"THE FUTURE OF SUSTAINABLE FOOD LABELLING"

MAPP
DEPARTMENT OF MANAGEMENT
AARHUS UNIVERSITY

AGRO FOOD PARK

Food & Bio Cluster Denmark

SESSION 1- UNDERSTANDING OF FOOD SUSTAINABILITY

—

Violeta Stancu

MAPP Centre

Michael Minter

CONCITO

Ditte Revsbæk Hansen

Danish Crown

Post questions for the round table session!
menti.com code **1284 5437**

FOOD SUSTAINABILITY UNDERSTANDING AMONG THE NORDIC-BALTIC CONSUMER-CITIZENS

Violeta Stancu, Susanne Pedersen,

Tino Bech-Larsen, Jessica Aschemann-Witzel

WHAT IS SUSTAINABILITY?

"meeting the needs of the present without compromising the ability of future generations to meet their own needs"

❑ **needs** of humanity and especially the poor, and

❑ **limitations** "imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (WECD, 1987)

Seen to consist of three pillars (van Bussel et al., 2022; Elkington, 2018)
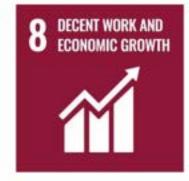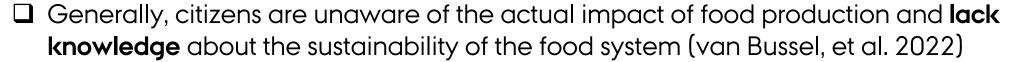
ECONOMIC

SOCIAL

ENVIRONMENT

WHAT DO WE KNOW ABOUT CONSUMER-CITIZENS UNDERSTANDING OF SUSTAINABILITY?

- ❑ Citizens are **concerned** about sustainability in general, however, less concerned at product level (Grunert et al., 2014)

- ❑ Citizens are familiar with the **environmental** aspects of sustainability, but are less aware of other aspects that sustainability entails (Peano et al., 2019, Grunert et al., 2014, van Bussel et al., 2022, Stancu et al., 2021)

- ❑ Citizens can **guess** the correct meaning of certain sustainability-related labels (Grunert et al., 2014)

- ❑ Generally, citizens are unaware of the actual impact of food production and **lack knowledge** about the sustainability of the food system (van Bussel, et al. 2022)

BACKGROUND AND AIM

- ❑ There are increasingly calls for a unified sustainability labelling scheme in the food area in order to empower consumers

- ❑ The knowledge of how consumer-citizens currently understand sustainability in a food context is key in supporting efforts to develop such a scheme

AIM

- ❑ To assess how Nordic-Baltic consumer-citizens understand sustainability in food

Funding

- ❑ *The "Food sustainability understanding in the Nordic-Baltic region" project is funded by the Nordic Working Group for Healthy, Safe and Sustainable Diet (HSSD) under the Nordic Council of Ministers*

OUR APPROACH

❑ Quantitative online survey, circa 15 min

❑ Nordic-Baltic countries

❑ Representative samples on age, gender and region, except in Iceland

  ▪ N= 600 per country, except in Iceland (N=109)

WHAT DOES SUSTAINABILITY MEAN TO CONSUMER-CITIZENS

WHAT DO YOU THINK 'SUSTAINABILITY' MEANS? WRITE THE FIRST 3 TO 5 WORDS THAT COME TO MIND.
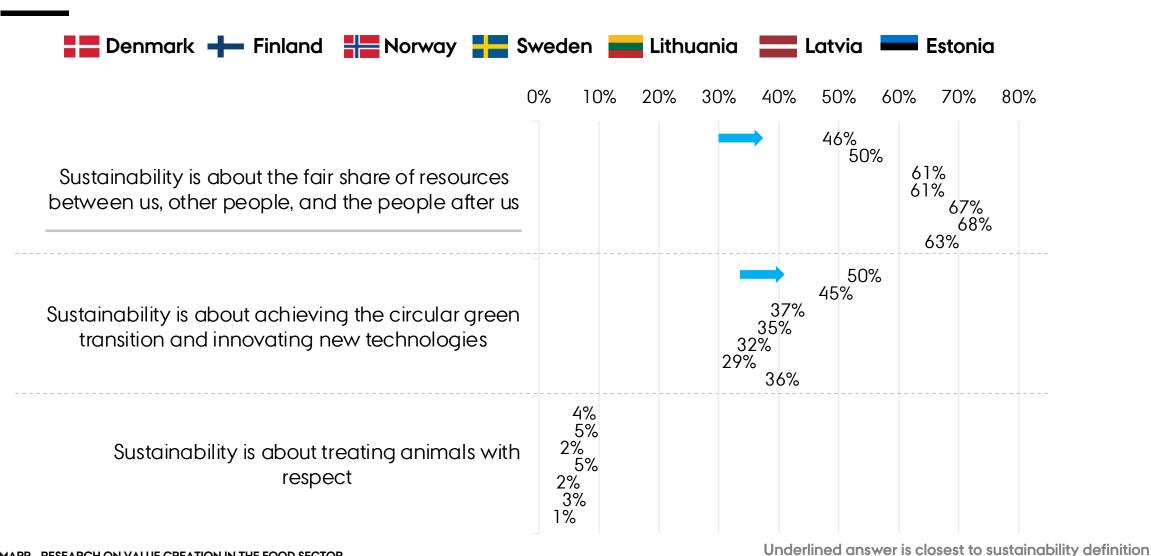

Top ten most common concepts mentioned in Denmark

Q2.1. IF SOMEONE WOULD TELL YOU WHAT SUSTAINABILITY MEANS ... TO WHICH OF THESE EXPLANATIONS DO YOU AGREE MOST?
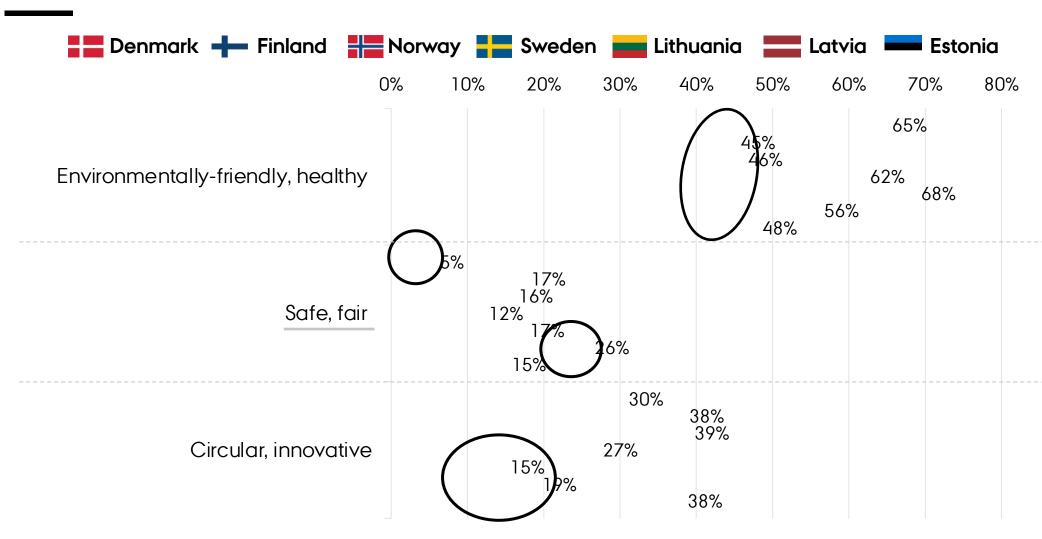
Denmark **Finland** **Norway** **Sweden** **Lithuania** **Latvia** **Estonia**

0%   10%   20%   30%   40%   50%   60%   70%   80%

Sustainability is about the fair share of resources between us, other people, and the people after us
46%
50%
61%
61%
67%
68%
63%

Sustainability is about achieving the circular green transition and innovating new technologies
50%
45%
37%
35%
32%
29%
36%

Sustainability is about treating animals with respect
4%
5%
2%
5%
2%
3%
1%

AARHUS BSS

Underlined answer is closest to sustainability definition

19 APRIL 2023

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Q2.2. WHICH OF THE FOLLOWING WORDS FIT BEST TO WHAT YOU THINK SUSTAINABILITY IS?

Denmark **Finland** **Norway** **Sweden** **Lithuania** **Latvia** **Estonia**

0%   10%   20%   30%   40%   50%   60%   70%   80%

Environmentally-friendly, healthy
- 45%
- 46%
- 48%
- 56%
- 62%
- 65%
- 68%

Safe, fair
- 5%
- 17%
- 16%
- 12%
- 17%
- 26%
- 15%

Circular, innovative
- 30%
- 38%
- 39%
- 27%
- 15%
- 19%
- 38%

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Q2.4. WHICH OF THESE SAYINGS BEST EXPRESSES SUSTAINABILITY FOR YOU?

