SCA Mood Magazi 1/2025

HEARTWOOD PINE LIFTS OSLO FACADE

SKA

CLIMATE BENEFIT FROM A GLOBAL PERSPECTIVE

> A PASSION FOR WOOD ON SOCIAL MEDIA

CRAFT

SVENSKA SPEL

The forest is her workplace

Cross-country skier Jonna Sundling has won seven World Championship titles and is the reigning Olympic sprint champion. Training hard and taking pleasure in every small step forward has taken her to the pinnacle of her sport in which the forest is the arena.

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Sprint queen Jonna Sundling > thrives in the Swedish forest.



Filip Berti builds and maintains wooden houses that will stand for centuries.



Anna Ryberg Ågren follows her passion for wood.





Forestry for biodiversity.

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The power of the forest drives us forward

HEN THE LIGHT of spring arrives, I see the forest changing day by day. Leaves on the trees, plants growing and flowering, colours shifting. These are tiny changes that eventually become big

until, suddenly, it is summer.

The constant ambition to make progress, regardless of whether in small steps or giant leaps, is my greatest motivation at work. To identify solutions, improve and move forward in dialogue with colleagues, customers and suppliers. Thanks to this evolution, I can thrive and feel a sense of pride. This is the endeavour that characterises our entire organisation when it comes to finding the contexts in which wood can be of greatest benefit – in the most durable timber products possible.

One such example is the facade of the new extension to the Oslo Cancer Cluster Innovation Park, which is clad in heartwood pine panels. Heartwood pine is durable, climatesmart and, not least, beautiful. You can learn more about the building in this issue of SCA Wood Magazine.

Our industry has a key role to play globally in the transition to an environmentally and socially sustainable future. This is underlined in an interview with David Hopkins, CEO of industry organisation Timber Development UK. We also look at the role of sawmills in this development, not least in the local communities in which they operate.

You will also meet Filip Berti, a carpenter with a particular interest in old houses and traditional building methods. He is driven by the desire to build something with his hands that will last for centuries.

Speaking of driving forces, I was especially pleased to read the article on cross-country skier Jonna Sundling in this issue of the magazine. She emphasises that many, many small steps in the right direction make all the difference, and that development itself is her greatest motivation. It is inspiring to hear this from someone who has enjoyed such enormous success.

On the wooded slope outside my window, spring continues to advance in small, small steps. The power of the forest is constant.

Enjoy your reading!

VANESSA PIHLSTRÖM HEAD OF MARKETING COMMUNICATION, SCA WOOD

UNIQUE WOODEN DOME IN GOTHENBURG

DESIGNED BY ARCHITECTS Wahlström & Steijner, a new district cooling plant on Medicinareberget in Gothenburg boasts Sweden's first dome made entirely from wood. Client Akademiska Hus had two wishes for the building: it was to be unique, and carbon neutral. The eye-catching result was a wooden igloo.

The structure consists of glulam arches tied and stabilised by a steel ring on top of the building. Between the arches are layers of spaced boards, weatherproofing sheet, mineral wool, wood fibre boards, plywood and battens. The facade is clad in pine shingles. The red hue is obtained by treating with linseed oil, turpentine and wood tar mixed with Falu red pigment.



Traditional knowledge

GIVEN NEW LIFE IN FILIP'S HANDS

TEXT JENNIE ZETTERQVIST PHOTO MATTIAS BARDÅ

Filip Berti hung up his chef's whites on a Friday and, on Monday, he put on his blue collar, completely changing his career path. As a carpenter specialising in the conservation of old buildings, he finds job satisfaction that was missing while working in the kitchens of some of Stockholm's finer restaurants, no matter how much love he put into the dishes.
"The food was gone in minutes. Now I'm doing my bit to save timber buildings that have stood for 150 years, so that they can stand for another 150," he says.

At home in the yellow wooden house from 1911, Filip Berti is building up a library of old volumes on building and buildings. "The deeper I go into traditional building methods and conservation, the more obvious it becomes that it is in these books that I can find the knowledge and inspiration I'm looking for," he says.

S A CHILD, there was no doubt about what Filip Berti would be when he grew up: a chef. He experimented in the kitchen and filmed his own cookery shows. His career followed a straight path through culinary school and out

into Stockholm's restaurant trade where, despite accumulating experience and accolades, he found that something was missing.

"It felt like I wasn't getting anywhere. I found it difficult to put so much thought, energy, joy and love into something that suddenly simply disappeared. It might take days to prepare a stew to be served for lunch and then, it would be gone in 15 minutes," he explains.

A NEW LOVE

As the same scenario was repeated every day, so the desire to create something more lasting grew stronger. In parallel with working in restaurants, he took on restorations for family and friends – projects that gradually captured his heart.

"I've always had a knack for building and I've always been fascinated by how tools can be used for different solutions. And I've always had a deep need to be creative and to shape whatever is in my head with my own hands," he says.





One kitchen renovation in Stockholm completely consumed him. Nothing felt difficult, not even cycling across Västerbron bridge with planks under his arm, an occasional necessity for the amateur carpenter, who at the time did not have a driving licence. Getting up early after each evening shift, he would eagerly continue with the restoration project until his alarm rang at 2 pm and it was time to return to his 'day' job.

"I would be in the swing of it and, in the end, I just thought: no, I don't want to go. I'd rather stay here So, there and then I decided to change industry," he says.

While the change itself was completed over a weekend, the preparations took 18 months. From 2013, Berti had the good fortune to work with a carpenter 20 years his senior with extensive knowledge of old buildings, something that fascinated the new apprentice. It was here that his interest in building conservation and restoration was ignited. This interest has grown stronger over the years and old buildings and traditional construction methods are now his professional calling.

Filip Berti ensures that one of the thousands of old doors covered with hardboard during the 1960s is returned to its former glory. The door was given to him and it will soon be reused as a cellar door.





Filip Berti and his colleagues in the Opus Lignum network prepare their projects in a workshop housed in a beautiful old barn with a partly exposed timber frame.

LIVING IN A RESTORER'S PARADISE

It was a yellow wooden house built in 1911 that persuaded Berti and his family to swap Stockholm for Strängnäs, and now the carpenter is ideally situated to specialise in building conservation and restoration. There are over 400 castles and manor houses doted around Södermanland that will eventually require intervention to conserve them or restore them to their former glory. Berti collaborates with four other craftspeople in the network Opus Lignum, all of them self-employed.

"It is mainly private customers who contact us looking for genuine craftsmanship with the right finish and a high level of quality. Period details are all the rage here and all of our work is performed in and around Strängnäs. Since moving here, I've never had longer than 35 minutes by car to get to work," he says.

He has now found what he was missing in the restaurant kitchen; he builds things that last and that will still be there when his three children have children of their own. One of the dream projects that he has completed is a boathouse with a roof of eighteenth-century tiles reclaimed from Taxinge Castle. The boathouse belongs to an estate on an island in Lake Mälaren.

"It was great both to do the job itself and to help to change the landscape. The boathouse now stands there as a landmark and I know that it will look just as beautiful 50 years from now," says Berti.

The aim is to do more projects in historical environments. Being part of cultural heritage projects appeals to the carpenter, who is constantly thirsting for new (and old) knowledge. At home in his own wooden house, he has an expanding library of books on the art of building from all conceivable perspectives. They adorn their setting, but they are also regularly read.

"As I only work on old buildings these days, it is in older books that I find most inspiration. And then there was always a latent interest. My mother was an antique dealer, so there have always been old books lying around my home," explains Berti.

