



Summary

This is a summary of the Round table discussions held at The Nordic Climate Forum for Construction, October 3rd, 2019 in Malmö.

The Nordic climate Forum for Construction gathered representatives from authorities, industry and academia within the construction and real estate sector. The main goal for the conference was to begin work on Nordic harmonization on regulations and climate emissions from buildings from a life cycle perspective. The forum was organized by The National Board of Housing, Building and Planning (Boverket) together with the Ministry of the Environment in Finland in collaboration with the Nordic Council of Ministers. Around 80 people attended the conference and all Nordic countries were represented. The first part of the forum was dedicated to Keynote speakers about the importance of construction sector's role when aiming at carbon neutrality and challenges along the way, greetings from the Nordic ministers and a presentation of state of the art in the Nordic countries. The second part of the conference was dedicated to three sessions of round table discussions to give room for discussions and dialogue. Everyone was asked to prepare for these discussions in beforehand by answering a set of questions. After each session everyone had the opportunity to submit their answers to the same questions in an online form. It is these submitted answers that are summarized in this document.

The program for the conference can be found in annex 1 and the questions for the round table discussions can be found in annex 2.

Round table 1 What can we reach with harmonization?

Benefits from cooperation in Nordic countries

66 PEOPLE ANSWERED THE QUESTIONS.

Network for sharing and learning among expertise

The cooperation/harmonization process can act as an arena for capacity building and exchange of expertise and serve as a network for sharing and learning about good examples and best practices from a Nordic perspective. A deeper understanding of carbon footprint of buildings when we exchange knowledge across boarder and help each other with problem solving are to be expected.

Stronger influence on an EU-level

There is an opportunity to develop more robust policies which can more easily be accepted by building sector stakeholders as well as academia when having the broader Nordic perspective. It might also lead to quicker implementation of decided policy when all countries are working together. On EU-level the power in talking with one joined voice regarding these questions are also seen as a great benefit of the cooperation, with the possibility of stronger influence on policy making in EU. 99 % of the participants think we'll have a bigger impact in EU if we work together. But some of the participants from Norway points out that not all Nordic countries are in EU and some other are lifting the importance of following EU-standards.

Sub optimizing

The platform for this could easily be used for other issues as well and some participants are lifting the opportunity to include other environmental aspects so there will be no sub optimization when looking at a building's whole life cycle. The cooperation can hopefully bring a better understanding of each other and cross boarder development of both industry and legislation and can be a ground for working with other issues as well. If used for other purposes as well there might also be even more opportunities to set an example and be proactive in an EU context. The harmonization/cooperation process could raise awareness and increase communication of sustainability issues from a life cycle perspective in society and working together towards the same goals makes it more likely to succeed.

Cost savings and taking the lead at the market

For the construction industry the greatest benefit is the bigger market that opens and that a Nordic Market is large enough to move ahead of others and set example. There might be increased Nordic competitiveness and an expanded market for products that have good environmental performance. A more rapid product development might also occur when the market grows/are growing.

Reduce administrative burden

Development of common system boundaries, methods, tools, databases and guidelines on how to use standards can all be reducing the administrative burden. Databases for environmental product declarations (EPD) and for transparent climate data are exemplified. The potential development of common tools, system boundaries and so on should all support a digitalization of the building sector to reduce the burden even more.

If the cost to develop databases or methods for LCA are to be shared this could ease the administrative burden as well. The process to create a roadmap and set common goals and a shared framework might also be more effective and require less administration if shared between countries.

For companies working in several Nordic countries in the administration would be lesser if guidelines, methods or databases are the same across the national borders. However, it depends on how the process/databases/methods is designed. A few of the participants thinks that that at first there will be a bigger burden, but that the burden will be reduced once everything is in place.

Cost savings

90 % of the participants believe in cost savings when going towards low carbon construction. The reasons for believing this are:

- Material optimization and more circulation of materials
- Lower climate risk, the cost of climate change is much greater than higher costs in material or construction
- Buildings are more energy efficient and will reduce energy costs and lower operational costs. Fossil fuel gets more expensive

The participants who are skeptical to that it will be cost saving means that it depends on how it is done, and that the harmonization/cooperation process might be driving more costs in the beginning but perhaps not in the long run.

Round table 2 - What can we harmonize and how?

60 PEOPLE ANSWERED THE QUESTIONS

Comparable requirements

At least 60% of all participants think that the Nordic countries should strive for comparable requirements in the different countries concerning limits of greenhouse gas emissions during a building's life cycle. However, many of the participants thinks that there are more important things to start with, such as data, methodology and a common roadmap, than comparable requirements concerning limitations of greenhouse gas emissions.