🇩🇰 **Denmark** ➕ **Finland** 🇳🇴 **Norway** 🇸🇪 **Sweden** **Lithuania** **Latvia** **Estonia**

0%   10%   20%   30%   40%   50%   60%   70%   80%

The true secret of happiness lies in taking a genuine interest in all the details of daily life
- 8%
- 13%
- 5%
- 8%
- 18%
- 11%
- 13%

Make every decision that we make relate to the welfare and well-being of the future generation to come
- 43%
- 48%
- 51%
- 50%
- 73%
- 68%
- 70%

We cannot solve our problems with the same thinking we used when we created them
- 49%
- 40%
- 44%
- 42%
- 9%
- 21%
- 17%

Underlined answer is closest to sustainability definition

WHAT DOES SUSTAINABILITY IN FOOD MEAN TO CONSUMER-CITIZENS

Q3. THINKING ABOUT FOOD SUSTAINABILITY, PLEASE RANK THE FOLLOWING DIMENSIONS BASED ON HOW IMPORTANT YOU THINK THEY ARE, STARTING FROM THE MOST IMPORTANT (1) TO THE LEAST IMPORTANT (10).

|	Denmark	Finland	Norway	Sweden	Lithuania	Latvia	Estonia
Most important	❑ Pollution reduction ❑ Climate change prevention	❑ Health ❑ Pollution reduction ❑ Climate change prevention	❑ Pollution reduction ❑ Climate change prevention	❑ Nature preservation	❑ Health ❑ Pollution reduction ❑ Nature preservation	❑ Health	❑ Health
Second most important	❑ Nature preservation	❑ Nature preservation ❑ Animal welfare	❑ Nature preservation ❑ Biodiversity	❑ Pollution reduction ❑ Climate change prevention	❑ Climate change prevention	❑ Nature preservation ❑ Pollution reduction	❑ Nature preservation ❑ Pollution reduction
Least important	❑ Culture	❑ Culture ❑ Economic growth	❑ Culture	❑ Culture	❑ Culture	❑ Culture	❑ Culture
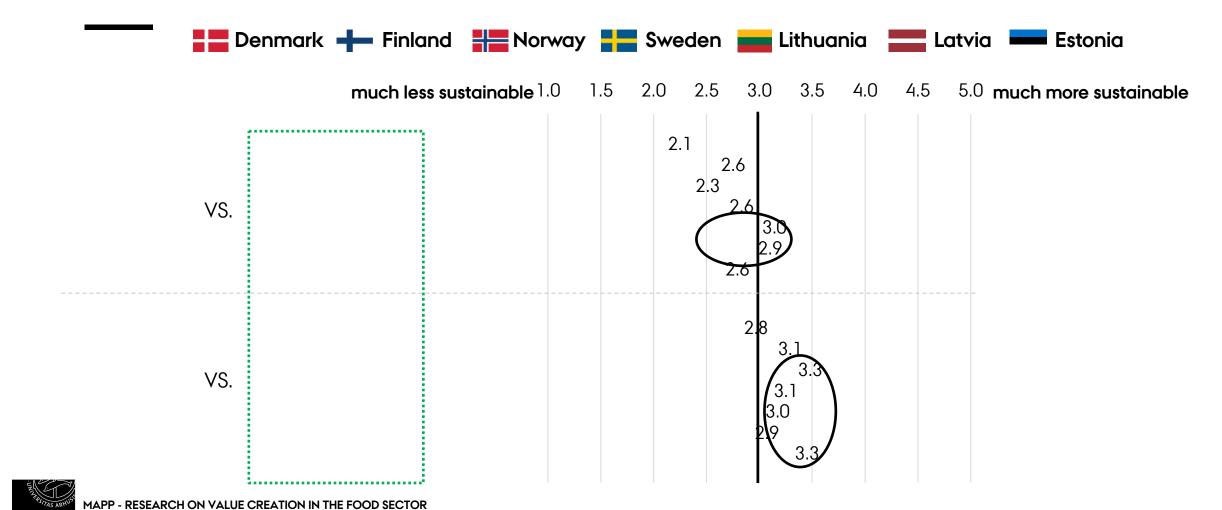
Q4. FROM THIS LIST, WHICH OF THE FOLLOWING ISSUES DO YOU THINK HAVE SOMETHING TO DO WITH FOOD SUSTAINABILITY? PLEASE SELECT ANY THAT YOU THINK APPLY.

| Three most frequently selected per country	Denmark %	Finland %	Norway %	Sweden %	Lithuania %	Latvia %	Estonia %
❑ Less food waste	**79%**	**84%**	**76%**	**71%**	**75%**	**62%**	**79%**
❑ Recyclable packaging	67%	**75%**	**65%**	**71%**	**67%**	**55%**	**68%**
❑ Local or short supply chain	57%	**71%**	63%	**70%**	37%	31%	**65%**
❑ Less energy used to transport products	**70%**	57%	**64%**	64%	40%	35%	57%
❑ Minimising carbon emissions when producing goods	**77%**	59%	62%	**67%**	47%	32%	45%
❑ Less packaging	59%	69%	63%	60%	**65%**	40%	**68%**
❑ Reducing the amount of pesticides used in food production	62%	58%	56%	**67%**	53%	**52%**	62%
❑ Reducing deforestation of the rain forest	60%	64%	**64%**	63%	46%	37%	59%
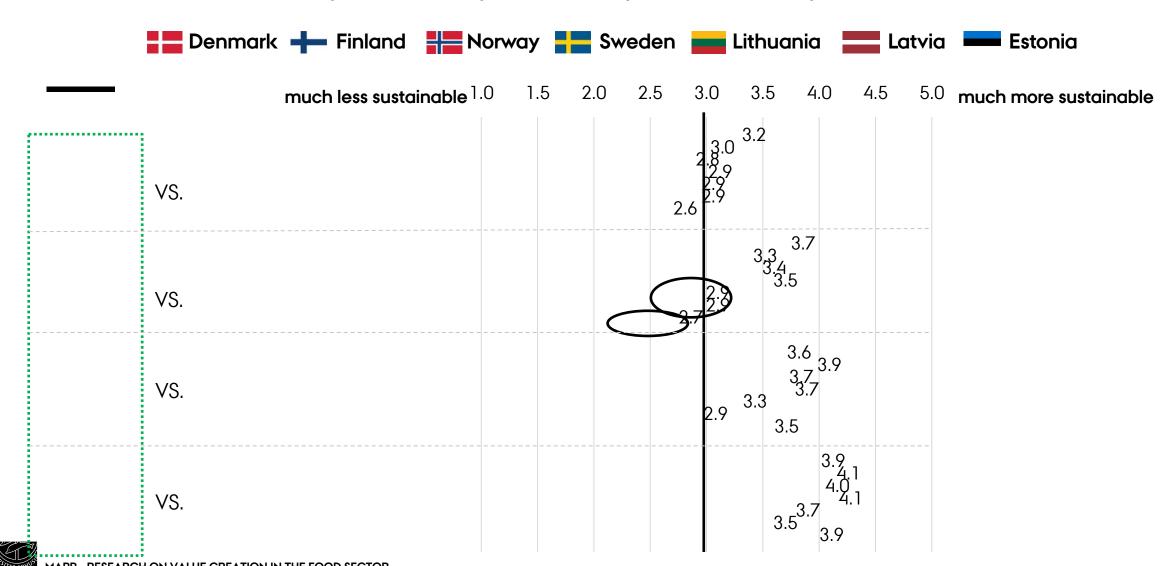
Q7. FOOD PRODUCTS VARY IN THE EXTENT TO WHICH THEY CAN BE SEEN AS SUSTAINABLE. PLEASE COMPARE THE FOODS BELOW IN TERMS OF HOW SUSTAINABLE YOU THINK THEY ARE.
HOW SUSTAINABLE IS ...(E.G. BEEF) VERSUS (E.G. CHICKEN)....?

Q7. …
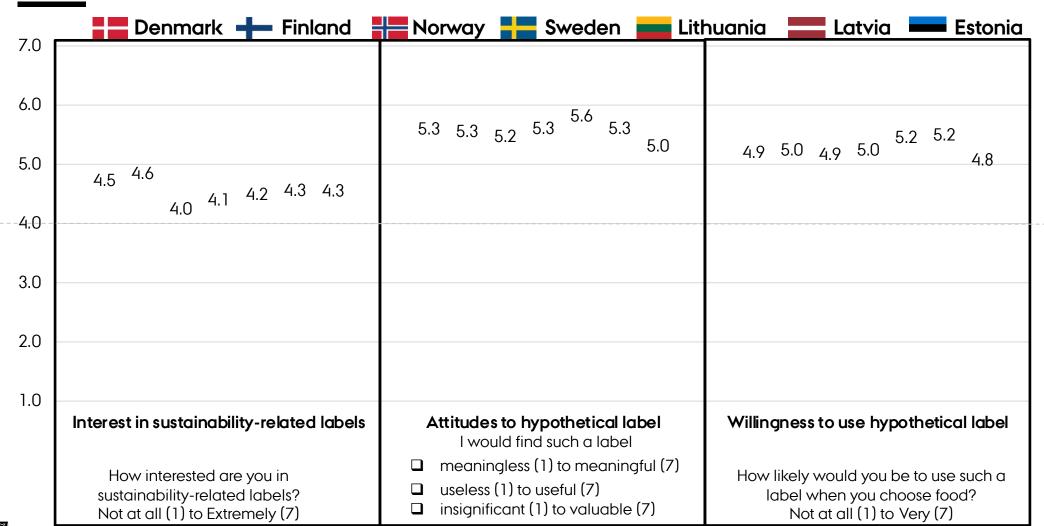# HOW SUSTAINABLE IS …(E.G. TOFU) VERSUS (E.G. CHEESE)….?

