Abstract
The WHO European Office for the Prevention and Control of NCDs is engaging in several initiatives addressing healthy and sustainable diets (HSD), guided by experts from across the region. This report sets out presentations and discussions that took place at a second expert meeting, held virtually on 24 and 25 March 2021. Member States highlighted their national HSD policies, sharing the challenges of implementation and setting out where technical support from WHO European Region would be of most benefit. It was an opportunity for the NCD Office and partners to describe and seek feedback on seven HSD workstreams and a chance to discuss how best to document, use and share existing data, as well as to identify gaps in knowledge.
Healthy and Sustainable Diets
Report of an Expert Meeting on healthy and sustainable diets

A workshop to share challenges, identify knowledge gaps and receive feedback

24–25 March 2021
[We all] have nice policies but how are we really able to get this out into the real world when things are so complex and there is so much econo[ics] and politics close to this? ... We look forward to support from WHO.

– Professor Lene Frost Andersen, Norway

We all agreed that the ongoing dialogue and exchange of opinion should be continued by WHO and we hope it continues to be a platform to share knowledge.

– feedback from small-group discussion
Acknowledgements

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Abbreviations

- **FAO**: Food and Agriculture Organization of the United Nations
- **FBGD**: food-based dietary guidelines
- **FPM**: food-profiling model
- **GHG**: greenhouse gas
- **HSD**: healthy and sustainable diets
- **NCDs**: non-communicable diseases
- **NCD Office**: WHO European Office for the Prevention and Control of NCDs
- **NPM**: nutrient-profiling model
- **OOH**: out-of-home
- **PBD**: plant-based diet
- **SDGs**: Sustainable Development Goals
- **SMEs**: small- and medium-sized organizations
- **UPF**: ultra-processed food
1. Executive summary

This report summarizes an expert meeting of the WHO European Office for the Prevention and Control of NCDs, bringing together Member States of the WHO European Region and expert stakeholders to discuss healthy and sustainable diets (HSD). It was held online on 24 and 25 March 2021.

Eleven Member States – Austria, Belgium, Denmark, Finland, Hungary, Ireland, The Netherlands, Norway, Portugal, the Russian Federation and the United Kingdom – presented on healthy and sustainable diets in their national context, sharing recent policy developments and the challenges of implementation. All expressed enthusiasm for continued engagement with many of HSD activities of the WHO European Region, with particular interest in food-profiling models (which can assist with labelling, tax systems and setting restrictions on marketing to children), plant-based foods, the digital food environment and reformulation. There were also a number of requests for WHO European Region technical support, including agreeing definitions on a number of key issues, developing indicators, and expanded opportunities for information-sharing.

The WHO European Region has developed a set of key workstreams, which form the basis of the work on healthy and sustainable diets. The outputs will form a suite of tools to strengthen surveillance and build capacity of Member States, enabling them to create their own national HSD packages. Progress within six workstreams was described by a subject-matter expert:

- a food-profiling model for healthy and sustainable diets, a scoring system combining environmental and nutrition impacts of foods;
- a data platform for modelling healthy and sustainable dietary patterns to inform dietary guidelines and to be used in research and scenario analysis;
- a manual to guide healthy and sustainable public food procurement;
- a monitoring platform to gather price, promotion, ingredient and availability information on plant-based food products;
- research into digital food environments, particularly the use of food delivery apps; and
- an interactive manual on food reformulation of processed foods to build capacity among small- and medium-sized food manufacturers.

Small-group discussions further drew out the knowledge gaps and potential actions for each workstream. There was a strong focus on: data (the need for a set of core definitions and indicators, for national data sets, for better information on the food delivered through apps and for a central database of sources of information); the need for guidance, manuals and other knowledge-sharing to highlight successes and support policies to transform food systems nationally; dietary patterns and consumer demand, including how to communicate with the general public; and on how best to collaborate constructively, with the WHO European Region taking a leading convening role.

