Palm wood: Sustainable raw material for furniture and joinery industries in Peninsular Malaysia

Oil palm trees are usually harvested for crude palm oil

Inspiring the next "material revolution" by creating sustainable and high-performance materials from oil palm waste, **Peter Fitch**, together with IOI, have set up IOI Palm Wood to commercialise this untapped potential.

An earlier article articulated on the meaning of sustainability: It refers to the concept of meeting present needs without compromising the ability of future generations to meet their needs. It entails finding a delicate balance between economic development, environmental stewardship, and social wellbeing. This is a very important concept for us to grasp and for the benefit of future generations.

Malaysian oil palm plantations have been under environmental scrutiny for decades and have been subjected to some of the most stringent regulations ever subjected to an agricultural commodity; crude palm oil (CPO). To be considered sustainable, CPO production must adhere to certain criteria and standards set by organisations such as the international Roundtable on Sustainable Palm Oil (RSPO) and the Malaysian Standard for Palm Oil (MSPO).

The key principles of sustainable palm oil production include:

No deforestation: Palm oil production should not involve the conversion of high conservation value areas or areas with significant carbon stock. It should not be planted on peatlands.

Respect for human rights and labour standards: Palm oil production should adhere to fair labour practices, respect the rights of indigenous peoples and local communities, and provide fair wages and safe working conditions for workers.

Protection of biodiversity and ecosystems: Palm oil production should aim to minimise the negative impacts on biodiversity and ecosystems. This includes protecting endangered species, maintaining wildlife corridors, and implementing responsible land management practices.

Responsible use of resources: Palm oil production should optimise land use, minimise water use, and reduce the use of pesticides and fertilisers. It should also promote the use of renewable energy sources.

This means that responsible Malaysian oil palm plantations should be already

complying with environmental, social and governance (ESG) principles. Wouldn't it be wonderful if we could further enhance these sustainability credentials by repurposing and reusing the waste biomass produced during the normal replanting cycle? This is exactly what the OnCore Palm Wood is doing. While palm oil extraction is the primary focus, there in an underutilised resource in the form of oil palm trunks (OPT).

This offers numerous environmental and economic benefits. The potential of utilising OPT to produce palm wood are many, but some of the more important factors are listed as follows:

First, palm wood can be produced from the OPT that are replanted every 25 years or so when the fruit yields to produce palm oil drops. Second, oil palms are perennial edible oil producers, so they capture carbon continuously until they are harvested during the replanting cycle. This makes OPT a renewable resource. Third, the current practice is for the OPT to be chipped and left to rot in the field after replanting. By converting this material into palm wood, the industry can lock in the carbon for another 10- to 20-year cycle, thus sequestering carbon. Lastly, the use of palm wood can help reduce the pressure on natural forests as it provides an alternative source of material that does not rely on cutting down large, slow growing trees.

The utilisation of OPT for palm wood production has significant potential. It offers economic opportunities, reduces pressure on natural forests, and promotes sustainable practices.

IOI Palm Wood launched their OnCore branded palm wood at the recent Malaysian Wood Exhibition, and the market feedback and acceptance were very positive. We believe that by delivering a value proposition to the customer where quality, performance and reliability, and value are offered, we have a winning business model. Together with this sustainability and ESG principles, we can make a positive contribution to the community and stakeholders, and reduce pressures on climate change.

We will need to develop quality standards and certifications for palm wood products to ensure consistency, consumer confidence, and market acceptance. Continued research is necessary to optimise the processing techniques, improve product performance, and explore new and innovative applications for palm wood. P

Palm oil plantations in Malaysia cannot be converted from areas of high conservation value or with significant carbon stock