Sustainable Development— International Framework—Overview and Analysis in the Context of Forests and Forest Products— Competitiveness and Policy

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Abstract

Green marketing in forest products (e.g., by certified forest products) can be done by forest certification while sustainable development may be seen as an opportunity in new markets. Innovations to meet customer needs in key markets have an effect on company competitiveness. The bioeconomy policy accounts very much for the sustainable use of biomass resources.

Sustainable development can include certification and trade. Green approaches to accentuate sustainable development and stakeholder collaboration is key to an emerging bioeconomy. Customers as stakeholders are linked with sustainable development and green business entities during the policy making phase. Marketing and communication in the green business sector is essential for sustainable product development and offers new market opportunities.

Likewise, strategy and policy are important to be competitive in the business environment. The Corporate Social Responsibility (CSR) philosophy is one strategy that can enhance competitiveness and trade in the bioeconomy market, and can also be a driver in marketing and sustainable development.

This article is qualitative research based and covers research articles and literature found in key academic databases such as Proquest, Academic Search Complete [EBSCO], Agris, CAB Abstracts, SCOPUS [Elsevier], Web of Science [ISI] and Google Scholar and other internet sites).

The bioeconomy means the use of renewable biological resources from land and sea, like crops, forests, fish, animals and micro-organisms to produce food, materials and energy (EU 2021). International and national policies of Green Economy definition can be found at the UN, Green Growth at the OECD and the Bioeconomy at the EU Web pages.

I he purpose of this research article is to clarify the following issues in the conceptual framework of sustainable development and to answer questions including, how is stakeholder collaboration represented in an international and national policy framework, and what is the role of corporations in the Corporate Social Responsibility (CSR) approach? How do stakeholders represent the concept of a Green Economy with Bioeconomy and Green Growth and the CSR in ecosystem services? When applying the Advocacy Coalition Framework approach with an international and national policy aspect, how can the sustainable development and competitiveness of a company be enhanced with Green Growth, Green Economy and Bioeconomy? What are the drivers of sustainable development in the markets and sustainable business internationally when taking into consideration competitiveness in the forest products sector? These include point of views of competitive business and the strategy of using the CSR. They

include innovations, incentives in financing and economics in sustainable development. Taking into consideration the environment and climate and forest ecosystems and bioeconomy with resources and sustainable development management include sustainable competitiveness, innovations, and international trade and also the policy framework. CSR and quality with standards and certification, in FLEGT with CSR and trade are included. How do the three dimensions of sustainable development show in trade,

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©Forest Products Society 2022. Forest Prod. J. 72(S1):1–4. doi:10.13073/FPJ-D-20-00053 including trade policy and investments in the forest sector in policy and whether to the Bioeconomy targets and competitiveness with Bioeconomy?

Branding, product quality, and superior service all differentiate a product. Making the product somehow different from the competition, in a way that is valued by the customer, can create a competitive advantage (Hansen and Juslin 2018). Service-based business practices are significant in competitiveness (Makkonen 2019). The 2030 Agenda for Sustainable Development includes 17 Sustainable Development Goals with 169 targets in economic, social, and environmental aspects. Global development and a win—win collaboration provide new sustainable development opportunities in natural resources and economics globally. The new Agenda is for the benefit of all in the current and future generations (United Nations Department of Economic and Social Affairs 2015).

A competitive strategy reflects the global environment with the goal of creating a sustained competitive advantage. A competitive strategy links to corporate- and businesslevel strategies. The value chain is important in achieving competitiveness (Nellis and Parker 2006). Michael Porter introduced the value chain in Competitive Advantage in 1985 (Porter 1985). There are pressures toward the diversification and renewal of industrial sectors founded on renewable resources at the global level (Mattila 2015). The Circular Bioeconomy is a concept that has been developed to replace the linear model of using resources. There is increasing interest around the use of bio-based materials (Salmela 2019) and the circular bioeconomy will have new and better environmental benefits (Baldwin 2020). Circular Bioeconomy is defined also by the FAO (FAO 2021, Bracco et al. 2019).

Bioeconomy and Competitiveness

Often new challenges create new opportunities to renew declining industries (Antikainen et al. 2017). The Bio-Circular Economy can be integrated into wood-frame multistory construction (Lazarevic et al. 2020).

