



Climate-KIC



Nordic Council
of Ministers

Nordic Wood in Construction Trends and SDG Opportunities & Trade-offs

Nic Craig

Tree2Tower

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@BuildWoodNordic

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Nordic Wood in Construction Secretariat

- Initiative set up by Swedish Government and Nordic Council of Ministers

Doing what?

- Support further development of the use of wood in construction in Nordic countries through projects that:
 - **identify and break down barriers** to using wood in construction, **share knowledge**, and increase **Nordic cooperation**

Why?

- Tackling the climate emergency but also **financial, social and health co-benefits**.
- Nordics are a shining example, *but* wood's full potential throughout the construction value chain is still to be realised...



Five Trends from 25 Cases of Nordic Wood in Construction

WOOD IN CONSTRUCTION 25 CASES OF NORDIC GOOD PRACTICE



[Read the report here!](#)

Five trends identified across the cases



Multifunctionality



Saving time and costs



Investing in scalability



Pushing the boundaries



Circular design

Trend 1: Multifunctionality

Flexibility increases the longevity of the buildings, improving the economic case and reducing environmental impacts of wooden constructions. This includes:

- Multifunctionality of use such as in *Oodi* (pg. 34)
- Ability to change and adapt spaces in the future as demands on the building change, demonstrated in *BRF iValla* (pg. 60)
- Production of easily replaceable wooden elements, such as *Wave-layered timber* (pg. 26)
- Forestry practices like at *Metsä Group* (pg. 18) that match user needs exactly to timber felling



Trend 2: Saving time and costs

Pre-fabrication of modular elements off-site can optimise the construction process and combined with local production reduce emissions from transport of materials, with added benefits of boosting jobs and expertise in the local economy. This includes:

- Creating more bespoke buildings matched to users' needs, as in *Östra Sala Backe (pg. 44)*
- Permitting work to take place year-round in more extreme climates like *SkellefteåKulturhus (pg. 38)*
- Leveraging local supply chains such as *Mjøstårnet (pg. 64)* allows for faster construction



Trend 3: Investing in scalability

Changing long-established practices requires new technologies and ways of working, but several of the developers invest in timber construction in order to scale up over time. This includes:

- Developing the skills and expertise to take lead in a more sustainable construction sector in the future, e.g. *Strandparken (pg. 58)*
- Using public procurement as a driver for change, with timber construction playing into municipality climate strategies, as demonstrated by *Lade School (pg. 40)* and *Herrestaskolan (pg. 36)*



Trend 4: Pushing the boundaries

Many projects showcased became the tallest or the largest timber project of their type on completion, and the Nordics are constantly challenging the possibilities of building in wood. This includes:

- *Mjøstårnet (pg. 64)* is set to become the world's tallest timber tower
- *Knarvik Community Church (pg. 42)* and *Flatey Farm (pg. 52)* demonstrates the adaptability of wood as a building material, allowing it to be used in almost any context.



Trend 5: Circular design

Increasingly, designers are beginning to think about what happens to the building at the end of its life. This includes:

- Building components are designed to be disassembled, which will keep wooden elements higher in the value chain in their second life, such as *Lisbjerg Bakke (pg. 48)*
- Producers are rising to the challenge with products such as *Korkbygd (pg. 30)*, coming to market to provide circular alternatives to traditional building materials.
- *TrÆls (pg. 70)* and *Saga Wood (pg. 72)* to transform wooden 'waste' from the construction industry into new products and services.





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Digitalisation

Underscoring every trend

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Sustainable Development Goals: ***Opportunities and Trade-offs***

SDG Opportunities



Competition for biofuels?



Rural jobs and growth?
Opportunities for men and women?



Waste and reuse?



Resilience of forests to adapt?
Mitigation potential?



Land degradation?
Biodiversity?

Key findings

- While negative impacts may be limited and positive impacts more abundant, the **benefits will not be maximised by chance**, and are heavily dependent on **forestry** practices.
- Nordic countries must, both in terms of **public policies and forest management**, manage the wood in construction value chain to strive towards contributions to the SDGs.
- There is a high demand for **research and better knowledge** on the impacts of SDGs in different stages in the value chain, pointing to a need for research financing.
- Moreover, while not necessarily a public responsibility, there is also a need for a **platform for dialogue** between key stakeholder groups to handle asymmetries in perceptions and knowledge.



What the experts said

”

*There are good and bad forestry practices, what we choose is a matter of **access to knowledge and policy***

*A **systems approach** is needed so that conflicting policies do not arise*

*A **strong legislation** and follow-up will be increasingly important*

*The **certification schemes** must be different from today*



Key opportunities and barriers in the value chain

Sourcing of raw material	<ul style="list-style-type: none">+ : Sequestration of carbon, Biofuels- : Loss of biodiversity and climate adaptivity, Better regulation required, Ineffective certification
Production of building materials	<ul style="list-style-type: none">+ : Biofuels, Job opportunities- : By-products (losses) in sawing
Housing and construction advisory	<ul style="list-style-type: none">+ : Choice of wood reduces climate impact- : Design for recycling and reuse limited at present
Construction	<ul style="list-style-type: none">+ : Less emissions in transport- : Some increase in packaging requirements
Use	<ul style="list-style-type: none">+ : Easier reconstruction of buildings- : N/A
Maintenance (reno., refurb., etc)	<ul style="list-style-type: none">+ : Job opportunities- : Potential increase in maintenance of facades
Decommission	<ul style="list-style-type: none">+ : Recycling and reuse potential- : Recycling and reuse requires design and construction criteria

Recommendations

Improve policies,
certification and
forest
management

Make sure that
potential conflicts
between WiC and
SDGs are
understood and
acknowledged

Handle perception
and knowledge
asymmetries
which may
negatively impact
the support of
SDGs

Consider mixed
forests as an
important climate
adaptation
measure

Use means and
design of
construction to
facilitate reuse and
recycling of
wooden materials

Not view wood in
construction as a
silver-bullet in
reducing impacts
through material
choice

2020 Priorities

Our priorities for this year

Municipality Platform

- Digital platform to act as a roadmap and guide for Nordic municipalities.
- Advantages and pitfalls of building with wood.
- Public procurement and financing.
 - Developing wood construction strategies.

LCA Capacity Building

- Building capacity at a municipal level for how to use LCAs and wood.
- How do LCAs change the economic and environmental case for using wood?

Policy Analysis

- Strengths and gaps in Nordic policy.
- Dialogues at every Nordic Democracy festival.
- Connecting local, national and Nordic levels.



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Thank you!

Nic.Craig@woodinconstruction.net

www.woodinconstruction.net



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Discussion



- Are Nordic trends also seen in the Bioeconomy Region?
- What are the obstacles for building more in wood in your experience?
- Where is action needed? Local? National? International?
- How can the Nordic Wood in Construction Secretariat be of benefit to the community here over the coming year?

