

ROADMAP

Harmonising Nordic Building Regulations concerning Climate Emissions



Nordic
Innovation

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Preface

This report is a part of the Nordic Sustainable Construction programme initiated by the Nordic Ministers of Construction and Housing and funded by Nordic Innovation. The programme contributes to the Nordic Vision 2030 by supporting the Nordics in becoming the leading region in sustainable and competitive construction and housing with minimised environmental and climate impact.

The programme supports the green transition of the Nordic construction sector by creating and sharing new knowledge, initiating debates in the sector, creating networks, workshops and best practice cases, and facilitating Nordic harmonisation of regulation for buildings' climate impact.

The programme runs from 2021-2024 and consists of the following focus areas:

Work package 1 – Nordic Harmonisation of Life Cycle Assessment

Work package 2 – Circular Business Models and Procurement

Work package 3 – Sustainable Construction Materials and Architecture

Work package 4 – Emission-free Construction Sites

Work package 5 – Programme Secretariat and Capacity-Building Activities for Increased Reuse of Construction Materials

An important part of the programme is to facilitate harmonisation of building regulations concerning climate emissions and LCA practices within the Nordic countries. It is in this context the present roadmap has been developed. This report is a final deliverable of task 1 in Work Package 1, led by the Finnish Ministry of Environment.

The work has been carried out by Morten Buus Consulting and Swedish Life Cycle Center with input from the Swedish National Board of Housing, Building and Planning; the Finnish Ministry of the Environment, the Danish Authority of Social Services and Housing; the Icelandic Housing and Construction Authority; and the Estonian Ministry of Climate.

**Nordic Sustainable
Construction**

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Summary

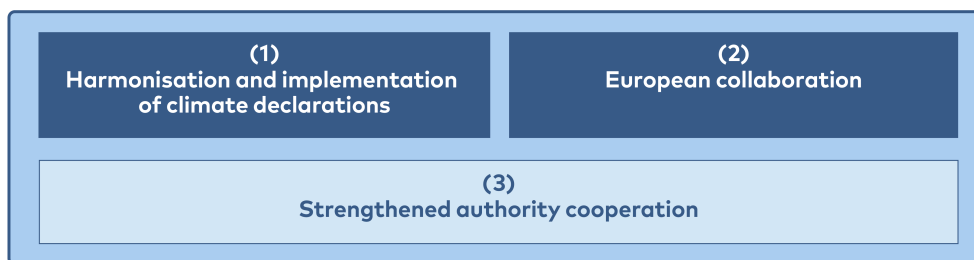
The building and construction sector is responsible for around 40% of all carbon emissions and 50% of all raw materials extracted on a global level. Green transition of the building sector is high on the agenda, and development of building regulations concerning climate emissions based on life-cycle assessments is ongoing in all Nordic countries, Estonia and beyond.

During the latest years the Nordic building authorities have benefitted from collaboration and sharing of experience within development of regulation by climate declarations and the life-cycle assessments (LCA) methods that these are based upon. All the countries are working closely with development of methods and regulation, and this momentum gives a unique chance to align methods and benefit even further from the collaboration. Therefore, the intention with this roadmap is to target and anchor the collaboration further to harmonise the approaches and support each other's climate ambitions.

In 2018 the Nordic Ministers responsible for Housing and Construction declared¹ that the region shall become the most integrated market for construction by removing barriers that restrict enterprises doing business in the other Nordic countries and, among other things, by strengthening the cooperation on harmonisation of building regulation. In 2019 a new declaration on *Low Carbon Construction and Circular Principles in the Construction Sector*,² in which the Ministers of Housing and Construction declared their shared commitment to fight climate change and mitigate the emissions and minimise the negative environmental impact that arise from the built environment, was given.

This roadmap document, developed by the Nordic and Estonian building authorities, outlines a path for the following years' collaboration. The roadmap includes three strategic aims, as seen below, comprising of harmonisation and implementation efforts of building regulations concerning climate emissions, securing, and benefiting from a European collaboration, as well as continued and strengthened cooperation as fundamental parameters for success. Each strategic aim includes identified initiatives and, in the appendix, a sketched time perspective for these initiatives can be found.

STRATEGIC AIMS



1. Declaration from the Nordic Ministerial meeting concerning buildings and construction on the 29th of May 2018, Stockholm Nordic cooperation (norden.org)
2. Nordic Council of Ministers: <https://www.norden.org/en/declaration/nordic-declaration-low-carbon-construction-and-circular-principles-construction-sector>

The identified aims and initiatives are considered a common starting point for the efforts to come, and the authorities will develop a more detailed execution plan on internal level.

As legislations, initiatives, and methods on both national and European level are evolving fast, the aims and initiatives must be continuously revisited and if needed, revised. Furthermore, the political landscapes may naturally change along the way and require revision of the initiatives.

The time perspective for the roadmap is 2023-2030. It should however be noticed that common funding by the Nordic Sustainable Construction Programme is only available until the end of 2024.





Introduction

We are facing a climate-crisis on a global level, and the construction sector plays an important role being responsible for around one third of all carbon emissions.³ All Nordic countries and Estonia have ambitions about mitigating the climate changes by reducing the total amount of carbon emissions. Reductions in the building sector is a key element in achieving these targets. Since 2018 the Nordic building authorities have been discussing future regulation on climate emissions, sharing experiences, and working together towards harmonised Life Cycle Assessment (LCA) methods for buildings.