He refers to himself as a building nerd and one book he recommends to beginners is *Så byggdes villan* [How the House was Built], which covers the architecture and construction of Swedish houses from 1890 to 2010. Many of the books on Berti's shelves are written by architect Charles-Emil Löwenskiöld, who is renowned for introducing ornate wooden decoration to Swedish homes. One magnificent work to which he often returns is the textbook *Husbyggnad II* (Housebuilding II), which details every stage of the housebuilding process.



Filip Berti changed track and now works with his passion, as a carpenter specialising in building conservation. He is often asked how one can summon the courage to take the step. "You have to make your mind up and then take every chance you get. Then it will happen in the end," he says.



MORE PEOPLE WANT TO LEARN MORE

Berti is, of course, enthusiastic about the growing interest in building conservation and making use of what we already have. Nowadays, almost all television programmes on building and interior design include features on reuse and ecofriendly building, something he believes has an influence on viewers. There is also a growing environmental awareness and it has become slightly embarrassing to throw things away simply because they are not entirely to one's taste.

Berti constantly preaches to his 112,000 Instagram followers on the value of conservation, choosing the right materials and prioritising long-term value over short-term cost-savings. While he does so with a great deal of humour, he is not joking.

"All I'm trying to do is enlighten people that this is valuable. And I think many people are coming to realise this more and more."

A PASSION FOR WOOD

Berti grew up with the family's summer home, a timber cabin built in 1890, something that he took for granted at the time but appreciates greatly today and views as the beginning of his love for old buildings and even wood itself. The sensation of his hand as a child gripping the wooden balustrade of the cabin a thousand times remains as a pleasant muscle memory.

"My relationship with wood is deep, a passion. I think in part it has a lot to do with learning to tame it. I know how to work it so that it cooperates with me," says Berti.

"I also think that we are all born with an attraction to wood going back to when we lived in caves and were already building with wood. There is no one who doesn't appreciate a perfect wooden surface with its grain, scent and structure. Everyone finds it pleasurable and wants to touch it.

Choice of timber is the be-all and end-all for a carpenter involved in conservation. Replacing sills is one common job and, if a house that has stood for 150 years is to stand for another 150, both the method and the material must be chosen with care.

"We only work with quality timber that we know will stand the test of time. It's the same in the restaurant business; once you've worked with the best raw ingredients, you never want to go back to pre-processed again," says Berti. *^{Je}*

THREE HISTORCAL BOOKS

LÖFVENSKIÖLDS ARKITEKTUR – IDÉBOK

FÖR HUSTÄNKARE

Charles-Emil Löwenskiöld

"Charles-Emil Löwenskiöld is the father of decorative Swedish carpentry and a real favourite. This book is great for finding inspiration in historical buildings from all eras."

STORA SNICKARBOKEN

Ernest Scott

"It might not look like much but it actually contains everything you need to know. Unfortunately, it's a little difficult to come by these days."

HUSBYGGNAD DEL TVÅ

Otar Hökerberg (et al.)

"I have two editions, one from 1945 and the other from the 1960s. It was written as course literature and contains absolutely everything you can imagine in a building project. Part I is more concerned with dimensions and the like, while Part II deals with all of the practicalities."





DESIGNING FOR CIRCULARITY

TEXT AMANDA SJÖKVIST PHOTO BODIL BERGQVIST

Architect Camilla Schlyter designs for circularity, with an increasing emphasis on the renovation and alteration of existing buildings. And, in an industry characterised by innovation and development, she is not afraid to look back. "I find inspiration in traditional timber buildings. In the past, we humans took advantage of everything, both as a resource and as part of the design expression," she says.

HANKS TO THE GREEN transition, the construction industry is undergoing major changes, and Camilla Schlyter sees this reflected in her own profession of architect. More than ever before, the profession is about designing for circular, sustainable construction. She sees a future in which the industry places greater emphasis on the renovation and flexibility of existing buildings and where wood is a rewarding material with which to work. She believes that, to achieve the goals of the green transition, it will be vital to use what we already have rather than simply building anew.

"Wood is an excellent choice for this kind of project, as it is adaptable in terms of both appearance and dimensions," says Schlyter who, together with SCA has designed and developed the innovative and sustainable timber cladding SCA Lynx, which offers considerable opportunities for design variation.

"Cladding is a part of the building we have contact with and it is therefore an important component of the building's identity. These days, we see more and more spectacular architecture. I am working more along the lines of renovating existing buildings, with attention to the details and adaption to different environments," says Schlyter.

PROFESSIONS SUPPORTING ONE ANOTHER Schlyter underlines that inter-professional collaboration can contribute valuable lessons. The process of developing the cladding alongside SCA is one example. Expert knowledge of sawn timber products in combination with Schlyter's architectural expertise resulted in a sustainable product that also meets the design criteria.

"By being responsive to everyone's expertise, I was able to prepare design criteria based on everything from the properties of the timber to design and manufacture," she explains.

As an architect, Schlyter begins from the assignment, the client and the financial constraints to identify what expression the design and project can take. She also relies a great deal on research.

"Whenever I create something, I want to develop my knowledge and keep up to date, both for my own sake and for my client's. Through research, I can always find support for designing for circularity," she says.

HIGH DEMANDS ON QUALITY

Schlyter is aware of a shift in her role as an architect. She says that, in the modern-day building project, suppliers, manufacturers and the construction industry itself are co-designers. The architect can collaborate closely with others, pooling knowledge to develop a design language based on the specific conditions of the project.

She also believes that designing for circularity will place higher demands on the quality of the wood, and that issues of forestry and architecture will go hand in hand.

"These days, the quality of the wood is increasingly important for new builds and renovations. I therefore believe that collaborations like the one I enjoyed with SCA will become vital, as both parties bear great responsibility for the green transition," says Schlyter.

"Imagine, I get to have the forest as my workplace!"

TEXT JENNIE ZETTERQVIST PHOTO KRISTOFER LÖNNÅ

When cross-country skiing sprint champion Jonna Sundling was growing up in the small village of Tvärålund outside Umeå, the forest was her own domain.
Skiing was something she did for fun with her friends and gold medals were beyond her dreams back then. Still, over the years those games in the forest became something more. The joy and desire for motion developed into a greater passion – something that has taken her to a place among the world's elite.
"When I was little, I could put on my skis at home and follow the snowmobile track all the way to training. It's only now I realise what a luxury that was," she says.



"It's my own development that has made me love skiing more and more with every year. It's not just about the big steps – many small steps in the right direction can make a big difference."

> ODAY, SUNDLING IS 30 YEARS old and has Olympic and World Championship gold medals in the sprint and is currently the most decorated skier in the Swedish national team. Her success began in the forests of northern Sweden where,

given the choice, you will still find her, whether on skis or roller skis, or in her running shoes.

"Imagine, I get to have a forest as my workplace! I'm grateful that I can make a living from skiing. In recent years especially, I've often pinched myself: Wow, this is real", she says.

HAPPIEST IN THE SWEDISH FOREST

Travelling to train and compete has taken her to many memorable destinations around the world, often with strikingly beautiful landscapes as a backdrop.

"But I guess I'm still happiest in the Swedish forest. And that's the truth. I feel so at home on Swedish soil and enjoy pulling on my running shoes and setting off alone, smelling the scents and listening to the birds. Sure, it's great to get out and see the countryside elsewhere, like in the Alps. But I and my partner were in Davos in Switzerland in July and I just kept going until he reminded me to stop and enjoy the view.

She laughs at the memory of how easy it is to become blind to beautiful surroundings; still, the ability to focus is what has taken her to the very top of her sport. She is the only female Swedish skier to have won seven World Championship gold medals, as many as the legend and men's record holder Gunde Svan.

