

Report **Nordic Food in Future Tourism** February 2022



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Government of Iceland Ministry of Culture and Business Affairs





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Curiosity creates knowledge and innovation is the driving force for change

Preface

Under the Icelandic Presidency of the Nordic Council of Ministers in 2019 the priority was set on youth, sustainable tourism, and the marine environment. This 3-year project is a contribution to sustainable tourism.

The project aims to understand the perception of Nordic food, highlight the importance of local food in sustainable tourism, and gain insight into how climate change and trends can shape our future of food in tourism.

The objective is to raise awareness of future challenges and opportunities related to food in tourism and provide strategic guidelines that support future actions and policymaking.

Our vision is that visiting the Nordics should be about experiencing a place where people and the planet prosper in sustainable harmony and economic growth. Where eating and traveling in harmony with nature and local culture is a desirable lifestyle. Our contribution is not about the competitive advantage but about our drive for a sustainable future.



Participants and countries

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Methods & process

This report is mainly based on a future analysis conducted by Kairos Future tailored to the projects goal. Future analysis is based on trendwatching, netnography and interviews with experts in the field. The results were molded through meetings and workshops with the project group and the Icelandic expert group and further insight was gathered through published documents. Based on this work we designed strategies that strengthen the role of the Nordics as culinary and sustainable destinations.

The Icelandic team also hosted hackathons and workshops with local stakeholders as part of a communication plan in order to gain insight on local challenges. The results will be published in another report.

Trend report

Trendwatching is to compile information that illustrates attitude and behavioral changes. Kairos Future put together a comprehensive trend report that identified over 100 trends and megatrends related to Nordic food, in areas from food production to travel and consumer behavior.

Netnography

Netnography is based on online qualitative and quantitative analysis. The netnography study is to give a glimpse of how people talk about Nordic food online, giving a more unfiltered view of the types of topics associated with Nordic food. Over 75 thousand posts were analyzed using algorithms and Al-tools. The text data was analyzed in five languages, English, German, Spanish, French and Chinese. Collecting and analyzing a large number of posts about Nordic food provides us with a better overview of the most types of associations people have with Nordic region's cuisine.

Expert Interviews

Expert interviews were conducted by Kairos Future to get additional views on different aspects of the future of Nordic food and to learn the most important things from the research status quo. The interviewees were selected from different backgrounds to give a wide range of insights of where local food in Nordic tourism is heading in the next 5-20 years.

Interviewees

- Håkan Andersson Winemaker and founder of Hällåkra winery.
- Dr Aviaja Lyberth Hauptmann Microbiologist researching microbes on traditional Greenlandic foods.
- Linus Blomqvist PhD student in Environmental Economics and Science at UC Santa Barbara and former director of the Conservation and Food & Agriculture programs at the Breakthrough Institute.
- Dr Richard Tellström Lecturer and researcher on food culture and history as well as consumer values.
- Dr Michael Bom Frøst Associate professor in Food Sensory Innovation at University of Copenhagen looking at novel foods, sensory aspects of food, and product development.
- Dr Jonatan Leer Head food and tourism research at University College Absalon studying food culture, meat consumption and the gendering of food practices.
- Analisa Winther Ecosystem developer with a focus on FoodTech and host of the Nordic FoodTech podcast.

Expert group

A group of Icelandic experts were chosen to collaborate with the project participants. These experts represent a broad value chain of industries, organizations, public sectors, and companies that are connected to food development, tourism, and research.

Introduction

Tourism intersects other sectors like transportation, hospitality, food production and culture. The responsibility over these different sectors is ruled by different ministries, regional or local authorities. Planning and policies need to be interdisciplinary in regards to food in tourism. It is essential that the tourism and the food sector join forces, exchange knowledge, and work together.

Nature has been a key factor for attracting tourists to the Nordic countries for decades and nature-based tourism has grown progressively. Many areas have also become attractive because of their unique cultural heritage, activities, and events, for example, food tourism. The development of food tourism supports regional food culture and allows destinations to diversify their product offering, making it more attractive to visitors. Destinations can enjoy an array of benefits such as high yield tourists, a positive trickle-down effect on other industries like agriculture and retail, and the creation of jobs in more niche segments such as food and beverage tours, cooking workshops, and cooking with locals. Regions that build a strong reputation for their food culture also work towards protecting local food traditions, ingredients, and culture. However, the Nordic palate is increasingly international in flavor.

Several factors today are contributing to increasingly blended food cultures on a global scale and the Nordics are increasingly becoming part of a more global food culture putting local traditions at risk. It is necessary to find a balance between embracing localism and globalization. It is therefore a good opportunity for all Nordic countries to set forward a national policy involving food in tourism as it can unleash potential rural development.

Many Nordic reports as well as tourism development plans have been issued on sustainable tourism, but few have specifically focused on food in tourism and the importance of the food and tourism sector working collaboratively and strategically together. Motivational factors of travel can easily be affected by drivers and trends like climate change, consumer values and as we have been experiencing, pandemics. The food industry is also affected by climate change, demographic shifts, and consumption trends. To ensure that food can continue to be produced in the Nordic countries in the future, we need to strive towards having a sustainable food system and embrace emerging food technology without diluting our traditions.

Changing climate coupled with technological innovations have indeed the real power of disrupting our current food system, including what we consider to be food at all. In the coming years this could create pressure on what is considered to be Nordic food culture, and in the worst-case scenario even whether the concept of Nordic food culture will prevail.

Food is a substantial part of a country's image as it is shaped by nature's conditions and reflects both culture and history. While it makes sense in some ways to talk about Nordic food, as the term helps to capture the idea of a shared Nordic identity, or as one of our expert interviewees said " there is no common Nordic food culture that spans all countries from Greenland in the west to Finland in the east."

Kairos Future analysis however revealed that Nordic food has a common denominator as it is often tightly connected to wellness & comfort moments and high-quality ingredients from an unpolluted environment. There was also a global hint of desire for the Nordic experience, a Nordic lifestyle. A lifestyle connected to sustainability and wellbeing. This led us to the conclusion that visiting the Nordics should be about experiencing a place where people and the planet prosper in sustainable harmony and economic growth.

Research shows that although Nordic consumers in general are increasingly conscious of sustainability, awareness does not always translate to behavior. It is evident that consumers need help from businesses and governments to translate their wish to be more sustainable to actual actions, but consumers can be a tough crowd. We need to find what triggers the desire for a sustainable lifestyle and progressively encourage a behavioral megatrend towards a sustainable lifestyle. A Nordic lifestyle we can leverage to our advantage in branding the Nordic region. The Nordic region already has the advantage of being seen as playing a unique, innovative role as a frontrunner¹ and Nordic societies are progressively integrating the UN goals of sustainable development.

The world is entering a period of increasingly rapid change and high uncertainty. For most people, change is difficult. It is taxing to shift from routine to the unfamiliar. But if we do not prepare for future changes, we might miss out on opportunities that help us adapt. In the past, when things have changed rapidly the people and businesses that thrive are the ones who think ahead and see challenges as opportunities. It is fundamental that every sector of society leans towards sustainable actions that help limit global warming to 1.5°C.²

Project partners thank the Nordic Council of Ministers for the funding provided, making the work described in this report possible, as well as all of those that have contributed to this project.



This project touches on various UN goals of sustainable development such as 2.4, 3.9, 8.9, 11.4, 12.3, 12.8 and 13.1

¹ State of the Nordic Region 2020. Nordic Council of Ministers 2020

² Intergovernmental panel on climate change



Future analysis

Demographics & labor market

There has been a growing share of the global middle class in the recent decades.³ Combined with more movement into the upper income tier in many countries, such as India and China, this will likely generate new groups of travelers and food consumers over the coming 20 years. In 2035 it is estimated that, among the global population who can afford to buy a plane ticket, the share from "nonwestern world" will increase from about 33% in 2000 to 73% in 2035.

In the Nordics and across the globe the population has aged significantly. People are staying active and healthy as they age. Younger people are moving to more urban areas, while the rural population is declining and ageing.^{4,5} A population growth will put even greater pressure on the food system to provide for a larger number of people.

People are already moving globally because of climate stressors and changing weather patterns. The Nordics should be prepared for climate migrants immigrating from areas where resources are scarce to grow and provide food.

Economic growth might stagnate if key competences cannot be found in the Nordic countries. Companies will have to consider how they recruit and train people in the future. According to the report State of the Nordic Region 2020 published by the Nordic Council of Ministers, 72% of all Nordic municipalities, especially those in rural areas, are expected to experience a decrease in the size of their working-age population by 2040. The report also highlights that the Nordic populations are the most mobile in Europe, which contributes to the ongoing rapid urbanization in the Nordic countries.