Challenges when harmonizing the legal requirements

The differences of traditions

The building and construction industry in the Nordic countries has for many years built up their own national traditions, because of that it might be a challenge to find similar ways of working. The differences in energy production and access to other natural resources needs to be addressed as well. The process also needs to take climate variations into account since that in some cases can lead to different requirements.

Political forces

The starting point are not the same for all countries and the political force can differ which can be a challenge when trying to harmonize legislation. The strive to harmonize can be counterproductive in some countries where local regulations and conditions are better than the harmonized ones. To be accepted one suggestion is to 'let the process be flexible and don't let it slow down if someone wants to go further than legislation. There is also political challenge on a national level when control is moved somewhere else.

Need for cooperation on many levels

For a successful harmonization there is a need for cooperation on many levels, locally, regionally, nationally and at a Nordic level with different stakeholders. All these aspects mentioned above might require different actions on national level to reach the same goals on a Nordic level.

What should be included in the work for harmonization?

Common definitions

97 % of the participants wants common definitions. This helps communication and are good for end-user and media. The use of standards is lifted here as well.

Common methods

93 % of the participants wants common methods, including system boundaries for LCA. Transparency, making it easier to compare and based on standards that already exist are common comments on this question.

Common database

90 % of the participants wants a common database. Most wanted database is for EPDs or for EPDs that are third party verified, for generic data for different stages in the life cycle, material, energy and so on. The database must be an open database for all to use.

Common registries for climate declarations

60 % of the participants wants common registries for climate declarations. This could be interesting but many more are unsure about the benefits with this kind of registry.

Common tools

52 % of the participants wants common tools. One common comment is that it should be free of charge and no black box¹ but many also write about that there are already several commercial tools available. One way might be to produce list of accepted tools.

Other environmental impacts

57 % of the participants wants to include other environmental impacts. Even more if counting the ones who answered “in the long run, yes” but at this point thinks it’s enough to start with focus on greenhouse gases.

Existing standards and models

In the comment section on more than one of these questions there are several comments about using the existing standards and models, e.g. Sustainability of construction works – Assessment of environmental performance of buildings – Calculation method (EN 15978), Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products (EN 15804) and Level (s).

Digitalization

Digitalization enables the use of a common and updateable language. It can also help in implementing tools, it can enable more data to be accessible and used and it can reduce time in doing routine work by making it automatic. Some participants point out that digitalization should be a tool not a goal and other reasons that the work with harmonization should support ongoing work with Building Information Model (BIM) or other strives to digitalize the sector.

¹ **Black box:** Testing assesses a system solely from the outside, without the operator or tester knowing what is happening within the system to generate responses to test actions. A **black box** refers to a system whose behavior has to be observed entirely by inputs and outputs.

Round table 3 - How shall we continue?

59 PEOPLE ANSWERED THE QUESTIONS.

Where should we start?

A common understanding of the problem

All Nordic countries must as a start be willing to cooperate around these questions and some suggest a clear political statement and mandate for the cooperation is needed. For a start the Nordic countries needs to agree to a common understanding of the problem. Suggestions is to use the UN sustainable development goals (SDG), the Paris agreement and/or EU policy as a start for forming that. 70 % of the participants thinks we can start a Nordic development program for supporting the harmonization.

A roadmap with common aim, scope and language

Some point out that there is need for forming principles of cooperation and that a common aim, scope and language is important. Others says that it's important to identify areas for agreement and areas for disagreement and then agree on a common roadmap. Another suggestion is to focus on identifying the smallest common denominator and start there or to identify the strengths in each country and build from that. On ministry level the suggestions are to write a letter of intent or the like and to set common objectives and an action plan/roadmap for all Nordic countries. Databases, methods and a common interpretation of the standards are also a common suggestion on where to start and a way to find common ground in a more practical way. Working for digitalization and standardization of EPDs and similar are another suggestion for work to be done.

Transparency and focus

The suggestions for how to formalize the cooperation are ranging from not formalizing it to very formal and anchored in the highest level at ministry. The different answers can be seen from the perspective that depending on how the purpose and scope of harmonization/cooperation is defined, different levels of formal cooperation are needed. Transparency and focus on efficiency are lifted as key words for any level and for the entire process.

Who should be involved?

The answer differs from whom you're asking. Many point out that a strong political will is needed but for the work to be successful there is need for dialogue with a broader range of stakeholder from material producers, end users, academia and NGOs, to certifications bodies, municipalities and financial institutes. Many names the Nordic council of ministers as the organization who should put these questions on top of their agenda. Nordic council of ministers are also a common suggestion for where to start a dialogue about funding the work to come.

