

Carbon footprint calculators for citizens

Recommendations and implications in the Nordic context

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The presentation is based on a [project](#) funded by the Nordic Council of Ministers working group on sustainable consumption and production.



Finnish Environment Institute SYKE

” We provide information, skills and services crucial to achieving sustainable development in Finland and globally. ”

Centre for SCP, environmental efficiency

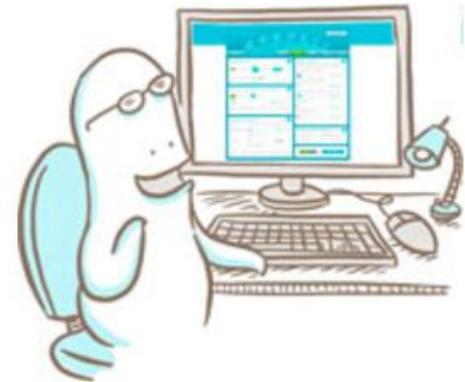
- Research on sustainable consumption and environmentally sound products and services:
 - Consumption, also in relation to urban form
 - Public procurement
 - Cleantech procurement
 - Eco-design
 - Electricity market
 - Eco-efficiency of land use planning (eco-calculator KEKO)



Photo: Virpi Liesimaa

Outline:

- Aims and reseach questions
- Data and methods
- Findings
- Recommendations



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Aims and research questions

- What calculators (i.e. carbon footprint calculators for citizens) are currently available in the Nordic countries and in the UK?
- What are learnings and success stories related to using carbon calculators in consumer engagement and behaviour change?
- What kind of suggestions of carbon calculator development and use can be made based on the Nordic experience?

Data and methods

- **Systematic desktop examination** of 10 online calculators for citizen (GHG emissions) + documentation and research publications if available. Focus is on the Nordic calculators.
- **Interviews of calculator developers/hosts**, we reached altogether six experts for an interview (phone or Skype).

