SCA Wood Magazine

2/2025

NEW ISO STANDARD SHOWS CLIMATE BENEFITS

FACADE SYSTEM WITH A TIMBER FRAME

AN INNOVATIVE LOOK AT SUSTAINABILITY

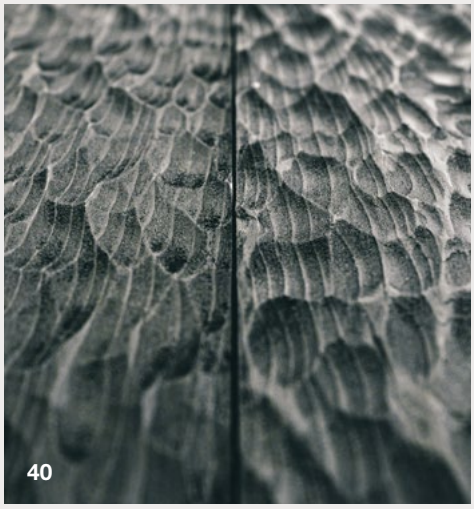
The forest industry's greatest champion

A lawyer by profession, Viveka Beckeman is Director General of the Swedish Forest Industries Federation. Driven by the extraordinary commitment of the federation's member companies, she disseminates insights into how managed forests contribute to social benefits and climate change solutions.

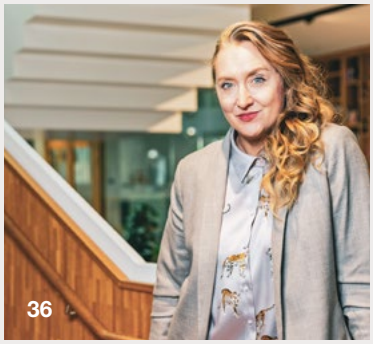
SCA Wood Magazine

2/2025

Viveka Beckeman is CEO of the Swedish Forest Industries Federation.

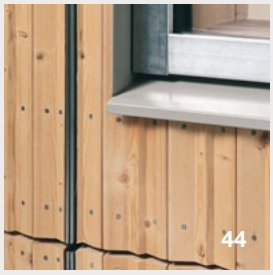


Modern exterior panels open up new possibilities.



Elise Grosse on the role of forests in the built environment.

A building material with climate value



SCA Wood Magazine

2/2025

PUBLISHER
Vanessa Pihlström

EDITOR-IN-CHIEF
Håkan Norberg

PRODUCTION
Frosting kommunikationsbyrå

COVER PHOTO
Bodil Bergqvist

TRANSLATION
Semantix

PRINT
Stibo Complete, Katrineholm

PAPER
Cover: Munken Polar, 200 g
Text block: Munken Polar, 120 g

CONTACT
SCA Wood
Skepparplatsen 1
851 88 Sundsvall
060-19 30 00
sca.com/sv/traprodukter

SUBSCRIPTION
woodinfo@sca.com

SCA Wood Magazine is printed on FSC™ certified paper (FSC™ C012075). In producing this magazine, we strive for the minimum possible environmental impact and advocate responsible forestry practices.

If you no longer wish to subscribe to SCA Wood Magazine, please contact woodinfo@sca.com and we will immediately cease processing your personal data in relation to this.

With hope for the future

THE UNDERLYING THEME of this issue of SCA Wood Magazine is power. The power to develop, inspire and change. And the power to stand against the storm.

We live in an age of wars of aggression, trade wars, humanitarian crises and climate anxiety. This obviously affects us regardless of how close or far away we are, even if we are among the lucky ones who still live in relative prosperity. In troubled times we tend to withdraw, become cautious, perhaps even passive. To some extent, we lose faith in the future. In such times, it is important to make an effort to acknowledge the many positive things that are actually happening around us, to celebrate what we are achieving together. At home or at work, with neighbours, friends and acquaintances. The small things and the large.

Media reporting has long been dominated by wars and conflicts, overshadowing other concerns such as environmental issues. But these are not going away simply because our attention is elsewhere. I am therefore glad to see the work that Viveka Beckeman, Director General of the Swedish Forest Industries Federation, is doing to create the long-term conditions for a good world. A world in which the forest and wood play a crucial role in achieving the 2°C goal for limiting global warming. Meet Viveka in this issue of SCA Wood Magazine.

You can also read about the new ISO standard that scientifically proves the positive climate impact of active forest management and forest products. We also present our new timber facade system, SCA Curtain Wall, which has enormous potential to make the construction industry more sustainable and cost-effective through robust and well-designed system solutions.

And join us on a trip to the village of Ottsjö in the mountains of Jämtland, where Sophie Odelberg has built her dream home adapted to an active life of outdoor adventure. The house's exterior panels are an innovation that encourages a new timber aesthetic far beyond traditional tongue and groove. Very beautiful!

I believe that we all have a responsibility to keep the flag of positivity flying high, regardless of whether it is over good news at a global level or simply enjoying ourselves on a day-to-day basis at work. It is doing so that will make us hopeful again. That gives us power.

Pleasant reading!

MARKUS HENNINGSSON
MARKETING DIRECTOR, SCA WOOD

ARCTIC URBAN TRANSFORMATION WITH A CLEAR TIMBER PROFILE

LOCATED NORTH OF THE Arctic circle in Sweden, the towns of Gällivare and Malmberget are merging as Malmberget is decommissioned to make way for the expansion of the local mine. The move is now largely complete and the vision is to create a world-class small Arctic town. This vision is reflected in Kunskapshuset [the House of Knowledge]. The building, which houses the municipality's upper secondary school and adult learning centre, was created by the architectural practices Liljewall and MAF with the emphasis on wood both inside and out to achieve a beautiful and sustainable education environment. Inspired by the Sami handicraft tradition, the timber and glass facade features large vertical timber beams in a strong red colour inspired by the surrounding countryside. The interior features robust glulam beams and pillars and a winding smoked oak woodblock staircase. Custom wooden furniture also unites the Arctic landscape and Sami handicraft in its design language.

PHOTO ANDERS BOBERT / LILJEWALL

The unique house among the trees rests firmly on stilts. Under the porch you can see the bottom of the wooden swimming pool, a must in Torkel Haraldsson's daring construction.

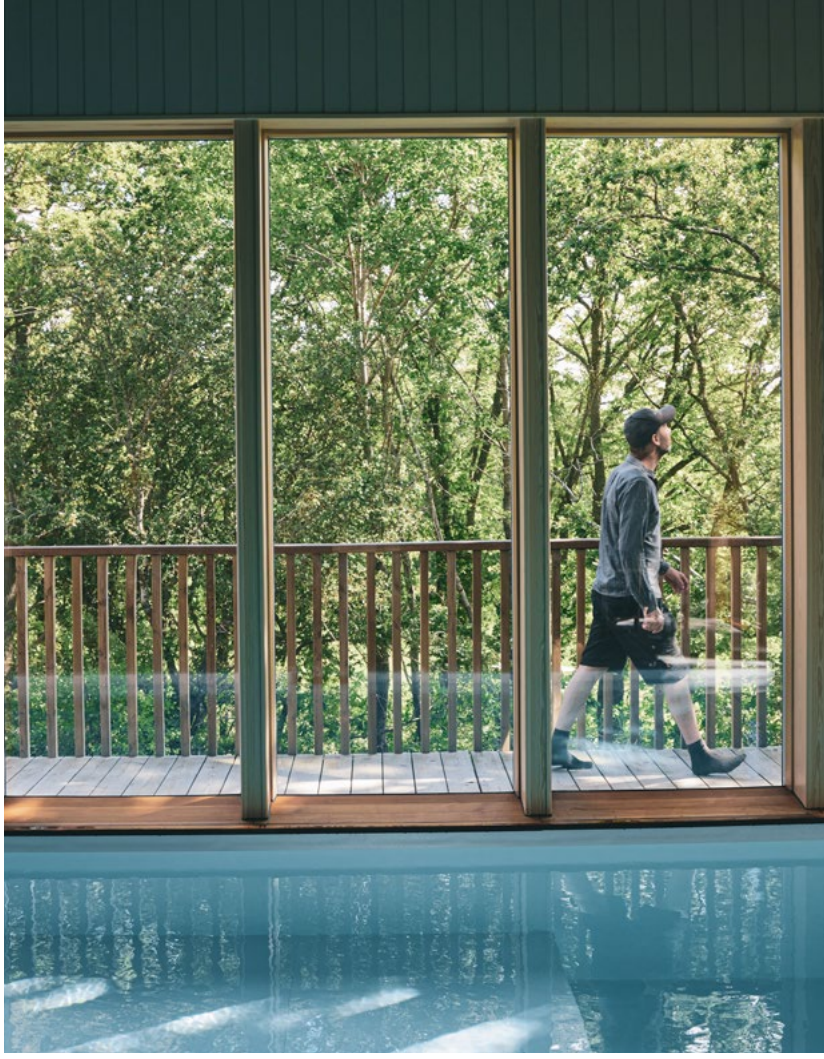
GREAT LOCATION

IN A MASTERFUL TREEHOUSE

TEXT JENNIE ZETTERQVIST PHOTO BODIL BERGQVIST

A narrow asphalt road winds through the lush landscape of Halland on Sweden's west coast. More meadows and farms await beyond every gently curving bend but, to find the house we are looking for, we must keep our eyes on the road ahead and continue patiently. Just before the end of the winding road, the house finally appears on a rocky slope, seemingly hovering above the ground. A luxury treehouse built entirely of wood by the skilled hands of furniture maker Torkel Haraldsson.

"We get the best of all worlds up here among the treetops," he says.



Torkel crafted much of the furniture before the house was completed. The Roman rings hanging from the ceiling symbolise the playful nature of the house. "There's going to be a liana over the pool as well," he says.

