



# Business Opportunities in Zambia's Forestry Sector

An overview of business opportunities in the Forestry sector  
for SMEs in Zambia, Finland and global investors





**SUOMI  
FINLAND**

The Zambian Forestry Opportunities Report was conducted under The Accelerated Growth for SMEs (AGS) Programme private sector development initiative and funded by the Ministry for Foreign Affairs of Finland.

The overall aim is to understand the market needs in Zambia and business opportunities for the private actors in the Zambian forestry sector, as well as businesses in Finland's forestry sector.

Tandem Circular Consulting conducted the study in collaboration with Reciprocity.

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## Acronyms

AFIP - African Forestry Impact Platform  
AGS – Accelerated Growth for SMEs  
CFMG - Community Forest Management Group  
EAC - East African Community  
EDFI - European Development Finance Institution  
EFSD - European Fund for Sustainable Development  
FMIS - Forest monitoring and information systems  
FORVAC - Forestry and Value Chains Development Programme  
ILUA - Integrated Land Use Assessment  
LULUCF - Land Use, Land-use change and Forestry  
MSME – Micro and Small to Medium Enterprise  
MSMED - Ministry of Small and Medium Enterprise Development  
MGEE - Ministry of Green Economy and Environment  
PES - Payments for Environmental Services  
PFP 2 - Participatory Plantation Forestry Programme  
REDD+ Reducing emissions from deforestation and forest degradation in developing countries  
SADC - Southern African Development Community  
SFM - Sustainable Forest Management  
TGA - Tree Grower’s Association  
UNEP - United Nations Environment Programme  
WCFB- Workers Compensation Fund Board  
ZAFFICO - Zambia Forestry and Forest Industries Corporation  
ZDA - Zambia Development Agency  
ZESCO - Zambia Electricity Supply Corporation Limited

# Executive summary

This report aims to present key business opportunities identified in Zambia's forestry sector, describe what would be needed to unlock these opportunities, and outline key recommendations and next steps. It was compiled as part of the **Accelerated Growth for SMEs (AGS)** Programme, an initiative funded by the Ministry for Foreign Affairs of Finland, in partnership with Zambia's Ministry of Small and Medium Enterprises Development, to support

the development of the private sector in Zambia.

While this document is aimed primarily at private sector stakeholders in the Zambian forestry sector, as well as businesses in Finland's forestry sector, it also seeks to be of interest to all relevant stakeholders in Zambia's forestry sector, including the public sector, civil society, international organisations, and global investors.

## Significant business opportunities exist to develop Zambia's forestry sector

Zambia's forestry sector presents significant and exciting business opportunities for growth and partnership. The formal and informal forestry sectors account for an estimated 5.2% of Zambia's GDP<sup>1</sup>, which in monetary terms amounts to an estimated US\$ 1.38 billion<sup>2</sup>. With 49m hectares of natural forest and woodlands, around 61,000ha of plantations<sup>3</sup>, and a small but established formal forestry sector, the sector presents several untapped business opportunities. If realised, these opportunities could have significant positive knock-on impacts on employment, enterprise development, economic inclusion, and rural development for the country.

Finland, boasting one of the most advanced and integrated forestry sectors in the world, is particularly well positioned to be a leading partner for business operators at all levels of the Zambian forestry value chain<sup>4</sup>. The technological knowledge, expertise, and experience in global markets of the Finnish forestry sector could provide significant support to unlock potential in Zambia's forestry value chain.

By collecting and analysing quantitative and qualitative data from existing research and studies, as well as engaging with relevant experts, several critical insights about opportunities and priorities in Zambia's Forestry sector have been identified for this report.

To select the most relevant and promising business opportunities, a set of 9 selection criteria was applied to a range of forestry activities. These criteria are:

- Domestic market potential
- Export market potential
- Employment potential
- Economic inclusion potential
- Rural development potential
- Enterprise development potential
- Business potential & interest
- Positive environmental impact
- Conducive regulatory environment

Based on these criteria, the following key areas of opportunity have been shortlisted:

1	Carbon Offsets
2	Management of Forest Resources, including Forest Inventory & Sustainable Harvesting
3	Non-Timber Forest Products
4	Timber products
5	Furniture
6	Paper pulp & Packaging

*Table 1: Shortlist of Key Opportunities in Zambia's Forestry Sector*

## Potential financial and non-financial resources exist to support businesses

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For several of these opportunities, potential financial and non-financial resources exist to support businesses. These include:

- The **European Fund for Sustainable Development (EFSD)**, a pan-European fund backed by a consortium of European development finance institutions (DFIs), which seeks to raise substantial financial resources for inclusive economic development, including guarantees, grants, and technical assistance
- **REDD+** (Reducing emissions from deforestation and forest degradation in developing countries), a UN-sponsored mechanism aimed at encouraging developing countries to reduce greenhouse gas emissions through a variety of forest management options, and at providing technical and financial support for these efforts<sup>5</sup>
- **FinnFund**, Finland's development financier and impact investor, with a substantial track record in Africa and the forestry sector. Finnfund is a co-investor in the newly launched **African Forestry Impact Platform (AFIP)**, aiming to raise up to US\$ 500m for investment in the African forestry sector by 2026<sup>6</sup>
- **Finnpartnership**, Finland's business partnership programme financed by the Ministry for Foreign Affairs of Finland, aimed at generating positive development impacts by promoting business between Finland and developing countries

In addition to these resources, there is also strong global institutional commitment to supporting and developing the Zambian Forestry sector. One of the most relevant examples is the **EU-Zambia Forestry Partnership**, signed in November 2022, on the sidelines of the COP27 UN Climate Change conference. As part of its commitments under the partnership, the EU will provide resources to stimulate private sector initiatives, support bankable forest-related projects, and provide access to finance for micro and medium enterprises. For its part, Zambia will actively promote sustainable forest management, and seek to massively increase the size of its plantations to reach 500,000ha, from the current level of around 61,000ha<sup>7</sup>.



Photo credits to: @the\_ngoni\_tourist

## Key public and private sector actors shape the Zambian forestry sector

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Several key stakeholders play important roles, either as individual organisations, or collectively, in Zambia's forestry sector. These include public sector institutions, privately-owned businesses of varying size, as well as civil society organisations. Some of these stakeholders hold significant influence in shaping the sector:

- Within the **public sector**, they include the [Department of Forestry](#), which falls under the [Ministry of Green Economy and Environment](#); and the [Lands Department](#), which falls under the [Ministry of Lands and Natural Resources](#). The newly created [Ministry of Small and Medium Enterprise Development](#) (MSMED), launched in 2021, is responsible for promoting SMEs in Zambia, and could potentially play a role in fostering a conducive environment for the development and expansion of an integrated forestry sector value chain, to the benefit of SMEs, as well as larger stakeholders and foreign investors. Another key public sector actor is the Zambia Forestry and Forest Industries Corporation ([ZAFFICO](#)), a parastatal which owns most of Zambia's commercial plantations, giving it significant influence in the forestry value chain as the country's main supplier of

industrial timber. As a result of its position, ZAFFICO enjoys a leading position over managed forests and the pricing of roundwood<sup>8</sup>. An additional number of significant public sector institutions have influence in the sector, notably the [Workers Compensation Fund Board](#) (WCFB), a social security scheme for formal employees in Zambia, with an equity share in ZAFFICO. The [Zambia Development Agency](#) (ZDA), for its part, is tasked with promoting trade, investment and enterprise development in Zambia. It provides specific incentives for investment, and is a key networking facilitator for commercial entities and investors seeking to conduct business in Zambia.

- Within the **private sector**, key stakeholders include large commercial operations in the timber and paper industry, mainly the Copperbelt Forestry Company (CFC), Zambezi Paper Mills (ZPM), Wood Processing Industries (WPI), and Book Hut. While recent data is not readily available, a 2013 World Bank study estimated that around 600 formal and 3,000 informal SMEs operated in Zambia's wood sector, employing around 47,000 people<sup>9</sup>.



