



Common Questions About Sustainable Consumption – and Researcher's Answers



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## About the programme

MISTRA Sustainable Consumption – From Niche to Mainstream is a research program aimed at stimulating a transition toward more sustainable consumption in Sweden and internationally. The program seeks to expand knowledge on how consumption patterns that currently exist within limited niches can be scaled up and become part of the mainstream. The focus areas are food, vacationing and home furnishing. The vision is that by 2030, the program will have significantly contributed to making sustainable consumption practices mainstream in Sweden. This transition will have led to improved quality of life and greater equity both within and beyond national borders. It will also have positioned Sweden—its businesses, public institutions, and civil society—as an international role model demonstrating that sustainable well-being is possible.

#### The program's objectives are to:

- Explore, test, and contribute to the development of solutions and strategies for sustainable consumption practices.
- Contribute to international research and development on sustainable consumption.
- Participate in and initiate both virtual and in-person forums for dialogue and collaboration with various societal stakeholders.
- The program's scientific contribution lies in deepening the understanding of how and under what conditions sustainable consumption practices can be scaled up and how the transition can be accelerated. It will explore strategies both for shifting to more sustainable products and services and for reducing overall material consumption.

FAQ – Common Questions About Sustainable Consumption – and Researcher's Answers ISBN: 978-91-8040-949-0 TRITA-ABE-RPT-2410 MSC Report No. 2:2 KTH, Department of Urban Planning and Environment, Teknikringen 10B, Stockholm, Sweden Editors: Jonatan Järbel, Eskil Engström, Freja Handler, Jörgen Larsson, Göran Finnveden Illustrator: Eskil Engström

#### What are Consumption-Based Emissions?

A country's consumption-based emissions are the emissions caused by the consumption of its residents, regardless of where in the world these emissions occur. This also includes emissions from the production of the goods consumed. This concept can be contrasted with a country's territorial emissions, which are the emissions produced within the country's borders. Territorial emissions are typically used in international agreements and negotiations, for instance, for greenhouse gases. Sweden has set targets specifically for territorial emissions of greenhouse gases. However, some municipalities and regions have also established targets for consumption-based emissions.

Often, when people discuss consumption-based emissions, they mean greenhouse gas emissions, but it's also possible to calculate consumption-based emissions for other pollutants. In some calculations, only household consumption is included, but typically public consumption (such as healthcare and education) and, occasionally, emissions related to investments (like new roads or factories) are also included. In Sweden's official statistics on consumption-based greenhouse gas emissions, all of these components are accounted for.

Further reading: <u>Three Methods for Calculating Climate Impact</u> <u>Emissions</u> (In Swedish)

Responding researcher:

Göran Finnveden



#### Will We Be Able to Eat Meat in the Future?



The short answer is, "Probably, but much less than today." Many studies have aimed to estimate what consumption in line with climate goals (as well as other sustainability targets) might look like. They commonly suggest a significant reduction in meat consumption, especially beef. Globally, beef consumption may need to be cut by about half. How much meat we can eat depends on factors such as:

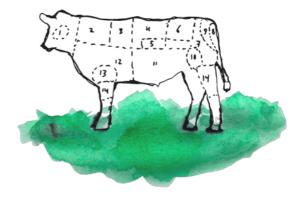
- The emissions produced by other sectors, which affects the remaining emissions "space"
- Technological advancements in agriculture (e.g., phasing out fossil fuels)
- The type of meat consumed. Beef (and other ruminant meats) has higher emissions than pork and, particularly, chicken.

How much meat an individual can consume also depends on how the emission budget is distributed among different countries and groups. For instance, certain groups in society may have special needs, requiring others to limit their meat consumption to near zero to keep total emissions within climate targets.

Reduced meat consumption also decreases land use, which supports biodiversity conservation. A certain number of grazing animals are needed to maintain meadows, but this requires far fewer animals than we currently have.

#### Further reading: EAT-Lancet Commission

Responding researcher: <u>Göran Finnveden</u>



### How Can the Concept of "Sustainable Consumption" Be Defined?

The concept of "sustainable consumption" can be used and interpreted in various ways depending on the perspective. One starting point is to consider consumption that meets

today's needs without compromising the ability of future generations to meet their own needs, while giving special consideration to the needs of the world's poor and the limitations of ecosystems. Some definitions also emphasize minimizing the use of natural resources and toxic materials, as well as reducing emissions of pollutants and waste throughout the lifecycle of a service or product.

Another approach is to base the definition on <u>the 17 Global Sustainability</u> <u>Goals</u> [8], which are supported by all countries worldwide. This implies that we must reduce our

environmental impact while simultaneously achieving social goals such as access to food, healthcare, education, water, energy, and housing. To date, no country has fully achieved sustainable development or sustainable consumption. For a country like Sweden [12], it is primarily the environmental goals that have not yet been met.

Another interpretation of the term "sustainable consumption" involves consuming products labeled as green, organic, or fair. However, this does not necessarily mean that these products have a sufficiently low impact to be in line with sustainable development.

Responding researcher: Göran Finnveden

#### Isn't the Concept of "Sustainable Consumption" a Contradiction?

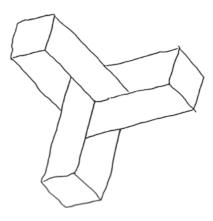
The concept of "sustainable consumption" can, in a way, be seen as a paradox, as "sustainability" involves conserving resources, while "consumption" often implies using them up. All forms of consumption impact the environment, but

sustainable development does allow for a certain level of environmental impact. Thus, striving for sustainable consumption is both possible and necessary. However, further research is needed to define what this kind of consumption might look like and how it can be achieved.

Achieving environmental goals requires a combination of technological advancements and behavior change. Improving product efficiency is important, but <u>sufficiency strategies</u> (in Swedish) [13] are also crucial. Reducing the demand for certain products and services is as essential as making them more efficient. This approach is necessary to avoid the negative rebound effects that often occur as a consequence of efficiency improvements alone.

#### Responding researcher:

Göran Finnveden



#### Can We Rely on Technological Development to Reach Climate Goals?

Our analyses show that focusing solely on advanced technology is unlikely to be sufficient for reducing Sweden's consumption-based emissions in line with the Paris Agreement. However, if we combine substantial technological advancements with reductions in consumption in key areas, our <u>analyses</u> [6] indicate that substantial emission reductions can be achieved. The most critical consumption reductions in this scenario include air travel, road and residential construction, and the consumption of beef and dairy products.