Automation, urbanization, and changing attitudes among young people will change the nature of the labor market. Replacing workers with technology will become a more frequent occurrence, and a challenge will be to find the right balance between man and machine. Around one-third of all Nordic jobs are considered at high risk of being automated by 2040.⁶

TThe diminishing interest of young people to work in the fields of farming or living in rural areas has been a worrying trend in the Nordics. In some Nordic countries there is a slowly growing desire to live rurally but the motivation of going against the trend

³ The uprecedented expansion of the global middle class. Brookings 2017

⁴ Regional Tourism Satellite Accounts for the Nordic Countries. Nordregio2020

⁵ State of the Nordic region 2020. Nordic Council of Ministers 2020

⁶ Regional Tourism Satellite Accounts for the Nordic Countries. Nordregio2020

has not been fully researched.⁷ With increased automation in agriculture less people are likely to be needed but demand for technical skillsets will increase although there is already a lack of tech professionals in the Nordic countries to fill all the roles in strong IT and start up sectors. Tourism has been a growing source of employment in some Nordic rural areas, however the sector is influenced by seasonality making it a difficult for a year-round livelihood. By capitalizing on new technology like 5G people will have more flexibility working off-site rurally for companies located in cities.

Sustainable & Responsible Tourism

Climate change impact is disrupting the food chain, causing weather-related delays in transport and prices could rise for hoteliers and operators due to higher cost of energy if demand exceeds supply. The insurance industry will adapt their terms to riskier circumstances putting strain on the tourism sector.

As annual tourism numbers have skyrocketed in certain Nordic destinations, the pressure of tourism on the natural environment and infrastructure has increased in parallel.⁸ At least until Covid-19 hit, in early 2020. Before the pandemic it was predicted that a large proportion of the arrivals of the next two decades to the Nordics would originate from Asia and the Pacific, followed by Europe. Due to the pandemic domestic travelling dominated travel habits forcing the tourism industry to adapt to the needs of locals in marketing material and recreational offers.

Climate change can change motivational factors of travel and can cause unavoidable loss and damage in the tourism sector through loss of income, decreasing purchasing power, bankruptcies, or property damage. If ecosystems are affected, we could see loss of animal and plant diversity and other tourist attractions such as forests, beaches, and glaciers.

Nature has been a key factor for attracting international tourists in the Nordic countries for decades and nature-based tourism has grown progressively. Many areas have also become attractive because of their unique cultural heritage, activities, and events, for example, food tourism. Food experience should be highlighted and interwoven in travel options adding to the accumulated experience as it gives rural areas opportunities to brand and connect with their travelers through narratives.

⁷ Regional Tourism Satellite Accounts for the Nordic Countries. Nordregio2020

⁸ Planning for sustainable tourism in the Nordic rural regions 2020

Sustainability has become an important policy framework tool for the tourism industry.⁹ Many Nordic reports as well as tourism development plans have been issued on sustainable tourism, but few have specifically focused on food in tourism and the importance of the two sectors working collaboratively and strategically together. Because of increased knowledge on the effect of climate change, sustainable tourism is an important key to secure future business, with focus on domestic and international travelers.

Traveler's desires are changing fast and require nimble companies and commercial models to support innovation and meet the ever-changing expectations. Sustainability and the climate are top of mind for a lot of people now, especially younger travelers. This will increasingly influence people's decisions from what to eat to where and how to travel.¹⁰ People in developed countries are slowly evolving into prosumers where values like quality and sustainable issues control their buying habits.

As the climate crisis continues it will become increasingly important for individuals and organizations to demonstrate their climate credentials. The most successful destinations will put processes in place to train those working in the tourism industry as well as residents, about local food & drink traditions. Tourism businesses and food producers need to both demonstrate and communicate their sustainable actions and practices. They need to inform customers about food waste policies, recycling, byproducts, eco certifications and renewable energy and destinations need to keep up to attract the increasingly eco-conscious tourist.

One of the key business trends is increased transparency to build customer trust, travel shopping is shifting to digital channels making information easier and consumers continue to champion fairness and transparency.¹¹ Consumers will increasingly favor options with low carbon footprint or carbon compensation.

Awareness does not always translate to behavior

A sustainable lifestyle that is enabled both by individual actions and efficient infrastructures, plays a key role in minimizing the use of natural resources, emissions, waste, and pollution while supporting equitable socio-economic development.¹² We need to rethink our ways of living, how we buy and what we consume. Altering the way, we socialize, exchange, share and build identities.

⁹ Tourism, nature and sustainability. Nordic Council of Ministers 2018

^{10 2020} State of the Food Travel Industry report. World food Travel Association

¹¹ McKinsey & Company. The State of Fashion 2021

¹² Global Survey on Sustainable lifestyles. UN environment programme

Nordic societies are progressively integrating the UN goals of sustainable development, but consumers can be a tough crowd as motivation to change a behavior comes from within each person, often based on emotions rather than facts, rules, or regulations. Thus, awareness and education play a huge part. We need to find what triggers the desire of a Nordic sustainable lifestyle as it is evident consumers need help from businesses and governments to translate their wish to be more sustainable to actual actions.

Nordic consumers in general are increasingly conscious of sustainability, but awareness does not always translate to behavior, as actual purchases of sustainable products have not increased in line with the awareness. A recent survey of Nordic consumers conducted by Kairos Future showed that 70% thought that their behaviors were not as environmentally friendly as they would like.

In another research, conducted by Kairos Future on Nordic travelers (from Sweden, Norway, Denmark, and Finland), sustainability is top-of-mind. More people report that they want to use more eco-friendly transport, travel closer to home, and choose more eco-friendly options in general when travelling. Fewer people consider travelling long distances to be a status marker compared to 2014, and an increasing number of people think that going on holiday to your summer cottage is high status. According to Kairos Future research, travel shaming seems to be more of a topic in the Nordics than globally.

Changing expectations

It is predicted that the largest growth areas in tourism will be activities that are exploratory, experimental, and hands-on, where travelers can learn and experiment. Micro segmentation, customization and exploratory activities are gaining ground. People are looking for places that cultivate their curiosity as well as offering recreation or activities that support their physical and mental health.

Everyday technical devices are and will keep on shaping consumers expectations. Smartphone development is an important component of people's changing purchasing and consumer behaviour. New apps and features allow for an individualized buying process or consumption of the experience. Artificial Intelligence can analyse large amounts of customer data and thus be a tool for individualizing customer travel experience.

Micro segmentation is gaining grounds

Nature tourism is a big and growing segment. Eco- tourism is a small but growing sub-segment emphasizing sustainability. Other segments like food tourism and wellness tourism also have growing sub-segments trends. Finding a key segment or sub-segment to target is getting harder with more niched groups emerging.

Never before has it been possible to segment as specifically as now. The digitalization of our lives makes it possible to reach niche groups relatively easily. With increasing travel experience, people have higher expectations on unique experiences and services, and want to get the most out of each holiday. This has led to a search for something that caters to a person's specific need or interest. Businesses will need to find new ways to reach customers as the purchase process becomes more individualized.

Concept stretching

Today's travelers are often looking for that "little extra", something that can enhance the experience and add an extra dimension to the journey. Many hotels offer precisely this because they are more than "just" an accommodation, eg. hotels whose restaurant, bar or lobby also caters to local customers or run other businesses in connection, for example selling art, furniture etc. The wine, dine, recline concept is an example of restaurants that also offer a room for the night, a sort of updated, luxurious version of the classic inn. In the future concept stretching and brand extension will increase. Finding new partnerships is more important than ever to attract people and create unique experiences.



Food Tourism

Food Tourism is sometimes referred to as culinary tourism or gastrotourism (gastronomy tourism), depending on countries. It is not an elitist group of people, but individuals who are looking for specific unique regional flavors and a narrative behind the food. The concepts of local and authentic have become diluted, and fewer visitors respond to these terms.¹³

In recent years, the number of food and drinks enthusiasts around the world has risen rapidly. Consumers are becoming increasingly familiar with different food cultures and they are more willing to experiment and try new products and ingredients that are perceived as exotic, especially when traveling abroad.¹⁴

Of all leisure tourists 77% say that food and drink experience are important to their satisfaction and 53% of leisure travelers are considered food tourists. However according to Kairos Future travel trend report, 4% of Scandinavians consider themselves as food tourists although 11% claim that food and drink are an important factor when choosing a destination. 77% of leisure tourists tell stories about their food experience and 60% buy food souvenirs. 69% seek information on food and drink options before and during their stay.¹⁵

Gastronomy plays a central role to the overall traveling experience for the food tourist. They spend on average 24% more on food and other travel experiences than ordinary leisure travelers. They are motivated by food related experience, want wide variety of experiences, seek local traditions, culture and uniqueness and are eager to share their experience on social media. Food tourism is emerging as an important protector of cultural heritage, and the sector helps create opportunities, including jobs, most notably in rural destinations. Destinations and other stakeholders need to understand the importance to reap the benefits food tourists can bring. However, there is still some confusion about what food tourism really is and how destinations and other stakeholders can get involved.^{16,17}

The most successful destinations will put processes in place to train those working in the tourism industry as well as residents, about local food & drink traditions along with sustainable practices. Local food is likely to increase in demand and experts predict continued growth in nearly every aspect of food travel —from gourmet to street food.

