



Welcome!

#NordicClimateForum

NORDIC CLIMATE FORUM FOR CONSTRUCTION



Why?

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Programme

| | | |
|--------------|---|---|
| 08.30 | Coffee and networking | |
| 09.00 | Welcome! | |
| 09.15 | Key-note speeches | Josefina Lindblom, European Commission Esa Kallio, Municipality Finance Martin Manthorpe, NCC |
| 10.00 | Nordic ministers give their greetings | |
| 10.15 | Coffee pause | |
| 10.30 | State of the art in Nordic countries + panel discussion | Matti Kuittinen, Ministry of the Environment, Finland |
| 11.00 | Introduction to roundtable discussions | Kristina Einarsson, Boverket, Sweden |
| 11.10 | Roundtable discussion 1 – What can we reach with harmonization? | Harpa Birgisdottir, Danish Building Research Institute |
| 12.30 | Lunch break | |
| 13.20 | Roundtable discussion 2 – What can we harmonize and how? | Martin Erlandsson, Swedish Environmental Research Institute |
| 14.20 | Coffee pause | |
| 14.45 | Roundtable discussion 3 – How shall we continue? | Eivind Selvig, Civitas, Norway |
| 15.30 | Summary and conclusions | |
| 18.00 | Dinner in Malmö | |

Practicalities for today

Wifi: **wifiStGertrud**
Password: **Internet**

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Key note speakers



Josefina Lindblom
European Commission



Esa Kallio
Municipality Finance



Martin Manthorpe
NCC Denmark

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**Life cycle approach to buildings:
State of the art in Nordic countries**

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State of the art

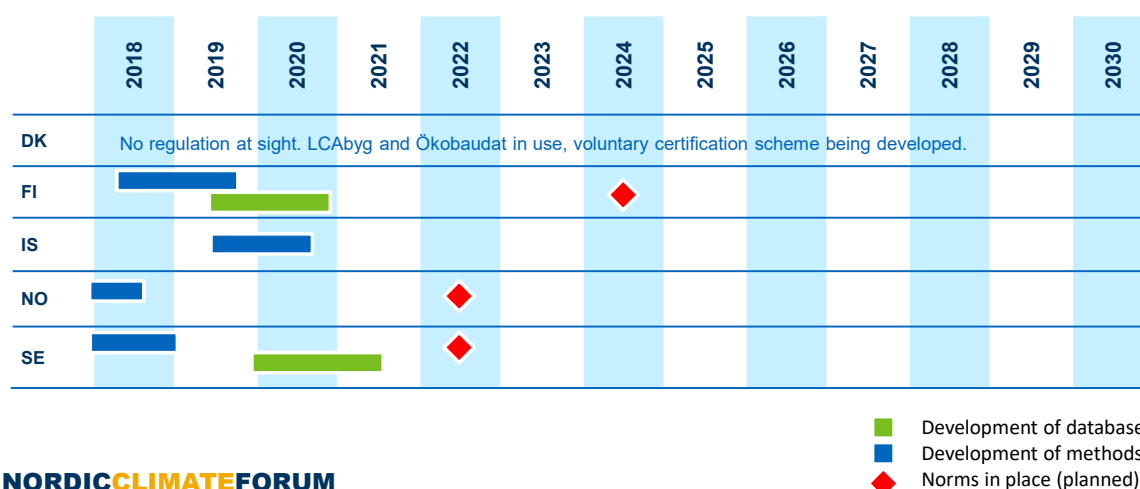
- Plans for taking life cycle approach into regulation?
- Differences and similarities in the approaches
- Level(s) and Nordic approaches
- Note: the following comparisons are based on preliminary and unconfirmed inquiries and do not necessarily represent the final outcome in the countries.

The foundation is on European EN standards; no major differences appear.

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Schedule for the development in the Nordic countries



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Included life cycle stages

| | Production | | | Construction | | Use | | | | | | | End-of-life | | | | Add |
|---------------|------------|----|----|--------------|----|-----|----|----|----|----|----|----|-------------|----|----|----|-----|
| | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Denmark | x | x | x | | | | | | x | | x | | | | x | x | |
| Finland | x | x | x | x | x | | | x | x | | x | | x | x | x | x | X |
| Iceland | x | x | x | x | x | | ? | ? | ? | ? | ? | | | | x | x | |
| Norway | x | x | x | ? | ? | | ? | ? | x | x | | | | | | | |
| Sweden | x | x | x | x | x | | | | | | | | | | | | |
| Level(s) beta | L1 | L1 | L1 | L2 | L2 | L2 | L2 | L2 | L1 | L1 | L1 | L2 | L2 | L2 | L1 | L1 | L1 |

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Included building types

| | Single-family | Residential | Office | Retail and restaurant | Schools and daycare | Hospitals and health | Hotels and dorms | Industrial | Sports facilities | Summer cottages | Renovation projects |
|------------------|---------------|-------------|--------|-----------------------|---------------------|----------------------|------------------|------------|-------------------|-----------------|---------------------|
| Denmark (LCAByg) | x | x | x | x | x | x | x | x | x | x | x |
| Finland | ? | x | x | x | x | x | x | x | x | | ? |
| Iceland | ? | x | x | x | x | x | x | x | x | | ? |
| Norway | ? | x | x | x | x | x | x | x | x | | ? |
| Sweden | x | x | x | x | x | x | x | x | x | | |
| Level(s) beta | | x | x | | | | | | | | |