How can we keep in touch?

The process probably needs to be facilitated to be successful and there is a need for clear goals for the process. To reach the full potential of cooperation and harmonization one suggestion is to start a platform that is digital and open for all stakeholders to take part in the because harmonization probably requires exchange of knowledge and experience within the building sector on all levels.

One question that was discussed was in what way future exchange of knowledge and ideas on how to promote harmonization could be done. 90 % of the participants want to have conferences similar to this one. Other alternatives on how to continue the future cooperation were:

- Working groups that report to a network
- An interactive and communicative webpage to spread info and that can be a bank for good ideas
- Web meetings
- Common pilots or common projects

A combination of web meetings, web forums and conferences where suggested as preferable. A network for stakeholders is also a common suggestion.

Possible joint studies

The participants had the opportunity to give their input on possible joint studies. Many suggestions were given and in Annex 3 there is a full list of possible joint studies. Some studies where suggested by many and they are listed below.

Use of BIM in LCA (*the most suggested study*)

Rules for BIM, LCA, Methods

Calculations methods

Pros and cons of a joint Nordic database for life cycle data

What are possible common system and system boundaries

Annex 1: Program Nordic climate forum for construction

Moderator: Matti Kuittinen, Ministry of the Environment (Finland)

8:30 - 09:00	Coffee and networking
09:00	Opening words - Matti Kuittinen
09:15-10:00	<p>Key-note speeches</p> <p>Josefina Lindblom - European commission Josefina has been responsible for the work on "sustainable buildings" for the last seven years and has managed the recent developments of Level(s), a common framework for the assessment of the environmental performance of buildings.</p> <p>Esa Kallio - Kuntarahoitus Municipality Finance Plc Esa Kallio is the president and CEO of Kuntarahoitus Municipality Finance Plc. and has extensive experience from the finance sector. Kuntarahoitus aims to revolutionise the environmental investment scene in Finland.</p> <p>Martin Manthorpe - NCC Senior Executive; Strategy, Business Development & Public Affairs in NCC Denmark. Martin is today working as a senior executive in NCC with Strategy, Business Development & Public Affairs as main areas of responsibilities.</p>
10:00-10:15	Nordic ministers give their greetings (videos).
10:15-10:30	Coffee pause
10:30-11:00	<p>State of the art in Nordic countries. Presenting the level of normative development and possibilities for joint ambition. Short updates on how norms are evolving in Nordic countries and what are the topical development issues.</p> <p>Matti Kuittinen, and a panel with representatives from the Nordic building authorities</p>
11:00-11:10	<p>Introduction to roundtable discussions.</p> <p>Kristina Einarsson, Swedish National Board of Housing, Building and Planning</p>
11:10-12:10	<p>Roundtable discussion 1 – What can we reach with harmonization?</p> <p>Introduction by Harpa Birgisdottir, Danish Building Research Institute (Denmark)</p>
12:20-13:20	Lunch break
13:20-14:20	<p>Roundtable discussion 2 – What can we harmonize and how?</p> <p>Introduction by Martin Erlandsson, IVL Swedish Environmental Research Institute (Sweden)</p>
14:20-14:45	Coffee break
14:45-15:30	<p>Roundtable discussion 3 – How shall we continue?</p> <p>Introduction by Eivind Selvig, Civitas (Norway)</p>
15:30-16:00	<p>Summary and conclusions</p> <p>(Kristina Einarsson, and Jenny Lagergren, Swedish Life Cycle Center)</p>
18:00	Dinner in St Gertrud

Annex 2: Questions for the roundtable discussions

Below are the questions that all participants were asked to prepare a preliminary answer to before the conference. At the conference a digital form was made available with these same questions and the answers that were sent in are the source of information to this summary.

Roundtable discussion 1 – What can we reach with harmonization?

1.1 From your perspective as representative of building authorities, academy or construction industry (or other), what benefits and opportunities do you see in a Nordic harmonization effort towards policies and practices of low carbon construction?

1.2 How can we reduce administrative burden with harmonisation?

1.3 Can we achieve cost savings with low carbon construction?

Yes No

Comments:

1.4 Or will it be more costly?

Yes No

Comments:

1.5 Can we gain stronger impact on EU policies, if we have harmonised approach?

Yes No

Comments:

Roundtable discussion 2 – What can we harmonize and how?

2.1 Should the harmonization effort strive for comparable requirements in the different Nordic countries, especially concerning limits of greenhouse gas emissions?