^{13 2020} State of the Food Travel Industry report. World food Travel Association

¹⁴ Key trends in culinary tourism. Global data 2018

^{15 2020} State of the Food Travel Industry report. World food Travel Association

¹⁶ The New Era of Food Tourism: trends and best practices for Stakeholders. Skift 2019

¹⁷ Guidelines for the Development of Gastronomy Tourism. UNWTO 2019

Food is part of our identity

Food is a substantial part of a country's image as it is shaped by nature's conditions and reflects both culture and history. It is important to bear in mind that our own consumer behavior and how we talk about our food and food culture, influences the demand and expectation of our guests but it also shapes our pride as a food nation.

Food is part of people's identity. In many cases people are using food to represent themselves. There are for example differences in the types of food urban elites eat and what more conservative people in the countryside choose. Or quoting one of our expert interviewees "While it makes sense in some ways to talk about Nordic food, as the term helps to capture the idea of a shared Nordic identity, there is no common Nordic food culture that spans all countries from Greenland in the west to Finland in the east."

Interestingly we don't even particularly favor our neighboring Nordic cuisine according to an international survey (2018) published on YouGov.¹⁸ The survey also revealed that Nordic food is rated among the least favorable foods in the world making Nordic cuisine less liked than we might have thought or perhaps less known to the world.

Nordic food heritage is based on local animal production and fisheries. According to some of our expert interviewees we still eat a lot of imported food across the Nordics as it can often be cheaper than what we produce locally. Though there is a need to move away from imported food, for climate reasons it is time to question whether it makes sense that all food products should be available to us at all times. We need to support regional farmers and make the Nordic countries more selfreliant in terms of food production.

Food activities & experience

One of the main reasons people travel is to get in touch with locals. Most of us have a desire to be able to relate what we consume to some origins and meaning. Learn a narrative through our meal. Popular activities in food tourism are guided food and drink tours with locals, eating with locals and home dining, food events and markets, street food, cooking classes, food, and drink trails, visiting farms, vineyards and breweries as well as visiting a trending restaurant or bar. Picnic services and open and closed picnic sites are also part of food in tourism. Sub-segments within Food tourism will grow, offering wholesome creative food experiences that inspire the mind and nourish the body.

¹⁸ YouGov. Italian cuisine is world's most popular 2018

Travelers worldwide are looking for more 'genuine' drinking and food experiences and prefer alternatives that have some narrative to the brand highlighting the importance of locally produced food. Millennials & Generation Z are specifically seeking local food and drink experiences and activities should not be just fun but also educational.^{19,20} Our expert interviewees agree in a broader sense, for consumers in general; more people are interested in learning about where their food comes from, asking for transparency in the food system from production to processing and cooking. They want a greater feeling of control of the value chain, meaning they want tangible evidence of how food is made. This is one of the reasons why people are going to visit smaller producers where they can get a complete narrative about a product. The chapter on foodtech covers several trends that are also affecting food in tourism.

Collaboration

Tourism boards, hotels, and resorts that operate predominantly in rural areas must partner with local farmers and producers to create authentic culinary experiences. This will have positive trickle-down effects both for tourism businesses and agricultural ones. Chefs, restaurants, and operators engaged in Food tourism play a huge part in innovation, reflecting visitor's expectation.

Tour operators must tap into the culinary tourism trend by building packages around destinations. To ensure the success of such offerings, operators should seek to combine the food tourism trend with other emerging trends such as ecotourism, wellness, and cultural and adventure tourism.²¹

Governmental support

National policies involving food in tourism are powerful political tools that can unleash the potential of food in tourism. Initiatives need to include removing unnecessary regulations limiting food and agriculture from the experience economy. The Faroe Islands with the help of politicians initiated Heimablidni, allowing rural homes to serve home cooked meals with products from their own farm or neighboring farms. The effort landed them on the UN list for sustainable tourism. Some Nordic countries are allowed to sell their own alcoholic beverages (under 5%) directly from farms while it is forbidden in other Nordic regions.

^{19 2020} Food Travel Monitor. World Food Travel Association

²⁰ Key trends in culinary tourism. Global Data 2018

^{21 2020} Food Travel Monitor. World Food Association



The top five impacts on global Food tourism

The World Food Travel Association listed in 2020 factors that are predicted to have the most positive and negative impact on global food tourism in the next 1-2 years. Below are the factors ranked among top five:

Positive impact

- 1. More millennials and younger people are seeking food and drink experiences
- 2. Travelers have more information about local food and drink before they travel
- 3. Programs on food and travel including Tv shows and YouTube/ internet are leading to more food travel
- 4. Social media posts are encouraging unique food or drink experiences
- 5. A greater focus on sustainability by food and beverage providers

Negative impact

- Globally standardized experiences

 What used to be local might become generic
- 2. Difficulty in sustaining small businesses as viable businesses
- Oversaturation of offerings (too many similar food or drink offerings)
- 4. Industrialized food supply systems affecting the availability of local foods
- 5. Economic slowdown, threat of recession



Nordic food

When we talk about Nordic food the term tends to be substituted to refer to a country's own food culture instead of pan-Nordic. The term however helps to capture the idea of a shared Nordic identity that benefits from a positive perception of the Nordic region. Perhaps somewhat supported by the inspirational motives of the New Nordic Kitchen manifesto.

Our expert interviewees worried that the Nordic countries have moved further away from their traditional food culture and feel that there needs to be a shift in people's mindset if we are to keep the connection with the food that has emerged from the region. They mentioned that many traditional fermented foods, such as Hákarl (fermented shark) or surströmming (fermented herring) are today seen as novelties that are strange and many times bordering on bizzare and feel that if we are to strengthen the food culture of the Nordic countries and reconnect with our traditions, we need to move past this and think about why people started eating it in the first place and focus on framing traditional food as something positive.

Despite various opinions on what Nordic food stands for we do have some commonalities in our food history for instance in food preservation. Harsh weather conditions and natural disasters influenced our survival skills and because of our short summers and often irregular access to international trading of goods, the preservation methods of pickling, fermentation, air drying, smoking, and curing shaped our cuisine for centuries.

Local food production is important because of food security, it stabilizes rural societies, it enriches our culture and plays a role in sustainable development. There is a great deal of value in local food production and artisan food.

We need to celebrate our small-scale food producers who contribute to rural inhabitation and support artisan food producers to develop as they are our source of knowledge and skillset that are fundamental to our food culture. Although we are facing changes in food offerings by new means of technology, traditional food and production is a valuable commodity for all countries.

We must bear in mind that the changing climate coupled with technological innovations have indeed the real power of disrupting our current food system, including what is food at all. In the coming years this could put pressure on what is considered to be Nordic food, and in the worst-case scenario even whether the concept of Nordic food will exist at all.

Diets & dining trends

Diets both globally and in the Nordics have always gone through various trending phases affecting the demand for certain food types or dining experiences. The Covid-19 pandemic has forced consumers to stay at home and change many of their consumption habits. New trends started like homemade sourdough bread and increased interest is given to heritage cooking, comfort, and soul nourishing cuisine. Restaurants have been creative with food-to-go but after the pandemic it is predicted that tailor made memorable dining will be on the rise. Meal kits, virtual dinner or cooking classes are all ways to reach a larger audience.²² Virtual restaurants have emerged through the pandemic. Some add a twist with access to a video from the chef, a storytelling or even a tailored concert. There has also been an increase in fancy for non-alcohol beers and wines but whether it will become a trend is yet to be seen.

An increasing demand for immune boosting and healthy food alternatives is predicted. Consumers will increasingly expect food to serve functional benefits both physically and mentally, something the tourism industry could capitalise on. Gut healthy foods are worth giving attention to and discussions around gut health in recent years gained more ground as imbalanced gut microbiome has been linked to both physical and mental health.²³

It may come as a surprise to many but Nordic diets on average contain many unhealthy foods such as candy, ice cream, pastries, pizza, pies and sugar-sweetened drinks, coffee, tea, and alcohol.²⁴ Food that is often connected to "comfort moments" in the Nordics. Since 1980 the Nordic Nutrition Recommendations have been based on scientific evaluation on which foods are good for human health. Up till today the Nordic diet usually has not contained sufficient proportions of foods like legumes, nuts and seeds, fruits, or whole grain to meet dietary recommendations. The focus on Nordic Nutrition Recommendations will however for 2022 be on new recommendations linking diet to sustainability, as well as maintaining a healthy body weight and reducing obesity.²⁵ This will further support sustainable tourism in regards to culinary experiences in the Nordics.