LCA of buildings is quickly gaining ground in the Nordic countries as the method for assessing the whole life carbon emissions of buildings, and all Nordic countries and Estonia are developing methods and investigating how to include this in the national building regulations. Sweden and Norway have already implemented their first set of regulation in 2022. Denmark in 2023. Iceland is expecting to do it in 2024 and Finland will follow in 2025. Estonia expects to implement climate-based regulation from 2025. EU is planning to implement similar legislation through the revised Energy Performance of Buildings Directive.

Working with LCAs and climate declarations is relatively new in all countries and methods, data and practices are not yet well-established. At this stage, the Nordic countries have a unique chance to align approaches and exchange knowledge on how to create and specify the regulation concerning climate emissions.

Contents and Objective of the Roadmap

This roadmap includes strategic aims and initiatives developed by the Nordic building authorities during 2022 – 2023 based on the present situation and knowledge.

The objective of the roadmap is to set the path for further cooperation between the building authorities and alignment of the regulations concerning climate emissions of buildings. Having similar methods and regulations in the Nordic countries will enable design and construction companies to offer low carbon solutions in all the Nordic countries. Furthermore, similar approaches will benefit policymakers by supporting each other's climate ambitions in regulation and in green public procurement, but also in the national and European policy development.⁴

3. Global Alliance for Buildings and Construction: <https://globalabc.org/our-work/tracking-progress-global-status-report>

4. Nordic Sustainable Construction: <https://nordicsustainableconstruction.com/work-packages/nordic->

As this roadmap is linked to the Nordic Vision 2030, the national carbon goals, and the expected introduction of climate declaration for buildings in the EU regulatory framework, the horizon of the roadmap's aims is set to 2030. The current time frame of the Nordic Sustainable Construction programme is however limited until the end of 2024. Included initiatives that go beyond this should only be considered indicative as these are not funded nor politically founded.

Nordic Vision 2030

In 2018 the Nordic Ministers for Housing and Construction declared that the region should be the most integrated market for construction.⁵ The Ministers' declaration aims at creating one coherent construction market in the Nordic region by removing barriers that restrict enterprises doing business in the other Nordic countries and strengthening the mobility within the region. To reach these goals, the declaration points at strengthening the cooperation on harmonisation of building regulation in the Nordic countries and exploring possible new Nordic research projects to ensure a better foundation for more harmonised building regulation.

In 2019 the Nordic Prime Ministers approved the Nordic Vision 2030, which is the vision for the Nordic Council of Ministers, which aims at making the Nordic region the most sustainable and integrated region in the world. The Vision was followed by a new declaration on *Low Carbon Construction and Circular Principles in the Construction Sector*⁶ in 2019, in which the Ministers of Housing and Construction declared their shared commitment to fight climate change and mitigate the emissions that arise from the built environment. Among others the declaration recognises that a rapid change is needed and stresses the importance of Nordic collaboration and harmonisation efforts.



Low-carbon construction shall be promoted, and Nordic building regulations harmonised

Nordic Ministers of Housing and Construction, 2019

[harmonisation-of-life-cycle-assessment](#)

5. Nordic Council of Ministers: <https://www.norden.org/en/declaration/declaration-nordic-ministerial-meeting-concerning-buildings-and-construction-29th-may>
6. Nordic Council of Ministers: <https://www.norden.org/en/declaration/nordic-declaration-low-carbon-construction-and-circular-principles-construction-sector>



Roadmap 2023-2030

A set of three strategic aims have been identified and developed during 2022 and 2023 by the Nordic and Estonian building authorities (Figure 1).

The three strategic aims comprise harmonisation and implementation efforts of building regulation on climate emissions, securing and benefiting from a European outlook, as well as continued and strengthened cooperation as a fundamental parameter for succeeding. The strategic aims are described further below, and a preliminary timeline is given in the appendix.

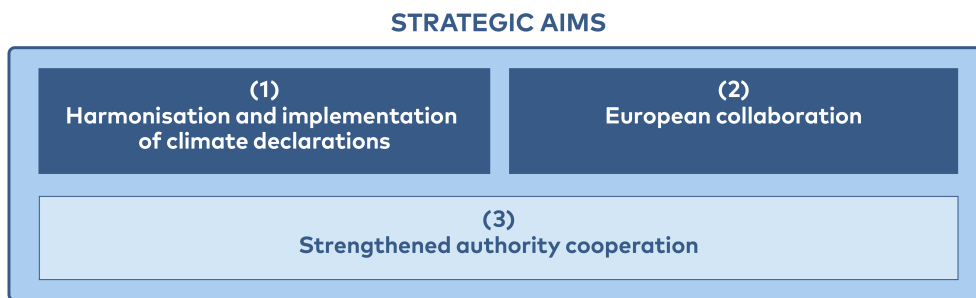


Figure 1. Overview of the strategic aims of the Nordic building LCA roadmap.

The time perspective of this roadmap is set to 2023-2030 based on the Nordic Vision 2030, the timeframe for the expected introduction of EU legislation and the national carbon goals. The first two years, 2023-2024, are within the timeframe of the Nordic Sustainable Construction Programme giving funding and a political foundation for the initiatives. The initiatives beyond 2024 should be considered indicative.

The identified aims and initiatives are however considered a common starting point for the efforts to come, and the authorities will develop a more detailed execution plan on internal level describing the contents of the initiatives, the responsibilities and time schedules more carefully.

As legislations, initiatives, and methods on both national and European level are evolving fast, the aims and initiatives must be revisited continuously. Furthermore, the political landscapes may naturally change along the way and require revision and possible supplement of the initiatives.