The increase in European forest resources stimulates the wood-based Bioeconomy (Kallio et al. 2018). The increased use of wood in construction and in other long-term use markets would assist in becoming a carbon neutral market and consequently there are new opportunities in green building with the CSR strategy (Wang et al. 2014).

Forests will have a growing significance (European Commission 2012). Globally, the European Union is working on reducing deforestation and forest degradation, and promoting sustainable forest management as part of its 2020 objectives (European Commission 2013). A New Forest Strategy (European Commission 2018) will be projected until the year 2030 through implementing United Nations objectives (European Commission 2018).

In Finland, forests are the most significant renewable natural resource. Most of the Finnish forests belong to family (i.e., private) forest owners (Natural Resources Institute Finland [Luke] 2020). In Finnish commercial forests, the PEFC (Programme for the Endorsement of Forest Certification schemes) (PEFC 2020) is the major certification organization and the FSC (The Forest Stewardship Council) minor certification organization (Ministry of Agriculture and Forestry of Finland 2020).

Green Business and Sustainable Development

In a study exploring how companies which operate in the Nordic wood products value chains use environmental performance measures in their environmental policy and communication with stakeholders, the general attitude towards using environmental performance measures was seen positive. (Räty et al. 2014). Replacement of fossil resources by renewable natural sources is possible in biorefinery markets (European Commission 2012). Cascading use of wood can improve the efficient use of resources (EU 2016).

Cascading of recovered wood competes with energy recovery. The most encouraging cascading opportunities are reuse, and preparation for reuse, of wooden packages and furniture. Recovered timber of clean and good quality may be used in finger-jointed joinery products. Optimization of material and energy efficiency is prudent to make the Circular Economy work and in development of the Bioeconomy (Husgafvel et al. 2018).

Network-based business models are a means of developing a competitive advantage in the context of increasing global competition. This potential business model is widely recognized as taking into consideration services to customers (Mattila et al. 2016).

Green Marketing

The forest industry certifies and creates eco-labels for products for various reasons including risk minimization, consumer confidence, and relations with environmental nongovernmental organizations and stakeholders. Geographically, Nordic firms tend to have environmentally focused values (Roos et al. 2012). Worldwide, the FSC and the PEFC have a combined 510 million ha of certified forest as of mid-2018 (UNECE/FAO 2019).

Strategy with Sustainable Development

The three strategic objectives of the Finnish National Forest Strategy of 2025 is as follows: "1) Finland is a competitive operating environment for forest-based business. 2) Forest-based business and activities and their structures are renewed and diversified. 3) Forests are in active, economically, ecologically, socially and culturally sustainable and diverse use." (Ministry of Agriculture and Forestry of Finland 2019).

The Rovaniemi Action Plan for the Forest Sector of a Green Economy describes how the forest sector can achieve the emerging green economy at the global level (UNECE/ FAO Forestry and Timber Section 2014). The Rovaniemi Action Plan for the Forest Sector in a Green Economy functions cross-sectorally in sustainable development (United Nations Economic Commission for Europe 2020). Principles include developing and promoting products and services of high user and consumer value and substitution of nonrenewables by forest products. The Rovaniemi Action Plan for the Forest Sector in a Green Economy consists of five pillars which include (1) Sustainable production and consumption of forest products, (2) A low carbon forest sector, (3) Decent Green Jobs in the forest sector, (4) Long term provision of Forest Ecosystem Services and (5) Policy development and monitoring of the forest sector in relation to a green economy. The goal of the first pillar is that patterns of production, consumption and trade of forest products are truly sustainable. The goal of the second pillar

is that the forest sector makes the best possible contribution to mitigation (sequestration, storage and substitution) of, and adaptation to, climate change and the goal of the third pillar is that the workforce is able to implement sustainable forest management, and the forest sector contributes to achieving the social goals of the green economy by providing decent jobs. The goal of the fourth pillar is that forest functions are identified and valued and payments for ecosystem services (PES) are established, encouraging sustainable production and consumption patterns and the goal of the fifth pillar is that policies and institutions relevant to the forest sector promote sustainable forest management; policy making is evidence-based, policy instruments are effective, efficient and equitable and monitoring is adequate in order to mainstream the green economy in forest sector policies. (UNECE/FAO Forestry and Timber Section 2014).