CROSS-COUNTRY SKIING WAS NOT A GIVEN

With hindsight, one might be forgiven for assuming that her choice of sport was a given. However, while the undemanding skiing of her childhood developed into a genuine interest, it was by no means certain that she would choose the path of cross-country skiing. Football also appealed, as did weight training at the gym. Her mother, Marie, hired a personal trainer for her young and eager daughter, to ensure she learned the right technique and avoided injury.



JONNA SUNDLING

Age: 30, born 28 December 1994.

Profession: Cross-country skier.

Club/team: Piteå Elite and Swedish cross-country team.

From: Tvärålund just outside Umeå, Västerbotten.

Family: Mum, Dad, four younger siblings and partner.

Lives: Östersund.

Leisure interests: Baking buns! Socialising with family, friends and DJ the dog.

"I've always loved exercise. Sitting still isn't my thing. I was thinking about that while I was standing in the wax cabin the other day, how much I enjoy practical and physical work. I'd probably rather run in the forest for three hours in freezing temperatures and rain than have to work in an office," says Sundling, laughing once again.

It was when the time came to choose which programme to take in upper secondary school that it began to dawn on her that cross-country skiing was her calling. Once enrolled in the cross-country skiing programme at upper secondary school in Lycksele, belief began to grow that she had real development potential. This was really brought home when she won gold in the sprint at the 2014 Nordic Junior World Ski Championships in Val di Fiemme. According one commentator, she "pulverised" the competition.

"That was my last year as a junior; I realised that I had a chance and it went really well. After that result it was black-and-white to me that sprint was my thing, that I had good potential and the ability to develop and break new ground. It gave me a self-confidence that I was missing, and it motivated me," says Sundling.

TOWARDS NEW OBJECTIVES

Horizons broadened, after leaving upper secondary school in 2015, she moved to Östersund, close to a number of other elite skiers and excellent training facilities. There were clouds on the horizon, however. The worst thing for an endurance athlete is falling ill, and this was happening to Sundling all the time. With over 60 sick days each season, her career was under threat just as it was beginning. It was difficult to maintain the continuity required to constantly improve. In 2017, she finally underwent surgery to have her tonsils removed, thus avoiding most of the infections that had previously dogged her. And it helped.





"Marit Bjørgen is my role model – she was strong, fast and could ski anything. If I can be a similar role model for someone else, that would make me happy."

The following year, she won her first world cup sprint in Lillehammer, Norway. In December 2024, she won her tenth, at the same venue.

"Whenever I've won a major race, all of the sick days, injuries and surgery seem insignificant. I mean, who cares? Sick days be damned, because I know that it has all been worth it."

In parallel with her success as a sprinter, she has also taken on longer distances with good results. For her, skiing is so much more than the rush of victory and the medals.

"I gives me back so much joy. I love it when I feel strong and I can be physically active, just like when I was little. And I get to know so many new people, see so many places and experience different cultures. I wish more people could do that, because its developed me a great deal as a person. And, when I think about the fact that it won't always be like this, it makes me a bit sad," she says.

THE OLYMPICS' HAPPIEST FOURTH-PLACE FINISHER

One of her most mentally challenging and memorable experiences so far was during the 2022 Winter Olympics in Beijing. It was during the pandemic and the Swedish cross-country team was in its own bubble. The training camp was long, as was the stay in China. It was a tough period during which the team became a surrogate family, with the athletes' actual families being forced to cheer them on from a distance. Still, when the sprint arrived everything fell into place – the gold was hers. As a bonus, she finished fourth in the 30 kilometre mass start, a race she had not specifically trained for.

"I think I was one of the happiest fourth-place finishers ever! First and foremost, I was so relieved after the sprint, when everything went according to plan. After that, finishing fourth – over a long

A SELECTION OF JONNA SUNDLING'S GOLD MEDALS

2014

Gold in the Sprint

and Relay at the

Nordic Junior World

Ski Championships

2012

Gold in the Youth Olympic Games

Gold in the Sprint at the 2016 Junior World Ski Championships

2016

2018

First World Cup Sprint victory

18



course in tough terrain - felt like another victory."

When she finally returned home to Sweden, she was exhausted but happy.

"It had been such an enormous journey with so many impressions, and also so much success. I had the time of my life during that period and it's something I'll never forget," says Sundling.

TO THE TOP ONE STEP AT A TIME

Patience, finely hone mental fortitude and the ability to find joy in daily training, these are the steps that have put this sprint queen on the throne. As she herself says, the big steps are not always the most important. Many, many small steps in the right direction also make a difference. For Sundling's part, development itself has always been, and still is, the greatest motivation. She wants to be the best that she can be. She resets herself before every race, imagining she is facing

WHAT IS SPRINT?

In a cross-country sprint, competitors ski a course of 1–2 kilometres. There are quarter- and semi-finals, with the best skiers in each heat going on to the final. All races take place on the same day.

SCA IS THE CLIMATE PARTNER OF THE SWEDISH CROSS-COUNTRY SKIING TEAM

Few sports are as strongly associated with the forest as crosscountry skiing, and no privatelyowned company in Europe owns as much forest as SCA. This is why SCA is proud to support Swedish crosscountry skiing all the way from youths in local skiing clubs to the elite athletes of the Swedish crosscountry skiing team.

"The climate transition is by far our greatest challenge, and the forest is a major part of meeting the climate challenge," says Anders Edholm, Senior Vice President Sustainability and Communications at SCA.

something entirely new. This helps her to maintain focus and to do her very best there and then.

"As a kid, I never had those dreams that so many others have, like being as great as Charlotte Kalla. For me, it's a passion that's grown over time and become stronger and stronger as I've developed," she says.

It is, to say the least, impressive to see Sundling explode uphill race after race, often leaving her competitors trailing when the conditions are toughest. At the same time, she is known for being calm and level-headed, thoughtful and even a little cautious in her statements. It was her partner, the one who reminded her to slow down and enjoy the view, who insisted that she display her medals and trophies. Until then, they were packed away. And it was him who persuaded her to watch her races afterwards, or at least some of them.

2021

Gold in the Sprint and Sprint Relay at the World Championships

2022

Gold in the Sprint at the Olympic Games

2023

Gold in the Sprint and Sprint Relay at the World Championships

2024

Tenth World Cup Sprint victory

2025

Gold in the Sprint, Sprint Relay and women's Relay at the World Championships

>

19

"When I think about the fact that I won't always be able to do this, it makes me sad. Skiing gives me so much, not only medals but also joy, freedom and the opportunity to feel strong."

> "At first I refused. But now I can actually do it, and even enjoy watching the races where everything has just flowed. Then I'm moved and can feel proud of what I've achieved. I'll never get tired of the Olympic finals, for example."

KEEN TO INSPIRE WITH JOY AND STRENGTH

Sundling mentions that, when you are always concentrating on your own performance, it is difficult to grasp that you are also a role model for others. But many people are inspired by Jonna Sundling, from adults watching her on television from their sofas to children who are just taking their first faltering steps on skis.

"I often forget that but, of course, the better things go, the more people recognise me. I hope I can inspire with joy and strength. Personally, I was really inspired by cross-country skier Marit Bjørgen, because she was so muscularly strong and could take on all distances. It's important to be able to see that everyone looks different and has different attributes. I would love to inspire others to be strong girls and young women who can tackle challenges, whether that be the Holmenkollen 50 kilometre race or an Olympic sprint in China," she says.

With her club, Piteå Elite, she also has the opportunity to meet young skiers from various small clubs at special training days, which are usually held after the Swedish Championships.

"It's really cosy and it takes me back to my own childhood. They also inspire me and it's important both that we can meet them and that they can meet us from the national team, so that the sport can live on," says Sundling.