Strategic aim 1 – Harmonisation and Implementation of Climate Declarations

The Nordic countries have a long history of co-operation and sharing of knowledge, which serves as a good foundation for this aim and its initiatives. There is a need for sharing of knowledge on both the methods themselves and on how to implement them in the best way. Pooling resources for capacity building in the markets as well as continuing the stakeholder dialogue are important initiatives to achieve this aim.

The focus of strategic aim 1 is at the core of the shared Nordic ambitions as it focuses directly on harmonisation of methods and regulations and promotion of low-carbon construction to the market. This is sought by joining forces in the further development, sharing experiences, seeking common solutions, and securing stakeholder involvement. Strategic aim 1 and the included initiatives are seen in Figure 2.

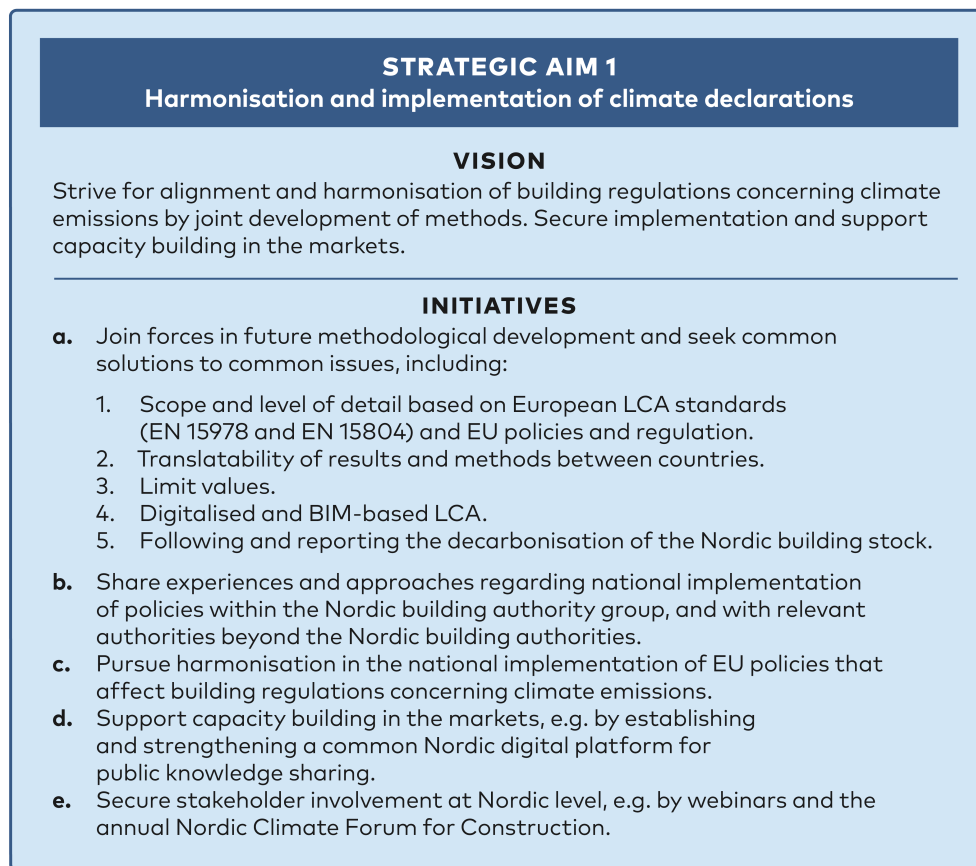


Figure 2. Vision and initiatives for strategic aim 1.

Strategic aim 2 – European Collaboration

The importance of prioritising European collaboration through joint Nordic efforts regarding climate declarations has been repeated in dialogues and workshops in

recent years. Both authorities and the industry have broadly advocated a joint Nordic contribution to the European development as one of the most important tasks and benefits of Nordic cooperation regarding calculation of life-cycle global warming potential (GWP) for new buildings.

STRATEGIC AIM 2
European collaboration

VISION

Prepare for and contribute to the EU development of climate related policies and regulations. Make the Nordics frontrunners within low carbon construction.

INITIATIVES

- a.** Map EU climate related policies, regulations, methods, and initiatives and update regularly.
- b.** Coordinate joint Nordic contribution to the development of most important climate related EU policies, regulations, methods and initiatives e.g.:
 1. Energy Performance of Buildings Directive (EPBD)
 2. Construction Products Regulation (CPR)
 3. EU Whole Life Carbon Roadmap (WLC)
 4. Level(s)
 5. EU Sustainable Finance Taxonomy Regulation
 6. Carbon border adjustment mechanism (CBAM)
 7. Ecodesign Directive
 8. EU Green Public Procurement criteria
- c.** Coordinate preparation for implementation of EU climate related regulations, including requirements for calculation of life-cycle global warming potential in the EPBD*.
- d.** Communicate and exchange relevant experiences regarding building regulations concerning climate emissions to and with other European countries and stakeholders, e.g. at the concerted action forum.
- e.** Follow and support European development of LCA standards, data, and databases.

*Commitment from Norway and Iceland fully depends on whether the revised EPBD will be adopted at national level.

Figure 3. Vision and initiatives for strategic aim 2.

In the past, the Nordic countries have been considered pioneers in other environmental aspects, and building LCA has the potential to become yet another. This requires that the current momentum in the Nordic collaboration is utilised as both Nordic and European development have accelerated with the Nordic countries still being ahead of many other European countries in terms of development and implementation of LCA in building industry.

