NiPN
National Information Platforms for Nutrition

Ethiopian Public Health Institute

"Promoting Sustainable and Healthy Diets: The Role of National Public Health Institutes"

Virtual Seminar | February 09, 2023

European Union

german cooperation
DEUTSCHE ZUSAMMENARBEIT

giz

UKaid
from the British people

BILL & MELINDA GATES foundation

NIPH
Norwegian Institute of Public Health

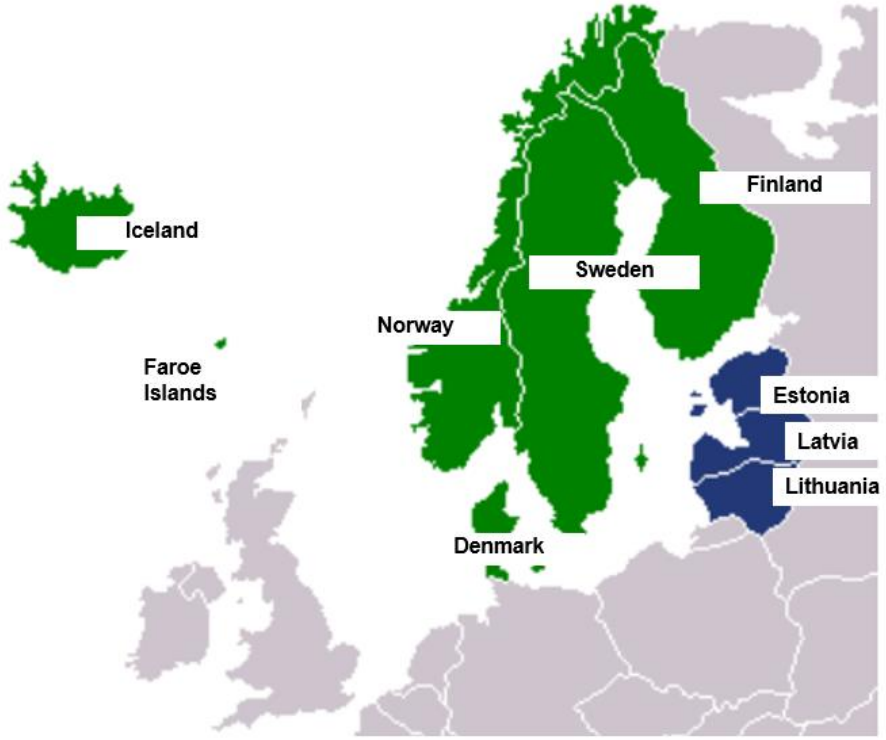
norden
Nordic Council of Ministers

The upcoming Nordic nutrition recommendations – revision 2022 - **how** integrate sustainability?

Ethiopian – Norwegian joint seminar

February 9, 2023 (12 o'clock Norwegian time)

Helle Margrete Meltzer
member of the NNR2022 committee



Ethiopia:
Food-Based Dietary Guidelines–2022

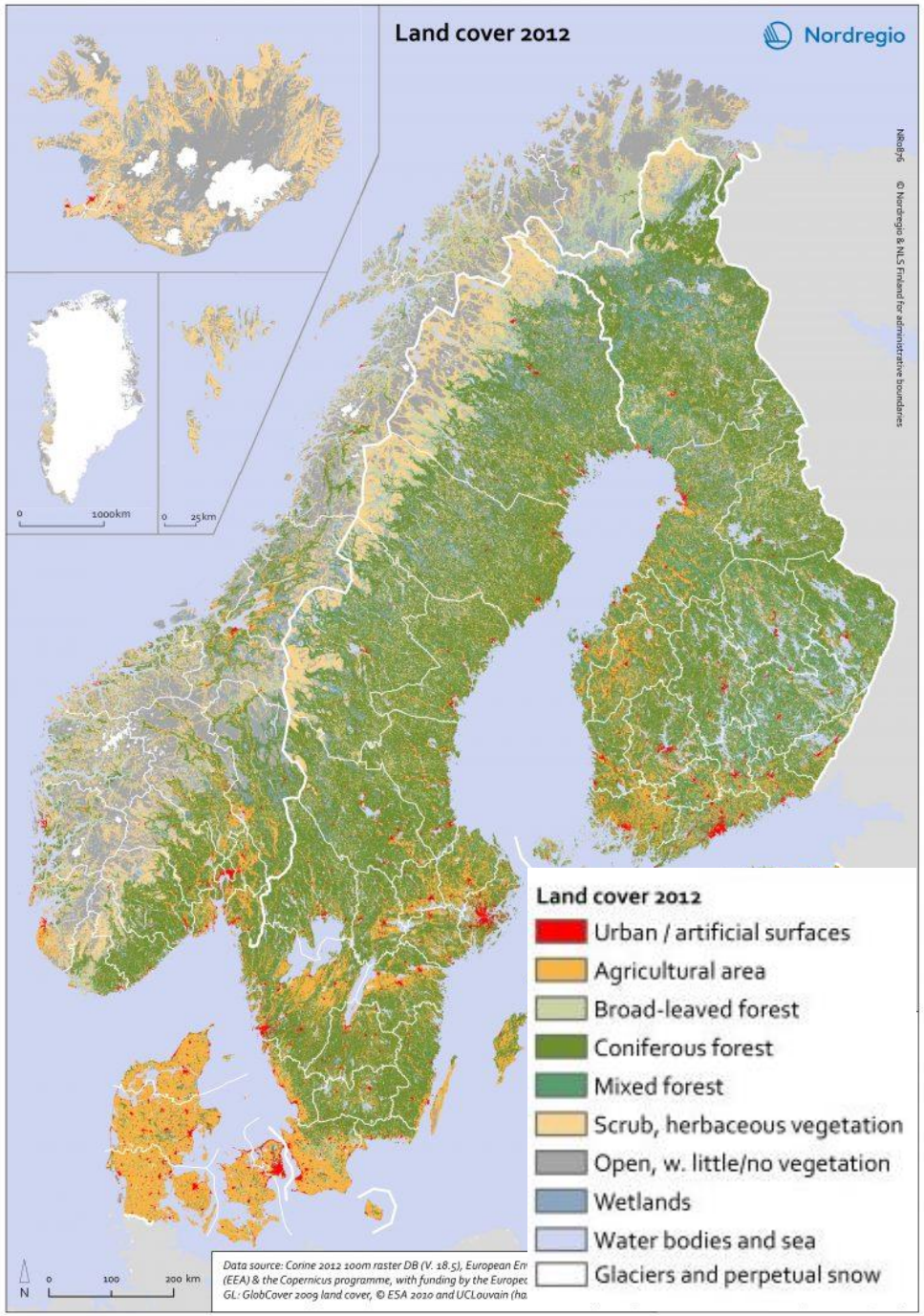
CONGRATULATIONS!

Key message 2: Every day, eat 80–120 grams of legumes such as beans, chickpeas, peas or lentils

Why are legumes important and how much of them should we eat?

- Legumes such as beans, chickpeas and lentils are very good sources of proteins and other nutrients
- Consuming legumes lowers BMI, slows weight gain over time and decreases occurrence of CVD and T2DM

Land cover in the Nordic countries



The Nordics – A VERY PEACEFUL CORNER OF THE WORLD

Many cultural similarities

Common welfare models

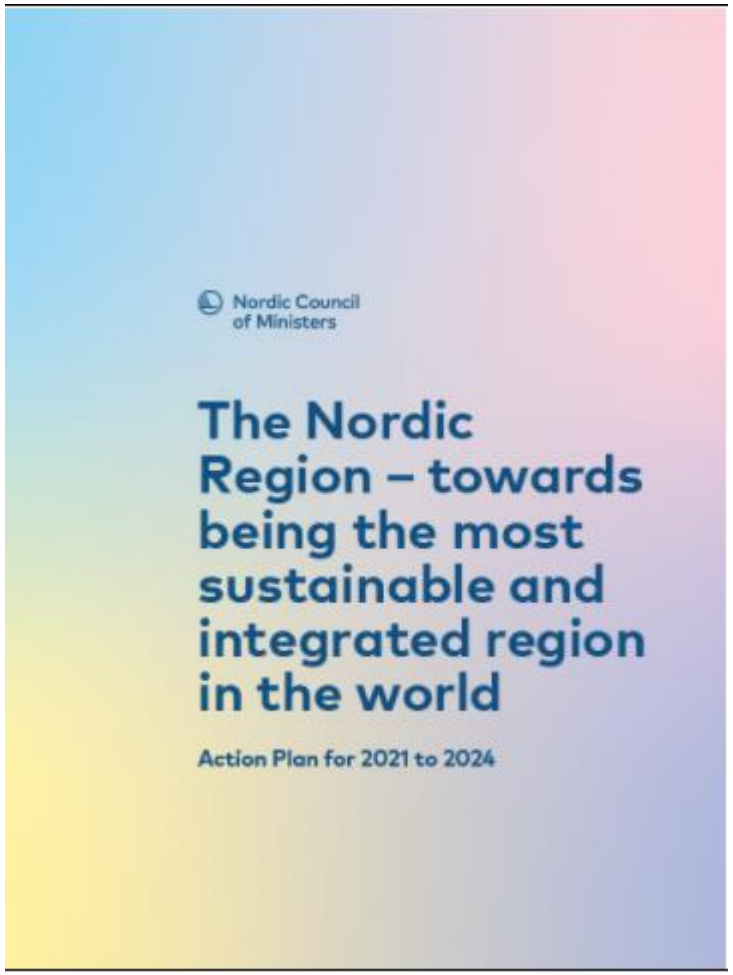
Common emphasis on equity, equality and trust