Photo by [Angelina Litvin](#)

## Challenges include land usage rules, lack of scale, and underdeveloped local and regional markets

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While opportunities for business exist, several obstacles remain in the way of leveraging them, including:

- **Constraining land ownership structures:**

There are two main categories of public land in Zambia: **State-owned land**, and **customary land**<sup>10</sup>. State-owned land is managed by the government through municipal councils. Such land is titled, registered and transferable. It can be secured through leasehold deeds allowing permit holders to make use of the leased land for a specified period. Customary land falls under the custodianship of traditional authorities, and is untitled. Traditional Chiefs have the authority to determine and change the usage of land, but only with the consent of local communities. State land can be acquired through application to the Ministry of Lands and Natural Resources or respective Town Councils, while customary land can be accessed through Chiefs in their respective Chiefdoms<sup>11</sup>. The **Lands Act** outlines the conditions of land ownership and use by foreign investors, who can either obtain land in the open market, or obtain the land by alienation (i.e. transfer) from the President, provided they meet the criteria outlined in the Act.

- **Lack of scale and resources:** Zambia's existing forestry sector is relatively small, labour intensive and low-tech, with limited resources to invest heavily in innovative technologies. Access to local commercial sources of finance for long-term investment is also limited.
- **Underdeveloped markets:** With a population of only 19.7 million, and a small middle class, Zambia's domestic market is relatively limited in size. In addition, as a landlocked country, it relies on ports and harbours in neighbouring countries, notably Tanzania, Mozambique, and South Africa for much of its international trade. However, Zambia's central location in Southern Africa's SADC regional grouping makes it an excellent base for accessing the sizeable SADC (Southern African Development Community) market of 380 million people and a GDP of US\$ 1 trillion<sup>12</sup>, as well as the partly overlapping EAC (East African Community), with a population of 283 million people and a GDP of US\$ 305bn<sup>13</sup>.



## A more conducive regulatory and business environment is taking shape in the forestry sector

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The **Forests Act of 2015** is the main piece of legislation regulating forests and forest management in the country. It recognizes the country's forests as central for sustainable development, climate change mitigation and adaptation, and biodiversity conservation<sup>14</sup>. One of the key provisions of the Act is that it empowers Community Forest Management Groups (CFMGs) to take more control over their forest resources, and hands over increased responsibility for Chiefdoms on local forests<sup>15</sup>. This provision is specifically meant to empower local communities in terms of land management and to end effective "open access" for illegal loggers and illegal exploitation of forest resources<sup>16</sup>. **Zambia's National Forest Policy of 2014**<sup>17</sup> focuses on sustainable forest management (SFM) through participatory forest management. Like the Forests Act, the policy seeks to provide recognition to the role of local communities in managing forest resources. The policy aims at improving the forest sector's contribution to poverty reduction and to the national economy, biodiversity conservation, and combating climate change. The Forest Policy also recognises the importance of attracting private sector investment, especially for timber plantations and non-timber forest products (NTFPs)<sup>18</sup>.

Forestry and agroforestry products also constitute a priority sector in **Zambia's 8th National Development Plan (2022-2026)** to promote value addition activities the Zambian economy through a **Sustainable Land, Forest, and Water Management Strategy**, which makes provision for reforestation and the development of commercial plantations<sup>19</sup>.

In addition to the specific provisions of the Forests Act and the prioritisation of Forestry in Zambia's national development plan, the country's overall **operating environment for businesses and investors has made significant positive strides** in the recent past. An extensive report in 2022 by consulting firm Deloitte highlights the **much-improved business environment in Zambia**, including targeted government policies to improve economic growth and job creation, a renewed focus on the role of the private sector, and a focus on improving the enabling environment for investors and business<sup>20</sup>.

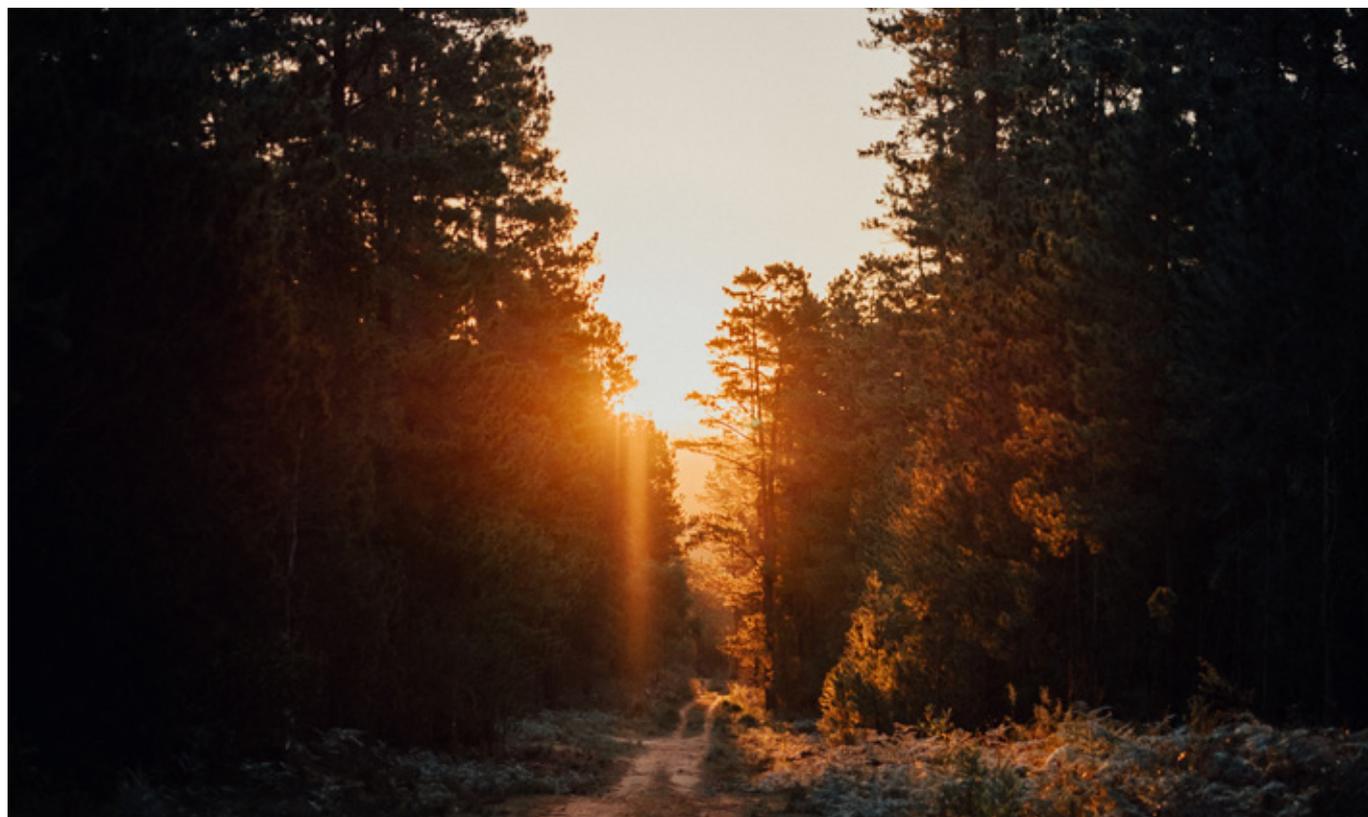
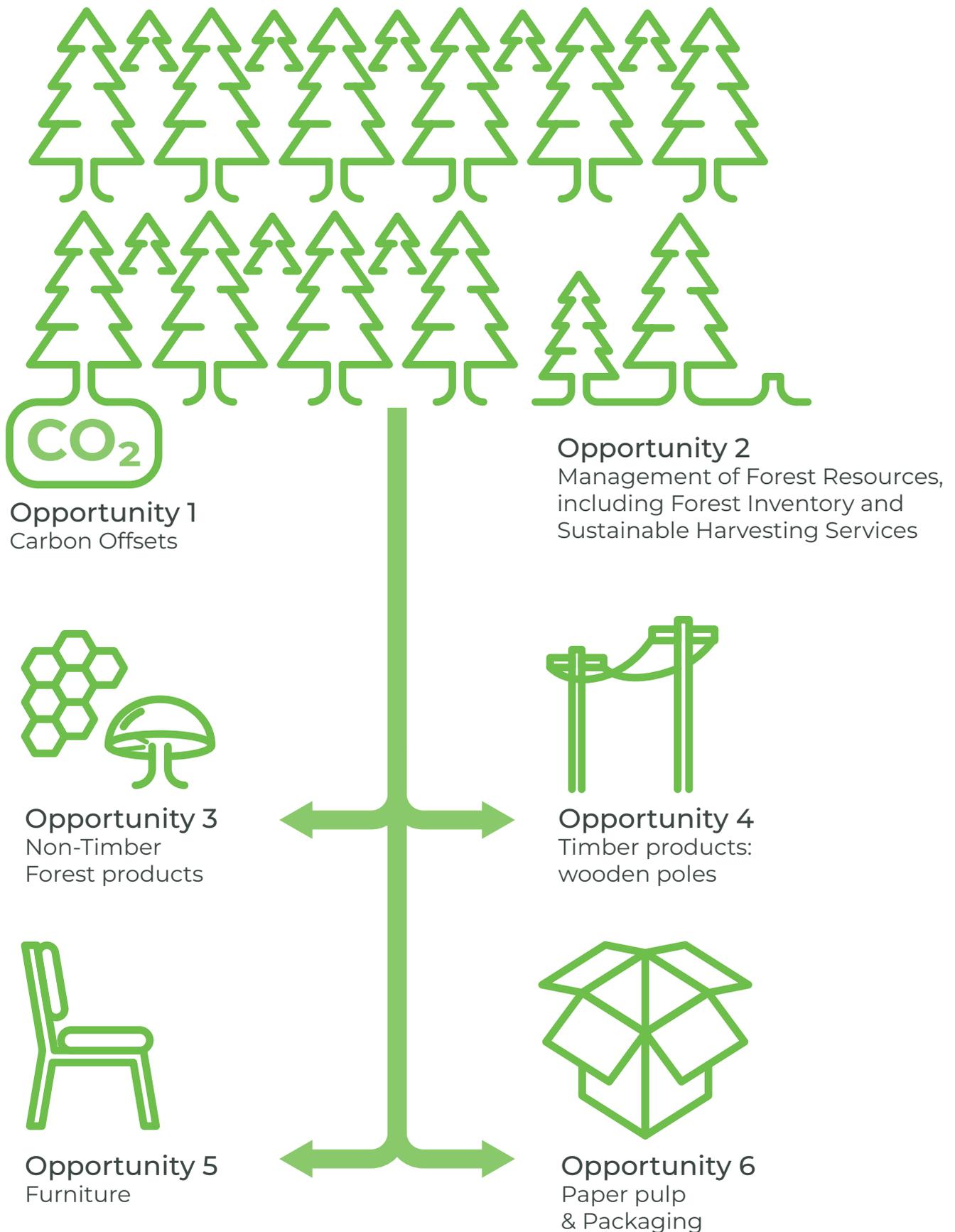


