Can you discuss your research activities in the Finnish forest sector, describing how you came to work in this field and stating your overarching goals?

KP: Lappeenranta University of Technology is located in an area where the economy has traditionally been heavily dependent on the pulp and paper industry. Our earlier projects were related to the competitive dynamics and structural changes in the industry on a global scale. During the past five years, our focus has shifted towards the role of sustainability and innovation. As an overarching goal, our team is creating new knowledge about the ways forest resources can be managed and used in an environmentally, socially and economically sustainable way to create value.

AT: I come from the field of forest economics and product marketing at the University of Helsinki. Our recent overarching research themes have focused on how sustainability is seen from a strategic perspective in this industry, its effect on markets of wood-based products and how it is reflected in daily company practices such as communications and sustainability reporting. In addition, we have analysed how corporate sustainability plays out in the forest industry internationalisation process; for example, in investments to plantation-based business models in China.

To what extent does the forest industry play a role in the country's economic wellbeing?

AT: Forests cover 75 per cent of Finland and there are over half a million private family forest owners, so forests and how they are being used definitely effects the whole of society. From the perspective of Finnish export income, the sector has historically played a key role; in fact, wood, pulp, paper and paperboard products represent about 20 per cent of total export value in Finland. The small-scale wood products sector is especially important for the rural economy in this scarcely populated country, as it provides stumpage income and employment opportunities. Beyond industrial importance, forests are a source of a wide variety of ecosystem services whose significance is being recognised increasingly at the global level.

Professors Kaisu Puumalainen and Anne Toppinen discuss how they became interested in the forest sector and the role that forests play in Finland’s economy

What are the biggest demands on the Finnish forest industry, and what challenges and opportunities do these demands present?

AT: Turbulence in paper markets due to substitution with digital media has and will continue to have a major impact on the structure of the paper industry. Renewable energy policies, sustainability standards for solid bioenergy and biofuels, and the way greenhouse gas impacts are accounted for shape both the investments and market demand. Many European-level strategic initiatives towards a bio-based economy will also play a role in raising awareness and promoting R&D and innovation. But the final decisions are made in the markets of current and future products, between producers and consumers at the global level.

KP&AT: Improving sustainable forest management is a goal not only in Finland but globally. As societal values change towards more fossil-free products, there will be demand for wood fibre in various forms. Many new wood fibre based products are emerging and will have a great role to play in a bio-based economy. According to one recent expert panel assessment, the share of new forest products could be already 30-40 per cent of pulp and paper industry turnover by 2030. From the perspective of the forest cluster, we need an ecosystem of companies providing different kinds of innovative solutions that create value for consumers. Therefore, better understanding of what drives consumers to choose sustainable products is an area we’d like to work in more.

Your two teams have recently completed a joint project entitled CSR-Forest that focused on the evolution of corporate responsibility in the industry. Can you describe your goals for this project?

KP: We examined the recent evolution in corporate responsibility in the forest industry. In particular, we addressed recent trends in corporate communication, such as corporate disclosure, adoption of consistent external reporting standards and the Global Reporting Initiative. We also addressed the growing awareness of engagement with and impact on local communities (particularly in new production areas), as well as the perceptions of employees, managers and customers in terms of legitimising forest industry sustainability practices.

From a theoretical perspective, corporate responsibility in this research project was seen as a collection of technical and managerial innovations. We aimed to explain the rate of adoption and diffusion of cooperate responsibility, and we focused on modelling its effects on the competitive advantage and value creation at the micro level. In addition to this, the objective was to model the dynamics of global consumption and international raw material (recycled fibre, roundwood and pulp) trade at the macro market level.

Do you have plans for future research within the Finnish forest sector? How would you like to see this sector evolve in the coming years?

KP&AT: The forest sector is playing a key role in raising awareness and promoting R&D and innovation. But the final decisions are made in the markets of current and future products, between producers and consumers at the global level. There is a great role to play in a bio-based economy.
FORESTS COVER A vast amount of the Earth’s surface, yet their importance to us as human beings is difficult to summarise in a few sentences. We encounter forest-based products through daily activities such as pouring a bowl of cereal, sneezing into tissues, buying a bus ticket or writing a shopping list. Many encounters are less obvious and result from the by products that go into the manufacture of other everyday items. Despite the importance of such material goods, we cannot forget the essential ecosystem services that forests give to us. They filter both the air we breathe and the water we drink, as well as create habitats for many rare flora and fauna, and provide a source of recreation and wellbeing for humans.