#### Responding researcher:

Jörgen Larsson



#### What is a Sustainable Vacation?

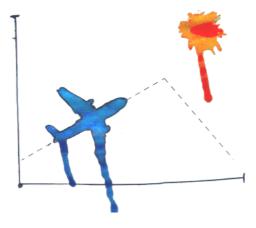
There are many criteria for what can be considered a sustainable vacation, such as being mindful of the local environment and supporting local employment. However, the most debated aspect is likely that the vacation should not cause significant climate impact. About 80% of the average

vacation's climate impact [14] comes from transportation, and 20% from accommodation. Additional emissions arise from activities and food consumption.

Terms like "low carbon" or "climate-smart" vacations are not precisely defined terms, but it can mean something that has a significantly lower climate impact than more common alternatives. Based on this definition, no form of air travel can be considered climate-smart. For instance, flying with biofuels still causes non-CO<sub>2</sub> climate effects, and the production of biofuels is usually energy-intensive and places pressure on biodiversity. The best choice for the climate is therefore to avoid flying altogether. Vacationing by train, bus, or electric car instead of flying is one of the most effective actions an individual can take to reduce climate impact.

See <u>https://travelandclimate.org/</u> [15] and <u>this report</u> (in Swedish) [16] for various solutions.

Responding researcher:



Jörgen Larsson

### How Much Can One Fly with a Clear Climate Conscience?

There is no definitive answer to this question, as it depends on factors such as whether and when airlines transition to more sustainable fuels. <u>Our research</u> [17] (in Swedish) suggests that halving global air travel could align with the two-degree

climate goal, provided there is a substantial technological shift in aviation and emissions decrease at a similar pace in other sectors. The EU has made decisions aimed at promoting this technological shift for flights within Europe, but for intercontinental flights (which account for half of Swedes' flight emissions), there are still no strong policies in place.

For those who feel unable to replace all flights with alternative modes of travel, a potential guideline might be to limit flying to half of the current average for Swedes – that is, a maximum of 3,000 kilometers per year, roughly the level of flying seen in the late 1990s. This could mean, for example, a round trip from Stockholm to London once a year, <u>Stockholm to southern Europe</u> [18] every other year, or Stockholm to New York every four years.

Responding researcher: Jörgen Larsson



#### Who Has the Greatest Responsibility for Solving the Climate Crisis: Consumers, Businesses, or Politicians?

There is no single actor solely responsible for the climate transition. We need efforts on all levels simultaneously, and the responsibility lies with society as a whole rather than with individual consumers. Waiting for "conscious consumers" to influence the market and politics is simply insufficient. However, there are other ways for people to drive change through collective action. For instance, as citizens, voters, association members, or neighbors, people can come together to push for change.

At the same time, we also see that businesses are, to some extent, taking the lead. That said, conflicts of interest within and between different sectors cannot be overlooked. For example, the profit motive in the private sector can conflict with more long-term societal interests in the public sector. The existing power dynamics [19] and forms of collaboration between politics, industry, and civil society may also need to shift to reach further in the climate transition.

It is also important to highlight issues of fairness, as those with the lowest per capita emissions often have the smallest consumption space. While those who consume the most, and companies that contribute significantly to greenhouse gas emissions and environmental impacts, could be seen as having a greater responsibility to change.

Further reading: Shifting Power Relations in Sustainability Transitions: A Multi-actor Perspective The practices of collective action: Practice theory, sustainability transitions and social change

Responding researchers: <u>Pernilla Hagbert</u> (with support from) <u>Vishal Parekh</u>



#### Is Sustainable Consumption Also Fair?

Consumption that is sustainable in terms of resources and emissions is not automatically fair, but research can help
reveal injustices. For instance, that a small portion of the population is responsible for a large share of the emissions. One way to approach this is through "consumption corridors,"

a model defining the maximum and minimum consumption limits that allow everyone to meet their needs without harming each other.

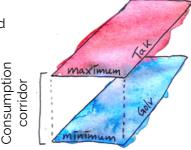
The use of Earth's resources is closely linked to fairness and justice in various ways, including who has access to resources and who holds power over their use. It also involves whose perspectives define how and why resources are used, or what is even considered a resource (e.g., animals or ecosystems). Environmental degradation and resource depletion often occur at the expense of certain groups of people or species. These injustices are not limited to one time or place; they can span long time periods (e.g., across generations) as well as distances (e.g., between rich and poor countries or densely and sparsely populated areas).

Another crucial and related question is who, what, and which entities are recognized as stakeholders in discussions on sustainable and fair consumption, and who is given a voice and influence.

Further reading: Sustainable Consumption Corridors What local people? Examining the Gállok mining conflict and the rights of the Sámi population in terms of justice and power Where species don't meet: Invisibilized animals, urban nature and city limits

#### Responding researchers:

<u>Vishal Parekh</u> (with support from) <u>Karin Bradley</u> and <u>Åsa Svenfelt</u>



#### What Will We Consume in the Future?

# 10

What we will consume in the future is uncertain; it depends on factors such as how society is organized and governed, the availability and distribution of resources, which technologies that will be developed, and the extent of climate change. This uncertainty

makes it difficult to predict but also allows for opportunities for change and transition.

If we move toward more sustainable consumption, large parts of the world may consume in ways that reduce environmental impacts. This could mean more plant-based foods, greater use of reused goods, and increased reliance on renewables, as well as more services and experiences that can promote well-being with minimal environmental impact. At the same time, some groups may need higher levels of consumption to meet basic needs, including food, housing, and energy.

Read more: Scenarios for sustainable futures beyond GDP growth 2050

Responding researchers: Karin Bradley (with support from) <u>Åsa Svenfelt</u>



#### What Is Meant by Sufficiency?

# 11.

A sufficiency perspective on sustainable consumption means recognizing that it's not enough to simply consume more ecologically produced or energyefficient products. For consumption to be longterm sustainable and more equitably distributed,

the consumption of certain goods and services must also decrease. A sufficiency perspective also focuses on quality of life and social justice, leading to discussions about what a good life within planetary boundaries could mean.

#### Further reading:

In search of sufficiency politics: the case of Sweden

Making sense of sufficiency: Entries, practices and politics

Scaling sufficiency -Towards less material consumption

Responding researcher: Karin Bradley



### Is It Possible to Eat Both Climate-Smart and Healthy? How? Absolutely! A notable seminal article from 2019

Absolutely! A notable seminal article from 2019 describes a universal diet that is both healthy for humans and sustainable for the planet. However, the

diet needs to be adapted to the conditions and specific needs of each country.