Yes No

Comments:

2.2 What challenges do you see in harmonization of legal requirements?

2.3 Should the Nordic harmonization effort include:

2.3.1 Common methods, including system-boundaries?

Yes No

Comments:

If yes, which methods are most crucial for harmonisation? Where should we start?

Comments:

2.3.2 Common definitions?

Yes No

Comments:

2.3.3 Common databases?

Yes No

Comments:

If yes, which databases?

Comments:

2.3.4 Common registries for climate-declarations?

Yes No

Comments:

2.3.5 Common tools for calculation?

Yes No

Comments:

2.3.6 Other environmental impacts other than global warming potential?

Yes No

Comments:

If yes, which ones?

Depletion of the stratospheric ozone layer

<input type="checkbox"/>	Acidification potential
<input type="checkbox"/>	Eutrophication potential
<input type="checkbox"/>	Tropospheric ozone photochemical oxidants
<input type="checkbox"/>	Abiotic resource depletion potential for elements
<input type="checkbox"/>	Abiotic resource depletion potential of fossil fuels
	Comments:

2.4 In what ways is digitalization important for a Nordic harmonization?

2.5 What other benefits might the Nordic cooperation bring other than direct harmonization within the above mentioned areas?

Roundtable discussion 3 – How shall we continue?

3.1 What common ground is necessary to have in a future cooperation?

3.2 Who needs to be involved, and how, for the work of harmonization to be successful?

3.3 Which of the existing cooperation bodies, the building authorities and/or the Nordic Council of Ministers, or other, could take this on their agenda?

3.4 How formalized should a future cooperation be between the Nordic building authorities, and which stakeholders should contribute and how?

3.5 Can we launch a Nordic development programme for supporting the harmonisation?

3.6 What are the best ways to exchange knowledge and ideas in the future to promote harmonization?

Conferences

Web meetings

Web forums (larger network of stakeholders)

Other:

3.7 Which joint studies on possible relevant harmonization themes should be launched? Examples of possible joint studies include setting of scenarios, practice-based system boundaries for LCA and use of BIM in LCA.

3.8 How should we proceed from now on?

Annex 3 list of possible joint studies

EPD

- Climate data for EPD
- How to use EPDs in marketing

Tools, databases and methods

- “Nordic Ökobaudat”, can it be done and how?
- How to use common product identification /database codes /GTIN
- Common taxonomy for generic product group, process or other relevant GWP data
- Requirements on software tool to be used for calculating Nordic Carbon Impact of buildings.
- Models for calculating baseline scenarios for A1-A3, A4-A5 for different building types to be used by LCA software tools.
- Scenarios for B4, B5, C3 and C4
- How to define and make material inventories
- LCA in other design tools
- LCA in methods for city and aerial planning
- How to narrow down the freedom to choose assumptions and scenarios
- Calculation methods
- A joint method for calculation of impacts from wood
- State of the art study on available data and possibilities for a common open database
- Joint study of the differences of LCA assessments in different countries so that it can be decided what kind of methods should be used and what could be harmonized.
- The new Nordic house – typologies a,b,c,d,e,f,g, - all with LCA and BIM models available.
- The Nordic – renovated buildings typologies, a,b,c, - Focus on materials – waste treatments circular perspectives.

Best practice, innovation and good examples

- Best practices from industry
- Best Practice Guidelines
- A reference building adapted to each country.
- National scenario buildings
- Idea creation process to identify radical changes (the EPDs are not sufficient it we need to reach the climate goals as fast as we do)
- Joint innovation projects

Economy

- Risk assessment for investors
- Cost benefit analysis of LCA
- Studies on extra costs – or economic benefits of low carbon buildings
- Economical assessments and impact on small manufacturers - can they compete on the same conditions?
- BIM and LCC

Where to start/“low hanging fruits”

- Define 5-10 most carbon intensive product groups and focus on harmonizing information /CO₂ requirements for them.
- Identify hotspots and possibilities how to lower them

Other

- Wide scope impact assessment of harmonization of low carbon building between Nordic countries based on findings and results of this Forum.
- Key elements in harmonized construction regulations, joint project in all Nordic countries with reference buildings and calculations in Nordic countries.
- Logistics program
- What is green Concrete?
- How to deal with different views on green electricity?
- Functional life time of different building types
- Digitalization, how can it simplify LCA
- Studies on Circular economy – development of “resource indicator” that can show the benefits of CE where GWP and ADP often cannot.
- Index for circular economy
- Studies on drivers for reduction of the carbon footprint of buildings. What does it really take keep us within the “limit” that we know we have?