WE TURN INTO the courtyard and come face to face with the floating house and the workshop of Allekulla Finsnickeri, the firm run by furniture maker Torkel Haraldsson. He lives here with his family in the house he spent two years building with his own hands, according to the vision of his friend, architect Josef Wiberg.

The friends have been discussing the idea of a house in the treetops for over 20 years. The steeply sloping plot was a gift to Torkel from his father, and he did not shy away from challenge of building on it. On the contrary:

"I knew right away that we could do something cool with this plot. It was just a matter of thinking a little differently," he says.

"WOOD IS A GREAT MATERIAL"

So, instead of doing what most people would have done and start flipping through catalogues, blasting rock, pouring concrete slabs, laying gravel and lawns, they settled on a treehouse resting on wooden stilts and plinths. In places, the house hovers over four metres above the ground.

"There was no discussion about whether to keep the plot as it was, with the beautiful rocks. We knew we had to adapt the house to it. It came quite naturally to design it like this and I'm very happy about that today," says Torkel.

It was also taken for given that everything would be built of timber.

"Wood is a fantastic material. You can do anything with it as long as you choose the right wood for the job and handle it properly," says Torkel.

His is a lifelong love affair with wood. Raised beside the sea, he trained as a boatbuilder during upper secondary school. It was there he learned about the tremendous attributes of different types of wood. He was keen to expand his knowledge on leaving school and enrolled in the furniture programme at the renowned Capellagården, founded by furniture designer Carl Malmsten. While there he met Josef Wiberg, received his journeyman's certificate and began his career as a cabinetmaker.

THE HOUSE'S HALLMARK: WELL-CHOSEN WOOD

Building houses is, however, very different from designing and making furniture. Nevertheless, having built a house before, albeit of the more

Hand-sawn cedar shingles adorn the front door. Torkel's door designs have been in demand with customers.

THE ROLE OF DIFFERENT TYPES OF WOOD IN THE HOME

Cedar: for durable facades that age beautifully.

Spruce: for a warm, vibrant finish on interior walls.

Oak: for hard-wearing floors.

conventional kind, Torkel felt ready to realise his dream of a house among the trees. His plan was to build it himself in under two years on a budget of SEK 2 million. There were those who though the project was crazy.

"I can understand that," Torkel says with a smile. "It was a bit crazy, but I felt it was doable. And it was. I am extremely efficient, and I know that in a day I can do the work of two or three carpenters, as long as I'm focused and get my head down."

The project did demand considerable sacrifices of both Torkel and his partner Ayla. And it cost a little more and took a little more time than they had originally hoped. But now the family has a unique home full of playfulness and joie de vivre, starting with the rustic facade, which is clad in knotty cedar that blends unassumingly into its surroundings. Torkel opens the self-designed front door and we are welcomed by interior walls of beautifully shimmering spruce. The floors are made of durable oak. The careful choice of woods is very much the hallmark of the house. Torkel believes the combination is largely the result of his deep-rooted boatbuilder's mindset. He is guided by the properties of the wood, its structural function and comfort. There is no place for minimalist design ideals here.

"I would much rather have a bit of humour and vibrancy than have everything stylishly plain and uniform, as many architects seem to prefer. There should be space for people in here, not just something chic in a coffee-table book" he says.

PUSHING THE LIMITS OF WOOD

The house's interior space is striking. On the ground floor there is a bedroom, bathroom and sauna. Downstairs is the open-plan living room and kitchen, with sliding glass doors onto a veranda that runs all the way around the house.

The undulating roof is clad in timber, while the ceilings are clad in insulating, wood wool acoustic panels, contributing to the restful atmosphere. While the shape of the roof was the architect's decision, the construction method was up to Torkel. After some head-scratching, he solved the problem by building a mould in which to produce the approximately 30 arched glulam beams. He clearly has complete confidence in the capabilities of the wood.

"I think it's probably something I've taken me from boatbuilding. When you build a boat, you have to push the limits of the wood to make it perform, and I have a bit of that in me, even when I build houses."

A stool for St. Paul's Church in Gävle will soon be ready at Allekulla Finsnickeri. "This is the cream of jobs for us. There is nothing better than being able to work uncompromisingly for the Church. It has to be good, and it has to last 400 years."

He has devised and manufactured many solutions during the construction process, often under considerable pressure of time. In hindsight, there are some things he would have done differently. Still, he has no regrets.

"For me, that naivety is a very important part of the house's character. You can feel that a human has come up with solutions as part of a process. This is often not the case in other houses," he says.

The pool room next to the kitchen is the family's absolute favourite part of the house. The pool is also built entirely from wood, with a structure suspended on wooden poles that, as far as Torkel knows, is unique – so far.

"I'm surprised more people don't build like this. It is very simple and it has worked very well. But when we filled the pool for the first time, I was terrified that it would crack and burst. There's always the human factor and what if I had forgotten a nut somewhere!"

NEW PERSPECTIVES AMONG THE TREES

Torkel has coordinated all critical steps with an expert design engineer, who made strength calculations and gave clear instructions. He has been careful to stick to what he has mastered. During the building project, he obtained his master's certificate as a cabinetmaker, the trade to which he has devoted his professional life. Something that should not be confused with being a carpenter.

"I've sometimes had the completely wrong idea and built things too complicated. But before I started with the house, the architect Josef said: 'Now, do it the way you know how. Don't keep experimenting and trying new things'. I think those were important words of wisdom. I did the very best I could, that's why it worked out and I haven't had any major problems," says Torkel.

Having moved into the house in 2023, the family - including two small children, a cat and a dog - has had time to enjoy a panoramic view of the changing seasons from on high. When the trees shed their leaves in autumn, they can look down across the meadows of Halland with their grazing sheep.

"It's pretty cool to experience the changes up here. Still, it's at its absolute best when the leaves come out again in spring. We have completely different animal and bird life here as well, with squirrels running past all the time and kites, large birds of prey, landing outside. And we've had a marten hopping around between the trees. You never see that at ground level and I think that's the best part. I would never trade this for a sea view," says Torkel.

The Wooden King's Throne, an oak chair that Torkel also made. Selma the dog can now run all the way around the house on the veranda, built among the treetops.

FACTS

Name: Torkel Haraldsson

Occupation: Furniture maker who has been running his own business since 2003.

Family: Wife Ayla, two daughters, dog and cat.

About the house: A timber treehouse in Onsala. Documented in the television show Husdrömmar [House Dreams] on Sveriges Television (SVT).

WOODHUB – WOOD'S POWER CENTRE

WOODHUB IN ODENSE has emerged as Denmark's national hub for sustainable timber construction. With 31,000 square metres on six storeys, Woodhub is the country's largest timber building. It is the workplace of some 1,600 civil servants from a range of government agencies. Designed by C.F. Møller Architects, the building demonstrates the possibilities of wood on a massive scale, from exposed pillars to solid cross-laminated timber elements. According to estimates, it will reduce carbon dioxide emissions by 5,400 tonnes over the next 50 years. Companies, researchers and architects will meet here to develop tomorrow's sustainable construction methods.

PHOTO C.F. MØLLER ARCHITECTS / AESTHETICA STUDIO

SMART CHARGING IN A STYLISH DESIGN

WITH ITS GROUNDBREAKING electric vehicle charging technology, Swedish company LexEnergy is taking a stylish approach to delivering ultra-fast public charging, even in areas with a strained power grid. The company's EV charging hubs are clad in wood, offering an appealing Scandinavian design aesthetic that blends into the urban environment. Beneath the wooden exterior is integrated battery storage and a proprietary software platform that enables smart charging. The advantage of these charging stations is that they can be installed in locations where it would otherwise not have been possible due to grid capacity issues.

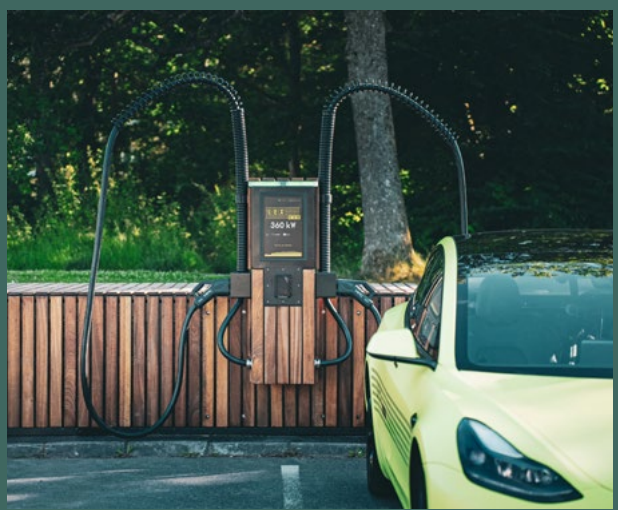


PHOTO LEXHUB

Take a seat in the wooden lighthouse

FYRTORNET [the Lighthouse] in the Malmö district of Hyllie is one of Sweden's tallest wooden buildings and a key component of the Embassy of Sharing urban development project. The building is the first of seven in the project and will be a symbol of the sustainable workplace of the future, where climate benefits, social community and modern architecture meet. Thanks to its timber frame, Fyrtornet has a smaller carbon footprint than traditional office buildings. At the same time, the material creates warmth and comfort.

Wood also plays a starring role in the interior, with exposed timber elements and conservatories behind glass facades that create a calming, green environment with plenty of natural light. The roof offers an orangery, greenery and views of the Sound, while the ground floor houses a café, lounge and library. The project is run by Granitor Properties. The architects are Wingårdhs. In March, Fyrtornet was named Building of the Year in the hotel and office category by Byggindustrin magazine.

PHOTO GRANITOR

TAKING POINT ON PROMOTING

THE POWER OF THE FOREST

TEXT JENNIE ZETTERQVIST PHOTO BODIL BERGQVIST

Viveka Beckeman, Director General of the Swedish Forest Industries Federation, is a lawyer who has become one of the most committed advocates for the forest industry. She fights for the interests of the federation's members and works hard to ensure that more people come to realise the importance of our forests in meeting the challenges of climate change.

