

# Exporting value-added bamboo products to Europe

Bamboo has been increasingly used as a substitute for tropical timber on the European market. Value-added bamboo products are becoming popular due to their characteristics of durability and strength, which resemble the qualities of tropical wood while providing an equally sustainable alternative. The European market offers great opportunities to exporters from developing countries and it is recommended that they focus on competitive prices and sustainability certifications.

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## 1. Product description

Bamboo is considered a grass with rapid growth. As it is a colony plant, it produces new canes (culms) every year from the root system. After 3 to 5 years, culms are ready for harvest, depending on the species. Every year, 5-6 culms can be harvested (from the species that are growing in clumps).

Figure 1: Bamboo flooring



Source: [MOSO](#)

It takes a varying number of years (4-15) for the plant to reach its maximum size (depending on the species and the climate). Bamboo combines durability and strength, while being dent resistant and eco-friendly.

Bamboo is native to most tropical and subtropical countries around the equator (such as Ecuador and Colombia), but it is also cultivated in countries such as China, Japan, Chile, Mexico, New Zealand, and so on.

Added-value bamboo products are mainly produced in China and purchased in Europe. Bamboo is increasingly

used as a substitute for hardwood, since it provides an environmentally sound proposition. In this fact sheet, value-added bamboo products are restricted to flooring, panels and decking made of bamboo, as there are limits to the statistics.

However, many more bamboo products are available on the market nowadays, such as construction beams, kitchen ware, latex-backed flooring on a roll, mouldings and of course the traditional furniture assortment.

For the classification of these products, the Eurostat Harmonised System (HS) is used. The following product codes are used: 4409.21 Bamboo, including stripes and friezes for parquet flooring and 4412.10 Veneer panels and similar laminated wood, of bamboo.

Other product groups (9401.51 and 9403.81) contain the classic bamboo furniture and the more modern furniture made from bamboo panels. This group is not taken into account because it is mixed with rattan, which will not be discussed in this study. Product specifications can be separated into the following characteristics.

Table 1: Overall specifications

	Flooring	Decking	Panels
Uses	Floors in hotels, houses, schools, offices, restaurants	Outdoor spaces such as gardens, swimming pools, terraces, public areas	Kitchen cabinets, countertops, ceiling, wall decoration, furniture
Panels dimensions	<ul style="list-style-type: none"> <li>• 1850 x 96 x 14 mm</li> <li>• 1850 x 130 x 14 mm</li> <li>• 1850 x 125 x 14 mm</li> <li>• 1920 x 96 x 15 mm</li> <li>• 960 x 96 x 15 mm</li> <li>• 915 x 125 x 14 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 2200 x 140 x 20 mm</li> <li>• 1860 x 140 x 20 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 2440 x 1220 x 5 mm</li> <li>• 2440 x 1220 x 12.7 mm</li> <li>• 2440 x 1220 x 19 mm</li> <li>• 2440 x 1220 x 25 mm</li> <li>• 2440 x 1220 x 30 mm</li> <li>• 2440 x 1220 x 40 mm</li> </ul>
Colours	Natural, Tiger, Caramel, Chocolate and Grey colour	Dark, Black or Caramel colour	Natural or Chocolate colour
Grains	Horizontal or Vertical or Strand Woven	Strand Woven	Horizontal or Vertical or Strand Woven

	Flooring	Decking	Panels
Hardness	Brinell scale: $\geq 4$ kg/mm <sup>2</sup> (plain or side pressed) and $\geq 9.5$ kg/mm <sup>2</sup> with High Density outer layers	Brinell scale: $\geq 9.5$ kg/mm <sup>2</sup> with High Density outer layers	Brinell scale: $\geq 4$ kg/mm <sup>2</sup> (plain or side pressed) and $\geq 9.5$ kg/mm <sup>2</sup> with High Density outer layers

## Types of packaging

The International Standards for Phytosanitary Measures (ISPM) apply to wooden packing materials. Products are placed on heat-treated pallets with protectors for the pallet-wrapping strips. This packaging is generally for protection rather than for marketing purposes.