🇩🇰 **Denmark** 🇫🇮 **Finland** 🇳🇴 **Norway** 🇸🇪 **Sweden** 🇱🇹 **Lithuania** 🇱🇻 **Latvia** 🇪🇪 **Estonia**

much less sustainable 1.0   1.5   2.0   2.5   3.0   3.5   4.0   4.5   5.0 much more sustainable

VS.

3.2
3.0
2.8
2.9
2.9
2.9
2.6

VS.

3.7
3.3
3.4
3.5
2.9
2.8
2.7

VS.

3.6 3.9
3.7
3.7
3.3
2.9
3.5

VS.

3.9
4.1
4.0
4.1
3.7
3.5
3.9

INTEREST IN SUSTAINABILITY LABELS, ATTITUDE AND WILLINGNESS TO USE OF HYPOTHETICAL UNIFIED LABEL

Legend: 🇩🇰 Denmark 🇫🇮 Finland 🇳🇴 Norway 🇸🇪 Sweden 🇱🇹 Lithuania 🇱🇻 Latvia 🇪🇪 Estonia

Interest in sustainability-related labels

Values: 4.5, 4.6, 4.0, 4.1, 4.2, 4.3, 4.3

How interested are you in sustainability-related labels?
Not at all (1) to Extremely (7)

Attitudes to hypothetical label

Values: 5.3, 5.3, 5.2, 5.3, 5.6, 5.3, 5.0

I would find such a label
❑ meaningless (1) to meaningful (7)
❑ useless (1) to useful (7)
❑ insignificant (1) to valuable (7)

Willingness to use hypothetical label

Values: 4.9, 5.0, 4.9, 5.0, 5.2, 5.2, 4.8

How likely would you be to use such a label when you choose food?
Not at all (1) to Very (7)

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CONCLUSIONS AND IMPLICATIONS

CONCLUSIONS AND IMPLICATIONS – SUSTAINABILITY UNDERSTANDING

❑ Most important **dimensions of sustainability** relate to the environment and health

- ▪ Other aspects of sustainability, e.g. social, should be communicated about maybe by taking point of departure in the aspects that citizens know about already in order to better resonate with them

❑ The Nordic countries clearly believe that the **current problems need new ways of thinking** to be solved

❑ Citizens have **difficulties differentiating between products** in terms of sustainability, thus communication on this should be improved

❑ Citizens are **positive towards and willing to use a common EU sustainability label** that would take into account various aspects of sustainability

Thank you for your time!

Questions or Comments?

We would like to acknowledge the members of our Steering group for their input to this study

MAPP - RESEARCH ON VALUE CREATION IN THE FOOD SECTOR

DEPARTMENT OF MANAGEMENT

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Climate impact of food
– the missing piece of the sustainability puzzle

Experiences based on The Big Climate Database

MAPP Conference 19 April 2023

Michael Minter, Program Director, Future Food

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DENMARK'S GREEN THINK TANK

About CONCITO

Companies

Scientists

Organisations

Young active
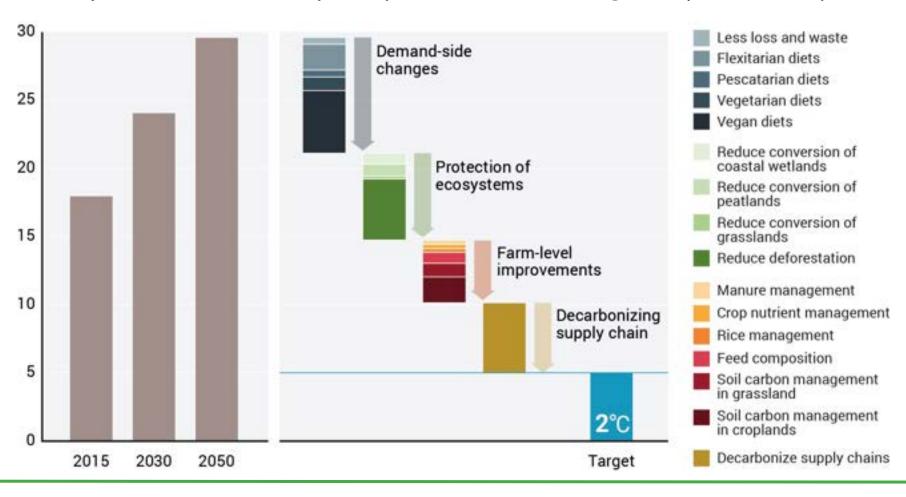
The food gap and possible solutions

Food system emissions trajectory and **technical** mitigation potentials by 2050
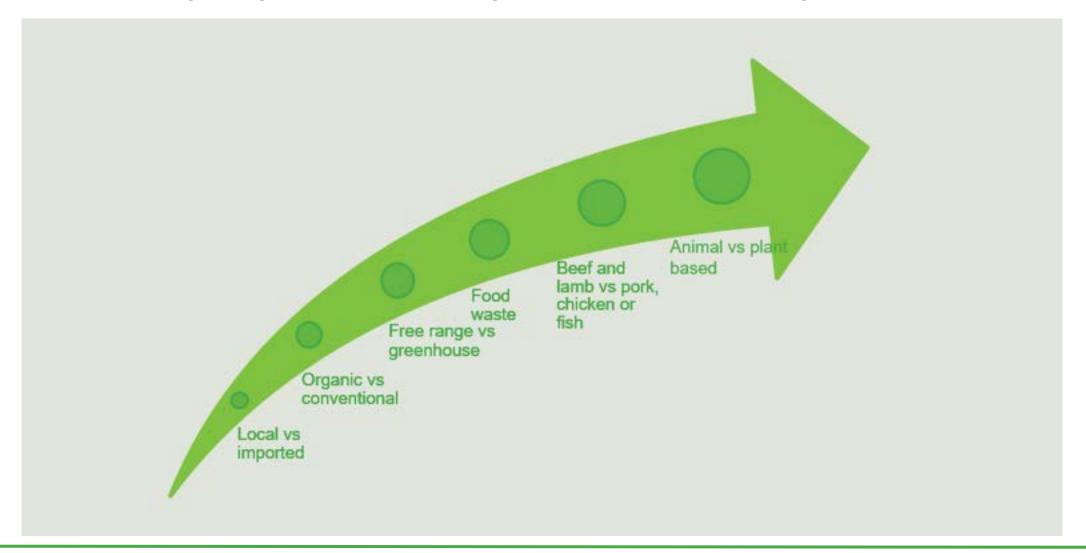
Emissions are projected to increase by up 60–90% by 2050

4 transformation domains identified

A combination of measures will be needed to transform food systems in line with emissions-reductions targets and pathways

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Climate proportions in place – food types essential

Local vs imported

Organic vs conventional

Free range vs greenhouse

Food waste

Beef and lamb vs pork, chicken or fish

Animal vs plant based

The single most important transformation:

Shifting diets!

HVAD FUCK ER EN BÆLGFRUGT?

Eat more vegetables and fruit

Eat wholegrain foods

Eat less meat – choose legumes and fish

Thirsty? Drink water

Choose vegetable oils and low-fat dairy products

Eat less sweet, salty and fatty food

Eat plant-rich, varied and not too much

The Official Dietary Guidelines – good for health and climate

Ministry of Food, Agriculture and Fisheries of Denmark
Danish Veterinary and Food Administration
altomkost.dk

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Four key barriers to the food transition

1

Perverse price signals

2

Promotion and greenwashing

3

Lack of information on climate

4

Lack of plant based cooking skills

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the big
CLIMATE DATABASE

Version 1

Average carbon footprint of 500 food products

Initiated and published by

CONCITO
DENMARK'S GREEN THINK TANK

Calculated by:

LCA consultants

Supported by:

salling fondene

the big
CLIMATE DATABASE
Version 1

Dansk ● CONCITO

Climate database   Background   Download   Q&A

Climate footprint calculated in kg. Click on column titles to sort.