"I am proud to be part of an industry in which people are driven by a unique passion and a strong sense of fulfilling a vital societal function," says Beckeman.

"There are many industries in which people are truly dedicated to what they do. But this kind of passion and sense of fulfilling a vital societal function is unique to the forest industry"

DRESSED IN AN immaculately cut blue suit and high heels, Viveka Beckeman moves quickly and purposefully across the Swedish Forest Industries Federation's head office in Stockholm. Her professional base is here in the affluent district of Östermalm and her razor-sharp appearance, firm handshake and convincing reasoning bear witness to the ease with which she moves through the corridors of power, somewhere she often finds herself, both figuratively and literally, as a prominent voice on many of the hot-button issues in Swedish and EU forestry.

Still, it is out among the federation's 220 member companies that she feels most at home. It is in the forests, sawmills and factories that she draws the energy and inspiration to continue working to safeguard the industry's best interests alongside her staff of 50 at the Swedish Forest Industries Federation.

"In my role, it is crucial to keep your ear to the ground. I constantly want to learn more about our members and listen to what they want from their industry organisation, so that we can help them in the best possible way," she says.

HORSE BOOK IGNITES DREAM OF BEING A LAWYER

Growing up in Skåne, Sweden's southernmost province, the forest was a cherished playground. Still, it was far from given that it would also be fundamental to her working life. Reading one of her many horse books piqued 12-year-old Viveka's interest in the law, eventually leading her to become a lawyer.

"I wish I had a fantastic explanation for why I chose the law. Of course, many people are driven by a desire to save the world from an early age, but for me it was actually the cool lawyer in that horse book that sowed the first seeds," she says, laughing at the memory.

The lawyer who waltzed in and set things to rights in that story certainly made an impression on Beckeman, who recognised that the profession offered opportunities to exert influence and make a real difference.

She was involved with many industries while working at the law firm, but one stuck out. While involved in the sale of the forest company AssiDomän, she came across an extraordinary level of commitment far beyond the dedication she had generally encountered before.

"I was quite taken with the people there. They really loved the forest and felt that they were doing something important for society. The incredible passion they displayed piqued my interest in the industry," she says.

THE INDUSTRY THAT BUILT SWEDEN

So, from primarily viewing the forest as a place for recreation, Beckeman was drawn to the possibility of being part of something greater, which led to her becoming head of legal at Sveaskog. It was in 2020 that she took up her current position as director general.

"It's great to be able to work in an industry that actually built Sweden and that at the same time has so much to offer in the future. When this challenge presented itself, it was too good to turn down. Helping to shape the image of the industry, to improve the conditions for it and shoulder responsibility as director general in a clear way, that appealed to me," she explains.

As an avid history buff, Beckeman is keen to play her part in highlighting the significant role of the forest industry in creating the prosperity that we in Sweden so often take for granted.

"Without the forest, we would have had no industry in Sweden. I like the historic connection and how much the forest means to rural areas and people's opportunities to continue living there today. Moreover, we will not be able to deal with the climate crisis unless we phase out fossil fuels, and we need the forest to do so. I am very proud to be part of the industry. But I always come back to the people who work with the forest. I love them!"

Among the first things she did as new director general was to launch the federation's future journey project, with the goal of accelerating the forest industry's contribution to the green transition.

“Personally, I think it’s important that it’s not just all talk. We must be useful and create real change,”

The result was the Swedish forest industries’ Road to the Future agenda, which contains three pledges on climate, circularity and biodiversity that must be met by 2040.

TWO MAJOR ISSUES OF CONCERN

It is obvious to the Swedish Forest Industries Federation that the forest industry is already contributing enormous societal and climate benefits. The latter is true globally, as 80 per cent of Swedish timber products are exported. The Swedish forest industry also develops forestry and is a global leader in research.

Still, many more people need insight into the overall benefits and the Swedish Forest Industries Federation is disseminating knowledge and advocating with policymakers to bring about favourable legislation. There are many issues that currently need to be addressed, two of which are clearly most pressing.

“If there’s one thing that keeps many of us awake at nights, it’s access to raw materials. All proposed legislation that might in any way limit access is of great concern to our members. That is one of our top issues,” says Beckeman.

The other is about how the climate benefits of timber products are viewed. The public discourse often focuses solely on the forest as a carbon sink, assuming that it does the most good for the climate if left untouched. But the Swedish Forest Industries Federation also wants the substitution effect to be recognised, i.e., the climate benefit that occurs when wood-based products and fuels replace fossil-based products and products manufactured using fossil-based energy.

“If we are going to cope with the climate crisis, we need to stop pulling fossil raw materials out of the ground and use fossil-free raw materials instead, and reuse them as many times as possible. That’s the biggest challenge: to make people realise that using timber products provides more climate benefits than just leaving all the forest standing.”

The Swedish Forest Industries Federation is encouraging people to have more tools in their toolbox, such as investing more in areas that are already set aside, and to continue to have productive forests, for example.

“And, above all, we’re not going to stop building houses, we still need toilet paper and many other products that can be made from wood. If all that comes from fossil sources instead, it will be worse for the climate overall,” says Beckeman.

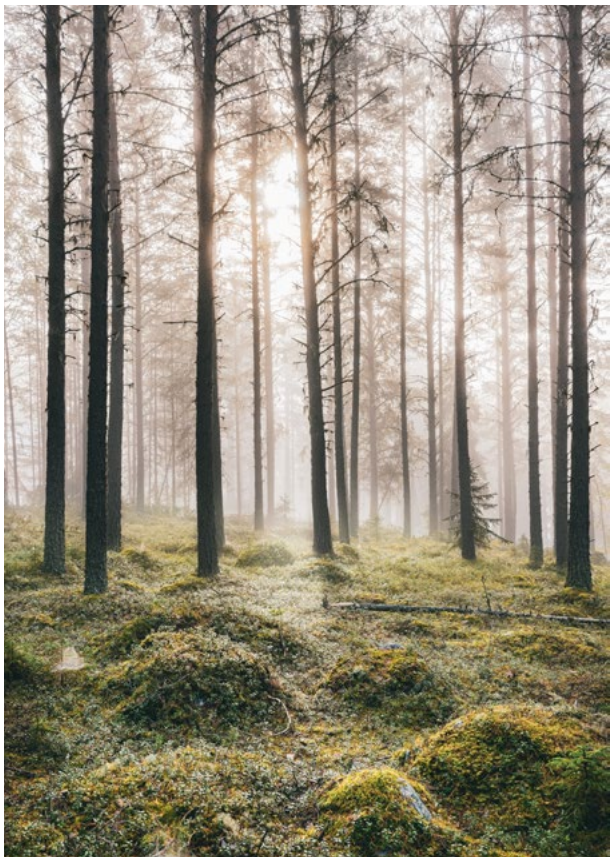


PHOTO SCA

DEMANDING CHANGES TO LULUCF

The current legislative proposals affecting the industry most, and provoking the most debate, are the Land Use, Land Use Change and Forestry (LULUCF) Regulation and the Regulation on Deforestation-free Products (EUDR). In LULUCF, the European Commission proposes binding net carbon removal targets for Member States. According to the proposals, with 70 per cent of its land area comprised of forest, Sweden is to be the Union's largest carbon sink.

"The entire regulation is intended to increase net carbon removal and as Sweden and Finland have so much forest, we have enormous potential to bind more carbon than countries that have already cut down their forests. When the Commission decided to fix binding targets, Sweden was given an impossibly high burden," says Beckeman.

One consequence may be that felling must decrease in Sweden, leading to the very shortage of raw materials that concerns the industry the most. The Swedish Forest Industries Federation sees these restrictions on Sweden as an easy way for the rest of Europe to increase total net carbon removal, on paper at least.

"We can't simply accept a negative impact on the Swedish forest industry, which generates 10 per cent of Sweden's export earnings. Reducing logging will make Sweden poorer and mean job losses, while other countries can continue with their emissions. Only three generations ago, we had famine here in Sweden and thanks to investments in the forest industry, we have built a prosperity that can easily be taken for granted. But it did not come for free," says Beckeman.

Of course, she also acknowledges the enormous significance of the climate crisis.

"I do not, however, believe that the present legislative proposals will produce the best effect on the climate. I'm concerned that we are focusing too much on binding carbon and missing the big picture; the problem is that in the EU we emit too much fossil carbon dioxide, which is what leads to global warming. What we should be looking at is how we can reduce carbon emissions, and the forest is one tool and facilitator for that," says Beckeman.

The Swedish Forest Industries Federation is looking to the Swedish Government to be more assertive. Many promising initiatives are underway, including a government commission of inquiry into the forest industry, but these must also be completed.

ABOUT THE SWEDISH FOREST INDUSTRIES FEDERATION

The Swedish Forest Industries Federation is an industry organisation representing 220 companies that process wood to make fossil-free and renewable materials and products. The organisation works to strengthen the competitiveness of the industry and increase the use of forest products. Members consist of:

- 40 40 pulp and paper mills
- 80 sawmills.
- 105 companies that conduct other operations.

THE SWEDISH FOREST INDUSTRIES' ROAD TO THE FUTURE

- By 2040, the forest industry's climate benefit shall increase by 30 per cent.
- By 2040, all wood-based products from our industries shall be fossil-free and recyclable.
- By 2040, Sweden shall have flourishing forests rich in biodiversity.

"While there are many issues and legislative proposals that engage our members, in principle it all comes down to the issue of access to raw materials and what climate benefits our products provide."

"A lot has happened, but not enough. We need a policy that is much more focused on using our forests and phasing out fossil-based products. We don't need more legislation that restricts forestry and we want Sweden to demand the revision of LULUCF," says Beckeman.