Orders are usually well packed (individually, in bundles or on pallets) and transported and counted by the number of containers (20 ft or 40 ft). Dry Cargo Containers defined as 20'GP (general container), 40'GP and 40'HQ (high cube) are normally used for shipment. If the density of your product is very high and the volume of the order is low, it is recommended that 20'GP containers are used. If the volume is large, it is recommended that 40'GP containers are used.

Figure 2: Bamboo decking



Source: [MOSO](#)

## Labelling

Labelling depends on your buyer and your end market. In the event that your product ends up on the retail market, all labels must specify the product's sizes, certification, function or building instructions (in case of prefab), and the requirements for maintenance.

## 2. What makes Europe an interesting market for value-added bamboo products?

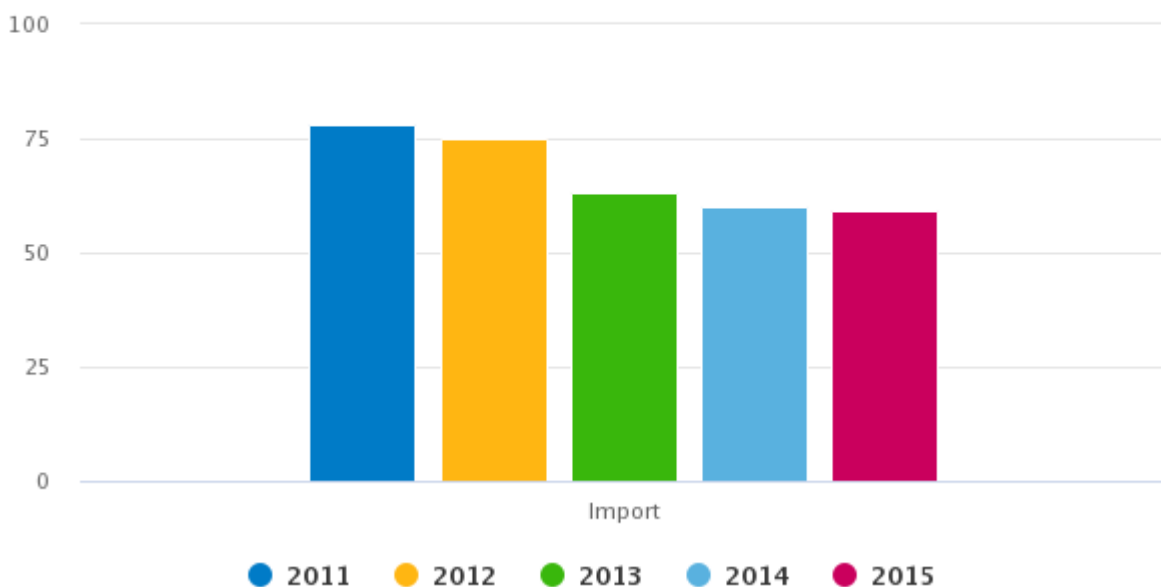
This section provides an overview of the market for value-added bamboo products. The trade data on bamboo are extracted from Eurostat.

### Import: stable situation

The figure below presents the import of value-added bamboo products to the 28 European Union countries.

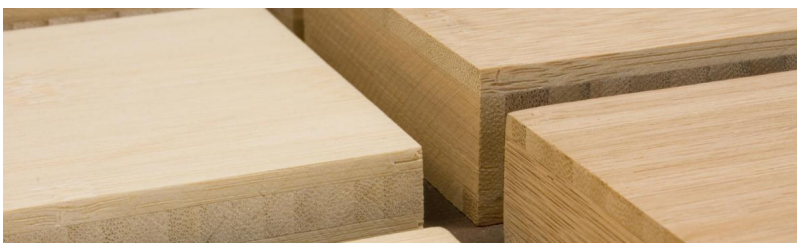
**Figure 3: Imports of bamboo products**

2011–2015, in € million



Source: Eurostat 2016.