European collaboration would benefit both the Nordic region and the rest of Europe as the Nordic experience can contribute to and support the European development while the Nordic countries could gain market benefits from becoming a role model within building LCA as well as learn from the other European countries.

Strategic aim 2 focuses on strengthening the region's contribution to European development work and preparing the authorities in the best possible way for future European legislation and initiatives in this area. Among other things, joint mapping

and maintenance of an overview of the extensive and complex set of legislation and initiatives related to climate emissions for buildings, as well as coordinate the Nordic contributions to these, are part of the aim. Strategic aim 2 and the included initiatives are seen in Figure 3.

Strategic Aim 3 – Strengthened Authority Cooperation

As all Nordic countries and Estonia are either in the first steps of implementing and integrating new regulations and methods concerning climate emissions in the national building and construction sectors, or are planning for this within the coming years, sharing experience on these matters will be valuable for all. Despite the differences between the countries with regards to development of national methods and legislation and the maturity and capacity of the markets, working with climate declarations and building LCA is still relatively new to all, and similar challenges are seen across the countries.

The fact that implementation and further development of both methods and legislation will be an ongoing process for many years to come, also including efforts for achieving market acceptance and building market capacity, further underlines the potentials in joining forces. And most importantly, working together will support the overall aim of mitigating the climate emissions from the built environment by introducing and developing solid methods and regulations concerning climate emissions.

Strategic aim 3 is about continuing and strengthening the already well-functioning Nordic authority network and taking advantage of the accumulation of knowledge, possibilities of dividing work and finding shared paths for the further development. Strategic aim 3 and the included initiatives are seen in Figure 4.



Figure 4. Vision and initiatives for strategic aim 3.

Background

The Role of the Construction Sector

Buildings and the construction sector contribute significantly to carbon emissions and climate change. Worldwide, buildings are responsible for around 40% of carbon emissions, 50% of all extracted materials, 35% of waste generated and 33% of water consumption. Other environmental impacts include resource depletion, air, water and land pollution and biodiversity loss.⁷ In Europe, the operation (i.e. use) of buildings alone accounts for around 40% of all energy consumption and 36% of carbon dioxide emissions.⁸

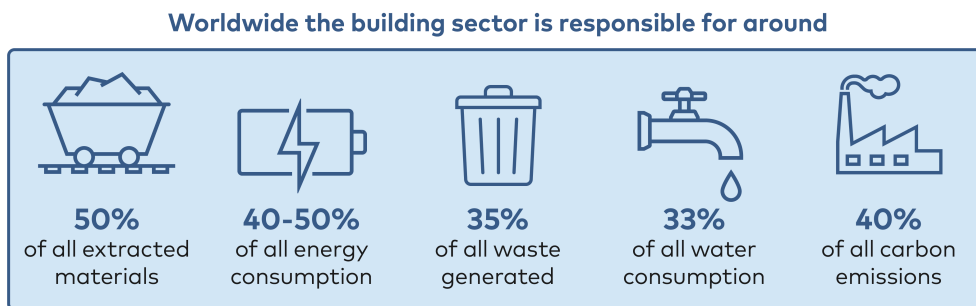


Figure 5. Global environmental impacts of the building sector. Source the European Commission.

The carbon emissions related to the building materials, often referred to as embodied carbon, in the built environment contributes to approximately 11% of all carbon emissions globally and estimated 10–20% of the EU's building carbon dioxide footprint. In countries with low-carbon energy, the embodied share can already be as high as 50%. This provides a compelling reason to address both embodied and operational carbon and calls for solid regulations and methods for calculating and mitigating these carbon emissions.⁹

What is Building LCA, and why is it relevant?

Life cycle assessment (LCA) is a method used to evaluate the potential environmental impacts and resource consumption of products and services. In the building sector, LCA is used to calculate the environmental impacts including the climate emissions or carbon footprint of a building's life cycle from the excavation of raw materials and production of building materials, through the construction processes to the use stage and finally the end-of-life and possible reuse of

7. Global Status Report (UN Environment, 2017): https://worldgbc.org/wp-content/uploads/2022/03/UNEP-188_GABC_en-web.pdf
8. Energy efficiency in buildings (EU, 2020): https://commission.europa.eu/news/focus-energy-efficiency-buildings-2020-02-17_en
9. EU Policy Whole Life Carbon Roadmap for buildings, World Green Building Council, 2022: <https://globalabc.org/resources/publications/eu-policy-whole-life-carbon-roadmap-buildings>

decommissioned materials. With the increased focus on global warming and reduction of the carbon footprint of buildings, the use of LCA in the building sector has increased over the last decade. The full life cycle of a building is illustrated in Figure 6.