AN INDUSTRY THAT INSPIRES HOPE

Many victories have nevertheless been won and the Swedish Forest Industries Federation continues to advocate for a more balanced view of the forest and more understanding of its power. Beckeman has high hopes for the future.

"I think that the entire industry inspires hope. It's so easy to fixate on the challenges and difficulties, especially with regard to the climate crisis. But we mustn't forget that we have enormous forests that we can use to create both value and climate benefits. And we have incredibly knowledgeable people here. We can do great things together as an industry."

Even in times of geopolitical unrest, we can draw energy from the forest. As an exporter, the forest industry has certainly felt the effects of closed borders, redirected timber flows and price rises over recent years.

"Of course, the entire world has seen how dangerous it is to become dependent on non-democratic states, and a large part of Europe is stuck with an enormous dependence on Russian gas and oil. But in this regard, the forest industry is a facilitator that can help to reduce this dependence. Residual products from the forest can be used for both fuel and heating," says Beckeman.

In Sweden, 60 per cent of all municipalities are already getting their district heating from the forest industry in some form. Should the present geopolitical unrest escalate and approach Sweden, the forest industry's resources will become even more important. Annual export value is currently SEK 185 billion and this will become even more vital to strengthening the country's economy. The forest also contains the basics of building materials, sanitary products and packaging that we need in both peacetime and wartime. Private landowners also provide a well-maintained road network on the same scale as the state-owned network, something that should not be underestimated.

"We are a vital cog in Swedish preparedness but many people overlook this as the forest and forest industry has always existed. Our members know the geography and have forest machines, equipment and knowledge that make it possible to retool for other assignments in wartime," says Beckeman.

The digitalisation of forestry – with everything from planning tools to laser scanning and drone harvesting making it possible to harvest with minimal environmental impact – is among the many innovations that arouse Beckeman's curiosity.

FOREST COMPANIES AND CORPORATE SOCIAL RESPONSIBILITY

As impressive as successes in product development are, she always returns to the importance of maintaining a holistic view of the forest's importance, with history in mind. Innovation is great and important for the future, but the most important thing is to use the entire tree and to do so in a responsible manner, environmentally and economically. As Beckeman sees it, this sense of responsibility characterises the Swedish forest industry.

"Companies such as SCA make an enormous contribution to local communities. They have a sense of social responsibility and give a great deal back. I think this is very much related to the fact that our raw material is such an important part of the industry. It is where it is; it can't be moved. Companies work so close to their raw material assets and of course they understand that the better the forest, the greater the profits. They also recognise the value of taking care of people. They care about what they have – the forest and the people – and somehow that makes it real."

At the time of writing, Beckeman is in her fifth year as director general and, as yet, it is not time for any summation of her deeds. But when that day comes, she hopes to be able to look back on environmental successes.

"If, when the time comes, I can see that the investments we have made in the future journey project have led to real change and greater climate benefit, then I would feel satisfied. I also hope that the forest industry receives recognition for all the good it actually does. We are part of the solution and I would really like people to see us as such."

FIVE FACTS ABOUT THE SWEDISH FOREST INDUSTRY

- Sweden is one of the world's leading exporters of pulp, paper and sawn timber products.
- In 2024, the total export value of Swedish forest products was approximately SEK 185 billion (2023: SEK 184 billion).
- Over 80% of products are exported.
- The forest industry accounts for between 9 and 12% of Swedish industry's jobs, exports, turnover and added value.
- The Swedish forest industry provides jobs for around 140,000 people (employed or subcontractors).

Source: Swedish Forest Industries Federation


SCA

ISO STANDARD DEMONSTRATES

CLIMATE BENEFITS OF FOREST PRODUCTS

TEXT KERSTIN OLOFSSON PHOTO SCA

April saw the launch of a brand-new ISO standard for calculating climate impact along the entire forest value chain.

"The ISO standard will give greater weight to the forest industries climate audits, benefiting wood fibre as a raw material. Both we and our customers can now highlight the climate benefits of the products in an even more specific and credible manner," says Susanne Rutqvist, Climate Lead at SCA.

THE NEW STANDARD, ISO 13391, provides an overall picture of the forest's climate benefits and the products manufactured from wood-based materials. It consists of four parts: three that show the climate benefits of the company's forest and renewable products, and one the company's fossil emissions. The three climate benefits are defined as:

- trees sequester carbon as they grow;
- products manufactured in timber raw materials store carbon throughout their lifetime;
- the products provide opportunities for displacing products that would cause higher greenhouse gas emissions, measured as the potential for prevented emissions..

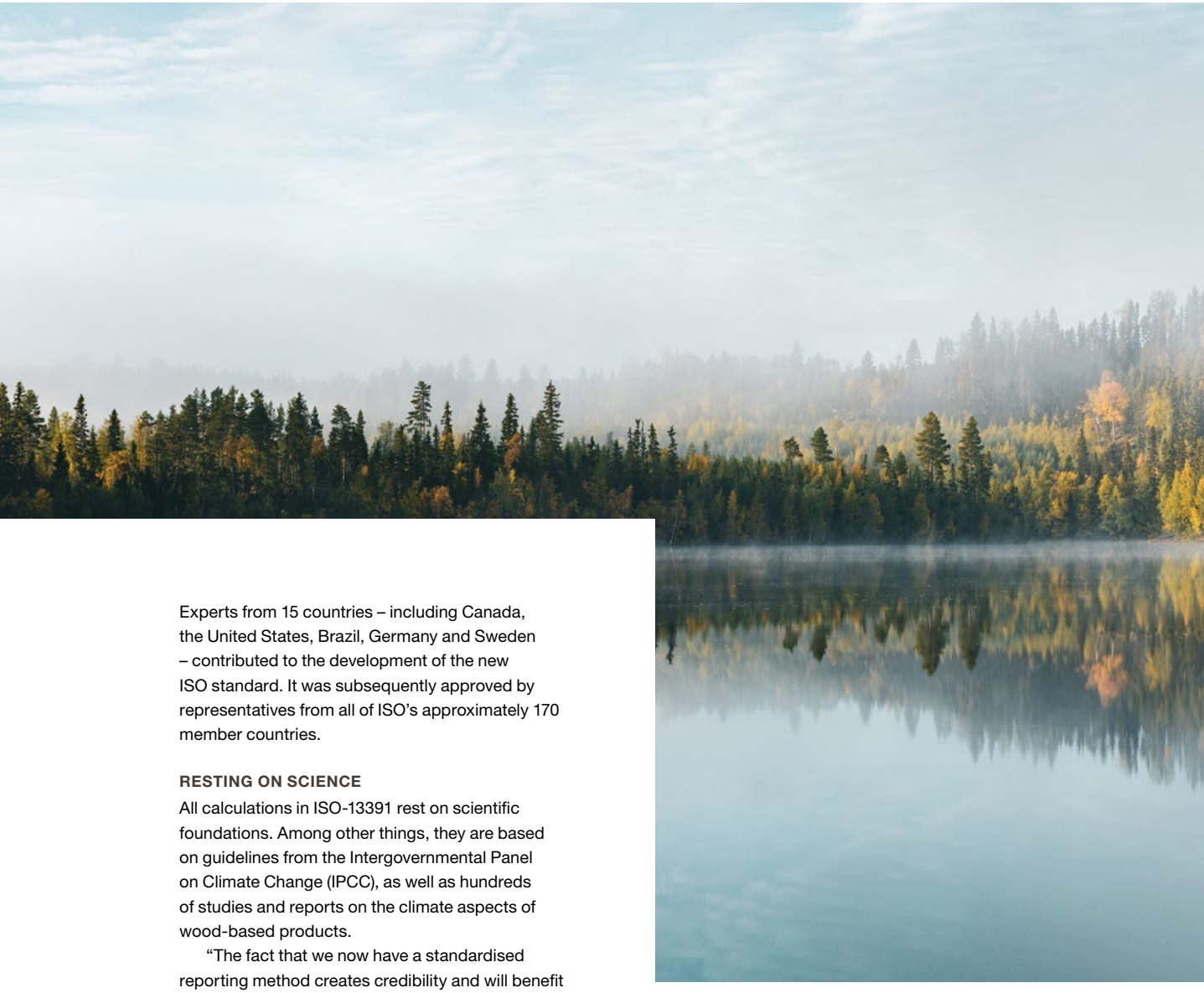
"In the EU, as well as in some other contexts, the main focus is on the role of forests as carbon sinks rather than anything else. But these calculations show that forests are most useful when they are managed responsibly, so that they both sequester carbon dioxide and contribute raw material for renewable products," says Rutqvist.

EXPERTS FROM 15 COUNTRIES

A model for calculating annual climate benefit from an overall perspective was developed within the forest industry back in 2018, and this has since been widely disseminated. This model was an important piece in the puzzle when it came to developing the ISO standard.

"Work on developing an international standard began a few years ago. It was natural for the International Organization for Standardization (ISO) to take a closer look at how we performed our calculations," explains forestry and climate specialist Peter Holmgren, who was one of the team that designed the previous model.

Susanne Rutqvist, Climate Lead at SCA, and Peter Holmgren, advisor in sustainable development.



Experts from 15 countries – including Canada, the United States, Brazil, Germany and Sweden – contributed to the development of the new ISO standard. It was subsequently approved by representatives from all of ISO's approximately 170 member countries.

RESTING ON SCIENCE

All calculations in ISO-13391 rest on scientific foundations. Among other things, they are based on guidelines from the Intergovernmental Panel on Climate Change (IPCC), as well as hundreds of studies and reports on the climate aspects of wood-based products.

"The fact that we now have a standardised reporting method creates credibility and will benefit the entire industry. This applies in both a business and political context," says Holmgren. The standard will make it possible to compare the climate impact of products and forest regions. It will also be useful for customers when choosing between products made from forest raw materials and alternative products.