²² These will be the 21 Biggest Food Trends of 2021, According to Chefs

²³ Impacts of Gut Bacteria on Human Health and Diseases 2015

²⁴ Nordic food systems for improved health and sustainability. Stockholm Resilience Centre 2019

²⁵ Nordic Nutrition Recommendations in 2022

Sustainable and healthy gastronomy

A great deal has been written about sustainable diets. The Nordics need to define sustainable diet in *a Nordic or Nordic regional context*, using the momentum that the New Nordic Food movement started. In a brief from the Nordic food policy lab²⁶ a sustainable, inclusive and healthy gastronomy is characterized by the following principles:

- 1. Grown seasonally as and when appropriate
- 2. From diversified agroecological and circular production systems
- 3. Safeguarding biodiversity and cultural heritage
- 4. Produced in a fair and inclusive way, including gender and youth
- 5. Nutritious, clean, and safe
- 6. Accessible and affordable to all
- 7. With a responsible balance between animal-based and plant-based ingredients
- 8. With minimized food losses and waste
- Sourced from production systems that significantly minimize their impacts on nature and on the environment, and that stay well within planetary boundaries

²⁶ Democratizing good food. Nordic Council of Ministers 2019

Nordic food culture

New Nordic Food was based on the New Nordic Kitchen manifesto and conceived and formulated by a culinary movement in 2004²⁷ emphasizing traditional, sustainable, and locally sourced foods, with a heavy focus on those considered healthy. The goal was building a regional food identity as well as to promote tangible social goals.^{28, 29} The Emergence of New Nordic Food Culture (2015) states that New Nordic Food has drawn international attention in a creative way. Some of our expert interviewees somewhat agree saying that what the New Nordic Food movement has succeeded with, was to put the Nordic fine dining scene on the map but failed in its attempt to influence what people eat on an everyday basis because the ingredients and dishes were not familiar enough to many people. However, it is difficult to argue that the influence of the movement does remain as it has inspired a greater focus on local Nordic food and seasonality.

Our analytical findings showed that the terminology "New Nordic Food" or "New Nordic Cuisine" doesn't play a big part in today's discussions online or in Google searches. The ideology of cooking in harmony with nature has however influenced the global perception of Nordic food and our analysis found it is tightly connected to wellness, quality ingredients and an unpolluted environment. What remains important is championing the role of chefs and their contribution to food policies and social food movements but we must also bear in mind that the motivation to change diet often comes from within each person and is often based on emotions rather than facts, rules, or regulations.

Blending food cultures & urban entrepreneurs

The Nordic palate is increasingly international in flavor. Several factors today are contributing to mixed food cultures on a global scale andthe Nordics are increasingly becoming part of a more global food culture, a phenomenon that is referred to as "Global Brooklyn" and are fashionable food hot spots in cities. They have a similar atmosphere, may look shabby and improvised but are carefully designed: rough wooden tables in postindustrial design lit by Edison bulbs where customers enjoy single-origin coffee, kombucha, and artisanal bread. The food establishments are often run by young urban entrepreneurs, and a bigger focus is placed on the craft of food production rather than speed and convenience.³⁰

²⁷ The New Nordic Food manifesto

²⁸ The Emergence of a New Nordic Food Culture. Nordic Council of Ministers 2014

²⁹ Solutions Menu. A Nordic guide to sustainable food policy. Nordic Council of Ministers 2018

³⁰ Global Brooklyn. Designing Food Experiences in World Cities. Fabio Parasecoli, Mateusz Halawa. 2020

How the world perceives Nordic food

Our netnography analysis revealed that Nordic food is often tightly connected to wellness & comfort moments, and high-quality ingredients from an unpolluted environment. There also seems to be a desire for a Nordic experience. This is something to keep in mind and leverage to our own advantage.

The internet has enabled commenters from around the world, some of whom have never visited the Nordics before to become familiar with Nordic regional cuisine and join a community that shares the results of their experience, opinions, and experiments with each other.

We studied five language areas: English, Spanish, French, German and Chinese, during a 11-month research frame from December 2018 to November 2019. Our findings revealed that Swedish food is the most frequently *mentioned* Nordic food followed by Icelandic and Danish Food. However, the most *searched* regional Nordic cuisine in descending order were. Swedish, Norwegian, Danish, Icelandic, Finnish and Greenlandic food. Limited searches were indicated for Ålandic and Faroese cuisine during the 11-month search time frame. The only brand/company mentioned in relation to Nordic food discussions was IKEA.



Frequency of mention in online social media discussions

Netnography, Nordic Food in Tourism, Kairos Future, February 2020

In the mind of the global consumer Nordic food is often synonomus with **wellness & comfort moments** and the cuisine is associated with **high quality ingredients** that come from an **unpolluted environment**

Why are people interested in Nordic cuisine?

People become interested in Nordic cuisine because of interest in health and wellness, as a byproduct of travel, from a general interest in food, from an interest in a more sustainable lifestyle and through organic exploration of social media. Based on the views expressed online, four themes were identified around the concept of Nordic food and what function it serves in their lives.

Global interpretation. Ideas were discussed, mainly in English speaking countries, that Nordic cuisine is symbolic of the evolving world around us. Many online posts evolved around Nordic fusion cuisine that is mainly centered around fish and in particular salmon and Nordic Japanese cuisine. Nordic food is also mentioned in other contexts than our cuisine like Nordic salad in France and Nordic lunchboxes in Spain.

Associations with health and wellness. Nordic food seems to have a strong association with the Nordic lifestyle of a good work-life balance and sustainable way of life. Nordic ingredients were associated with high quality and clean environment and often discussed in relation with organic, clean, and wild food. Plant based diets were also mentioned in multiple posts and the principles of the New Nordic diet was associated with healthy eating.

A desire for a Nordic experience. TTo eat an "authentic" meal is one way to experience the Nordic lifestyle. Although posters may not all be familiar with the flavors of Nordic cuisine, they are arbiters of judging what qualifies as authentic. For non-Nordics, IKEA is their main touch point for Nordic cuisine. With its global reach IKEA is a defining authority on what traditional Swedish food looks like. There is also a strong fascination in Nordic traditional ingredients and dietary supplements using Nordic ingredients and the way Nordics pair their food.

Connecting to Nordic food. For those from a Nordic country or not, posters express strong feelings about Nordic food and the way it should be prepared. Users – both Nordic and not – express curiosity, surprise, and pleasure over 'hyper regional' Nordic cuisine. Some commenters express strongly negative feelings about Nordic food, with complaints about the cost, flavors used, and those stemming from a lack of familiarity with the cuisine. Conversations about Nordic cuisine reflect a diverse range of viewpoints: from travelers who tried the dishes during a visit to intrepid home cooks, residents of Nordic countries to people homesick for the food they grew up eating.

Online mentions of Nordic food

The top five most frequently mentioned Nordic dishes in online posts are: meatballs, waffles and pancakes, crab, mashed potatoes & salmon.

The top six most frequently mentioned Nordic ingredients were in descending order: crab, salmon, cheese, fish & seafood, Icelandic lamb, and cranberries.



Netnography, Nordic Food in Tourism, Kairos Future, February 2020

Considering that cod is one of the major exports from many of the Nordic regions it was not a popular topic of conversation, with less than 10% of posts (7.38%) related to cuisines featuring the word "cod". Danish beer was also not a popular topic of conversations regarding Danish food with less than 10% of posts (6.89%).

Nordic food pairings were a popular topic, like cheese and gingerbread, waffles and ice cream, herring and aquavit, sugar and cinnamon, meatballs, lingonberry sauce and potatoes.

Recipes and home cooking experiments are widely featured in online dialogues and could be used strategically when promoting Nordic regional dishes. Seasonal Nordic specialties and desserts are also of special interest.

Language area observation

It depends on the language area whether the most popular search is for Nordic diet (English), Nordic cuisine (French and Spanish), Nordic kitchen (German) or Nordic food (Chinese). English speakers also search for Scandinavian cuisine and comfort food.

The Germans talk about high prices, daring tastings and meatballs, the French search for smörrebröd, fish, and pastry. The Spanish speaking countries discuss a lot about bacalao (dried salted cod) but hardly ever in context of Nordic origin or cuisine.

China's most popular Nordic food and drinks imports include cookies, vodka, candy, beer, bottled water, milk powder, oatmeal, skyr yogurt and luncheon meat. Searches for Nordic food on Chinese e-commerce platforms include vodka, chocolate, oatmeal, fish oil supplements and astaxanthin from Sweden. Cookies, milk powder, yogurt, Carlsberg beer and canned luncheon meat from Denmark. Fish oil supplements from Norway, Milk powder from Finland and skyr yogurt from Iceland. Country specific foods that were mentioned are Swedish meatballs, Danish cookies, Norwegian salmons, and to our surprise ginseng from Iceland, which is not even an Icelandic ingredient, but most likely relates to the Icelandic sea cucumber (cucumaria Frondosa) often referred to as ginseng of the ocean. China has been one of the largest markets for sea cucumbers which is considered to have an aphrodisiac effect among various health benefits.

Regional Food

Most searches on regional cuisine/food were found on Swedish, Norwegian, Danish, Icelandic, Finnish and Greenlandic food. Limited searches were indicated for Ålandic and Faroese cuisine. Many commenters from across the world, who have visited the Nordics, feel that eating out is expensive. Everyone wants value for their money, and it is imperative that the two go together.

Åland. Field of interest among visitors involved coziness and an enjoyable atmosphere linking the cuisine to niche Nordic food. Most mentioned ingredients were Cinnamon and pancakes. Limited searches via Google.

Denmark. Field of interests among visitors involved the cozy atmosphere offered by Danish hospitality that heightens the food service. The most mentioned food was smörrebröd. According to Google search data, people in the US and the UK account for the majority of searches for Danish cuisine, indicating a much higher interest among English speaking countries, in particular the US. Germans also showed more interest in Danish cuisine than the other Nordic cuisines.

