Indonesia opens its arms to social forestry

Not long ago, Indonesia was considered one of the world’s deforestation hotspots, but it has undergone a remarkable transformation. The government’s efforts to curb deforestation, paired with an industry reorientation towards plantation-grown timber, have created a window for positive change in the Indonesian timber sector. This is not to say that deforestation has stopped—but the opportunity is there. Fairventures Worldwide, a non-profit company with offices in Germany, Indonesia and Uganda, is supporting this transformation through innovative forest landscape restoration approaches and activities strengthening the entire value chain.

The lightwood revolution

To understand the opportunity, it is necessary to examine recent industrial and political developments. Indonesia banned log exports in the 1980s. Since then, the country’s tropical logs have been processed domestically, fuelling a furniture industry (which sells both abroad and in the local market) and an engineered-wood sector geared mainly towards exports. Both sectors are concentrated in Central and East Java, with a few outliers; the engineered-wood sector is the larger of the two (by both worth and the volume of timber consumed).

The main products of the engineered-wood sector are various types of panel, such as plywood, laminated boards and bare core. In the past, these panels have been produced using meranti (Shorea species) and other tropical hardwoods although, in these applications, such timbers provide little added value, either aesthetically or mechanically. As supplies dwindled in the easily accessible (but vanishing) forests of Borneo and Sumatra, and concerns about legality increased, the industry was forced to look elsewhere to satisfy its resource needs.

Surprisingly, it found a source of materials very close to home. Many smallholders in Java were using the fast-growing species Paraserianthes falcataria—known in Indonesia as albisia or sengon—for erosion control and as a shade tree for coffee and cocoa. A few companies pioneered the use of albisia as a raw material for engineered wood and now hundreds of companies have picked it up. Other locally produced, fast-growing trees have gained traction, too, such as Anthocephalus cadamba and Acacia mangium. The majority of timber processed in Indonesia now comes from planted forests, mostly from smallholders in Java, who seamlessly integrate the trees with their agroforestry systems. Larger, dedicated plantations have also been established, and these are expanding slowly beyond Java, too. The trend has had positive effects on smallholder livelihoods: even a couple of hundred trees—often covering less than 1 hectare—can increase family incomes substantially. A tree typically requires an investment of USD 2 and produces a return of USD 15 after seven years.

Albisia and other plantation-grown species are showing promise for other engineered-wood products, too, such as glue-laminated beams (glulam). In recent years, Fairventures and partner companies such as PT Woodlam Indonesia and PT SMIP have been testing albisia for use...
in glulam, a product that can replace steel and concrete in construction and is set to become a major product. With Southeast Asia returning to the use of wood in construction, Indonesia could become a major glulam supplier to the region given its large land area, suitable climate and dynamic industry. Singapore National University’s research programme on mass timber construction in the tropics has confirmed the potential of Indonesia to export glulam in Southeast Asia (S. Okuda and L. Corpataux, personal communications, 2018).

Albisia’s wood properties make it a perfect building material for a post-carbon economy. The tree can grow to a height of more than 15 metres and a diameter of more than 30 cm within seven years. Over the seven years, 1 hectare of mixed plantation will absorb about 40 tonnes of carbon; albisia plantations, therefore, have enormous climate-change mitigation potential when the wood is used in long-lasting functions. The specific weight of the timber is only two times that of balsa wood but it has material characteristics comparable with poplar. Due to its low weight, albisia lends itself to the production of panels used in the interiors of ships, trains and caravans, where low weight translates into fuel savings. The wood’s weight is also an advantage in other applications, to the extent that the entire family of wood products from albisia and similar species is often referred to as “lightwood”; the higher strength of the more traditional hardwoods is rarely missed.

There is interest in lightwood in Europe. European import promotion programmes such as the Swiss Import Promotion Programme and Germany’s Import Promotion Desk are investing in the promotion of lightwood products. Fairventures pioneered a circular scheme with the German importer Broszeit Group and the interior design company MyWoodWall in which the companies fund the replanting of trees according to the volume of products sold.

**Policy developments in Indonesia**

**Verified legality**

Several recent policy developments in Indonesia have assisted the development of the local timber industry. From 15 November 2016, the European Union (EU) recognizes the national SVLK certification scheme, enabling Indonesia to issue Forest Law Enforcement, Governance and Trade (FLEGT) licences to accompany verified-legal products exported to the EU. The advantage of this is that FLEGT-licensed products are thereby considered to comply with the requirements of the EU Timber Regulation (which prohibits EU operators from placing illegally harvested timber and timber products on the EU market) (EU FLEGT Facility 2018). This gives Indonesia’s exports a competitive advantage over those of other tropical countries, which are yet to obtain such recognition for the legality of their timber in their agreements with the EU.