Nordic Council established in 1952

Cooperation in a number of areas, including on diet and the environment

Nordic Co-operation

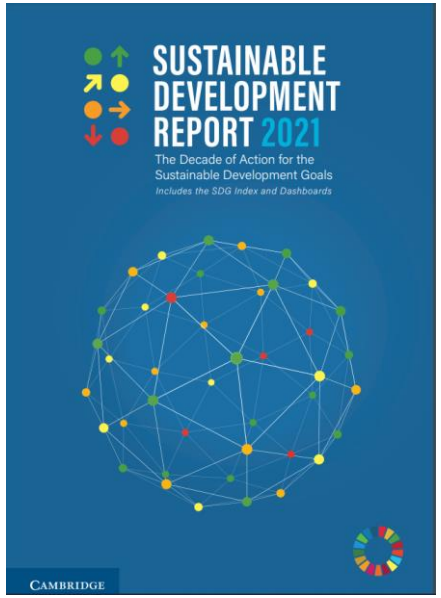
Nordic
Co-operation



Vision for Nordic co-operation

Our vision is to make the Nordic Region the most sustainable and integrated region in the world by 2030. The co-operation in the Nordic Council of Ministers must serve this purpose.

https://dashboards.sdgindex.org/profiles



green	Goal Achievement
yellow	Challenges remain
orange	Significant challenges
red	Major challenges

	SDG Index Rank	1 UTRYDDE FATTIGDOM	2 UTRYDDE SVOLT	3 GOD HELSE OG LIVSKVALITET	4 GOD UTDANNING	5 LIKESTILLING MELLOM KJØNNA	6 REINT VATN OG GODE SANITÆRFORHOLD	7 REIN ENERGI TIL ALLE	8 ANSTENDIG ARBEID OG ØKONOMISK VEKST	9 INDUSTRI, INNOVASJON OG INFRASTRUKTUR	10 MINDRE ULIKSKAP	11 BEREKRAFTIGE BYAR OG LOKALSAMFUN	12 ANSVARLEG FORBRUK OG PRODUKSJON	13 STOPPE KLIMAENDRINGAN	14 LIVET I HAVET	15 LIVET PÅ LAND	16 FRED, RETTFERD OG VELFUNGERANDE INSTITUSJONAR	17 SAMARBEID FOR Å NÅ MÅLA
Finland	1	green	orange	yellow	green	yellow	green	green	yellow	yellow	yellow	yellow	red	red	orange	orange	yellow	orange
Sweden	2	green	red	yellow	yellow	green	yellow	green	yellow	green	yellow	yellow	red	red	red	red	yellow	yellow
Denmark	3	green	red	yellow	yellow	yellow	yellow	green	yellow	yellow	green	orange	red	red	orange	yellow	yellow	yellow
Norway	7	green	red	green	orange	green	orange	green	yellow	yellow	green	yellow	red	red	orange	red	yellow	green
Iceland	29	green	orange	yellow	orange	yellow	orange	green	yellow	yellow	green	orange	red	red	red	red	green	red

Providing Sustainable Food Based Dietary Guidelines is a central tool for fulfilling the Nordic vision

Hitherto: the guidelines have been health-based

Nordic Nutrition Recommendations (NNR)

1. Nordic Nutrition Recommendations, 1st ed. (1980) First common Dietary Reference Values for Nordic countries
2. Nordic Nutrition Recommendations, 2nd ed. (1989)
3. Nordic Nutrition Recommendations, 3rd ed. (1996)
4. Nordic Nutrition Recommendations, 4th ed. (2004) Integrating physical activity
5. Nordic Nutrition Recommendations, 5th ed. (2012) Integrating food-based dietary guidelines
6. Nordic Nutrition Recommendations. 6th ed. (2023) Integrating sustainability and obesity.

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Nordic Council of Ministers

NNR has a major impact on public health

- National food and health policies (DRVs, FBDGs, nutrient declaration, keyhole symbol, taxes, health programmes …)
- Health professionals (treatment of patients, supplements, enrichment, enteral and parenteral nutrition)
- Health educations (medicine, nutrition, nursing etc)
- Public food service (hospitals, nursing homes, schools, kindergartens etc)
- Food industry (product development)
- Research and surveillance

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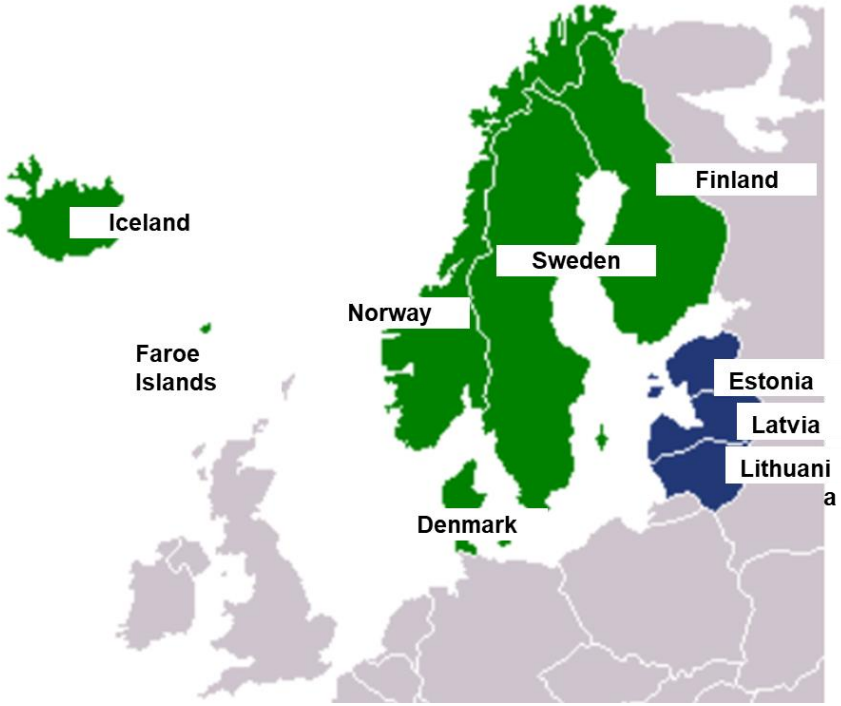
The Nordic Nutrition Recommendations (NNR)

- Commissioned and funded by the Nordic Council of Ministers (NCM) and food/health authorities in Nordic countries
- Five Nordic countries and three Baltic countries
- NCM: Integrate sustainability
- Project period: January 2019 - June 2023
- NNR2022 project
  - > 400 nutrient/diet/health/sustainability/ methodology scientists



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Aims of the process

- Best possible review of scientific evidence
- Most updated systematic methodology
- Open and transparent process
- Democratic process

Organisation of NNR2022

Steering Committee

- Henriette Øien, The Norwegian Directorate of Health, Oslo, **Norway (Chair)**
- Satu Männistö, National Institute for Health and Welfare, Helsinki, **Finland**
- Hólmfríður Þorgeirsdóttir, Directorate of Health, Reykjavík, **Iceland**
- Ulla-Kaisa Koivisto Hursti, National Food Agency, Uppsala, **Sweden**
- Anne Pøhl Enevoldsen, Danish Veterinary and Food Administration, Glostrup, **Denmark**