In a study three different dietary patterns were optimized to be both more nutritious and climate-friendly. All diets had a lower proportion of animal products and a higher proportion of plant-based foods. The climate impact of a fully nutritious diet could be reduced by up to 53% while much of the diet remained unchanged. This shows that there are many variations of a healthy and environmentally friendly diet tailored to Swedish conditions.

Based on the collective scientific literature on food, health, and the environment, the new Nordic Nutrition Recommendations were released in 2023. The overarching recommendation is that we should eat more plant-based foods than we do today and fewer products from land-

based animals. Adults should reduce their intake of red and processed meat to a maximum of 350 grams per week for health reasons, and ideally even lower for environmental reasons. Meat can be replaced with legumes and grains. However, we should increase our intake of fish from sustainable stocks. In general, whole grains, vegetables, fruits and berries, nuts, and seeds are good for both climate and health.



#### Further reading:

Nordic Nutrition Recommendations 2023 If We Eat More Climate-Smart, We Can Gain 1.200.000 Years of Life

#### Responding researchers:

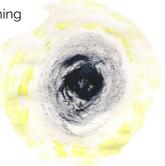
Liselotte Schäfer Elinder (with support from) Emma Patterson

#### 13. I Feel Anxious When I Think About the Climate Crisis – How Can We Think About Climate Change and the Future? It is understandable to feel anxious about an

It is understandable to feel anxious about an uncertain future that may be marked by crises and changes. There are some psychological "tricks" to

cope with this anxiety, such as taking a break from climate news or talking to someone. A more practical approach is to focus on (positive) possibilities. Sometimes people talk in terms of TINA (TINA = There Is No Alternative), but that is not the case – there are countless alternatives and possibilities. We can find these possibilities by learning about, and participating in, alternative ways of organizing society and our lives.

For example, through community-supported agriculture (CSA), staycations, upcycling, item-lending libraries, downshifting, clothing swap events, carpools, beach clean-ups, soup kitchens, solar or wind cooperatives, and so on. All of these examples can also have a real impact, here and now.



In addition to being a practical way to gain insight into how we can meet our needs in alternative ways, a common feature of these activities is that they are done together with others. Research has shown that collective actions, such as cleaning up a beach together, can help counteract negative feelings about climate change.

Here is a list of more things you can do if you are struggling with climate anxiety.

Responding researchers: Sara Skarp (with support from) Mikael Klintman

#### How Often Do I Have to "Act Sustainably" for It to Offset That One Time I Don't?

This is a question many of us have probably asked ourselves when we want to engage in an activity that we know causes significant emissions and feels hard to

justify. Someone who "negotiates" with themselves in this way is trying to reconcile two conflicting desires or feelings, or different norms or habits that are in opposition. Actively trying to live more sustainably is probably more about finding what feels right and gradually striving toward it. Eating vegetarian, avoiding flying, or reducing unnecessary consumption helps decrease total emissions, and lasting changes can lead to quite significant emission reductions for you and may cause ripples to those around you. It's likely wiser to gradually incorporate conscious choices into our everyday lives rather than trying to balance out each individual action.

#### Responding researcher:

David Andersson



#### Do People Who Earn More Money Contribute to Higher Greenhouse Gas Emissions?

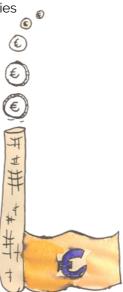
Yes, most likely, and that's because higher income usually leads to higher consumption, and almost all consumption results in emissions. Individuals with higher incomes tend to live in larger homes, own

additional properties, rely more on car transportation, and take more flights – all of which contribute to high emissions.

But, at the same time, most research in this area relies on household budget surveys that equate a euro spent in one domain with a certain number of grams emitted from consumption in this domain. But households with higher incomes often pay more for abstract values such as location or status. This is sometimes referred to as "positional goods," where wealthier households are also more likely to pay a premium for homes in desirable locations, buy expensive status cars, branded clothing, designer home furnishings etc. The emissions from such "luxurious" goods and services are often comparable to less exclusive alternatives, meaning wealthier households pay more for the same amount of emissions. This luxury factor contributes to making the relationship between income and emissions less strong, but there is a clear gap in the research here that we hope to fill.

#### Responding researcher:

David Andersson



#### 16 If One Becomes Aware of How Much Emissions Their Consumption Generates, Does It Lead to Reduced Greenhouse Gas Emissions?

Research in this area shows a complex relationship between environmental awareness and reductions in greenhouse gas emissions. Increased awareness of one's own carbon footprint can be a first step toward more sustainable behaviors, but it is not a guarantee of reduced emissions. On the contrary, there is often talk of a gap between increased awareness and changed lifestyle – a socalled "action – awareness gap." Even if people are aware of for example climate change and which behaviors lead to high emissions, factors such as accessibility, cost, social norms, and habits can prevent changes from occurring. At the individual level, experimental research shows that the behavioral effect of specific information about one's own energy use or climate impact often leads to reductions of between 2-5%. However, research also shows that there is often a return to previous behaviors after an initial activation phase (see, for example, "<u>The Use of Green</u> <u>Nudges as an Environmental Policy Instrument</u> [38]").

#### Responding researcher:

David Andersson



# What Can Politicians Do to Achieve More Sustainable Consumption? Although many Swedes express both interest in

Although many Swedes express both interest in environmental issues and concern about the effects of human activities on the climate, voluntary changes in individuals' consumption behaviors are not as common.

To bridge this gap between attitudes and behaviors, politicians can use various instruments to help people break unsustainable habits and adopt more sustainable alternatives. There are many different options for political action, including legislation, price-based controls, and information campaigns. However, research indicates that for these measures to work optimally and gain sufficient public acceptance, multiple actions should be implemented simultaneously (for example. price adjustments on both environmentally harmful and environmentally friendly products or environmental taxes combined with the introduction of better alternatives). This also requires measures at different societal levels - from national to local - to work in coordination, which demands cooperation between the state and municipalities. Sustainable consumption patterns are not just an individual or household responsibility; political tools can also be directed at producers, retailers, and the public sector, which, as a large consumer of various goods and services, can make a significant impact.

#### Responding researcher:

<u>Simon Matti</u>



# 18

#### What Are Rebound Effects?

Rebound effects, sometimes called indirect or second order effects, are the unintended consequences that can arise when sustainability measures lead to changes in environmental impact, often due to altered costs. Rebound effects can include direct economic rebound, when the price of a product decreases due

to, for example, improved energy efficiency, freeing up money that may then be used to buy more of the same product – potentially increasing consumption. An example of this is driving longer distances when fuel consumption and its associated costs decrease.

