotion of Bolivian LKTS, reasons for traders to be willing to introduce new timber species were identified. Main reasons were price (39%) and availability (27%) and appearance and wood properties (23%). A few respondents indicated customer demand driven, competitive advantage and diversification were reasons to include new species in their business (Cossio Antezana, 2007).

Price and availability are important factors for successful marketing of new timber species and are the two important factors for traders to decide to look for/accept new species (Cossio Antezana, 2007; Van Dijk, 2013; Timber Trades Journal. 24 Aug 2013). In support of LKTS market introduction, initial favourable pricing of new species compared to the more commonly used species with similar properties may tempt timber traders to buy and gain practical experience through pilot projects. Experiences with the new species can be shared through an online database, like [www.lesserknowntimberspecies.com](http://www.lesserknowntimberspecies.com) and [www.houtdatabase.nl](http://www.houtdatabase.nl).

It can be considered to market either primary products or secondary products. A benefit of placing processed products from LKTS on the market is that potential problems in processing the new timber due to a lack of knowledge at buyers' side can also be avoided (Plumtre, 1996).

## 4.1 Marketing strategies

The promotion of new timber species should be an explicit part of your overall marketing strategy. Try to select the different target groups and trade-chain participants with a potential interest in LKTS and try to find out why potential buyers might be willing to engage in business. The promotion and introduction of new species can be done via a network of selected dealers or via an open approach to all market partners. The type of product you have to offer (rough sawn timber, semi-finished product or an end-product) will also influence the most appropriate marketing strategy.

### Sustainable Timber Procurement Policies

Aiming at supporting the increase of sustainably managed forests, over time several tools have been developed and put in place as a market mechanism to achieve this. Timber traders, timber trade federations and purchasing (governmental) entities developed policies and guidelines to persuade parties to adapt responsible timber sourcing practices. In this sense, the use of lesser known timber species, realizing the contribution they make to SFM, may be (or become) part of this. Therefore, it is important to know about - and make use of - buyers' countries procurement policies and clients' Corporate Social Responsibility policy (CSR) and how these may support your LKTS business opportunities. Here, some of the most significant are briefly described.

*Sustainable Timber Procurement Policies (STPPs)* send a strong signal to the market, helping persuade timber market actors to adopt sustainable sourcing practices. The number of national governments with STPPs has increased substantially from nine in 2008 to over 25 in 2015, of which 19 are within the EU. There has also been a significant increase in the number of companies with a STPP. A number of European timber trade federations have recently developed membership policies, under which the purchase of an ambitious percentage of sustainably sourced timber have become mandatory. This may create great opportunities for the introduction and marketing of LKTS from certified forests.

#### Public Procurement Policies

In many countries governments initiate projects that involve the use of tropical timber. As such, public bodies are important potential buyers of LKTS. Next to this direct impact on the market, research shows that government procurement policies can have a broader impact on consumer markets: in countries with comprehensive timber procurement policies the market share of certified timber increased.

FSC Denmark is using this principle in a project on developing procurement policies and guidance for municipalities which includes a high priority for the use of less commercially used species. To support both municipalities and companies in the implementation, consultants and architects are being trained to advise on the use of LKTS.

Similar to Denmark, the Dutch Timber Procurement Assessment System (TPAS) seeks to provide assurance to national and local government institutions that the wood products they purchase meet the sustainability and legality requirements of the Dutch government.

TPAS is viewed as a 'comprehensive' policy, similar to the UK timber procurement policy, referring to governments that draw up their own criteria for what they consider as 'sustainable'. LKTS from sustainably managed forest should be included in these criteria.



The development of *Green Building Assessment Schemes* impacts sustainable sourcing. Under these assessment schemes, timber only scores well if it is demonstrably responsibly sourced. Life cycle analyses are increasingly used to demonstrate the environmental impact of various commodities and to score building materials in detail under these assessment schemes. As part of this assessment, forest certification is used as a tool to demonstrate timber is responsibly sourced. Also here, this may open potential markets for LKTS from sustainably managed forests.

*Corporate social responsibility* (CSR) is a private business self-regulation tool that aims to contribute to a company's performance and reputation. In international timber trade, CSR strategies encourages parties to make a positive impact on the environment by setting standards for the responsible sourcing of timber and timber products. Based on these company's ethics, producers and suppliers are confronted with an increasing demand for certified timber only, which may create ample opportunities for the inclusion of new timber species from sustainably managed forests as well.