Faroe Islands. Field of interests among visitors involved delicious local food but expensive, lamb was specifically mentioned, and the cuisine linked to meat heavy. Limited searches via Google.

Finland. Field of interests among visitors involved the availability of traditional ingredients and reindeer meat. Many mentions were on the Finnish sapas (Suomitapas). Main searches came from the UK and other searches came from Spain, France, and Germany in descending order. Searches from the US were relatively lower than on other Nordic cuisines. **Greenland.** Field of interests among visitors involved exotic food like muskox and whale meat as well as Greenlandic tapas plates, shellfish, salmon and mussels. Many mentions were of high prices. Most searches came from the US. Other searches came from the UK, Spain, Germany, and France in descending order.

Iceland. Field of interests among visitors involved Icelandic ingredients (the Icelandic hotdog, lobster, lamb, and fish) and Iceland's food movement. Many mentions were of unique flavor and high prices. According to Google search data, people in the US and the UK account for most of the searches. Searchers in the UK show a higher interest in the cuisine relative to other Nordic cuisines. Other searches came from France, Spain, and Germany in descending order.

Norway. Prior to visiting Norway visitors had low expectations only to be pleasantly surprised about the quality of food they experienced, such as elk and reindeer meat. Main searches came from the US, followed by the UK. Other searches came from Spain and France although the interest was relatively lower compared to other Nordic cuisines. Germany showed the least interest in Norwegian cuisine compared to other Nordic cuisines both relatively and absolutely.

Sweden. Field of interests among visitors involved the authenticity of Swedish food, meatballs as well as food and drink pairing. Most searches by far came from the US, followed by the UK. Other searches came from Spain, France, and Germany in descending order. Compared to other Nordic cuisines, searches from these three countries were slightly lower.


Nordic food production

The global importance of the Nordic regions as food providers is likely to increase in future as the suitability for agriculture decreases in some global areas. If global warming however continues to rise it could change biodiversity and the output of food production in the Nordics.

Agriculture faces a massive dual challenge in feeding a growing and increasingly affluent global population, while at the same time reducing its negative environmental impacts. Droughts, floods & influx of new pests and diseases can have negative effects but at the same time warmer climate gives possibilities to grow new food types like vineyards seen primarily in Denmark and southern Sweden. The northernmost commercial vineyard is in Telemark, Norway.

Crops such as corn and rapeseed, traditionally grown in the south of Scandinavia can now be farmed further north due to the warmer climate. In 2020 the Northern Hemisphere land and ocean surface temperature was the highest in the 141-year record at +1.28°C above average.³¹ It is therefore important to adapt agriculture to future conditions, especially since the development of new crop varieties takes a long time. In the south and west of the Nordic, the temperature is expected to be like the global average increase, while the northern and eastern areas are expected to have a higher increase in temperature.³²

The role of farmers will be under reconstruction. In addition to primary agricultural production farmers fulfil multiple functions such as maintaining the rural landscape, conserving biodiversity as well as natural resources. One essential feature of this new role is the demand for entrepreneurship because of climate change and changing consumption habits.

How food is produced and transported to the consumer is undergoing rapid change across the Nordic countries. An increase in local and short food chains is predicted to grow. The farm to table movement has already been trending but new opportunities arise as there is a growing interest in knowing where the food comes from. Farmer to urban consumer delivery is likely to grow through various platforms like REKO or other similar platforms. A marketplace platform that connects farmers and chefs is also promising.

There is a desire among Nordic politicians to stimulate local food and feed production and the COVID-19 pandemic further puts focus on the importance of

³¹ National Centers for Environmental Information

³² Nordic agriculture and climate change 2019

food security. The Nordics will always rely on import and export but by being more self-sufficient, the reliance on imported food could be reduced.

However, a shift to sustainable food systems can also lead to an export boom showcasing Nordic innovation and leadership. $^{\rm 33}$

Sustainable food systems

Moving towards sustainable food systems, calls for sustainable fisheries, regenerative farming as well as protecting and conserving biodiversity, maintaining healthy soil and emphasis on green & renewable energy.

According to FAO (Food and agriculture organization of the United Nations) climate change will affect all four dimensions of food security: food availability, food accessibility, food utilization and food systems stability. It will have an impact on human health, livelihood assets, food production and distribution channels, as well as changing purchasing power and market flows.

The world urgently needs to change the way it produces and consumes food. If consumption trends continue as projected, the world will need to increase food production by more than 50 percent to feed nearly 10 billion people adequately in 2050.³⁴ Globally we waste around 30-40% of our food and by reducing the waste we could feed more people and lessen the economic and environmental burden that unavoidably follow food waste. Melting glaciers bring new shipping routes and new opportunities to over-exploit resources such as fish, rocks, gas, and oil.³⁵

To ensure that food can continue to be produced in the Nordic countries in the future, we need to strive towards having a sustainable food system as we are facing some grand challenges that seem to be mounting.³⁶ But, as one expert interviewee said "Just like there is no single Nordic diet that is identical across all Nordic nations, the solutions needed to implement a more sustainable food system will also look different across the region. We need to identify each country's offering and think about how we can create harmony around that." While the Nordic countries are leading the way in many aspects, there still is room for improvement. Widely adopted regenerative farming helps mitigate climate change.

The Nordic region is blessed in many ways, it has plenty of good farmland, abundant water resources, uses relatively little antibiotics in animal husbandry compared to many other European countries and some like Iceland are in the forefront of using

³³ Nordic food systems for improved health and sustainability. Stockholm Resilience Centre

³⁴ Creating a sustainable food future. World Resources Institute 2019

³⁵ Hållbar utveckling i Arktis viktigare än någonsin. Nordic Cooperation

³⁶ Cookbook for system change. Nordic innovation strategies for sustainable food systems. Nordic Council of Ministers 2020

renewable energy. Over usage of antibiotics in food production increases the risk of antibiotic resistance in humans posing a serious threat to human health.

Genetic engineering in the European Union has varying degrees of regulation. Some countries have a national ban or restrictions while others don't.³⁷ Some Nordic regions have GMO (Genetically Modified Organisms) free zones. There has been a public rise of opposition to GMO food in Europe but with climate change there could be an increased need for more resilient crops using GMO. The pros of GMO crops are that they may contain more nutrients, are grown with fewer pesticides, and are usually cheaper than their non-GMO counterparts. The cons are that they may cause allergic reactions because of their altered DNA and they may increase antibiotic resistance.³⁸

Biodiversity and soil degradation

Biodiversity has emerged as a key area for the future of farming, as we rely on various animals from birds to insects and bees for our land to be healthy. Our expert interviewees pointed out several ideas on how to best achieve biodiversity. One is to use low productive practices where land is not farmed very intensively to allow animals to live in those areas. Another idea is to farm some parts intensively while completely stopping to farm other areas and rewild them, that is to let nature take over and create new habitats for animals. Research has indicated that the latter option has the greatest benefit for biodiversity, while also being able to generate greater yields of food.

According to the United Nations report Global Biodiversity Outlook emphasis should be made on political pressure to protect our biodiversity. The Nordic Council of Ministers have recently pointed out that the Nordics need to commit and comply with conservation and protection policies.³⁹ Soil degradation and the loss of topsoil could mean that affected regions and countries will struggle to grow their own food in the future.

Fish stock pressure and depletion

According to Kairos Future analysis fish stocks in the North Sea, Norwegian Sea and Arctic Sea are coming under pressure from both climate change and fishing. In these regions fishing is monitored and controlled reasonably well although fishing still places a strain on fish stocks. Climate change is exacerbating this strain, through acidification of oceans and temperature changes, which allows, and forces, migration of fish stocks. The North Sea has already seen a 15-20% reduction in

³⁷ GMO free Europe

³⁸ Evidence-based pros and cons of GMO foods 2020

³⁹ https://www.norden.org/en/news/lea-wermelin-nature-crisis

productive capacity of sea life and the North Atlantic cod are spawning just a few degrees south of the North pole, where they never spawned before, which is a result of warming temperatures.⁴⁰ According to the IPCC (Intergovernmental Panel on Climate Change) seas are about 26% more acidic today as they are absorbing excess carbon form the atmosphere, which has a damaging effect particularly for shellfish. If fish stocks drop, fish could become an exclusive and expensive food source. This could become a threat as early as in 2040.

Food technology - a growing trend

Foodtech is and will be shaping the future of food both globally and in the Nordics. It aims to reduce food waste, create efficiency, and expand our food base.

Food tech is an emerging sector exploring how technology can be leveraged to create efficiency and sustainability in the food sector. It covers technology in agriculture, consumer apps and services, food delivery, food processing, food safety, traceability, kitchen and restaurant technology, next generation of food and drinks and waste management.⁴¹

Agri-Tech

The agriculture sector needs to invest in new technology and better systems to optimize yields and efficiency as farming is facing labor shortage. Replacing workers with robots will probably become a more frequent occurrence, and a challenge will be to find the right balance between man and machine.

As AI (Artificial Intelligence) becomes more capable, more areas are being found for its use. It is now being used in food systems to help food producers manage crops, fisheries, and animal stocks. AI has, and will continue to, drive up crop yields and reduce costs for food producers.