Next steps include a proposal for the European Region and partners to establish a new network of Member States and experts, to meet the need for knowledge-sharing and capacity-building. The workstreams will continue to develop through ongoing discussion with Member States as to what they will find most useful. Finally, the learning from the workstreams will inform planned WHO European Region activities ahead of the UN Food Systems Summit in September 2021.
2. Context and aims

2.1 Healthy and sustainable diets: a human and planetary imperative

The food system is continuously evolving as consumer preferences, production systems and policies are shifting over time. Public health systems are also under increasing pressure as non-communicable diseases (NCDs) – including obesity, diabetes, heart disease and some cancers – pose a threat to long-term health. At the same time, food systems are a substantial contributor to climate change, biodiversity loss and the depletion of natural resources. Changes in food systems are needed not only to address the rise in diet-related NCDs but to promote a shift towards an environmentally sustainable future. This is no easy task, nor can it be carried out by one single actor or action alone.

Population health and planetary health are deeply interconnected – and, in response, the WHO European Office for the Prevention and Control of NCDs (the NCD Office) is engaging in several initiatives addressing healthy and sustainable diets (HSD), guided by experts from across the region. This emerging programme listens to the needs and concerns of Member States and will respond with evidence-based guidance on issues such as food-based dietary guidelines (FBDG) and labelling, food reformulation, digital food environments, plant-based diets (PBD) and public procurement, informed by experts from the European Region and beyond. This will complement work by WHO in Geneva, which includes the development of a WHO guideline on healthy dietary patterns and the updating of dietary codes (the updated guideline on total fat consumption will be released soon for consultation, with others on sugar etc. being finalized).
2.2 The 2019 expert meeting

In October 2019, the NCD Office hosted an expert meeting investigating dietary patterns for health and sustainability in the WHO European Region. With participation from WHO Collaborating Centres and other interdisciplinary experts, it discussed how to support Member States in formulating national and Europe-wide dietary guidelines that consider both human and planetary health. The outcomes of this process have been submitted in a paper to *Lancet Planetary Health*.

Consensus was reached on eight areas of concern:

- uniform definitions, guidelines and policies;
- collaboration between stakeholder groups to address shared challenges;
- inclusion of environmental impact categories in dietary guidelines;
- reduction of inequalities associated with dietary transformation;
- promotion of plant-based diets without an increase in ultra-processed food (UPF);
- food labelling covering both nutritional content and environmental sustainability;
- product reformulation (particularly the reduction of salt, free sugars, and saturated and trans fats); and
- awareness-raising within the population about how to positively change their diet.

These discussions laid the foundation of the current work of the WHO NCD Office, which has since developed seven workstreams to address the multidimensionality of healthy and sustainable diets, as set out in section 4 below.
2.3 The 2021 expert meeting: format, aims and outputs

The second expert meeting was held on 24 and 25 March 2021 (virtually, rather than in-person, due to COVID-19 restrictions), bringing together 43 experts from 18 Member States of the European Region.

The expert meeting provided:

- a forum for Member States to highlight their national HSD policies, share the challenges they face in implementation, and set out where technical support from the European Region would be of most benefit;
- an opportunity for the NCD Office and partners to describe and seek feedback on the new HSD workstreams;
- a chance to discuss how best to document, use and share existing data – and to identify the gaps in knowledge that are of most concern to participants.

This report summarizes the proceedings and insights gained during this meeting. The discussions will inform a set of recommendations on how best to build capacity across the region, enabling Member States to appropriately promote and enable sustainable and healthy diets in each national context.
3. Member States: status reports and technical support requests

Eleven Member States from the WHO European Region gave presentations on the status of policy and implementation on healthy and sustainable diets at national level: Austria, Belgium, Denmark, Finland, Hungary, Ireland, The Netherlands, Norway, Portugal, the Russian Federation and the United Kingdom.

Each Member State was also requested by the Region to reflect on which of the workstreams would be most valuable and on which areas technical support would be most useful, and this is presented in a table at the end of this section.
3.1 Current action being taken by the Member States

AUSTRIA

The People’s food, people’s health: Towards healthy and sustainable European food systems conference was held during the Austrian presidency of the EU in 2018. Shortly after this, the Austrian Health Target Process was established, one of the 10 targets of which is to ensure that healthy nutrition and high-quality food are accessible to all. This requires taking a multisector approach – and initially there were tensions between the different sectors, such as the food industry. However, the process included a “transformation workshop”, which used a tool that allows participants to step back and have constructive discussion towards a common goal. The feedback was good – and it enabled the diverse group to address what has been done, what needs to be done, and which sector is best placed to lead each aspect. Concrete pathways forward have been developed on public procurement, improving food literacy through the provision of more transparent information, and the food market.