Photo by [Lidya Nada](#)

# Business Opportunities





## Business Opportunity 1: Carbon Offsets

Selection criteria:

Export potential	+++
Business potential & interest	+++
Positive Environmental Impact	+++
Regulatory environment	+++

Zambia's rapidly growing carbon offset market has attracted much attention in recent years, and several large-scale projects have been announced in 2023<sup>21</sup>, facilitated by a new set of guidelines<sup>22</sup> issued by Zambia's government. There are also significant (if not always undisputed) environmental benefits in carbon offset programmes, as a major avenue to compensate for carbon emissions. There is also existing Finnish expertise in soil management, as illustrated for example by Soilwatch, which has a long-standing presence and expertise on the African continent, or Greencarbon, which specialises in carbon footprint management.

### Snapshot

- The global carbon offset market was valued at US\$ 331.8 billion in 2022, and expected to grow by 31% per annum between 2023 and 2028, to US\$ 1.3 trillion<sup>23</sup>.
- With 49 million ha of forest cover, **Zambia holds significant potential as a natural carbon sink**, and is a growing market for carbon offsets.
- According to estimates, Zambia already accounts for 6% of Africa's carbon credit output and 0.7% of global production<sup>24</sup>.
- Significant momentum to develop carbon markets in Zambia **already exists**, as exemplified by initiatives by COMACO, BCP and TNC. Major multinationals including TotalEnergies and ENI are looking to invest in Zambia's carbon credit market, and will need expert forestry management services.
- Zambia is a pilot country for the **REDD+ mechanism** (Reducing emissions from deforestation and forest degradation in developing countries), funded by developed countries to finance carbon offsets for the protection of forests and native forests<sup>25</sup>.

## Brief Description of the opportunity: What, Where, Who, How.

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**Carbon offsets** consist of reducing or removing emissions of carbon dioxide or other greenhouse gases, to compensate for emissions made elsewhere. **Carbon credits** (the financial instruments created by offsets) represent emission reductions that can be bought or sold on international markets, creating revenue streams for natural carbon sinks such as Zambia, as well as opportunities for companies that can offer specialised services in managing carbon sinks.

In Zambia, carbon projects in conservation or improved sustainable forest management **offer opportunities for forestry companies to develop and implement carbon forestry projects**, in partnerships with Zambian service providers<sup>26</sup>. Large fossil fuel producers including TotalEnergies, Shell and ENI either have existing carbon offset programmes in Zambia, or are planning to, and these companies could become **anchor clients for forestry businesses** providing a range of forest management services.

In addition, successful carbon offset projects can help reduce the concerning rate of deforestation in Zambia, which was estimated to have reached 172,000 ha in 2022, equivalent to 69.8 million tonnes of carbon<sup>27</sup>.

Global carbon markets are also increasingly gaining traction, driven by the imperatives to address global climate. The forestry sector is a good place to start as it accounts for 60% of Zambia's overall carbon emissions<sup>28</sup>, especially due to charcoal production. While the local carbon market is still at an nascent stage, it is one of the fastest-growing carbon offset markets on the African continent, and Zambia's government supports the development of a carbon credit market, which it seeks to support as a potential source of revenue to fund economic development<sup>29</sup>.

## Market potential

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Concrete entry points for businesses in the carbon offset sector can include:

- Land use, land-use change and forestry projects (more commonly known as LULUCF), which focus on avoiding deforestation, protecting existing forests, and restoring forests in areas where land was deforested.
- Soil management models that contribute to preserving or increasing the amount of carbon sequestered in soil, such as regenerative agriculture and agroforestry (i.e. the integration of crops, livestock and woodlands in the same area). Zambia has real potential in adopting these approaches, as exemplified, for instance, by the Simahala Incubator Farm Company (SIFC) near Livingstone<sup>30</sup>, and the ClimateChar conservation project developing agroforestry in the east of Zambia<sup>31</sup>.

Potential local partners to assist investors in Zambia could include stakeholders such as [Carbon Forest Zambia](#), and [Prospero](#), both based in Lusaka.

Some support for businesses can also be mobilised from the EDFI Carbon Sink EFSD+ Guarantee Programme<sup>32</sup>.

According to the Integrated Land Use Assessment II (ILUA II) forest inventory data released in 2016, the total carbon stock in forested land was estimated at 1,218.3 million tonnes, half of which is located in Northwestern, Muchinga, and Western provinces<sup>33</sup>.

A UNEP report from 2015 has estimated the carbon stock market value of 1ha of forest to be in the region of US\$ 150/ha, and up to US\$ 750/ha for intact forests, depending on location. Annual values of carbon sequestration range from US\$ 16 to US\$ 30/ha per annum<sup>34</sup>.