Despite this clear importance and need, over the last 50 years about half of the world’s forest cover has disappeared, due to climate change and unsustainable use. As the global population grows, there is likely to be ever-increasing demand on forests and forest-based products, which will only be emphasised by the damage to forests that will ensue due to extreme weather events. This will not only have drastic environmental consequences, but economic consequences too, especially for countries that rely so heavily on the sector.

FINNISH FORESTS

In Finland, the forestry and the forest industry employ about 3 per cent of the working age population and forests create both market and social value. Discovering a way to decrease the surmounting stresses on this sector is economically paramount for the country, and delving into corporate responsibility (CR) has been one approach to the problem. CR (originally corporate social responsibility, or CSR) became popular in the 1960s when organisations started to place an emphasis on how they could regulate themselves internally with respect to the law, ethical standards and international norms. Organisations manifest this responsibility through their commitment towards the communities and environment in which they operate.

The forest industry is facing strong structural pressures due to growing consumption and foreign investments in emerging countries, as well as the maturing traditional markets of Europe and North America. Through globalisation, the industry is exposed to new risks, including vulnerability to companies’ CR, image, and stronger and more complex demands for accountability. Therefore, companies need to reconsider their stakeholders’ expectations as determinants of competitive advantage and value creation in the heavily competitive situation.

Professor Kaisu Puumalainen from the School of Business at Lappeenranta University of Technology and Professor Anne Toppinen from the Department of Forest Sciences at the University of Helsinki have been searching for a sustainable and competitive future for Finland’s forestry sector. INVESTIGATING CR

In a recent project, the researchers investigated the evolution of CR in the forest industry. By addressing recent trends in reporting standards, engaging with local communities in new production areas and analysing employee and customer perceptions, the team built up a picture of the adoption of CR within the industry and examined what effects this adoption had on the creation of value for it.

The international survey data the researchers collected from 60 companies showed that firm level attributes, such as proactivity, may foster CR, meaning that some companies may have higher social and environmental performance than others. By using another dataset on large US companies from MSCI ESG – which has been providing in-depth research, ratings and analysis of the environmental, social and governance-related business practices of thousands of companies worldwide since 1991 – the team found that the relationship between CR and financial performance sometimes differs from industry to industry. In some industries, such as the forest sector, the relationship seems to be somewhat bidirectional.

The team used the lens of the Global Reporting Initiative to investigate how CR is reported in pulp and paper. “We found that only a minor share of companies in Pulp and Paper International (PPI)’s Top 100...”

How to save our forests
Two research groups based at Lappeenranta University of Technology and University of Helsinki are investigating how corporate responsibility could bring about a sustainable future for Finland’s forestry sector.
report sustainability issues comprehensively under economic, environmental and social responsibility,” explains Toppinen, who explains that these ‘proactive’ companies are typically largest, and most of them are integrated forest companies in the sense that they have both forest ownership and more diversified business activities. In general, the environmental issues are more comprehensively reported in PPI as compared to social issues. However, the comprehensiveness of the reporting was found not to be connected with financial performance.

“From the perspective of the traditional Finnish forest industry, which is undergoing a structural change, corporate responsibility represents an area that no longer is only of marginal importance,” Puumalainen expands. Economic analysis of CR in the forestry and forest industry is in early stages, but does indicate economic incentives, such as forest certification.

**FORTHCOMING FORESTRY ADVANCEMENTS**

“Despite being able to quantify and value indirect corporate responsibility related benefits, this research is still modest at the moment and there is clearly a need to continue it in the context of the evolving globalisation of forest industrial activities in the Global South,” Toppinen expands. There are many opportunities for further research regarding the value of CR and forest certification to firms, and to public and NGO landowners. Puumalainen and Toppinen believe that future studies should also include a wider set of quantitative sustainability indicators of corporate practices in order to assess how internal and external stakeholder perceptions are linked to actual practices and economic performance over longer periods of time.