We really have to pay attention to health not becoming the little sister or brother of the big sustainability issue … I have to raise my voice very strongly sometimes because [other issues] are so big – but together we are bigger.

– Karin Schindler, Ministry of Social Affairs, Health Care and Consumer Protection, Austria

Next steps include defining indicators for the food system (learning from what already exists in this and other sectors) and mapping joint action on reformulation efforts, using a Food Safety Agency monitoring system, which includes a prototype app. A nutrient profiling model adapted to the Austrian food market is in development and the requirements of the EU Audiovisual Media Services Directive have already been implemented.

The stepwise approach taken by Austria can be challenging – for example, there is strong resistance from the Austrian food industry both to the development of the NPM and to providing reformulation data, with pushback to further regulation on the grounds that the industry provides employment. A further benefit of the work on food systems is that the health sector is being integrated into the development of a national plan on sustainable procurement: “Working on food systems enables us, as the health sector, to talk on eye level with other sectors.”
BELGIUM

Sustainability is included in the Belgian dietary guidelines, which have a strong focus on plant-based diets. Cultural sensitivity is particularly important, with three different food pyramids for the country: French, Brussels and Flemish. All three food pyramids reflect the aim of lowering consumption of animal products and the Flemish pyramid (an inverse triangle) excludes processed foods high in fat, sugar and salt entirely, which is a powerful message (and a challenge to the food industry) that diet should focus on “foods on their own” (such as fruit and vegetables) rather than ultra-processed foods.

Belgium is the second country in Europe (after France) to implement Nutri-Score. This is important for citizens in understanding food choices, but environmental sustainability is not yet sufficiently embedded: while foods can be good for both environment and health, this is not always the case. Sustainable healthy recommendations are being drawn up for food procurement for school canteens for 3–18-year-olds, but “We are not going far enough – we need to be more innovative in how we think if the SDGs are to be achieved and global warming stemmed”.

DENMARK

Denmark has just released, in January 2021, new national food-based dietary guidelines: the Official Dietary Guidelines – Good for Health and Climate. The evidence behind the new guidelines was adapted by the National Food Institute, DTU, from the EAT–Lancet model, taking national food culture into account. Much of the guidance remains the same (such as sensible choices on vegetables and fish consumption) but there is a focus on plant-rich foods, with a significant cut to the recommended amount of meat consumption to 350 g a week, with a corresponding recommendation to increase legume consumption to 100 g a day (prepared amounts): “We have had to tackle the gap between our food culture and an environmentally friendly diet... because we eat a lot of meat in Denmark.”

The development process regarding how to formulate and communicate the dietary guidelines was undertaken by the Danish Veterinary and Food Administration (DVFA) and included workshops and dialogues with a number of government departments (including the Ministry of Food, Agriculture and Fisheries and Ministry of Climate) and with civil-society organizations (bringing both the health and climate perspectives) and the food/retail industry. An existing Food Partnership for Health and Climate mean that Denmark is in a good position to continue discussions.

Consumer testing of the guidelines was carried out to ensure that the public were comfortable with and understood the messaging – and, although these discussions were valuable, challenges remain in implementing the guidelines beyond well-educated
population groups. A further barrier to progress is the need for better data – for example, although food companies are eager to be involved in the HSD agenda, questions need to be answered about claims being made for their products.

Focusing on HSD within public procurement can strengthen the impact of the dietary guidelines and, while efforts here are at an early stage, guidelines are being updated for professional caterers, which will help to increase the availability of healthy and climate-friendly food in, for example, kindergartens, schools and workplaces.

In addition to the food-based dietary guidelines with a focus on health and climate, DVFA also has other initiatives and communication activities of importance for promoting sustainable food consumption, such as initiatives on reducing food waste and on environmentally sound choices of fish and organic foods.