Category	Food	CO2e pr kg	Agriculture	ILUC	Processing	Packaging	Transport	Retail
Beverages	Alcoholic soda, 4%	0.72	0.25	0,00	0,21	0,19	0,07	0,01
Beverages	Apple juice	1.64	0.32	0,02	0,61	0,31	0,37	0,01
Beverages	Apple juice, canned or bottled	1.64	0.32	0,02	0,61	0,31	0,37	0,01
Beverages	Aquavit, 40 % vol, average values	2.04	1.10	-0,05	-0,11	0,37	0,72	0,01
Beverages	Beer, Danish household, low alcohol	0.60	0.07	0,05	0,24	0,16	0,07	0,01
Beverages	Beer, lager, alc. 4.4 % by vol.	0.60	0.07	0,05	0,24	0,16	0,07	0,01
Beverages	Beer, strong, alc. 7.6 % by vol.	0.60	0.07	0,05	0,24	0,16	0,07	0,01
Beverages	BITTER, Gammel Dansk Bitter Dram	2.04	1.10	-0,05	-0,11	0,37	0,72	0,01
Beverages	Brandy, cognac	8.22	0.99	-0,02	4,80	0,37	2,07	0,01
Beverages	Cider 4.5%	1.10	0.28	0,01	0,53	0,19	0,08	0,01
Beverages	Cocoa, instant, without milk, powder	4.98	2.75	2,84	-5,52	4,32	0,58	0,01
Beverages	Cocoa, powder	4.98	2.75	2,84	-5,52	4,32	0,58	0,01
Beverages	Coffee bean, roasted, ground	3.18	1.30	0,84	0,21	0,24	0,58	0,01
Beverages	Coffee, instant, powder	10.11	2.35	1,54	2,43	3,21	0,58	0,01
Beverages	Elderberry, juice, concentrated, sugar added	2.40	1.17	0,26	0,28	0,31	0,38	0,01
Beverages	Espum jok	0.53	0.14	0,00	0,17	0,16	0,06	0,01

SEARCH

[   ] Search

GOODS CATEGORY

- Beverages (32)
- Bread/bakery products (34)
- Candy/sugar products (13)
- Cereal/grain/pulse products (22)
- Fruit/vegetable products (75)
- Fruits (27)
- Meat/poultry (62)
- Milk/eggs/substitute products (31)
- Oils/fats edible (4)
- Prepared/preserved foods (61)
- Seafood (51)
- Seasonings/preservatives/extracts (32)
- Vegetables (56)

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Key features of the database

🔓 **Free access** for all

🔍 **Unique transparency** on data and references

⌘ Carbon footprint split up into **different elements of the supply chain**

♺ **Consistent LCA-model** and calculation of all products

🌐 **Easily applicable** to the food market of **other countries**

the big
CLIMATE DATABASE
Version 1

Meat and poultry generally have high climate footprints:

- Turkey — 2–3 kg CO2e/kg
- Chicken — 2–4 kg CO2e/kg
- Game — 2.5 CO2e/kg
- Pork — 3–5.5 kg CO2e/kg
- Lamb — 25–27.5 kg CO2e/kg
- Beef — 31–152 kg CO2e/kg

Seafood varies significantly in footprint:

- Mussels, oysters, etc. — 0.2–1 kg CO2e/kg
- Herring, salmon, bream, etc. — 9–17 kg CO2e/kg

Dairy products have medium–high to high footprints:

- Milk — 0.5–1 kg CO2e/kg
- Whipping cream — 2 kg CO2e/kg
- Butter — 4 kg CO2e/kg
- Cheese — 3–7.5 kg CO2e/kg

Fruit and vegetables have the lowest footprints:

- Raw fruit — 0.1–3 kg CO2e/kg
- Raw vegetables — 0.1–4 kg CO2e/kg
- Pepper/fresh herbs — 1–3 kg CO2e/kg
- Legumes — 1–3 kg CO2e/kg
- Frozen/dried fruit — 0.5–4 kg CO2e/kg

Bread and processed foods have medium–high footprints:

- Food grains — 1 kg CO2e/kg
- Bread, grains — 1–2 kg CO2e/kg
- Rice — 1.5 kg CO2e/kg
- Pasta — 1.5 kg CO2e/kg
- Cake, biscuits — 2–3 kg CO2e/kg

Mushrooms are in the low end for vegetables:

- Champignon, oyster mushroom — 0.5 kg CO2e/kg

Plant-based alternatives generally have low footprints:

- Plant-based beverages — 0.5–3.5 kg CO2e/kg
- Vegan mince/burgers — 1–2 kg CO2e/kg

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Status

- Launched in February 2021

- Approx 150.000 visits, 500.000 pageviews, 5.000 downloads

- Nordic Council Environment prize 2021

- Version 1.1 to be launched spring 2023

Selected examples:

- Climate labelling pilot in Netto and Coop (retailers)

- Climate scores on recipes in Føtex (retailer)

- GHG reduction target in Meyers (catering)

- GHG results on food types in Danish Cater (wholesale)

- Educational material for primary school

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Status – use in public procurement

- At least 13 municipalities, regions and the state use climate data in public procurement targets and kitchens.
- 7 of them directly or indirectly based on The Big Climate Database.

Information

KLIMAAFGIFT Læsetid 6 min.

I Aarhus Kommune har afgifter på oksekød nedbragt forbruget med over 30 procent

Det er blevet 32,50 kroner dyrere for et kommunalt køkken at købe et kilo hakket oksekød i Aarhus. Afgiften har nedbragt forbruget med over 30 procent. Aarhus gør en indsats for Danmarks reduktionsmål, siger kommunen

DEL ARTIKEL 🎁

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CO2e of 1 kg minced beef vs minced pork and vegetables

100 kg

10 kg

1 kg

the big
CLIMATE DATABASE
Version 1

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Plans and ambitions

Version 1.1. medio 2023 with adjustments and corrections based on feedback

Further communication and roll-out in Danish foodsector, municipalities etc.

Examining and developing the potential of the tool at EU and international level

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Thank you!

Read more

concito.dk

denstoreklimadatabase.dk

Contact

Michael Minter, mm@concito.dk

CONCITO PROGRAM

Food

More food on less land

CONCITO's Food Program aims to promote climate-friendly and sustainable food systems, consumption patterns, and lifestyles in a visionary and constructive way.

The global food system and our consumption of material goods are putting pressure on the planet and the climate. The food system is responsible for about 30% of global greenhouse gas emissions and needs to be transformed along the entire value chain from farm to fork. The challenge is particularly remarkable in a country like Denmark, with high animal production and consumption. The consumption of material consumer goods is the largest individual climate burden, and it also requires a transformation of our consumption patterns and lifestyles.

Through knowledge gathering, dialogue, dissemination, and advocacy, we identify and promote possible solutions for the green transition based on the latest Danish and international knowledge. We work in an evidence-based, independent, constructive and pragmatic way, helping to keep the focus on the essential elements of the transition.

In the Food program, we focus on:

1 Promoting a less climate-intensive food production through land-efficient and low-impact production methods in agriculture and the food industry.

2 Promoting climate-friendly food habits through better climate data and information, and better supply in the grocery and food service sectors.

3 Promoting climate-friendly and sustainable consumption patterns and lifestyles.

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Danish Crown

Together, we are creating a more sustainable future for food

Danish Crown in brief FY 21/22

49 billion

meals each year[1]

5,404
Danish farmers own
Danish Crown

26,600
Employees

64 billion
Revenue
in DKK

1. Based on dietary guideline of 50 g meat per day.

Being the supplier of
49 billion meals
comes with a responsibility

Sustainability in Danish Crown

"

Our ambition is to be a successful and leading player in sustainable meat production by 2030

Jais Valeur
CEO of Danish Crown
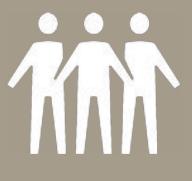
Sustainable farming

Sustainable production

Good jobs for everyone

Together with customers and consumers

We strive to earn the confidence of customers and consumers and meet their needs for healthy, safe and responsible food

We support target 2.1 by supplying safe and nourishing food all over the world.

We support targets 12.1 and 12.2 by encouraging sustainable consumption, sustainable management and efficient use of natural resources.

We support target 17.H by encouraging sustainable consumption and production patterns and by participating in effective partnerships.

In our 2022 consumer study*, we found that consumers struggle in making sustainable food choices – but that they are motivated for it

Consumers want to act sustainable

Sustainability is on the consumers' radar and they see it as a subject full of complexities which is hard to handle. Therefore, they are navigating towards ideal states for sustainability.

Food is an occasion for sustainable decision-making
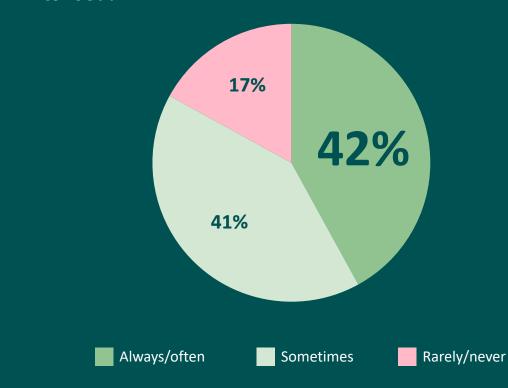
Food is a daily occasion for consumers to take action. However, they find it difficult to do so. Therefor, they seek guidance on how to make sustainable food choices.

A climate label can ease sustainable decision-making

In a different study**, we found that **46%** of Danish consumers find it difficult to make sustainable choices.

At the same time, **63%** says certificates drive choices, hence, a climate label could ease the ability to make sustainable choices.

How often are consumers acting sustainable in relation to food?