Figure 4: Bamboo panels



Source: [MOSO](#)

During the period between 2013 and 2015, imports to Europe were stable. The evidence of economic recovery is not yet shown in the figures, resulting in an import value of € 59 million over 2015. Out of the total import, 59% came from other European countries (so-called “intra-European trade”), while the remaining 41% came from developing countries (mainly China).

Based on the import figures alone, it seems that there is not much activity in the market, but this assumption would be incorrect. The consumption graph below shows a substantial increase, which is good news for bamboo product manufacturers in developing countries. The reason that there is no increase in imports is that more imported products are now sold on the European markets, instead of being re-exported. This development has resulted in decreasing export figures. The strict implementation of the EUTR might still affect imports of bamboo products in the coming period, since Europe has been actively blocking imports of illegal timber and Bamboo as well as non-verifiable products.

In 2015, the largest importers were the Netherlands (€ 20 million), France (€ 8 million), the United Kingdom (€ 8 million), Belgium (€ 5 million) and Germany (€ 4 million). The leading supplier from developing countries was China (€ 23 million). Other countries do not play a substantial role (less than € 0.5 million).

### **Re-exports: continued decrease**

The figure below presents the export of value-added bamboo products from the 28 European Union countries to the rest of the world.

European exports decreased for the fourth year in a row, amounting to around € 13 million in 2015. As value-added bamboo products are not produced in Europe, export principally means “re-export”. For 2015, consumption levels increased (see below) and less export was consequently required. Out of the total export, 74% was destined for other European countries (the so-called “intra-European trade”), while the remaining 26% was exported to countries outside Europe.

In 2015, the largest exporters were the Netherlands (€ 5 million), Belgium (€ 2 million), Denmark (€ 2 million) and Spain (€ 2 million).

### **Consumption: continued increase**

The figure below presents the consumption of value-added bamboo products in the 28 European Union countries. Consumption is calculated as Imports + Production – Exports.

The consumption continues to increase after a sharp drop in 2012, amounting to € 45 million over 2015. The GDP and consumer confidence are expected to increase further in 2016 and the popularity of bamboo products in general will not lag behind. These developments will further positively affect consumption. In 2015, the largest consumers were the Netherlands (€ 17 million), France (€ 8 million), the United Kingdom (€ 7 million), Belgium (€ 4 million) and Germany (€ 4 million).

As production of bamboo flooring, decking and panels does not take place in Europe, its value is zero.

## **3. Which trends offer opportunities on the European market for value-added bamboo products?**

The [CBI Tropical Timber Trend](#) document provides you with detailed trends on the European market for sustainable tropical timber, timber products and bamboo. The section below gives a short summary of the most important developments and trends on the European Union market.

The growing utilisation of bamboo presents a solution to the controversial use of tropical timber. Though the use of tropical timber is associated with some unique features, such as durability and rot resistance, it is also associated with illegal logging and deforestation. In this respect, bamboo is presented as a much more sustainable solution, mainly because of its rapid growing speed. As such, it is considered a renewable material and is being marketed on the European market in this manner.

Since the 1990s, bamboo products have been successfully substituted for tropical timber products, creating a great demand for bamboo imports. The substitution of tropical timber by bamboo has occurred because of its environmentally friendly features, but also because of its technical properties. Despite the fact that tropical hardwood is considered ideal for outdoor and indoor applications, some Bamboo products have already started competing with these claims.

Its increasing popularity has resulted in continued research and further improvement of bamboo products. One example of new, innovative bamboo products is the introduction of high-quality Vertical and Strand Woven products. Such products consists of 90–95% bamboo, with the remainder being glue. After harvesting, the bamboo is split, the skin is removed, the material is crushed to a rough fibrous kind of strip, impregnated with resin, pressed in moulds and the glue is activated by heat.

