

Export Potential in Lao PDR

Processed Wood and Specialty Agriculture



International Trade Centre¹

21 June 2019

¹ This document has not been formally edited by the International Trade Centre.

Executive Summary

Environmental and economic sustainability is a key challenge for the Laotian economy and its strategy towards exports

In the wood sector, the country needs to transition from large-scale logging and exports of natural, unprocessed wood to a sustainable supply of plantation wood and exports of products with higher domestic value-added. In the agricultural sector, there are products that have important export potential, but leave a large environmental footprint (in particular, manioc).

Considering these aspects is important to protect the environment, but also to ensure production capacity in the long-run. In devising its export strategy, Lao PDR needs to make sure that today's export successes do not harm tomorrow's environment and economy.

The EU is a promising market for sustainable exports, but frictions need to be addressed

The overall export potential of the country is larger in ASEAN and China than in the European Union (EU). However, the EU is an important market for the more sustainable products in the two priority sectors studied in this report. Increasing exports to the EU may thus be one pillar of a sustainable export growth strategy for Lao PDR.

The additional exports that seem possible in ASEAN and China are predominantly driven by the expected demand growth in these markets. Benefitting from it requires investing in promising sectors to ensure that productive capacity is in line with increased demand. Opportunities for export growth in the EU market, on the other hand, result from the fact that frictions are currently inhibiting higher exports. Realizing export opportunities requires identifying and addressing those frictions.

Exports in the processed wood sector could grow by \$31 million – and more if the country diversifies its exports of furniture and other products

The total untapped export potential for processed wood products that the country already exports (wood charcoal, sheets for veneering, parquet flooring, certain types of furniture) is \$31 million. The most important product is wood charcoal for which \$19 million of additional exports seem possible by 2023. Opportunities to diversify and start exporting new products that use domestic inputs from the wood sector include other types of furniture as well as articles for sports and outdoor games.

The agricultural sector presents important opportunities for high-quality niche products – existing ones, like coffee, and new ones, like black tea and flowers

Exports in the specialty agriculture sector (broadly defined) have the potential to grow by \$447 million. Topping the list of the most promising and sustainable crops in the sector, coffee has an estimated export growth potential of \$62 million. Diversification opportunities include black tea and fresh flowers as well as preserved, frozen or dried vegetables that would allow Lao PDR to increase the domestic value-added of its exports.

Table of Contents

Executive Summary.....	2
Abbreviations.....	4
Priority sectors.....	5
Methodology.....	5
Export potential indicator.....	5
Product diversification indicator.....	5
Value chain indicator.....	6
Export potential and employment.....	6
Data.....	7
Interviews.....	7
Overall export potential by region.....	8
Processed Wood.....	9
The wood sector in Lao PDR.....	9
Export Potential.....	10
Opportunities for Value Chain Development.....	14
Specialty Agriculture.....	19
The agricultural sector in Lao PDR.....	19
Export Potential.....	19
Diversification Opportunities.....	26
Opportunities for Value Chain Development.....	30
References.....	32
Annex.....	33
Annex 1: List of products in sector “Processed Wood”.....	33
Annex 2: List of products in sector “Specialty Agriculture”.....	34

Abbreviations

ASEAN	Association of Southeast Asian Nations
EPI	Export potential indicator
EU	European Union
FLEGT	Forest Law Enforcement, Governance and Trade
GDP	Gross domestic product
FDI	Foreign direct investment
GTAP	Global Trade Analysis Project
HS	Harmonized System
IMF	International Monetary Fund
ITC	International Trade Centre
LFS	Labour Force Survey
PDI	Product diversification indicator
RoW	Rest of the world (all other countries)
VCI	Value chain indicator

Priority sectors

This report focuses on two priority sectors: processed wood and specialty agriculture. The processed wood sector comprises 55 products, the specialty agriculture sector 288 products.

Methodology

This report analyses export opportunities using three different indicators: the export potential indicator (EPI), the product diversification indicator (PDI) and the value chain indicator (VCI). This section provides a brief explanation of each indicator and the underlying methodology. For more details, please refer to Decreux and Spies (2016) for the EPI and PDI, to ITC (2018a) for the VCI, and to ITC (2018b) for the employment potential methodology.

Export potential indicator

The EPI serves countries that aim to support established export sectors in increasing their exports to existing and new markets. It identifies potential export values based on supply capacities in the exporting country, demand conditions in the target market and bilateral linkages between the two. The EPI is computed for each product-destination combination, but only for products, which the country already exports.² The EPI goes beyond commonly used measures of comparative advantage by including additional variables, such as gross domestic product (GDP) and population growth prospects (until 2023), tariffs, and geographical distance. This allows accounting for expected increases in domestic supply and market demand, for a country's tariff advantage, and its distance to the target market.

Any gap between a country's export potential and its actual exports can result from two sources: first, future economic growth in the country itself or demand growth in the target market (dynamic, or growth-based export potential), and second, factors that trade advisors may address together with local companies, such as lacking information about the rules and regulations of the target market or difficulties to comply with them or to meet the (quality) preferences of its consumers (static, or friction-based export potential).

This report provides information on the **value** of export potential in each priority sector in the EU, ASEAN, China, and the rest of the world. It distinguishes between export potential that is already used, static export potential that is not used due to some type of frictions, and dynamic export potential that may be realized in view of the expected economic and demand growth until 2023.

Product diversification indicator

The PDI serves countries that aim to diversify and develop new export sectors. Based on Hausmann and Hidalgo's notion of the product space, the PDI identifies products that the country does not yet export competitively, but which seem feasible given the country's current export basket and the export baskets of similar countries.

The PDI starts from a country's current supply capacities and identifies new export products into which the country could diversify. It uses the concept of product space: the idea that a country with a certain export portfolio can relatively easily diversify into new products currently exported by other countries that have a similar export portfolio, as these countries are likely to have a similar set of production capabilities. The PDI methodology improves the product space measure by accounting for natural

² Lists of all products in the priority sectors are included in the Annex. They specify whether the Lao People's Democratic Republic has export potential in each product or not.

endowments that are pivotal for a country to produce certain products and by incorporating demand and market access information.

While the EPI predicts the potential value of exports, the PDI methodology yields a **ranking** of products for export diversification. This report provides information on the highly ranked diversification opportunities in specialty agriculture,³ and the current and projected market imports for these goods in the EU, ASEAN, China, and the rest of the world.

Value chain indicator

The VCI serves countries that aim to diversify and develop new export sectors that promote the transformation of domestic products. It identifies vertical diversification opportunities with a high probability of export success.

The VCI combines information on the input-output links between different sectors and the supply capabilities revealed by the country's current export basket.

- Input-output links: the VCI leverages data from input-output tables that represent inter-sectoral relations, production and consumption in the entire economy.⁴ In particular, it uses "technical coefficients" that capture the share of each sector's input required to produce the output of another sector.
- Supply capabilities: as the PDI described above, the VCI uses the concept of the product space to capture the capabilities to supply new products by looking at how often other countries export these new products jointly with products exported by the Lao People's Democratic Republic.

Similar to the PDI, the VCI methodology does not yield a value for potential exports, but a **ranking** of vertical diversification opportunities. This report provides information on the diversification opportunities that promote value chain development in the priority sectors.

Export potential and employment

This ITC methodology quantifies the expected employment impacts of export growth. It connects a country's untapped export potential to an assessment of the number of jobs that could be created if that potential was realized. The methodology considers job creation within each export sector (direct effects) as well as linkages between sectors. Using input-output analysis, it also measures employment created through increased demand for intermediate goods from upstream industries (indirect effects) and greater consumption (induced effects). Accounting for these linkages is important as they tend to prioritize sectors in which local value addition and wages are relatively high. In such sectors, the induced effects from an increase in exports may be greater than the direct and/or indirect effects on employment. The methodology estimates employment effects for the entire population and disaggregated by gender.

³ The PDI is computed for specialty agriculture, but not for processed wood. The VCI is more pertinent than the PDI in the context of processed wood, as it helps identify opportunities for transforming existing products.

⁴ Input-output tables are not available for all countries. This report uses input-output tables of the United States, Mexico and the Philippines, as they reflect a range of different production structures and are sufficiently detailed to capture how Lao P Democratic Republic may transform existing commodities into value-added export products.

Data

The computations of the EPI, PDI and VCI use weighted five-year averages (2013-17) of trade data from the ITC Trade Map.⁵ Information for tariff data comes from the ITC Market Access Map for the latest available year. Geographic distance, a proxy for transport costs, is taken from a database prepared by the Centre d'études prospectives et d'informations internationales (CEPII), gross domestic product (GDP) from the International Monetary Fund (IMF) World Economic Outlook, and population projections from the World Bank's World Development Indicators database.

The export potential database comprises more than 4,000 product groups based on the six-digit level of the Harmonized System (HS) classification. Certain products not compatible with international conventions, highly dependent on natural resources or not in line with the ITC work program are excluded, and some HS 6-digit codes are aggregated into a product group to allow for consistency across HS revisions. The processed wood sector as defined in this report comprises 55 products, whereas the specialty agriculture sector comprises 288 products. The respective lists of products are included in annexes 1 and 2.

Employment results have been computed using ILO Labour Force Survey (LFS) data and an input-output table built by Menon and Warr using 2002 data and covering three agricultural industries: crops, livestock and poultry and forestry and logging.⁶

Interviews

The qualitative analysis and its findings were complemented by interviews with local sector experts from both the public and private sector (four interviews per sector). Interviews were conducted by phone.

⁵ Trade data reported by the Lao People's Democratic Republic is available for 2010-2016. The comparison of the country's direct reports with mirror reports at sector-level reveals considerable differences. The country's reliability score is ~ 0.3 , while the threshold used to determine reliability is >0.5 . Hence, for Lao PDR's trade with a reliable reporter, only mirror data is used, while for trade with an unreliable reporter, an average of direct and mirror data is used for flows that are reported by both sides.

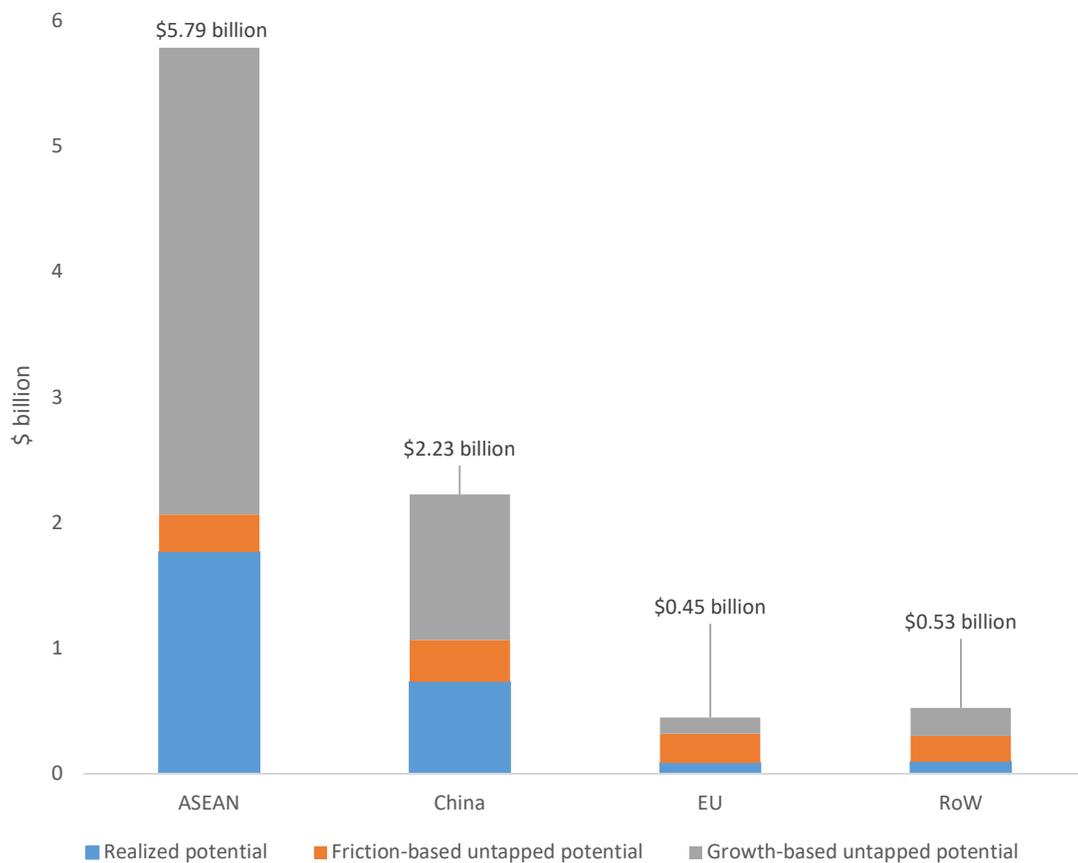
⁶ Should a more recent and sufficiently disaggregate input-output table for Lao PDR become available, employment results should be updated.