There are also indirect economic rebound, when the change in price leads to spending more on another type of goods. For example, buying second-hand items is often cheaper than buying new, so the overall environmental impact depends on how households use the money that is saved. It may also be that if you choose sustainable products, such as buying organic food, which is more expensive, the environmental impact depends on what the household refrains from spending money on to compensate. Thus, environmental impact may increase or decrease depending on whether the money saved is spent on something more or less environmentally impactful or if the household refrains from consuming something more or less environmentally impactful.

Read more: Second-order Environmental Effects (In Swedish)

Responding researchers: Åsa Svenfelt (with support from) <u>Erika Kriukelyte</u>



# Does It Make a Difference if I Change My Behavior? It's often said that "small changes can lead to big results." However, this isn't quite true – small changes

results." However, this isn't quite true – small changes generally lead to small results. There are solid reasons to believe that an individual's behavior change alone

does not lead to meaningful outcomes. This is partly because an individual's behavior has limited influence over larger systems, like a country's infrastructure, and partly because behavior changes can create rebound effects in other parts of one's lifestyle. Changing a single behavior is challenging; changing an entire lifestyle is even harder.

However, indirect effects from behavior changes can sometimes lead to positive societal impacts. For instance, a few individuals' behavior change can create a niche market that enables a company to develop a service that later becomes widely adopted or provide a testbed for government authorities to explore the impacts of a behavior shift, laying the groundwork for new regulations. Additionally, lifestyle changes can shift social norms. For example, if one person starts cycling instead of driving, it might encourage others to cycle, which could eventually motivate policymakers to improve cycling infrastructure, creating a positive feedback loop.

In summary, the indirect effects of behavior change are often more significant for positive societal change than the direct effects.

Responding researcher:

Matthias Lehner



#### No One Else Cares, So Why Should I?

A lot of people do care, but feel powerless or limited in their ability to act. This sense of resignation is common when we focus on what we can do primarily as individual consumers. Research (for example, The High Price of Materialism [40], see a summary video [41]) shows that the materialistic aspirations and the

"I don't care" attitude typical of the status quo actually undermine both collective and individual well-being. This harms our relationships, leaving us feeling more insecure, anxious, and unsafe.

By continuing to care, and acting accordingly, we strengthen our capacity for collective action while contributing to feelings of meaning, community, and hope (often referred to as "active hope"). Hopelessness is contagious, but so is hope!

Read more: <u>Karin Kali Andersson: Strength in Numbers</u> (In Swedish) <u>Climate Psychologists' Newsletter</u>

Responding researcher: Hanna Eggestrand Vaughan

20

high price of materialism

#### How Can We Achieve a More Circular Economy? Is It Possible to Become Fully Circular?

The term "circular economy" generally refers to an economy where materials are used in closed loops, allowing products and materials to be reused and

recycled. "Circularity" is a means to achieve sustainability. A key aspect of a circular economy is to extend material loops by using products for longer, reusing and repairing them, reducing material and resource usage, minimizing waste through efficient production and usage, and relying on renewable resources that are cycled. It's also important to avoid toxic substances, as they not only pose environmental and health risks but also complicate reuse and recycling.

Closing the loops through recycling is essential, but it alone isn't sufficient. Even with highly efficient recycling processes, achieving 100% material recovery isn't possible due to thermodynamic limits, and it often isn't economically feasible either. Thus, we need to think beyond only recycling and also focus on reducing overall consumption levels.

Read more: <u>Circular Economy</u> <u>Compendium</u>

Responding researcher: Jessika Richter



#### 22 What Influences the Acceptance of Environmental Policy Instruments? Environmental policy instruments may fail to be implemented if citizens have a very negative view of

implemented if citizens have a very negative view of them. Designing policy tools that are acceptable to the public is sometimes a balance between factors like

the instrument's effectiveness, the cost to the individual, and the fair distribution of outcomes among social groups.

People are for example often more positive toward information-based

policies compared to taxes. However, information-based instruments are generally less effective. Sometimes citizens are not fully informed about the societal issue that a policy aims to address. In such cases, acceptability may increase by informing citizens about the issue. This can be viewed as an argument for introducing information-based policies before or alongside other, more effective policies.



Overall, people tend to be more supportive of policies when they believe them to be effective, when the

perceived costs are low, and when they do not affect different social groups unfairly. While people often underestimate how effective taxes can be, they also tend to underestimate the societal cost of subsidies, such as new subsidies being funded by increased taxation. This might partly explain why people are often less positive toward taxes. The acceptability of taxes and regulations can however increase if their effectiveness is properly communicated to the public.

Read more: What explains public support for climate policies?

Meta-analyses of fifteen determinants of public opinion about climate change taxes and laws

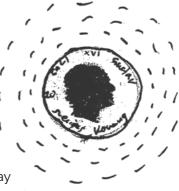
Responding researcher: Emma Ejelöv

# 23. What is Required for a Policy to be Effective?

When a policy or measure is described as "effective," it can sometimes mean that it achieves the desired goal. However, it can also refer to "cost-effectiveness,"

meaning that a certain goal – such as a reduction in emissions – is reached at the lowest possible cost. In any case, it is important to assess the indirect effects that the policy will have. For example, if a product is taxed, the primary purpose might be to reduce the consumption of that specific product. This could lead to the development of alternative products, representing an indirect technological development.

The time aspect is also crucial. A policy measure that is not cost-effective today could become so in the future if new, cheaper technologies are developed. Economic instruments like taxes are cost-effective if they can target emissions, although sometimes this can be technically challenging. On the other hand, prohibitions can be clear and effective. Combinations of policy tools can also be effective and may lead to increased acceptance.



Often, the necessary preconditions or availability of alternatives must be in place. For instance, it is easier to encourage people to switch to cycling if it is perceived as safe and time-efficient (as seen in Copenhagen). It is less effective to implement policies that reduce car traffic if there are no bike lanes or good public transportation options.

Responding researchers: <u>Göran Finnveden</u> (with support from) <u>Carl Dalhammar</u>

# How Can the Public Sector Contribute to Sustainable Food Consumption? The public sector has several ways to promote sustainable food consumption. By using foods with low impacts on climate and biodiversity into public meals,

it can play a pivotal role. Although it accounts for only a small percentage of Sweden's total food consumption, the sector has substantial opportunities to spread knowledge about and encourage sustainable eating habits, particularly through school meals. <u>Research</u> (in Swedish) shows that students are generally accepting of climate-smart school menus, which is promising for increasing acceptance of sustainable food options beyond school settings.