Conclusions

Policy development and the CSR strategy has significant relevance in the climate change framework, providing a link between forestry and sustainable new products in an effort to be competitive. The CSR covers financing, and includes forest certification, which has an important role in the markets and sustainable development.

Sustainable development policies include the Green Economy, the Green Growth, and the Bioeconomy with the Circular Economy, which is a business model in the industry creating new markets in the sustainable sector. A bioeconomy is essential in the policy development. Certification is increasingly utilized for global marketing of forest products. Certification should be included in the sustainable development and can enhance trade.

Sustainable development in the markets and trade has a significant role when considering competitiveness. Customers are stakeholders in the sustainable development and green business. Green approaches accentuate sustainable development with collaboration by multiple stakeholders.

Literature Cited

- Antikainen, R., C. Dalhammar, M. Hildén, J. Jáchym, J. T. Jääskeläinen,
 P. Kautto, S. Koskela, M. Kuisma, D. Lazarevic, I. Mäenpää, J.-P.
 Ovaska, P. Peck, H. Rodhe, A. Temmes, and Å. Thidell. 2017.
 Renewal of forest based manufacturing towards a sustainable circular bioeconomy. *In:* Reports of the Finnish Environment Institute 13/2017. Finnish Environment Institute, Helsinki.
- Baldwin, R. 2020. Forest products utilization within a circular bioeconomy. Forest Prod. J. 70(1):4–9.
- Bracco, S., A. Tani, Ö. Çalicioglu, M. Gomez San Juan, and A. Bogdanski. 2019. Indicators to monitor and evaluate the sustainability of bioeconomy. Overview and a proposed way forward. Rome, FAO. 128 pp.
- European Commission. 2012. Innovating for sustainable growth: A bioeconomy for Europe. European Commission, Brussels. 60 pp.
- European Commission. 2013. A new EU Forest Strategy: For forests and the forest-based sector. COM/2013/659. European Commission, Brussels. 17 pp.
- European Commission. 2018. Progress in the implementation of the EU Forest Strategy. COM/2018/811. European Commission, Brussels. 11 pp.
- European Union (EU). 2016. Study on the Optimised Cascading Use of Wood. https://data.europa.eu/doi/10.2873/827106. Accessed January 3, 2021
- European Union (EU). 2021. Bioeconomy. https://ec.europa.eu/info/ research-and-innovation/research-area/environment/bioeconomy_en. Accessed March 6, 2021.
- Food and Agriculture Organization of the United Nations (FAO). 2021.