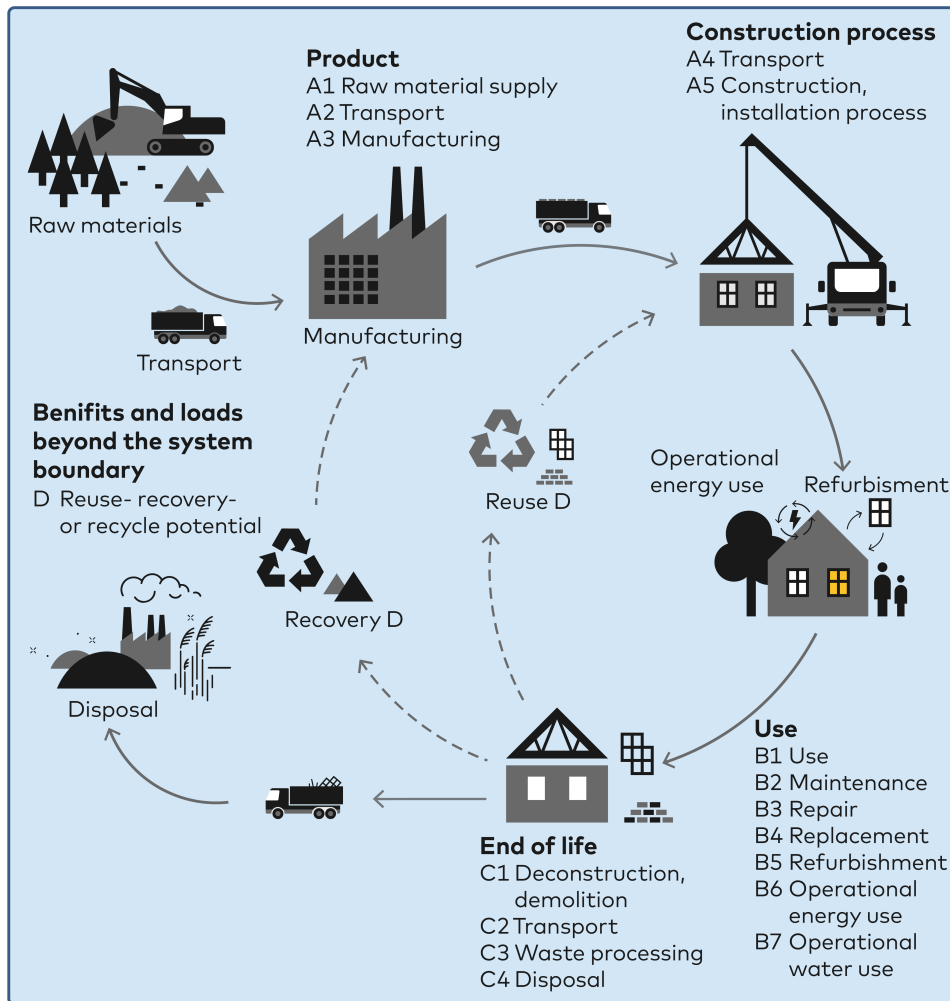


Figure 6. A buildings life cycle according to the standard EN 15978 in which the life cycle of a building is defined in five life cycle stages: A1-A3, A4-A5, B1-B7, C1-C4 and D.

Based on the information on material types and quantities, service life of buildings materials and the energy consumption of the building, the environmental impacts can be calculated. The result of an LCA can show the impacts of the different building elements and life cycle stages for a given reference study period (normally 50 years). For instance, when LCA is used in the early design stages the most significant building elements can be identified and possible improvements can be sought in the materials used or even in the overall geometry of the building.

In the new and upcoming regulation on climate declarations, LCA will be used to calculate and declare the climate emissions of new buildings, and where limit values are introduced, it will be used to document that these are not exceeded.

Within the LCA terminology the climate emissions, or the carbon footprint, is defined as the Global Warming Potential (GWP) and calculated in kg CO₂-equivalents, which includes not only carbon dioxide but several other greenhouse gases. For buildings the results are often presented in kg CO₂-equivalents per m² per year to reflect the reference study period and make results for buildings of different sizes comparable.

Why Harmonise?

Harmonisation of Nordic LCA methods and legislation is broadly supported by both authorities and stakeholders in the construction industry. The key benefits can be summarised in three main elements:

Market and Economic Benefits

Harmonised methods remove barriers for the industry as it becomes easier and more attractive to offer services and solutions across the borders, which again is expected to result in better and more cost-effective buildings due to increased competition.

Collaboration strengthens the knowledgebase and competencies for both policy makers and academia and accelerates the capacity building in the industry.

Development of Policies and Legislation

Collaboration between authorities ensures a more solid basis for decision-making and a more efficient problem-solving.

Building upon each other's experience may result in faster development and smoother implementation of more robust methods and regulation. The development processes in the Nordic countries so far include fine examples on this.

European Contribution

Nordic countries have often been seen as frontrunners on environmental aspects. Being among the first countries to implement legislation, which on top of that is harmonised across the region, can make the Nordics a role model for low-carbon construction resulting in both bigger contribution to European legislation as well as market advantages for the Nordic building industry towards a bigger European market.

If the Nordic countries, by contributing to the EU initiatives, can introduce national building LCA legislation in line with future EU legislation, this is expected to facilitate adaptation and implementation of revised legislation at a later stage. At the same time, this scenario is expected to lower the costs for the building industry to adapt to new legislation and adapt the existing practices.

Nordic Collaboration within Building Regulation concerning Climate Emissions

The Nordic building authorities have a long history of collaboration, with yearly meetings for knowledge sharing and for discussing common challenges. In the past this work has however not been anchored at a political level.

In 2018 the Nordic building authorities started discussing the perspectives and plans concerning future legislation of low carbon buildings and methods for LCA. The Nordic harmonisation effort started after the declaration 2018, and a first meeting was held in the spring 2019. Since 2021 the Estonian building authorities, the Ministry of Climate, have been part of the co-operation as well.