**The Social Forestry Initiative**

Another important policy development is Indonesia’s moratorium on new oil-palm plantations, which was put in place in 2011 to slow large-scale deforestation. But the...
most important measure announced to date is the Social Forestry Initiative. The government plans to transfer the management rights of 12.7 million hectares of forest from the national level to communities for sustainable forest management or reforestation, thereby meeting a long-standing demand of local communities across Indonesia. Communities will need to prepare management plans, either on their own or in cooperation with private-sector partners, and manage the areas in accordance with environmental standards. This initiative has the potential to change forestry in Indonesia in many exciting ways, creating space for innovative mixed forests tailored to local conditions with a focus on ecological and social benefits.

A key success factor for smallholder forestry in Java is land-tenure security: farmers with secure land titles invest in their land and can boldly plant trees on long rotations, obtain the necessary harvesting permits and provide traceability documentation. Hundreds of thousands of farmers in Java with secure tenure have used forestry to raise themselves out of poverty. On the other hand, people living on the outer islands, where few farmers’ claims appear in land registers, have been less able to realize the benefits of forestry. Thus, the Social Forestry Initiative could be a game-changer. The outer islands, especially Borneo and Sumatra, have large areas of degraded land, high levels of rural poverty and a climate that is well-suited to agroforestry. With secure tenure, farmers will be able to restore degraded areas through agroforestry and use remaining natural forests for the sustainable production of logs and non-timber forest products. The timber they produce will be in high demand because Javanese growers are struggling to provide sufficient raw materials to meet the needs of the flourishing timber industry. In growing more timber, Indonesian farmers will help the country meet its climate-change mitigation goals, restore ecosystem services and conserve biodiversity.

### One million trees

Developments in both timber demand and supply are pointing in the same direction—towards the large-scale restoration of forest landscapes in Indonesia with agroforestry and natural forest management, largely by communities and smallholders. Forest landscape restoration has the potential to generate income for many of the country’s most vulnerable communities, realize enormous co-benefits for climate-change mitigation and biodiversity conservation, and build a strong, innovative and future-proof timber-processing industry that could be a leader in the post-carbon economy.

Knowledge, management support and capital are needed to realize this potential. Despite much talk about the dos and don’ts of reforestation, practical, applicable knowledge on aspects of agroforestry such as species composition, fertilization, soil improvement and yield optimization on different soil types is rare. It is also unusual to find companies and organizations interested in partnering with communities to help manage these areas. Lastly, the private sector has been reluctant to provide capital for these measures.
Since 2014, Fairventures has been implementing its “One Million Trees” programme in Central Kalimantan, Borneo, with the aim of addressing such needs. More than 1000 smallholders have received training, seedlings, tools, and management and monitoring support to replant 0.2–1-hectare plots with mixes of fast-growing trees, cash crops and food staples. At the heart of these efforts is firm demand for fast-growing lightwood. The very short rotations of these tree crops enable farmers to increase their incomes quickly; compared with other land-use models, the increase is dramatic. The seven-year wait for the first timber harvest is bridged with intercropped food staples and cash crops.

The programme has invested heavily in gathering data to track the growth of every tree planted: the 1 million trees planted in Central Kalimantan have thus provided a database to build a better understanding of the opportunities for scaling up the scheme. It is possible, for example, to identify best practices and species mixes and to help stakeholders understand the economics of restoration. The plantings themselves, and the experiences of smallholders, serve as tangible examples that others can see, learn from and replicate. The first phase of the Fairventures programme will end in February 2019, most likely with the planting of the 1-millionth tree.

Going large-scale

Beyond the “first million”, the future is all about scale. Fairventures is working to develop business plans for restoration at scale in social forestry areas; these will involve private investment and management by Fairventures. In the province of Central Kalimantan alone, several hundred communities are likely to gain access through the Social Forestry Initiative to 1.5 million hectares of degraded landscapes suitable for restoration and joint management. Fairventures is also developing tools to enable the ongoing monitoring of the community plantations at a much larger scale and to use the data thus generated for the full digitization of the value chain. This will ensure full transparency and enable customers to closely examine the origins and journeys of their products.

Seize the opportunity

Indonesia has a deserved reputation for high rates of deforestation. But recent developments might completely change this picture—if the right steps are taken. Without broad engagement, the Social Forestry Initiative will lose its drive; wood processors will return to the natural forests for their log supply if plantations don’t meet their needs. Fairventures urges researchers, investors and companies to seize this opportunity to support forest landscape restoration by replicating the model developed in Central Kalimantan and re-evaluating old assumptions on forestry in Indonesia.

Reference

EU FLEGT Facility 2018. Background: the Indonesia-EU Voluntary Partnership Agreement. www.euflegt.efi.int/background-indonesia