- Sustainable and circular bioeconomy for food systems transformation. http://www.fao.org/in-action/sustainable-and-circular-bioeconomy/en/. Accessed March 5, 2021.
- Hansen, E. and H. Juslin. 2018. Strategic marketing in the global forest industries. Third ed. Oregon State University, Corvallis. 244 pp.
- Husgafvel, R., L. Linkosalmi, M. Hughes, J. Kanerva, O. Dahl. 2018. Forest sector circular economy development in Finland: A regional study on sustainability driven competitive advantage and an assessment of the potential for cascading recovered solid wood. *J. Cleaner Prod.* 181:483–497. https://doi.org/10.1016/j.jclepro.2017.12. 176
- Kallio, A., I. Maarit, B. Solberg, L. Käär, and R. Päivinen. 2018. Economic impacts of setting reference levels for the forest carbon sinks in the EU on the European forest sector. *Forest Pol. Econ.* 92:193–201. https://doi.org/10.1016/j.forpol.2018.04.010
- Kleinschmit, D., B. H. Lindstad, B. J. Thorsen, A. Toppinen, A. Roos, and S. Baardsen. 2014. Shades of green: A social scientific view on bioeconomy in the forest sector. *Scand. J. Forest. Res.* 29(4): Biobased Economy. https://doi.org/10.1080/02827581.2014.921722
- Lazarevic, D., P. Kautto, and R. Antikainen. 2020. Finland's wood-frame multi-storey construction innovation system: Analysing motors of creative destruction. *Forest Pol. Econ.* 110:101861. https://doi.org/10. 1016/j.forpol.2019.01.006
- Makkonen, M. 2019. Renewing the sawmill industry: Studies on innovation, customer value and digitalization. Dissertationes Forestales 269. Department of Forest Sciences, Faculty of Agriculture and Forestry, University of Helsinki. 65 pp.
- Mattila, O. 2015. Towards service-dominant thinking in the Finnish forestry service market. Dissertationes Forestales 198. University of Helsinki, Finland. 61 pp.
- Mattila, O., K. Hämäläinen, L. Häyrinen, S. Berghäll, K. Lähtinen, A. Toppinen, 2016. Strategic business networks in the Finnish wood products industry: A case of two small and medium-sized enterprises. *Silva Fenn.* 50(3):1544. https://doi.org/10.14214/sf.1544
- Ministry of Agriculture and Forestry of Finland. 2019. National Forest Strategy of Finland 2025. https://mmm.fi/metsat/strategiat-ja-ohjelmat/kansallinen-metsastrategia/viestintamateriaali Accessed April 16, 2021. (In Finnish.)
- Ministry of Agriculture and Forestry of Finland. 2020. Sustainable forest management. https://mmm.fi/en/forests/forestry/sustainable-forest-management. Accessed November 4, 2020.
- Natural Resources Institute Finland (Luke). 2020. Forest ownership. Luke, Finland. https://www.luke.fi/en/natural-resources/forest/forest-resources-and-forest-planning/forest-ownership/. Accessed November 4, 2020.
- Nellis, J. G., and D. Parker. 2006. Principles of business economics. 2nd ed. Pearson Education Canada, Toronto. 448 pp.
- Porter, M. E. 1985. Competitive Advantage: Creating and Sustaining Superior Performance. The Free Press, New York. 557 pp.
- Programme for the Endorsement of Forest Certification (PEFC). 2020. Facts and figures. https://www.pefc.org/discover-pefc/facts-and-figures. Accessed November 4, 2020.
- Räty, T., A. Toppinen, A. Roos, M. Riala, and A. Q. Nyrud. 2014. Environmental policy in the Nordic wood product industry: Insights into firms' strategies and communication. *Bus. Strat. Env.* 25:10–27. https://doi.org/10.1002/bse.1853
- Roos, A., T. Nuutinen, A. Q. Nyrud, S. Perttula, M. Riala, T. Räty, L. Tellnes, A. Toppinen, L. Wang, and S. Blažková. 2012. Green business practices in the wood industry sector—A review. *In:* Proceedings of the Biennial Meeting of the Scandinavian Society of Forest Economics, Toppinen, A., Karppinen, H., and Kleemola, K. (Eds.), May 23–26, 2012, Hyytiälä, Finland.
- Salmela, M. 2019. Small and medium sized companies in wood-based circular bioeconomy—Barriers and prerequisites to success. Master's thesis. Jyväskylä University School of Business and Economics, Finland. 77 pp.
- United Nations Department of Economic and Social Affairs 2015. Transforming our world: The 2030 Agenda for Sustainable Development. https://sdgs.un.org/2030agenda. Accessed March 5, 2021.
- United Nations Economic Commission for Europe 2020. Rovaniemi Action plan for the Forest Sector in a Green Economy can trigger cross sectoral initiatives in the context of the Paris Agreement. https://unece.

- org/DAM/timber/publications/SP-35-Rovaniemi.pdf. Accessed January 3, 2022.
- United Nations Economic Commission for Europe/Forest and Agriculture Organization (UNECE/FAO). 2019. Forest Products Annual Market Review 2018–2019. ECE/TIM/SP/48. https://www.unece.org/fileadmin/DAM/timber/publications/SP48.pdf. Accessed November 4, 2020.
- United Nations Economic Commission for Europe/Forest and Agricul-
- ture Organization (UNECE/FAO) Forestry and Timber Section. 2014. The Rovaniemi Action plan for the forest sector in a green economy 2014. https://www.unece.org/fileadmin/DAM/timber/publications/SP-35-Rovaniemi.pdf. Accessed November 4, 2020.
- Wang, L., A. Toppinen, and H. Juslin. 2014. Use of wood in green building: A study of expert perspectives from the UK. *J. Clean. Prod.* 65:350–361. https://doi.org/10.1016/j.jclepro.2013.08.023

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