### **Comparison, grouping and substitution of timber species**

As an outcome of the technical research on new timber species, supported by literature search and by the results of practical scale testing, the properties and potential use of new species may well compare to traditionally known timbers. If so, this may offer viable options for the grouping and substitution of mainstream species and a convincing argument in support of market acceptance of LKTS (Eastin and Wright, 1998). Comparing LKTS to commonly used timber species is considered key to successful market entry of new species.

#### **WWF Guide to lesser known tropical species**

In 2013 WWF published a guide on tropical lesser known timber species to provide information on the benefits of the use of LKTS and information about approximately 50 species. With the guide, the properties and practice of commonly used timber species can easily be compared with those of LKTS. For each new species the technical information and availability is described. <http://gftn.panda.org/?212135/Guide-to-Lesser-Known-Tropical-Timber-Species>.

Grouping of species with comparable properties and performance is a way to market new species. With grouping, the potential number of species that can be used for a certain end-use can be increased by considering them 'similar', treating them as one. This increases the opportunities of a reliable supply (Win Kyi, 2002). E.g. retailers often sell 'hardwood' for use in gardens without mentioning the species name, which in some cases they do not even know themselves. It has to be clear to customers for what kind of end-uses the promotional species can be used. Focus on the technical issues, so the performance and suitability for end-uses, instead of on the name of the new species itself.

Grouping is for some end-uses more obvious than others. For species with a high density/quality grouping is not (per se) recommended, a niche market is more likely to be found for these types of new species.

### **'Grouping' of timber species**

Plumptre (1996) gives several examples of grouping of timber species with comparable features. He grouped construction timber from Uganda by durability and permeability and marketed those groups as 'light, medium and heavy construction timbers'. By doing so, this increased the use of LKTS for a construction project of the Uganda Ministry of Works from 3 to over 100. How species can be grouped depends on the potential end-use: e.g. on appearance, strength, resistance to fungi, etc.

Similar to grouping, new species with alike wood properties may replace commonly used timbers that become less available or those with irregular supply. As such LKTS may be able to be complementary or even fully substitute traditionally used timber species. Another reason for replacing species by LKTS is the shortage of *certified* well-known timber species from third party certified sustainably managed forests.

### **LKTS as an alternative for non-certified timber**

Founded in 1942, Timbmet is one of the UK's leading suppliers and manufacturers of timber and panel products. The company successfully introduced the LKTS Red Grandis plantation eucalyptus. An important factor was that this species is a good alternative for non-certified mainstream species like Sapele (*Entandrophragma cylindricum*) and Meranti (*Shorea* spp.) (Timber Trade Journal, 24 Aug 2013).

Communicating appropriate end-uses and help comparing species can be done by:

- Aiming for inclusion of the new species and its potential use in timber reference guides, e.g. the Houtvademecum in the Netherlands;
- Aiming for inclusion of the species in 'recommended species lists' for specific applications, like window frames, facade use and doors;
- Developing information sheets and include pictures of the wood, pilot projects, etc., e.g. the WWF Guide to lesser known tropical species;
- Designing a database for comparison of common timber species to LKTS.

### **Identify target groups**

Manschot (2014) concluded that most initiatives on promoting LKTS are rather passive towards their target groups. The image of tropical timber in general might hinder the acceptance of even more (new) species from natural tropical forests. Informing markets and end-users about the inherent role of LKTS in the overall practice of SFM can create awareness and support the introduction and acceptance of new species. This should be done in a proactive way by contacting the target group directly and personally to explain the benefits of tropical timber, including the 'lesser known'. It is recommended to have clearly identified target groups at sector level and to specify the promotion per target group to link up with their (information) needs. For construction and building, technical information is most important, aesthetics and workability are more important for those engaged carpentry and furniture (van Dijk, 2013).

Specific target groups might be sensitive to ‘story telling’. While the use of LKTS itself is already a good story to tell within the context of SFM, additional to the third party certification of it, fair trade concepts may be equally important to consider. When working with local forest-dependent communities and sourcing from community-based small scale timber producers in developing countries this can add to (credible) ‘story telling’.

## 4.2 Practical tools for promoting and communication

Without pretending to offer a complete overview of tools to support the promotion and introduction of LKTS in mainstream markets, the following suggestion might be considered as a tool in the overall marketing of new species.