## What is needed to make it happen

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Given the “carbon rush” into Zambia’s forests, businesses active in Finland’s forestry sector and elsewhere could develop capacities and partnerships for locally-led carbon projects. This would involve identifying and engaging with local Community Forest Management Groups (CFMG), as well as Community Resources Boards (CRB), notably in the Copperbelt and Northwestern provinces, where most of the carbon offset potential is located<sup>35</sup>.

According to a recent study by consulting firm E&Y, the carbon fund business model in Zambia “facilitates the transaction of carbon credits from agribusiness that demonstrates emission reduction”. For instance, Community Markets for Conservation (COMACO) and oil & gas multinational Shell recently verified 0.9 million tonnes of carbon credits, providing nine chiefdom areas with US\$3.1m for protecting their customary lands<sup>36</sup>.

There are also significant **potential synergies between business activities in carbon offsets and non-timber forestry products (NTFPs)**, (see business opportunity 3), considering that well-designed carbon offset projects can “reduce food insecurity by including fruit and nut trees in the agroforestry design, and improve livelihoods within the community through additional income from carbon credits”<sup>37</sup>.

Finally, in a strong positive signal of the potential of the carbon offset market, Zambia issued new interim guidelines in 2022, which provide a practical outline to businesses and include sustainable forest management, reforestation, avoided deforestation, restoration, and forest regeneration as part of eligible carbon markets<sup>38</sup>.



## Business Opportunity 2: Management of Forest Resources, including Forest Inventory and Sustainable Harvesting Services

Selection criteria:

<b>Domestic market</b>	+++
<b>Export potential</b>	+++
<b>Positive Environmental impact</b>	+++
<b>Business potential &amp; interest</b>	++

Improved forestry resource management services in Zambia are critical to ensure the sustainable development of the Zambian forestry sector. Smart forestry management tools and methods would not only address some of the existing bottlenecks in the country's forestry value chain and assist with resource monitoring and business planning, they would also open opportunities to export to regional and overseas markets, and greatly increase the sector's potential for growth and employment. Finnish forestry companies have extensive know-how and experience in these fields, as exemplified by companies such as **Kesla, Arbonaut, Tapio, Slidetec, Bitcomp, Gimrobotics, Simosol, Trestima, Afry** and many others.

### Snapshot

- Zambia is eager to enhance business activities in the country's timber sector. However, as pointed out by the Zambian Minister of Green Economy and Environment in December 2022, it lacks the technological expertise to quantify the timber resource and measure the afforestation efforts<sup>39</sup>.
- There is a significant need for more capacity in Zambia to manage and optimise its existing plantations<sup>40</sup>, as well as its natural forest resources.
- Large operators such as ZAFFICO could benefit from a range of Forest Resource Management services, and have expressed a need for forest management services.
- Further potential lies with smallholder farmer plantations (SHFs).

## Brief Description of the opportunity: What, Where, Who, How.

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Management of Forest resources is understood in the context of this report as “the process of planning and implementing practices for the stewardship and use of forests to meet specific environmental, economic, social and cultural objectives”<sup>41</sup>.

The larger commercial and parastatal stakeholders in Zambia’s Forestry sector need a broad range of forest resource management services, including **smart forestry and smart harvesting technologies**, which focus on tools to improve the accuracy and efficiency in forestry operations, from harvesting to transport as well as planning and analytics. This includes the main plantations managed by ZAFFICO, essentially located in the Copperbelt, but potentially also the smaller community-based forests and small-holder plantations, which are scattered around the country. Beyond plantation-based wood, Zambia is also a reservoir of rare commercial timber species and tropical woods, such as muzauli (also known as rosewood - *Guilbortia*

*coleosperma*) and mukwa (*Pterocarpus angolensis*)<sup>42</sup>, which are in high demand in high-end markets, notably China, mainly for use in the furniture industry (see Business Opportunity 5). These rare woods contain significant economic value for Zambia. Sustainable harvesting technologies and inventory services are critically important to combat illegal logging and smuggling of these rare woods, and allow Zambia to fully benefit from sustainable trade in this area.

Forest inventories also offer opportunities for expert services on plantation forest management plans, as well as forest monitoring and information systems (FMIS)<sup>43</sup>.

Such services could play critical roles in making Zambia’s forestry sector more competitive, more sustainable and improve its ability to add significant value to the social and economic inclusion of rural communities.

## Market Potential

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There is existing demand for inventory services, but also for sustainable forest resource management services. Key potential clients include the large existing plantation operators such as parastatal **ZAFFICO**, as well as the **Copperbelt Forestry Company** (CFC), which runs an existing plantation of 1,000 ha and has acquired land for 10,000 ha for further development in the Serenje district. Other operators include the **Workers Compensation Board Fund** (WCBF), which already runs a small plantation of 200ha, but has plans to expand to at least 10,000 ha<sup>44</sup>.

There is potential in exploring **Public-Private Partnership models** (PPPs), by which the government pays for a series of services provided by businesses, including forest resource management and the lease of land for plantations<sup>45</sup>. Zambia has developed a legal framework for PPPs, and the government may be keen to leverage opportunities to increase its industrial timber production through PPPs.

Further opportunities could also lie in cross-sectoral partnerships with some large Zambian enterprises in related natural resource management sectors. Among them are Illovo Sugar, Louis Dreyfus Company on cotton and crops, and Zambian Breweries, which has invested funds in activities on reforestation and landscape restoration<sup>46</sup>. Zambian Breweries works closely with other big water users to protect vital watersheds, where forests play an important protective role and can yield Payments for Environmental Services (PES)<sup>47</sup>.

Finnish forestry management companies have an existing and recent footprint in the Zambian market, as exemplified by **Arbonaut**, one of the world’s leading forestry knowledge service operators, which completed a full mapping and inventory of ZAFFICO’s plantations in 2022-2023.<sup>48</sup>

The experience of the [Participatory Plantation Forestry Programme](#) (PFP 2), funded by Finland in neighbouring Tanzania, provides a useful comparative and technical basis for investors in the Zambian Forestry sector. It also provides some evidence that with the right kind of support and tools, scale is not necessarily a precondition for successful and sustainable forestry management. The PFP 2 plantation support model provided value chain and market access support to thousands of smallholder plantations, some as small as 1ha, but collectively amounting to a substantial 500,000ha of forests<sup>49</sup>. Another significant component of the PFP 2

is the [Forestry and Wood Industries Training Centre](#)<sup>50</sup>, aimed at improving efficiency in timber processing and product diversification.

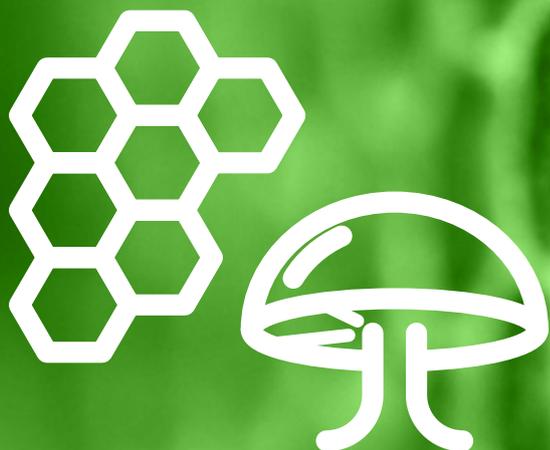
The PFP 2 Programme seeks to increase rural income and develop sustainable plantation forestry and supports participatory and sustainable land use planning, notably by facilitating the creation of Tree Growers' Associations (TGAs)<sup>51</sup>. While the Programme is still ongoing, its ultimate impact will clearly hold important learnings for the entire region, including Zambia.

## What is needed to make it happen

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To support their ventures, medium to large scale businesses from the European Union, including Finland, can apply to the [European Fund for Sustainable Development Plus \(EFSD+\)](#), which can be mobilised to provide catalytic funding in the form of guarantees and blended finance (including grants, concessional equity and debt) to support and complement investment in green infrastructure, including new commercial wood plantations<sup>52</sup>. In order to be sustainable, successful and commercially viable, such plantations would need a range of efficient and modern forestry resource management services.

