Orchestrating Sustainable User-driven Bioeconomy: Policy, Transformation and Benefits (ORBIT)

Competitive bioeconomy needs to encompass both tangible component associated with bio-resources, but also intangible component in terms of ability to produce and process knowledge to ensure adaptation of actors in the changing global economic context and sustainability challenges. The overall purpose of this project is to orchestrate research on end-user driven systemic development, and promote growth of sustainable and diversified forest-based bioeconomy. Our research agenda is organized under four WPs, which focus on: 1) Grand societal challenges and related policy drivers, 2) Changing consumer behavior and consumer-driven business models, 3) Bioeconomy industry transition and business networks, 4) Orchestrating user-driven sustainable forest-based bioeconomy. The common denominator in ORBIT is the combination of both quantitative economic and statistical econometric modelling and a range of qualitative methods to the topical problems of industry and consumer behavior and by addressing the means of policy measures. We also use various and largely participatory futures research methodology tools as a cross-cutting approach. As a result of this, an evolutionary and systemic view on possible future developmental pathways is built together with providing information on the related bottlenecks that may influence to this development.

During the first year 2017, we organized three thematic workshops on case-products with very different characteristics and positioned at different levels of forest bioeconomy value-pyramid: a) new uses of wood in the multi-story construction; b) fiber-based packaging, c) biochemical and biorefineries. Altogether 74 participants joined these highly interactive meetings, representing industry, policy makers, academia and civil society. During 2018 we used the rich workshop material and conducted an online data collection and are in spring 2019 finalizing a joint article across all three teams on the key outcomes. This task focuses on the role of regulation in accelerating transition towards sustainable bioeconomy and also acknowledging an ongoing circular economy development.

Among other key activities we have done a comparative analysis of bioeconomy networks in Finland and Germany, analysed sustainability pathways in fibre-based packaging, developed a preliminary frameworks for a business model change within a systemic transition process, and developed an analytical framework of forest-based biorefinery. In addition, we have completed two literature reviews, one on sustainability transition in private forestry and the other one on factors impacting bioeconomy competitiveness. Project members have actively presented initial results in several conferences in the areas of forest economics, consumer research and transition management. We have also been engaged in several international mobility exchanges during 2017-19 and have actively sought to deepen international collaboration within ORBIT network.

Contact information:
Professor Anne Toppinen, University of Helsinki, Department of Forest Sciences, anne.toppinen@helsinki.fi
Professor Lassi Linnanen, Lappeenranta University of Technology, lassi.linnanen@lut.fi
Professor Markku Ollikainen, University of Helsinki, Department of Economics and Management, markku.ollikainen@helsinki.fi

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