Overall export potential by region

The total export potential of Lao PDR is about \$9 billion. The largest share of this export potential lies in the ASEAN region (close to \$6 billion), whereas export potential in the EU is significantly smaller (\$450 million). Exports to China also have a strong potential, of more than \$2 billion (see figure 1). All other countries combined (the rest of the world (RoW)) account for only \$530 million.

As demand in ASEAN and China is expected to increase strongly over the coming years, the potential for dynamic export growth is high, corresponding to 64% and 52% of total export potential, respectively. Within the remaining current export potential to ASEAN, a large share (86%) is already used, while only a small share is inhibited by frictions (14%), implying that Laotian exporters already have good knowledge of the regional market. In order to reap export potential opportunities in ASEAN, it is therefore crucial to strategically target sectors for which demand growth is high. Demand in the EU, on the other hand, is expected to grow relatively slowly, and dynamic export growth potential only corresponds to 29% of total export potential to this region. Current export potential to the EU is used at only 27%, while 73% remains unused due to frictions. To increase exports to the EU, it is necessary to identify and address those frictions.

Figure 1: Total export potential, by region



Source: ITC calculations based on ITC Export Potential Map data (2019).

Processed Wood⁷

The wood sector in Lao PDR

Lao PDR has a competitive advantage in producing wood, but the sector faces important sustainability challenges

Lao PDR is recognized for its excellent climatic and soil conditions for agro-forestry. In the past, trade in the wood sector was largely driven by exports of (almost) unprocessed natural wood⁸ to neighbouring markets. To protect its natural resources, the Laotian government has recently introduced legislation to a) limit the supply of wood to processing industries and b) ban a broad range of wooden products from being exported. These changes in domestic policy affect the prospects for processed wood exports from Lao PDR.

Lao PDR is currently enforcing a strict logging ban on natural wood to curb illegal logging activities and allow natural forests to recover. Areas for plantation wood (wood specifically cultivated for logging purposes) are still small and serve as a reliable source in the medium run, provided that the government provides the required land concessions to the private sector. Hence, conversion wood (e.g. gained from clearing areas for infrastructure projects) currently presents the largest source of raw material for production purposes. As conversion wood is only irregularly accessible through auctions and only available as a by-product of regional development projects, it cannot serve as a sustainable and reliable source for downstream industries. Production levels of the processed wood sector are expected to remain low until the supply shortage is resolved.

In addition to restricting access to raw material domestically, Lao PDR has also imposed an export ban on unfinished wooden products since 2016 to further disincentivize illegal logging behaviour. Only products featured on a narrowly defined export list are allowed to be sold to foreign markets, including semi-finished items unequivocally originating from sustainable plantation wood. These restrictions are perceived as an important obstacle for the private sector. Foreign buyers sometimes demand products which slightly deviate from the specifications set out on the export list, and the impossibility of exporting such customized products results in missed business opportunity.

Together, the persistent supply shortage and ongoing export ban are expected to limit the production, and hence the export potential of processed wood products in the short and medium run. In the long run, sustainable production capacity in the processed wood sector crucially depends on the availability of plantation wood as an input. Sustainability thus emerges as a key challenge for the sector, with the need of moving towards larger domestic value-added given limited wood supply in the short run, and ensuring reliable and sustainable wood supply at a large scale in the long run.

⁷ A detailed list of all products in the Processed Wood sector is included in Table 1 (Annex).

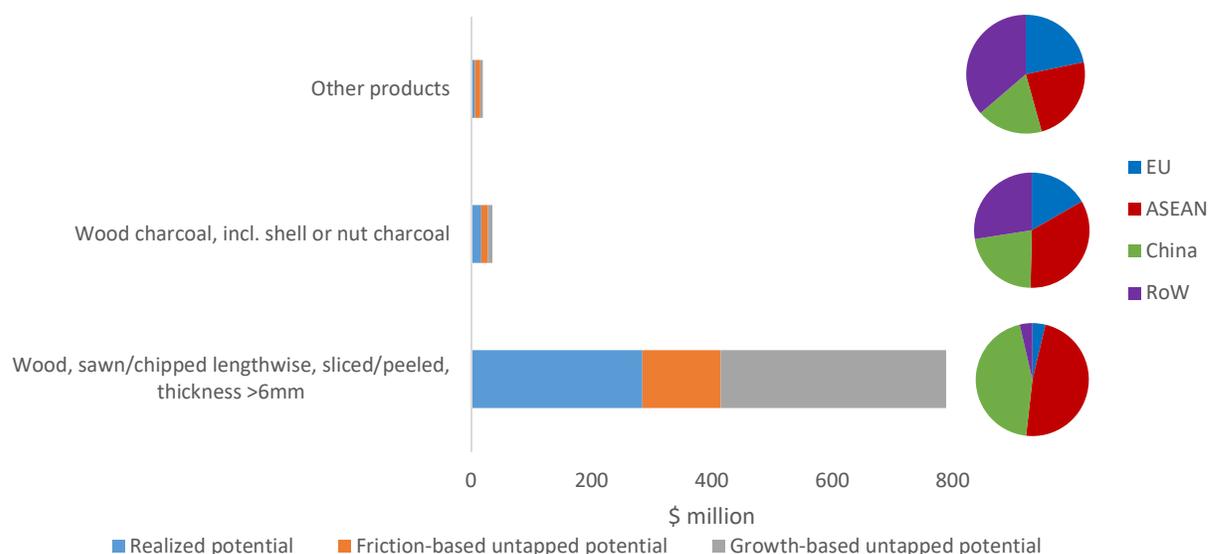
⁸ Natural wood refers to trees that have grown naturally, as opposed to plantation and conversion wood.

Export Potential

“Sawn/chipped wood” has large export potential (\$790 million), but it is declining under the export ban

Lao PDR has export potential in 15 different wood products. With \$790 million, “wood, sawn/chipped lengthwise, sliced/peeled, thickness >6mm” represents 94% of total export potential in the processed wood sector (figure 2). Most of the export potential in this product lies in ASEAN (48%) and China (45%). These results are driven by data on past exports of sawn/chipped wood, which were indeed important. However, product exports are falling under the export ban the Laotian government has established to protect its natural resources. Hence, firms in the sector have to search for other, more sustainable export alternatives.

Figure 2: Export potential in processed wood, by product and destination



Source: ITC calculations based on ITC Export Potential Map data (2019).

Fully exploiting the export potential in products authorized under the export ban could increase exports in processed wood by \$31 million

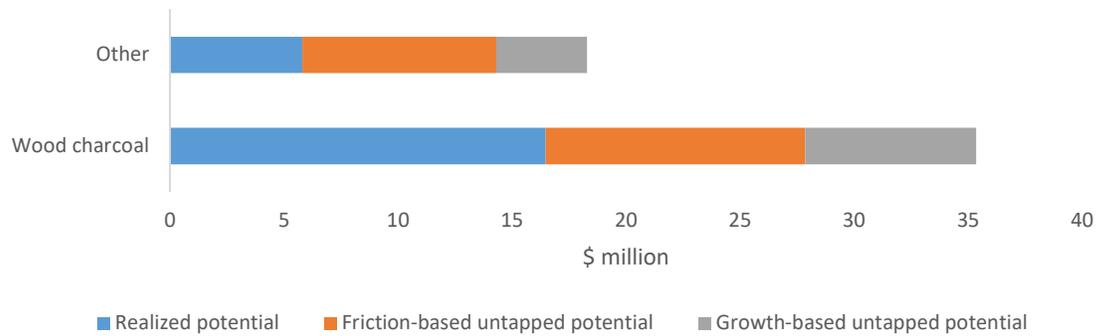
The processed wood products that remain authorized under the export ban combine a total export potential of \$54 million, out of which \$31 million are currently untapped. Fully realizing this export potential would lead to the creation of about 12,500 jobs – about 125 in the wood products sector itself, about 6,500 in the wood products value chain, and about 5,900 through increased consumption in the rest of the economy.

The most important authorized export product is “wood charcoal”, with an untapped export potential of \$19 million

The second most important product is “wood charcoal, incl. nut or shell charcoal”, which represents \$35 million, or 4% of the total export potential in the sector. 47% of export potential is currently used,

32% unused due to frictions, and 21% driven by expected growth (figure 3). 34% of export potential in this product lies in ASEAN, 22% in China, 17% in the EU, and 27% elsewhere.

Figure 3: Export potential in processed wood, by product, excluding sawn/chipped wood



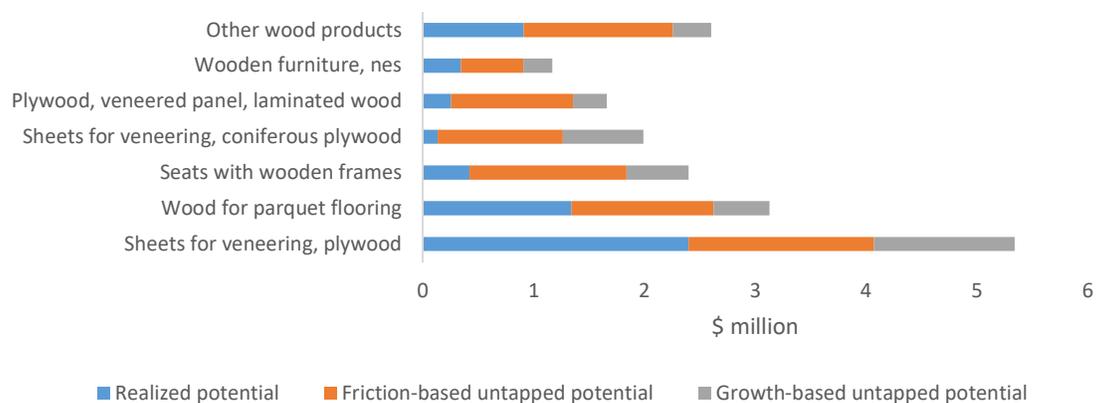
Source: ITC calculations based on ITC Export Potential Map data (2019).

The remaining 13 products account for only 2% of the total export potential. In this group of products, 32% of export potential is already used, and 23% is dynamic export potential stemming from expected growth in markets. At 45%, unused static export potential is particularly high, implying that frictions are important for these less established export products. They are also the products with the highest share of export potential to the EU (22%).

Other products with export potential include sheets for veneering, parquet flooring and furniture

A yet more disaggregated perspective, displayed in figure 4, reveals the main products in this group. Those with a total export potential above \$1 million include sheets for veneering, wood for parquet flooring and different types of furniture. The share of untapped export potential is relatively high in this category, implying that it is possible to achieve substantial relative increases should frictions be overcome. However, total export potential in this group of products is still small, totalling only \$18 million.

Figure 4: Export potential in processed wood, by product, excluding sawn/chipped wood and wood charcoal



Source: ITC calculations based on ITC Export Potential Map data (2019).

Sawn/chipped wood was mostly exported to Asian countries, but the EU is an important potential market for more sustainable wood products

When accounting for all wood products, including those currently prohibited by the export ban (figure 5, right side), ASEAN is by far the region with the highest export potential (\$396 million, or 47% of total export potential). China accounts for 43% of Lao PDR's processed wood export potential with \$363 million. With \$40 million, the export potential to the EU is much smaller, representing only 4.7% of the total.

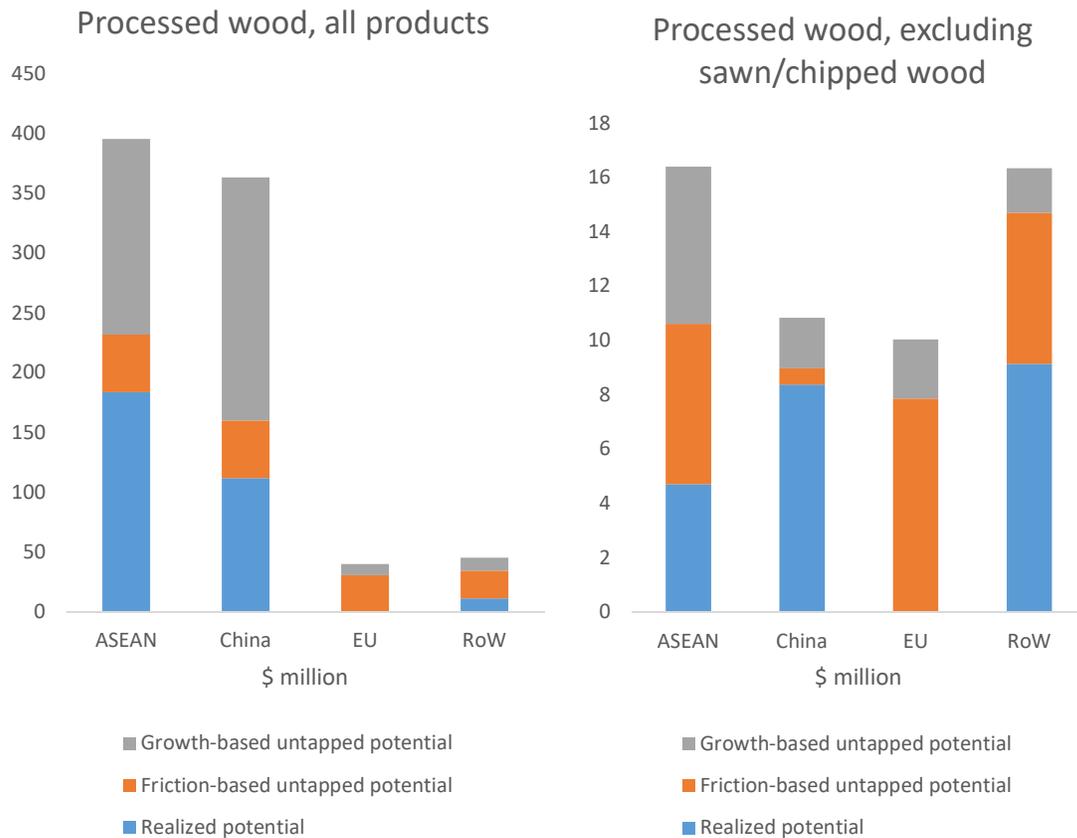
When excluding sawn/chipped wood (figure 5, graph on the left), ASEAN remains the market with the highest export potential (\$16 million, or 31% of total export potential). China comes second with \$11 million (20%), while the EU market gains in relative importance with \$10 million (19%). In ASEAN, about one third of total export potential is already realized, one third is driven by frictions, and one third driven by expected growth. In China, a large share (77%) of export potential already is realized, leaving only \$2.5 million in export growth potential. While total export potential in the EU is slightly smaller than in China, it is still virtually unused (less than 1% is realized). Hence, opportunities to realize additional exports in the EU (\$10 million) are much larger than in China, and almost as large as in ASEAN (\$12 million).