Scientific Advisory Group


Amanda MacFarlane, Health Canada


Joseph Lau, co-director of Evidence-based Practice Center, Brown Univ. US


Susan Fairweather-Tait, Univ. of East Anglia, UK


Giota Mitrou, WCRF, UK


Dominique Turck (EFSA), Univ. of Lille


Joao Breda, "WHO Reg. office for Europe", Copenhagen, DK


Wulf Becker, Uppsala Univ. Sweden

The NNR 2022 Committee

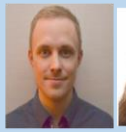
- Rune Blomhoff, University of Oslo/Oslo University Hospital, **Norway** (Chair)
- Anne Høyer, The Norwegian Directorate of Health, **Norway** (Project secretary)
- Ellen Trolle, Technical University Denmark, Kgs. Lyngby, **Denmark**
- Rikke Andersen, Technical University Denmark, Kgs. Lyngby, **Denmark**
- Ursula Schwab, University of Eastern Finland, Kuopio, **Finland**
- Maijaliisa Erkkola, University of Helsinki, Helsinki, **Finland**
- Inga Þórsdóttir University of Iceland, Reykjavík, **Iceland**
- Þórhallur Ingi Þórhallsson, University of Iceland, Reykjavík, **Iceland**
- Helle Margrete Meltzer, Norwegian Institute of Public Health, Oslo, **Norway**
- Jacob Juel Christensen, University of Oslo, **Norway**
- Hanna Eneroth, The National Food Agency, Uppsala, **Sweden**
- Eva Warensjö Lemming, The National Food Agency, Uppsala, **Sweden**
- Tagli Pitsi, National Institute for Health Development, Tallinn, **Estonia** (Observer)
- Lasma Pikele, The Minsitry of Health of the Republic of Latvia/Inese Siksna, Institute of Food Safety, Animal Health and Environment, Riga, **Latvia** (Observer)
- Almantas Kranauskas, Ministry of Health, Vilnius, **Lithuania** (Observer)
- Bjørg Mikkelsen, Food Department at Faroese Food and Veterinary Authority, **Faroe Islands** (Observer)

Systematic Review Centre


Agneta Åkesson, Karolinska Institutet, (head)


Christel Lamberg-Allardt, Univ. Helsinki,.


Erik Arnesen, Univ. Oslo, Norway


Fredrik Söderberg Karolinska Institutet


Birna ThorisdottirUniv . Iceland


Alfons Ramel, Univ. Iceland


Linnea Bärebring, Univ. Gothenburg,


Bright Nwaru, Univ. Gothenburg,


Jutta Dierkes, Univ. Bergen,

> 400 scientific multidisciplinary experts selected based on open call in 8 countries, scientific competence, balance between countries

DRVs: Dietary Reference Values
FBDGs: Food-Based Dietary Guidelines

DRVs for 36 nutrients and FBDGs for 17 food groups

Nutrients and food components

1. Fluid and water balance
2. Energy
3. Fat and fatty acids
4. Carbohydrates
5. Dietary fibre
6. Protein
7. Alcohol
8. Vitamin A
9. Vitamin D
10. Vitamin E
11. Vitamin K
12. Thiamine
13. Riboflavin
14. Niacin
15. Vitamin B6
16. Folate
17. Vitamin B12
18. Biotin
19. Pantothenic acid
20. Vitamin C
21. Calcium
22. Phosphorus
23. Magnesium
24. Sodium and salt
25. Potassium
26. Iron
27. Zinc
28. Iodine
29. Selenium
30. Copper
31. Chromium
32. Manganese
33. Molybdenum
34. Fluoride
35. Choline
36. Phytochemicals and antioxidants

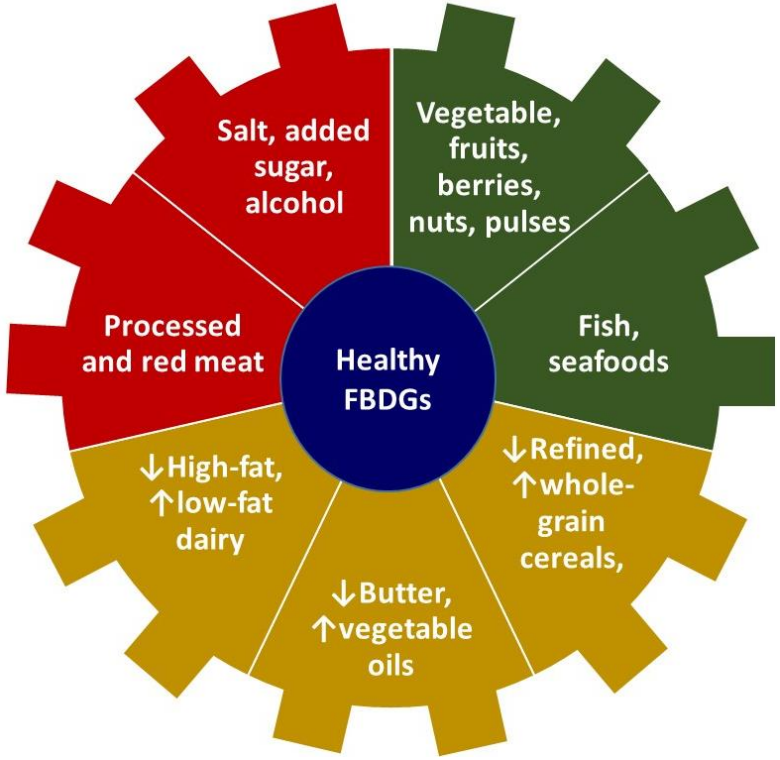
Food groups

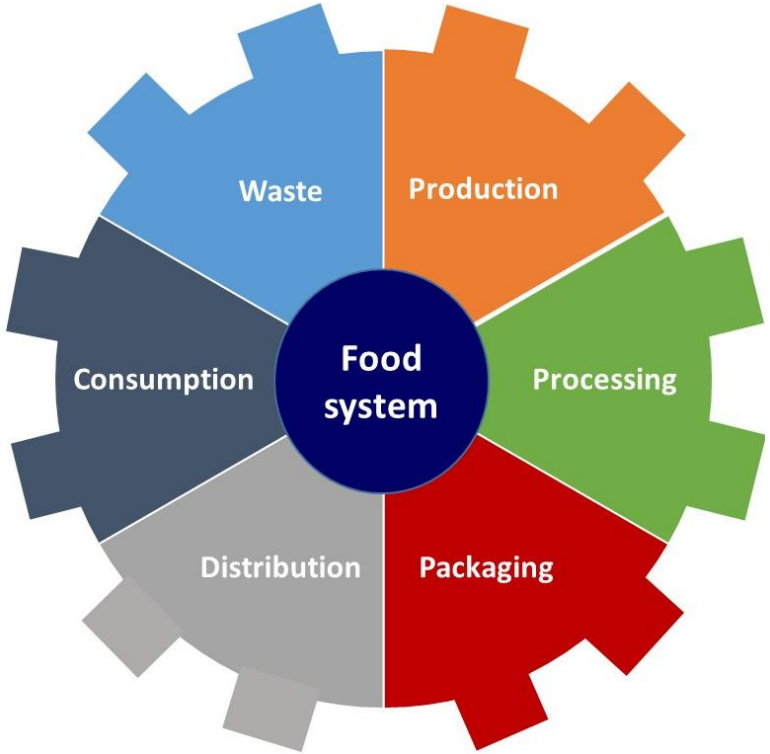
1. Breastfeeding
2. Drinks (coffee, tea, sugar sweetened and artificially-sweetened drinks)
3. Cereals (grains)
4. Vegetables, fruits, and berries
5. Potatoes
6. Fruit juices
7. Pulses (legumes)
8. Nuts
9. Fish, fish products and seafood
10. Meat and meat products
11. Milk and dairy products
12. Eggs
13. Fats and oils
14. Sweets and confectioneries
15. Dietary patterns
16. Meal patterns
17. Ultra-processed foods