The public sector also contributes to reducing food waste in public kitchens and cafeterias. In schools, students are often involved in efforts to minimize plate waste, which helps raise awareness about food waste beyond the school environment. Some municipalities work to reduce food waste at the wholesale level by purchasing raw materials that would otherwise be discarded, while others support local agriculture by buying shares in local farms [58] (In Swedish).

Local food production is not necessarily more ecologically sustainable, but it can contribute to social and economic sustainability by supporting local food culture and creating jobs within the local agricultural sector. Municipalities and regions can also use procurement to actively request sustainable products that may not yet be available on the market, helping to expand their availability in regular grocery stores.

Responding researcher: Erik André

## **Research presentations**

#### Jörgen Larsson

PROGRAM DIRECTOR, ASSOCIATE PROFESSOR, SENIOR RESEARCHER, Department of Space, Earth and Environment, Chalmers University Technology, Gothenburg



My research aims to understand how consumption `` patterns can be adjusted to achieve politically set goals, such as climate targets. This involves developing

goal scenarios with calculations of climate benefits from both technical and behavioral changes. My main focus is on analyzing political instruments aimed at achieving these goals, including how policies can be designed to both reduce emissions and be accepted by the public. I primarily work with the consumption areas of long-distance travel (air travel) and food. In addition,I am the vice program director for the Mistra program and lead the projects "Policy packages and public support" and "Company targets as a form of sustainable consumption governance."

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#### Göran Finnveden

Program Director and Professor in Environmental Strategic Analysis at the Department of Sustainable Development, Environmental Sciences and Engineering (SEED), KTH, Stockholm

My research is focused on sustainable consumption, circular economy and methods for environmental and sustainability assessments of different types of products and systems. In the program I am the director and also leading a project on sustainable consumption and macro-economic effects.

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#### David Andersson

Postdoc, Department of Space, Earth and Environment, Chalmers University of Technology

My research often focuses on households' sustainable consumption patterns and how they differ between groups. In my studies, I have examined factors influencing household greenhouse gas emissions, whether there is a link between well-being and greenhouse gas emissions, as well as how rebound effects vary across groups with regard to their assumed intentions.

I work on analyzing household consumption patterns. I run the company Svalna (www.svalna.se), which develops and provides technological solutions and platforms to help individuals and organizations measure and reduce their climate impact. Data from Svalna's app is used in my own research as well as in that of others. I am also the founder of the card game Klimatkoll (www. kortspeletklimatkoll.se).

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#### Erik André

Municipal Phd Student, Department of Space, Earth and Environment, Chalmers University of Technology, and Environmental Administration, City of Gothenburg

My research concerns local policy for sustainable food consumption. I am interested in how local authorities can work with school meals, but also within other areas, to make food consumption more sustainable. My methodological focus is on experiments.

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#### Hampus André

Affiliated Researcher. Postdoc, Department of Sustainable Development, Environmental Sciences and Engineering (SEED)

I am a postdoc at KTH working in a research project on similar topics as Mistra Sustainable Consumption, about the climate transition of the Swedish Tourist Association (STF) in their mountain stations without connection to the road network. We study climate measures based on the idea of sufficiency (e.g. changed restaurant concept to avoid helicopter

transport of fresh ingredients) with respect to mitigation potential and feasibility. In particular, I am interested in the acceptability of sufficiency measures, their assessment in life cycle assessment (LCA) and potential scalability. In other research I investigate user behavior and rebound effects in circular economy contexts.

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#### Karin Bradley

Professor, Department of Urban Planning and Environment, KTH Royal Institute of Technology, Stockholm

My research concerns sustainability transitions, sharing economies, social movements and contestations around planning and policy for



I lead the project ""Public policy experiments". In addition, I lead the project "Framing futures for deep transformation" together with Asa Svenfelt.

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#### Carl Dalhammar

Associate professor, (IIIEE) at Lund University

I have over 20 years' experience of research related to products policies and sustainable consumption issues. I am a board member of Re:Source, a national Swedish innovation program that funds Circular Economy projects. I am also a member of the Research Council of the Swedish Competition Authority. I teach at several international and Swedish master programs.



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#### Hanna Eggestrand Vaughan

Lecturer and DOCTORAL STUDENT, Department of Urban Planning and Environment, KTH, Stockholm

I am a doctoral student affiliated with the program, researching how values relate to ideas what sustainable consumption is and how it can be achieved. If certain values permeate and shape less environmentally impactful consumption practices, how can this insight be utilized to design policies that promote such values and thus enable deep sustainability transitions?



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#### Eskil Engström

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My research focuses on how consumption-based greenhouse gas emissions have developed as a calculation practice, target-setting mechanism, and area for policy governance. I shed light on these issues by examining discussions within expert networks at the intersection of politics, academia, business, and civil society.

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#### Emma Ejelöv

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My research concerns the design and public acceptability of environmental policies, specifically policies related to sustainable food consumption. Methodologically my focus is on experiments.



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#### Pernilla Hagbert



Researcher, Department of Urban Planning and Environment, KTH

I am a researcher in transition planning at the Division of Urban and Regional Studies at KTH. My research critically examines various interpretations (and paradoxes) of sustainability by also exploring norm-critical, alternative ways of acting and living as part of the transition to a more sustainable society. Within Mistra Sustainable Consumption, my focus is primarily on the role different actors play in promoting sustainable consumption and the potential of policy experiments.

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#### Anneli Kamb

PhD student, Department of Sustainable Development, Environmental Sciences and Engineering (SEED), KTH, Stockholm



My research revolves around sustainable long-

distance travel with extra focus on the climate impact of aviation. I am interested in how the climate impact from vacation travel can be reduced, through both technical development and behavioral change. My background is in engineering physics and industrial ecology.

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#### Mikael Klintman

Professor Sociology, Lunds universitet

My research interest is in the relation between human motivation – ecological, social, economic, practical – and how tensions between motivations play out at the organizational and societal levels, concerning how to reduce harms to environment and health. Within the Mistra programme I am leading the project "From disputes to the constructive application of Sustainable Consumption knowledge".



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#### **Matthias Lehner**

Associate Senior Lecturer, IIIEE, Lund university



My research focuses on sustainable consumption behavior and sustainable business models. Within this field of sustainable consumptoin behaviour I have worked both on marketing/branding, consumer behaviour, nudging, and alternative consumption ideas (sharing, collaborative consumption, cooperatives). My main interest in all of these areas is the individual consumer and how her behaviour can be changed towards higher levels of economic, social, and environmental sustainability. Within the field of sustainable business models I am most interested in how niche business models can

become mainstream.

Within the Mistra programme I am leading the project "Digitalisation: friends & foes of sustainable consumption?"