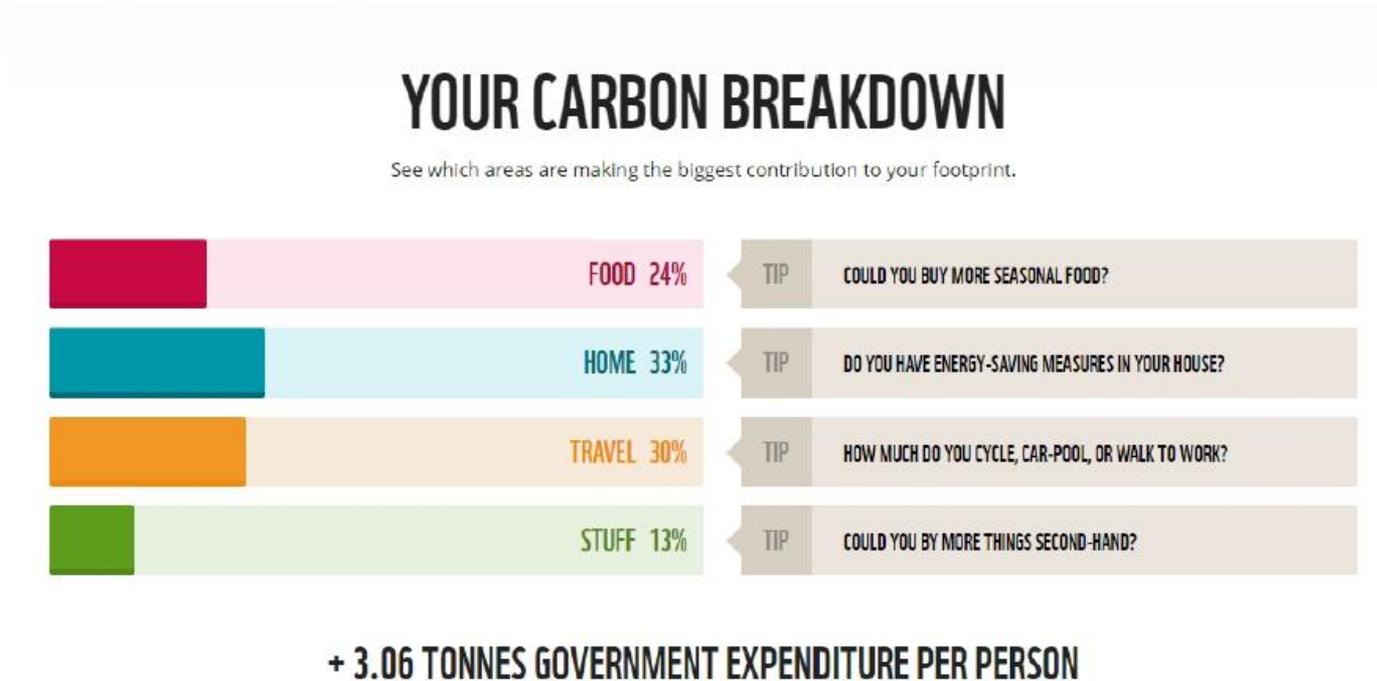


Examined calculators

Name of the calculator	Host	Country
Car comparison calculator	Orkusetur (Energy Agency Iceland)	Iceland
Climate Neutral Now	UNFCCC United Nations Framework Convention on Climate Change	Global
Ducky	Ducky as	Norway
Ilmastodieetti	The Finnish Environment Institute SYKE	Finland
Klimatkontot	IVL Swedish Environmental Research Institute	Sweden
Min klimatpåverkan (REAP Petite in UK)	SEI Stockholm Environment Institute	Sweden (+ UK)
WWF UK environmental carbon footprint	WWF UK	UK
Kolvidur calculator	Kolvidur Fund	Iceland
The Baltic Sea Card	Ålands Bank	Åland / Finland / Sweden
CO2-beregneren	Energi Tjensten (Energy Agency Denmark)	Denmark

Findings

Figure 2: A screen capture from the WWF UK footprint calculator result page presenting the personal and the government footprint



Findings: Features and expected use

Many calculators have features that allow users to see their progress and learn how to make their footprint smaller (e.g. calculator by SEI below). However, engaging users to return has been a challenge.

Pledges

[Overview](#) | [Questions](#) | [Pledges](#) | [Groups](#)

Power

Food

Travel

Shopping

Activities

Pledges let you record your intentions for the future and see the potential impact of your plans. You can return later to see how you've matched up to your expectations.

Pledge	I already do this	I will do this next year	I am unable to do this
Change my behaviour to use less energy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Replace all my lights and appliances with energy efficient ones when needed	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Switch to a green electricity tariff	✓		
Make sure my home is well insulated	✓		
Replace my boiler with a condensing one	✓		
Generate my own power using solar energy	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Generate my own power with a ground source heat pump	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Install a biomass boiler	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Power results

Your current footprint after pledges	1.0
Your improved footprint (with a greener lifestyle) after pledges	0.89

Carbon footprint (in tonnes CO₂e)

- 0.99 per person
- 0.89 per person (greener lifestyle)

[Show ecological footprint](#)
[Show household impact](#)

Findings: Calculators, campaigns and media visibility

The role of media campaigns has contributed to number of users, at least temporarily. It was also mentioned as a potential means to reach new users.



I am concerned about the serious risks that climate change poses for present and future generations.

With my signature I agree to take the following actions:



I promise to do my best to reduce the greenhouse gas emissions caused by me and to cut my personal climate footprint by half within ten years.

Sign now!



To achieve the target, I will pay attention to the climate footprint of my energy use, travelling, eating and consumption habits, electronic devices and household appliances. I will make low-carbon choices wherever possible.



Findings: Research projects and local sustainability initiatives

- Calculators developed by environmental research organisations for research purposes often in projects
 - Long term maintenance and development?
 - What should be the purpose and the target of the calculator?
- Calculators used in research or sustainability initiatives:
 - How and where to recruit users? E.g. schools, local events, through media, internal networks, intermediaries?
 - What is the actual use context from the calculator user perspective?

Findings: Role of intermediaries

- To be a link between calculator host and citizens: Municipalities, NGOs, companies, teachers/schools...
- To provide face-to-face consultation to make calculators more meaningful. Calculators can be too simple or complicated depending on the prior knowledge of the users.

Calculators help people to know what matters

Ilmastodieetti.fi Suomeksi



Measure your carbon footprint and start a Climatediet!

Climatediet is a tool to track and reduce your personal carbon footprint.