These products are a perfect fit for outdoor decking. Wood-look recycled plastic or Wood Plastic Composites (WPC; for example, [Polywood](#)) are some of the materials that are marketed as close substitutes of tropical timber and bamboo. This development can be a problem in the decking market, where these WPC products are taking over market share rapidly.

The rise of demand in emerging economies continues. The rapid development of emerging economies is fuelling demand for bamboo products.

The European Union Timber Regulation (EUTR) is meeting expectations only partly. The implementation of the EUTR is still in its infancy. In many European Union Member States, the monitoring of illegal trade is still insufficient.

The Gross Domestic Product (GDP) in the European Union is expected to grow by 1.8% in 2016 and by 1.6% in 2017 (EU/EFTA Forecast 2015). The growth for 2017 was tempered in the last part of 2016 because of Brexit, the United Kingdom's withdrawal from the European Union.

The euro has appreciated against the US dollar, from a low of 0.72 euro/US dollar in April 2014 to a high of 0.94 in November 2016. This fact means that the euro is still weak (November 2016), which has influenced prices and price competitiveness. A stronger euro means that European buyers pay relatively lower prices for bamboo from China and other countries that maintain prices in US dollars or have currencies linked to the US dollar.

### Tip:

Bamboo has many applications and its popularity attracts various consumer groups. Industry sources indicate that innovative bamboo products are increasingly preferred by architects who are experimenting with different materials. If you are supplying the higher segments of the market, make sure that you offer innovative solutions such as the one mentioned above.

## 4. Which requirements should value-added bamboo products comply with to be allowed on the European market?

This buyer requirement section is separated into three parts: requirements that you *must* meet to be able to export, additional requirements that you *may* meet and niche requirements that you *can* meet. Below, you will find a summary only. For more information, please read the more detailed CBI document on “[Requirements with which your product should comply](#)”. You can also check the International Trade Centre’s [Standards Map](#), an online tool providing information on over 130 standards and other similar initiatives.

## Which requirements must you comply with?

The European Union Timber Regulation (EUTR) is the most important requirement that you must meet. Although bamboo is not a wood species, it can be considered as such. This reason is why some bamboo products such as flooring and panels have been included in the EUTR. Nevertheless, several sources indicate that bamboo should not come under the EUTR, which would differentiate it from timber. This discussion is still not finished on the EU/EFTA level.

For example, the designated Dutch competent authority and the government share the opinion that “bamboo is not a product that qualifies under the scope of the Regulation” (Source: [MOSO](#)).

However, for the moment, all timber and bamboo imported into the European Union needs to come from verifiable legal sources. The implementation of the EUTR is still in its infancy. In many European Union Member States, the monitoring of trade in illegal timber and bamboo is still insufficient.

Since the implementation of the EUTR, the supply chain of timber and bamboo has become more transparent. It has already resulted in major improvements to the legality control and the overall environmental and social performance of the timber and forestry industries. This process might still take some time, but the European Union will move towards a stricter implementation of the EUTR.

At this moment (2017), all bamboo products are included in the EUTR except for the following: products made from plaited or woven bamboo, pulp and paper made from bamboo, and seats (chairs, sofas, and so on) made from bamboo.

There is also the European Union General Product Safety Directive, which applies to all consumer products. Products that are permanently incorporated into construction works also have to comply with the Conformité Européenne (CE) requirements. Timber or timber products that are permanently incorporated into construction works will have to be CE marked: this requirement applies to windows, doors, frames, industrial flooring and parquet, stairs, glued laminated timber, panels, cladding and structural timber.

In principle, bamboo products are excluded from the CE marking because there are no product standards. At this moment, bamboo flooring is still excluded from the CE standard as well. This situation means that no CE marking is required on bamboo flooring. Nevertheless, experts from MOSO, other bamboo flooring manufacturers from Europe and test institutes have developed a European Harmonised Standard for “lignified materials other than wood” (EN 17009), including bamboo flooring.