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Included indicators

| | Primary energy | Greenhouse gas emissions | Acidification | Eutrophication | Ozone depletion | Summer smog | Fine particles | Human toxicity | Ecotoxicity | Water used | Waste | Damage to biodiversity | Damage to health | Depletion of abiotic resources | Depletion of fossil fuels | Odour | Other environmental impacts |
|---------------|-------------------|--------------------------|---------------|----------------|-----------------|-------------|----------------|----------------|-------------|------------|-------|------------------------|------------------|--------------------------------|---------------------------|-------|-----------------------------|
| Denmark | x | x | x | x | x | x | | | | | | | | x | x | | |
| Finland | x | x | | | | | | | | | | | | | | | x |
| Iceland | Under development | | | | | | | | | | | | | | | | |
| Norway | | x | | | | | | (x) | (x) | | (x) | (x) | ? | | (x) | (x) | |
| Sweden | | x | | | | | | | | | | | | | | | |
| Level(s) beta | x | x | x | x | x | x | | | | | | | | x | x | | |

(x) = not included in the proposed LCA but are included in the Norwegian Regulation on technical requirements for construction works.

Included building parts

Included building parts

| | Sub-structure | | | Structure | | | | | | | | | Building Services | | | | | | | | Finishes | | External | | | | | | | |
|------------------|-------------------|----------------|------------------------|----------------|---------------------------|----------------|---------|----------------|--------|----------|------|------------------|-------------------|---------------|-------------------|----------------|----------------|--------------------|------------------|-------------|------------------------|-------------------|-------------------|-----------------|-----------|---------|------------|-----------|--|--|
| | Foundations | Basement walls | Ground floor structure | External walls | Frame (columns and beams) | External doors | Windows | Internal walls | Floors | Ceilings | Roof | Stairs and ramps | Water system | Sewage system | Electrical system | Heating system | Cooling system | Ventilation system | Conveying system | Data system | Fire protection system | External finishes | Internal finishes | Fixed furniture | Furniture | Balcony | Vegetation | Pavements | | |
| Denmark (LCAbyg) | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | | | | x | x | | | x | | | | |
| Finland | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | x | | | | x | | |
| Iceland | Under development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Norway | ? | ? | x | x | x | x | x | x | x | x | x | | | | | | | | | | | ? | ? | | | | | | | |
| Sweden | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| Level(s) beta | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | | x | | |

Generic databases used in life cycle assessment

| | National database | Other dataset |
|---------|-------------------|---|
| Denmark | | Ökobaudat (German database) for LCAbyg |
| Finland | 2020 > | |
| Iceland | | Foreign databases, EPD Norge and Environdec |
| Norway | | Focus on EPD's, OneClickLCA for Statsbygg |
| Sweden | < 2022 | |

In addition to generic databases, Environmental Product Declaration (EPD) programmes exist in various Nordic countries.

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Conclusions

- There are more similarities than differences
- Methodological details could be jointly developed
- Compatibility with Level(s) is worth taking into account

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Nordic contact persons



Denmark

- Tine Faarup
- Morten Buus



Finland

- Harri Hakaste
- Matti Kuittinen



Iceland

- Björn Karlsson
- Jón Guðmundsson



Norway

- Ingunn Marton



Sweden

- Kristina Einarsson
- Erik Olsson

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Introduction to roundtable discussions

Kristina Einarsson

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Purpose of today's roundtable discussions

Your task:

- Share your knowledge
- Show on key factors
- Make suggestions

Our task:

- Collect information for Nordic harmonization.
- Engage with the industry, researchers and government.
- Create a network for continued work.

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Structure of today's roundtable discussions

- 3 – 5 min: Introduction to the dialogue by
 - Harpa Birgisdottir, Danish Building Research Institute (Denmark)
 - Martin Erlandsson, IVL Swedish Environmental Research Institute (Sweden)
 - Eivind Selvig, Civitas (Norway)
- 30 – 45 min: Discussions
- 10 min: The participants writes down their answers

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Practical steps



- You must have a computer / tablet with you.
- Connect to network “wifiStGertrud” (password: Internet).
- Log in to the webpage with the questionnaire – <https://www.delegia.com/nordicclimateforum>
- Choose “Round table discussion” and a session
- Every table has an moderator - Start the discussion!
- The moderator will announce when 10 min is left. Time for writing down your answers.
- IMPORTANT! Send your answers **after each session**.

We do not send / post your comments, however we are a public authority!

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Summary and conclusions

Kristina Einarsson

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What happens next?

- A **network** for continuing the work will be created. It will be administrated and moderated by the Swedish Life Cycle Center (SLC) at Chalmers University of Technology.
- A report with the results will be produced.
- Everyone who participated will get the report.

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Presentation of the network

by

- The Swedish Life Cycle Center (SLC) at Chalmers University of Technology *Jenny Lagergren*

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Swedish Life Cycle Center

14 partners and 7 government agencies in collaboration

Swedish Life Cycle Center | www.lifecyclecenter.se

Network for continuing the work

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Nordic Working Group for harmonization: LCA, climate and buildings

- To address the results from the Nordic Climate Forum of Construction 2019 and to deepen the discussion of a Nordic harmonization of construction between expertise,
- a report with the results will be produced
- representatives from the Nordic building authorities, academia and industry,
- increase knowledge and dissemination of results of the cooperation,
- Web meetings

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A dialogue forum

- Open for everyone
- Opportunity to influence the harmonization process

Dissemination of results:

- Everyone who participated will get the report
- Public webinar 2020

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Are you interesting in joining the network?

Contact us for more information:

Jenny Lagergren, Project Manager jenny.lagergren@chalmers.se

Maria Rydberg, Project Manager maria.rydberg@chalmers.se

Read more about the collaboration:

<https://www.lifecyclecenter.se/projects/nordic-working-group-for-harmonization-lca-climate-and-buildings/>

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