42%

41%

17%

■ Always/often   ■ Sometimes   ■ Rarely/never

We have different ways of helping consumers navigate towards a more sustainable behaviour

CLIMATE

ANIMAL WELFARE

HEALTH

NATURE

FOOD WASTE
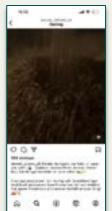
PACKAGING
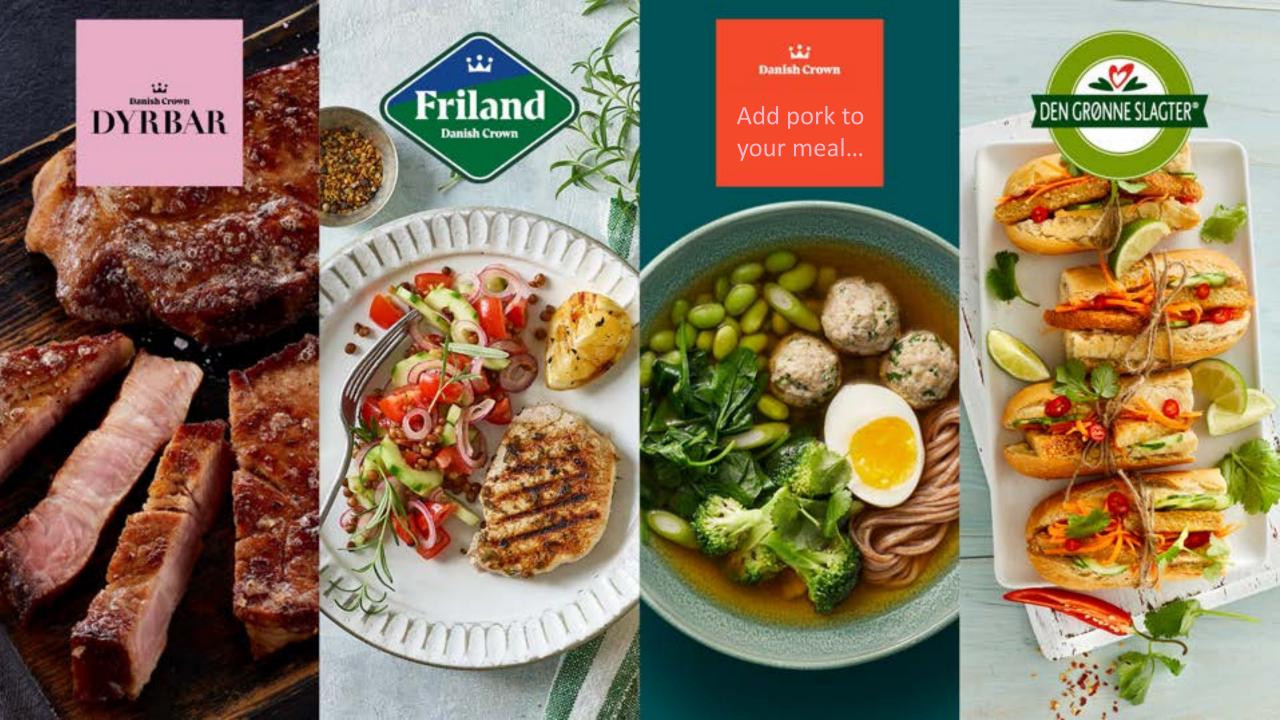
Primary data is in place through our internal LCA model and we are ready to share the footprint of our products with the end consumers

Danish Crown

National Brand campaign
Focused on food and opinions

Add pork to your meal…

Danish Crown

Better Food. Brighter Future.

TOO MUCH, TOO COMPLEX, TOO SIMILAR –

CAN META LABELS SUPPORT NAVIGATION IN THE SUSTAINABILITY LABELLING LANDSCAPE?

Gabriele Torma

Post-Doctoral Researcher

MAPP centre

Aarhus University

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RELEVANCE

- More than 450 sustainability labels worldwide

- A tool to make the "right choice" the "easy choice"

- Credence attribute → Search attribute
  - you know what to look for
  - for those who care

TYPES OF SUSTAINABILITY LABEL

▪ (Quasi-) Mandatory or voluntary

▪ Binary or multilevel

▪ Positive or negative

▪ One or multi dimensional

PROBLEM

Figure 1: A sample of popular environmental labels.
(Heyes et al., 2020)

- Too many, too complex, too similar?

- Who knows what specific sustainability labels actually mean and how they differ from each other?

  ➢ Overload
  ➢ Tradeoffs

TRADEOFFS BETWEEN LABELS

- Different label combinations on one product can lead to trade-offs for consumers about different sustainability dimensions

- Study on the effect of different multi-level sustainability labels: animal welfare, climate, an (binary) organic, and a nutritional label

- Consumers can handle **two** different types of labels at the same time

- The effects of a negative label on WTP cannot be compensated by a positive label.

Sonntag, W. I., Lemken, D., Spiller, A., & Schulze, M. (2023). Welcome to the (label) jungle? Analyzing how consumers deal with intra-sustainability label trade-offs on food. Food Quality and Preference, 104, 104746.

META SUSTAINABILITY LABEL

A **meta sustainability label** scheme "condenses existing product-labels and other communication measures into an **overarching Sustainability message** in order to enable household consumers better to align purchase decisions with Sustainable Development goals."

Dendler, L. (2014). Sustainability meta labelling: An effective measure to facilitate more sustainable consumption and production? Journal of Cleaner Production, 63, 74-83.

A meta-sustainability label could **replace** the diverse single-issue **sustainability labels** included in their study and would **satisfy 84% of consumers.**

Janßen, D., & Langen, N. (2017). The bunch of sustainability labels – Do consumers differentiate? Journal of Cleaner Production, 143, 1233-1245.

RESULTS OF LITERATURE REVIEW
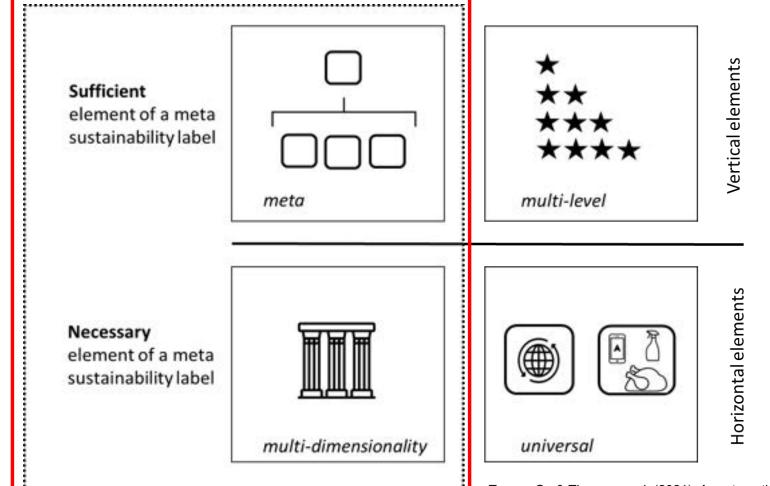
Benefits

- Amplifying positive effects

- Better understanding

- Mitigation of negative effects

- Further benefits

Disadvantages

- Amplifying negative effects

- More confusion

- Amplifying negative effects

- Further disadvantages

Torma, G., & Thøgersen, J. (2021). A systematic literature review on meta sustainability labeling–What do we (not) know?. *Journal of Cleaner Production*, *293*, 126194.
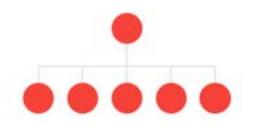
WHAT DEFINES A META SUSTAINABILITY LABEL?
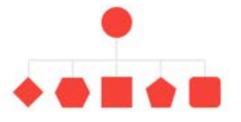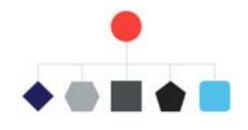
Torma, G., & Thøgersen, J. (2021). A systematic literature review on meta sustainability labeling–What do we (not) know?. *Journal of Cleaner Production*, 293, 126194.

BRAND FAMILY LOGOS

Branded House

Main brand is most prominent with sub-brands clearly taking a second tier

Coke, Diet Coke

Sub-Brands

There is a clear association with the master brand, but sub-brands stand on their own

Virgin, Virgin Atlantic, Virgin Mobile

Endorsed Brands

The parent brand is in the background, but sub-brands gain from their association with it

3M, Scotch, Post-It

House of Brands

Most people aren't aware the sub-brands are from the holding company

Unilever, Dove, Breyers, Vaseline

SUSTAINABLE DEVELOPMENT GOALS

Meta label

Common family label design

ØGO
ØKOLOGISKE BRUNE RIS
1 kg

øko rugbrød
8,4% fibre
33% fuldkorn

BKI
KAFFEN ALLE KA' LI'
ØKOLOGISK FAIRTRADE
Rund og Harmonisk
MELLEMRISTET
FORMALET KAFFE
350 g ℮

ARVID NORDQUIST
Selection
ECO
MELLANMÖRK
FRUKTIG & HÖTIG
KRAV
PEOPLE · PLANET · COFFEE
100% SUSTAINABILITY CERTIFICATIONS
100% CO₂ COMPENSATED
100% QUALITY ARABICA BEANS

KORNKAMMERET
ØKOLOGISK GRAHAMSMEL
1 KG

100% CO₂ compensated

KRAV

FAIRTRADE

Knækrisblanding lanceres med Nordic Food Partners

Folkekirkens Nødhjælp har i samarbejde med Salling Group og Nordic Food Partners lanceret produktet Økologisk Aromatisk Ris. Knækrisblandingen indeholder 50 % knækkede basmatiris, der ellers sorteres fra under produktion, og bidrager derved til bekæmpelse af madspild.

