

Building sustainable forest-based value chains

Inspiring stories from all over the world

Key messages

The below key messages are derived directly from the experiences of ten case studies from all over the world, looking at the development of sustainable forest industries from an investor's perspective. Five of these case studies were presented during the SW4SW conference 30 October – 1 November 2017. Among the investors are international or national companies, forest funds, or local community enterprises and cooperatives, who all are doing something out of the ordinary in their respective region on developing sustainable forest-based value chains.

Investments to drive up efficiency

1. Development of forest products, industries and value chains is about entrepreneurs taking initiatives: without enthusiastic people striving for progress from forests, not much will happen. There are ample examples of individuals, families and cooperatives who have grown from a small start-up to leading businesses in their area.
2. In the resource-constraint future, a valid investor's proposition is about improving the productivity of forest land for biomass, energy and non-wood products. Moving downstream, there is upside potential in harvesting wood more efficiently and processing as much as possible of its fractions into value-added products, which are sold in competitive markets to consumers who appreciate wood products for their sustainability.
3. A diversified production, either within one enterprise or through a network of enterprises, produces a wider range of benefits such as profit, value-added, employment, tax revenue etc., while reducing the ecological footprint for each unit of production.
4. Many forest-rich developing economies are capital-poor, whereby companies have restrained cash flows and are often unable to secure bank financing at affordable rates. New solutions are to approach new sources of climate finance, concessional development banks, institutional investors and pension funds. Technology supplier's credits are also commonly used to finance major investments.
5. Foreign direct investments have triggered industrial development in planted forests and in forest concessions in a number of locations where domestic capital has not been available. Over time their leadership position has led to a closer integration with local wood suppliers, small-growers, service providers and small industries, who all benefit from increased economic activity.

Value chains, networks, clusters, and new industrial ecosystems

6. Not all local forest companies are competitive or succeed in adverse operational conditions. Small and medium sized enterprises (SMEs) are often the backbone of value chains by supplying roundwood and semi-finished products to the downstream processors of finished products. To

ensure a proper market take-off there is often a need for one company, often larger than the others, to act as value chain leader.

7. Forest products value chains tend to be shorter among small, start-up firms that develop their business from a local setup and for the local market. Linkages to the final uses like the construction market, help SMEs to better understand the product quality imperative, and possibly reduce the number of middlemen.
8. For the large international forest product companies, value chains are long and often complex networks of suppliers and partnerships, extending to the final consumers. Using every fraction of the wood biomass is requiring product innovations and testing of new technologies that may not be in their core business strategy. To maximize processing efficiency, large companies have realized that they need to create a new industrial ecosystem made of smaller start-up firms.
9. Cooperatives, networks and clusters of SMEs may be useful in concentrating their capacities as a group to reach economies of scale, become more competitive in large tenders, and to benefit from shared utility costs, transports and other industrial services.

Wood residues for green energy

10. Wood-based fuels offer a natural extension to forestry and wood industry by capturing the value of harvesting waste, bark and processing residues, and providing a valuable by-product for forest industries both in energy use at the mill and for sales to local households and other processing industries.
11. For the surrounding community, the collection and use of residual wood from harvesting and processing is preferable from ecological and economic points of view to collecting firewood from the forest. Efficient burning of high-calorific wood fuels improves food security, health and safety in communities, and releases time of household members to other productive activities. Also, it gives the industrial enterprise an opportunity to link with the host community, which can improve the common understanding and cooperation in forest decisions.
12. In the smaller wood industry context, heat from wood waste enables an important first step into value-adding through kiln-drying of sawnwood, which in turn allows better accuracy in dimensioning and remanufacturing wood products for new market segments and end-uses. Charcoal, pellets and briquettes can be produced from wood processing waste with relatively low investments, and these open up the consumer market for wood fuel.
13. In large-scale modern forest industry, harvesting waste, bark and processing residues are used to generate both heat and electricity for internal and external uses. The largest pulp mills are excessively self-sufficient in energy, what allows them to sell heat to local users and electricity to the national grid. Apart from energy, they develop different residue fractions (e.g. chemicals, lignin, process gases) into new products with partner companies, in support to bioeconomy.

Sustainable forest management

14. Without efficient and profitable wood processing, there is rarely sufficient interest, purpose nor financial means for sustainable forest management. Forest which produces income and livelihoods in local wood industry and for communities is perceived valuable for its long-term replenishment.
15. The closer a forest industry is established to its resource base, the better it can influence the quality of forest management and the more likely it is to invest in securing a long-term, sustainable raw material supply. The future trend is about intensifying forest management towards intended end use.
16. Partnership in forest management between companies and communities is a powerful mechanism to broaden wood supply around a forest industry, and mainstream SFM practices and out-grower schemes. This improves the environmental and social sustainability of operations in forests and around industry sites.
17. Interest and application of forest certification varies according to value-adding level of forest products. Industries producing value-added products to final consumers are likely to be more interested in protecting their good name by adhering with environmental standards, forest certification schemes, and demanding a controlled chain of custody from their suppliers upstream in the value chain.

Better access and use of information

18. Mobile phones and open-source data have dramatically broadened access to digitalized forest and market information of rural forest growers and enterprises, and help improving their competitiveness in value chains. Mobile applications are already in frequent use in measuring, buying, selling, and paying for wood. At mills a growing array of activities can be controlled remotely with handhelds: e.g. kiln-drying operations, optimizing transports and stock inventory.
19. International market knowledge, online trading platforms and contact networks are important tools for developing the small producers' knowledge of value chains, and strengthening their negotiating power with other chain members.
20. Access to reliable statistical data on markets and producers is an essential part of larger industry planning on new products and market entries. Digitalized data collection, interpretation and subsequent marketing skills should be trained to small forest and wood enterprises, who may not have direct contacts to customers abroad.