Frictions need to be identified and addressed to benefit from export potential in the EU market

While frictions represent about half of untapped export potential in ASEAN and about a quarter in China, this share is much larger (78%) in the EU. This implies that frictions are an important hindrance for Laotian exports to the EU – these frictions need to be identified and addressed in order for the country to benefit from opportunities in the EU market.

Findings from the qualitative interviews suggest that exports to European markets are limited by less established trade networks, high certification requirements (e.g. Forest Law Enforcement, Governance and Trade (FLEGT)) and high transport costs. ASEAN markets are much more accessible than European markets, both in terms of certification requirements and transport costs. Regional trade frictions are mostly limited to informal border taxes occasionally applied to shipments to Thailand or disproportionate transport costs for small shipments to Viet Nam. China incentivizes imports of raw material to support its domestic processing industry and imposes additional fees on processed wood imports from Lao PDR.

Figure 5: Export potential in processed wood, by destination market

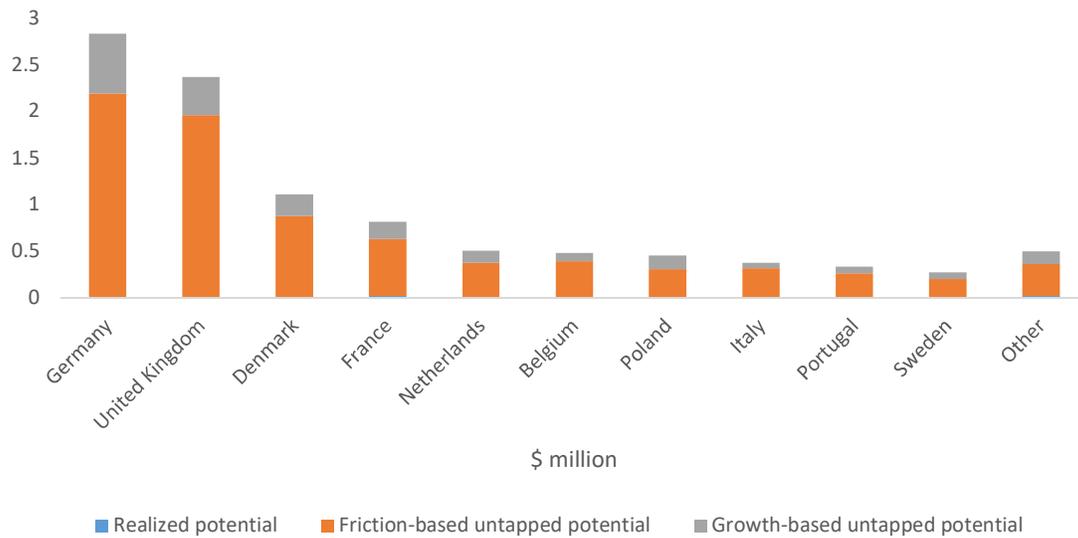


Source: ITC calculations based on ITC Export Potential Map data (2019).

Among EU countries, Laotian processed wood products have the highest export potential in Germany and the United Kingdom

Across all EU countries, Laotian exports of wood products are zero or very small. The country in which they have the highest export potential is Germany with \$2.8 million, followed by the United Kingdom with \$2.4 million and Denmark with \$1.1 million (figure 6). In all EU countries, untapped export potential is mostly friction-based, with shares ranging from 67% (Poland) to 85% (Italy). Growth-based untapped export potential is relatively low, which can be partially explained by the EU's lower growth prospects as compared to other world regions. This implies that tapping into its export potential in any EU country will require Lao PDR to address the existing frictions.

Figure 6: Export potential in processed wood to the EU, excluding sawn/chipped wood

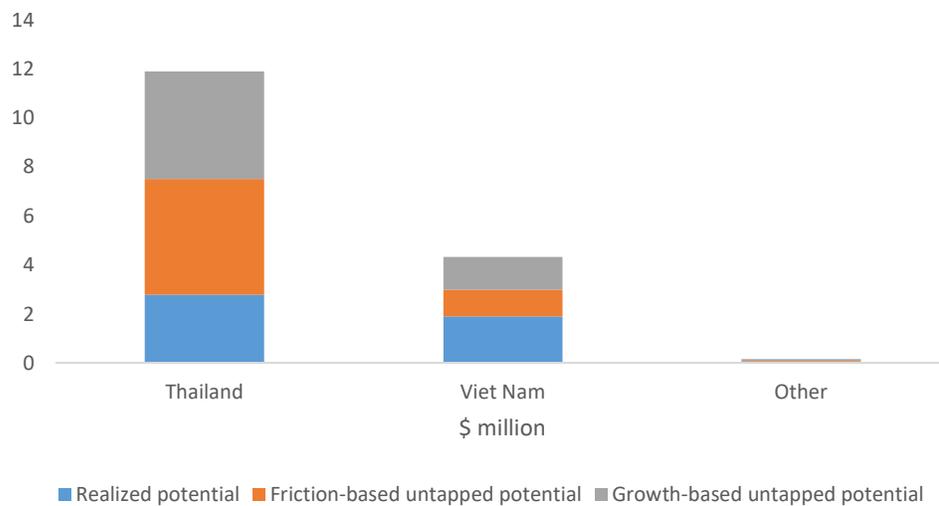


Source: ITC calculations based on ITC Export Potential Map data (2019).

Export potential in ASEAN lies almost exclusively in Thailand and Viet Nam

Thailand is by far the most important export potential destination for Lao PDR in ASEAN, with \$12 million in total, out of which \$9 million are yet to be realized (figure 7). Viet Nam is second, with a total of \$4 million, half of which untapped. All other ASEAN countries combined represent export opportunities of only \$175,000. Untapped export potential is about half friction-based and half growth-based in both Thailand and Viet Nam. Frictions appear to be a relatively less important constraint to exports within the region than to those destined to the EU.

Figure 7: Export potential in processed wood to ASEAN, excluding sawn/chipped wood



Source: ITC calculations based on ITC Export Potential Map data (2019).

Opportunities for Value Chain Development

This section presents selected new export products that rely on Lao PDR's current export products as inputs. These products represent opportunities for successfully diversifying the country's exports and adding more value to domestic products before exporting. The graphs present inputs on the left and outputs on the right. The size of the output bubbles represents current world imports. The horizontal bars on the very right represent projected world imports. The darker area contains again information on current world imports, while the lighter area covers projected import growth.



Several of Lao PDR's export products are inputs in the production of furniture. Projected world imports for selected furniture products amount to \$46 billion.

As depicted in figure 8, sheets for veneering (440810, 4408XX), laminated wood (4412), reeds, rushes, osier and raffia (140190) as well as sawn or chipped wood (4407Xc) can be used as inputs for the manufacturing of furniture. Besides products in the processed wood sector, furniture manufacturing could also use some of the country's other export products, such as parts of seats (940190), and sacks and bags of plastics (392310, 392329).

Among the output products, upholstered seats (940161) stand out, with world imports expected to reach \$20.8 billion per year by 2023. They are followed by wooden furniture for kitchens (940340) and for offices (940330), with \$7.8 and \$5.1 billion, respectively.

With regards to furniture as an export opportunity for Lao PDR, sector specialists have highlighted that Thailand and Viet Nam are highly competitive in the large-scale production of those goods. As this may make it challenging for Lao PDR to enter the market, one suggested option was to focus on high-quality niche products such as design furniture. Those might, however, require additional know-how to become a feasible option.

Other diversification opportunities that use Laotian wood products as inputs include articles for sport and outdoor games

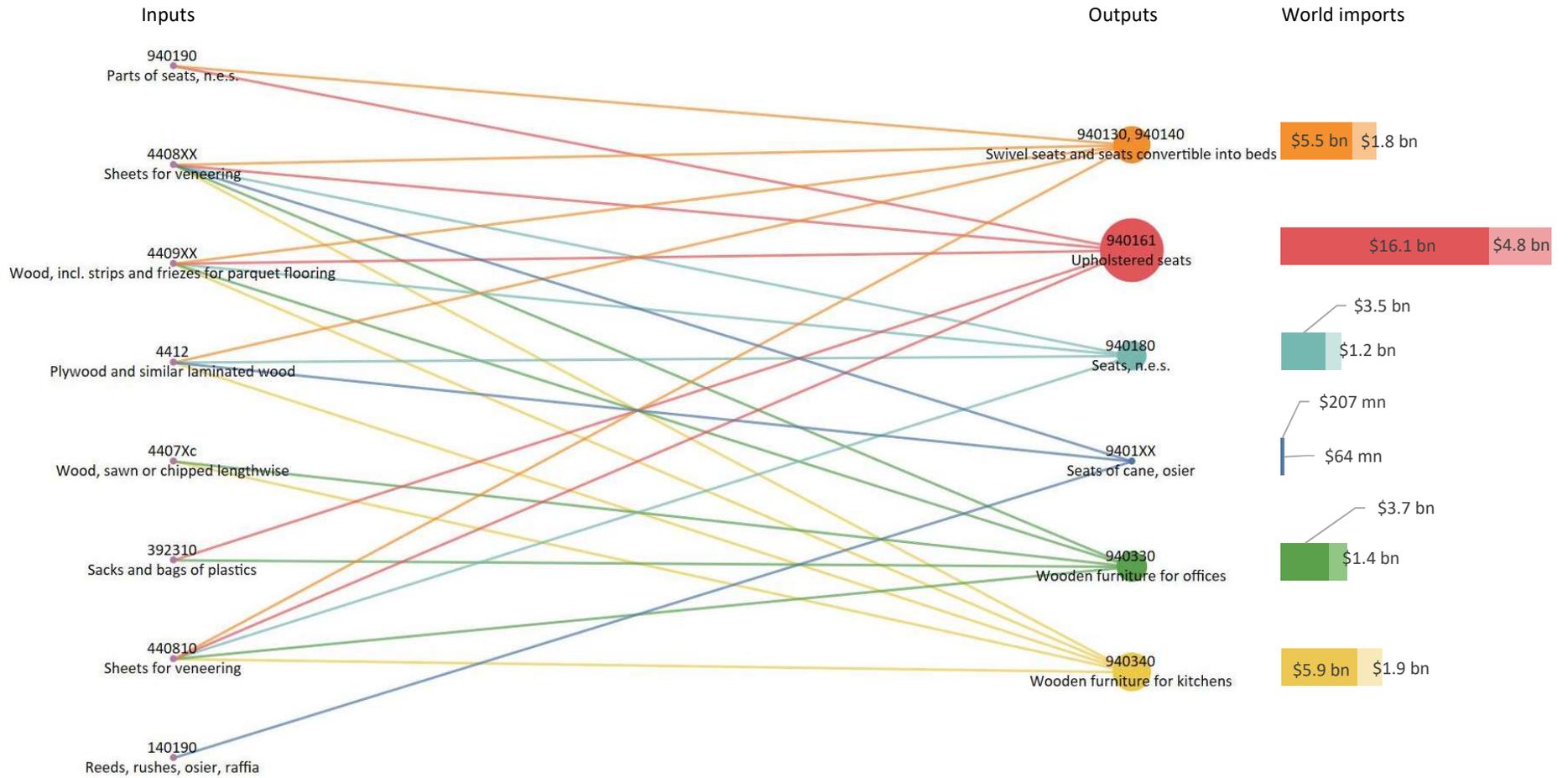
Figure 9 presents another set of diversification opportunities that make use of domestic inputs. Among those, articles for sport and outdoor games (950699) face the largest projected imports, with \$8.1 billion. The inputs for this product include sheets for veneering and plywood (440810, 4408XX, 4412) as well as sawn or chipped wood and other types of wood (4407Xc, 4409XX). Sector specialists in the qualitative interviews viewed this group of products as a viable opportunity.