[Calculate your carbon footprint now](#)



The calculator helps you recognise what contributes to your carbon footprint and provides tips on how to reduce its size. The calculator is designed for Finnish conditions by the Finnish Environment Institute.

Summarised recommendations



Recommendations 1/3

Consider what is the target audience of the calculator and what we expect users to do with the calculator? How can we learn about users' expectations and design the calculator accordingly?

What kind of targets for calculator use and impact we can set and follow-up?

Recommendations 2/3

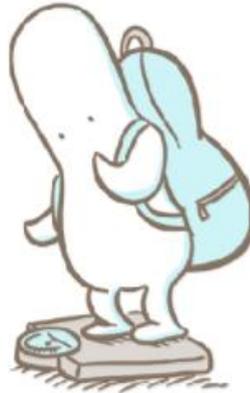
Calculator can be a useful tool in sustainability and/or research projects but creating one should not be an end in itself.

How and by whom the calculator can be linked to existing activities of citizens or intermediaries? How and what kind of change the calculator is expected to contribute to?

Recommendations 3/3

What is the interesting and/or useful input for me?

End-users



What is the added value for us?

Intermediaries

How we can reach end-users? Who could be the intermediary?

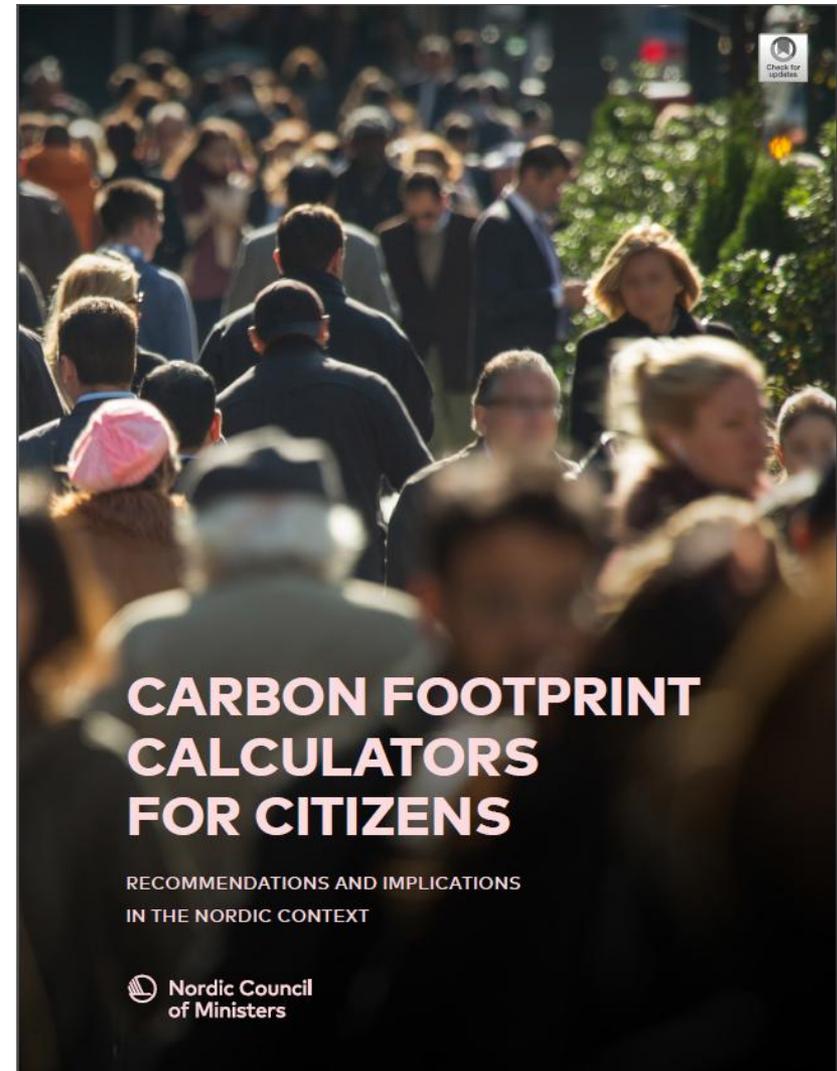
Calculator hosts

Please consult the [report](#) for more detailed list of recommendations.

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