FINLAND

Finland’s national dietary guidelines have included sustainable food choices since 2014, but this aspect will be strengthened in a new iteration of the guidance, due to publish in 2022 – the National Nutrition Council has already been expanded to include experts on environmental sustainability. Guidance taking sustainability into account is also being drawn up for specific population groups: guidance for the older population has already been published (2020), there are online tools and guidance for local health decision-makers to help to plan school and nursery meals, a guideline for students is due to publish in August, and work will soon begin on guidelines for healthy sustainable food for people living in institutions.

The government launched an umbrella programme focusing on sustainability and climate in 2014, which includes a focus on PBF and sustainably produced fish. Separate health and sustainability guidelines have been produced for procurement, but these are being merged into a new guideline that is due to launch in autumn 2021. Work is being done to encourage increased legume consumption – although this will be culturally challenging. There is also a project addressing inequalities, Trust Food, which looks at socioeconomic exposure and trust transformation of food systems.

Finland has a tax on sugar-sweetened beverages that has recently been increased and the government has committed to a further public health tax on unhealthy food, but it is proving difficult to find a model that would work in the Finnish context. There is also an ongoing project that assesses exposure to marketing of unhealthy food, and there is a plan to develop guidelines on marketing in the future, so the focus of the European Region on food profiling is very useful. In its role as chair of the Nordic Council of Ministers, Finland hopes to run a side event to the UN Food Systems pre-Summit, on health and sustainable diets, in New York in June.
HUNGARY

To date, efforts in Hungary have focused primarily on human rather than planetary health, with only relatively small steps taken on environmental considerations. A Public Health Product Tax was introduced in 2011 on foods high in fat, salt, sugar and caffeine (i.e. energy drinks), in an effort to encourage product reformulation. Recently, the need to monitor reformulation (and therefore to assess the impact of the tax) has become a priority, and in 2020 Hungary joined the Best-ReMaP initiative, which is working towards the establishment of a harmonized monitoring system for reformulation of processed food. In 2013, trans fats (TFAs) were banned – but subsequent impact assessments have shown that although this significantly reduced TFA consumption, the TFAs have often been substituted with saturated fats, notably palm oil, which is an example of why the health and environmental impacts of a policy should be considered together. Standards for public catering introduced in 2014 address standards for fat, salt and sugar but also have some environmental aspects (including prohibiting the use of palm oil). Locally produced food is also a focus of policy: from 2022, any procurer of public food (for example, in schools) must ensure that at least 60% of the total value of the product is locally produced – and this will rise to 80% after two years.

The national food database is in the process of being updated and will include both traditional foods and branded products. This will be a fundamental tool to provide dietary advice to the public and will guide labelling requirements. Inclusion of environmental impact data in this database would be extremely welcome, enabling the calculation not only of the nutrient intake of the population but of the environmental impact of a particular diet (such as a traditional Hungarian diet).

Hungary is working with the WHO European Region on the digital workstream – including using webscraping to build a database of supermarket foods, the nutrient content of which can then be assessed – and is looking forward to finding out if this can be an efficient way to collect information on the food supply.

IRELAND

The Austrian EU presidency in 2018 was the first time that the whole-systems approach to food had been presented to Member States (particularly a paper by Corinna Hawkes, commissioned by WHO). This sparked a significant policy discussion in Ireland and, although the Department for Agriculture was not in a position to adopt it at the time, it will form the basis of the new strategy of the Department for Agriculture that is being published later this year. On the EU side, Farm to Fork also has a focus on sustainable diets and Ireland is moving forward on some of these objectives. The need for interconnectivity between
different parts of the system is exemplified in the Healthy Ireland approach, which brings together several government departments and other stakeholders, and will provide the framework within which future guidance on healthy and sustainable diets will be produced and assessed.

Ireland is taking part in the JA Best ReMaP (Reformulation, Marketing and Promotion): a reformulation map has been drafted but is not yet published, and Ireland is co-leading (with Portugal) the work on marketing, which will include a checklist and practical guidance.

The Food Safety Promotion Board, Safefood, is working with the Department of Health on steps towards a more plant-based diet, which Ireland is referring to as a move to a healthy and sustainable diet – for example, a recent publication on whether meat alternatives are health-promoting.

Plans for 2021 include the development of feasible, evidence-based guidelines for consumers on increasing fruit, vegetable and pulse consumption and reducing red meat and food waste. A revised Children’s Communications Code is due to publish this year, and Ireland currently uses the UK’s OFCOM model (with an exemption for cheese) for marketing restrictions because there was not (yet) a WHO model available.