These products, along with wood in the rough (4403Xb, 4403Xc) and products from other sectors, such as copper cathodes (740311) and plastic boxes (392310) could serve as inputs for the production of other new export products. These diversification opportunities include fuel wood (4401Xa), railways or tramway sleepers (4406Xa, 4406Xb), wooden frames (441400), clothes hangers (442110), umbrellas (660199) and line fishing tackle (950790).

If Lao PDR is able to ensure a sustainable supply of plantation wood as an input for the processed wood industry in the long run, wood pulp has been suggested by sector specialists as an additional

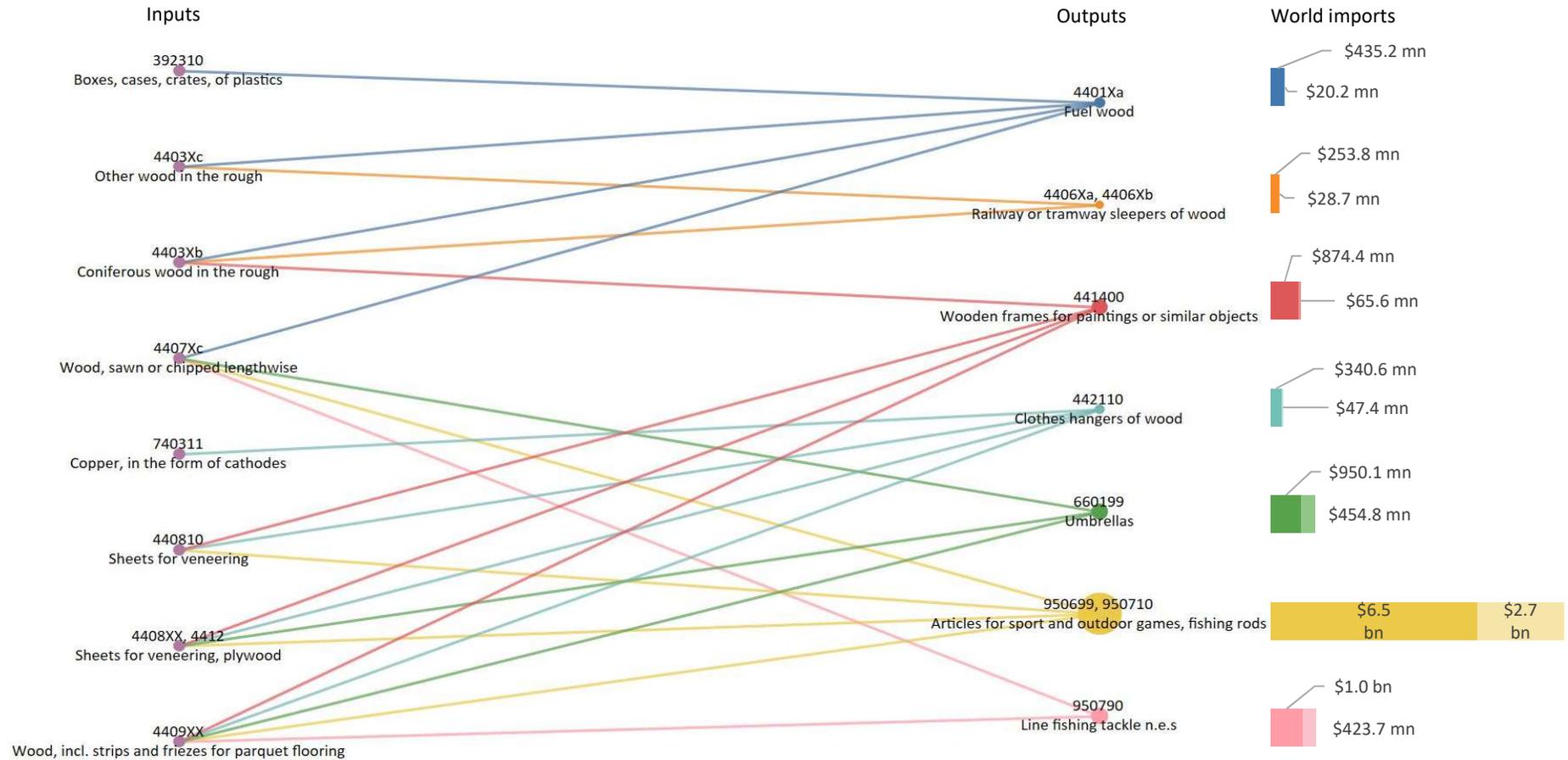
opportunity for export diversification. In the future, wood pulp may play an important role as a sustainable substitute for cotton in textile industries in Thailand and Viet Nam.

Figure 8: Diversification opportunities for value chain development, furniture



Source: ITC calculations based on ITC Export Potential Map data (2019).

Figure 9: Diversification opportunities for value chain development, other wood products



Source: ITC calculations based on ITC Export Potential Map data (2019).

Specialty Agriculture⁹

The agricultural sector in Lao PDR

High-quality niche products are considered a promising opportunity for Laotian agricultural exports

Exporting commercial crops on a large scale would be challenging for Lao PDR, as its limited size and labour force and lack of sea access make it difficult to compete on price. Instead, Lao PDR's comparative advantage lies in its topography, which allows growing a wide range of specialty vegetables and fruits and its perception as an organic origin due to a traditionally low usage of fertilizers. High quality niche products that market their exotic origin or organic nature are deemed to be the way forward.

With respect to the analysis presented in this report, it should be noted that it is methodologically challenging to study specialty agriculture using international trade data. This analysis uses data at the 6-digit level of the HS classification. At this level of detail, and even in more disaggregated data that is reported by some countries, it is not possible to distinguish high-quality or specialty varieties of a product from ordinary ones. For example, organic specialty coffee from a particular cultivation area falls under the same HS code as any low-quality variety. Hence, this analysis provides an overview of products and markets in which Lao PDR has export potential, but needs to be complemented by more in-depth information whenever it is necessary to clearly distinguish between specialty and non-specialty varieties.

In addition, the niche nature of several specialty agriculture products makes it challenging to compute reliable export potential figures, as trade flows tend to be small and volatile. This is especially the case for products the country has only started exporting very recently. During the expert interviews, several specialty agriculture products that did not figure prominently in the report were mentioned, for example mulberry, sticky rice or macadamia nuts. These may indeed present interesting niche products for export, but individually account for a very small fraction of exports and/or export potential, which is why they could not be considered in the quantitative section of this report.

Export Potential

Fully exploiting export potential in specialty agriculture to ASEAN, China and the EU could increase Lao PDR's exports by \$447 million

Lao PDR has an export potential of \$634 million in specialty agriculture. Fully realizing this potential could increase exports by \$447 million and create about 229,000 jobs: 111,000 in the export sectors directly, 10,000 in upstream sectors in the value chain, and 108,000 through increased demand in other sectors in the economy.

The region with the highest export potential is ASEAN (\$311 million), which accounts for 49% of Lao PDR's total export potential in specialty agriculture (figure 10). While 39% of this export potential is already used, fully exploiting the remaining 61% would correspond to additional exports of \$189 million. Within the unused export potential, \$44 million is static export potential, likely to be unused due to frictions. Another \$145 million is dynamic export potential. It stems from expected GDP and

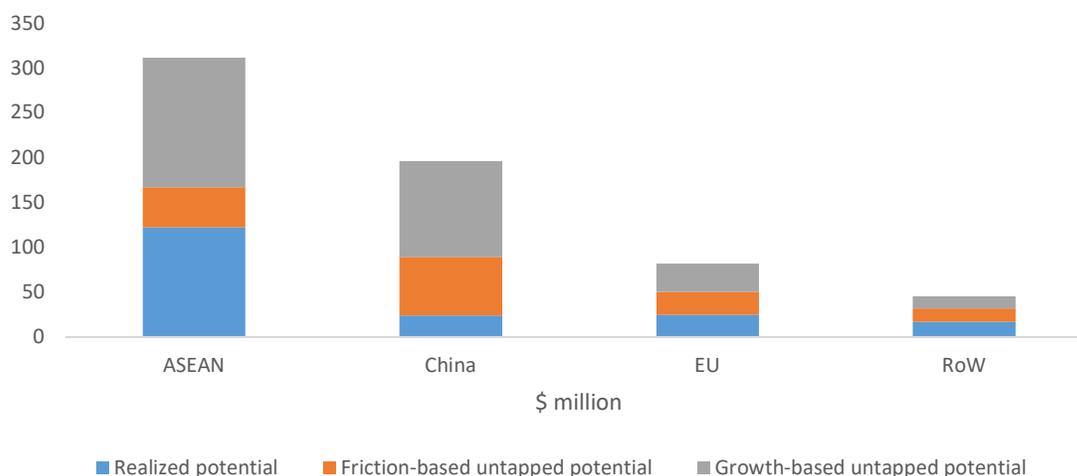
⁹ A detailed list of all products in the Specialty Agriculture sector is included in Annex 2.

demand growth in the ASEAN region over the coming years, which will increase opportunities for Laotian exporters.

Much potential also exists to increase exports to China (\$196 million). Only 12% is currently used, while over \$100 million in additional exports could be realized if expected Chinese GDP and demand growth are met, and \$65 million if frictions are overcome.

The total export potential to the EU is \$82 million, and thus much smaller than the export potential to ASEAN and China. 70% of this export potential, \$57 million, is currently not used. \$26 million correspond to unused potential due to frictions, whereas \$32 million represent dynamic export potential driven by expected growth of demand in the EU. As for processed wood, the share of dynamic untapped potential is lower for the EU than for ASEAN, which is partially due to lower expected growth over the next years.

Figure 10: Export potential in specialty agriculture, by destination market



Source: ITC calculations based on ITC Export Potential Map data (2019).

Manioc is the specialty agriculture product with the highest potential, but its cultivation has environmental drawbacks

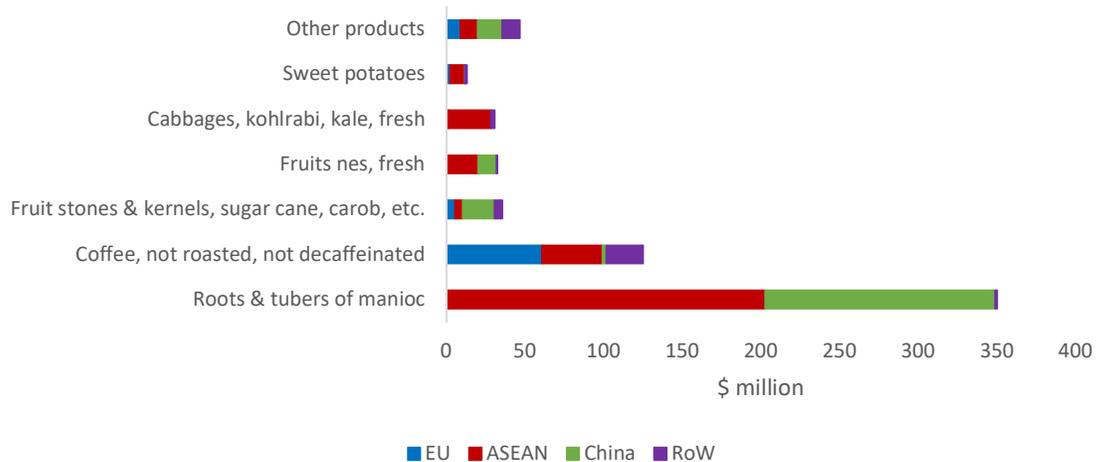
Lao PDR has export potential in 28 different specialty agriculture products.¹⁰ With \$350 million, “roots & tubers of manioc” is the most prominent product, representing 55% of total export potential in the sector (figure 11). 19% of this export potential is already used, 25% is unused due to frictions, and 56% is driven by expected demand growth. With \$202 million, more than half of the export potential (58%) in “roots & tubers of manioc” lies in ASEAN, about 42% in China, while the EU represents less than 1% of export potential in this product.

Currently, manioc is mainly exported to neighbouring countries in form of starch and used in downstream industries as a supplement for car fuel or alcohol industries. The commercial crop not only faces considerable competition in foreign markets but also leaves a large environmental footprint. Typically cultivated in soils that have been mined intensively and hardly contain any further

¹⁰ The category “fruit nes, fresh” includes fresh tamarinds, cashew apples jackfruit, lychees, sapodillo plums, passion fruit, carambola, pitahaya. In the category “fruit stones & kernels for human consumption, sugar cane, carob, etc.”, Lao PDR exports mostly consist of sugar cane.

nutrients, it is treated as a crop of “last resort”. Manioc requires few inputs (such as fertilizer) and has deep roots, which extract all remaining nutrients from the soil. After harvest, the soil is often not suited for further cultivation and suffers from severe soil erosion. Hence, although manioc shows up as a product with large export potential, especially in ASEAN countries and China, sector experts have suggested that it might not be advisable to promote it given its important environmental drawbacks.