### Wood samples

To raise enthusiasm, create interest and gain trust in the new species amongst potential buyers, samples can be provided. This can be a box with wood samples of the new species or larger sizes and volumes, to allow potential users to experiment and gain experience with the new timber species themselves. It is important to deliver a representative set of samples. The timber has to be dried well to avoid distortions. And make sure the samples contain representatively specific properties of the species, like erratic stains. Also, be sure to send flat sawn and quarter sawn samples or samples sawn according to specific client request.

#### The LKTS Animal Parade by FSC Denmark

FSC Denmark developed a playful set of LKTS wood samples. In addition to the online database and the LKTS publication ‘The FSC animal parade’, the Danish designer Martin Dalsgaard Christensen made three animals consisting of 36 samples of promotional timber species in total. In each sample a number is carved that matches with the page number in the book, giving a description of that particular species, photographs and technical information.

Christensen won the Designer Talent of the Year 2013 Award with the prototypes of these three sample animals.



Animal Parade developed by FSC Denmark. Source: FSC Denmark

### Pilot projects (demonstration projects)

With pilot projects practical experiences with the new species can be gained. The performance, aesthetics and suitability for specific uses can be showcased to potential buyers. Existing partnerships (see also chapter 3) can be used to establish pilot projects to test and demonstrate what is possible and can be done with the new species under consideration. The acceptance of new species by end-users and the willingness to engage in business by buyers may be triggered only after positive experiences shown in these pilot

projects. During the process of designing and executing pilot projects, good and regular communication and guidance of the implementing contractor is key to the success of the pilot.

### The restoration of Albert Bridge London

EcoChoice Ltd., based near Cambridge, UK, in the East of England, is specialist suppliers of FSC certified sustainable timber products for the construction industry. EcoChoice introduced sustainably sourced Eveuss (*Klainedoxa gabonensis*) from Cameroon on the UK market. The key in the marketing process of the lesser known species was the restoration of the Albert Bridge in London (Timber Trades Journal, 24 Aug 2013). Note that large projects can be a risk to (first) introduce a species. In general it might be safer to start with a smaller project. (See also <https://www.lesserknowntimberspecies.com/species/eveuss>)



## Communication tools and events

### Websites and databases

If you already have a (company) website, consider to add a special (roll out) header dedicated to LKTS. The first information that visitors to your website should be confronted with is the 'rationale' behind the use of LKTS: the need to harvest and sell new species as integral and conditional element of sustainable forest management, aiming to reduce pressure on mainstream timber species and maintaining the forest species composition and associated biodiversity (see the factsheet at pg. 12 as an example). Then introduce the new species you have to offer to your clients by providing detailed and illustrated descriptions for each of them and/or make a factsheet available as download.

In case you do not have your own website (yet) then, before considering to make one, it is worth investigation the options to make use of - or refer to - already existing websites. Examples of existing websites on lesser known timber species are:

- <http://www.tropicaltimber.info> (by ITTO): contains info on LKTS, technical information, also availability per species. Make sure you are added as a (certified) forest producer on the maps of the specific timber species. Contact information can be found on the website.
- [www.houtdatabase.nl](http://www.houtdatabase.nl) (by Probos, owned by Centrum Hout): contains information on more than 200 timber species, such as mechanical and physical properties, uses (incl. pilot projects), suppliers and availability with a certificate for sustainable forest management that meets the Dutch procurement criteria.
- [www.lesserknowntimberspecies.com](http://www.lesserknowntimberspecies.com) (by FSC Denmark): this website is developed for inspiring and guiding timber users to diversify their selection of timber species. The website contains information on more than 200 species, like physical and mechanical properties, appearance and typical uses. More than 50 cases are included to share experiences and for inspiration.

### **Social media**

These days social media are an important source of communication and information. One of the benefits of social media is that interaction with customers is easier, they can make suggestions, give feedback and easily follow the progress of e.g. a pilot project.

### **Media and free publicity**

Media attention can serve as free publicity. Through interviews and articles in newspapers, professional magazines and even on radio and television, information on new species can easily be shared with a wide audience. Other option for free publicity and exposure come with attending fairs and exhibitions. At fairs there is often the possibility to give a presentation or workshop.