Urban agriculture

Traditional farming practices could be supplemented by new technological innovations to provide food for the growing urban population. Urban agriculture is nothing new and has been around for a long time. But with the growth in the world's population and with increasing urbanization, the idea of producing food in cities at a large scale through vertical farming may be one of the answers to improve security and resilience in the food chain.

⁴⁰ Global ensemble projections reveal trophic amplification of ocean biomass declines with climate change 2019

⁴¹ https://forwardfooding.com/what-is-food-tech/

The Nordics will most likely see an increase in vertical and urban farming producing food where the environment is carefully monitored. Some call it post-organic food production. One of our expert interviewees pointed out that there are though a couple of critical barriers. First of all, vertical farming is mainly used to grow different types of salads, microgreens and herbs that don't have the biggest emissions. Secondly, indoor agriculture requires a lot of investment to get started, and a lot of energy to grow food. Thirdly, it seems unlikely that crops such as rice and corn can be grown more effectively or economically than with current farming methods.

The next generation in Food and drink

Growth in new protein sources

New protein sources are being researched and invested in. While plant-based proteins like pea, soy and whey are common in most meat alternatives, there is a growing number of new sources that are being used to make meat analogs or replace meat in people's diets. By alienating meat, dairy and fish with substitutes traditional food cultures could be affected. Solar foods in Finland have managed to create protein powder using carbon dioxide, water, and electricity. Hemp is predicted to be a vital protein source. NapiFeryn Biotech in Poland is developing protein from rapeseed and insect farming in the Nordics is today led by Denmark and Finland.

Cultured - Cell-based food

Lab-grown or cultivated food is an emerging sector that cultures & grows ingredients in labs instead of using livestock. The sector is currently in its infancy but in 2040 we might be seeing a vast growth in this sector. It's already possible to culture meat and fish using cells from living animals. Perhaps growing tropical fruits with cultivated techniques might catch attention in the Nordics.

The digitization of food - What shall we print for dinner?

It is predicted that 3D printers might be a common household in the near future, just like microwaves are today. It fits well into the greater demand from consumers for convenience, portion control and customization. By this food becomes less tied to a particular place but also makes food more accessible to different groups of people i.e., fun shapes for children and appealing appearance with soft texture for dysphagia patients.⁴² 3D food printing also offers a way to make appealing dishes with "ugly" food or cut offs as demonstrated by Matís in Iceland on developing new innovative Icelandic seafood products from low value seafood byproducts using a 3D printing device. An Israeli company is creating "beef steaks" with 3D printers as a solution to minimize greenhouse emissions of traditional beef production, producing

⁴² Food unfolded. Making soft food more exciting Video

animal-free meat with the appearance, texture and flavor of whole muscle meat.⁴³ These are only two of many companies developing food using 3D printers today. 3D food printing may be applied mostly in restaurants in the beginning, as the printers enable chefs to expand their creativity and have even more control in precision of their food presentations as well as reducing food waste.

Radical transparency & origin labelling

New technology coupled with growing consumer demand has fueled the rise of radical transparency and traceability. Consumers want to know where the food comes from to build trust, fight against food fraud, and improve actions on food safety. A survey from the Food Marketing Institute from 2018 showed that 75% of participants would switch to a brand that was more transparent, an increase from 39% in 2016.⁴⁴

Improved technology using sensors for food safety like pathogen sensors and onsite DNA testing providing real time authentication preventing food fraud is part of today's technology and will no doubt be standard procedure in the future.

Blockchain technology has emerged as an increasingly promising tool for producers, businesses, and consumers in the food industry to share information on the origin, production methods, ingredients, working conditions etc. The technology has for example made it possible for companies to trace food back to the farm where it was grown which is relevant in cases of food contamination.

Origin labelling could provide a big boost to Nordic producers, as consumers show a greater interest in local clean food, small carbon footprint and sustainable production methods.

Surplus and Waste

Food waste is a major global challenge. About 30% of all food produced for human consumption is wasted. When food is thrown away, so are the resources that went into producing it.⁴⁵ The process of creating new food products from, unutilized food resources, by-products or using wasted ingredients ingeniously, has seen growth both in upstream and downstream functions i.e., jellyfish, algae, and insects. Several companies and startups have developed consumer apps that minimize food waste, enabling consumers to buy food for less money that would otherwise end up in the trash. Some restaurants in the Nordics have specialized in zero waste and more will follow. More emphasis is and will be on smart and sustainable packaging using soluble and biodegradable packaging.

⁴³ Redefine meat

⁴⁴ Food Dive. Label Insight and the Food Marketing Institute 2018

⁴⁵ Food wastage footprint & climate change. FAO

Buying food & delivery service

The Covid-19 pandemic has proved horrendous for the restaurant business. Restaurants will need to rely on other options than seated guests or full kitchen staff. Ghost kitchens are a co-working space for food or a restaurant without a storefront to lower operational costs. This enables them to strip down the traditional dining establishment by removing dining areas and fancy décor. Instead, they serve as large kitchens for restaurants to prepare food to deliver to customers. Virtual restaurants have emerged through the pandemic. Some add a twist with access to a video from the chef, a storytelling or even a tailored concert.

Online grocery shopping and home delivery boomed during the pandemic and the service will only evolve. Retailers will team with nontraditional partners. In the future grocery stores might add online or onsite cooking classes with a chef and access to a nutritionist. Even offer access to microgreens grown in- house that customers can pick and bag themselves.

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Kitchen and restaurant tech

Kitchens will rely more on digital solutions that allow restaurants to use ingredients more efficiently and optimize operations. Klimato is a Danish software that calculates CO2 emissions based on a restaurant's menu and provides solutions to decrease it. Data analytics like Yumpingo crowdsources customer feedback to provide data analytics to restaurants to improve their guest experience and service operations. In addition to the 3D food printer, other devices are likely to appear, i.e., robo-chef that not only cooks but also cleans.⁴⁶

⁴⁶ Luxury Restaurant Guide. A futuristic Vision of Dining 2021

Strategic guidelines

Strategic guidelines to support future actions and policy making for food in tourism within the Nordic countries

Based on the future analysis the project partners added their professional insight to form a vision and design strategies that could help strengthen the role of Nordic food in future Tourism across the region and in individual countries. The common vision created within the group was as follows:

> Visiting the Nordics should be about experiencing place where people and the planet prosper in sustainable harmony and economic growth.

> A place where eating and traveling are in balance with local culture and nature and seen as a desirable lifestyle, a Nordic lifestyle.

Our achievement is not about competitive advantage but about our drive for a sustainable future.

The Nordic Style

Nordic Food in Tourism

Nature, wellness, niche activities and entrepreneural culture Quality ingredients served with storytelling and pride associated with comfort moments

Eating and travelling in harmony with nature and local culture - a lifestyle that is desirable To see this vision come true the following strategies and guidelines were set forward. These are suggestions to be discussed with and together stakeholders such as individual food and tourism businesses and associations, local communities, government, NGOs, media, and developers in each Nordic country for further development. Suggestions of actors for execution of the specific suggestions are not provided as these can vary between countries. Those who have impact on policy making in food and/or tourism are encouraged to consider these suggestions and act upon.

The suggestions are divided into six focus areas listed below (also in table Annex 1):

- 1. Investments & lobbying
- 2. Tools & knowledge for innovation and product development
- 3. Understanding residents and visitor's needs and expectations
- 4. Education and training programs for schools and businesses
- 5. Communications toolkit
- 6. Visibility of local food and distribution

Investment and lobbying

Nordic cooperation has been strong through decades, and there has been increased recognition among politicians on the importance of sustainable tourism.⁴⁷ However, food in tourism hasn't gained the momentum it deserves. Few of the Nordic countries have policy that highlights food in tourism. There is also a need for supportive infrastructure to enhance food in tourism.

- Support investment, lobbying and strengthen political knowledge on Nordic regional food in tourism highlighting the connection to sustainability.
- Establish a Nordic funding system specified for food in tourism in cooperation with the New Nordic Food program.
- Provide political decision makers with tools and success stories on food in tourism.
- Lobby for an improved legal framework that facilitates and encourages more smallscale food production.

⁴⁷ Nordic Council of Ministers, 2019. Plan for Nordic tourism co-operation 2019-2023. PolitikNord 2019:727.

Tools and knowledge for innovation and product development

There is a strong innovation & entrepreneurial spirit in the Nordic countries. However, the emphasis and level of food technology innovation aiming to improve sustainability varies in the Nordic countries. Food should also be more connected to sustainable tourism.

Suggestions:

- Create a shared Nordic framework of tools and knowledge for innovation and product development supporting food in tourism.
- Support clusters in the Nordic region to provide a joint platform for sharing experiences and ideas, search for funding and finding collaborators within the field of food in tourism.
- Cooperate & collaborate: Bring Nordic food science, innovation hubs, clusters, food & tourism sector, and other stakeholders together and make incentives durable.
- Encourage individuals and organizations to undertake more innovation projects on sustainability involving tourism and food.
- Host joint Nordic hackathons on food in sustainable tourism, involving the younger generation.