Figure 11: Export potential in specialty agriculture, by product and destination market



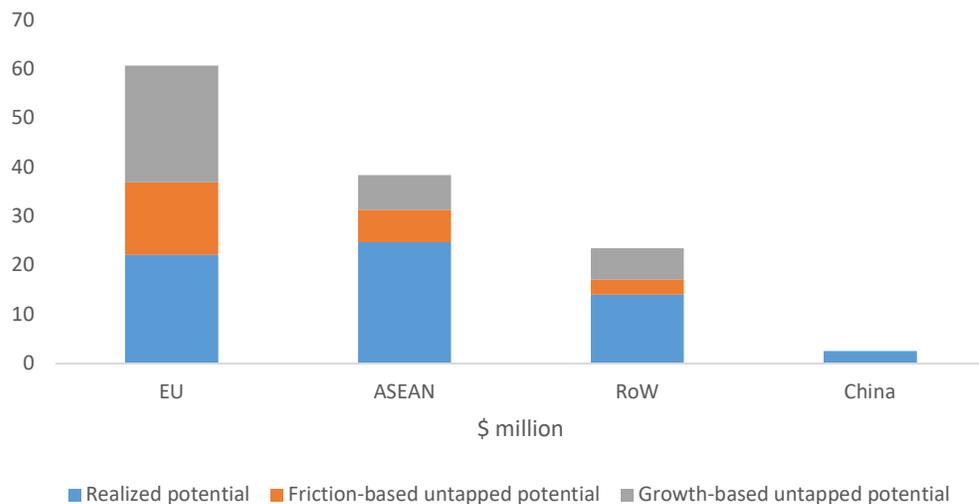
Source: ITC calculations based on ITC Export Potential Map data (2019).

Fully exploiting export potential in coffee, the second export potential product, could increase exports by \$62 million

The second most important export potential product is “coffee, not roasted, not decaffeinated”, amounting to \$125 million, or 20% of total export potential in specialty agriculture. The EU represents the largest market for this product (\$61 million, 49%), while ASEAN follows second (\$38 million, 31%). China remains relatively small (\$3 million, 2%) (figure 11).

In the EU, Lao PDR currently exploits about 36% of its total export potential, implying that it could increase its exports by \$39 million in this region alone (figure 12). 38% of this export growth potential is currently hindered by frictions, whereas the remaining 62% are driven by expected GDP and demand growth. This implies that the frictions faced by Laotian exporters in the EU market are relatively less constraining in the coffee sector than in other sectors. Nonetheless, addressing them could increase exports by \$15 million, thanks to the overall size of the sector. In the ASEAN market, Lao PDR is currently exploiting 64% of its export potential. Of the remaining \$14 million in untapped export potential, 48% are caused by frictions and 52% by expected growth.

Figure 12: Export potential of coffee, by destination market



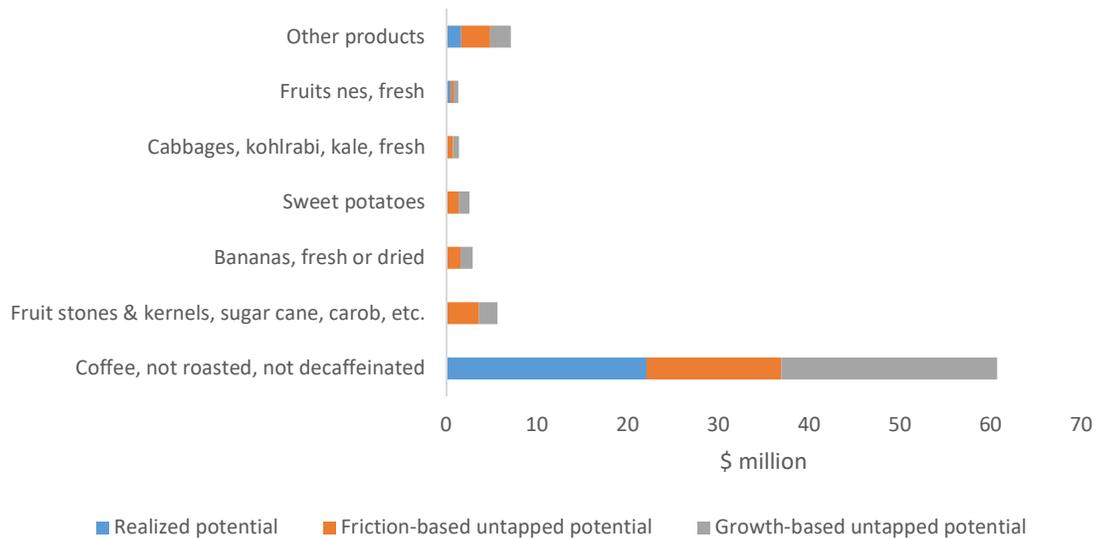
Source: ITC calculations based on ITC Export Potential Map data (2019).

As highlighted by sector experts, Coffee is a prime example of a niche product. High quality coffee varieties from Lao PDR such as “mountain coffee” from the Northern parts of the country are sold globally and benefit from relatively well established supplier-buyer networks in European, ASEAN and Chinese markets. Challenges in the coffee sector mainly relate to two areas: quality and processing capacity. Difficulties in upholding consistent levels of quality, especially in reaction to demand shocks, can restrict access to export markets while limited domestic processing capacity restricts Laotian producers to export raw beans rather than high-priced roasted varieties. In the EU, larger distance and higher certification standards limit coffee exports to a group of niche products. In ASEAN and China, less refined varieties of coffee are increasingly sold at respectable prices as certification standards and diversification requirements are lower than in EU markets.

Lao PDR has export potential to the EU in 28 specialty agriculture products – in 15 of them, more than 50% of export potential is unused due to frictions

The product with the highest export potential to the EU is “coffee, not roasted, not decaffeinated”, which represents \$61 million, or 74% of total export potential in specialty agriculture (figure 13). It is followed by “fruit stones & kernels for human consumption, sugar cane, carob, etc.” (\$6 million, 7%), “bananas, fresh or dried” (\$3 million, 4%) and “sweet potatoes” (\$3 million, 3%). All other products represent less than \$2 million and less than 2% of total export potential. The share of export potential unused due to frictions is relatively low (24%) in the main export potential product (“coffee, not roasted, not decaffeinated”), implying that Lao’s coffee exporters are already relatively well informed about how to access the European coffee market. Yet, another \$15 million of exports seem possible if all opportunities were fully exhausted. In many other products, the share of unused static export potential is high – for 15 of them, it lies above 50%.

Figure 13: Export potential in specialty agriculture to the EU, by product

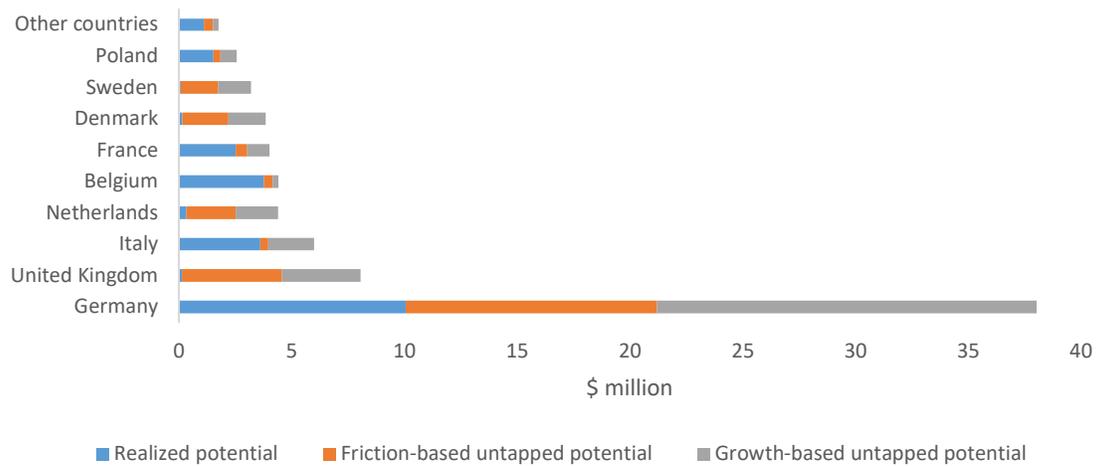


Source: ITC calculations based on ITC Export Potential Map data (2019).

Germany is the EU country with the most important opportunities for Laotian exporters. The share of unused export potential varies considerably across EU destinations.

Among the 20 EU countries to which Lao PDR has export potential in specialty agriculture, Germany is the most important one, representing \$38 million or 47% of total export potential to the EU (figure 14). The share of export potential that is unused due to frictions is 29% (\$11 million). This share however varies significantly across destinations: while it is relatively low for Italy (6%) and Belgium (9%), it lies above 40% for 12 countries. These include large export potential destinations such as the United Kingdom and the Netherlands, to which the export potential is of \$8 million and \$4 million, respectively. With an average of 39%, the share of export potential to the EU driven by expected demand growth is significantly higher for specialty agriculture than for processed wood.

Figure 14: Export potential in specialty agriculture to the EU, by country

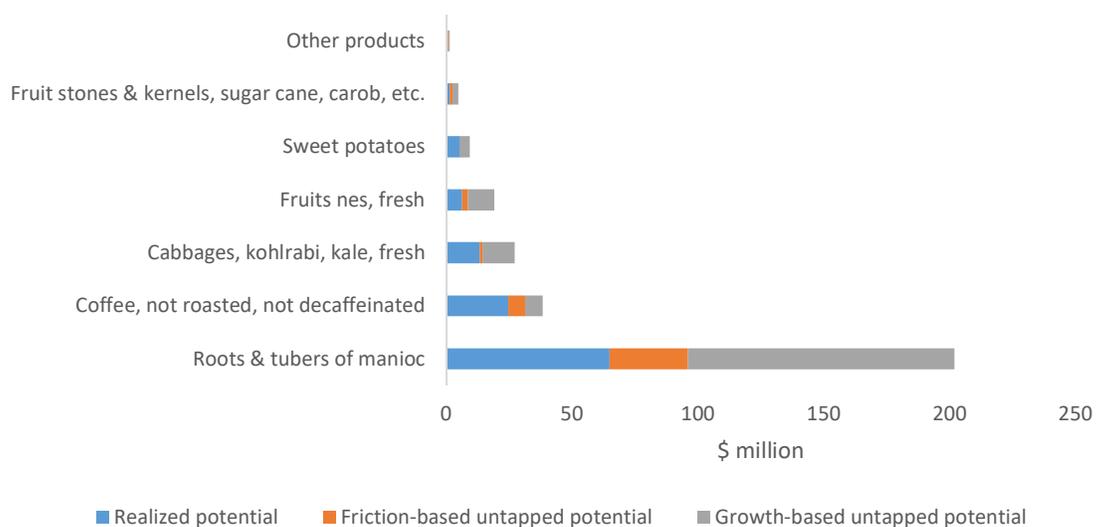


Source: ITC calculations based on ITC Export Potential Map data (2019).

Export potential in specialty agriculture to ASEAN is almost exclusively driven by exports to Thailand and Viet Nam, the most important product being “roots & tubers of manioc”

The specialty agriculture product with the highest export potential to ASEAN is “roots & tubers of manioc”, representing \$202 million, or 65% of total export potential (figure 15). 15% of this export potential, or \$31 million, is currently not used due to frictions. The next most important export potential products are coffee, cabbages and fruits, nes. Frictions preventing exports appear to be less of a hurdle in Laotian exports to ASEAN than to the EU. They are above 40% of total export potential for 5 of the 25 products with export potential to ASEAN, as opposed to 16 of 27 in exports to the EU.

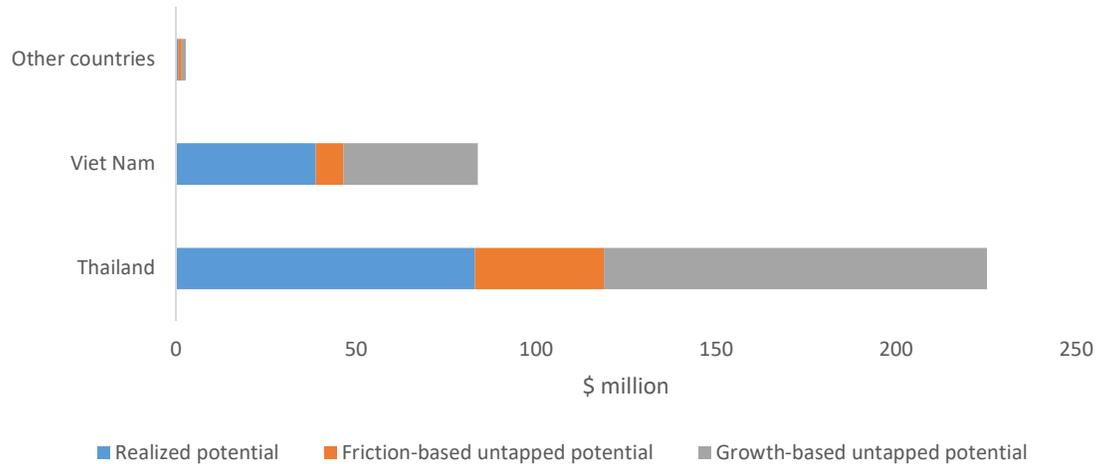
Figure 15: Export potential in specialty agriculture to ASEAN, by product



Source: ITC calculations based on ITC Export Potential Map data (2019).