Businesses would also need to explore the feasibility of acquiring, or developing the plantation belt in Northwestern, Luapula, Northern and Muchinga provinces, where an estimated 100,000ha of land could be available for acquisition<sup>53</sup>.



## Business Opportunity 3: Non-Timber Forest products

Selection criteria:

<b>Economic inclusion and skills development</b>	+++
<b>Export potential</b>	+++
<b>Rural development</b>	++

Non-timber forest products (NTFPs) present great opportunities for economic inclusion and skills development, as well as rural development, in line with the stated priorities of Zambia's National Forest Policy (2014) as well as the 8th National Development Plan (2022-2026). The export market for NTFPs has grown sharply in the recent past, notably the sale of premium honey and beeswax products to EU markets. Other products, including medicinal plants, may also fetch premium prices in some export markets. Companies from Finland, the EU, and other major economies such as South Africa may be interested in developing opportunities in such areas as harvesting, planting, certification, and marketing of NTFPs.

### Snapshot

- The estimated value of NTFPs from Zambian forests was at about US\$ 135.8 million in 2015<sup>54</sup>. The potential market is significantly larger: A 2018 study by the Indaba Agricultural Policy Research Institute estimated the potential market size to be at least US\$ 489 million<sup>55</sup>.
- Prominent NTFP products in Zambia include honey, mushrooms, cosmetics, turpeneic oil, mopane worms (caterpillars), and medicinal plants.

## Brief Description of the opportunity: What, Where, Who, How.

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Non-timber forest products typically include a range of products such as honey, fruits and nuts, mushrooms, as well as medicinal plants, resins, essences and a range of barks and fibres such as bamboo, and rattans<sup>56</sup>.

Zambia's NTFP sector is still largely underdeveloped, and opportunities exist to develop business in several promising areas, including honey, mushrooms, turpeneic oil, fruits, caterpillars, and medicines<sup>57</sup>, for which there

is an existing small production base, as well as bamboo and rattan, for which there is increasing demand, linked to two other parts of the forestry value chain: Furniture (see business opportunity 5) and Paper, Pulp and Packaging (see business opportunity 6).

Non-timber forest products can help boost incomes and support livelihoods in rural areas, and encourage forest conservation.

## Market Potential

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According to UNEP figures, the estimated value of Zambia's existing NTFP sector stood at US\$ 135.8 million in 2015 (no more recent figures are readily available)<sup>58</sup>. The potential market is estimated to be much higher, and was evaluated by Zambia's Indaba Agricultural Policy Research Institute to be worth US\$ 489 million in 2018<sup>59</sup>.

There are significant opportunities to develop some high-added value NTFPs for the global export market, including honey, cosmetics (essential oils, aloe vera, devil's claw, etc.), and health beverages such as marula and fruit juices<sup>60</sup>. Mopane worms, which are a local delicacy and important source of protein across Southern and Central Africa, also present opportunities, more specifically for the domestic and regional markets.

The processing of organic honey, in high demand in global north markets, as well as beeswax, present a major immediate opportunity. Around 20,000 small scale bee-keepers, mainly in Northwestern province, supply more than 90% of Zambia's natural honey. A share of the production is exported to the European and US markets under Zambian brands such as Ubuchi, Zambezi Gold<sup>61</sup>, and Safaribee. Zambia has recently received EU certification to export honey and beeswax to the EU market, and there are plans to further expand production and exports in the coming years. Total exports of honey have grown considerably over the past few years, reaching US\$ 14.3 million in 2022<sup>62</sup>.

## What is needed to make it happen

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**Further market research and development research:** Businesses need to carry out detailed market research to identify valuable NTFPs, assess their ecological and economic potential, potential export and domestic markets, and develop sustainable harvesting and processing techniques. This can lead to the expansion of existing production (such as honey) but also the cultivation of new or nascent commercial production of NTFP products. Financial and technical support for such research may be available from entities such as FinnFund or other stakeholders.

**Study and apply some learnings** from the [Forestry and Value Chains Development Programme](#) (FORVAC) in neighbouring Tanzania,

with a focus on NTFPs including mushrooms and honey, to gain a better understanding of the conducive conditions for the development of NTFPs.

**Identify relevant stakeholders from the public sector and civil society**, at local as well as national level in Zambia, to engage in partnerships and leverage resources, expertise, and funding for NTFP development initiatives. It will also be crucial to assess the risks relating to **land ownership and control of forested areas** and establish clarity of the legal framework in which the sustainable exploitation of NTFPs can take place.



## Business Opportunity 4: Timber products: wooden poles

Selection criteria:

<b>Domestic market</b>	+++
<b>Employment potential</b>	++
<b>Enterprise Development potential</b>	++

The production volume of wooden poles in Zambia falls far short of domestic demand, forcing the country to import two thirds of its needs, mainly from neighbouring countries. There is significant scope to increase local production to meet demand. Incidentally, this reality also highlights the fact that Zambia's existing commercial plantations are too small to cover domestic needs, let alone benefit from export opportunities, and that there is significant room for the expansion of commercial plantations. There is also some employment and enterprise development potential in this opportunity. Forestry companies from Finland and elsewhere, which specialise in wood treatment products and technologies, could partner with local companies in Zambia to increase production and quality for the local and regional markets.

### Snapshot

- Zambia's domestic production of wooden poles only covers about one third of the local market, estimated at 300,000 poles per year.
- There are market opportunities to increase production, to supply not just the growing local market, but also for export to neighbouring countries with high demand, such as the DRC.
- Large-scale clients include electricity utility ZESCO, which opened a tender for the supply of US\$ 107 million worth of wooden poles in 2022.

## Brief Description of the opportunity: What, Where, Who, How.

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Wooden poles are ubiquitous construction materials and used all over the world to support electricity grids and fences, as well as a range of other constructions. They present numerous advantages, including cost relative to concrete or steel alternatives, low electricity conductivity, and, when properly treated, resistant to a range of weather conditions<sup>63</sup>. The production of wooden poles also requires much less energy and has a lower environmental and carbon footprint than concrete or steel.

ZAFFICO, as part of its quest to diversify and strengthen its business, operates a eucalyptus pole plant on the outskirts of Kitwe, producing fencing poles, construction poles and transmission & utility poles<sup>64</sup>.

Finnish forestry companies (and other businesses) could supply treatment technologies to enhance the quality and durability of wooden poles, timber planks and possibly railway sleepers, produced in Zambia.

## Market Potential

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The Zambia Electricity Supply Corporation (ZESCO) and the Rural Electrification Authority (REA) provide steady demand for wooden poles to support the electricity grid in urban and rural areas of the country<sup>65</sup>.

ZESCO opened a public tender for the supply of wooden poles for a value of US\$ 107 million in 2022.

There is, furthermore, sustained demand for wooden poles for fencing. Over the past decade, Zambia has been importing around half of its annual usage of wooden poles, mainly South Africa and Zimbabwe, to supplement local production<sup>66</sup>. ZAFFICO operates a pole treatment plant for both creosote and chromated copper arsenate (CCA) preservatives, with a current output of 140,000 poles per year<sup>67</sup>.

## What is needed to make it happen

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Finnish forestry companies (and others) can provide expertise and technology to develop the pole market. They need to conduct **further market research** to develop a detailed understanding of the Zambian and regional market needs and constraints.

Potential investors need to **engage with stakeholders across the local value chain**, from production to end clients, including ZAFFICO and ZESCO, to determine needs and clear obstacles in the way of developing the local market.

The **Zambia Development Agency** could facilitate the process and provide incentives to develop the sector.