Læs mere

EXPERIMENTAL DESIGN

- 2 × 2 × 2 × 3
- label × COO × roasting × price
- Fractional factorial design
- 8 choice sets with
- 4 choice alternatives each
- Between-subject-design
- 4 different labelling conditions

Representative sample
~500 participants per country (USA, Germany)
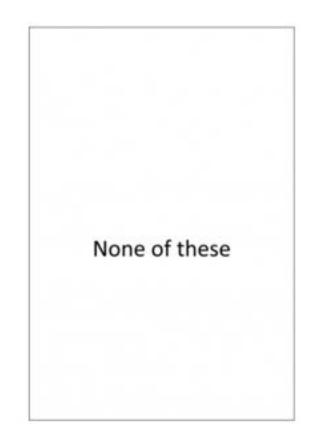
Attribute	Levels
Labelling	Label
	No label
Country of origin	Colombia
	Ethiopia
Roasting	Dark
	Medium
Price	Low
	Medium
	High

Choice set example, German, label condition 1

Four different label conditions - Germany

| Condition 1 **Traditional** | Condition 2 **New design** | Condition 3 **Traditional + meta** | Condition 4 **New design + meta** |

RESULTS – DIRECT EFFECTS

- In both countries, consumers preferred a labelled, medium roasted coffee from Colombia at the lowest price

- Labelling and price being the most important product attributes in both countries

- The importance of labelling and price in Germany is even more striking

- **Respondents prefer sustainability-labelled products over not labelled products**

RESULTS – INTERACTION & MODERATION

- USA -A meta sustainability labelling communicated as a family design line scheme outperforms traditional labelling among consumers in general

- GERMANY - Different consumer segments prefer different meta labelling designs
    - More positive perception of SL prefer adding a meta label to traditional labelling
    - More subjectively knowledgeable prefer the new design with family design line
    - More confused consumers prefer the new design with family design line and meta label added

CONTRIBUTION

Is a **meta sustainability label** a potentially useful tool for sustainability transformation?

- First empirical evidence
- More research needed
- Pushing the debate

Which type of climate label helps consumers to more climate friendly shopping?

Two labels to guide consumers

Best-in-class label

- Compares products within product categories

- 19 categories with med animal based and vegetarian products as seperate categories.
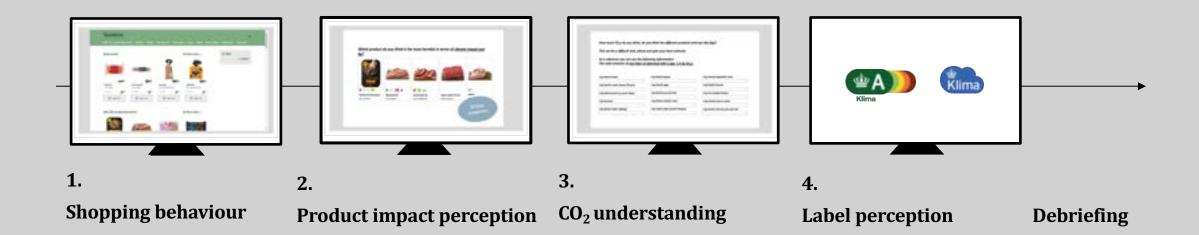
Scale (trafic light)

- Compares products across the entire supermarket

- Five levels with an exponentially increasing thresholds.

0	1,1	2,5	5	>10

kg CO_2

Experimental flow

1.

Shopping behaviour

2.

Product impact perception

3.

CO_2 understanding

4.

Label perception

Debriefing

Brød og kiks   Se flere varer →

🛒 **Kurv**

I alt **0,00 kr.**

Burgerboller
320 g / Hatting
Pr. kg 62,50   20⁰⁰

Flerkornsbaguette
250 g / Butikken
Pr. kg 73,00   18²⁵

5-kornsbrød
625 g / Schulstad Det Gode
Pr. kg 40,40   25²⁵

Solsikkeboller
500 g / Schulstad Det Gode
Pr. kg 50,50   25²⁵

🛒 Læg i kurv   🛒 Læg i kurv   🛒 Læg i kurv   🛒 Læg i kurv

Kød, fisk og kød alternativer   Se flere varer →
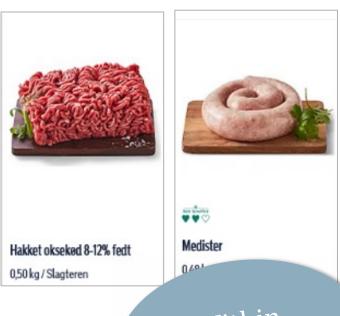
Which product do you think is the least harmful in terms of _climate impact per kg?_

Plantebaseret kebab vegansk...

180 g / Like Meat

Kyllingeinderfilet

325 g / Butikken

Oksefilet bøffer øko

350 g / Butikken ØKO

Hakket oksekød 8-12% fedt

0,50 kg / Slagteren

Medister

0,6...

Within categories

Which product do you think is the least harmful in terms of <u>climate impact per kg?</u>

Sødmælk 3,5% fedt laktosefri

Agurk
1 stk

A38 m. hindbær 0,5% fedt
1 liter / Arla A38

Hakket økologisk kyllingekød...
300 g / De Danske Familiegårde

Spaghetti
250 g / Pastella

Across categories
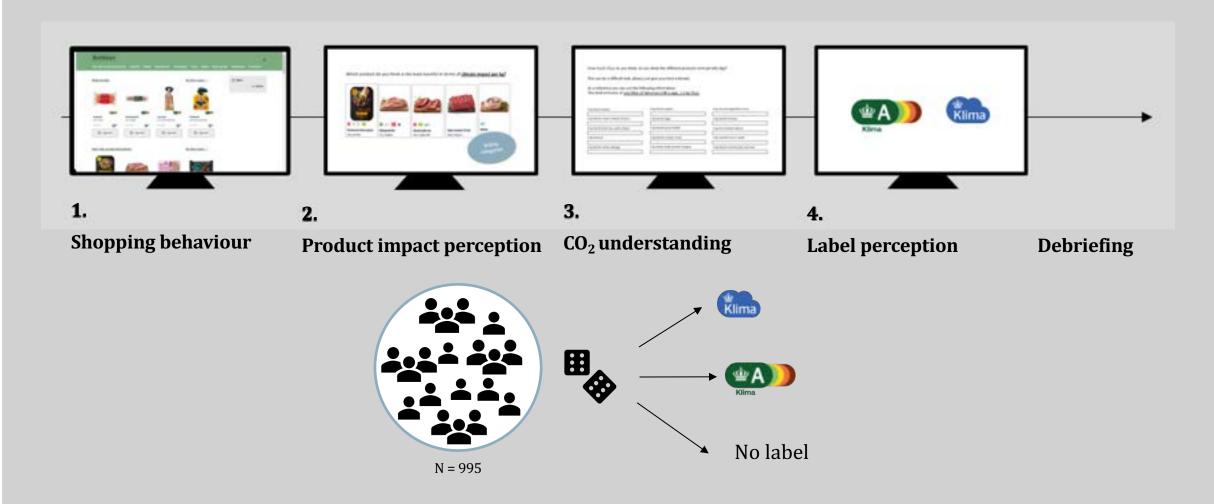
How much CO$_2$e du you think, do you think the different products emit per kilo (kg)?

This can be a difficult task, please just give your best estimate.

As a reference you can use the following information:
The total emission of <u>one litter of skimmed milk is app. 1.5 kg CO$_2$e.</u>

1 kg Danish butter	*1 kg Danish apples*	*1 kg minced vegetable mince*
1 kg Danish cream cheese (25 pct.)	*1 kg Danish eggs*	*1 kg Danish honney*
1 kg Danish pork (e.g. pork chops)	*1 kg Danish ground beef*	*1 kg hot-smoked salmon*
1 kg bananas	*1 kg Danish chicken meat*	*1 kg canned tuna in water*
1 kg Danish white cabbage	*1 kg ready-made spinach lasagna*	*1 kg Danish minced pork and veal*

Experimental flow

1. Shopping behaviour

2. Product impact perception

3. CO_2 understanding

4. Label perception

Debriefing

N = 995

No label
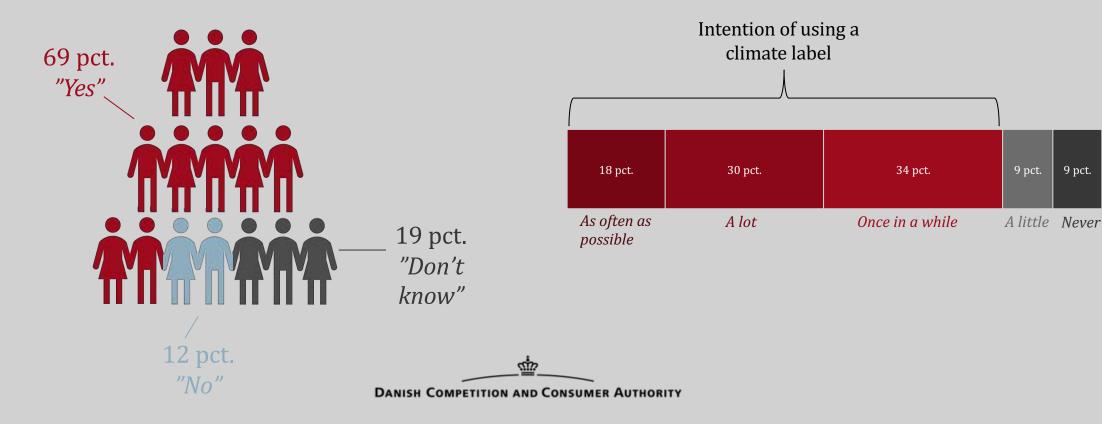
Results
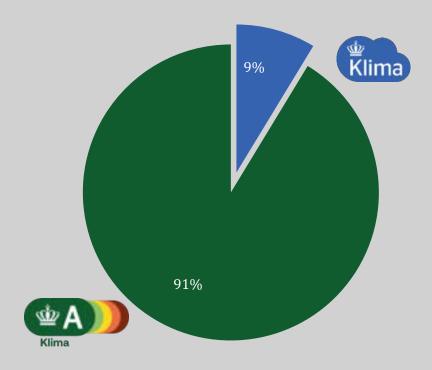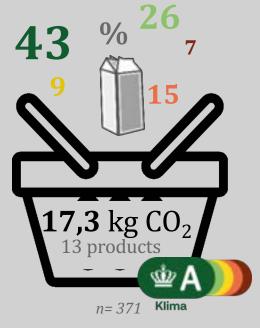
Consumers have a clear preference towards the scale

Which type of climate label do you think best guides you?