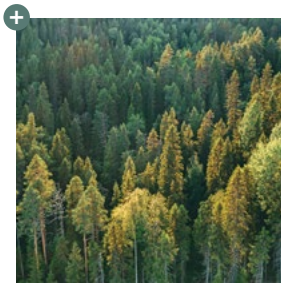
"It makes it easy to demonstrate the climate benefits of wood-based products in a specific and credible way, and to compare different materials. It will also be an important tool to help politicians to make decisions based the bigger picture, that optimise overall climate benefit," says Rutqvist.

Peter Holmgren was previously head of global climate work at the Food and Agriculture Organization of the United Nations and is currently an advisor in sustainable development.

DIFFERENT PRODUCTS HAVE DIFFERENT BENEFITS

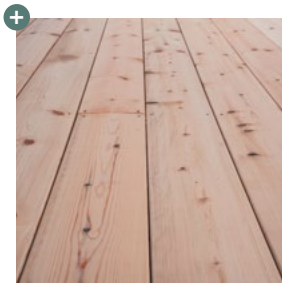
Different products from the forest have different climate benefits. Long-lived products – like sawn timber products used for building elements, floors and furniture – have significant benefits both in that they store carbon for many years and because they reduce the need for materials such as concrete and steel. Paper products have somewhat different benefits. While they store carbon for a shorter time, they make a significant contribution to avoiding greenhouse carbon emissions by reducing the need to manufacture equivalent products in, for example, plastic and glass. Energy products from the forest can directly replace fossil-fuels for heating, electricity and transport.

THE FOUR PARTS OF THE ISO-STANDARD (ISO-13391)



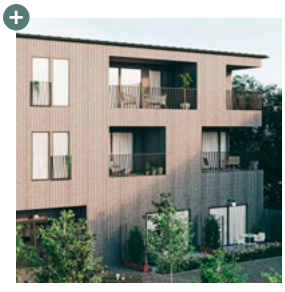
FOREST CARBON UPTAKE

Growing forests sequester carbon dioxide. Due to active forest management, the standing timber volume increases.



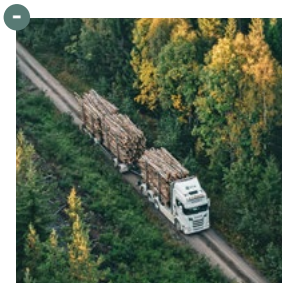
STORAGE IN PRODUCTS

Carbon sequestered in the forest is stored in timber products. The calculation takes account of the product's area of use, life cycle and level of recycling.



AVOIDABLE EMISSIONS

Renewable products can substitute for products with a high carbon footprint – such as plastic, steel and concrete – thus creating opportunities to avoid fossil emissions.



EMISSIONS ALONG THE VALUE CHAIN

The organisation's fossil emissions from forestry, industrial processes and transportation.

Tailored timber house

FOR AN ACTIVE LIFESTYLE

TEXT HÅKAN NORBERG PHOTO SOPHIE ODELBERG

The photographer and adventurer from Stockholm's inner city found a home in rural Jämtland – and built her dream house in wood. We visit Sophie Odelberg in her mountain "cabin" in the village of Ottsjö. "My husband and I built this house for the long term, with durable and sustainable materials. We want to be able to remain here for the rest of our lives," she says.

GROWING UP IN Östermalm, Stockholm, Sophie Odelberg never really fitted in. While her peers were interested in "tea parties and expensive clothes", seven-year-old Sophie would rather be climbing.

"Climbing walls were less common then and none of my friends were interested. That's why my first season in Åre in 2013 felt like coming home."

While outdoor activities and adventure are a big part of life for photographer Sophie Odelberg and her husband, these interests have taken a back seat over recent years as they have built their dream home in the village of Ottsjö, 30 kilometres from the ski resort of Åre.

The couple designed the house themselves together with Note Design Studio. The three staggered sections of the house follow the contours of the land, blending the building into the hilly terrain and providing views from every part of the house. The design also ensures that there is always shelter somewhere against the locally sourced pine heartwood cladding.

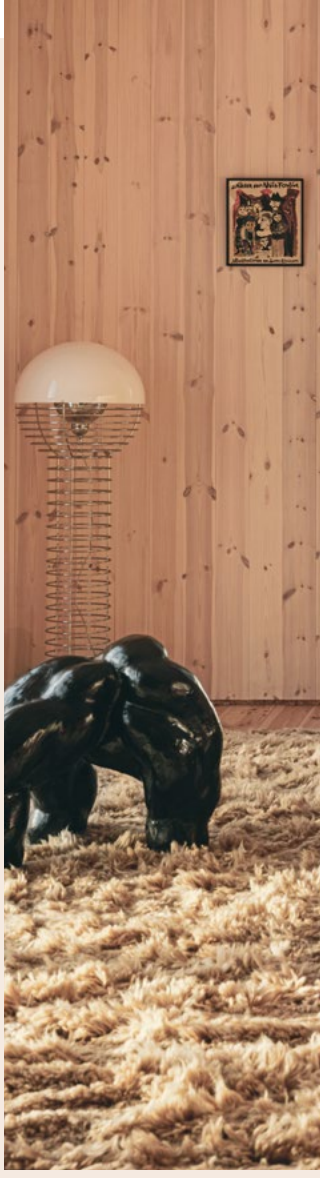
"Jämtland is very important to us! We wanted the fells and mountains to permeate the house, and we wanted to be able to justify our choice of materials. The house is inspired by the traditional barns of Jämtland and a timber facade was a given. In the end, we decided on untreated heartwood pine from the forests of Jämtland. It's beautiful, weatherproof and didn't need to be transported far," says Sophie.

ECONOMICAL INGENUITY

The house features a number of singular solutions to suit the couple's active lifestyle and economical ingenuity was the hallmark of the construction project. For example, Sophie wanted to be able to open up the entire living room to the surrounding mountain landscape, and made sure that the house had no less than five exterior doors.

"I hate to feel confined and I want to be able to drink my coffee outdoors as often as possible, but large sliding doors would have been far too expensive. So, we placed exterior doors in every corner instead, so that wherever you are in the house you can get out."

To keep costs down, the couple have invested a great deal of their own time working on the construction of the house. Fortunately, they both enjoy carpentry.



FACTS

Frame: Timber frame from SCA.

Cladding: Grooved SCA Lynx untreated heartwood pine in varying widths to create a striking impression.

Interior panelling: Pine treated with hardwax oil.

Insulation: Wood wool. “And we have very thick walls.”

Roof: Sheet metal.

Ceilings: Pine from SCA, including weatherboard panels that are actually intended for exterior use.

Floors: 22 mm pine floorboards and Norwegian faux marble “from the other side of the mountain”.

Heating: Geothermal. “It was more expensive to install than other options but now our biggest outlay on energy is the grid tariff rather than electricity consumption.”

“There was also an element of wanting to demonstrate that it’s possible to build an interesting house without spending 10 million SEK. You can process basic materials from the local area to make them feel luxurious,” says Sophie.

Like the weatherboard panelling used for the ceiling of the dining area and kitchen. Intended for exterior, this is a detail that with simple means, if admittedly a great deal of hard work to sand all the rough planks, gives the house a unique, luxurious feel.

CARRYING PLANKS FOR 16 HOURS

“Building a house is one of the hardest things I’ve ever done,” Sophie wrote in one of the many Instagram posts in which she documented the project. Despite that fact that she and her husband live in Stockholm, some 600 kilometres from Ottsjö, and both have full-time jobs, they took on the project design, procurement and project management themselves.

Sophie was alone on site when the pine panels for the interior walls were delivered in mid-winter. The 1,400 planks were unloaded roughly 70 metres from the house and needed to be carried to site that day to avoid damage. It took Sophie 16 hours and 50,000 steps to carry the planks four at a time. She then spent 12 hours a day for four weeks treating each plank with hardwax oil.

“Obviously it’s taken its toll, but it’s also been incredibly rewarding, and fun. We were forced to turn down a lot of things for a while, but we make up for that now!”

Now the house is finished the couple can finally resume their keen interest in adventurous outdoor activities. This summer they climbed the Matterhorn on the border between Italy and Switzerland. Still, like any homeowners, there is still plenty of work to do on the timber house in Ottsjö. When asked what comes next, Sophie’s list is seemingly endless.

“We moved in last year but we’re still doing a bit of everything. The largest job we have left is installing decking. And then there are some small fixes inside, such as sanding and treating the

floors, lamps for the staircase, fitted wardrobes in the utility room, finding a storage solution to hide the chimney…"

Of course, they will also be enjoying the activities offered on their doorstop by the Jämtland countryside, in summer and winter. Sophie can step out of the utility room door to walk in the mountains and on her return come back in across the rough-hewn stone floor and straight into the bathroom, without dragging fir needles and moss into the rest of the house.

"We chose this location so we could be active without needing to use the car. And the house is fully adapted to our way of life."

Sophie has documented the construction of the house, which they call Fjället Cabin, on Instagram under the username @fjalletcabin. Keep an eye out for further developments in the timber mountain cabin designed for an active lifestyle.

SCA Wood France is taking service to the next level

TEXT KERSTIN OLOFSSON PHOTO SCA

SCA Wood is investing in France, including establishing the subsidiary SCA France to deal with direct sales to the French market. "We can now offer our industrial customers even better service. Among other things, we will be opening a new terminal so that customers can quickly make small supplementary purchases from the warehouse there," says Markus Henningsson, Vice President Marketing & Sales at SCA Wood.

"**FOR THE LAST FEW** years, ISB has dealt with sales in France on our behalf, but SCA Wood will now be taking over responsibility. We want to give our customers clarity regarding what is SCA Wood and what is ISB. That said, we are a long-term shareholder in ISB and as such we clearly want to continue our close collaboration and partnership with ISB. However, establishing SCA Wood France provides us with a more efficient structure and we will be further improving our service levels," says Markus.