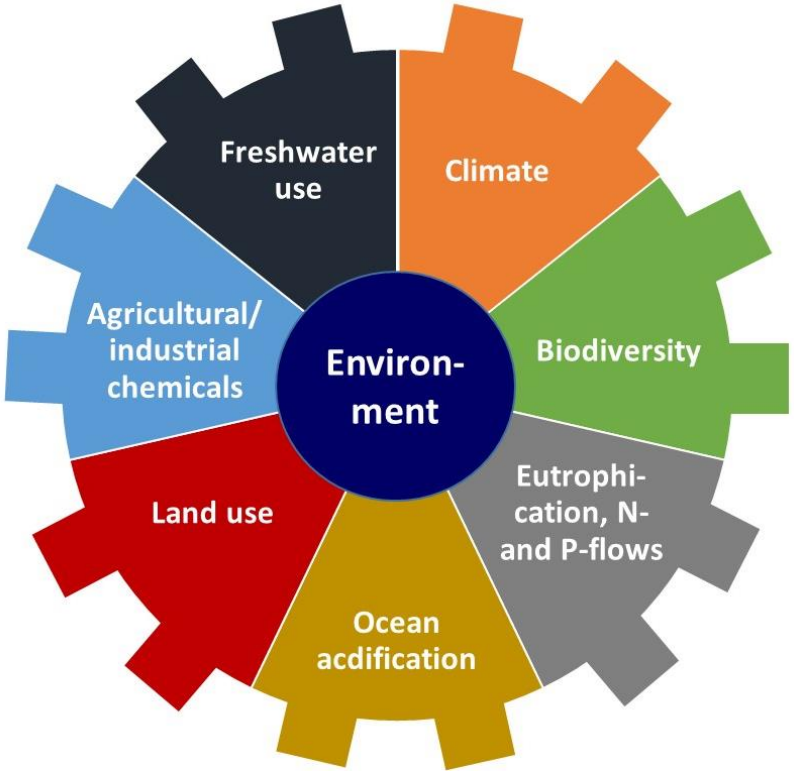
Science advice to national authorities

- DRVs: No national adjustments
- FBDGs: Same scientific message, some adjustments to national context (food systems, priorities, challenges, culture)

NNR2022: Integration of environmental sustainability with healthy FBDGs







How can a healthy diet be combined with environment-friendly food systems in the Nordic and Baltic countries?

Providing Sustainable Food Based Dietary Guidelines is a central tool for fulfilling the Nordic vision

Hitherto: the guidelines have been health-based

When integrating sustainability:

- A systemic approach, taking planetary boundaries as a starting point? or
- A bottom-up approach, based on LCA analyses? Or
- A combination of both

Fairy easy to see what must be done from a global perspective:

- Far to much cropland is being used to feed animals
- Monocultures and land expansion reduce biodiversity etc etc
- We have to change to a more plant-rich diet – with lower content of animal-based foods

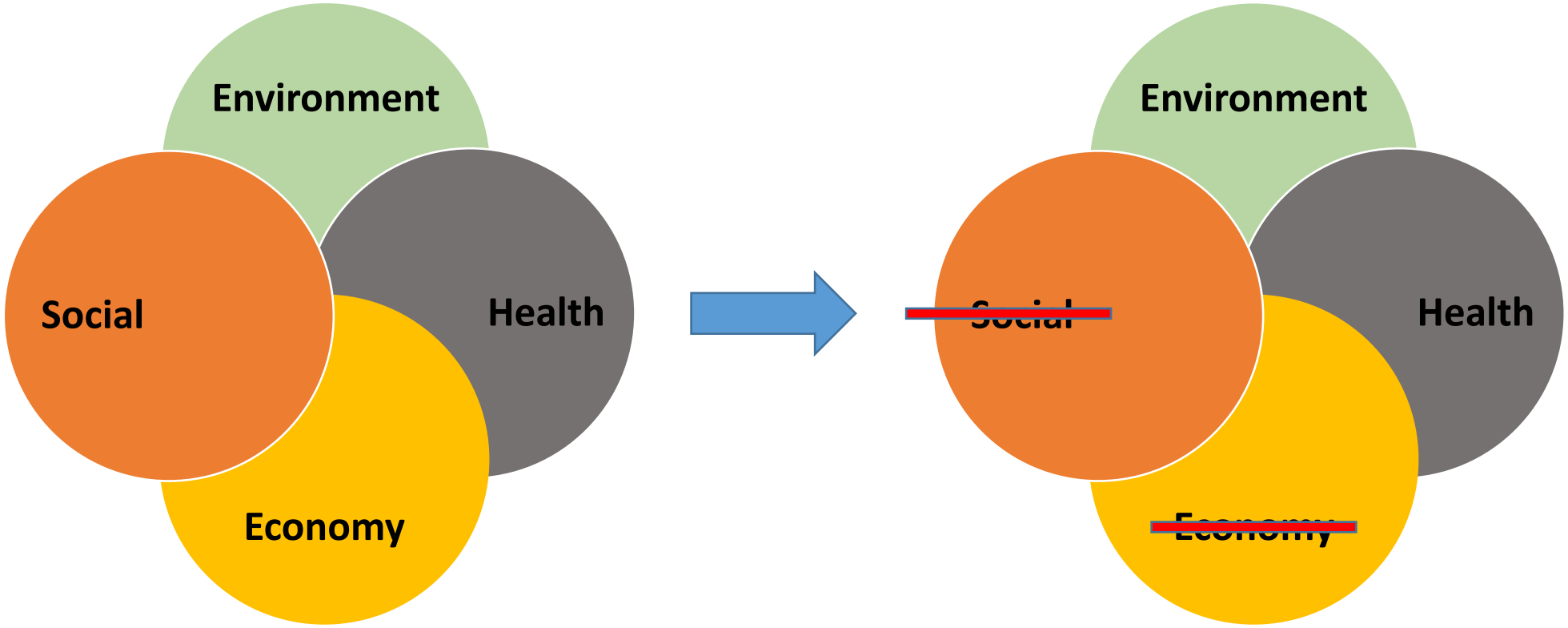
Fairly difficult to downscale and see what has to be done at a regional and country level

- When taking local resources and culture into consideration

Challenge 1 Narrow the scope

One major descision had already been taken:

To narrow the scope to the environmental and climate impact of food



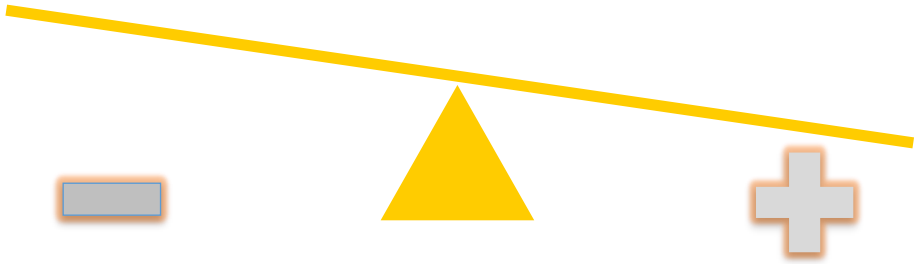
Challenge 2) Trade-offs

When establishing traditional health-based dietary advice

- A number of trade-offs (e.g. overweight reduces risk of osteoporosis, but increases risk of e.g. certain cancers, CHD etc)
- Final dietary advices are therefore a balance, an integrated overall assessment
- Health based dietary advice also take cultural aspects into consideration

When going to integrate environmental sustainability perspectives into dietary advice

- Numerous trade-offs have to be considered
  - GHG emissions vs biodiversity
  - Soil-building practices vs yield emphasis
  - Efficiency vs food miles
  - Efficiency versus animal welfare
  - Etc etc