**THE NETHERLANDS**

In the Netherlands, relevant policy on food and diet is split between the Ministry of Health, Welfare and Sport (responsibility for food safety, nutrition, obesity etc.) and the Ministry of Agriculture, Nature and Food Quality (responsibility for increasing consumption of plant-based foods).

There are two very relevant primary policy agreements – one on health and one on the climate:

- The National Prevention Agreement (2019–2040) has over 70 parties who have committed to a “healthier Netherlands”, including a target to reduce the prevalence of overweight, by 2040, to 1997 levels. Current dietary policy is based around a national dietary wheel (the “Wheel of Five”), which sets maximum levels of meat consumption (with fish now recommended only once, not twice, a week) and a minimum level for fruit and vegetable consumption.

- The National Climate Agreement (2019–2050) includes a section related to food, including reducing food loss and food waste. A system is currently being developed that will enable the monitoring and comparison of foods using a uniform definition of carbon footprint per kilogram of product, which will enable stepwise reduction in carbon emissions. There is ongoing research into *true pricing* of food and how this can be used in the push towards greater sustainability.

There are also targets to make food consumption more sustainable, including on a move to plant-based foods to align with dietary guidelines. However, current diets are far from
aligning with the food-based dietary guidelines (FBDG) – only a third of daily energy and greenhouse gas emissions come from foods that align with the guidelines – so UPFs need to be addressed. The Health Council of the Netherlands is considering drawing up a new FBDG that will include greater prominence for sustainability.

NORWAY

An expert from a Norwegian university remarked that there are two papers that are particularly key in directing efforts on healthy and sustainable diets in Norway:

- First, the Norwegian National Action Plan for a Healthier Diet 2017–2023, which has cross-government support from eight departments, including the Health and Care Services, Climate and the Environment, and Fisheries, Agriculture and Food. This has been developed in support of SDGs 2 (nutrition), 3 (health) and 12 (sustainable consumption and production) and is the first policy plan in the country to combine health and environmental sustainability.

- The second white paper is the Climate Plan 2021–2030, which includes action points of relevance to HSD, such as waste reduction. It supports other national plans, including the National Action Plan for a Healthier Diet, the plan to reduce food waste, and the national agriculture plan (which is negotiated annually and will now include the need to reduce agricultural GHG emissions).

There is also a global white paper on food, people and the environment, and other ongoing work towards a more healthy diet, including on school/nursery meals. In addition, there are actions with the industry, such as a salt partnership.

Realizing these actions and policies is the next step. Food waste has proved to be a win-win: it is an economic win for the food industry as well as being good for the environment, and a target of a 20% reduction in food waste across manufacturing, wholesale and grocery from 2015 to 2020 looks likely to be achieved. However, there seems to be less policy willingness in addressing red meat consumption, which is a major contributor to carbon emissions. Here, health and environmental concerns are being balanced with economic and cultural drivers.

New Nordic Nutrition Recommendations are planned for 2022 (including the Baltic countries), which will integrate environmental concerns – this will be useful as Norway does not currently have official food-based guidelines that include sustainability: "We hope it will be a starting point for more concrete work towards sustainable food for our population and transformation of our food system."
PORTUGAL

The main actions that have been taken to date include a focus on the Mediterranean diet, where there are already synergies between health and sustainability – consumer education efforts using the Portuguese Food Guide (a food wheel) focus on fruit, vegetables and legumes. School meal procurement standards also follow the Mediterranean diet and incorporate food seasonality, and it is hoped that in future standards will be set for food procurement for other public institutions. The Agriculture Ministry has also been working to promote short supply chains, and there is a cross-departmental strategy for healthy eating that takes a cross-departmental health in all strategies approach – but to date the climate sector has not been involved in this strategy.

Portugal has not yet taken strong action on healthy and sustainable diets and lacks the expertise to take this forward. However, HSD is increasingly on the agenda – including through involvement in the FoodDB platform – and the work of the European Region across all the workstreams is welcomed.