Climate labels alone do not reduce the amount of CO_2 in the shopping carts

43 % **26** 7 9 15

17,3 kg CO_2
13 products

n= 371

1,22 CO_2 pr. produkt

43 10,0 pct. **27** 6 8 16

17,9 kg CO_2
14 products

n= 284

1,19 CO_2 pr. produkt

9,6 pct.

18,0 kg CO_2
13 products

n= 340

1,31 CO_2 pr. produkt

DANISH COMPETITION AND CONSUMER AUTHORITY
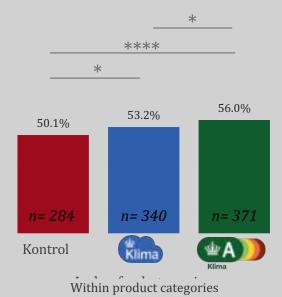
The scale enables more consumers to identify climate-friendly alternatives

Share of consumers, who correctly identify the product with the least harmful climate impact

Within product categories

Chi² = 11.18, df = 3, p-value = 0.01

Across product categories

Chi² = 22.72, df = 3, p-value < 0.001

DANISH COMPETITION AND CONSUMER AUTHORITY
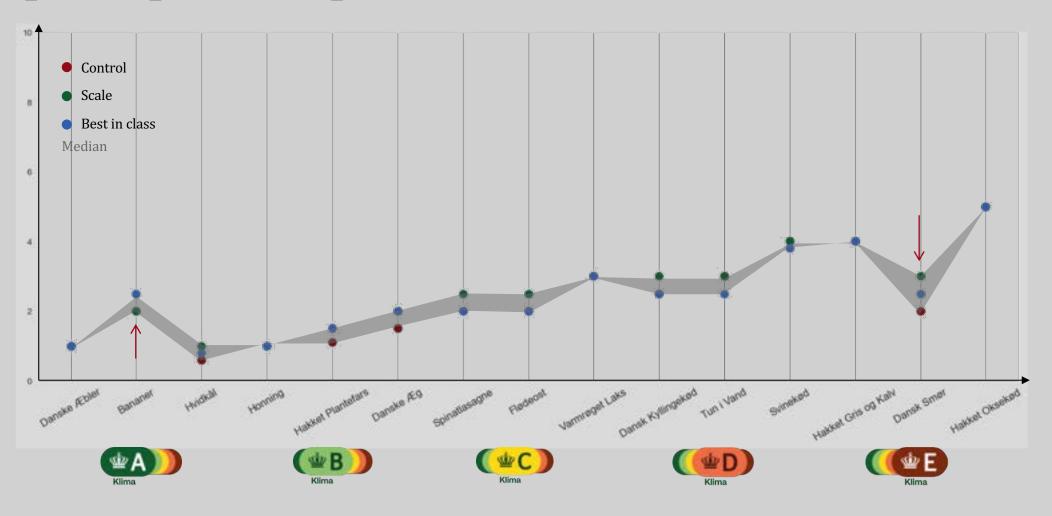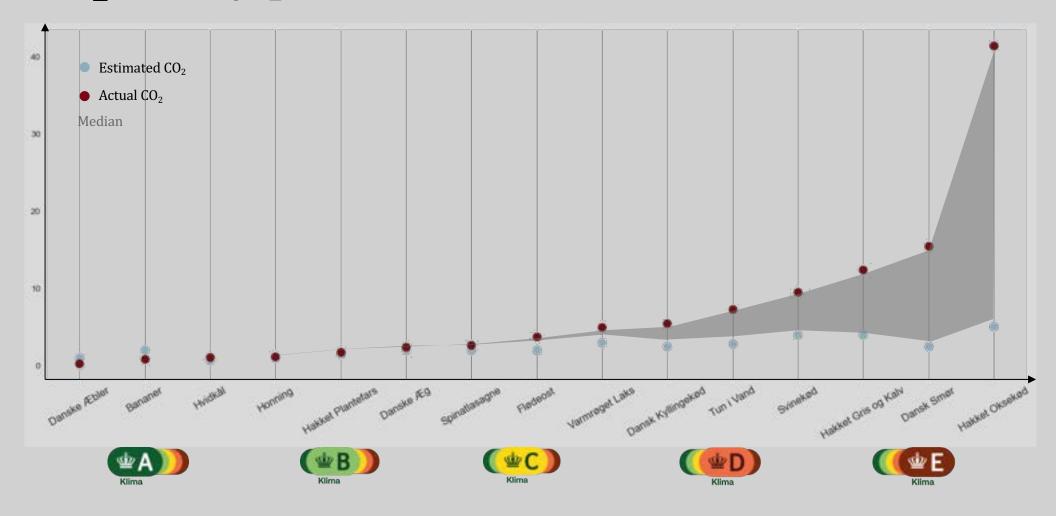
* p < 0,1; ** p < 0.05; ***p< 0,01; **** p < 0,001

The labels do not change consumers perception of product-emission
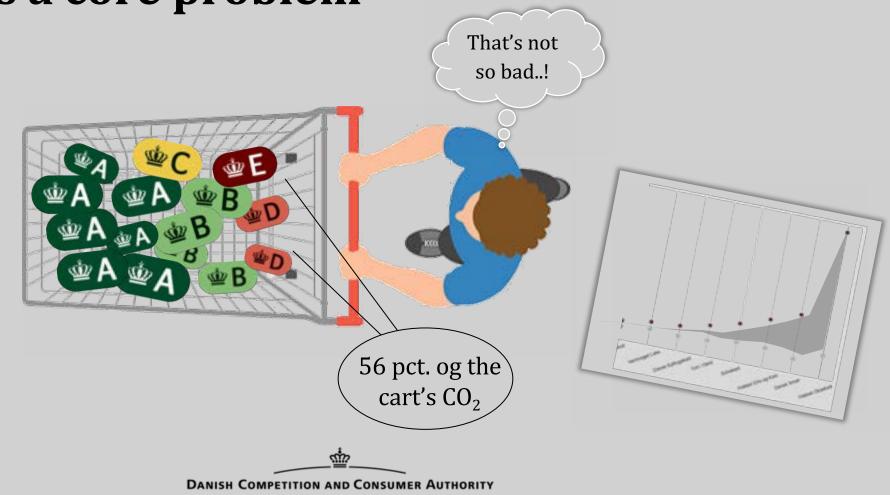
Consumers highly mis-judge the footprint of CO_2-heavy products

Key take away:
The scale out-performs Best in class, but it does not address a core consumer problem
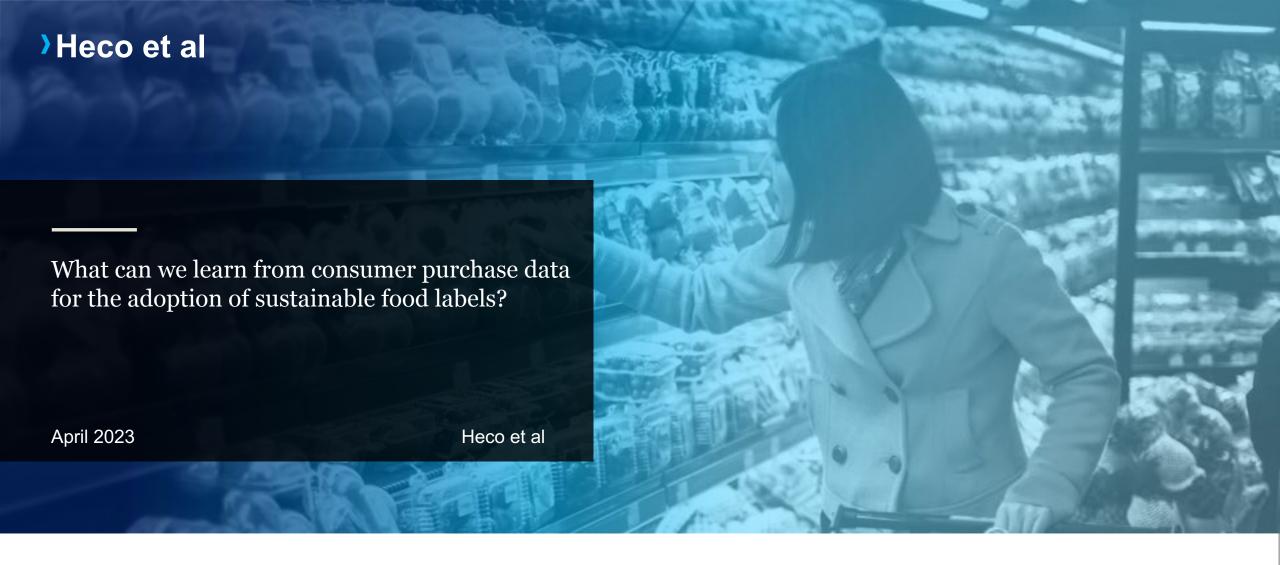
- Consumers have a clear preference for the scale

- The scale helps consumers to better identify climate-friendly alternatives

- The tested scale does not correct the assymetry between how much the consumers think CO_2-heave products emit and the actual footprint of these products
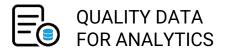
Thank You!