Social media and podcasts have also become hugely more important sources of inspiration and information over the last ten years. In addition to running the Winter Pass podcast with Charlotte Kalla and biathletes Hanna and Elvira Öberg, she has her own Instagram account and contributes to the cross-country team's new account in the app Wimt. "It's important to find a balance, which isn't easy. I see myself as an athlete not an influencer, but it can be difficult to know what level I should be at. Privacy is important to me and I'm careful about what I share. It shouldn't distract from my job," she says.

MENTAL STRENGTH IS A SUCCESS FACTOR

Balance is also required when it comes to following social media feeds oneself. This is easily fixed during important competitions, when all scrolling apps are deleted. When the time comes for the sprint star to perform, all energy must be focused on competition, not wasted on wondering what others are up to. Conserving mental strength is as important as physical training and Sundling has been assisted by her mental coach for many years now. However, these days it may be sufficient to simply talk about a problem to her coach, and then find a solution herself when she hears her own reasoning.

"Controlling my own thoughts has been a key for me. Before the 2024 World Cup in Minneapolis, I was irritated by small things, like poor glide or a forgotten vest. But I turned it around and performed the next day, when it mattered. I think that's an ability that anyone can benefit from in life."

The power of positive thinking helped Sundling win a gold medal in the sprint, and her first gold in a long-distance race.

To digest the many impressions after a competition, and to recharge her mental batteries, she enjoys doing what for many others are 'normal things' but that in the well-planned life of an elite athlete like her are often put to one side. As soon as she has time, she prefers to hang out with family and friends, go out to dinner, go to a concert, bake buns and spend quality time with her dog DJ, an energetic Jack Russell terrier.

"And then, nature is very important to me and always will be, regardless of what I decide to do once I finish with elite skiing. ⊯

JONNA'S TIPS FOR MENTAL STRENGTH

- > Work on being conscious of your own thoughts, then you can begin to control them. It's awesome!
- Always try not to ignore fear and anxiety. It's like pushing a ball down under water – you can guarantee that it will pop up again. Let your thoughts stay at the back of your mind, but don't waste energy on them. Focus on your goal instead.
- If you have negative thoughts about yourself or what you are doing, say them out loud to someone. Often, you won't feel anywhere near as troubled by them. Maybe you will even laugh at them!
- > Take a break from social media whenever you need to focus on your own performance, You will save vital energy and avoid the risk of comparing yourself with others.
- > Be patient. Have fun!



Building a low-carbon future with wood

TEXT HÅKAN NORBERG PHOTO SOPHIE ODELBERG

David Hopkins, Chief Executive Officer of Timber Development UK, is an advocate for the forestry and timber industry, and also a champion of decarbonisation. He gives a no-nonsense impression talking about the opportunities and realities of his field.

"The forestry and timber industry produces and supplies high-value, high-performance, beautiful and renewable products and solutions that others can't, but if you don't have regulations and sustainable practices, people won't trust you," he says.



OOD IS EMERGING as one of the most effective materials for addressing climate change, thanks to its carbonsequestering properties,

renewability, and the relatively low-energy process required for its production. With its unique qualities, the forestry and timber industry is poised to play a crucial role in the global push for sustainability. To fully unlock wood's potential, the industry must navigate challenges around regulation, sustainability, and public trust.

David Hopkins is Chief Executive Officer of Timber Development UK, which is the largest supply chain body for timber in the UK, spanning from sawmill to specifier and all points in between. The organization is committed to growing connections, knowledge, and influence for its member organizations.

Timber Development UK is also invested in accelerating a low-carbon future, fittingly, with a CEO who has been a campaigner for the decarbonisation of construction, industry and the economy for nearly 30 years. David Hopkins is a former environment journalist and has written for the Times, Guardian, Independent and the BBC, as well as editing a number of trade and industry titles focused on environmental aspects of industry. He also has a background in PR, specialized in clean technology and carbon markets.

"I was there when recycling, sustainability and carbon footprints were becoming a new thing that companies had to address, and I thought the forestry and timber industries were sidelined on these issues. They were almost exclusively associated with de-forestation, while actually holding the key to sustainability. Especially in terms of natural resource management, renewable materials and so on," says Hopkins.



BOOST ECONOMY - REDUCE EMISSIONS

The holy grail of climate and carbon economics, Hopkins explains, is to boost economy and at the same time reduce emissions, and the forestry and timber industry has a unique opportunity to accomplish this. When used in products like construction materials or furniture, wood continues to store carbon over time, acting as a carbon sink for many years. While other industries extract finite materials from the earth, sustainably managed forests regenerate their raw material, making wood a renewable resource that actively contributes to carbon reduction.

"And the manufacturing and assembly requires very little energy compared to bricks, steel or plastics," says Hopkins. "Our life-cycle studies show that the amount of carbon emissions absorbed and stored in timber products is higher than the emissions associated with the energy used in production. When you are absorbing more carbon than you produce you are in a win-win position for the climate."

David Hopkins is very aware of the value of carbon footprint, the importance of knowing who





David Hopkins, Chief Executive Officer Timber Development UK.

your key stakeholders are and bringing them with you in these matters, as well as how investors and governments can put pressure on companies to improve their performance and values.

"The increasing environmental awareness has been good for the forestry and timber industry, recognizing that it needs to adhere to regulations about management of forests and production. It has forced industries into a good practice, causing forests in many parts of the world to grow, both in size and value" says Hopkins.

"You don't get that in other industries. Demand for oil, metals and minerals leads to us running out of them. Demand for wood has made forests grow all across Europe. That's because of regulated, sustainable management," he says.

The next step is to make the global market a level playing field, which David Hopkins says it is not today.

"In Europe, we mostly recognize the need for regulations, and the hardwood forests in America are growing. However, this is not true for the tropical belt, where strong governance and regulations are often missing," he says.

ENVIRONMENTAL AND SOCIAL SUSTAINABILITY

David Hopkins stresses the need for having robust, business-friendly regulations all over the world. This is necessary, he says, both from a business standpoint and to secure regeneration of the forests so that we have access to material in the long term.

"You also need it to be able to reassure the public that this is an ethical and worthwhile choice. If you don't have regulations, people don't trust you," says Hopkins.

He thinks that the timber industry sometimes needs to recognize its own importance more, and present a united voice to the world. Trees absorb carbon in rural areas, wood stores carbon in buildings in urban areas; the industry creates jobs in both places.

"We should keep repeating the message of sustainability of the forestry and timber industry, and also highlight the social aspect of it. It really is a win-win, and all parties of the industry, all over the world, should say this with one voice," says David Hopkins.

Economically wise wooden office building

PIONEERING TIMBER building Magasinet has taken its place in Linköping's new city district of Ebbepark. The six-storey, 2,700 square metre office block is constructed entirely in wood, including a load-bearing frame of glulam and cross-laminated timber. Inspired by traditional weaving techniques, the facade connects to the area's history as a centre of textile manufacturing and gives the building a distinct identity.

Magasinet is, however, more than simply a beautiful landmark; it is proof that wood can be both a sustainable

and economical choice. A thorough review and analysis of the construction process reveals that costs were only two per cent higher than for a comparable concrete building.

Thanks to efficient construction methods, the frame was raised in only 32 days, reducing both costs and climate impact. The results exceeded all expectations: Magasinet's climate footprint is 54 per cent smaller than that of a traditional building, and the project came in under budget.



Wood that brings people together

THE AUSTRIAN VILLAGE of St. Michael im Lungau has a new community centre. Built entirely from wood, with its warm and natural design the Lungau Arena is a sports and recreation hall that blends effortlessly into the village's surroundings.