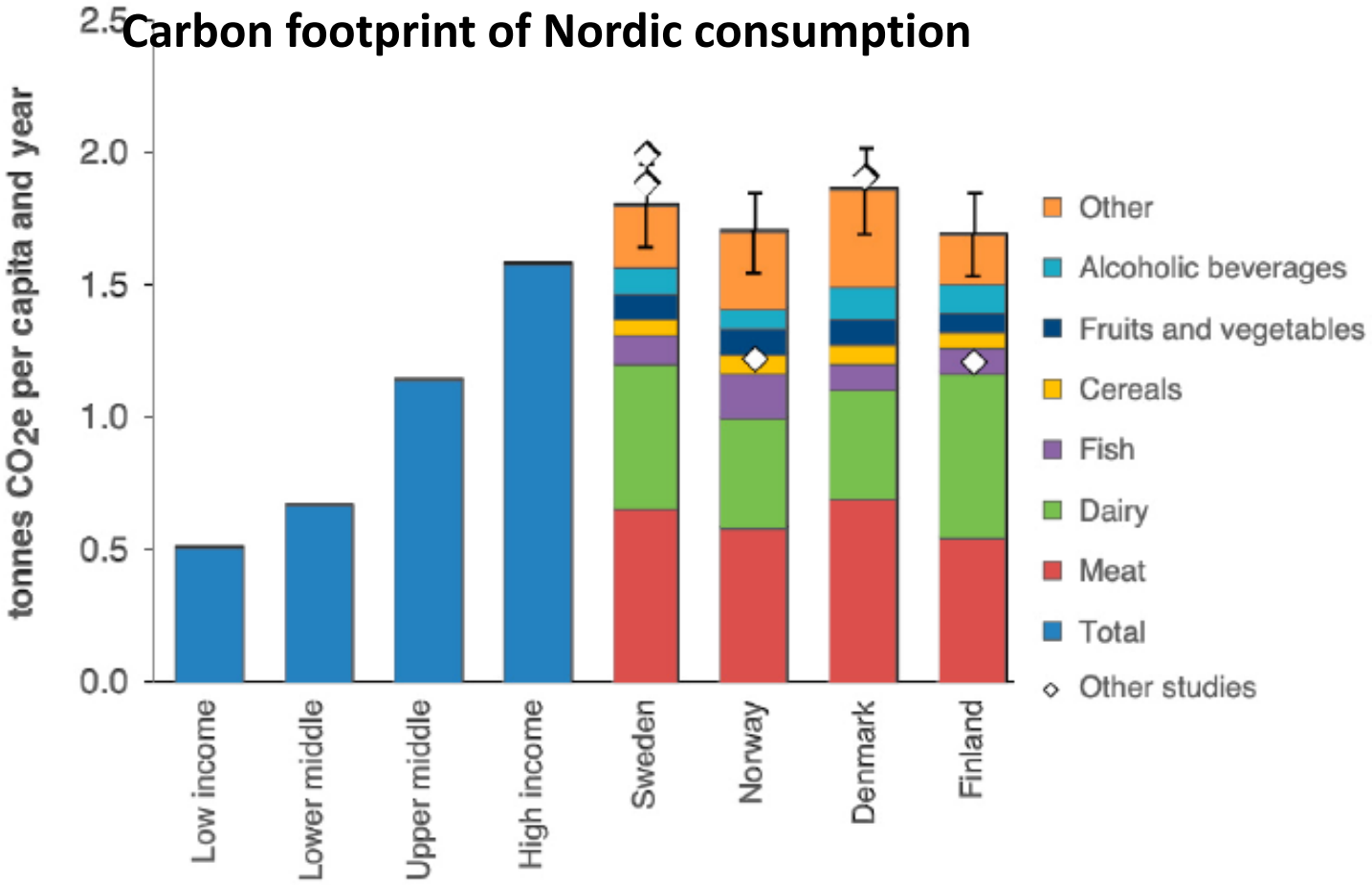
Challenge 3: Identifying and weighing important characterizing factors within the production and value chain of foods

Possible issues, for example

- different production practice related to country of origin
- different types of transportation (airborne vs ship vs train)
- Influence of land use change - more or less arable land for animal fodder, more or less total arable land

The Nordic/Baltic Food Systems

Impact on climate change



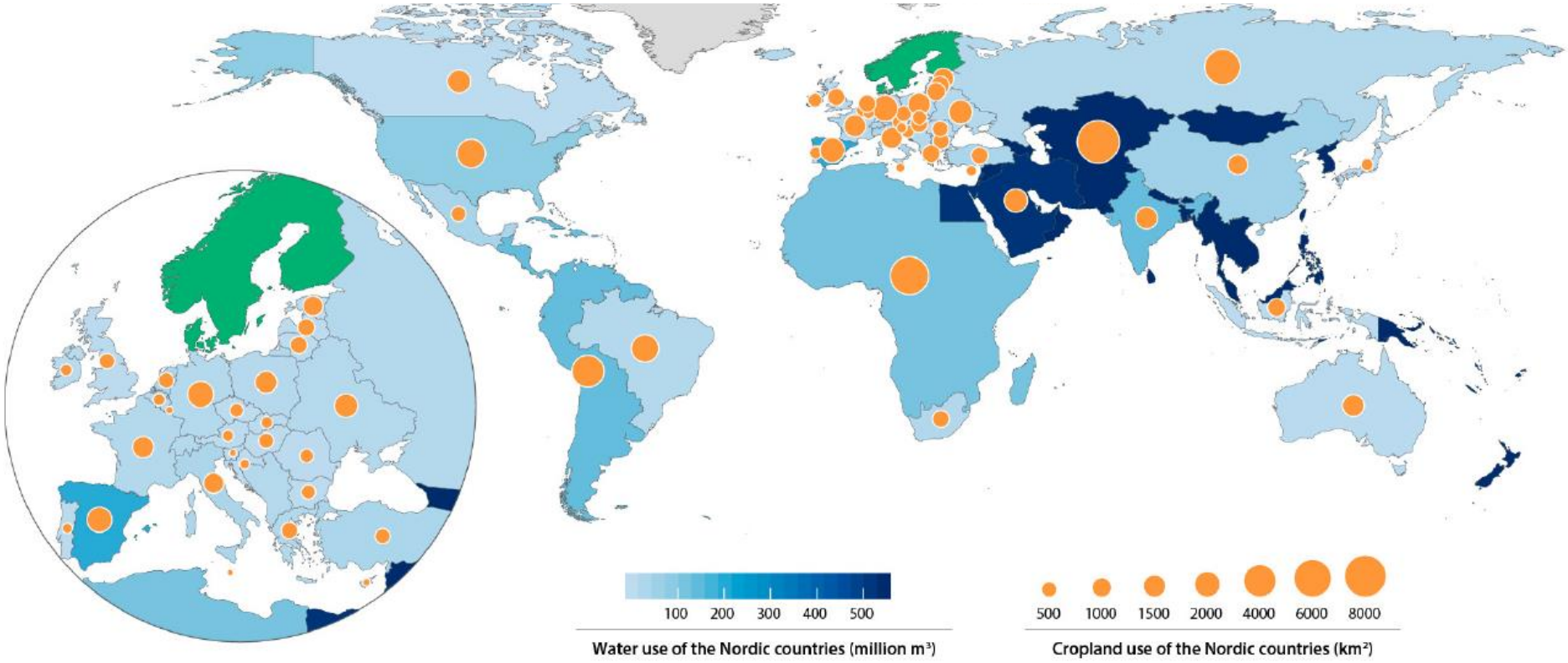
>50% of greenhouse gas emission related to Nordic/Baltic consumption is external

Nordic food systems for improved health and sustainability, Stockholm Resilience Centre (Wood et al, 2019)

The Nordic/Baltic Food Systems

Impact on the environment of the planet

Cropland area and blue water (irrigation) used by Nordic consumption



Nordic food systems for improved health and sustainability (Wood et al, 2019)

Formulating FBDGs - Issues under consideration

- How much red meat per week?
- Dairy cattle has lower climate footprint than meat cattle
- White meat versus red meat
- Local meat and meat from wild caught animals versus imported meat
- Meat from monogastric animals (pigs and chicken) versus meat from ruminants (cattle and lamb)
- Animals fed on natural pasture
- Fruits and vegetables transported long distance by airplane
- Fruits and vegetables imported from regions with water shortage
- Legume production
- Etc etc

Thank you

FHI
Folkehelseinstituttet

Center for Sustainable Diets

Line Småstuen Haug, Head of Center for Sustainable Diets
Department of Food Safety
Norwegian Institute of Public Health

Promoting Sustainable and Healthy Diets: the role of Public Health Institutes – 09.02.2023

NIPH
Norwegian Institute of Public Health

Nutrition

Taste

Joy

Culture

Climate change

Biodiversity

Environmental pollutants

An unhealthy diet is one of the most important single factors that causes loss of years with good health

A transition to a more plant-based diet is recommended both for human and planetary health

Around 25% of the global burden of disease comes from environmental risk factors

Climate change – food production and distribution

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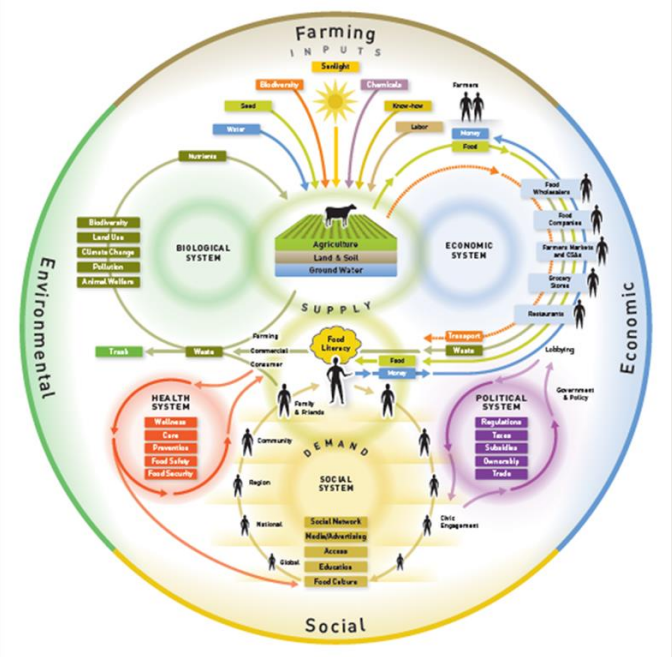
Norwegian Institute of Public Health