#### **The Consortium Tropical Timber, the Netherlands**

The consortium launched a website to communicate their pilots ([www.fsc.nl/lkts](http://www.fsc.nl/lkts)), made the promotional film 'LKTS, looking beyond the known species' (*In Dutch: 'LKTS: verder kijken dan de bekende houtsoorten'*), and they make use of the network of the consortium members and social media (Twitter: #LKTS, #kiestropisch, #FSC). The film can be watched via <http://www.fsc.nl/nl-nl/fsc-per-sector/hout/lkts>

### **Events and exhibitions**

Each year in the timber sector several events like sector meetings, trade shows, fairs, seminars and workshops are organized. These events could be an opportunity to give information on the introduction and use of new species in general, present specific LKTS to a wider audience and share the results of pilot projects. Currently the largest event for the timber trade in Europe is the Carrefour du bois (Timber show) in Nantes, organized every two years. To raise awareness and demonstrate the applications of the promotional species, workshops can be organized for the target group at these events.



## 5 Lessons learned and recommendations

In this closing chapter of this Good Practice Guide on the introduction of lesser known timber species (LKTS) in mainstream markets, based on our experiences during the implementation and evaluation of the LKTS project in Suriname, we share our ‘lessons learned’ and make some recommendation to consider when developing your own project and/or working on similar initiatives. Recommendations are clustered according 1) project management (preparation and implementation), 2) LKTS selection and availability and 3) LKTS research and practical scale testing.

### Related to project preparation and design

The LKTS Suriname initiative was based on a previous project that resulted in the FSC certification of close to 400.000 hectares of sustainably managed forest, and a subsequent trade mission in 2015 aiming to create business relations between suppliers and buyers of FSC certified timber. The LKTS project started in 2016 in which all four FSC certified companies in Suriname were asked to participate. Although they all agreed to do so, in practice their genuine commitment and contribution to the project turned out to be less than agreed during project design. Not all promised budget contribution were made and the supply of selected LKTS was less in volume and severely delayed in time.

To avoid these and similar underperformances during project implementation, the following lessons might be learned from it / recommendations might be taken at heart:

- Be sure that project partners have adequate time and resources available to make their contribution to the project.
- Make sure that partners are genuinely committed and well aware of the potential advantages the outcomes of the project may bring them in support of their SFM business case.
- Realize that unforeseen circumstances may seriously affect implementation (both course and time) of the project, e.g. an early start of the rainy season, bad condition of forest hauling roads, breakdown of machinery, and so on.
- Be aware that, considering the above and once up-and-running again, companies will give priority to the logging main species to maintain core business first.

**Recommendation 1:** *Elaborate on making a risk-assessment and formulate mitigating actions as part of the project preparation.*

In the Netherlands, potential buyers of FSC timber from Suriname were asked to participate in the selection and practical scale testing of the selected LKTS. Alike the suppliers, also buyers were asked to make a contribution to the project budget, both in cash and in kind, the latter basically by practical scale testing. Although some had met during the FSC trade visit, most of the potential LKTS trade partners were new to each other ‘in doing business’ at the start of the project. Also during preparation (and implementation) of the project, no opportunities were created to meet. Not knowing each other may have contributed to the lack of mutual understanding at moments of time delay and insufficient supply of LKTS for (practical scale) testing.

Lessons learned from this are:

- Engage partners in your LKTS project that already know each other through existing business relations. In Suriname, the LKTS project started short after companies were FSC certified, thus being new in FSC timber trade market. As such, disappointments in the LKTS project may even negatively affect the fragile FSC trade relations.
- To get to know each other, create ample opportunities for business partners, both suppliers and buyers, to meet. Conference calls may do.

**Recommendation 2:** *Create opportunities in your project for partners to get to know each other, aiming at the creation of mutual understanding and common ownership of the project. Preferably, engage partners that already know each other.*

Most donors ask project implementing partners for own contribution as well, as a means to the end of creating commitment. While during project preparation fixed agreements are made on the cash contribution of project partners, the ‘in kind’ contribution is commonly described in general term only, e.g. the free of charge supply of the required volume of LKTS for testing purposes. However, depending the type of pilot/demonstration projects for practical scale testing, the volume needed may be considerable and far beyond the suppliers’ expectations. In the LKTS Suriname project, this was one of the major reasons why far less than required samples were shipped for testing. Important lessons from this are that:

- During project design the partners’ contribution, both cash and kind, should be well described and maximized.
- In case of the need for additional ‘in kind’ contributions, e.g. extra LKTS volume demand for practical scale testing, provisions for compensation should be in place.