Export potential to ASEAN is almost entirely driven by two destinations, Thailand (\$225 million, 72%) and Viet Nam (\$84 million, 27%) (figure 16). For both of them, the share of export potential which is unused due to frictions is relatively low (respectively 16% and 9%).

Figure 16: Export potential in specialty agriculture to ASEAN, by country



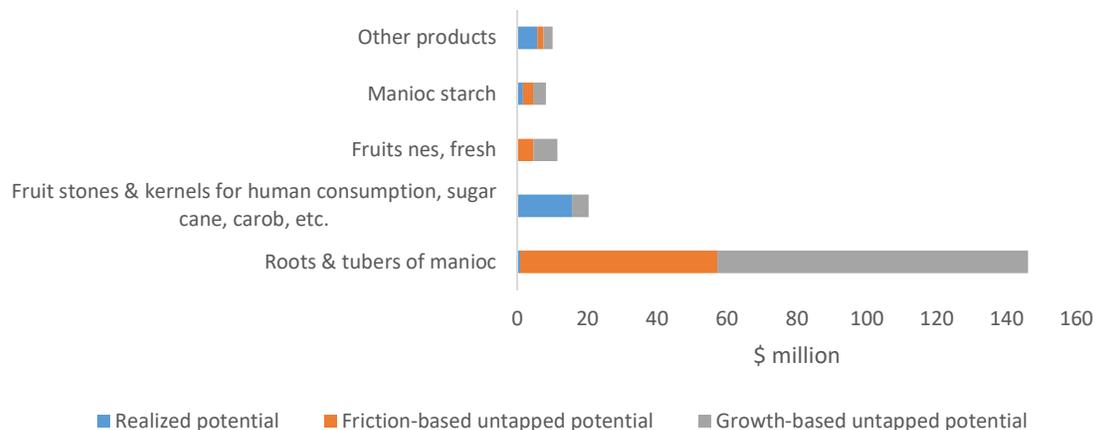
Source: ITC calculations based on ITC Export Potential Map data (2019).

Most of the export potential to China for specialty agriculture lies in “roots & tubers of manioc”

Three quarters of Lao PDR’s export potential to China in specialty agriculture products lies in “roots & tubers of manioc” (\$146 million) (figure 17). Current exports are almost non-existent (\$731 thousand). More than half of the remaining potential is driven by expected Chinese GDP and demand growth (\$89 million), the rest is due to frictions (\$56 million).

All other products represent together about \$50 million of export potential. Most of the untapped potential (\$18 million out of \$27 million) comes from expected Chinese GDP and demand growth.

Figure 17: Export potential in specialty agriculture to China, by product



Source: ITC calculations based on ITC Export Potential Map data (2019).

Diversification Opportunities

13 of Lao PDR's top-20 diversification opportunities are in the specialty agriculture sector, the most important in terms of market imports being "cocoa beans", "cashew nuts, shelled" and "black tea, packings > 3kg"

The specialty agriculture sector comprises a large share of the products with the highest potential for export diversification. 13 of the 20 products with the highest potential for export diversification are in this sector, and another 11 are ranked between 21 and 87.

Figure 18 displays the most important specialty agriculture products for export diversification, ordered by diversification rank. Bars on the right side of the graph capture current and projected world imports from all countries to which Lao PDR is expected to be able to export.¹¹ The diversification opportunity rank differs from world market size, as it is driven by other factors, including a "density" measure that captures how close Lao PDR is to being able to export this product, and information on tariffs and distances.

The products with the highest imports are "cocoa beans" (\$10 billion current and \$16 billion projected imports), "cashew nuts, shelled" (\$4 billion and \$6 billion), "cut flowers and buds, fresh" (\$4 billion and \$5 billion) and "Black tea, packings > 3kg" (\$3 billion and \$5 billion).

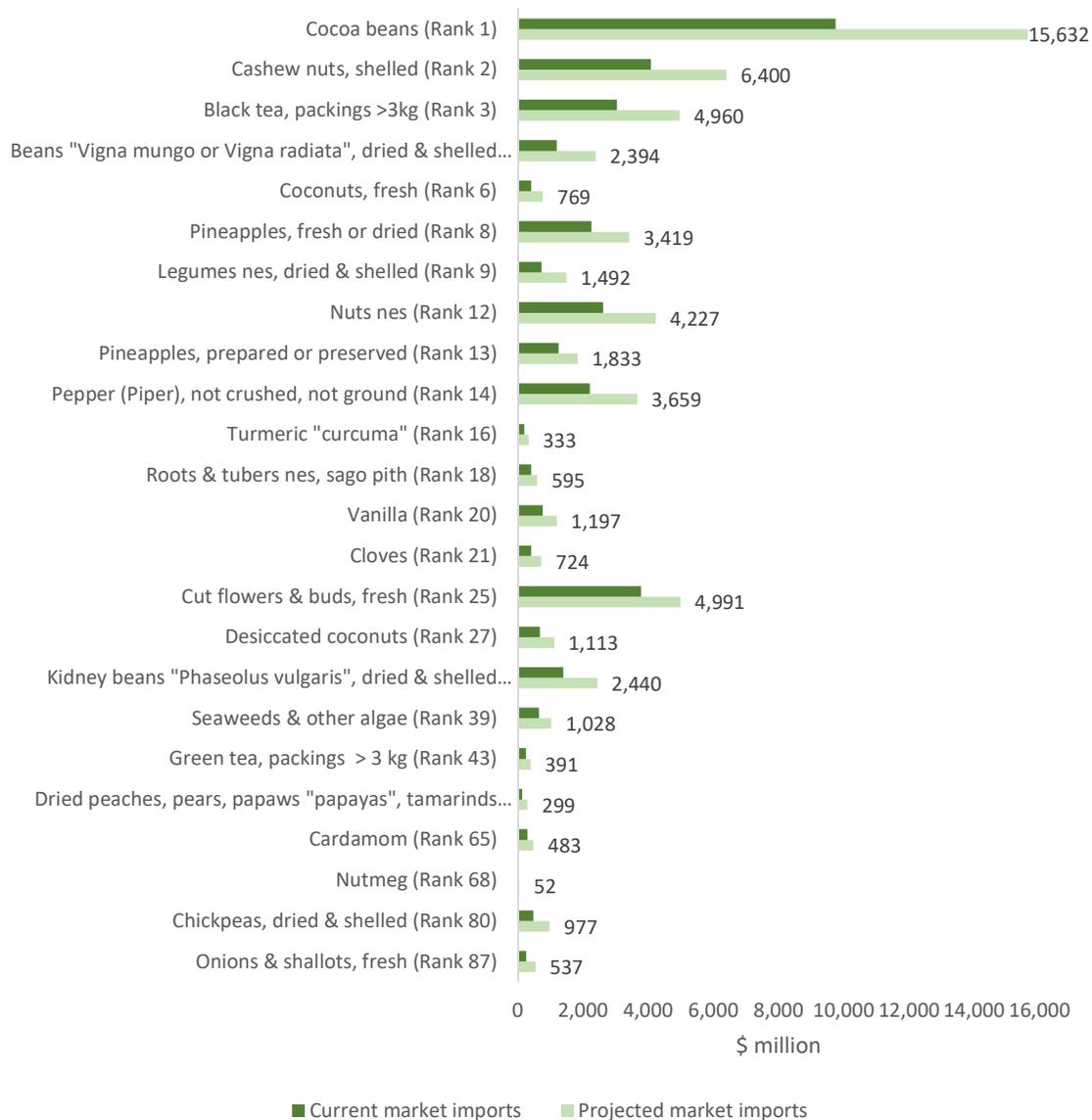
According to sector experts, the cultivation of cocoa beans in Lao PDR may face natural limitations due to a lack of humidity. Moreover, large competitors in the region would make it difficult to reach the needed scale to offer products at attractive prices. The latter applies to cashew nuts as well. While there do not seem to be natural limitations in cultivating them, neighbours like Cambodia possess a competitive advantage and currently dominate regional markets.

Tea, on the other hand, is regarded as a promising niche product and shares similar challenges and opportunities as coffee. Consistently referred to as a promising source of future export revenue, high quality tea varieties in Lao PDR benefit from their exotic character (e.g. wild tea and forest tea) and a reputation of being more organic than foreign counterparts, despite the fact that not all producers in the country hold related certifications. Tea exports to the EU remain very low due to weak trade networks, high transport costs, insufficient packaging and difficulties to adapt products to local taste. Consequently, sector experts see more important opportunities in Asian markets (ASEAN, China, Japan) whereas exports to the EU are expected to remain small and concentrated on high-quality varieties.

Flowers as a potential candidate for export diversification would require further development of cooling chains in order to preserve them during transport. This technology exists in neighbouring Thailand and could be imported or brought in through foreign direct investment (FDI).

¹¹ It is not possible to compute (expected) imports from Lao PDR alone, as the country is not exporting (or not exporting sufficiently large quantities) of these products yet.

Figure 18: Market imports of specialty agriculture products with opportunities for diversification

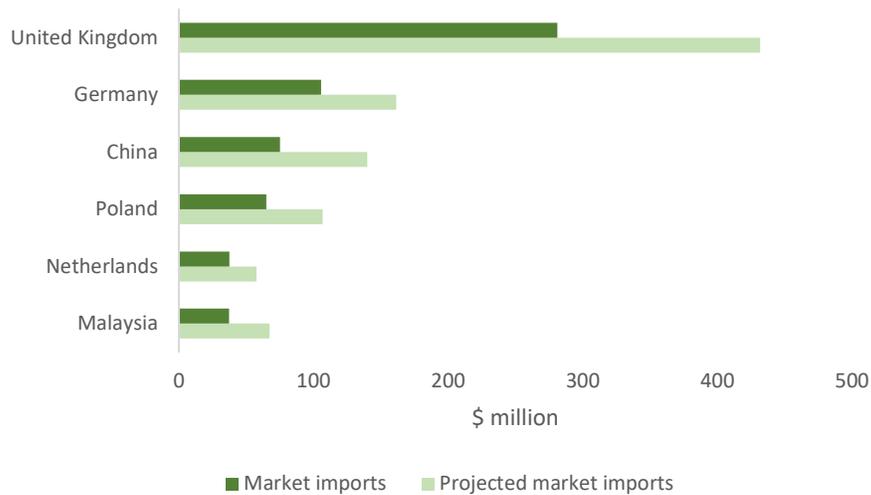


Source: ITC calculations based on ITC Export Potential Map data (2019).

Black tea presents diversification potential in most important EU and ASEAN markets and China – and import demand is expected to grow significantly

“Black tea (packings >3kg)” is among the top-5 products for diversification in many important markets considered in this study: 22 EU countries, six ASEAN countries and China. Among those, the countries with the largest imports are the United Kingdom, Germany, China, Poland, the Netherlands and Malaysia. In all of those major markets, projected imports are considerably larger than current imports: imports are expected to increase by more than 50% in all of them (figure 19). This predicted rise in import demand may present opportunities for Lao PDR to start exporting black tea.

Figure 19: Market imports of black tea (packings > 3kg), selected importers



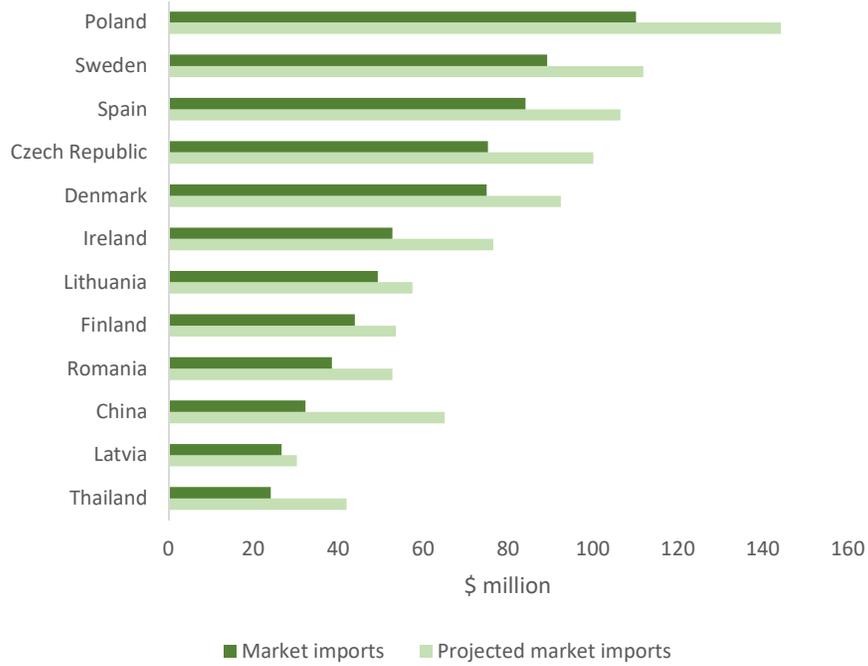
Source: ITC calculations based on ITC Export Potential Map data (2019).