Sturdy glulam beams support the airy roof, providing both stability and pleasant acoustics. Walls of horizontal planks reinforced with oblique glulam trusses combine with wooden slatted windows to create a bright and welcoming environment. The arena is designed to bring people, sports and local clubs together under the same roof, with nature and tradition as a foundation

FINNISH DESIGN MEETS BRUTAL ELEGANCE

FINNISH FURNITURE BRAND Vaarnii invited visitors to take a seat and enjoy unique wooden design at this year's Stockholm Furniture Fair. With its uncompromising design philosophy – which unites brutality with sophisticated elegance – Vaarnii is seeking to set new standards for how wood can be used in modern furniture design.

The collection is made entirely from solid Finnish pine, a local material that has previously been largely overlooked in the premium segment. Both the natural beauty of the wood, with its knots and grain, and its inherent strength are on display in this robust furniture.

Founded in 2021, Vaarnii works with designers that share its vision of raising Finnish handicraft heritage to a new level and creating functional furniture that lasts for generations.



Heartwood facade

LIFTS OSLO CANCER CLUSTER

TEXT KERSTIN OLOFSSON PHOTO DANIEL ZEGA



A soft impression and minimum maintenance – these were two key requirements for the facade of the new building at the Oslo Cancer Cluster Innovation Park.

"In the end, we chose heartwood pine panels, and the results were outstanding," says project manager Stein Andre Vestskog of turnkey contractor Strøm Gundersen.



SLO CANCER CLUSTER is a non-profit member organisation focused on cancer research. Its purpose is to improve the lives of cancer patients by developing

new diagnostic methods and therapies. The organisation currently operates from three buildings completed in 2012, but it was always planned to eventually supplement these with a fourth section. Ground was broken on the new building in 2023 and work is expected to be completed in the autumn. The 12,000 square metre building will be seven storeys high with an additional two basement levels. It will house offices, laboratories, a staff restaurant and conference centre.

A WARM, SOFT FEELING

The three existing buildings are clad in white sheet metal, but both the architect and the developer were keen for the new section to give a softer



impression. It was also important for the facade to be maintenance-free. Based on this specification, the first two floors have a glass facade, while floors three to seven are clad in heartwood pine panels.

"Externally, the building is already finished and it turned out great. Not only is the building beautiful but the timber cladding also gives the whole area a warmer and softer feeling. It's given the whole area a lift," says Stein Andre Vestskog.

IMPREGNATED BY NATURE

The fact that the facade is maintenance-free is due to the unique attributes of pine heartwood, which comes from the innermost part of the tree. Heartwood accumulates extractives such as resins and fatty acids that naturally impregnate the wood, making it more water-repellent and resistant to moisture and rot, a valuable property for wood products exposed to the elements.

"When the time came to choose a supplier, our key concern was to identify an exterior panel with a high percentage of heartwood. The fact that SCA was able to guarantee at least 99 per cent was one important reason for choosing them. Of course, there were several other aspects that played a part, such as the reliability of deliveries, price and the fact that we already enjoyed good collaboration," says Kenneth Kvebek, Sales Director at Viken Element, the company responsible for delivering and installing the facade.





Kenneth Kvebek, Sales Director, Viken Element

The facade is delivered and installed as prefabricated panels. In addition to the cladding, SCA has delivered structural timber and battens for the facade panels.

BEAUTIFUL RAW MATERIAL FROM THE NORTH The timber used in SCA's products comes from the forests of northern Sweden, forests that are ideally suited for the manufacture of heartwood products.

"There is correlation between a tree growing slowly and a high percentage of heartwood. Growth is slower here in the north, so we obtain a really nice raw material. We are also meticulous when it comes to sorting, including x-raying all of the timber so we can state exactly how great a percentage of heartwood our products contain," explains Lars Nilsson, salesperson at SCA Wood Scandinavia.

While heartwood pine products do not need to be painted or otherwise treated to stand up to the elements, in the case of the cladding for the Oslo Cancer Cluster, the customer chose to order painted panels in a silver-grey colour.

"Untreated heartwood pine panels change colour over time, starting as a warm wood colour before gradually silvering. This process takes many years, but in this case it was requested that the building have its final colour from the start," says Lars Nilsson.

PREFABRICATED PANELS

To ensure that the installation of the facade was as efficient as possible, prefabricated panels were used. "This was particularly practical given that the building site was cramped and the schedule tight," says Kenneth Kvebek.

The facade panels, which are nine metres high and two and a half metres wide, were delivered complete with windows and insulation. Installation started in October and was completed in December.

"It was fast work considering that it involved 3,000 square metres of facade. Everything went smoothly," says Kenneth Kvebek.

HIGH ENVIRONMENTAL AMBITIONS

Choosing timber cladding is in line with the generally high environmental ambitions of the project. Among other things, Strøm Gundersen has the stated objective of sorting at least 90 per cent of waste and keeping waste down to no more than 20 kilos per square metre.

"Building with heartwood pine is both environmentally friendly and climate-smart so, as far as we're concerned, it's ideal," says Stein Andre

Vestskog, who adds that it is not only the choice of materials that makes this project special, but also the purpose.

"The work that will be performed in this building will mean so much to cancer research for years to come. Perhaps it will even play a part in solving the cancer riddle. Obviously, it's especially enjoyable to work on a project like this."

The role of the sawmill

IN A CHANGING WORLD

TEXT VICTOR IHRE PERSSON PHOTO SCA

The past and the future meet in sawmills. Historically, they have been an engine for local communities, creating jobs and driving economic growth. Today, competition for raw materials is fierce and constant adaption is demanded to remain profitable. At the same time, demand is growing as requirements for using sustainable materials increase. The role that wood plays in this transition is crucial in many ways – both for industry and society.

N BOLLSTABRUK, SOME 30 kilometres northwest of the High Coast Bridge in the estuary where the Ångerman River meets the sea, stands the Bollsta Sawmill. It has stood there for well over a hundred years, a hub for timber processing and a symbol of a community that was born and has grown thanks to the forest. It was built in the nineteenth century from the same raw material that today is the foundation and future of the town. The sawmill is more than simply a place of work – it is the lifeblood of a town of over 1,000 inhabitants.

It is December and snow blankets the landscape. Steam from the timber-drying kilns rises into the cold sky creating sculptural formations, while the air is filled with the familiar scent of freshly sawn wood. The sawmill is a place where activity never ceases.

Timber trucks enter the gates one after the other and, in the harbour a little further into the sawmill area, a vessel is moored. Over recent days, work has been ongoing almost around the clock to load 2,200 packets of wood bound for Morocco.

"The sawmill is the hub of our operation," says Jerry Larsson, President at SCA Wood, as he surveys the sawmill.

Jerry is responsible for SCA's five sawmills, which in many ways are the engine driving the forest industry ecosystem the company has developed during its almost 100 years in business.

Having refined the art of creating value from the forest, the company is now taking on a key role in the green transition alongside the rest of the forest industry. With its renewable raw material and unique ability to store carbon in its timber products, SCA Wood offers an obvious and sustainable solution for reducing carbon footprints – both in Sweden and globally.

"Wood has been a key to prosperity for centuries and, naturally, our ambition is to continue contributing to this in future. For us, it's self-evident that wood is one of the materials of the future," says Jerry.

GLOBAL DEMAND CREATES LOCAL VALUE

And it certainly is self-evident; since the start of the twenty-first century, demand for sawn timber products has increased by almost 2 per cent annually, a development driven by both economic growth and the need for more housing. Nor is there any sign of this trend slowing down. On the contrary, stricter requirements for sustainable building are expected to further strengthen the competitiveness of wood as a building material.

"If urbanisation continues, the need for homes in metropolitan areas will naturally increase. However, given how crowded these cities already are, both above and below ground, regional enlargement will be required to meet this need," continues Jerry.