RUSSIAN FEDERATION

The Russian Federation is currently “on a bridge between old and new policy”, as the previous policy on health and nutrition ran to 2020 and is under revision. A recently approved food-security doctrine has introduced a definition of “healthy eating” at legislative level, which is itself a major achievement.

In 2019, the government launched six projects as part of a new national initiative, one of which is on nutrition and healthy lifestyles. This includes monitoring of children's behaviour at home and at school, monitoring of food quality, and the launch of a new education programme (cartoons, videos, infographics) for a number of population groups. Moving from traditional dietary patterns to plant-based diets is likely to be a major challenge – less than 1% of the adult population are vegetarian or follow a plant-based diet, so in future this will be incorporated into educational material, along with information on issues such as reducing food waste into education material on nutrition. The hope is also to bring climate issues into nutritional guidelines.

There is a national voluntary guideline on front-of-pack colour-coding of nutrition information, which is largely ignored, and advice would be welcome from colleagues on how to build partnerships with industry on reformulation.
THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

The National Food Strategy (part 1 of which published in July 2020 and part 2 will publish later this year) focuses on supporting the UK through COVID-19 and the exit from the EU. The Strategy is led by Defra, with support from Public Health England and the Department of Health and Social Care – and the government has committed to publish a white paper within six months of the publication of part 2. There is ongoing work to mitigate the dietary and environmental impact of free trade agreements, such as the effect of a reduction of food tariffs that could increase consumption of high fat, sugar and salt foods (HFSS) foods. Advocacy is ongoing for the maintenance of the precautionary principle in these negotiations. Loss of this principle will have implications for food quality standards and could increase the availability of HFSS foods.

The UK’s reformulation programme has been under way in salt and sugar for several years, and work is now ongoing on reducing calorie intake, including calories from food eaten outside the home. The Eatwell Guide underpins government nutrition policy and the last review of the Eatwell model in 2016 included an update of the protein food group to place greater emphasis on more sustainable alternatives to meat and encouraged more sustainable food choices. Following this, a review of the sustainability of the Eatwell Guide by the Carbon Trust showed that a diet that follows the Eatwell Guide would have a lower environmental impact than the current average UK diet. Research is also currently being undertaken into the cost of a healthy basket in line with the Eatwell Guide.

The government’s Buying Standards for Food and Catering Services were introduced in 2011, which set mandatory higher environmental production and resource efficiency standards as well as nutrition-related mandatory standards. All central government departments and their agencies are required to apply these either directly or through catering contractors, and the wider public sector (such as local authorities) are encouraged to adopt them.
3.2 Areas of interest and requests for technical assistance

In addition to updating participants on national policies and implementation, the Member States were asked to note any aspects of healthy and sustainable diets that are of particular interest and to set out requests for technical support.

AREAS OF INTEREST

All seven workstreams were welcomed, with those that were most often noted by the Member States as being of particular interest being: food-profiling models (notably to help with labelling, tax systems and setting restrictions on marketing to children), plant-based foods (PBFs) (including micro/macronutrients), the digital food environment and reformulation.

The Member States that highlighted specific workstreams included:

- **Denmark**: Food-profiling modelling, PBFs – and systems thinking, which is “always relevant!”
- **Finland**: Food-profiling modelling, PBFs (including investigating micronutrients in, for example, plant-based milks) and reformulation.
- **Hungary**: Digital tools and food-profiling modelling.
- **Ireland**: Food-profiling modelling (useful for standardization and for marketing restrictions for children), digital/apps (as an agent for change) and advice on tenders for public food procurement.
- **Portugal**: Procurement, reformulation, food-profiling models, and digital tools to monitor labelling information.
- **Russian Federation**: Reformulation.
- **United Kingdom**: PBFs, the digital food environment and food reformulation.

We will look at all seven workstreams and link closely with you in developing them.

— Ursula O’Dwyer, Health Promotion Policy Adviser, Irish Department of Health

An additional issue raised both by Member States (Belgium and Portugal) and in the discussions called for greater focus within the workstreams on equity dimensions – both from a health perspective but also as climate change has unequal effects. Belgium additionally noted the need to remember goals to achieve zero hunger as the workstreams develop, and to consider relationships with countries in the Global South.
TECHNICAL ASSISTANCE

Several requests for technical assistance and specific information sharing were received from the Member States:

- **Austria**: Requested that the WHO European Region establishes a network to support those interested in this issue – in particular as this could help to counter the arguments used by the food industry to undermine the importance of action on healthy and sustainable diets.