**Recommendation 3:** *Be clear on what contribution - and to what extent - is expected from project partners, both cash and kind, and create facilities for (financially) compensating for addition requests.*

A project on the market introduction of LKTS doesn’t just deal with lesser known timber species but with far more uncertainties and ‘issues to be solved’ as well. Although forest inventories may indicate sufficient available volume of a specific tree species, this doesn’t mean that it is available from the harvesting block that’s being logged now. Once felled, transport may be delayed because of bad forest road due to heavy rains, primary cutting of logs into preferred dimensions may be delayed due to unfavorable log characteristics, and export may be delayed because export authorities are not familiar with the timber species at stake. Or, to summarize, working on the ‘lesser known’ may confront project partners with multiple challenges. Project implementing should be flexible to anticipate on these kind of unforeseen issues and time should be sufficient to deal with these challenges. In the Suriname LKTS project, the initial time set for the harvest, transport and shipping of LKTS to the Netherlands was far too ambitious and had to be adjusted many times. The same counts for both the laboratory research and practical scale testing. While at the wood research laboratory the drying of LKTS samples took much longer than expected, there was no time left at all for practical scale testing and monitoring of timber performance in the end-use situation.



Major lessons that can be learned from this:

- Realize that the prefix ‘lesser known’ not only refers to the timber species itself but may also apply for many other activities that relate to the implementation of the LKTS project.
- Be aware that minor time delays may eventually result in huge time losses, e.g. a one-day delay of clearance for export may result in 4-weeks waiting for a next shipment.

**Recommendation 4:** *Make use of the maximum of project running-time in the planning and implementation of your project. Project implementation should be enough flexible to deal with the uncertainties that are inherent to the research on new timber species.*

### Related to the project management and implementation

In the Suriname LKTS project, the overall responsibility was with the projects’ applicant, i.e. Probos. For implementing the first phase of the project, dealing with the selection of potential LKTS, clear agreement was made with the local office of Tropenbos International (TBI) in Suriname to manage and facilitate this process. During the second phase of the project, basically only dealing with the timely supply of the selected LKTS for testing in the Netherlands, the role of TBI in Suriname was unclear. Apart from some ad-hoc support, during this second phase local project coordination was lacking. Probos had to take this role, including all communications with the LKTS supplying companies. The lack of local project coordination may have been a major cause for misunderstanding and the limited supply of wood for testing. Important lessons to be taken at heart are:

- Seek for a local project coordinating partner to support project implementation.
- For obvious reasons, considering the role of LKTS project partners, the local project coordinator should not have a direct stake in the LKTS project.
- Be very clear on what is expected of the local coordinator and how to compensate for the services provided, engage in a formal contract.

**Recommendation 5:** *For the coordination of project activities in the suppliers’ country a local project coordinator should be contracted, the contract should clearly state tasks and responsibilities and mutual expectation.*

### Related to the selection and the number of LKTS to be included in the project

The testing and market introduction of LKTS may confront parties with - sometimes unforeseen - challenges and requires long-term commitment and ample resources, both time and money. This may be most important reason for limiting the number of LKTS in a single project. Another reason is not to introduce too many LKTS at the same time in existing markets. In the LKTS Suriname project, the SBB list of ‘potentially commercial species’ (class B) and the annual SBB production data of these species were the first criteria for selection. Eventually, after a vigorous selection initially 10, but ultimately only five species were selected for research and testing. Final selection was not always easy as interests and opinions may vary between project partners: suppliers and buyers may have opposing interests.

An important lesson from this is that the selection process and the number of LKTS are preferable already described in the project documents:

- Before starting the selection of LKTS, the criteria for selection and the process itself should be agreed by all. The 'selection funnel' as introduced in this Good Practice Guide served well in the case of the LKTS Suriname project.
- Be modest in what is possible, depending on available time and resources, limit the number of LKTS in the project, preferably already defined in the project documents.

***Recommendation 6: Both the (basics of the) LKTS selection process and the maximum number of LKTS to be selected for further research and testing should already be described in the project documents.***

A final recommendation regards **the moment of shipping of the LKTS sample material for testing** to the Netherlands. In the case of the LKTS Suriname project not all required volumes of the selected LKTS material could be supplied at the same moment. First supply was left waiting at the local log yard for an extended period of time before being shipped. This may have a negative effect on the quality of the logs, resulting in fungal decay and defect due to borers. Based on this experience it is recommended to cut the available timber into the agreed dimensions and prepare for shipping at the first possible occasion. To prevent the loss of timber quality, don not store logs for testing for an extended period in the local log yard.

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