It is precisely there, in the expansion of new residential areas, that wood clearly has a role to play. He believes that, when it comes to four- to eight-storey apartment buildings, wood is one of the most economic and sustainable alternatives.





Jerry Larsson, President, SCA Wood.



Peter Oremo, CEO, Sollefteå Slipservice.



However, it is not only the forest industry that is hoping for a continued increase in demand. According to Jerry, what sets the forest industry – and especially sawmills – apart is its strong association with regional value chains.

"We are largely self-sufficient. Apart from certain machinery components and fuel, we are not dependent on imports. This means that enormous value is both created and remains locally," he says.

The value chain as described by Jerry is simple but powerful: the timber is purchased from local owners, timber is transported to the sawmill by local contractors, and the raw material is processed by people who live and work in the same region. Even the plastic that wraps and protects timber packets is now manufactured in close proximity to the sawmills. In other words, this is a value chain that not only strengthens the sawmill but also local businesses.

A recent report on the significance of the forest industry for northern Sweden commissioned by SCA demonstrates that, in 2024, the wood products and paper industries in central and northern Norrland generated almost SEK 2 billion in municipal and regional tax revenue. In addition to the wood and paper products industry employing almost 11,000 people, the industry is also estimated to indirectly contribute to an additional 8,000 jobs through its need for local services. "It's no secret that many municipalities are highly dependent on our operations. In many places we are the largest employer and, were we to disappear, it would quickly have major consequences," says Jerry.

A POLISHED OPERATION THANKS TO SAWMILLS

One of the many local business that has grown thanks to the sawmill industry is Sollefteå Slipservice. A business that started in a garage in Sollefteå in the 1980s has developed into a highly specialised operation with 18 employees and an annual turnover of around SEK 30 million.

"My father-in-law's first sawmill customer was Graninge Bruk. Thanks to their business, he was able to employ his first employee and build a 200 square metre workshop," explains Peter Oremo, CEO of Sollefteå Slipservice.

Today, the workshop is four times the size and collaboration with sawmills has been crucial to the company's growth. When Tunadal Sawmill upgraded its saw line, Sollefteå Slipservice followed suit, investing around SEK 15 million in new machines to keep pace.

"We have robots working around the clock and, together with the sawmills, we are constantly developing new tools to make production even more efficient. Having SCA as a partner also allows us to





Proximity to ports has always been decisive for the location of sawmills.

work with some of the best tool manufacturers in the world," says Peter.

While the company now has customers all over Sweden, the region's sawmills are still the foundation of the business. The downsizing or closure of SCA's sawmills would have immediate consequences.

"Were SCA to decrease or cease operations, we would need to lay off at least half of our workforce. That's not something we like to think about, but it's a fact," he says.

For Sollefteå Slipservice, the sawmills are more than just customers – they are a prerequisite for the company's existence. If the sawmills were to vanish, it would have dire consequences not only for Sollefteå Slipservice but also for the entire network of suppliers and specialist companies that has grown up around the forest industry.

FIERCE COMPETITION KEEPS SAWMILLS SHARP

The sawmill in Bollstabruk is still a hive of activity, even though the dock is now still after days of intensive work. The only trace left of the 135-metre-long cargo vessel Merweborg is the path carved through the ice, which leads the eye towards the sea – a conspicuous reminder of how the port connects the local to the global.

A comparison of sawmill maps from 2002 and today reveals an obvious development: fewer sawmills concentrated around locations with good access to maritime transport. In just over 20 years, the number of sawmills located in the regions where SCA operates has declined from 43 to 27. The ones that remain are those with the best conditions for reaching out into the world.

"If we look at the sawmills that have survived – especially in northern Sweden – we can see an obvious trend. These days, close proximity to a port is crucial. Just as rivers were once essential for rafting timber, so maritime transport is now crucial to competitive exports," explains Jerry.

For SCA too, this development has been tangible. During the same period, the number of sawmills operated by the group has more than halved from eleven to five, a development that has demanded adaption but also opened up new opportunities. To meet future needs, SCA has invested in streamlining and modernising its sawmills. Investments in new technology and increased production capacity have left SCA's sawmills stronger and today they account for over 50 per cent of the total production of sawn timber products in northern Sweden.

"Competition for raw materials is fierce but, with healthy investment in our sawmills, we see further opportunities going forward. By continuing to work closely with forest owners, the business community, local politicians and communities, we can create the right conditions to continue creating value locally and globally in future," concludes Jerry.

A director's heart that beats a little faster for sustainable building

TEXT JENNIE ZETTERQVIST PHOTO MARIE HIDVI

Anna Ryberg Ågren is the Director of industry organisation Swedish Wood. Thus far, she has devoted 25 years of her career to environmental and sustainability issues. She spends her free time in the forest, recharging her batteries so she can continue for many more years to come.

"It's easy to fall for wood; it's the only renewable building material and it has a special place in my heart," she says.







"I have quite simply always followed my passion."

ESPITE GROWING UP on Sweden's west coast, Ryberg Ågren is in her element in the forest rather than the sea. Her childhood home was on a small street surrounded

by woods, and it was there she played with the neighbourhood children, camping and getting into mischief for the first time.

"The forest has always been a presence in my life and I feel secure when I have nature's solid ground beneath my feet. It gives me clam and renewed energy," she explains.

FOLLOWING HER PASSION

In her youth she had no idea that the forest would play a part in her future career, even if the route may seem well planned looking in the rearview mirror.

"I have quite simply always followed my passion and what I found enjoyable. I had a chemistry teacher in high school whose lessons were very exciting and inspiring, which had a big impact on me," she says.

This spark ignited her interest and led her to study chemistry and chemical engineering at Chalmers University of Technology. While there she became absorbed in calculating the total environmental impact of products through lifecycle analysis. With this, she embarked on a career in sustainability, beginning with a position at the foundation Chalmers Industriteknik. "Back then, in the late 1990s, there was a considerable focus on packaging and we conducted may investigations in that area," says Ryberg Ågren.

Focus shifted to the chemical content of building materials in 1997 after the scandal during the construction of the rail tunnel beneath Hallandsåsen, when cracks in the bedrock were sealed with the compound Rhoca-Gil and the poisonous substance acrylamide leaked into the groundwater. Ryberg Ågren was recruited as an environmental consultant by White Arkitekter, her first step into the construction industry, a journey that continued via IVL Swedish Environmental Research Institute, forest industry group Derome and Constructions Products Sweden. Since 2022, she has been Director of Swedish Wood, part of the Swedish Forest Industries Federation, a position that suits her perfectly.

"All building materials are needed, but wood is still the only one that is actually renewable through a biological process. With other natural materials, the more we extract the less we have left," she says.

DISSEMINATING KNOWLEDGE ABOUT WOOD

Swedish Wood is tasked by its members with disseminating knowledge about wood and building in timber, to promote a viable sawmill industry and a sustainable society.



"There's a great deal of interest in building with wood and I think that politicians are fairly receptive to the idea. Still, it remains an important task for us to market wood and make it easy for everyone who wants to build in wood," says Ryberg Ågren.

One current debate revolves around sustainable forestry, a subject that has attracted wider interest in part due to the many EU initiatives that affect the forest and forestry in various ways.

"I am completely convinced that it is possible to conduct forestry that both provides a high yield, so that we can build even more in wood, and at the same time contributes to a wealth of biodiversity. We don't need to choose between the two. It is part of our mission to reassure the building industry about this," says Ryberg Ågren. #

Read Anna Ryberg Ågren's account of how the forest has enriched both her private and professional life.

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Who doesn't like wood?

"MUM, WE'RE RICH!"