- Reduced crops (eg flooding, drought, heavy rain)
- Reduced catches of fish (higher water temperatures, acidification)
- Need for use of new plants
- Changes in distribution patterns

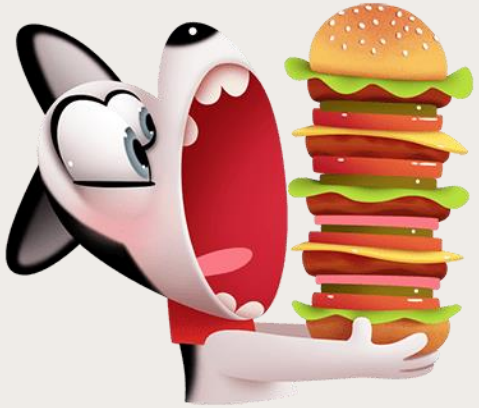


https://www.nourishlife.org/

Climate change – content in food

NIPH
Norwegian Institute of Public Health

- Use of pesticides and insecticides changes
- Distribution and presence of environmental contaminants in soil, water and air, and thereby in food and drinking water will change
- Occurrence of natural toxins is changing
- Changes in nutritional content of the food

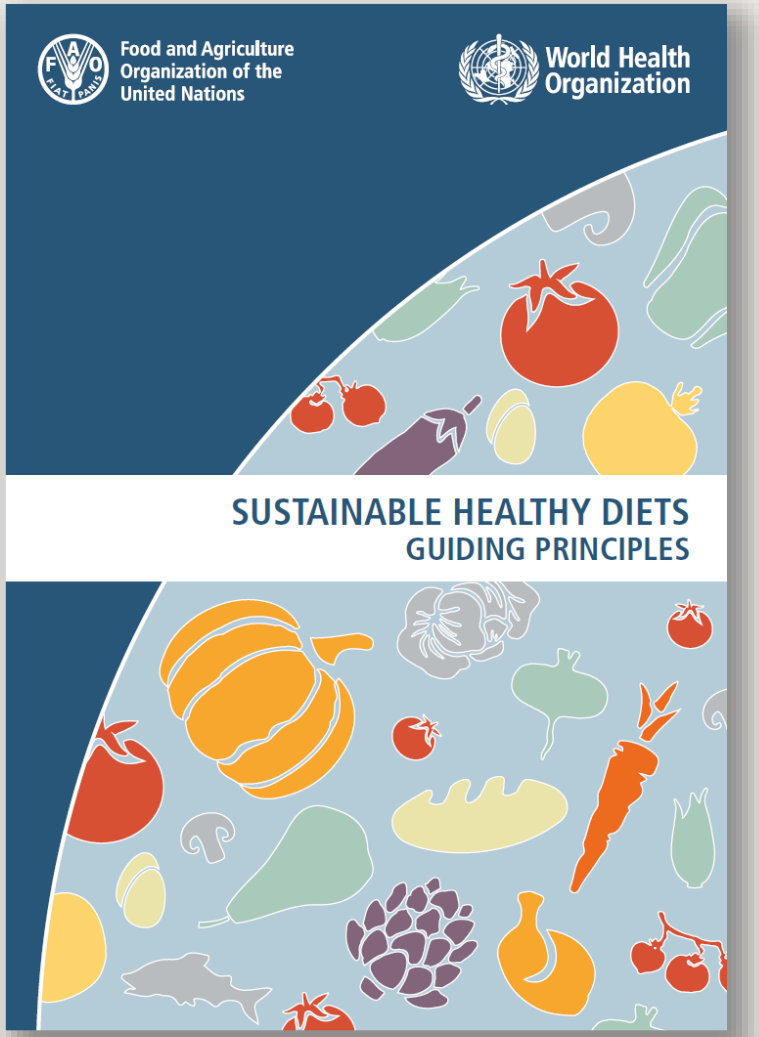


Sustainable Healthy Diets (FAO/WHO, 2019)

Are dietary patterns that:

- promote all dimensions of individuals' health and wellbeing
- have low environmental pressure and impact
- are accessible, affordable, safe and equitable
- are culturally acceptable
- support the preservation of biodiversity and planetary health

https://www.who.int/publications/i/item/9789241516648



NIPH
Norwegian Institute of Public Health

Vision

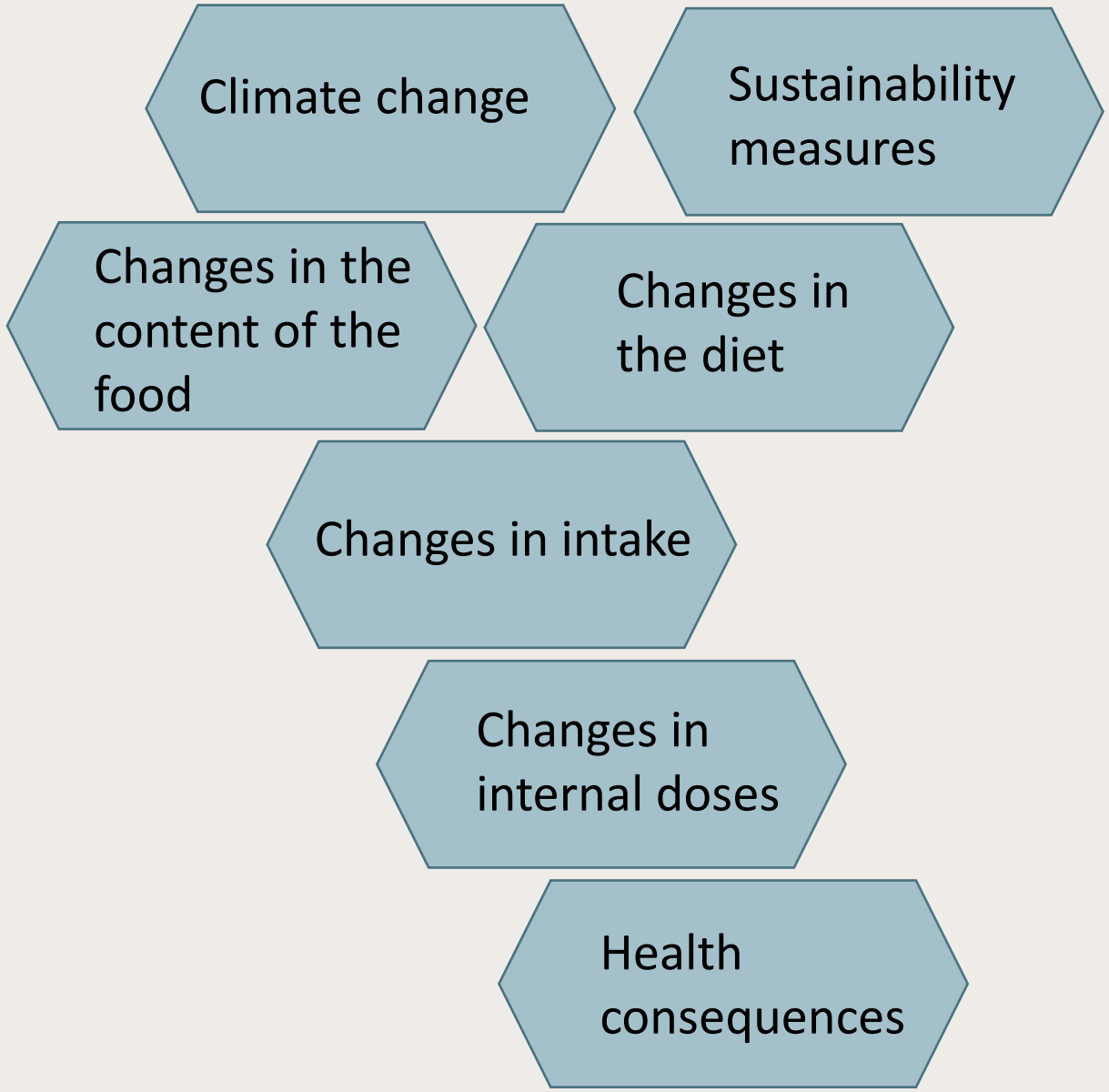
Improved health for everyone through a healthy, safe and sustainable diet