Understanding residents and visitor's need and expectation

Tourism is an important pillar of the Nordic countries economy and residents wish to live an eco-friendlier and sustainable lifestyle. However, awareness on sustainable lifestyle and eco-friendly travel reflecting climate impact needs incentives to change behaviour that aligns with eating and travelling in harmony with nature.

- Further joint research among the Nordic countries supporting food in tourism and climate change adaptation such as on sustainable lifestyle, travel behaviour and consumption habits, trends, and megatrends. Understanding residents and visitor's needs and expectation enables better marketing, investment, and product development. This can be done via e.g., focus groups and/or surveys focusing on food and tourism.
- Highlight good examples on sustainable actions and behaviour regarding food in tourism that inspire and influence others in the world to follow in the Nordic footsteps.
- Collaborate on guidelines for the Tourism industry focusing on steps residences and visitors can take to minimize their carbon footprint while visiting the Nordic countries.



Invest in education and training programs for schools and businesses

It can be challenging to attract skilled and local labour in tourism. There is also a high turnover of people working within the industry.⁴⁸ Therefore, knowledge of local food and food culture is often lacking among those working within tourism, resulting in misperception and/or untapped opportunities for creating positive culinary food experiences.

- Invest in education and training programs for schools and businesses working within food and/or tourism, build local knowledge on Nordic (regional) food in tourism and sustainable actions.
- Create a new profession: Nordic food Tourism designer. Focus on the whole experience, storytelling, and sustainable lifestyle in accordance with all generations.
- Promote and recognize good workplace conditions, supporting regional development regarding food in tourism, that are creating jobs that last for an entire year, not just over the tourism season were that is the case.
- Set up gastronomic hubs that create educational programs with emphasis on purity, season, ethics, health, quality, and sustainability (as in the New Nordic Food Manifesto) in different learning levels such as members from Nordic national culinary teams visiting elementary schools and creating simple inspirational dishes using all parts of raw materials.
- Invest in future generations. Integrate food production, local & regional food characteristics, cultural heritage, and sustainable Nordic lifestyle as early as kindergarten in school curriculums. Update educational material using e.g., hands on and virtual learning.

⁴⁸ Walmsley, A., Åberg K., Blinnikka P., Jóhannesson G.Þ., 2020. Tourism Employment in Nordic Countries. Trends, Practices, and Opportunities, 2020. Springer International Publishing. 2020.



Communication toolkits for promoting Food in Tourism

There is an increased global interest in artisan, local & regional food, and food culture.⁴⁹ The global consumers associate Nordic food with wellness and quality ingredients from an unpolluted environment. However, there is little knowledge on traditional Nordic/ regional food among international visitors or even among locals who often lack knowledge on the cultural heritage of food.

- Create a communication toolkit for promoting Food in Tourism: Nordic sustainable lifestyle and diet/ gastronomy intertwined with nature, local culture, and tourism. Focus on common denominators yet still highlight regional differences.
- A consensus on sustainable Nordic diet/gastronomy & lifestyle should be reflected in "Nordic food in tourism".
- A broader framework of collaborations to introduce Nordic food through the whole visitor economy, such as within companies like IKEA, the MICE industry, film industry, through virtual tours and dinner parties, collaborating with local and international food ambassadors etc.
- Work towards a common Nordic certificate of origin or certificates for restaurants and destinations that meet authentic Nordic criteria or artisan food.
- Work closely with chefs/restaurants to obtain a better understanding of visitors' preferences and culinary trends.
- Invest in joint Nordic hubs, online or physical marketplaces that focus on Nordic lifestyle & food i.e., make virtual food tours /dinner parties to engage visitors.

⁴⁹ Wolf, E., Stone M., Garibaldi R., Migacz S., Stein N., 2020. 2020 State of the Food Travel Industry report. World Food Travel Organisation.

Visibility of local food & distribution

We share strong ethos towards food safety and sustainable mode of food production. However, visibility and distribution of local food is inefficient in many Nordic regions. There is a need to emphasise the importance of local food to support food security and sustainable development. Regenerative and smart farming need more attention and support. Commercialization and visibility of small-scale food production is generally lacking or not sufficiently efficient.

- Increase visibility of local food & distribution, enhancing the connection of consumer with producer as the supply chain gets shorter. Local food needs to be visible, origin labelled and easily accessible both in rural areas and in urban cities.
- Mapping ways for farmers & fishing operators to be in more direct contact with restaurants, supermarkets, local stores & consumers.
- Actively involve farmers, fishing operators and consumers on future actions involving consumption trends, climate change impact and food technology, as well as the Nordic Food trademark of purity, season, ethics, health, sustainability, and quality⁵⁰.
- Encourage local communities to continue with, expand, or begin traditions that highlight local foods and food production (such as yearly food celebrations at harvest time or other traditional yearly food festivities) to educate the local communities about their own food culture and heritage. Such festivities could also become tourist attractions and incite local chefs' and restaurants' creativity based on food heritage and tradition.
- Local food related initiatives, such as food festivities, are likely to attract attention from the media, which is another reason for encouraging such initiatives to become more established.

⁵⁰ New Nordic Food Manifesto, 2004. Nordic Co-operation.

Conclusion

Foreseeable changes due to global warming and the 4th industrial revolution will shape our future both regarding the availability of food and consumer (residents' and tourists ') preferences. Policies need to take this into account. Sustainability is the underlaying framework for all policy work today in the Nordics, at the Nordic cooperation level as well within individual Nordic countries. In the **Plan for Nordic tourism cooperation 2019-2023**⁵¹, four themes are highlighted: competitive Nordics, innovative and smart Nordics, sustainable Nordics and attractive Nordics. Recommendations have been set for creation of Nordic roadmap of sustainable tourism and establishment of a taskforce for effective exchange of best practices and policies⁵². In the 2022 edition of the Nordic Nutrition Recommendations sustainability will be integrated in the food-based dietary guidelines for the first time⁵³. Food strategies and tourism strategies in the Nordic countries today reflect this focus on sustainability.

Nonetheless, no common formalized cooperation regarding food in tourism at the Nordic level. National tourism and food strategies in the Nordics have in general not been interrelated. However, in the new Norwegian tourism strategy **Nasjonal Reselivsstrategi 2030**⁵⁴, and Norwegian food strategy, **Matnasjonen Norge**⁵⁵, both published in 2021, a change can be seen towards this direction. The strategies interact with one another and emphasize the importance of cooperation between ministries that manage efforts in relation to food and tourism and interaction between stakeholders in the tourism and food sectors, the business policy for food and tourism seen in context, both nationally and internationally. This is an important step in streamlining actions within food in tourism.

Many destinations have set strategy, specifically of food in tourism. Besides attracting visitors, a successful strategy can increase both resident and visitor quality of life and make a significant economic impact. In Denmark, a public-private partnership, the Gastro 2025 plan was launched by the government in 2019 with the aim to strengthen Danish gastronomy, attract tourists, and promote sustainability: "Gastronomy will be used as a force of change, increasing export of Danish produce, developing better meal habits, reducing food loss and waste, and supporting the development of Denmark as a compelling tourist destination."⁵⁶

⁵¹ Nordic Council of Ministers, 2019. Plan for Nordic tourism co-operation 2019-2023. PolitikNord 2019:727.

⁵² Árnadóttir R.E, 2019. Nordic Tourism Policy Analysis. Nord 2019:008. Nordic Council of Ministers, 2019

⁵³ Nordic Nutrition Recommendations 2022: join in the work. 08.10.19. Nordic Co-operation.

⁵⁴ National Tourism Strategy 2030. Big impact, small footprint. April 2021. Innovation Norway.

⁵⁵ Matnasjonen Norge. 02/2021. M-0757 B. Landbruks- og matdepartementet,

Nærings-og fiskeridepartementet, Helse- og omsorgsdepartementet

⁵⁶ Gastro 2025. March 2019. Ministry of Environment and food of Denmark.

A 2030 scenario set forward in the Nasjonal Reselivsstrategi is that the "tourist industry in Norway in 2030 is based on STRONG IMPRESSIONS rooted in nature, culture, traditions, way of life, food culture and innovative stakeholders". One of the initiatives and measures pointed out in the strategy is "National concept for food and culinary experiences" which has the goal of "tapping the potential for food and culinary experiences by building up market interest, reinforcing offerings and ensuring deliveries". One of the action mentioned is establishment of national "food and drink" month, another is creation of accelerator programme for gourmet eateries to support them to develop into the international elite.

In the 2030 vision of Matnasjonen Norge, food and tourism are linked few times, food being visible element of the tourist country Norway, Norway being internationally known for unique and exciting food culture, food, and drink experiences. The food strategy is aimed to be a framework for regional and local development work and contribute to further development of strong food and tourism regions via e.g., the network Food nation Norway. Priority measures include continue to prioritize business-oriented instruments for the food and tourism area and contribute to the comprehensive building of a reputation that strengthens, further develops, and profiles Norway as a food nation nationally and internationally. Part of this is governmental support to special reputation activities for food and drink, both major national initiatives such as Norway's participation in the International Green Week in Berlin, Matstreif, the national food and beverage competition Det Norske Måltid, and major regional food festivals in various parts of the country.