## Business Opportunity 5: Furniture

Selection criteria:

Domestic market	+++
Employment potential	+++
Enterprise development potential	+++

The Zambian furniture market is growing fast and is projected to reach a value of US\$ 160 million by 2030. Currently most furniture is imported from East Asia, and increasing domestic production to serve regional markets could create thousands of employment opportunities and help create sustainable small and medium-sized enterprises. There is an opportunity for Finnish businesses, as well as forestry companies from elsewhere, to supply consulting services, specialised machinery, knowledge, and technology to develop the Zambian furniture industry and improve the quality of its production. The example of **Afrifurniture** in neighbouring Tanzania, developed with the support, (amongst others) of Finland's **Indufor** group and **Leapfrog**, provides a strong positive signal underlining the potential and feasibility of this opportunity.

### Snapshot

- Zambia has a small but growing wooden furniture market, driven by rapid urbanisation, strong economic growth, and a growing middle class.
- Domestic manufacturing of wooden furniture is mostly informal, with thousands of small-scale artisans producing furniture of inconsistent quality. These producers struggle to compete with mass-produced affordable furniture, mostly imported from China and East Asia.
- There are opportunities to grow Zambia's domestic furniture industry, to serve the local and regional markets within SADC and the EAC trade blocks, and potentially the huge Asian markets further afield.
- The local industry needs woodworking machinery and technology to produce quality products at competitive prices for the local and regional markets.
- The Zambian government is keen to support the nascent furniture industry.

## Brief Description of the opportunity: What, Where, Who, How.

Zambia has a significant supply of suitable wood to produce wooden furniture. A portion of the pine trees from Zambia's plantations typically end up as furniture products<sup>68</sup>. In addition, indigenous hardwoods such as teak, rosewood (muzauli), and mahogany are some of the commonly used wood species in furniture making, often high-end products. Rosewood, for example, is in very high demand in China and can fetch up to US\$ 17,000/tonne<sup>69</sup>, a value that has also exposed this type of wood to illegal logging and smuggling. Zambia has a tradition of artisans and MSMEs involved in producing wooden furniture<sup>70</sup>. There are also several formal small-scale producers, as exemplified by Sikale Wood Furnitures, Thamara Wood & Furniture, or Mupapa Wood.

Despite this local production base and the availability of adequate raw materials, Zambia does not have a significant capacity for wood processing for furniture. Paradoxically, the country exports significant amounts of logs

and raw wood to Asia, only to be re-imported into Zambia as mass-produced furniture. One of the main reasons is that due to poor labour productivity, unit costs tend to be far higher in Zambia than in competing East Asian economies, such as China or Vietnam. Zambia, however, remains cost competitive in regional terms<sup>71</sup>.

This situation translates into a significant loss of economic value-addition and local beneficiation, a reality the Zambian authorities aim to change over the next decade. The example of **Afrifurniture**<sup>72</sup> in neighbouring Tanzania is a good example that promising furniture businesses can be nurtured to serve local and regional markets in Southern Africa, despite competition from mass-producers. Afrifurniture came into being as part of the previously mentioned [PFP 2 programme](#) (see opportunity 2: Management of Forest Resources), with the support, amongst others, of Finland's [Indufor Group](#), a forest consulting service provider.

## Market Potential

Local demand for furniture in the Zambian market alone is estimated to grow to US \$ 120 million by 2025 and reach US\$ 160 million by 2030<sup>73</sup>. Interested businesses need to consider not only the size of the Zambian market, but rather the growing size of the entire SADC and EAC trade blocs, which together account for over 500 million people and a GDP of over US\$ 1.2 trillion.

A large portion of this growth is driven by rapid urbanisation and a growing aspirational middle class in the global South. Zambia, with an estimated urbanisation rate of 46% and a fast-growing economy in the heart of the SADC trade bloc, is in a good position to benefit from its geographical position, within close range of large markets in Tanzania, Malawi, Angola, Mozambique, and the Katanga province of the DRC, adjacent to Zambia's copperbelt.

The global furniture market was valued at \$516.66 billion in 2022 and is projected to grow to \$780.43 billion by 2030<sup>74</sup>.

### ZAMBIAN DEMAND SCENARIO FOR WOODEN FURNITURE

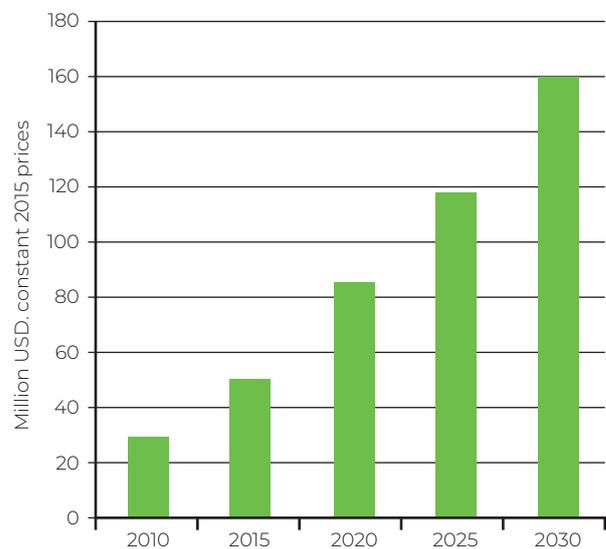


Figure 2: Zambian demand scenario for wooden furniture. (Source: HÄGGBLOMM & Partners, "Zambian Forest Sector Opportunities for Finnish Stakeholders", 2017.,p68).

## What is needed to make it happen

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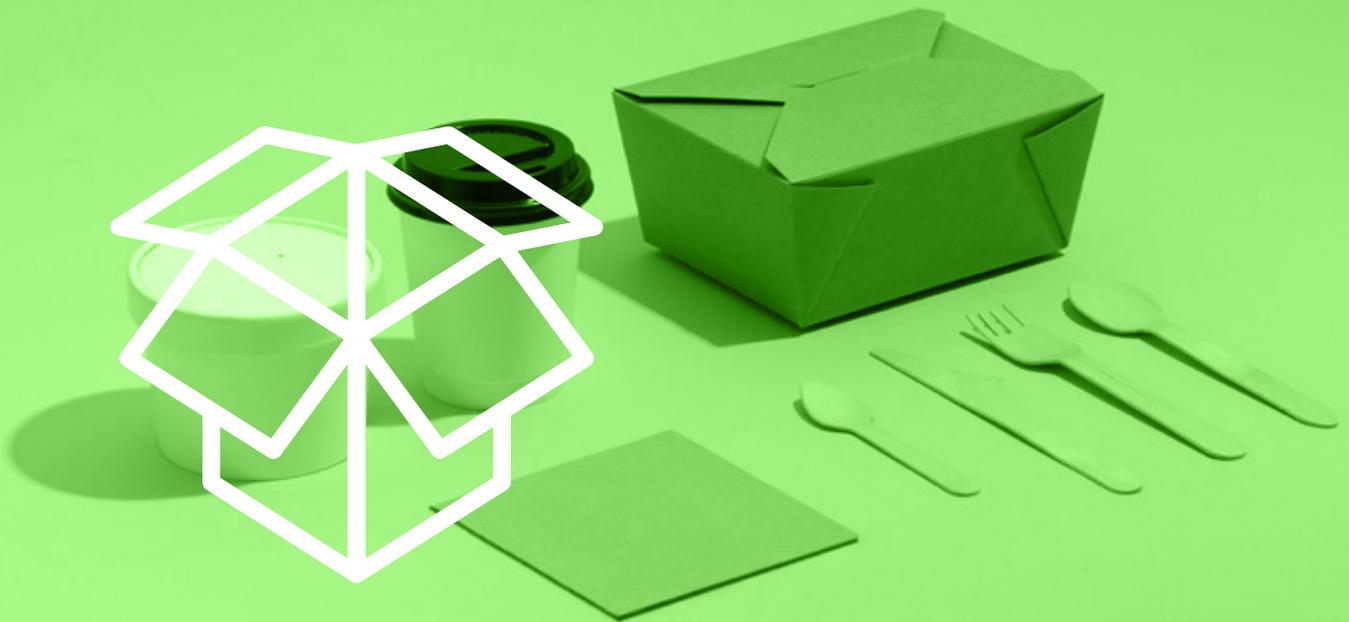
**Businesses need to conduct in-depth market research** to understand the Zambian and regional furniture markets and value chains, from producers to end-consumers, considering the full spectrum of market segments: households of varying income levels, commercial furniture buyers, schools, and other public sector networks. Consideration should also be given the potential of high-end, small volume but potentially valuable export markets in Europe for high-value tropical woods, such as muzauli. It needs to be emphasised that in the context of illegal logging and trade in high-value and rare hardwoods in Zambia, it will be of primary importance to explore ways to grow and trade such species in sustainable and transparent conditions.