As part of this strategy, SCA Wood France has established a new terminal in Rochefort to improve the service provided to major industrial customers. While customers will continue to place their main orders for timber products with SCA sawmills in Sweden, if they need to supplement their orders with smaller purchases they can do so quickly and conveniently via the Rochefort warehouse.

DURABLE TIMBER FROM THE NORTH

SCA's largest customer base in France consists of manufacturers of glued laminated timber (glulam), mainly suppliers of glulam beams to major projects.

"They need high-quality raw materials with good strength properties, which is where northern Swedish spruce really comes into its own. The slow growth of trees in northern Sweden makes for high-strength timber. It also has a fine knot structure," says Markus.

In addition to glulam manufacturers, the French customer base also includes other industrial customers, such as door manufacturers and planing mills.

Markus Henningsson, Vice President Marketing & Sales SCA Wood and Armel Chaumont, President of SCA Wood France

"In this regard, our largest customer is ISB, which processes and distributes consumer products to timber merchants and DIY stores," says Markus.

INCREASED DEMAND

SCA sees significant future opportunities in the European market.

"With the EU making considerable efforts to achieve a green transition, demand for wood will increase. This makes Europe a stable market in an unstable world," notes Markus.

Meanwhile, the availability of timber in Central Europe is declining. There has been significant felling for many years now due to attacks on forests by the European spruce bark beetle, but now the flow of timber is beginning to decrease.

"We will therefore see a decline in the production of timber products in Europe in combination with increasing demand. This is where we can contribute with high-quality products from northern forests," says Markus.

EFFICIENT LOGISTICS

There are a number of reasons why SCA has chosen to invest in France in particular.

"Above all, our logistics system in France is highly competitive, both economically and environmentally. We can ship our projects by sea, reducing costs and emissions per tonne- kilometre," explains Markus.

SCA previously delivered products to a terminal in Honfleur. For the last few years deliveries have also been made to a terminal in Rochefort, making it possible to supply the entire French market in a much more effective manner.

"Honfleur is in northwest France while Rochefort is in the southwest, so they complement one another really well. Rochefort is also close to many of our major customers. We are also increasing our delivery capacity by delivering products on two vessels each month rather than one," says Armel Chaumont, President of SCA Wood France.

Another reason for investing in SCA Wood France is that France is one of the countries working most exhaustively to increase the use of timber in new builds.

"France has also been an important market for SCA historically, so it's only natural for us to continue along this path. We have the capacity to meet the demands of the French timber products market and to offer secure, competitive deliveries. We are also looking forward to increasing collaborating with industrial customers on developing new products," says Armel.

Benefits at all stages

FROM THE FOREST TO SOCIETY

TEXT VICTOR IHRE PERSSON PHOTO SCA

From the forests of Norrland to finished houses, the climate benefits of timber products extend along the entire value chain. But what does it take for wood to actually deliver the full climate value many ascribe to it?

IN JÄMTLAND'S INLAND, along a forest road lined with tall spruce and pine, there is a track beneath embedded in hoarfrost. It is January. The days are short and the air still. A logging truck is parked up, its trailer loaded with logs felled that morning. They have been formed during a century of shifting seasons and slow growth that has made them strong.

The felled trees have done their part for the ecosystem, including as an efficient carbon sink. Slow growing, they have sequestered carbon throughout their lifetime, now the time has come to start contributing to something greater. When the truck leaves the forest, the climate benefit of the logs will continue with new momentum, via the sawmill and out into the world.

Still, their journey does raise questions. With each felling, voices are also raised concerning biodiversity, nature conversation and the real value of the forest. Should the trees have been left standing, continuing to store carbon in the forest?

On the other side of the debate, where utilisation becomes reality, the answer seems obvious. Steam rises from the sawmill's dryers, dancing against the sky in the cold air, and from goods-in there is the constant dull clatter of newly arrived logs being sorted and separated based on their various attributes. All to maximise the value of each tree.

"Each plank, log and tree is unique. There are no exact copies. Each tree has grown in a special place, shaped by the weather and wind and cared for by hard-working people generations before us," says Peter Nilsson, Sawmill Manager at Munksund Sawmill in Piteå.

Here, in a sawmill that has been operating since the late nineteenth century, the extended benefits of the forest become more tangible: this is a building material with climate value. A tree that once grew in the soil of northern Sweden is on its way to becoming part of a building, a facade, a floor, a piece of furniture – something greater that is both structural and sequesters carbon.

"Timber is in many ways a living material, and handling a stately pine that has been growing for longer than a human lifespan inspires both respect and reverence. For me, there is a simple and ingenious logic in building with timber while managing forest regrowth," he continues.

IT BEGINS IN THE FOREST

Just over half of Sweden's forest is in the north of the country. The distances here are long and population density low, but the climate benefits are even greater. The forests are growing faster than they are being felled, and each year the amount of carbon sequestered in the trees increases. According to

the report Norrland, skogen och klimatet [Norrland, the Forest and the Climate], the annual net carbon uptake of forests in Sweden's four northernmost counties amounts to approximately 29 million tonnes CO^2 equivalent (CO^2e).This can be compared to Sweden's total emissions from industry, transport and other sectors in 2023 of 44 million tonnes CO^2e.

In other words, whether trees should be left standing in the forest is a key question. According to Per Funkquist, Vice President Sustainability at SCA, it is by utilising and felling the forest that we can ensure maximum climate benefit. By sequestering carbon in growing forests and providing society with the renewable raw material needed for the climate transition. All of this while also achieving other goals such as maintaining biodiversity. According to Funkquist, achieving this balance will require long-term, knowledge-based trade-offs rather than simplifying the issue as a series of contradictory aims.

"If the forest is to really make the maximum contribution to climate goals, we need a regulatory framework that encourages active forest management, substitution effects and a circular bioeconomy," says Funkquist.

This is a view shared by many of those working in the Swedish forest industry, not least in the ongoing discussion of the role of the forest at European level. There is a risk that new directives and regulations will equate all Member States despite the significant differences in forest types, management traditions and levels of responsibility. Sweden has often underlined the need for a more calibrated perspective that places greater importance on national conditions.

According to Funkquist, there is otherwise a risk of losing sight of both the climate and societal benefits of forestry. While acknowledging that the EU's ambitions are fundamentally positive, he believes that they are occasionally characterised by narrow, short-term thinking. Swedish forests are more than a passive carbon sink. Through active forest management, they both create high growth and are a source of renewable products, as well as climate benefits.

"It is important to understand that it is the entire forest cycle – from growing timber stock in the forest, through harvesting renewable forest raw materials to processing products that substitute for fossil-intensive ones – that together create climate benefits," he says.

CLIMATE BENEFIT AT EVERY STAGE

The sawmills of northern Sweden are thus more than simply industrial sites – they play a key role in a resource-efficient industrial cycle in which every

Peter Nilsson, Sawmill Manager at Munksund Sawmill.

part of the tree is utilised. Just over half of the log is processed into sawn timber products. The rest – bark, savings and wood chips – are turned into paper pulp or biofuel to drive timber dryers and heat buildings. Many modern facilities are almost self-sufficient in energy, resulting in a low carbon footprint.

"We have a renewable raw material that sequesters carbon. This places high demands on us to make wise and balanced decisions at every stage of production. While we have come a long way, we are still working hard to further reduce our footprint in various ways, not least in our transport and logistics," says Nilsson.

His point demonstrates exactly what sets wood apart from many other materials. In other industries, efficiency drives are often about reducing the damage and lowering emissions from something that is already a burden to the climate. With wood, almost the reverse is true: more efficient processing enhances the existing benefits. As each board is already storing carbon, reducing the carbon footprint of production means that the benefit of the product itself is enhanced. Something that is already good becomes even better. The cleaner the process, the greater the climate value, something that can rarely be said of fossil-based alternatives.

This efficiency also characterises the entire value chain: short transport distances, local raw materials and processing, bio-based energy and a high degree of automation. The differences are striking. According to the report Norrland, skogen och klimatet [Norrland, the Forest and the Climate], Sweden's four northernmost counties account for annual climate benefits equivalent to 43 million CO^2e. The vast majority of these benefits are generated by substituting timber products for more emission-intensive materials such as steel, concrete and plastic. The substitution effect alone avoids almost 14 million tonnes of greenhouse gas emissions annually.

So, according to Per Funkquist, it is in the utilisation and management of forests that maximum climate benefit is realised, not only as a carbon sink but also as a replacement for something else.

"The role of forests is not only important but essential to the transition to a fossil-free society," emphasises Funkquist.

A TIMBER BUILDING AS A CARBON SINK

Think of an ordinary house built of wood: the frame, the joists, the cladding and floors all made from sawn timber products. In round figures, this will consume between 25 and 30 cubic metres of timber. This timber will have sequestered around 20 to 25 tonnes of carbon. According to calculations by the International Civil Aviation Organization (ICAO), this is the equivalent of over 100 return flights between Stockholm and London. This carbon will continue to be sequestered in the house for perhaps another century or more.

At the Stockholm-based architectural practice Equator, which now works almost exclusively on commercial buildings and with professional

Per Funkquist, Vice President Sustainability at SCA and Louise von Bahr, architect at Equator.

clients, they are aware that this particular attribute is increasingly important. According to architect Louise von Bahr, a partner at Equator, in just a few years climate reporting has become a whole new ballgame.

“Today, everyone is after a lower carbon footprint. Of course, this driving force has placed new demands on us but it has also opened up new areas of knowledge and innovation at all levels. Not least when it comes to wood,” she says.

One obvious example is Logicenters new logistics centre in Bålsta. The project was completed in 2024, and Equator was involved from the initial concept to the final design. By using a timber frame and facade, as well as hemp-insulated wall panels, the project succeeded in reducing emissions by almost 90 per cent compared to more traditional building materials.