Overall goal

To be a leading knowledge and research center that, through monitoring and interdisciplinary research, paves the way towards a more sustainable diet

We will explore:

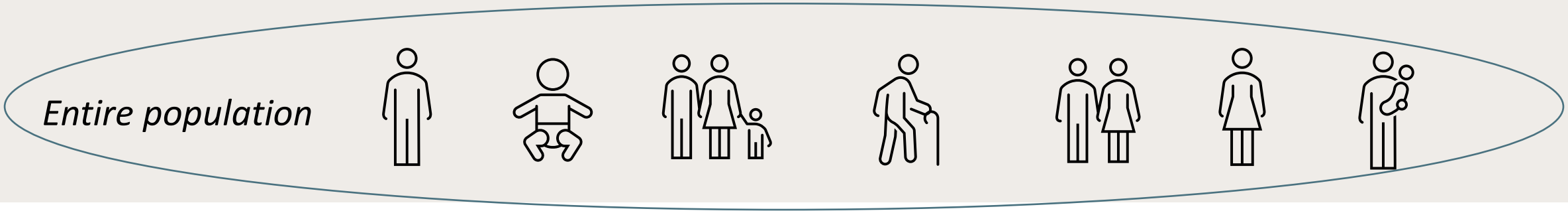
- How changes in the climate and environment, as well as sustainability measures, affect the Norwegian diet
- How changes in the diet affect health
- What are the important drivers, barriers and measures for a sustainable diet



To achive this, we will:

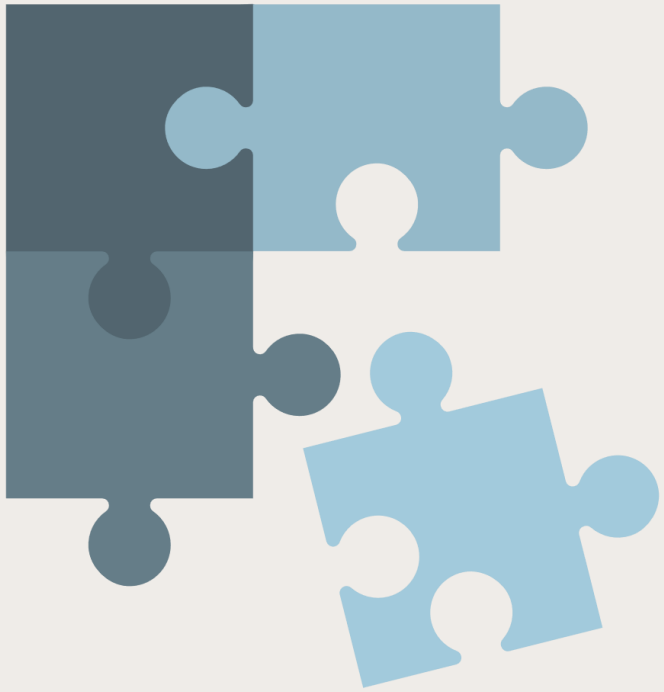
Develop an innovative and coordinated national program for monitoring the diet and exposure to environmental contaminants

- **NIPH's advantages**
  - National responsibility for monitoring the population's diet
  - The Norwegian Environmental Biobank (Miljøbiobanken)
  - Registries and population based studies



Activitites

Surveillance
Projections
Calculations of disease burden
Exposome research
Invitro studies
Modelling
Risk-benefit analyses
Effects of measures
Drivers og barriers

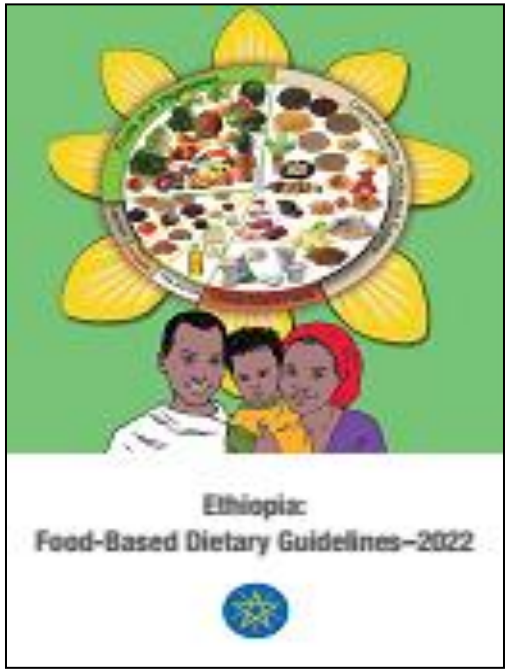


Relevance

- UN sustainable development goals
- WHO global NCD goals
- WHO protocol on water and health
- European Green Deal
- Farm to Fork
- EU Chemicals Strategy for Sustainability
- Nordic Nutrition Recommendations

https://www.un.org/en/sustainable-development-goals

The Ethiopian Food-based dietary guidelines: A potential tool for promoting sustainable healthy diets



Official name: Ethiopia: Food-Based Dietary Guidelines–2022

https://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/ethiopia/en/

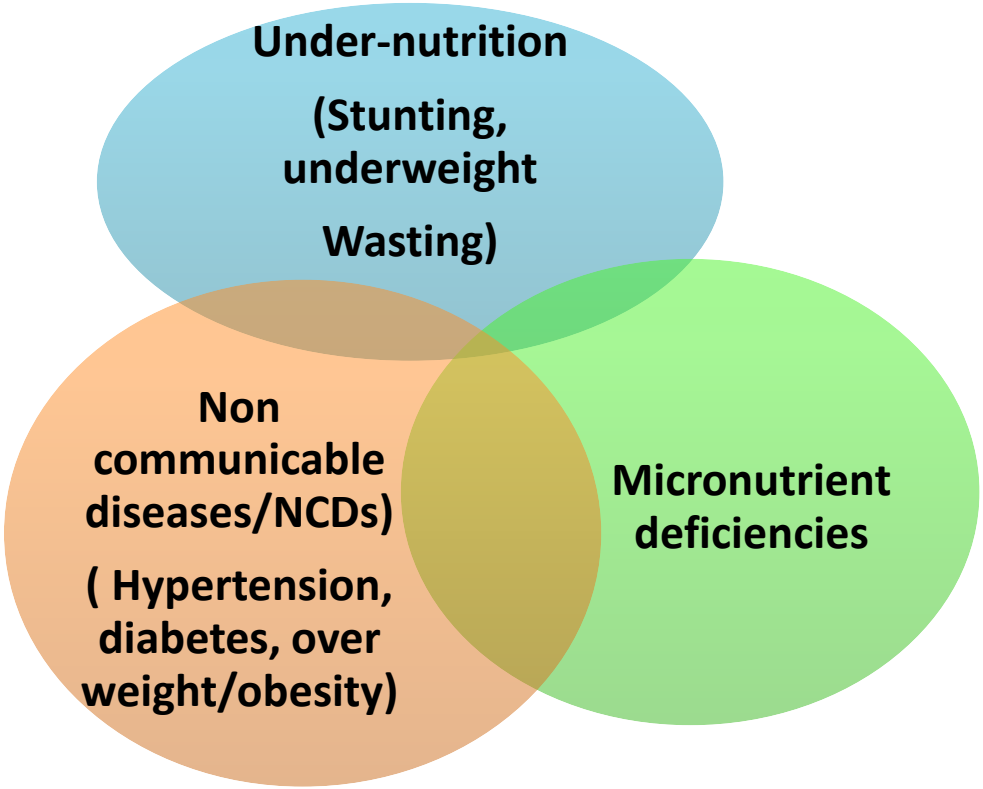
The Ethiopian food-based dietary guidelines address “Healthy Sustainable Diets” guided by two objectives.

Objectives:

1. Provide dietary recommendations for the Ethiopian population two years and older for **increased diet quality** including **diversity** and **food safety** for optimal health.

