

Beetlemania, regulations and Eastern Europe – what's next for the wood waste market?

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Abstract

Wood waste is an important raw material for the wood based panel producers, especially so for the particleboard and increasingly for the OSB producers. Nevertheless, the wood waste has stuck between the forestry/wood sector and waste management sector. Each sector is facing unique challenges and opportunities, that simultaneously pull wood waste market into different directions.

In the face of bark beetle breakouts across Europe the forestry and wood sector need to look at the management practices, and how to balance the environmental side and the needs of the wood processing industry. Although the bark beetles do not target wood waste directly, the subsequent price volatility leaves an impact on the wood waste demand. Similarly, to the virgin wood supply there is a pressure to reduce prices. To some extent virgin wood prices can be controlled through harvesting activity – increasing or decreasing, depending on the market situation. Most certainly this is not the case with wood waste. Waste management companies and wood recyclers cannot turn around to the market asking to create less waste in summer or more in winter. It is a never-ending balancing act of supply, storage and offtake opportunities throughout the year.

With the wood waste being in between two sectors – is it wood or is it waste? Strictly speaking it is subject to waste management regulations. Nevertheless, we should not think of it as waste. Despite rules and regulations, it is a resource that can support Circular Economy, Resource Management and is perfectly aligned with the principles of Cascading Use of Wood. To maximise the benefits that wood waste utilisation can bring to the economy there must be clarity around the material itself, and how and where it can be used.

Currently in Europe, there is no uniformity across the wood waste and the quality i.e. grades/classification determine its usability within the panel sector. If deemed unacceptable the material can only be used in energy recovery. The question around quality and classification has endless interpretations, still, without a single European view as to how to classify different wood waste streams. This raises a number of questions:

- Should we use four grade, three grade or any other grade system?
- Is the classification linked to the origin of the material or the contamination level?
- What qualities make wood waste hazardous or no longer suitable for material recycling?

- What about the permitted uses e.g. particleboard production?

Unlike virgin wood, wood waste comes with its own set of rules and regulations that affect the way this material is handled. Further national rules can alter the handling, processing and end-use application of the processed material.

In simple terms, the quality can be defined as material that can be used in the panel sector or destined for energy recovery. Nevertheless, there are big differences among the European countries. This brings us back to the pricing. Material sent to the panel sector tends to mirror that of virgin wood prices; however, the pricing of wood waste sent to energy is more affected by the Energy from Waste sector rather than traditional wood users. Energy from Waste and bioenergy sectors in Europe are changing raising concerns about the financial viability of some installations as the subsidy environment is changing. The consequences of the Paris Climate Agreement and the CO₂ taxes will have a further impact in the coming years. The petrochemical sector is emerging as a new consumer targeting wood waste for chemical recycling.

It is fair to say that the wood waste market is well established in Western Europe yet still growing in the Eastern regions and outside Europe. Wood based panel industry is at the forefront again and shaping the development of the infrastructure surrounding collections, sorting, treatment and utilization. Still there needs to be a solid understanding on how to balance the final product e.g. particleboard quality requirements with the chemical composition of wood waste, namely, contaminants and the respective thresholds.

A number of consumers have increased their ability to use wood waste in Eastern Europe. While lacking a fully developed infrastructure and regulatory framework, some end-users are turning to imports. For few imports are a stop-gap solution, though for others it is likely to remain a long term strategy, as it will be impossible to secure necessary volumes domestically. In recent years' new trade flows have developed and others disappeared. A select few European countries already have a high share of imports primarily due to the demand exceeding domestically available supply. Do these countries have an ability to increase domestic collections further? Can they increase separation of wood from the mixed wastes? Many European countries still permit landfilling of biodegradable waste. If this was to change, where more volumes could be extracted? Is there a mismatch between the demand and supply locations? Majority of the wood waste is generated in the areas with high population density and/or industrial activity. Traditionally wood based panel producers are located close to forest resources, while combined heat and power plants tend to be closer to the population and industry. Does the location matter? When is it an advantage and when a disadvantage?

Trading of wood waste across European countries has created a somewhat false illusion that this an easily traded product. Indeed, in some cases the trade is long established, and all involved parties i.e. suppliers, buyers and most importantly regulators have taken a position that enables such trade. However, when it comes to new market entrants, the rules of the game are not always so clear,

especially, when the regulator needs to learn a lot more about this product. This can lead to delays in starting the utilization of the material, imports and lack of clarity about on-site management.

It remains a very dynamic market and new challenges are likely, but it does not take away from the wood waste potential to contribute to circular economy and cascading use of wood.