I and my then five-year-old daughter had come across a spot in the forest that was overflowing with chanterelles. Of course, she had no idea how much they cost in the supermarket, her sense of sudden wealth was rooted in something else entirely; a joy that I recognise, and a memory that I like to carry with me.

The forest has always been important to me. As a child, it was the best of playgrounds. As a teenager, a place to recharge my batteries As a young mother, I was keen for my children to share the same experience, and I became a guide in Friluftsfrämjandet, the Swedish Outdoor Association. I will never forget when we were camping with a group of youths and had a bark boat race. It was wonderful to see how, in the absence of mobile phones and tablets, they went all-in on making the very best boat they could from tree bark, determined to win.

The forest is still my greatest source of energy. It is there that I go jogging and it is there that I choose to go riding. In winter, there is very little to beat the feeling of gliding through the forest on skis.

Nere are many reasons to love the forest and to love wood. There is no other building material that is renewed in a biological cycle. It is a unique material and that knowledge makes my job as Director of Swedish Wood feel important.

The road here has not always been straight. I have been driver by the desire, chosen an education and jobs based on what I consider to be fun. For many years, I worked on sustainable building at the IVL Swedish Environmental Research Institute. I took part in EU projects focused on the energy consumption and climate impact of low-energy buildings in Europe. Previous axioms – such as that most of a building's climate impact comes in the operational phase – were shown to be no longer true. Once we had an energy-efficient building stock, the impact of construction itself became at least equally great.

One of my assignments while at IVL came from Derome, who wanted to calculate the climate impact of building a single-family home. Many years later, before I went on to shoulder the role of CEO of Constructions Products Sweden, this assignment led to the opportunity to become head of sustainability at Derome. This gave me the opportunity to work more in Stockholm, where I had found love.

While, for me, 'the right material in the right place' goes without saying, I also realised just how difficult it is for different materials to come together on the climate issue. Perhaps that is why the choice to take over as Director of Swedish Wood was such a simple one. After all, I feel so strongly about wood. The scent. The sense of being hugged that a timber building creates. The carbon dioxide they convert to carbon and store, and the climate benefits this creates. How can you not love wood?



ANNA RYBERG ÅGREN DIRECTÖR, SWEDISH WOOD

Responsible forestry

WHERE ALL SPECIES CAN REMAIN

TEXT KERSTIN OLOFSSON PHOTO RUBEN KARLSSON

All flora and fauna found in SCA's forests must have the conditions to continue living there in the future – this is the most important sustainability goal of SCA's forest management. "This implies that there must be a variety of habitats in our forests, and we have a palette of tools at our disposal to ensure that there are. Follow-ups show that this work is yielding results. Important indicators of biodiversity have risen by between 24 and 92 per cent," says Jonas Mårtensson, President of SCA's Forest business area.

OREST PROCESSES are drawn out. It takes around a century for a tree to mature to the point where it can be harvested, and many other processes take even longer. In SCA's forest management, the planning horizon therefore

stretches over a century or more. "Thinking long-term is vital if we are to secure biodiversity, maximise climate benefit and ensure good timber production and the forest's other values," says Jonas Mårtensson.

"Another important factor in our planning is that it is not only based on local conditions but looks beyond at needs and conditions from a landscape perspective. This is called landscape ecological planning, and we have worked this way for many years. It helps us to take the right measures in the right place, so that we can create different values in different areas of our forests in an efficient manner."

MAPPING CONSERVATION VALUES

As part of landscape ecological planning, SCA surveys all of its land holdings to see which forests have high conservation values, such as old-growth forests, a large percentage of deciduous trees or a great deal of dead wood. SCA voluntarily sets aside forests with the highest conservation values and either allows them to develop naturally or manages them to benefit conservation.

"And then there are certain forests with conservation values in which we can combine forestry with measures to preserve of develop conservation values, such as by practising continuous cover forestry," says Mårtensson.

Some regeneration harvesting can also be adapted to the needs of specific species. For example, preserving screens of deciduous trees to create bright, open deciduous forests that benefit many birds.

Other forests are managed with basic retention, meaning that 10–15 per cent of trees are spared during regeneration felling. For example, trees are left in conservation patches and buffer zones around waterways and wetlands.

"Many people assume that regeneration felling means that practically all trees are felled, but a relatively large percentage are normally left standing out of retention. We also leave dead trees and take measures to create dead wood, as many species depend on it. Research has shown that basic retention makes a big difference to biodiversity," says Mårtensson.

HELPING SPECIES WITH HABITATS

SCA has been working to make conservation measures even more effective for some years now. The aim is to improve habitats that are vital to species that are adversely affected by forestry. This work began with a thorough analysis by SCA and the Swedish University of Agricultural Sciences (SLU) of the Swedish Red List, a compilation of the extinction risk and status of individual species in Sweden. A species is red listed if its numbers decline sharply over a short period, if it is rare or has a very limited range.

"In total, some 30,000 species live in Sweden's forests. The review identified 203 red-listed species that are found on our land holdings and are adversely affected by forestry activities. These include fungi, mosses, lichens, insects and birds. As a major forest owner in northern Sweden, SCA has a particular responsibility for these species. We call this our species commitment," says Mårtensson.

The next stage was to identify the types of habitats that these species need. Careful analysis revealed 11 types of habitat that meet their requirements. For example, forests rich in deciduous trees with deadwood in various stages of decomposition, wetland forests and streamside forests.



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Biodiversity requires that some areas are left to develop freely while in others targeted interventions such as prescribed burns are necessary.



Jonas Mårtensson, President of SCA's Forest business area.



"The vast majority of forest species can manage relatively well in the environments created when forestry is conducted with basic retention. However, many of the species we are committed to have more specific habitat demands, and then we need to take specific measures to preserve, develop and recreate the habitats they depend on at landscape level. And one great advantage is that, when we benefit the most demanding species, we also benefit a wide range of other species," says Mårtensson.

MANY SPECIES BENEFIT FROM FOREST FIRES

So, it is not simply a matter of setting aside land and leaving it to develop freely; active measures are often required to preserve and recreate rare habitats.

"Forest fires were once more common. Large areas often burned, something that affected the entire forest landscape and all its species. These days, we can effectively extinguish forest fires and that creates completely different conditions. Imitating fires and other disruptions is therefore a key part of our work to create forests in which all species can live," says Mårtensson.

So-called prescribed burns are a very valuable measurement. Areas of forest are burned under controlled conditions to create habitats for species that benefit from or are dependent on forest fires. Other interventions include planting more forests dominated by deciduous trees and creating more dead wood, something that was plentiful when forests burned on a regular basis.

POSITIVE DEVELOPMENT

Both SCA's forestry and Swedish forestry in general have undergone major changes over the last 30 years, including greater emphasis on conservation and biodiversity. These changes have paid dividends. This is clear when one examines indicators for biodiversity – the factors that researchers consider important for maintaining a diversity of species – such as dead wood, older deciduous trees and old-growth forest.

"With the aid of SLU's Swedish National Forest Inventory, we have been able to follow the development of these indicators on our land over the last 25 to 30 years, and the results are very positive. The various indicators have increased by between 24 and 92 per cent," says Mårtensson.

The increased presence of indicators has immediate benefits for many species, but the benefits will be even greater over time as certain conservation values take more time to develop.

"Our conservation work will also become more effective as new research gives us greater knowledge about different species and their specific needs and we refine our working methods accordingly," says Mårtensson. Geranium bohemicum is fire-dependent as the seeds need to be heated before they will germinate. The seeds can lie dormant in the soil for centuries waiting for a fire. Geranium bohemicum is one of many species that benefits from prescribed burns.