In addition, the development of an ISO standard for bamboo flooring is in progress. Once these two new standards are available, they have to be used as standards for the CE marking of bamboo flooring. At this moment, it is expected to have the European Harmonised Standard published by the end of 2017.

You also have to comply with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the European “Registration, Evaluation, Authorisation and Restriction of Chemicals” (REACH). For packaging material, you have to comply with the International Standards for Phytosanitary Measures (ISPM).

## Which additional requirements do buyers often have?

Sustainable forest management is especially relevant to tropical timber, due to concerns about deforestation and global warming. Bamboo is considered to be one of the most sustainable ‘lignified material’ species, mostly because its growth speed is more than 10 times quicker than that of hardwood (around 5 years compared to at least 50 years). Bamboo can be harvested without the need to replant, because the root system is left intact when it is harvested.

At the same time, its root structure has the ability to hold the soil in place and prevent erosion. Finally, in its natural environment, it will need no irrigation, no pesticides and no fertiliser. Based on the growing market, FSC



certification (Forest Stewardship Council) has included bamboo forests and bamboo products in its standards, to confirm their sustainable harvesting and production.

The awareness of consumers regarding sustainability issues in general is increasing. As a result, several European companies have started offering FSC certified bamboo products. Moreover, importing companies often need to address other issues than the origin of wood. European buyers pay more and more attention to their corporate responsibilities regarding the social and environmental impact of their business. This aspect also affects traders and processors.

## **What are the requirements for niche markets?**

Ecolabels may be important. These labels do not only focus on sustainable sourcing but also on other aspects of the products: processing (for instance, energy consumption, waste management), packaging and the use of chemicals. Smallholders and communities often face tough competition on the global timber market. The Forest Stewardship Council (FSC) has developed a “dual certification of FSC and Fair Trade” that has been tested and is available.

## **Country-specific requirements**

Various European countries have their own regulations or requirements. The following larger importing countries and their specific requirements can be identified.

### **Germany**

General building regulation (Bauordnungsrecht). “U” mark (mandatory requirement for commercial building products). German regulations on pentachlorophenol and formaldehyde (Chemikalien-Verbotsverordnung). Public procurement. The DIN (German Institute for Standardisation) aims to organise and moderate standardisation in Germany. It currently has 11 standards and specifications in relation to tropical timber.

### **Belgium**

Belgian building regulations. Public procurement. The Federal Government supports the certification of sustainably managed forests and will use only certified wood in its procurement procedures. The Federal Government advised the 3 “Gewesten” (Regions) to implement similar regulations, which they are doing gradually. The NBN (Bureau for Standardisation) aims to organise and moderate standardisation in Belgium. It currently has 24 standards and specifications in relation to tropical timber.

### **France**

Public procurement: the French government’s public procurement policy for timber requires that all timber and wood-derived products must be from independently verifiable, sustainable sources.

AFN technical standards. AFNOR provides technical specifications for outdoor timber: NF B54-040:2010, NF B54-040/A1:2013 and NF EN 12871:2013. Specifications include product dimensions, stability and moisture requirements.

### **The Netherlands**

Dutch building regulations (Dutch “Bouwbesluit”): products used in building projects must comply with the Dutch building regulations. Public procurement. Dutch regulations on various chemicals such as formaldehyde. The NEN (Dutch Institute for Standardisation) aims to organise and moderate standardisation in the Netherlands. It currently has 51 standards and specifications in relation to tropical timber.

## **5. What competition do you face on the European market for**



## value-added bamboo products?

For a complete and detailed overview of your competition on the European market, you can read our “[Competition in the timber sector](#)” document. With regard to bamboo, take the following into account.

### Timber and composite alternatives compete with the sustainability of bamboo

Bamboo is considered to be a sustainable alternative to timber and is increasingly being used as a substitute for tropical timber on the European market. Nevertheless, some European buyers might turn to bamboo alternatives, replacing it with composite materials or treated temperate timber.