Catrine Normann
cnj@kfst.dk

DANISH COMPETITION AND CONSUMER AUTHORITY
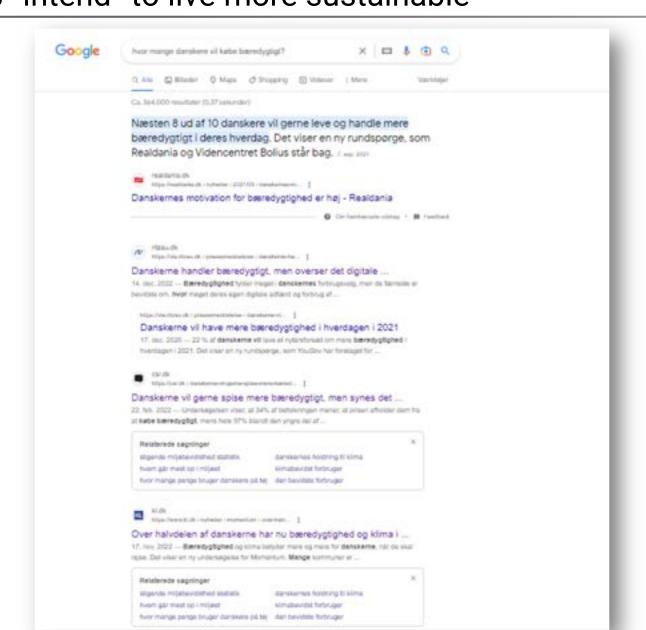
INTENTIONS AND OPINIONS | A simple Google search for "Opinion studies" show that Danes "intend" to live more sustainable
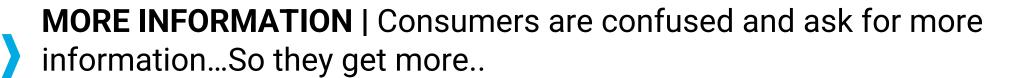
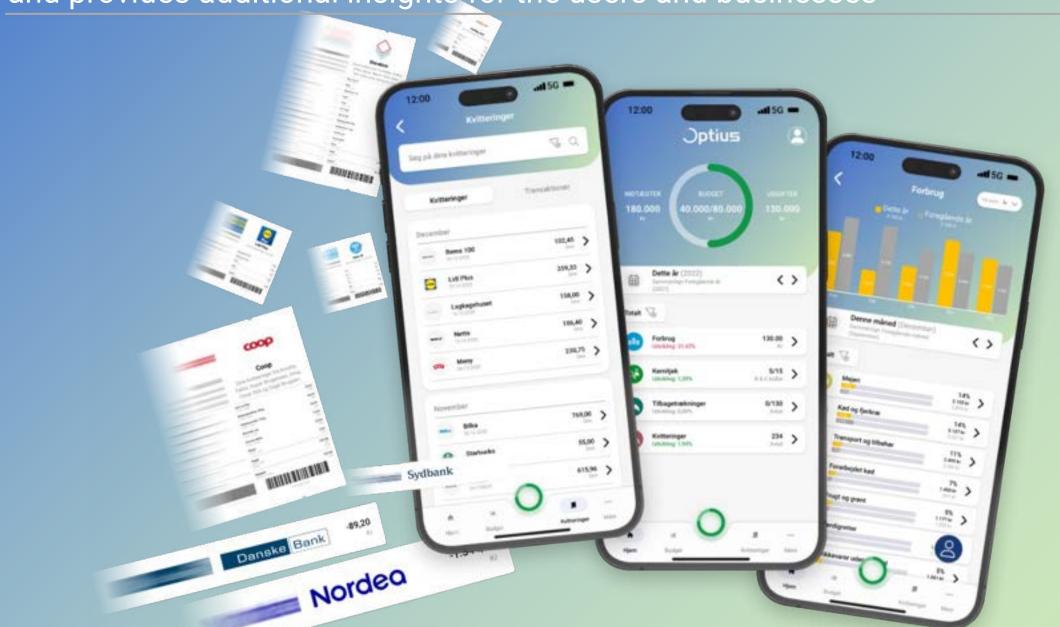# LABELS | And consumers are met with >250 different labels in EU and >450 worldwide...
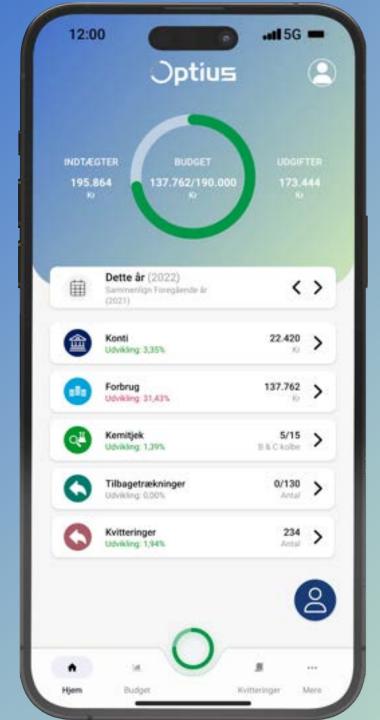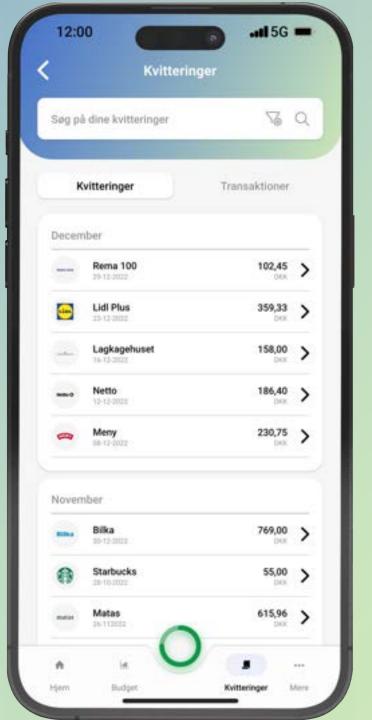

› Heco et al

MORE INFORMATION | Consumers are confused and ask for more information…So they get more..

"…5.000 users that uses Coops app on the daily basis has 10% less climate impact than the other Coop customers…"

› Heco et al

ENHANCED DIGITAL RECEIPTS| Optius gathers all your digital receipts in one place and provides additional insights for the users and businesses
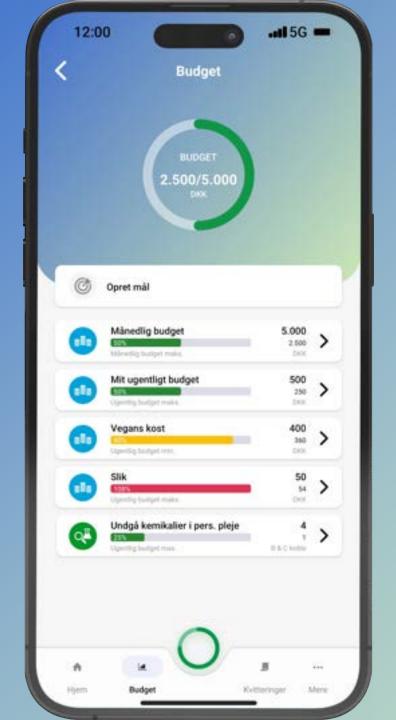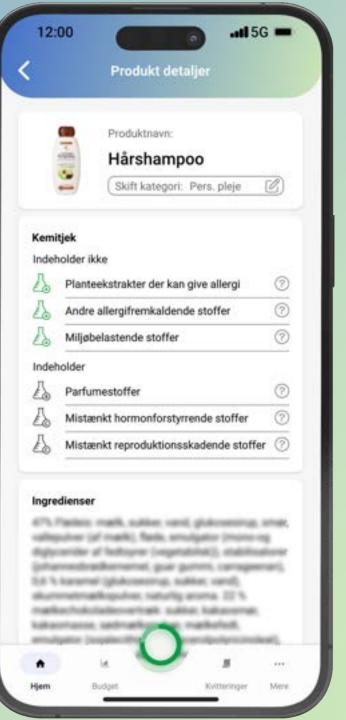
ROUND TABLE

WHAT WILL MAKE A SUSTAINABILITY FOOD LABEL SUCCESSFUL?

Benjamin Heco
Hecoetal

Catrine Normann
Danish Competition and Consumer Authority

Ditte Revsbæk Hansen
Danish Crown

Marcia Dutra de Barcellos
Ghent University, UFRGS

Michael Minter
CONCITO

Post your questions on
menti.com (code **1284 5437**)

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AARHUS UNIVERSITY

AGRO FOOD PARK

Food & Bio Cluster
Denmark