EXCEEDING CERTIFICATION REQUIREMENTS

SCA's efforts to ensure biodiversity are described in the company's Nature conservation strategy, including what percentage of land is to be set aside for various conservation measures. In several cases, SCA's strategy goes beyond the rules contained in the forest management standards for FSC[®] and PEFC.

"For example, we have decided to set aside six per cent of our land, while FSC and PEFC rules set a minimum voluntary set-aside limit of 5 per cent. We have also decided to manage six per cent of our land with combined goals that both benefit conservation values and provide timber for harvest. In this regard, FSC requires 5 per cent, while PEFC has no requirements at all," says Mårtensson.

THE CLIMATE BENEFIT OF THE FOREST

One issue that has grown in importance over recent years is the role of the forest in limiting global warming.

"Here too SCA has a great responsibility. The climate benefit we create consist of three parts: the forest's uptake of carbon dioxide, the carbon stored in our products, and the substitution effect when our products are used to replace fossilbased alternatives. Each year, SCA contributes a climate benefit equivalent to over a quarter of Sweden's total emissions. A rapidly growing forest is vital if we are to contribute the greatest possible climate benefit," says Mårtensson.

Climate benefit is also an important issue with regard to biodiversity.

"If we fail to halt global warming, it will eventually pose an enormous threat to biodiversity and our ecosystems. This is one of many aspects that we consider when we plan our responsible forest management, combining high production of renewable raw materials with considerable concern for biodiversity and the other values in the forest," says Jonas Mårtensson.

DIFFERENT NEEDS



LIGHT AND WARMTH

The best way to protect and develop conservation value depends entirely on what kind of nature one is trying to conserve. Many species that thrive in pine and deciduous forests prefer plenty of light and warmth. They often benefit from harvesting some timber from the forest, especially spruce. If no measures are taken in such environments, then spruce will eventually take over and the conservation values are lost.



PEACE AND QUIET

Species in spruce forests generally prefer shade and continuity. Put simply, one can say that they like peace and quiet in the forest, without any major disturbances and changes. That said, small-scale disturbances, such as a large tree dying or being blown down in a storm, are always welcome. This provides good conditions for many species that depend on dead wood or the layering that occurs when saplings grow up in the gaps. Spruce forests with high conservation values therefore often benefit from being left to develop freely, although sometimes exploitation felling or selection felling – when a few trees are harvested without noticeably impacting the impression of a forest – works splendidly.

BIO-BASED SENSORS

OF WOOD AND FOR WOOD

TEXT HÅKAN NORBERG PHOTO DIGITAL CELLULOSE CENTER

Researchers at the Digital Cellulose Center have developed a bio-based sensor that can sense both atmospheric humidity and the moisture content of wood. In simple terms, a moisture meter that is itself manufactured from wood. "Our aim is to develop sustainable, circular electronics from forest materials. This would reduce electronic waste globally and make the products recyclable in the same way as wood," says Jesper Edberg, scientific leader at the Digital Cellulose Center.



next? But for Jesper Edberg and Andreas Fall, scientific leader and project manager at the Digital Cellulose Center, this is the stuff of everyday life.

"This is what we work on. If it's not difficult, we don't do it," says Edberg.

The Digital Cellulose Center strives to develop sustainable, circular electronics by combining forest materials with the Internet of Things (IoT). This makes it possible to develop electrically active cellulose products that can communicate with the digital world while remaining sustainable. This could mean entirely new types of active packaging solutions, able to sense and adapt to their surroundings, or paper rolls able to store electrial energy from solar cells or wind power. Or for that matter, moisture sensors for wood, made of wood.

"The research is a balancing act between dreaming big and seeing the industrial potential," says Edberg.

His fellow researcher, Anders Fall, expands:

"When you're thinking about new research ideas, you need to take your time to break out of the box. Think expansively and bounce things off your colleagues. That's when you come up with new concepts. Then it's important to identify the potential applications." **CREATING VALUE FROM WASTE PRODUCTS**

As wood becomes increasingly common as a building material, so the need for efficient and sustainable moisture monitoring systems increases. Wood is a living material that naturally absorbs moisture from its surroundings, meaning that, unless moisture levels are carefully controlled, there is a risk that timber buildings will suffer from mould and rot.

"Our sensors can help improve the long-term sustainability of wooden buildings by continuously monitoring moisture levels," explains Fall.

The bio-based sensors were developed through a process involving the laser treatment of lignin, making it possible to create graphene, a material with excellent electrical and mechanical properties. This makes the sensors especially good at measuring atmospheric humidity and moisture in the wood, so that damp can be prevented before it becomes a problem.

"We use lignin, a residual product from the forest industry, to create value and reduce our dependence on fossil resources. It's a matter of finding uses for residual materials and contributing to a more circular economy," says Edberg.

Another benefit of manufacturing sensors from lignin and other bio-based materials is that they can be integrated with the lifecycle of the wood rather than being separated during recycling. They can follow the same recycling or destruction process as other wood materials, making them a sustainable alternative to traditional electronic sensors.





Jesper Edberg and Andreas Fall, researchers at Digital Cellulose Center.

"We are working to create sensors that are not only functional but that can also be part of sustainable development," says Edberg.

The next stage of their research is to install the bio-based moisture sensors in a demonstration environment in a real wooden building, to test them outside the laboratory.

INDUSTRIAL RESEARCH

The researchers at the Digital Cellulose Center see enormous potential in their bio-based sensors, not only in wooden buildings but also in other industries where moisture monitoring may be important, such as packaging and medical technology.

"There is considerable interest in these sensors and we see several future applications that can help solve global sustainability challenges," says Andreas Fall, who explains that the work is conducted in collaboration with academia, research institutes and industry.

"We conduct materials research, but always with uses and applications in mind. We work closely with industry based on society's needs, but at the same time with a vision," says Fall.

The ambition is to identify new value chains for forest raw materials by combining cellulose with electronic components.

"Speaking of which, we are always open to new partners from industry, ideally linked to wood," says Edberg. ⊯

LIGNIN AND GRAPHENE

Lignin binds the cellulose fibres in wood and strengthens the tree trunk. When manufacturing paper and paperboard, the lignin is separated in the pulping process and is considered waste. Heating lignin produces the super material graphene, which is lighter than cotton but stronger than steel. Graphene can also conduct current completely without resistance.

THE DIGITAL CELLULOSE CENTER

The Digital Cellulose Center (DCC) strives to develop sustainable, circular electronics by combining forest materials with electronics. The DCC includes the academic partners RISE Research Institutes of Sweden, Linköping University and KTH Royal Institute of Technology, together with a large group of companies working in areas such as electroactive materials, paper and pulp, packaging and conversion, as well as electrical applications and energy storage. The DCC is coordinated by RISE and funded by Vinnova, Sweden's national innovation agency, together with the center's partners.

LUXURIOUS SIMPLICITY AT MAJAMAJA OFF GRID VILLAGE A SIMPLE LIFE IS transformed into a luxurious experience at Majamaja, an off-grid retreat in the Helsinki archipelago, Finland. The small wooden houses enjoy a unique location on the rocky outcrops on the shore of the archipelago, their innovative design showing the way for sustainable construction. Built in sustainable timber and equipped with solar panels and advanced water purification systems, the cabins are completely self-sufficient. The off-grid solution provides the guests who book in with the opportunity to live in harmony with nature, reduce their ecological footprint and try life without the usual infrastructure and comforts of the city.

Designed by Littow Architectes, the project has attracted considerable attention and recently won the Dezeen Awards 2024 in the category small project of the year. Majamaja is an inspirational example of the role of wood in tomorrow's environmentally friendly architecture and similar villages are being planned in other challenging environments that are otherwise difficult to reach.



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