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#### Simon Matti



Professor of Political Science, Luleå University of Technology and Centre for Collective Action Research (CeCAR), University of Gothenburg

I am a professor of political science. My main research interests are in environmental politics and policy, focusing on the emergence of and (political) solutions to large-scale collective action problems, such as climate change and resource depletion. Theoretically, my research lies at the intersection

of political science, social and environmental psychology, and behavioral economics, with a methodological emphasis on experimental and survey methods.

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#### **Oksana Mont**

Professor in Sustainable Consumption Governance, The International Institute for Industrial Environmental Economics at Lund University, Lund

I am a Research Coordinator in Sustainable Consumption Governance at the International Environment Institute at Lund University, Lund. My main research area is a multidisciplinary evaluation of

various measures for changing consumption behavior, such as different consumption policy tools and business models in circular and sharing economies, collaborative production and consumption. Within the Mistra programme I am leading the project "Creating space for change by dispelling myths about sustainable consumption behaviour".

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#### Jonas Nässén

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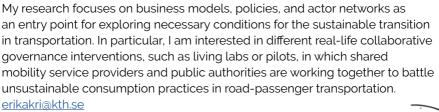
My research is about understanding the effects of consumption and how the consumption patterns can be transformed in relation to long term climate goals. Examples of specific research interests include rebound effects from green choices and relationship between time

use, consumption and emissions. Within the Mistra programme I am leading the project "Micro-level analyses of consumer behaviour and offsetting", and I also work in the project "Policy packages and public support".

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#### Erika Styre

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#### Vishal Parekh

PhD candidate, Division of Strategic Sustainability Studies, KTH, Stockholm

My research focuses on how various societal institutions (non-profit organizations, companies, government agencies) can contribute to achieving sustainable food consumption in Sweden. I am particularly interested in power, justice, and how different interests and logics influence transition projects.

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#### **Emma Patterson**

Adjunct Senior Lecturer in Public Health Nutrition, Department of Global Public Health, Karolinska Institutet

In a nutshell, my research focuses on measuring and influencing dietary behaviors at population level. Within the Mistra programme I have performed a health economic assessment to quantify

the potential health gains that could be achieved if certain sustainable dietary practices became more widespread in the population. I have

also been involved in the programmes' research on sustainable school meals.



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#### Jessika Richter

Associate Senior Lecturer, IIIEE, Lunds university

My research focuses on policy instruments for sustainable consumption through lifestyle changes and strategies for a circular economy, including repair, reuse, extended product lifespan, producer responsibility, green procurement, circular business models, and initiatives for circular cities. I have particularly

researched the trade-offs and challenges that the digitalization of more circular products entails in minimizing resource use.

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#### Liselotte Schäfer Elinder

Professor of Public Health, Department of Global Public Health, Karolinska Institutet, Stockholm

I lead the research group on Community Nutrition and Physical Activity, and my research area is health promotion and disease prevention, focusing on dietary habits, physical activity, and the prevention of obesity and



other chronic diseases. I also research the optimization of public meals for health and sustainability and examine the resulting health effects.

Sara Skarp



Postdoc, Department of Sociology at Lund University

I am a postdoctoral researcher at the Department of Sociology at Lund University. Within Mistra Sustainable Consumption, my research focuses on sustainable tourism, nature tourism, and leisure. I collaborate with initiatives that work to promote sustainable tourism

and leisure, specifically examining how they address challenging questions around understanding what constitutes sustainable tourism. My current and past research falls within the broader framework of societal engagement for and with sustainability. I earned my doctorate and continued working in England, where I focused on societal transition, small-scale sustainability initiatives and their role and potential, as well as travel and vacationing during the pandemic in relation to sustainability gains.

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#### Åsa Svenfelt

Associate Professor, Centre for Municipality Studies, CKS, Linköping University

I am a lecturer in Urban Planning and a docent in sustainable development and future studies. I research long-term planning for sustainable consumption and just transition to sustainable societies. In my research, I often use participatory future studies as a tool, both to visualize and analyze paths towards sustainable futures and to manage uncertainties in long-term urban planning. Within Mistra Sustainable Consumption, I lead the project "Testing new practices and measures in businesses and households" and the



project "Framing futures for deep transformation" in collaboration with Karin Bradley.

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### References

QUESTION 1

[1] Naturvårdsverket, "Three Methods for Calculating Climate Impact Emissions," www.naturvardsverket.se, 2022. <u>https://www.naturvardsverket.se/amnesom-</u>raden/klimatomstallningen/sveriges-klimatarbete/tre-satt-att-berakna-klimatpaverkande-utslapp/

[2] N. Brown et al., "Nya metoder och miljöindikatorer för att stödja policy för hållbar konsumtion i Sverige," www.naturvardsverket.se, 2022. <u>https://www.naturvardsverket.se/publikationer/7000/978-91-620-7031-1/</u>

#### QUESTION 2

[3] W. Willett et al., "Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems," The Lancet, vol. 393, no. 10170, pp. 447–492, Jan. 2019, doi: <u>https://doi.org/10.1016/s0140-6736(18)31788-4</u>

[4] L. Gordon et al., "Food as Industry, Food Tech or Culture, or even Food Forgotten? A report on scenario skeletons of Swedish Food Futures," Swedish University of Agricultural Sciences, 2022. Available: <u>https://mistrafoodfutures.se/wp-content/uploads/2022/11/mistra-food-futures-report-1-web.pdf</u>

[5] E. Fauré, G. Finnveden, and U. Gunnarsson-Östling, "Four low-carbon futures for a Swedish society beyond GDP growth," Journal of Cleaner Production, vol. 236, p. 117595, Nov. 2019, https://doi.org/10.1016/j.jclepro.2019.07.070

[6] J. Larsson et al., "Konsumtionsbaserade scenarier för Sverige – underlag för diskussioner om nya klimatmål," Mistra Sustainable Consumption, Rapport 1:11, Chalmers tekniska högskola, Göteborg, 2021.

[7]L. Akenji et al., "1.5-Degree Lifestyles: Towards A Fair Consumption Space for All," Hot or Cool Institute, Berlin, Jan. 2022. Available: <u>https://hotorcool.org/resources/1-5-degree-lifestyles-towards-a-fair-consumption-space-for-all/</u>

#### QUESTION 3

[8] UNDP, "Globala målen – För hållbar utveckling," Globala målen, 2013. https:// www.globalamalen.se

[9] D. Fuchs et al., "Consumption Corridors," Mar. 2021, doi: <u>https://doi.org/10.4324/9780367748746</u>.