Co-operation with the Construction Sectors

To start up the work regarding harmonisation of building regulations concerning climate emissions within the Nordic countries, the Ministry of the Environment in Finland and the Swedish National Board of Housing, Building and Planning took the initiative to arrange the conference “Nordic Climate Forum for Construction” in Malmö in October 2019. It brought together the Nordic construction authorities, academia, and construction industry. The dialogue with stakeholders has continued since then, both through The Nordic Climate Forum for Construction and with webinars presenting new research in the field.¹⁰

Nordic Steering Group for Harmonisation of Building Regulations

Following the 2019 Ministers meeting, the importance of mandating a steering group for the harmonisation efforts was highlighted. The purpose of the steering group is to coordinate the long-term efforts seeking a more integrated Nordic construction sector, among others by working together on harmonisation of the building regulations. The mandate highlights the importance of the steering group to act as a clear link between the political level and the more operative level working with the specific administration and development of national building regulations.¹¹

10. [Nordic Harmonisation of Life Cycle Assessment Nordic Sustainable Construction](#)

11. <https://www.norden.org/en/node/43987>

Methods and Policies in the Nordic Countries Today

The interest and awareness on building LCA has been growing in all countries, and the Nordic building authorities have been working on this with different priorities and mandates during several years. Binding political decisions on implementation of LCA requirements have been in place in Finland since 2017, in Sweden since 2019, and in Denmark and Norway since 2021. In May 2023 the government in Estonia approved to make LCA calculation mandatory for new buildings at the latest by December 2025. Iceland expects to make LCA calculations mandatory for new buildings in 2024. Sweden introduced a requirement for climate declaration with effect from January 2022 as the first of the Nordic countries. From July 2022 Norway followed up with the introduction of a climate declaration requirement. Denmark introduced legislation in January 2023, and Iceland expects to introduce climate declaration requirement in 2024. Finland will introduce such no later than 2025. Estonia expects to introduce regulation in 2025 following the implementation of the revised EPBD.

A simple overview of national carbon goals and time frames for introduction and development of regulation on climate emissions from buildings is found in Figure 7 below.

Implementation into policies

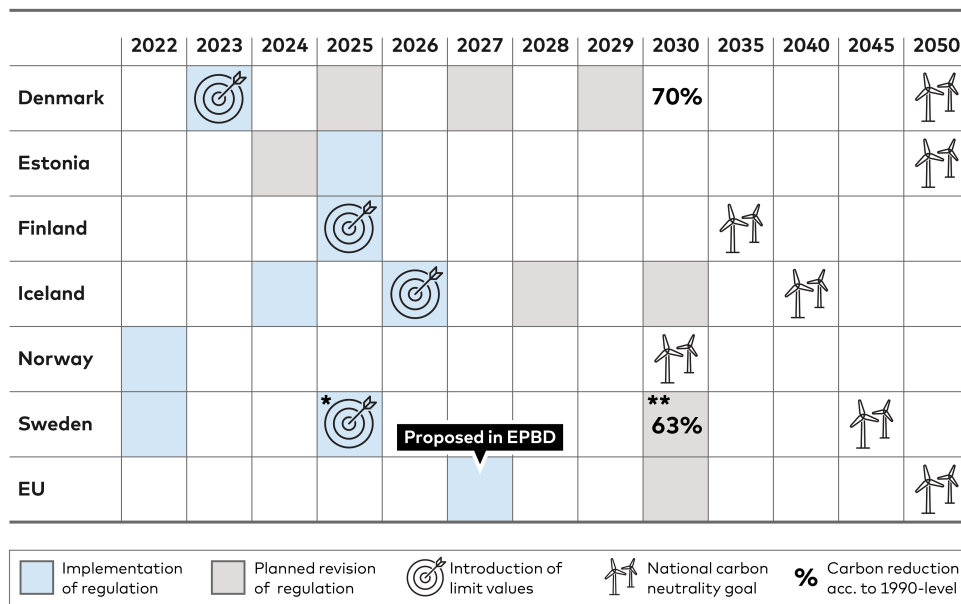
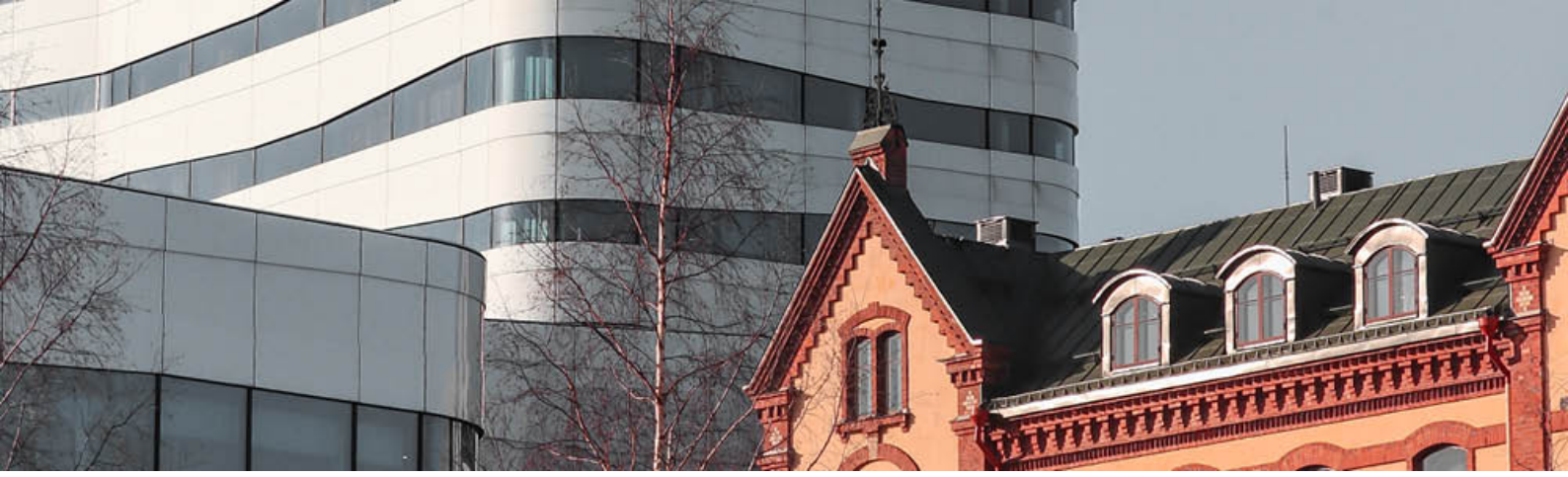