Cut flowers present diversification potential in most important markets – import demand is expected to grow faster in Asia than in the EU

“Cut flowers and buds, fresh” show diversification potential in most of the countries considered in this study; however, they rank lower than black tea in all of them, indicating that the likelihood of successfully exporting flowers is slightly lower than that of tea.

Figure 20 presents the current and projected imports of cut flowers of the top-importers in ASEAN, the EU and China that are likely to import flowers from Lao PDR. Several EU countries are important importers of cut flowers, and demand in those countries is expected to grow by between 13% (Latvia) and 45% (Ireland) (figure 20). While total imports are smaller, expected import growth is larger in the most important Asian markets, with 74% in Thailand and 100% in China.

Figure 20: Market imports of fresh cut flowers, selected importers



Source: ITC calculations based on ITC Export Potential Map data (2019).

Opportunities for Value Chain Development

This section presents selected new export products that rely on Lao PDR's current export products as inputs. These products represent opportunities for successfully diversifying the country's exports and adding more value to domestic products before exporting. The graphs present inputs on the left and outputs on the right. The size of the output bubbles represents current world imports. The horizontal bars on the very right represent projected world imports. The darker area contains again information on current world imports, while the lighter area covers projected import growth.



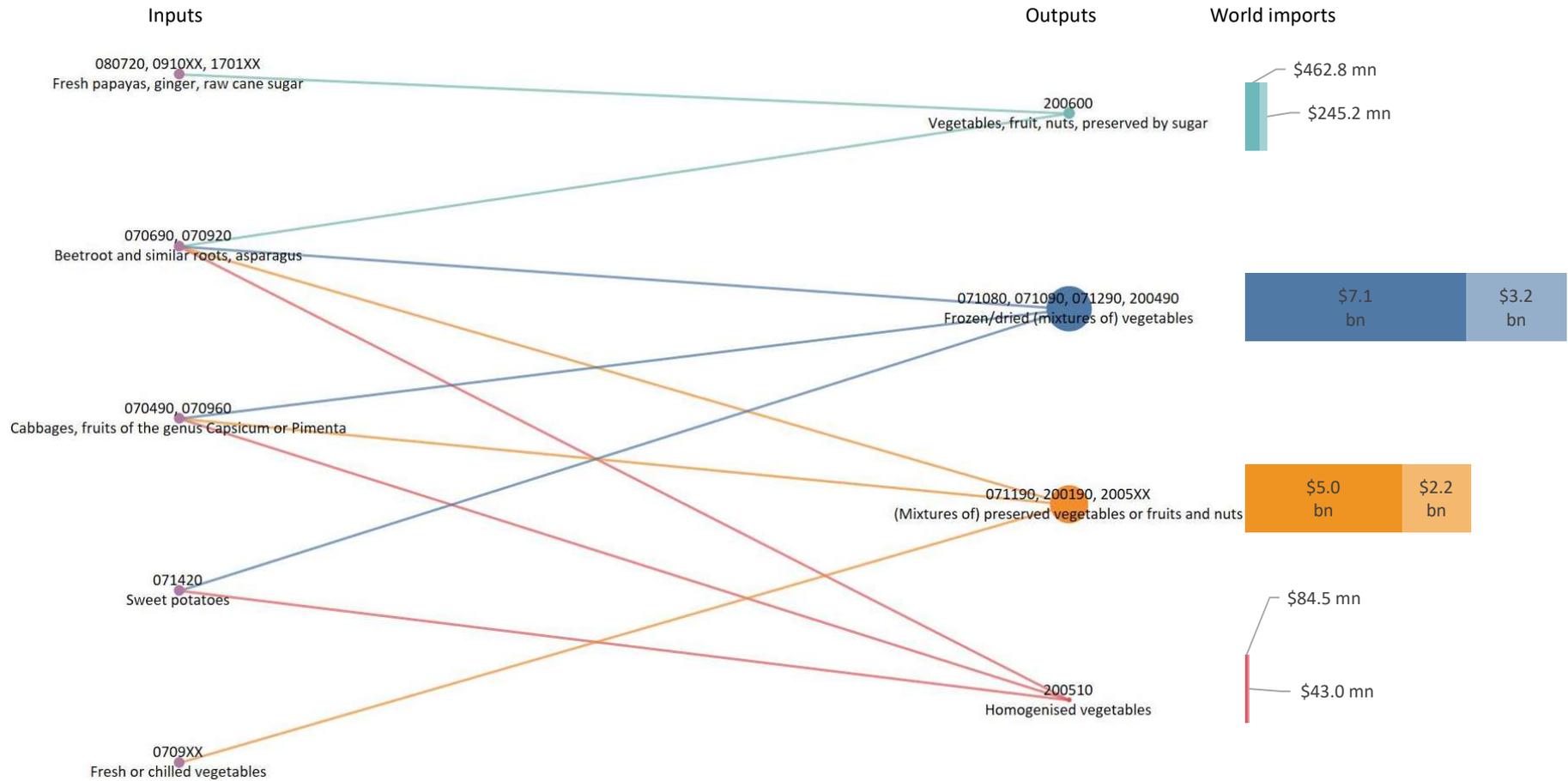
Domestically grown vegetables could be transformed into vegetables mixtures for export diversification

Asparagus (070920) and beetroot (070690) serve as inputs into the production of all diversification opportunities. Other relevant inputs include cabbages (070490), capsicum or pimenta fruits (070960) and sweet potatoes (071420). These products neared \$22 billion in exports in 2017, with cabbages accounting for almost 60%.

The diversification opportunities that could be produced using these export products, along some others such as papaya (080720), ginger (0910XX), raw cane sugar (1701XX) and other vegetables (0709XX), are displayed in figure 21. Together, they will face a world demand of \$18.3 billion by 2023. Frozen vegetables (071080) and prepared vegetables or mixtures of vegetables (2005XX) stand out, with projected world imports surpassing \$4.7 billion each. Other diversification opportunities are frozen mixtures of vegetables (071090), provisionally preserved vegetables and mixtures thereof (071190), dried vegetables and mixtures thereof (071290), vegetables, fruit, nuts and other edible parts of plants, prepared or preserved by vinegar or acetic acid (200190) and frozen (mixtures of) prepared vegetables (200490).

According to sector experts, producing and exporting processed vegetables and vegetable mixtures is within reach, but would require an upgrading of current processing and packaging capacities in the country.

Figure 21: Diversification opportunities for value chain development, vegetable mixtures



Source: ITC calculations based on ITC Export Potential Map data (2019).

References

Decreux, Y., & Spies, J. (2016). Export Potential Assessments – a methodology to identify export opportunities for developing countries. Mimeo. URL:

https://exportpotential.intracen.org/media/1089/epa-methodology_141216.pdf.

ITC (2018a). Value Chain Indicator: adding value to national exports and developing cross-country production chain. Addendum to the ITC technical paper “Exploring Malawi’s export potential”. URL:

<https://malawi.exportpotential.intracen.org/media/1098/vc-methodology-20-12-2018.pdf>.

ITC (2018b). Turning export potential into employment. A case study for Jordan. URL:

<http://www.intracen.org/publication/export-potential-employment-Jordan/>.

Annex

Annex 1: List of products in sector “Processed Wood”

Product group code	Product	Export Potential
440121	Coniferous wood in chips/particles	No
440122	Wood in chips/particles	No
4401Xa	Fuel wood, in logs, billets, twigs, faggots or similar forms	No
4401Xb	Sawdust & wood waste/scrap	No
440500	Wood wool, flour, powder able to pass through a fine	No
4406Xa	Railway/tramway sleepers of wood, not impregnated	No
4406Xb	Railway/tramway sleepers of wood, impregnated	No
440725	Dark & light red meranti, meranti bakau, sawn/chipped lengthwise	No
440726	White lauan, white (yellow) meranti, white seraya & alan, sawn/chipped lengthwise	No
440791	Oak, sawn/chipped lengthwise, sliced/peeled, >=6mm	No
440792	Beech, sawn/chipped lengthwise, sliced/peeled, >=6mm	No
4407Xb	Virola, mahogany, imbuia & balsa, sawn/chipped lengthwise	No
440831	Sheets for veneering, thickness <=6mm, of dark & light red meranti & meranti bakau	No
440910	Coniferous wood, continuously shaped, not assembled	No
441090	Board of bagasse/bamboo/cereal straw/other ligneous materials	No
4410XX	Particle board & similar board of wood	No
4411	Fibreboard of wood/other ligneous materials	No
441300	Densified wood in blocks, plates, strips or profile shapes	No
441400	Wooden frames for paintings, photographs, mirrors & similar	No
441510	Cases & similar packings & cable-drums, of wood	No
441520	Pallets (collars) & other load boards, of wood	No
441600	Casks, barrels & coopers' products & parts thereof, of wood	No
441700	Tools, broom/brush (bodies, handles); shoe lasts & shoetrees of wood	No
441810	Windows, French windows & their frames, of wood	No
441840	Wooden shuttering for concrete constructional work	No
441850	Shingles & shakes of wood	No
442110	Clothes hangers of wood	No
450110	Natural cork, raw /simply prepared	No
450200	Natural cork, debarked/roughly squared	No
450310	Corks & stoppers, of natural cork, incl. round-edged blanks	No
450390	Articles of natural cork, nes	No
450410	Agglomerated cork, flat shapes, solid cylinders	No
450490	Agglomerated cork, & articles thereof, nes	No
940130	Swivel seats	No
940140	Convertible seats	No
940161	Upholstered seats with wooden frames	No

9401XX	Seats of cane, osier & similar	No
940330	Wooden office furniture	No
940340	Wooden kitchen furniture	No
9403XX	Furniture of cane, osier & similar	No
4402	Wood charcoal, incl. shell or nut charcoal	Yes
4407Xa ¹²	Coniferous wood sawn/chipped lengthwise, sliced/peeled	Yes
4407Xc ¹³	Wood, sawn/chipped lengthwise, sliced/peeled, thickness >6mm	Yes
440810	Sheets for veneering, coniferous plywood or similar, sawn lengthwise/sliced/peeled, thickness <=6mm	Yes
4408XX	Sheets for veneering, plywood or similar, sawn lengthwise/sliced/peeled, thickness <=6mm	Yes
4409XX	Wood continuously shaped, non-coniferous	Yes
4412	Plywood, veneered panel & similar laminated wood	Yes
441820	Doors & their frames & thresholds, of wood	Yes
4418XX	Other builders' joinery & carpentry of wood	Yes
4419	Table/kitchenware, of wood	Yes
442090	Wood marquetry & inlaid wood; caskets, cases for jewellery/cutlery	Yes
4421XX	Articles of wood, nes	Yes
940169	Seats with wooden frames	Yes
940350	Wooden bedroom furniture	Yes
940360	Wooden furniture, nes	Yes

Annex 2: List of products in sector “Specialty Agriculture”

Product group code	Product	Export Potential
60110	Dormant unedible bulbs, tubers, etc.	No
60120	Growing unedible bulbs, tubers, etc.	No
60210	Unrooted cuttings & slips	No
60220	Edible fruit or nut trees	No
60230	Rhododendrons & azaleas	No
60240	Roses	No
60290	Live plants & mushroom spawns	No
60390	Cut flowers & buds, not fresh	No
0603XX	Cut flowers & buds, fresh	No
70110	Seed potatoes	No
70190	Potatoes, fresh	No
70200	Tomatoes, fresh	No
70310	Onions & shallots, fresh	No
70320	Garlic, fresh	No

¹² 4407Xa is not currently authorized for export.

¹³ 4407Xc is not currently authorized for export.