**Source sustainable local wood supply for furniture:** Businesses interested in exploring opportunities in Zambia's furniture industry need to engage with large local wood producers and sawmillers (ZAFFICO, CFC, WPI, etc.) to establish conditions to source a stable and sustainable

supply of raw wood for furniture production from renewable sources and sustainable forestry practices.

**Engage with existing local furniture manufacturers,** to understand their needs in terms of machinery, technology, and upskilling. This may also involve engaging not only with formal industrial manufacturers, but also with small-scale artisans, who represent most local producers.

**Engage with the Zambian public sector stakeholders,** including the Zambian Development Agency, to align on smart and innovative incentives to encourage local sourcing and production of wood furniture. One idea, as suggested for example by the World Bank, would be to establish small industry clusters through the creation of industrial parks, with support from domestic investors and government<sup>75</sup>. This can help increase productivity, reduce costs, and increase the local industry's competitiveness.



## Business Opportunity 6: Paper pulp & Packaging

Selection criteria:

<b>Domestic demand</b>	+++
<b>Environmental impact</b>	+++
<b>Business potential &amp; interest</b>	++

There is sizeable demand for paper pulp and packaging products in Zambia, with imports reaching an estimated value of US\$ 140m. Wood-based packaging products also present major environmental advantages compared to plastic and other alternatives. Local and foreign businesses, such as Zambezi Paper Mills, Book Hut and Nampak, have been developing their paper and wood packaging activities in Zambia in recent years. Opportunities exist for Finnish and other businesses to provide expert services and technologies in the paper and packaging value chain.

### Snapshot

- Zambia imported an estimated US\$ 140 million worth of paper pulp and paper products in 2021<sup>76</sup>.
- The local paper pulp and wood packaging sectors are small and underdeveloped, and present opportunities for investment from Finnish and other investors.
- There is strong growth and interest in developing bamboo plantations in Zambia to supply fibre for paper and packaging.

## Brief Description of the opportunity: What, Where, Who, How.

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Paper and paper pulp refer in this context to paper and pulp made from wood raw materials. Packaging refers to cartons, wooden cases, pallets, and boxes which are made up of wood or cardboard.

In 2021, Zambia imported an estimated US\$ 140 million worth of paper products, including cellulose fibre (US\$ 20 million, mainly from Finland), and toilet paper (US\$ 19 million), followed by a variety of specialised paper products such as paper containers and kraft paper. The country also exported around US \$ 23.7 million worth of paper products, mostly to regional markets such as South Africa<sup>77</sup>.

Two of the main companies in the paper pulp & packaging industry are South Africa-based **Nampak**, which has a large facility near Lusaka producing carton packaging, and **Book Hut**, Zambia's main supplier of school textbooks and exercise books, boasting a large and modern paper processing and manufacturing plant in Lusaka. In addition, **Zambezi Paper Mills** is the country's main producer of kraft and tissue paper.

Zambezi Paper Mills is dealing with shortages in its supply of wood fibre, despite growing national and regional demand for its products<sup>78</sup>. One of the opportunities they are considering is to increase local sourcing by the establishment of bamboo plantations to supply fibre products.

## Market Potential

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Among the main advantages of paper and wood packaging are their eco-friendly credentials, in contrast to plastic-based alternatives. Shoring up the Zambian paper packaging industry would also have further positive economic impacts, in the form of formal employment (including some relatively low-skilled jobs) and income generation.

Considering Zambia's significant trade deficit in paper and packaging products, there are **opportunities to expand local production**, either by engaging with the existing large suppliers for opportunities to increase production volume and efficiencies, or even greenfield investments by Finnish and other paper pulp and packaging companies.

Another opportunity is the expansion of plantations to increase the supply of raw materials for the paper pulp value chain to address the shortage of wood fibre for making paper. Zambezi Paper Mills is now considering bamboo as an alternative source of fibre to a mooted USD 145 million investment project in kraft paper and tissue mill, for which it is looking for business partners<sup>79</sup>. About 7,500 hectares would be required to supply 300,000 tonnes of green bamboo per year. The Forestry Research Unit of the Forestry Department has carried out research on growing bamboo in Eastern province, with promising results<sup>80</sup>.

According to some market research sources, the global wooden packaging market was valued at US\$ 3.53 billion in 2022, and is expected to reach USD 5.58 billion by 2030<sup>81</sup>.

## What is needed to make it happen

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**Engaging with local industry:** The first step for interested businesses should be to engage with local industry leaders to determine immediate and medium-term needs in the value chain.

**In-depth market research:** To gain detailed insights into the local and regional market needs, interested businesses need to carry out in-depth market research to establish market prospects and determine the medium to long-term viability of investing in the sector.

**Developing a sustainable supply of raw materials:** Boosting the local paper & pulp and

packaging sector also implies the development of a sustainable supply of raw materials (wood fibre and bamboo fibre), through responsible forestry practices and reforestation efforts. Finnish companies, with their world-class experience in these areas, are well-positioned to provide services in this regard.

**Engage with the relevant public sector authorities,** including the Zambian Development Agency, to discuss a strategy for the development of paper and wood packaging products for the Zambian and regional markets, and align on potential incentives to boost the industry.

## Key recommendations and next steps

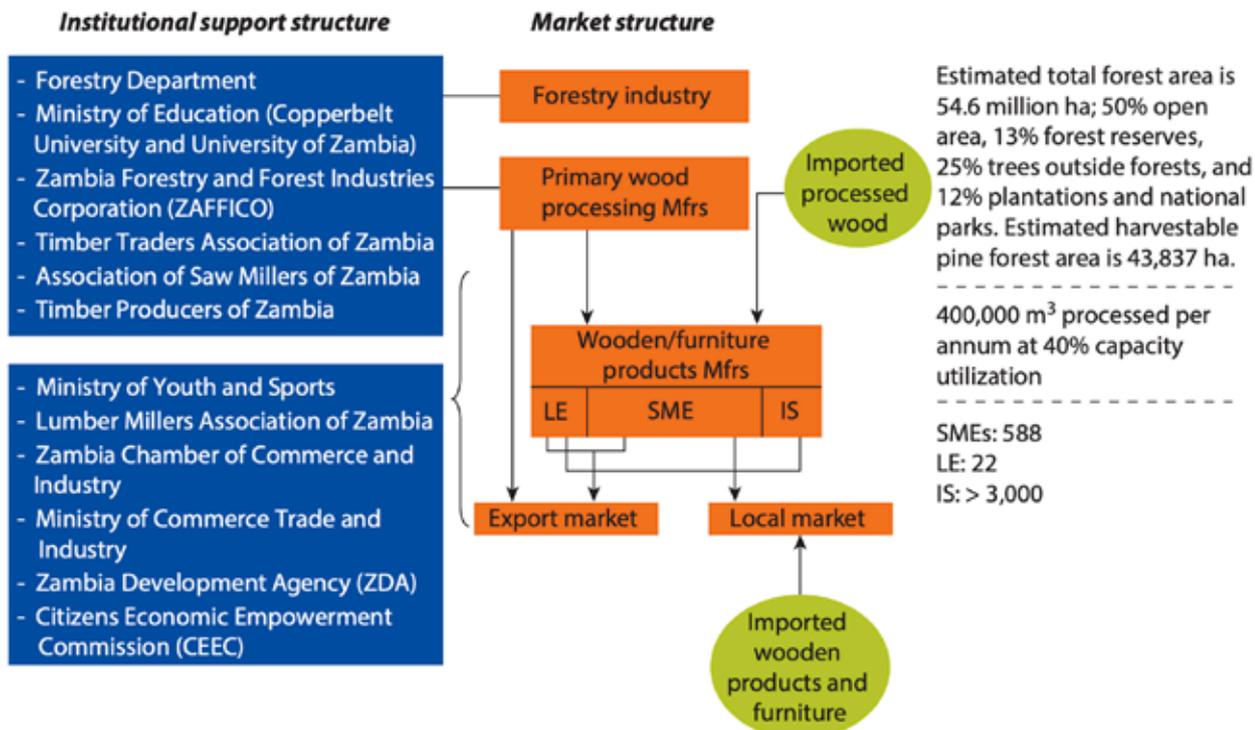
The business opportunities presented in this report are not exhaustive. Further opportunities may exist in the forestry value chain and are worth exploring in detail, including a wide range of value-adding activities in the forestry value chain. Finnish companies, with their world-leading technology and expertise, are particularly well positioned to develop existing opportunities in Zambia, to their own benefit, but also to the benefit of economic development in Zambia. To leverage these opportunities in the short and medium term, the following next steps will be essential:

- **Market Research:** Businesses will need to carry out specific and detailed market research in each of the identified areas to identify detailed market needs and specific opportunities. It will also be essential to consider not only the domestic markets, but also the export potential of Zambian forestry products, given Zambia's advantageous geographical position, trade agreements and decent transport links to the larger regional markets such as the Democratic Republic of Congo, Tanzania, Zimbabwe, Malawi, and South Africa.
- **Establish a Dialogue Platform with local stakeholders:** Businesses need to engage with local stakeholders and establish channels of communication or a dialogue platform. These include the local private sector, public sector, as well as civil society, such as community-based organisations such as Community Forest Management Groups (CFMGs) and NGOs engaged in forestry. It will be essential to engage the Zambian Forestry Department and the Zambia Development Agency (ZDA), in order to identify areas where incentives are needed, and where some of the potential barriers (including complex ownership structures) can be addressed or mitigated.
- **Understanding the regulatory environment for each of the business opportunities,** including navigating the rules governing access to land and land ownership structures, will require businesses to get specialised legal advice from Zambian practitioners.
- **Engage with willing partners to support long-term investment:** Businesses should engage with possible sources of 'soft' financing and investment partners, as well as non-financial resources needed to support business ventures, such a networking and matchmaking: These include ESDF+, FinnFund, AFIP, Finnpartnership, and a range of Development Finance Institutions (DFIs) to incentivise business and investments, and provide forms of commercially viable financing options and guarantees.

The sustainable development of Zambia's forestry sector is key to the country's long-term prosperity. With conditions for business steadily improving, Finnish and other global forestry companies can make a decisive contribution to this development.

# Annexes

## Stakeholder mapping of Zambia's Forestry sector



Source: World Bank (2013). "Light manufacturing in Zambia" - Chapter 7. <sup>82</sup>.

## List of key stakeholders in Zambia's Forestry sector

Category / Name	Function	Notes / Comments
<b>Public sector</b>		
Ministry of Green Economy & Environment	Main government Ministry in charge of the environment	
Forest Department	Department falling under Ministry of Green Economy and Environment; responsible for managing, protecting, and conserving forests	
Ministry of Lands & Natural resources	Main government ministry in charge of the management of land and natural resources for sustainable land use.	
Lands Department	Department falling under the Ministry of Lands and Natural Resources	
Constituency Development Fund		
Workers Compensation Fund Control Board (WCFCB)		Worker's organisation seeking to develop capacity to manage plantation assets
ZESCO	Electricity Utility	Major client for wood poles (electric grid)
Zambia development Agency (ZDA)		Possible provider of incentives for investment
ZAFFICO (Zambia Forestry and Forest industries Corporation plc)	Parastatal company, largest exotic forestry company in Zambia	Major actor with large plantations. Rents out land to CFC and WPI
<b>Private sector</b>		
WPI (Wood Processing Industries Ltd)		Major corporate actor
ZPM (Zambezi Paper Mills Ltd)		Major corporate actor
CFC (Copperbelt Forestry Company)		Major corporate actor
Mupapa Wood Limited		Example of a micro-enterprise
Sikale Wood		Furniture business
Encito		Furniture business
<b>Industry Organisations</b>		
COSTIGA (Copperbelt Sawmillers and Timber Growers Association)		
ZNAS (Zambia National Association of Sawmillers)		
<b>International Organisations and other stakeholders</b>		
African Development Bank (AFDB)		Development Finance Institution (DFI)
European Fund for Sustainable Development		
Private Forestry Program (PFP 2)		
INBAR (International Network on Bamboo and Rattan)		
BCP	Carbon project aggregator	
COMACO	Carbon project aggregator	
TNC (The Nature Conservancy)	Carbon project aggregator	

## Outline of EFSD+ potential guarantees:

The 5 Carbon Sink sub-sectors	Targeted end-beneficiaries	Technical Assistance
1. Natural Forests	Sustainable management of natural forests, REDD+  EU DFIs invest in private sector companies in the following sectors: key machinery, basic processing and infrastructure, surveillance, forest planning and management, low-impact logging, assisted natural regeneration.	<b>Technical Assistance:</b> feasibility and comprehensive studies for either new areas to be planted or forest products to be promoted, capacity building low impact logging, biodiversity conservation and forest cover monitoring
2. Smallholder Forestry	Promote and expand existing outgrower schemes, Build new outgrower schemes in conjunction with commercial plantation forestry	<b>Technical Assistance:</b> advisory services for technology uptake in the areas of tree nurseries, capacity building for farmers in forest management, maintenance and harvesting, initial land preparation, forestry extension services
3. Agricultural and other carbon sink investments	Climate smart agriculture (soil enrichment), including regenerative agriculture, agroforestry and shadow-tree cacao and coffee production Nature Based Solution projects such as mangrove restoration, blue carbon projects etc. (newest area of work for the EU DFIs and where technologies and business models are being tested)	<b>Technical Assistance:</b> feasibility and greenhouse gas baseline studies as well as monitoring efforts; support for mangrove restoration arrangements and development
4. Plantation Forestry	Brownfield plantation forestry with new plantation expansion areas Selectively greenfield plantation companies Commercially viable species such as eucalyptus, pine, teak, acacia and for as promoted, training for forest employees, stakeholder many as possible to be FSC certified.	<b>Technical Assistance:</b> feasibility studies for either new areas to be planted or forest products to be engagement
5. Forest product processing for prolonged carbon storage	Enhance existing processing schemes, Build new processing plants Private sector companies in the following sectors: sawmills, MDF plants, veneer, flooring, furniture, biomass and pulp, and for as many as possible to be FSC certified.	<b>Technical Assistance:</b> Market studies for new products; legal wood supply and chain of custody certification

Source: EDFI-EuropeandDFIs' envisaged proposals for EFSD+ for Carbon Sinks & Sustainable Industries, Presentation, 1 April 2022.

## List of interviews conducted

Date	Organisation	Name & position
24 August 2023	Finnfund	Peter Chapell, Investment Manager, Equity and debt finance for positive impact in the forestry and agriculture sectors
25 August 2023	Finnpartnerships	Axel Sointu, Business Partnership Lead
28 August 2023	Mapping Business Opportunities in Zambia's Forestry Sector for Partnership with Finnish Companies	Kauri Sparff & Abraham Makano, Consultants and report authors
29 August 2023	Embassy of Finland in Zambia	Elizabeth Ndhlovu, Finland Embassy Forestry advisor, & Jan Koivu, Deputy Head of Mission
31 August 2023	EU Delegation in Zambia	Cristina SORIANI, Attaché / Project Manager Finnpartnership
31 August 2023	ZAFFICO	Aaron Chipongoma, Fire Control Officer

## Endnotes

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