Figure 7. Overview of national carbon goals and time frames for introduction and revision of legislation on low-carbon buildings.

In all countries the implemented or proposed methods and legislation are based on the same European standard for assessment of environmental performance of buildings by LCA (EN15978) giving a common language and framework for the harmonisation efforts. This European standard defines the full life cycle of a building separated in life-cycle stages and modules. Figure 8 gives an overview of included life cycle modules in the current national methods. It is evident that both differences and similarities exist, e.g. A1-A3 and B4 are included by all countries while e.g., C3 and C4 are included by most but not all. Inevitably potential for further alignment exists.

Building LCA includes many other prerequisites and system boundaries than the list of included life cycle stages giving a much more complex picture of the comparison than seen below. For instance, the list of included building elements varies as well as the definition of the operational energy consumption.





Comparison of Methods and Scopes

Included life cycle stages	Denmark	Estonia	Finland	Iceland	Norway	Sweden	Level(s)
A1-A3	✓	✓	✓	✓	✓	✓	✓
A A4 Transport to site	✓	✓	✓	✓	✓	✓	✓
A5 Construction	✓	✓	✓	✓	✓*	✓	✓
B1 Use in building							✓
B2 Maintenance					✓	✓	✓
B3 Repair							✓
B B4 Replacements	✓	✓	✓	✓	✓	✓	✓
B5 Refurbishment							✓
B6 Energy	✓	✓	✓	✓		✓	✓
B7 Water							✓
C1 Demolition works		✓	✓	✓		✓	✓
C2 Transport		✓	✓	✓		✓	✓
C C3 Waste management	✓	✓	✓	✓		✓	✓
C4 Final disposal	✓	✓	✓	✓		✓	✓
D Additional	✓	✓	✓	✓			✓

*Only waste included

Figure 8. Overview of the included life-cycle modules (according to standard EN15978) in the current introduced or proposed national building LCA models and in Level(s). The darker blue indicates what is already implemented or will be implemented while the lighter blue indicates proposed scope of future regulation.



The European Framework related to Building LCA

The European Commission has increased focus on the construction sector as a key element in achieving the Commission's target on climate reductions, resource-efficiency, and circular economy.

Whole-life carbon of buildings is considered in relation to several EU-initiatives and future regulations setting a very important framework for the future development of LCA policies and methods at national level. Some of the most important initiatives directly involving building LCA are the Level(s) framework,¹² the EU Sustainable Finance Taxonomy Regulation,¹³ the Energy Performance of Buildings Directive¹⁴ (EPBD) and the Construction Products Regulation.¹⁵

European (EN) Standards are highly important and frequently used within the building industry as these provide common definitions, scopes, understandings etc. for many aspects of designing, constructing, and maintaining a building. Also, with regards to LCA, the European standards are highly important as these, among others, provide common consolidated ground for both calculation of the environmental performance of buildings (EN15978) and for the declaration of the environmental performance of construction products (EN15804).

Level(s), which is a voluntary sustainability reporting tool developed by the European Commission referring to the EN standard 15978, sets the Commission's method for LCA for buildings. It was launched in 2020 with a pilot version available from 2018. The importance of Level(s) has increased with first the EU Taxonomy and latest the EPBD proposal referring to elements in the LCA method in Level(s).

The ***EU Sustainable Finance Taxonomy Regulation***, often referred to as the Taxonomy, is a framework to facilitate sustainable investments. The Taxonomy is a part of the overall EU Sustainable Finance policy supporting the goals of the

12. [Level\(s\) \(europa.eu\)](#)

13. [EU Taxonomy Navigator \(europa.eu\)](#)

14. [Energy performance of buildings directive \(europa.eu\)](#)

15. [Construction Products Regulation \(CPR\) \(europa.eu\)](#)

[European Green Deal](#). In short, all financial institutes, and businesses with more than 500 employees is obliged to disclose on sustainability of their economic activities starting from 2022. With the purpose of establishing a clear and common framework for the classification of sustainable economic activities, the Taxonomy regulation has been developed. The Taxonomy builds upon assessment of six environmental objectives with climate change mitigation being one. To be classified as sustainable, an economic activity must at least fulfil the technical criteria. For economic activities within Construction and Real Estate Activities the technical criteria include a requirement of calculation of life-cycle Global Warming Potential (by LCA) for new buildings above 5,000 m². The Taxonomy refers to the LCA method of Level(s). The roll-out of the sustainable finance regulation is expected to add further fuel to the investors' and clients' demand for whole-life carbon assessments (LCA's) of buildings.