To enable more people to follow the same path in the future, von Bahr also highlights the need for more hybrid solutions. She believes that maximising the benefits of timber is a matter of both combining and substituting materials – using timber where possible and having the courage to innovate when it comes to interplay with other materials. This is a change that both demands and facilitates closer collaboration between industry stakeholders in order to jointly develop new concepts, production methods and products.

"There is no escaping the fact that the choice of materials is extremely important when we build, and that there is a great deal of engineering that should be focused on timber," says von Bahr.

BUILDING THE FUTURE IN TIMBER

A new shift begins at the sawmill. The machines work rhythmically and steam from the dryer rises towards the winter sky. Timber that began its journey as slow–growing trees in the forests of northern Sweden has now been processed and stacked, ready for delivery to tomorrow’s construction projects.

To some extent, it remains to be seen how the attributes of these products will be valued in future legislation, regulation, climate policy and building standards. One thing that is certain is that the issue of how the forest is utilised going forward will shape both the industry and the future of the communities that live in and around the forest.

“The timber industry has manifestly created prosperity and quality of life in Sweden, perhaps for so long that people have actually stopped reflecting on it. But when we process slow-growth Norrland pine to build earthquake-proof houses in Japan, there is a deep and meaningful sense that we are making a difference," concludes Peter Nilsson.

For Nilsson and his colleagues in the industry, building in timber is not simply a matter of using renewable materials but rather about creating products that sequester carbon and substitute for emission-extensive alternatives. While new forests grow and sequester carbon from the atmosphere, the carbon already stored remains sequestered for generations to come in homes, schools and other timber structures.

An innovative view on sustainability

TEXT HÅKAN NORBERG PHOTO ANNA THORBJÖRNSSON

Elise Grosse is Head of Sustainability at Sweco Architects. While she sees enormous opportunities in the green transition, she underlines that it will demand a shift of perspective.

"A sustainable transition is not simply a matter of cutting back and giving things up; it's about doing things differently so that the situation improves from a broader perspective. With a few simple adjustments to the rules of the market economy, society could quickly become circular, energy-efficient and more future-proof," she says.

WHEN THE TIME came for Elise Grosse to apply to upper secondary school, her father was clear about one thing: "Make sure that you get good grades, then you can do as you like". No sooner said than done. Grosse specialised in natural sciences, found school easy and left with excellent grades. Then it was time to do as she liked, which was to become an artist.

"That came out of an inner desire, not from outside. It wasn't about achieving anything, earning money or having a given role; it was about curiosity and providing perspective on society," she explains.

After a higher education preparatory programme at the art school Nyckelviksskolan, she applied to both Konstfack University of Arts, Crafts and Design and the Royal Institute of Art. To her consternation, she was not admitted to either. In retrospect, she views this as a salutary setback; forced to take a new path, she enrolled at KTH School of Architecture, where she gained a new perspective. She met lots of interesting people who shared her interest in art and culture, and her eyes were opened to the societal role of architecture.

"I realised that the architect could comment on society to at least the same extent as the artist, and that there is a higher purpose beyond designing pretty houses. And if nothing else, there was a studio at the School of Architecture where I could work on the entrance examination the Royal Institute of Art."

As it turned out, Grosse remained at KTH, after which she studied art and architecture in Berlin and New York. For her degree project she collaborated with a carpenter in Värmland, where they built a modern catalogue house in timber. It was there that she began to weave the threads together: art, architecture and nature.

FORMATIVE ASSIGNMENT IN GERMANY

After making ends meet working for herself for a few years – "There was a recession and no jobs, so I started my own business," she explains – she received her first real commission as an architect, from her father.

"He had started a successful IT company in Germany and they were planning to convert a DDR-era building into a modern office building," explains Grosse.

The project taught her a great deal about the processes involved in a building project, while the resource efficiency left over from the old East Germany gave her an insight into the need to find new uses for any and all materials. This was sustainability, reuse and energy-efficiency before these were the words on everyone's lips.

PHOTO ADOBE STOCK

The commission led to another, to build a kindergarten or the children of employees next-door to the IT company. This presented Grosse with the opportunity to do pursue sustainability even further, but she was ploughing a lonely furrow.

"This was the early 2000s and no one was particularly interested in sustainable solutions, but I found the right people to collaborate with and completed the project. And the kindergarten won an award!"

"I HAVE TO CHANGE THIS"

Back in Sweden, Grosse got a job at White Arkitekter, where she was responsible for developing a sustainability network for seven years. Today, she is Head of Sustainability at Sweco Architects, one of several divisions within Europe's leading architecture and engineering consultancy.

As an architect, she takes great responsibility for developing her role. Business as usual is not an option in a changing industry.

"The built environment is responsible for 40 per cent of global emissions, a third of all waste and it consumes an enormous amount of energy. There is an expectation that our profession will offer solutions to this. At one point I thought, either I change career or I have to do something to change this. I chose the latter." Grosse is a high-profile proponent of sustainability within the industry, and her approach is as innovative as her attitude is positive.

"I advocate where I can see opportunities. The solutions and technology are there, we can do something about this and the commercial motivation is enormous. But we live in a market economy the rules of which are based on fossil-fuels and the linear economy."

THE FUTURE IS HERE

Grosse is convinced that, with a few adjustments to the rules of the market economy, society should be able to quickly become sustainable and more resilient.

"Why don't we tax emissions? Why can't procurements place more emphasis on kilowatt-hours, carbon emissions and minimising waste? Why don't we demand non-toxic and sustainable over the lowest hourly rate? Where are the concrete examples of the sharing economy? Then we can build-in the quality that provides the best economy in the long term. And with quality design and material choices, it pays to repair and reuse instead

of throwing away," she says. "There are plenty of specific examples of the sharing economy and if these are scaled up it will make Sweden more competitive! Sweden is an export-dependent country with a high sustainability profile. This is something we need to maintain and continue to develop. The world outside Sweden is in dire need of resource-efficient, circular, sustainable solutions."

She describes architecture and construction as a series of conflicting goals that must be managed: budgets, statutory requirements, functionality, aesthetics and, not least, sustainability. For Grosse, this is a matter of creating the right incentives for the industry, and it is vital that we do so now.

"Sustainability used to be about addressing severe climate-change risks that lay in the distant future. Now, it's the reality we live in."

Elise Grosse on the role of forests in urban environments.

The forest's new role in the built environment

IT IS SAID THAT WE SWEDES have a special relationship to the forest. Despite living in one of the world's most secular nations. we find peace and spirituality in the temple of the tranquil forest.

I grew up beside a nature reserve in a suburb of Stockholm. The forest was my playground, my security blanket and my first school of architecture. There, I learned that space is formed by light and shade, by variations in height, proportions and materials. Later in life, when I lived on a tropical Caribbean island, it was the mixed forest of Sweden that I longed for. The moss, the scent of bark, the dappled sunlight filtered through the foliage. Perhaps I was longing to return to my original environment at a cellular level.

When I had my own children, we played in a copse beside the large playground between the blocks of our housing estate in Dalen. They never tired of it. Unlike the playground, with its preprogrammed activities, the forest offered fantasy, creativity and the joy of exploration.

Interest in small urban forests, so-called pocket forests, is growing globally. No larger than a tennis court, they increase biodiversity, cool the city and store carbon dioxide. In Sweden, Sweco and Trelleborg Municipality have developed a model for the creation of an urban forest on what is currently a paved area, contributing to an urban transformation that will sequester more carbon dioxide than it emits in 50 years.

As an architect, my job is to create environments that work not only for people but also for the entire ecosystem. The forest has a key role to play: it is a place for recuperation and play, a carbon sink and a shield against heat and flooding.

The forest has gone from being a source of raw materials to existential infrastructure. In urban planning, there are three particularly vital values to consider: biodiversity, recreation and community. It must also be a response to the climate crisis.

The forest must be integral to tomorrow's cities, and sometimes at the heart of the neighbourhood. For there, amongst the moss and foliage, we find not only the origins of life but also the key to our shared future.

ELISE GROSSE
HEAD OF SUSTAINABILITY,
SWECO ARCHITECTS

FACTS

Urban forest: Green spaces with dense standing trees integrated into the urban environment, such as along roads in place of car parking. Contribution:

- Carbon sequestration and climate regulation.
- Heat reduction and reducing the risk of flooding.
- Recreation and community meeting places.
- Increased biodiversity.

Pocket forest: A pocket forest is a compact, small-scale, densely planted mini forest with species reflecting local forests:

- Compact mini forest, often no larger than a tennis court.
- Densely planted with local species to recreate the local ecosystem.
- Strengthens ecosystem services and cools urban heat islands.

“It’s nice to be able to reflect the environment in the facade”

TEXT HÅKAN NORBERG PHOTO SCA

Linda Samuelsson is an architect and interior designer. She has built two private timber houses, with sights set on a third, and her dream is to specialise in the material.

SCA Wood Magazine asked her to cast her eye over the next-generation timber panelling and give her impressions.

AN ARCHITECT HAS MUCH to consider aside from the client when it comes to a building’s appearance: building permits, detailed development plans, nearby buildings and, not least, the surrounding environment.

“When you draw something, it is first and foremost the location that sets the conditions for the design. It’s nice to be able to reflect the environment in the facade,” says Linda Samuelsson of interior design agency Nokori.

She looks through the samples of SCA Wood’s five new exterior panels, which offer a range of design languages for timber facades. She is adamant that innovation need not mean doing something spectacular, but rather providing new possibilities, not least aesthetically.

“Modern timber panels have given us new tools for exterior expression, allowing us to work with so much more than colours,” she says.

“Take Alces, for example. It has a type of planing that makes me think of woodwork at school. It feels like traditional handicraft in a new form. I can see that cladding on a house close to the water, the sunlight reflecting from the water onto the facade.”