2. Promote **broad food system actions** supporting diet quality being sensitive to sustainability.

The guideline was developed to address the triple burden of malnutrition



37% : Children stunted

7% : Wasted

21%: Underweight

Source: Mini EDHS, 2019

22 % : Adults hypertensive

12 %: Diabetic

22%: of urban women overweight/obese

Source: EPHI NCD STEPS 2016, EDHS 2016

57% : children & **24%** of women anemic

35% of children and **34%** of women have Zinc deficiency

32% women have folate deficiency

17% of women have B12 deficiency

Source: EDHS 2016, Micronutrient survey 2016

The FBDGs is in cluster 2 of Ethiopia food systems transformation pathway & considered social, cultural, economic, and environmental aspects of sustainability

AT 1 : Ensure access to safe and nutritious food for all

AT 2: Shifting to sustainable consumption patterns

AT 3: Boost nature positive production

Cluster 1:
Ensure availability and accessibility of safe and nutrient dense foods

Cluster 2:
Sustainable and equitable consumption of healthy, safe and nutrient-dense diets throughout the life cycle

Cluster 3:
Integrated policy and system to promote Agricultural transformation

Cluster 4:
Enhanced digital technology and innovation throughout the food system

AT 4: Advanced equitable livelihoods

AT 5: Build resilience to vulnerabilities and shocks

Cluster 5
Access to markets, market information, infrastructure and specialization

Cluster 6
Managing and mainstreaming risk and protecting the poor

Slide from Dr. Namukolo Covic

The guideline has 11 evidence-based public recommendations to promote sustainable healthy diet

1. **Diversify** your diet by selecting from at least 4 food groups in every meal and 6 food groups every day
2. Every day, eat 80–120 grams of **legumes** such as beans, chickpeas, peas or lentils
3. Eat 100–200 grams of various **fruits and vegetables** of different colours every day, such as bananas, papayas, kale, carrots and tomatoes
4. Diversify your diet with 10–20 grams of **nuts and oilseeds** such as groundnuts, and sunflower or sesame seeds
5. Add **animal-source foods** such as eggs and meat (60 grams) and dairy foods (300–400 grams) to your meals every day
6. Drink 8–10 large glasses of **clean water** every day
7. Take up to 15–20 grams of **fats and oils** per day

8. Be **physically active** for at least 30 minutes a day

9. Limit intake of **sugar, sweets and soft drinks** to below 30 grams per day
10. Limit **salt intake** to below 5 grams per day
11. Limit **alcoholic drinks** – both factory-processed and homemade – to no more than 2 glasses per week

The first seven recommendations encourage consumers to implement healthier dietary practices, whereas the last 4 public recommendations advise limiting certain food groups to stay healthy.

Key Messages

For Healthy Diet and Lifestyle

Key Message 1: Diversify your diet by selecting from at least 4 food groups in every meal and 6 food groups every day.

Key Message 2: Every day, eat 80–120 grams of legumes such as beans, chickpeas, peas or lentils.

Key Message 3: Eat 100–200 grams of various fruits and vegetables of different colours every day, such as bananas, papayas, kale, carrots and tomatoes.

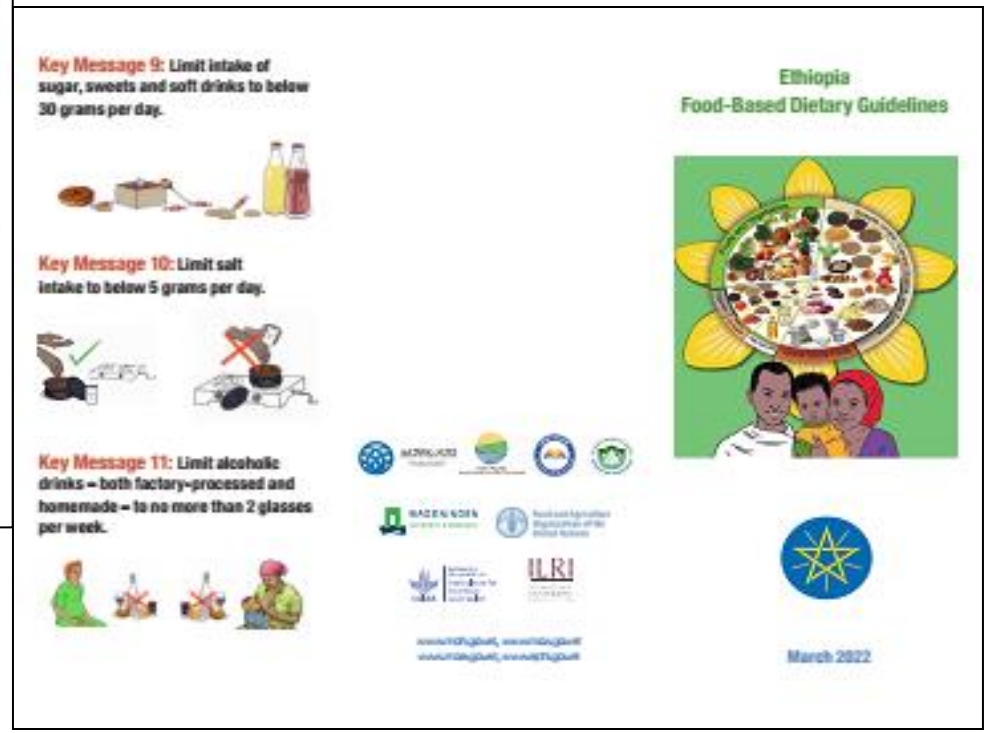
Key Message 4: Diversify your diet with 10–20 grams of nuts and oilseeds such as groundnuts, and sunflower or sesame seeds.

Key Message 5: Add animal-sourced foods such as eggs and meat (60 grams) and dairy foods (300–400 grams) to your meals everyday.

Key Message 6: Drink 8–10 large glasses of clean water daily.

Key Message 7: Be physically active for at least 30 minutes a day.

Key Message 8: Take up to 15–20 grams of fats and oils per day.



Key Message 9: Limit intake of sugar, sweets and soft drinks to below 30 grams per day.

Key Message 10: Limit salt intake to below 5 grams per day.

Key Message 11: Limit alcoholic drinks – both factory-processed and homemade – to no more than 2 glasses per week.

Ethiopia
Food-Based Dietary Guidelines

March 2022

The dietary guidelines has also included monitoring and evaluation indicators for assessing impact and plan for further improvement

Box 5: Tentative/preliminary M&E indicators	
Short-term indicators	Exposure to FBDG key recommendations, changes in knowledge and attitude of the population, health/agriculture professionals, decision-makers, and the food industry related to the key messages, associated graphics used in the FBDGs.
Medium-term indicators	Increased availability and accessibility of recommended foods in key messages and dietary guidelines to set public standards as a base for developing or refining food, agriculture and nutrition policy and programs.
Long-term/outcome indicators	Changes in food production, consumption trends and dietary intake, and resultant positive health outcomes.

Source:http://www.fao.org/nutrition/education/food-dietary-Guidelines/background/evaluation/en/

The guide has also included roles and responsibilities of implementing sectors which will contribute for clear start up

Task	Suggested lead institution(s)
▪ Defining the role of different stakeholders	▪ Joint MoH, EPHI, MoA
▪ Operationalizing the FBDGs	▪ MoH, MoA, and MoE, with leadership by MoH
▪ Training different stakeholders and implementation	▪ MoH/EPHI
▪ Research, M&E on the effectiveness of FBDGs	▪ EPHI
▪ Follow-up data and continued evidence generation	▪ EPHI
▪ Revising the FBDGs	▪ EPHI
▪ Establishment of Healthy diets coalition	▪ Joint leads: MoH, MOA; Co-lead: EPHI

Practical suggestion is made for each task in the guideline

What aspects of the Ethiopian FBDGs indicate to promote sustainable healthy diets?

Few examples

1. The guideline is based on national policies and programs towards availing diversified, nutrient-dense, and healthy diets
   - Food & Nutrition Policy
   - Nutrition sensitive Agriculture
   - School feeding programs
   - Component of the national food systems transformation plan
2. It is endorsed by government bodies with multi sector engagement

- Signatories are Ministers for : Ministry of Agriculture, Health and Education.
- The joint pilot implementation plan is done with MoA

What aspects cont.

3. Can be used as **policy and advocacy tool** to express demands for healthier diet in
   - Schools, hospitals, prisons, social canteens, restaurants, etc.
   - Used as a baseline reference for school feeding programs in AA and other regions)
   - FBDG recommended amounts used as a standard for calculating the cost of a healthy diet (CoHD) which is used as a monitoring tool to inform the government/policy makers

4. Can be used as **capacity development tools** for promoting healthy diet

5. It has potential for **dietary related regulations and policy updates**

   Eg. Alcohol, sugar, trans fats, etc

   - Baseline references for unhealthy diet control proclamations is under review

4. As monitoring and evaluation tool, FBDGs can be used by sector organizations to **track, refine and improve annual plans**, and to re-plan as may be needed

Please note pilot implementation plan is prepared with stakeholders

Thank you for listening

“Promoting sustainable and healthy diets: The Role of National Public Health Institutes”

MORE INFO

NIPN: www.nipn.ephi.gov.et

Virtual Seminar | February 09, 2023