70390	Leeks, scallion, chives, fresh	No
70410	Cauliflowers & broccoli, fresh	No
70420	Brussels sprouts, fresh	No
70511	Cabbage lettuce, fresh	No
70519	Lettuce, fresh, excl cabbage lettuce	No
70521	Witloof chicory, fresh	No
70529	Chicory, fresh, excl witloof chicory	No
70610	Carrots & turnips, fresh	No
70700	Cucumbers & gherkins, fresh	No
70810	Peas "Pisum sativum", fresh	No
70820	Beans "Vigna spp., Phaseolus spp.", fresh	No
70890	Legumes nes, fresh	No
70930	Aubergines, fresh	No
70940	Celery, fresh, excl celeriac	No
70951	Edible mushrooms & truffles, fresh or chilled	No
70959	Mushrooms, fresh or chilled	No
70970	Spinach, fresh	No
71010	Potatoes, raw, steamed or boiled, frozen	No
71021	Peas "Pisum sativum", frozen	No
71022	Beans "Vigna spp., Phaseolus spp.", frozen	No
71029	Legumes nes, frozen	No
71030	Spinach, frozen	No
71040	Sweetcorn, frozen	No
71080	Vegetables nes, frozen	No
71090	Mixtures of vegetables, frozen	No
71120	Olives, provisionally preserved	No
71151	Mushrooms, unsuitable for immediate consumption	No
71159	Mushrooms & truffles, unsuitable for immediate consumption	No
71190	Vegetables & mixtures of, unsuitable for immediate consumption	No
71220	Onions, dried	No
71231	Dried mushrooms, whole, cut or in powder	No
71232	Dried wood ears, whole, cut or in powder	No
71233	Dried jelly fungi, whole, cut or in powder	No
71239	Dried mushrooms & truffles, whole, cut or in powder, nes	No
71290	Vegetables nes & mixtures, dried	No
71310	Peas, dried & shelled	No
71320	Chickpeas, dried & shelled	No
71331	Beans "Vigna mungo or Vigna radiata", dried & shelled	No
71332	Adzuki beans, dried & shelled	No
71333	Kidney beans "Phaseolus vulgaris", dried & shelled	No
71340	Lentils, dried & shelled	No
71350	Broad beans & horse beans, dried & shelled	No
0713Xb	Legumes nes, dried & shelled	No
0714XX	Roots & tubers nes, sago pith	No

80111	Desiccated coconuts	No
80121	Brazil nuts, in shell	No
80122	Brazil nuts, shelled	No
80132	Cashew nuts, shelled	No
0801XX	Coconuts, fresh	No
80211	Fresh or dried almonds in shell	No
80212	Fresh or dried almonds, shelled	No
80221	Hazelnuts, in shell	No
80222	Hazelnuts, shelled	No
80231	Walnuts, in shell	No
80232	Walnuts, shelled	No
0802Xa	Chestnuts	No
0802Xb	Pistachios	No
0802Xc	Nuts nes	No
80410	Dates, fresh or dried	No
80420	Figs, fresh or dried	No
80430	Pineapples, fresh or dried	No
80440	Avocados, fresh or dried	No
80510	Oranges, fresh or dried	No
80540	Grapefruit, fresh or dried	No
80550	Lemons & limes, fresh or dried	No
80590	Citrus fruit nes, fresh or dried	No
0805XX	Citrus fruits nes, fresh or dried	No
80610	Grapes, fresh	No
80620	Grapes, dried	No
80711	Watermelons, fresh	No
80719	Melons, fresh, excl watermelons	No
80810	Apples, fresh	No
0808XX	Pears & quinces, fresh	No
80910	Apricots, fresh	No
80930	Peaches & nectarines, fresh	No
80940	Plums & sloes, fresh	No
0809XX	Cherries, fresh	No
81010	Strawberries, fresh	No
81020	Raspberries, blackberries, mulberries & loganberries, fresh	No
81040	Cranberries, bilberries & other Vaccinium fruits, fresh	No
81050	Kiwifruits, fresh	No
81060	Durians, fresh	No
81110	Strawberries, raw, steamed or boiled, frozen	No
81120	Raspberries, blackberries, etc., raw, steamed or boiled, frozen	No
81190	Fruits & nuts nes, raw, steamed or boiled, frozen	No
81210	Cherries, provisionally preserved	No
81290	Fruits & nuts nes, provisionally preserved	No
81310	Apricots, dried	No

81320	Prunes, dried	No
81330	Apples, dried	No
81350	Mixtures of nuts or dried fruits	No
81400	Peel of citrus fruit or melons	No
90112	Coffee, not roasted, decaffeinated	No
90122	Coffee, roasted, decaffeinated	No
90190	Coffee husks & skins; coffee substitutes	No
90210	Green tea, packings <=3kg	No
90230	Black tea, packings <=3kg	No
90240	Black tea, packings >3kg	No
90300	Mate	No
90411	Pepper (Piper), not crushed, not ground	No
90412	Pepper (Piper), crushed or ground	No
0904XX	Pepper (Capsicum or Pimenta), dried, crushed or ground	No
905	Vanilla	No
90620	Cinnamon (incl flowers), crushed or ground	No
0906XX	Cinnamon (incl flowers), not crushed, not ground	No
907	Cloves	No
0908Xa	Nutmeg	No
0908Xb	Mace	No
0908Xc	Cardamons	No
0909Xa	Coriander seeds	No
0909Xb	Cumin seeds	No
0909Xc	Juniper berries & seeds of anise, badian, caraway or fennel	No
91020	Saffron	No
91030	Turmeric "curcuma"	No
91091	Mixtures of different types of spices	No
91099	Spices nes	No
110510	Flour, meal & powder of potatoes	No
110520	Flakes, granules & pellets of potatoes	No
110610	Flour, meal & powder of dried legumes	No
110630	Flour, meal & powder of edible fruit & nuts	No
110813	Potato starch	No
110819	Starch, excl wheat, maize, potato & manioc	No
110820	Inulin	No
120810	Soya bean flour & meal	No
120890	Flours & meal of oil seeds or oleaginous fruit, excl soya & mustard	No
121010	Hop cones, excl ground, powdered or in pellets	No
121020	Hop cones, ground, powdered or in pellets; lupulin	No
121120	Ginseng roots	No
121130	Coca leaf, fresh or dried, whether or not cut, crushed or powdered	No
121140	Poppy straw, fresh or dried, whether or not cut, crushed or powdered	No
1212Xa	Seaweeds & other algae	No
130120	Natural gum arabic	No

130212	Extracts of liquorice, excl with >10% of sucrose & confectionery	No
130213	Extracts of hops	No
130220	Pectic substances, pectinates & pectates	No
130231	Agar-agar	No
130232	Mucilages & thickeners, derived from locust beans or guar seeds	No
130239	Mucilages & thickeners derived from vegetable products nes	No
151790	Edible mixtures of fats, oil & fractions, chemically modified nes	No
170410	Chewing gum	No
170490	Sugar confectionery not containing cocoa	No
180100	Cocoa beans	No
180310	Cocoa paste, not defatted	No
180320	Cocoa paste, defatted	No
180400	Cocoa butter, fat & oil	No
180500	Cocoa powder	No
180610	Cocoa powder, sweetened	No
180620	Chocolate & other cocoa food preparations	No
180631	Chocolate & other cocoa preparations, filled	No
180632	Chocolate & other cocoa preparations, unfilled	No
180690	Chocolate & other cocoa preparations, in containers	No
190110	Food preparations for infant use	No
190120	Mixes & doughs of flour	No
190190	Malt extract	No
190211	Uncooked pasta, containing eggs	No
190219	Uncooked pasta, not containing eggs	No
190220	Pasta, stuffed	No
190230	Pasta	No
190240	Couscous	No
190300	Tapioca	No
190410	Prepared foods from roasting cereals	No
190420	Prepared foods from cereal flakes	No
190430	Bulgur wheat in the form of worked grains	No
190490	Cereals in worked grains, prepared, n.e.s.	No
190510	Crispbread	No
190520	Gingerbread & the like	No
190531	Sweet biscuits	No
190532	Waffles & wafers	No
190540	Rusks, toasted bread	No
190590	Bread, pastry	No
200110	Cucumbers & gherkins	No
200190	Vegetables preserved by vinegar or acetic acid	No
200210	Tomatoes, whole or in pieces, prepared	No
200290	Tomatoes, prepared	No
200310	Mushrooms, prepared	No
200390	Mushrooms & truffles, prepared	No

200410	Potatoes, prepared or preserved (not in vinegar), frozen	No
200490	Vegetables & mixtures of vegetables	No
200510	Homogenised vegetables put up for retail	No
200520	Potatoes	No
200540	Peas "Pisum Sativum"	No
200551	Shelled beans	No
200559	Unshelled beans	No
200560	Asparagus	No
200570	Olives	No
2005XX	Vegetables nes & mixtures, prepared or preserved (not in vinegar), not frozen	No
200600	Edible parts of plants preserved by sugar	No
200710	Homogenised preparations of fruit or nuts, cooked, <=250g	No
200791	Citrus fruit jams or similar, nes	No
200799	Fruit (excl citrus) jams or similar, nes	No
200811	Groundnuts, prepared or preserved, excl with sugar	No
200819	Nuts & other seeds, prepared or preserved, nes	No
200820	Pineapples, prepared or preserved, nes	No
200830	Citrus fruit, prepared or preserved, nes	No
200840	Pears, prepared or preserved, nes	No
200850	Apricots, prepared or preserved, nes	No
200860	Cherries, prepared or preserved, nes	No
200870	Peaches, prepared or preserved, nes	No
200880	Strawberries, prepared or preserved, nes	No
200891	Palm hearts, prepared or preserved, excl in vinegar	No
200897	Mixtures of edible parts of plants, prepared or preserved, nes	No
200911	Orange juice, frozen	No
200912	Orange juice, unfermented, Brix value <= 20	No
200919	Orange juice, unfermented, Brix value > 20	No
200921	Grapefruit juice, unfermented, Brix value <= 20	No
200929	Grapefruit juice, unfermented, Brix value > 20	No
200931	Single citrus fruit juice, unfermented, Brix value <= 20	No
200939	Single citrus fruit juice, unfermented, Brix value > 20	No
200941	Pineapple juice, unfermented, Brix value <= 20	No
200949	Pineapple juice, unfermented, Brix value > 20	No
200950	Tomato juice, unfermented	No
200961	Grape juice, incl. grape must, unfermented, Brix value <= 30	No
200969	Grape juice, incl. grape must, unfermented, Brix value > 30	No
200971	Apple juice, unfermented, Brix value <= 20	No
200979	Apple juice, unfermented, Brix value > 20	No
200990	Mixtures of fruit & vegetables juices	No
2009XX	Juice of fruit or vegetables, unfermented	No
210120	Tea or mate extracts & preparations	No
210130	Roasted coffee substitutes & extracts	No
210210	Active yeasts	No

210220	Inactive yeasts	No
210230	Prepared baking powders	No
210310	Soya sauce	No
210320	Tomato ketchup & other tomato sauces	No
210330	Mustard flour & meal	No
210390	Preparations for sauces & prepared sauces	No
210410	Soups & broths & preparations therefor	No
210420	Food preparations, mixtures of two or more ingredients	No
210500	Ice cream & other edible ice	No
210610	Protein concentrates & textured protein substances	No
210690	Food preparations	No
220110	Mineral waters & aerated waters	No
220190	Ordinary natural water	No
220210	Waters as beverage	No
2202XX	Non-alcoholic beverages	No
220900	Vinegar	No
500100	Silkworm cocoons for reeling	No
500200	Raw silk (non-thrown)	No
500400	Silk yarn, nes	No
500500	Silk waste yarn, nes	No
500600	Silk yarn & silk waste yarn, for retail; silkworm gut	No
500710	Noil silk wovens	No
500720	Wovens, >=85% silk or schappe	No
500790	Wovens, <85% silk or silk waste	No
70490	Cabbages, kohlrabi, kale, fresh	Yes
70690	Salad beetroot, salsify, celeriac, radishes, fresh	Yes
70920	Asparagus, fresh	Yes
70960	Peppers (Capsicum or Pimenta), fresh	Yes
0709XX	Vegetables, fresh or chilled	Yes
71140	Cucumbers & gherkins, provisionally preserved	Yes
0713Xa	Beans "Vigna & Phaseolus" nes, dried & shelled	Yes
71410	Roots & tubers of manioc	Yes
71420	Sweet potatoes	Yes
80131	Cashew nuts, in shell	Yes
803	Bananas, fresh or dried	Yes
80450	Guavas, mangoes & mangosteens, fresh or dried	Yes
80720	Papayas, fresh	Yes
0810XX	Fruits nes, fresh	Yes
81340	Peaches, pears, papayas, etc., unmixed, dried	Yes
90111	Coffee, not roasted, not decaffeinated	Yes
90121	Coffee, roasted, not decaffeinated	Yes
90220	Green tea, packings >3kg	Yes
0910XX	Ginger	Yes
110620	Flour, meal & powder of sago, roots or tubers	Yes

110814	Manioc starch	Yes
1211XX	Medicinal plants, herbs, etc., nes	Yes
1212Xb	Fruit stones & kernels for human consumption, sugar cane, carob, etc.	Yes
130190	Lac; natural gums (excl gum arabic), resins, balsams, etc.	Yes
1302XX	Vegetable saps and extracts	Yes
200580	Sweetcorn	Yes
2008XX	Edible parts of plants, prepared or preserved, nes	Yes
210111	Coffee extracts	Yes
210112	Coffee preparations	Yes
220300	Beer made from malt	Yes