As mentioned previously, one of the main objectives of the project Food in Tourism is to provide strategic guidelines that support future actions and policymaking. During the project time, some initiatives have already made use of the project findings.

- The Norwegian tourism strategy 2030, points out the "need for national concept that links markets, eateries and suppliers while also linking seafood, agriculture, game/harvesting and local specialities. This concept could be based on the findings of the "Nordic Food in Tourism"project, which recommends linking our food and culinary experiences to our natural lifestyles."⁵⁷
- The New Nordic Food programme is currently facilitating activities based on the New Nordic Food Manifesto and among the tools being used in that work are findings and suggestions made by the Food in Tourism project.⁵⁸

⁵⁷ National Tourism Strategy 2030. Big impact, small footprint. April 2021. Innovation Norway. p 58.

⁵⁸ Communication with members of the New Nordic Food Committee, January 2022.

Food in tourism in the Nordics has many opportunities to flourish in the future. The aim should be to look at the society as whole, be proud of the cultural heritage, build on it as well as traditions and customs of food culture while preserving and highlighting the food specialities of different regions. At the same time, we should promote development and innovation looking towards underutilized resources and a zero-waste food policy. We need to consider future scenarios, plan ahead, collaborate and remember that several individual small steps can have great impact.

Annex 1

Strengths	Weaknesses	Suggestions
Strong history on Nordic cooperation and increased recognition among politicians on the importance of sustainable tourism	Food in tourism hasn't gained the momentum it deserves. Few of the Nordic countries have a policy that highlights food in tourism.	Support investment and lobbying - strenthen political knowledge on Nordic regional food in tourism highlighting the connection to sustainability. Establish a Nordic funding system specified for food in tourism in cooperation with the New Nordic Food program Provide political decision makers with tools and success stories on food in tourism.
	Need for supportive infrastructure to enhance food in tourism.	Lobby for an improved legal framework that facilitates and encourages more small-scale food production.
Strong innovation & entrepreneurial spirit in the Nordic countries	The emphasis and level of food technology innovation aiming to reduce climate impact varies in the Nordic countries. Food could be more connected to sustainable tourism.	Tools and knowledge for innovation and product development - Create a shared Nordic framework of tools and knowledge for innovation and product development supporting food in tourism. Support clusters in the Nordic region to provide a joint platform for sharing experiences and ideas, search for funding and finding collaborators within the field of food in tourism.
		Cooperate & collaborate. Bring Nordic food science, innovation hubs, clusters, food & tourism sector and other stakeholders to the same table and make incentives durable.
		Encourage individuals and organizations to undertake more innovation projects on sustainability involving tourism and food.
	+	Host joint Nordic hackathons on food in sustainable tourism, involving the younger generation.

Strengths	Weaknesses	Suggestions
Tourism is an important pillar of the Nordic countries economy and residents wish to live an eco-friendly and sustainable lifestyle.	Awareness on sustainable lifestyle and eco-friendly travel reflecting climate impact needs incentives to actually change behaviour that aligns with eating and travelling in harmony with nature.	 Understanding residents and visitor's need and expectation to enable better marketing, investment, and product development. Further joint research among the Nordic countries supporting food in tourism and climate change adaptation. Including sustainable lifestyle, travel behaviour and consumption habits, trends, and megatrends. Highlight good examples on sustainable actions and behaviour regarding food in tourism that inspire and influence others in the world to follow in the Nordic footsteps.
		Collaborate on guidelines for the Tourism industry focusing on steps our visitors can take to minimize their carbon footprint while visiting the Nordic countries.
	Challenging to attract skilled and local labour in tourism.	Invest in education and training programs for schools and businesses - Build local knowledge on Nordic (regional) food in Tourism and sustainable actions.
	Knowledge on local food and food culture is often lacking among those working within tourism resulting in misperception and/or untapped opportunities for creating positive culinary food experiences.	Create a new profession– Nordic food Tourism designer - Focus on the whole experience, storytelling, and sustainable lifestyle in accordance with all generations.

Strengths	Weaknesses	Suggestions
continuation Tourism is an important pillar of the Nordic countries economy and residents wish to live an eco-friendly and sustainable lifestyle.	High turnover of people working within the industry.	Promote and recognize good workplace conditions, supporting regional development regarding food in tourism, that are creating jobs that last for an entire year, not just over the tourism season.
		Set up gastronomic hubs that create educational programs with emphasis on purity, season, ethics, health, quality, and sustainability (as in the New Nordic Food Manifesto) in different learning levels such as members from
		Nordic national culinary teams visiting elementary schools and creating simple inspirational dishes using all parts of raw materials.
		Invest in future generations. Integrate food production, local & regional food characteristics, cultural heritage, and sustainable Nordic lifestyle as early as kindergarten in school curriculums. Update educational material using e.g., hands on and virtual learning.

Strengths	Weaknesses	Suggestions
Increased global interest in artisan, local & regional food, and food culture. The global consumers connect Nordic food to wellness and quality ingredients from an unpolluted environment.	Little knowledge on traditional Nordic/ regional food among international visitors or even among locals who often lack knowledge on the cultural heritage of food.	Communication toolkit for promoting Food in Tourism: Nordic sustainable lifestyle and diet/ gastronomy intertwined with nature, local culture, and tourism. Focus on common denominators yet still highlight regional differences. A consensus on sustainable Nordic diet/gastronomy & lifestyle should be reflected in "Nordic food in tourism". A broader framework of collaborations to introduce Nordic food through the whole visitor economy, such as within companies like IKEA, the MICE industry, film industry, through virtual tours and dinner parties, collaborating with local and international food ambassadors etc.
		Work towards a common Nordic certificate of origin or certificates for restaurants and destinations that meet authentic Nordic criteria or artisan food.
		Work closely with chefs/restaurants to get a better understanding of visitors' preferences and eating trends.
		Invest in joint Nordic hubs, online or physical marketplaces that focus on Nordic lifestyle & food i.e., make virtual food tours /dinner parties to engage visitors.

Strengths	Weaknesses	Suggestions
We share strong ethos towards food safety and sustainable mode of food production.	Visibility and distribution of local food is inefficient in many Nordic regions. Need to emphasise the importance of local food to support food security and sustainable development. Regenerative and smart farming need more attention and support. Commercialization and visibility of small- scale food production is generally lacking or not sufficiently efficient.	 Visibility of local food & distribution - Enhancing the connection of consumer with producer as the supply chain gets shorter. Local food needs to be visible, origin labelled and easily accessible both in rural areas and in urban cities. Mapping ways for farmers & fishing operators to be in more direct contact with restaurants, supermarkets, local stores & consumers. Actively involve farmers, fishing operators and consumers on future actions involving consumption trends, climate change impact and food technology, as well as the Nordic Food trademark of purity, season, ethics, health, sustainability, and quality (The New Nordic Food Manifesto). Encourage local communities to continue with, expand, or begin traditions that highlight local foods and food production (such as yearly food celebrations at harvest time or other traditional yearly food festivities) to educate the local communities about their own food culture and heritage. Such festivities could also become tourist attractions and incite local chefs' and restaurants' creativity based on food heritage and tradition. Local food related initiatives, such as food festivities, are likely to attract attention from the media, which is another reason for encouraging such initiatives to become more established.

Definitions

Sustainable Tourism. Consensus by the Project group:

Sustainable Tourism takes full account of its current and future economic, social, and environmental impacts of a host community. It addresses the needs of the visitors and the industry in harmony with sustainable behavior and supported by official actions in public policies.

UNWTO: Sustainable Tourism

Tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities.

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Brundtland report

Sustainable behavior. Consensus by the Project group:

Sustainable behavior strengthens economic viability and social prosperity, respects cultural resources and historic heritage, contributes to the protection of the environment and is interwoven in political areas of priority and public policies.

Food Tourism

The World Food Travel Association defines Food tourism is the act of traveling for a taste of place in order to get a sense of place.

The World Tourism Organization (UNWTO) defines gastronomy tourism as "a type of tourism activity which is characterized by the visitor's experience linked with food and related products and activities while travelling.

Trend/shift

Trend is a general tendency or direction of a development or change over time. A trend may be strong or weak, increasing, decreasing or stable. There is no guarantee that a trend observed in the past will continue in the future. What is interesting about trends is that normally most players, organizations or even nations cannot do much to change them – they are larger than the power of individual organizations and often nation states as well, like urbanization and demographic change.⁵⁹

⁵⁹ The European Foresight Community

Megatrend

Megatrends occur at global or large scale. They are the great forces in societal development that will highly likely affect the future in all areas over the next 10-15 years. Megatrend is also defined as a large, social, economic, political, environmental, or technological change that is slow to form. Once in place, megatrends influence a wide range of activities, processes, and perceptions, both in government and in society, possibly for decades. They are the underlying forces that drive trends, like aging population.⁶⁰

Drivers

Drivers are defined as developments causing change, affecting, or shaping the future. A driver is the cause of one or more effects, like climate change.

⁶⁰ The European Foresight Community







Government of Iceland Ministry of Culture and Business Affairs