A planned ***revision of the EPBD*** includes whole life-cycle carbon as a new aspect and sets a requirement for declaration for all new buildings from 2030 and for new buildings above 2,000 m² from 2027. The requirement is based on methods and boundaries as defined in the EN standard 15978, which Level(s) also refers to. Approval of the revision proposal will set a new scene for the development of national LCA policies as it will oblige all Member States to implement these LCA requirements in national legislation starting from 2027. Should this happen, national methods should be adjusted. If Norway and Iceland, who are not EU Member States, decide to adopt the revised EPBD this must be met here as well.

The ***Construction Products Regulation (CPR)*** lays down harmonised rules for the marketing of construction products in the EU. The Regulation provides a common technical language to assess the performance of construction products and ensures that reliable and comparable information is available to professionals, public authorities, and consumers.

The necessary performance and documentation concerning sustainable use of natural resources has, however, been unclear since the introduction of the CPR in 2011.

The CPR and decision on how to include environmental performance are relevant in relation to building LCA as the performance of the construction products are important inputs for the building LCA. As long as this is unsettled, the Member States cannot require, in the national building legislations, specific product information on environmental performance that are not required by the CPR even though these include relevant data for the climate declarations. Since 2022 the revision of the CPR has been underway, including sustainability as a central element, the work is ongoing under a horizontal sustainability group. The horizontal sustainability group identifies sustainability indicators which will play an important role in the building LCA.

The European Commission aims at developing an ***EU Whole life carbon roadmap***, outlining how all building-related emissions, both operational and embodied, can be mitigated by 2050. While several EU Member States have gathered data and set out national roadmaps and strategies, an EU-wide roadmap for reducing whole life

cycle carbon emissions in buildings has not been developed yet. To support the development, the European Commission has initiated a study which, among others, will establish a baseline for embodied carbon emissions of buildings across European regions, describe how the levels of embodied carbon for a representative selection of building types and typologies can be expected to evolve by 2050, and set the trajectory towards climate objectives for operational carbon in various scenarios. The study will run until the end of 2023.



Appendix

Indicated Time Frame for Roadmap Initiatives

Strategic aim 1: Harmonisation and implementation of building regulations	2023	2024	2025	2026	2027	2028	2029	2030
<p>a. Join forces in future methodological development and seek common solutions to common issues, including:</p> <ol style="list-style-type: none"> 1. Scope and level of detail based on European LCA standards (EN 15978 and EN 15804) and EU policies and regulation. 2. Translatability of results and methods between countries. 3. Appropriate methods for defining limit values. 4. Digitalised and BIM-based LCA. 5. Following and reporting the decarbonisation of the Nordic building stock 	<p>Ongoing, prioritised topics to be agreed at meetings within authority cooperation group</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid gray; padding: 5px;"> <p>Prioritised 2023-2024</p> </div> <div style="border: 1px solid gray; padding: 5px;"> <p>Prioritised 2023-2024</p> </div> <div style="border: 1px solid gray; padding: 5px;"> <p>Prioritised 2023-2024</p> </div> <div style="border: 1px solid gray; padding: 5px;"> <p>Prioritised 2023-2024</p> </div> <div style="border: 1px solid gray; padding: 5px;"> <p>Prioritised 2023-2024</p> </div> </div>							
<p>b. Share experiences and approaches regarding national implementation of policies within the Nordic building authority group, and with relevant authorities beyond the Nordic building authorities.</p>	<p style="text-align: center;">Ongoing</p>							
<p>c. Pursue harmonisation in the national implementation of EU policies that affect building regulations concerning climate emissions.</p>	<p style="text-align: center;">Ongoing, depending on the different policies deadlines, see European outlook</p>							
<p>d. Support capacity building in the markets, e.g. by establishing/ strengthening a common Nordic digital platform for public knowledge sharing.</p>	<p style="text-align: center;">Ongoing</p>							
<p>e. Secure stakeholder involvement at Nordic level, e.g. with webinars and the yearly Nordic Climate Forum for Construction.</p>	<p style="text-align: center;">Ongoing</p>							

Strategic aim 2: European outlook	2023	2024	2025	2026	2027	2028	2029	2030
a. Map EU climate related policies, regulations, methods, and initiatives and update regularly.	Updated annually							
b. Coordinate joint Nordic contribution to the development of most important climate related EU policies, regulations, methods and initiatives 1. Energy Performance of Buildings Directive (EPBD) 2. EU Whole life carbon roadmap 3. Carbon border adjustment mechanism (CBAM) 4. Construction Products Regulation (CPR) 5. Ecodesign Directive 6. Green public procurement criteria revision 7. Level(s) 8. EU Sustainable Finance Taxonomy Regulation.	Ongoing. If a timeframe for coordination and contribution is available that is marked for the relevant policies below. An annual update will be made to follow new deadlines and new policies							
c. Communicate and exchange relevant experiences regarding building regulations concerning climate emissions to and with other European countries and stakeholders, e.g. at the concerted action forum.	Ongoing							
d. Follow European development of LCA standards, data, and databases.	Ongoing							

Strengthened authority cooperation	
a. Continue and prioritise current authority cooperation.	Ongoing. Meetings quarterly
b. Map ongoing national development of legislation and other activities, competencies, knowledge, and experience continuously.	Updated annually. At meetings in authority cooperation group
c. Enhance collaboration with and between researchers and define common Nordic research projects.	Ongoing. At meetings in authority cooperation group
d. Ease and support authority collaboration by establishing a common digital co-working platform.	Establish 2023 and update/evaluate annually

About this Publication

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Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland.

Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

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Nordic Sustainable
Construction



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