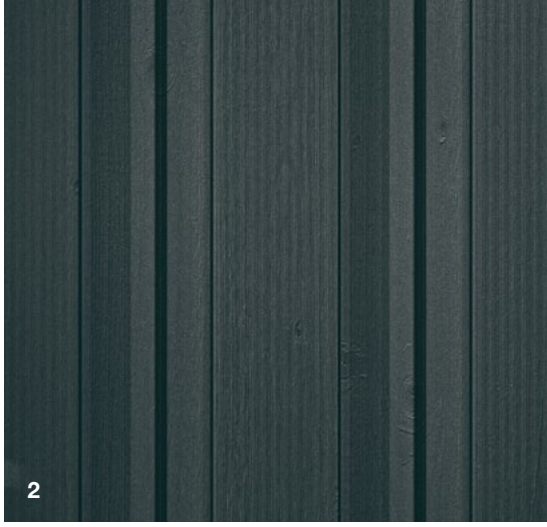
Samuelsson highlights wood as a more sustainable building material than many of the alternatives, and notes that this type of panel may make it easier for many people to choose wood.

“Cladding such as Dama or SCA Cladding Shingles can imitate other materials, making it possible to create an impression that is not immediately associated with wood, while still working with wood! I see a new market opening up for timber cladding and I think that more people will be willing to express themselves more boldly,” says Samuelsson.

PHOTO ANNA KARLSSON

Linda Samuelsson, architect and interior designer.

Linda Samuelsson runs the Nokori interior design agency and is an advocate for sustainable architecture and design. She is also part of Boning Studio, which gathers expertise in architecture, design and build, planning applications, interior design and project management.



1 SCA ALCES

Cladding with grooves planed in various sizes with random movements across the surface, for a unique and almost handcrafted appearance.

2 SCA LYNX

Wavy panels with mix and match profiles. The corners can be either square or rounded.

3 SCA URSUS

Panel with grooves of varying sizes planed into the surface to create a vibrant and exciting impression.

4 SCA SHINGLES

Cladding shingles that combine tradition and innovation. Available heat-treated with ThermoWood or in heartwood pine.

5 SCA DAMA

Cladding with a pointed design that can be mounted in various ways, allowing for greater design freedom.

“It's high time we built more sustainably”

PROFESSOR SPREADS THE WORD ABOUT TIMBER CONSTRUCTION AND SUSTAINABLE FORESTRY WORLDWIDE

TEXT HÅKAN NORBERG PHOTO JOHANNES EDBERG

Staffan Schartner is an environmentally committed architect whose interest in wood has grown over the years. This spring, he was appointed adjunct professor at Linnaeus University, where he teaches and conducts research into timber construction. “We need to stop building timber buildings as if they were concrete buildings and come up with an architecture that suits timber. We are not quite there yet," he says.

STAFFAN SCHARTNER is an architect and adjunct professor of timber architecture at Linnaeus University. He is an advocate for building in timber for a sustainable future. With projects like the Swedish Pavilion at the 2020 World Expo in Dubai, built entirely of timber without steel or concrete and with recycling in mind, he is showing the way forward.

“I'm interested in the connection between sustainable forestry and timber construction, where one drives the other. Timber construction has the potential to be the strongest driving force of forest restoration globally," he says.

Available all over the world, wood is a renewable material that stands up well to tensile and compressive forces. Wood also has a high strength-to-weight ratio.

“And yet, in Sweden we use a tiny fraction of our forest for construction. Building a timber apartment building is equivalent to the growth of the Swedish forest in a few minutes," says Schartner, who advocates for smarter architecture adapted to timber. Solutions without glue and metal, such as laminated boards with wooden nails, and circular construction methods that allow buildings to be more easily dismantled.

Linnaeus University is collaborating with 18 companies and industry organisations on the project Competitive timber structures: Resource efficiency and climate benefits along the wood value chain through engineering design. Funded to the tune of SEK 135 million, the project is intended to contribute to the transition to a green and climate neutral or even climate positive construction sector.

One initiative is seeking to increase cooperation with African countries, where the potential for forestry and timber construction is high. Schartner also mentions a meeting with a Thai company that demonstrated laminated veneer lumber (LVL) made from eucalyptus harvested after only five years. As he points out, if one compares this to the 80 years it takes before a tree can be felled in northern Scandinavia, it provides some perspective on the potential of tropical forests and plantations.

“You can build all the houses in the world out of timber without reducing the number of trees in the forests. However, globally this demands functioning closer-to-nature forest management in many of the forests that are still standing or that can be restored without problem," says Schartner.

Schartner is an architect with many years of experience working in construction and project management. His position at Linnaeus University includes networking, teaching and researching timber construction. The appointment is funded within the framework of The Bridge, a strategic partnership between Södra, IKEA and Linnaeus University that covers the entire forest value chain.

PHOTO LINNEUNIVERSITETET

Staffan Schartner, professor at Linnaeus University.

INNOVATIVE WOODEN FACADE SYSTEM

TEXT KERSTIN OLOFSSON, HÅKAN NORBERG
PHOTO TORBJÖRN BERGKVIST

Facade systems are traditionally prefabricated in aluminium and steel, but SCA is now launching a system manufactured in wood – SCA Curtain Wall. "It's a much more sustainable alternative. At the same time, it's a safe way to build and offers architects enormous freedom," says Louise von Bahr, a partner in architectural practice Equator, who developed the system in collaboration with Norrlands Trähus and SCA Wood.

THE FACADE SYSTEM is delivered as prefabricated modules with glazing and window and door frames already installed, significantly reducing construction time and quickly making the building weathertight.

"Large, complex construction projects need a well-thought- out facade system if they are to work. Previously there were no systems in sustainable materials, but given the climate crisis this is something we really need," says von Bahr.

CLIMATE IMPACT REDUCED BY 60 PER CENT

A wooden facade system has significant climate benefits. Greenhouse gas emissions are roughly 60 per cent lower than when using a conventional aluminium system.

"We've minimised the use of fossil-based materials, even if we still have to use aluminium fixings for the door and window frames. The one thing that has the largest impact on the carbon footprint is that the frame itself is made of wood rather than aluminium. If you then choose timber cladding, you get the lowest possible greenhouse gas emissions," says Johan Larsson, Business Developer at SCA Wood.

NO EXTERNAL FINISHING REQUIRED

The facade system offers all the benefits of a traditional prefabricated system in that it is quick, safe and flexible. The prefabricated modules can be quickly installed on site.

"No external finishing is required; the job is finished once the module is suspended in place. This means that no scaffolding is required on the job, which usually represents a significant cost-saving," says Peter Rhensbo, CEO of Norrlands Trähus, the company that manufactures the facade modules.

"This opens up the possibility of building advanced facades for sites where there is no room for scaffolding," says Johan Larsson.

ALWAYS 20 DEGREES AND SUNNY

Prefabricating facade modules indoors under controlled conditions has significant benefits in terms of safety and quality.

"It's always 20 degrees and sunny in our factory, unlike the variable conditions on site," says Rhensbo.

Having a curtain wall system also makes for easier division of responsibility in the construction project.

"With a curtain wall, there is a distinct boundary between the frame and external walls. This makes it very clear who is responsible for each part of the project," says Rhensbo.

DESIGN FREEDOM

Facade modules are manufactured in a standard size of 3.8 × 2.7 metres and can be adapted to various floor joist heights and room divisions. Modules can be supplied with full-length glazing, several smaller windows and/or doors, or no doors or windows. Flexibility extends to the choice of cladding; for example, sheet metal, ceramic tiles or timber panels.

ABOUT THE FACADE SYSTEM

Unlike traditional infill walls, which sit within the building's frame, modules are suspended like a curtain in front of the frame. Facade modules are not stacked on top of one another but are each individually suspended so that they only bear their own weight. The system was developed for skyscrapers but is now used for many other multi-storey buildings.

SCA CURTAIN WALL

SCA Curtain Wall is a wooden facade system that has been tested and certified by the independent laboratory IFT Rosenheim.

Johan Larsson, Business Developer SCA Wood.

PHOTO SCA

"This is not included in the system, so the client is completely free to choose. Naturally, we prefer timber cladding such as heartwood or thermowood. Timber cladding has a modest climate impact, requires very little maintenance and also ages incredibly beautifully," says Larsson.

As Louise von Bahr points out, one vital aspect of the system is its adaptability.

"The situations in which this type of facade is used often have clear conditions and requirements on everything from energy-efficiency to acoustic performance. SCA Curtain Wall makes it easy to adapt to these. The system also gives the architect enormous freedom in terms of variation and attention to detail," says von Bahr.

TESTED, CERTIFIED AND READY FOR THE MARKET

While SCA Curtain Wall is primarily intended for office blocks, it is also suitable for buildings such as hotels, schools and hospitals.

"Increasing demands are being placed on reporting the climate impact of buildings and reducing the use of fossil-based materials. This system represents a leap forward in reducing the carbon footprint of industrial buildings," says von Bahr.

The system is designed to adapt to all types of joists and is also ideal for renovations intended to improve a building's energy performance. It is also adapted to both reuse and recycling.

"When the building reaches the end of its life, it will be just as easy to dismantle the facade as it was to install it. All of the components can also be reused. The system will make it much easier for our customers to build sustainably," says Johan Larsson.

"We are delighted that SCA Curtain Wall has been tested, certified and is ready for the market once the economy recovers."

PROJECT PARTNERS

The idea for the system was hatched at architectural practice **Equator**, which also provided expertise in facade systems and prepared drawings.

Module manufacturer **Norrlands Trähus** has brought expertise in industrial production to the project. The company has full-scale models of the system for customers to look at.

SCA Wood provided funding, project management and expertise on wood.

PHOTO SCA


SCA