[10] Wikipedia, "Doughnut (ekonomisk modell)," Wikipedia, Nov. 06, 2019. <u>https://sv.wikipedia.org/wiki/Doughnut\_(ekonomisk\_modell)</u>

[11] J. Rockström et al., "A safe operating space for humanity," Nature, vol. 461, no. 7263, pp. 472–475, Sep. 2009, doi: https://doi.org/10.1038/461472a.

[12] J. D. Sachs, G. Lafortune, G. Fuller, and E. Drumm, "SUSTAINABLE DEVEL-OPMENT REPORT 2023: Implementing the SDG Stimulus," 2023. doi: <u>https://doi.org/10.25546/102924</u>. **QUESTION 4** 

[13] C. Dalhammar, O. Mont, and M. Lehner, "Politik och styrning för hållbar konsumtion," <u>https://formas.se/kunskap-och-fordjupning/formas-rapporter/rapporter/2022-06-10-politik-och-styrning-for-hallbar-konsumtion.html</u>

#### **QUESTION 6**

[14] Klimatsmart Semester, "Metodrapport - vetenskapligt underlag till alla beräkningar | Klimatsmart semester," klimatsmartsemester.se, 2022. <u>https://klimatsmartsemester.se/sa-har-vi-raknat</u>

[15] klimatsmartsemester.se, "Beräkna klimatutsläpp från semestrar | Klimatsmart semester." <u>https://klimatsmartsemester.se</u>

[16] A. Ekvall, J. Larsson, and J. Nässén, "Klimatsmart semestrande. Tekniska lösningar, förändrat beteende och politiska styrmedel," research.chalmers.se, 2022, Available: <u>https://research.chalmers.se/publication/528902</u>

#### QUESTION 7

[17] S. Georg, "Distance calculator - Calculate the distance online!," www.distance. to. <u>https://www.distance.to/Stockholm,SWE/Malaga,M%C3%A1laga,Andalucia,ESP</u>

[18] J. Åkerman, A. Kamb, S. Matti, J. Larsson, M. Nilsson, and J. Nässén, "Långväga resande i linje med klimatmålen," Jan. 2022. Available: <u>https://www.diva-portal.org/smash/get/diva2:1634181/FULLTEXT01.pdf</u>

#### **QUESTION 8**

[19] F. Avelino and J. M. Wittmayer, "Shifting Power Relations in Sustainability Transitions: A Multi-actor Perspective," Journal of Environmental Policy & Planning, vol. 18, no. 5, pp. 628–649, Nov. 2015, doi: <u>https://doi.org/10.1080/152390</u> 8X.2015.1112259

[20] D. Welch and L. Yates, "The practices of collective action: Practice theory, sustainability transitions and social change," Journal for the Theory of Social Behaviour, vol. 48, no. 3, pp. 288–305, Apr. 2018, doi: <u>https://doi.org/10.1111/jtsb.12168</u>

#### QUESTION 9

[21] A. Di Giulio and D. Fuchs, "Sustainable Consumption Corridors: Concept, Objections, and Responses," GAIA - Ecological Perspectives for Science and Society, vol. 23, no. 3, pp. 184–192, Jul. 2014, doi: <a href="https://doi.org/10.14512/gaia.23.s16">https://doi.org/10.14512/gaia.23.s16</a>. [22] S. Persson, D. Harnesk, and M. Islar, "What local people? Examining the Gállok mining conflict and the rights of the Sámi population in terms of justice and power," Geoforum, vol. 86, pp. 20–29, Nov. 2017, doi: <a href="https://doi.org/10.1016/j.geoforum.2017.08.009">https://doi.org/10.1016/j.geoforum.2017.08.009</a>.

[23] P. Arcari, "Normalised, human-centric discourses of meat and animals in climate change, sustainability and food security literature," Agriculture and Human Values, vol. 34, no. 1, pp. 69–86, Apr. 2016, doi: <u>https://doi.org/10.1007/s10460-016-9697-0</u>. [24] P. Arcari, F. Probyn-Rapsey, and H. Singer, "Where species don't meet: Invisibilized animals, urban nature and city limits," Environment and Planning E: Nature and Space, vol. 4, no. 3, p. 251484862093987, Jul. 2020, doi: <u>https://doi.org/10.1177/2514848620939870</u>.

#### QUESTION 10

[25] Å. Svenfelt et al., "Scenarios for sustainable futures beyond GDP growth 2050," Futures, vol. 111, pp. 1–14, Aug. 2019, doi: <u>https://doi.org/10.1016/j.fu-tures.2019.05.001</u>.

#### QUESTION 11

[26] Å. Callmer and K. Bradley, "In search of sufficiency politics: the case of Sweden," Sustainability: Science, Practice and Policy, vol. 17, no. 1, pp. 195–209, Jan. 2021, doi: https://doi.org/10.1080/15487733.2021.1926684.

[27] Å. Callmer, "Making sense of sufficiency: Entries, practices and politics," KTH Royal Institute of Technology, 2019. Available: <u>http://kth.diva-portal.org/smash/</u> record.jsf?pid=diva2%3A1380175&dswid=8346

[28] O. Persson, "Scaling sufficiency: Towards less material consumption," KTH Royal Institute of Technology, 2022. Available: <u>https://www.diva-portal.org/</u> <u>smash/record.jsf?pid=diva2%3A1690580&dswid=-1591</u>

#### QUESTION 12

[3] W. Willett et al., "Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems," The Lancet, vol. 393, no. 10170, pp. 447–492, Jan. 2019, doi: <u>https://doi.org/10.1016/s0140-6736(18)31788-4</u>.

[29] Nordiskt samarbete, "Mindre kött, mer växtbaserat: Här kommer de Nordiska näringsrekommendationerna 2023," www.norden.org, 2023. <u>https://www.norden.org/sv/news/mindre-kott-mer-vaxtbaserat-har-kommer-de-nordiska-narings-rekommendationerna-2023</u>

[30] MISTRA Sustainable Consumption, "Om vi äter mer klimatsmart kan vi vinna 1 200 000 levnadsår," MISTRA Sustainable Consumption, Jun. 01, 2022. <u>https://</u> www.sustainableconsumption.se/om-vi-ater-mer-klimatsmart-kan-vi-vinna-1-200-000-levnadsar/

[31] Developing a novel optimisation approach for keeping heterogeneous diets healthy and within planetary boundaries for climate change P. E. Colombo, L.
S. Elinder et al. European Journal of Clinical Nutrition <u>https://doi.org/10.1038/s41430-023-01368-7</u>

#### QUESTION 13

[32] University of Colorado Boulder, "6 tips for coping with climate anxiety," Health & Wellness Services, Apr. 13, 2023. <u>https://www.colorado.edu/health/blog/climate-anxiety</u>

[33] S. E. O. Schwartz, L. Benoit, S. Clayton, M. F. Parnes, L. Swenson, and S. R. Lowe, "Climate change anxiety and mental health: Environmental activism as buffer," Current Psychology, Feb. 2022, doi: <u>https://doi.org/10.1007/s12144-022-02735-6</u>.