#### Tips:

The drive for innovation is important on the European market for bamboo products. New products are being developed which combine bamboo with other materials. One example is bamboo/vinyl flooring ([FlexBamboo](#)), where thin bamboo strips are pressed onto a latex backing.

Other innovations are the outdoor [cladding and beams](#) that are now entering the market. You can find further examples of innovative bamboo products on the websites of the Dutch [MOSO](#) company and the British [Bamboo Flooring](#) Company.

### Your competition is working on legality and traceability

Legality and traceability requirements are considered major barriers for exporters in developing countries. This fact is because of the potential problem with illegal timber. Nevertheless, products with less detailed specifications and less sophisticated design, such as bamboo decking, will enter the European market more easily compared to other timber products such as furniture.

#### Tips:

Keep up to date with market access requirements and trends, following details of developments provided by CBI.

Make sure that you work on the legality and traceability of your raw material.

### Your competition is there; make sure that you stand out

Despite the increasing popularity of bamboo, its cultivation has only recently been undertaken in other regions outside China such as Mexico, Colombia, Vietnam and Indonesia. Additionally, industrial sources indicate that suppliers outside China often cannot offer the same affordable, high-quality products or provide certifications. This situation is also caused by the fact that only about 50% of each culm can be used, so markets have to be found for the waste products.

Such markets are available in China, but often not in other countries. As a result, suppliers have increased power due to the limited supplies available. At the same time, it will be harder for exporters outside China to enter the European market due to high quality demands.

As bamboo decking and flooring boards as well as bamboo panels have a standard design, they are not

considered a speciality item such as highly designed furniture articles. Consequently, switching between suppliers is more likely for buyers as compared to speciality items. Market rivalry also depends on the various bamboo species available, as different bamboo species can be used for the same application.

Market rivalry also depends on the quality, design and prices. Bamboo is sometimes used to make a design statement within companies, public institutions or private homes. In such cases, sustainability and design are often important, with the product ordered as a single item and in a specific, unique size and at a higher price than for standard-sized and conventional designs.

### **Tips:**

Innovation is the key to survival and one of the major success factors on the European market for bamboo products. Make sure that you add value to your product by improving its durability, offering flexible sizes, quality and design (colours). Exporters from developing countries are advised to focus on a niche; for example, the high-end market, such as furniture made from bamboo panels. The custom-made market (and related services) is also growing rapidly.

General prices for timber (and thus bamboo) can change daily, so you depend on your buyers to stay informed of the price developments. For more general information on prices, check the [bi-monthly ITTO tropical timber market reports](#) (International Tropical Timber Organization) and the [FORDAQ](#) website.

As many retailers display their products online, verify whether your styles and price ranges match theirs. Be innovative in proposing new styles, but also be flexible if required in order to adapt to traditional styles.

Smaller, specialist retailers can be targeted by exporters of high-quality, innovative products.

## **E-commerce competition**

Online orders directly from producers (in developing countries, delivering directly with online delivery tracking) or directly from DIY retailers and wholesalers (for instance, [Argos](#), [DecksGo](#), and [Overstock](#)) are increasingly popular. Online market places such as [Alibaba](#) and [eBay](#) are also popular options for retail and wholesale. In addition, the normal retail showrooms, DIY centres, warehouses and specialist garden centres continue to be traditional channels.

### **Tips:**

Online buying is increasing among household consumers and importers. As a result, it is recommended that exporters connect with suppliers who own or have access to online shops.

Using social media such as LinkedIn and Facebook can be a way to increase your market exposure. Communication can be aided by web-based call and conference facilities, such as Skype, which allow long-distance face-to-face exchanges.

Make sure to display at relevant trade fairs and on the internet, including a direct sales page on your website with appropriate direct delivery methods.

## European companies are investing in your country and become competition

As a result of increased buyer requirements on the European market, European buyers are working towards vertical consolidation of their supply chain. Europe is replacing part of its suppliers due to legality issues. They can do so by sourcing or producing bamboo products directly in the harvesting countries, thus weakening the role of the exporter.

Vertical consolidation is currently taking place on the bamboo market. This development creates the need for long-term cooperation between suppliers and importers. As such, importers indicate that they are building relations with their suppliers in developing countries for many years to come and often visit the exporting companies to make sure that the operations are carried out accordingly.

### Tip:

The stricter requirements of the European market create the necessity for long-term cooperation. At the same time, working together with other processors and traders will make you a more attractive supplier while reducing the costs and supplying higher volumes.

## 6. Through which channels can you get value-added bamboo products on the European market?

For more general information about market segments and channels, you can have a look at the [Market Channel and Segment document](#) available on the CBI market intelligence platform.

The value chain for bamboo does not present significant differences from the general tropical timber sector. Exporters in developing countries mostly sell their products to importers and wholesalers on the European market. The product is distributed via retailers, Do-It-Yourself (DIY) stores (such as [B&Q](#), [Homebase](#), [Praxis](#) and [Hornbach](#)) and specialist companies, mostly in a finished form.

Trading channels for bamboo products in general have changed drastically in recent years. First of all, the influence of e-commerce has shifted Bamboo sales towards a much quicker and more open process. More importantly, legality and sustainability demands have resulted in the shortening of supply chains, thereby decreasing the number of agents active in the bamboo trade.

Figure 7: Trade structure for bamboo products



**Tips:**

If you supply sustainably certified bamboo products, the Netherlands, Belgium and Germany are the ideal countries for you to export your product. These markets offer higher profit margins on products compared to non-certified ones.

The [Global Forest Trade Network](#), a WWF initiative which aims to connect sustainable timber and bamboo exporters with European industries, can provide you with an important opportunity to connect to the right buyer.

**7. What are the end-market prices for value-added bamboo products?**

There are many factors that influence the prices of value-added bamboo products: popularity of products (demand), durability class/grade, colour consistency, sustainability certification (FSC), innovative design, combination of materials and appearance of the bamboo (clear grain, good machining properties, staining, finishing properties). In general, the correct price/quality combination is key, as well as providing both good services and custom-made products.

**Tips:**

Small premiums are sometimes paid for products with a sustainability certificate.

Make sure that you are continuously working on innovative ideas, providing custom-made services, guaranteeing a stable quality (include a quality control system in your production), and ensuring that you can provide quality evidence (certification) and test reports of your products.

Figure 8: Price breakdown of value-added bamboo products imported to Europe (excluding VAT, average 20%)



Source: FSG.

**Common market prices**

The table below provides examples of retail prices (including VAT) in the major importing countries.


Table 2: Examples of retail prices

Type of furniture	Remarks	Price	Size or parts	Picture	Sold by	Country
Flooring	Bamboo Elite, naturel density, oiled, 3 layers or bamboo	€31/m2	1830 x 142 x 13 mm		Bamboe Vloeren outlet	Netherlands
Decking	Thermally treated	€90/m2	1850 x 130 x 18 mm		Praxis	Netherlands
Panels	Strand Woven Bamboo Panel Crushed Carbonised	€374 per panel	2500 x 1300 x 20 mm		Bamboo Import Europe	Netherlands
Flooring	Solid Carbonised Strand Woven (FSC)	€35/m2	915 x 125 x 10 mm		Bamboo flooring company	United Kingdom
Panel	Bamboo Worktop 3-Ply Natural Density	€221 per panel	2440 x 1220 x 20mm.		Bamboo supplies limited	United Kingdom


Flooring	<b>MOSO</b> Industrial Bamboo side press, caramel	€40/m2	140mm x 280mm strips		<b>Floorhouse</b>	Belgium
Cladding	<b>KUL</b> Bamboo, tongue & groove	€60/m2	10 x 80 x 1960 mm		<b>Froshking</b>	Germany

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