[34] H. Chu and J. Z. Yang, "Emotion and the Psychological Distance of Climate Change," Science Communication, vol. 41, no. 6, pp. 761–789, Dec. 2019, doi: https://doi.org/10.1177/1075547019889637.

[35] Smarta Kartan, "Smarta Kartan," Smarta Kartan. <u>https://www.smartakartan.</u> se/

[36] Klimatpsykologerna <a href="https://www.klimatpsykologerna.se/">https://www.klimatpsykologerna.se/</a>[37] Klimatprata! <a href="https://www.klimatprata.se/">https://www.klimatprata.se/</a>

#### **QUESTION 16**

[38] F. Carlsson, C. Gravert, O. Johansson-Stenman, and V. Kurz, "The Use of Green Nudges as an Environmental Policy Instrument," Review of Environmental Economics and Policy, vol. 15, no. 2, pp. 216–237, Jun. 2021, doi: <u>https://doi.org/10.1086/715524</u>.

#### QUESTION 18

I39IH. Eggestrand and Å. Svenfelt, "Andra ordningens miljöeffekter: Vid uppskalning av potentiellt hållbara konsumtionspraktiker," Mistra Sustainable Consumption, Rapport 1:7, Stockholm: KTH, 2020. <u>https://www.sustainableconsumption.</u> <u>se/wp-content/uploads/sites/34/2020/11/Rapport-1.7-Andra-ordningens-miljo%CC%88effekter-FINAL.pdf</u>

#### QUESTION 20

[40] T. Kasser, The High Price of Materialism. Cambridge, Mass.: MIT Press, 2002.
[41] New Dream, "The High Price of Materialism," YouTube. Dec. 04, 2011. Available: <u>https://www.youtube.com/watch?v=oGab38pKscw</u>

[42] K. K. A. Hjalmars Gustaf Öhrnell, "Karin Kali Andersson: Ensam är inte stark," Sveriges Natur, Feb. 08, 2019. Available: <u>https://www.sverigesnatur.org/opinion/karin-kali-andersson-ensam-ar-inte-stark/</u>

[43] F. Hylander, "Kulturdebatt. Psykolog: Så omvandlar du din klimatångest till handlingskraft," Dagens Nyheter, Aug. 09, 2018. Available: <u>https://www.dn.se/kultur-noje/kulturdebatt/psykolog-sa-omvandlar-du-din-klimatangest-till-han-dlingskraft/</u>

[44] K. Andersson, "Kulturdebatt. Klimatpsykologen: De ekologiska kriserna kräver konstruktivt hopp," Dagens Nyheter, Dec. 30, 2021. Available: <u>https://www.dn.se/ kultur/klimatpsykologen-de-ekologiska-kriserna-kraver-konstruktivt-hopp/</u> [45] The Climate Psychologists, "Climate Psyched | The Climate Psychologists | Substack," climatepsyched.substack.com, Aug. 25, 2023. <u>https://climatepsyched.substack.com/</u>

[46] Common Cause Foundation, "Home," CC Foundation. <u>https://common-causefoundation.org/</u>

[47] T. Crompton, "Common Cause: The Case for Working with our Cultural Values," 2010. Available: <u>https://www.researchgate.net/publication/277002308</u> <u>Common\_Cause\_The\_Case\_for\_Working\_With\_Our\_Cultural\_Values</u>

#### QUESTION 21

[49] Lunds universitet, "Circular Economy - Sustainable Materials Management | Coursera," Coursera, 2018. <u>https://www.coursera.org/learn/circular-economy</u> [50] P. Peck et al., Circular Economy - Sustainable Materials Management: A compendium by the International Institute for Industrial Environmental Economics (IIIEE) at Lund University. The International Institute for Industrial Environmental Economics, 2020. Available: <u>https://portal.research.lu.se/en/publications/</u> <u>circular-economy-sustainable-materials-management-a-compendium-by</u> [51] M. Brandão, D. Lazarevic, and G. Finnveden, Handbook of the circular economy. Cheltenham, UK: Edward Elgar Publishing Limited, 2020.

#### QUESTION 24

[52] Livsmedelsverket, "Fakta om offentliga måltider," www.livsmedelsverket.se, 2023. <u>https://www.livsmedelsverket.se/matvanor-halsa--miljo/maltider-i-vard-skola-och-omsorg/fakta-om-offentliga-maltider</u>

[53] Grausne, J., & Quetel, A-K. Fakta om offentliga måltider 2018: Kartläggning av måltider i kommunalt drivna förskolor, skolor och omsorgsverksamheter, 2018. Livsmedelsverket.

[54] Konkurrensverket. Offentlig upphandling av mat: En kartläggning av Sveriges offentliga upphandling av livsmedel och måltidstjänster (Rapportserie 2015:1), 2015. Konkurrensverket.

I55] P. Eustachio Colombo, "Optimizing school meals today : a pathway to sustainable dietary habits tomorrow," Inst för global folkhälsa / Dept of Global Public Health, 2021. <u>https://openarchive.ki.se/articles/thesis/Optimizing\_school\_</u> <u>meals\_today\_a\_pathway\_to\_sustainable\_dietary\_habits\_tomorrow/26925076?-</u> <u>file=48971626</u>

I56] André, E., Eustachio Colombo, P., Schäfer Elinder, L. et al. Acceptance of Low-Carbon School Meals with and without Information – A Controlled Intervention Study. J Consum Policy 47, 109–125 (2024). <u>https://doi.org/10.1007/s10603-023-09557-4</u>

[57] Livsmedelsverket, "Handbok för minskat matsvinn," <u>https://www.livsme-</u> delsverket.se/matvanor-halsa--miljo/maltider-i-vard-skola-och-omsorg/matsvinn-i-storkok/handbok-for-minskat-matsvinn

[58] E. Röös et al., "Styrmedel för hållbar matkonsumtion -en kunskapsöversikt och vägar framåt Future Food Reports 13," Sveriges lantbruksuniversitet, forskningsplattformen SLU Future Food, SLU Future Food Reports 13, 2020. Available: <u>https://www.sustainableconsumption.se/wp-content/uploads/</u>

sites/34/2020/06/StyrmedelForHallbarMatkonsumtion.pdf



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