- **Belgium**: Requested that WHO reviews the definition of UPF and establish a formal, WHO/FAO-approved definition, and also provide an overview of the NOVA food classification system.

- **Ireland**: Requested the establishment of a regular (at least annual) forum to learn from other countries and share discussion.

- **The Netherlands**: Requested an agreed definition on what a health/sustainable diet entails, the facilitation of exchange of data, and policy evaluation tools that incorporate sustainability (for example, extending INFORMAS Food-EPI to include environmental issues), and suggested that an international panel on food systems could be established that would align WHO and FAO activities.

- An expert representing a **Norwegian** university requested the development of a) indicators in complex areas such as agriculture and fisheries and b) decision-support systems to help to understand and balance the trade-offs of social/environmental impacts with health.

- **Russian Federation**: Requested a) support in developing a food waste guideline and b) advice on how best to partner with industry on food reformulation.

- **United Kingdom**: Requested further information-sharing on fortification by manufacturers of PBF such as plant-based milk, and the micro/macronutrient content of these products.
4. Key WHO European Region workstreams

Following the 2019 WHO European Region meeting, a core team at the NCD Office has developed a set of seven key workstreams, which together will form the basis of the work of the European Region on healthy and sustainable diets:* 

1. Food-profiling model for healthy and sustainable diets
2. Data platform for modelling healthy and sustainable dietary patterns
3. Healthy and sustainable public food procurement
4. Dietary shifts and plant-based food products
5. Healthy digital food environments
6. Food reformulation
7. Systems thinking in practice

These workstreams take into account recent scientific studies that stress the need to take urgent action on health of people and planet across the food system and are also in response to further evolution of the food system, such as expanding digital food environments (which has been catalysed by COVID-19) and increasing consumer calls for plant-based diets. The outputs will form a suite of tools to strengthen surveillance and build capacity of Member States, enabling them to create their own national HSD packages.

The workstreams were presented by a subject-matter expert at the meeting, with time for questions and comments from other experts and Member State representatives.

4.1 Food-profiling model for healthy and sustainable diets

Professor Mike Rayner (University of Oxford) and Charlotte Bunge (Charité – Berlin School of Public Health) presented the thinking and current work in the first workstream, which will ultimately inform the development of a user-friendly food-profiling model that incorporates both nutritional and environmental indicators. The evidence for healthy and sustainable diets is fast increasing, with recent analyses of the EPIC study, presented by Dr Inge Huybrechts (International Agency for Cancer Research), showing a clear link between cancer and both a diet that is unhealthy and a diet that lacks diversity.

Nutrient profiling is well established as the science of classifying or ranking foods according to their nutritional composition for reasons related to their preventing disease or promoting health. What is missing is an algorithm that enables the classification of foods for environmental reasons, either separately from or in addition to nutrition.

All models must include a number of factors: the scope of issues addressed (e.g. is alcohol included), the number and names of categories, the components (e.g. salt content or carbon emissions), the reference amount (e.g. per serving), the system boundaries (e.g. growing/manufacture/waste), and the precise details of the algorithm (e.g. weightings between elements, is it a scoring system or a threshold model).

A food-profiling model can take a component-specific approach, which on the nutrition side means highlighting individual nutrients (through, for example, a traffic-light system) and on the environmental side highlighting specific issues such as carbon emissions, water use or biodiversity. Alternatively, these individual elements can be combined into a single overall score, in the same way that Nutri-Score provides a single score for nutrition.

Oxford University is currently developing a scoring system combining the environmental and nutrition impact of an individual ingredient. The workstream is now taking this further, investigating the potential to develop a meaningful food-profiling model that scores a complete food rather than a specific ingredient, combining environmental and nutritional impact. A paper currently in press is a systematic review of existing models and their algorithms: 10 examples were found that met the criteria for inclusion as environmental models, eight of which also included nutritional values, but just three combined nutrition and environment into one score.
Ultimately, the development of a standardized Sustainable and Healthy Food Profiling Model would provide consistency and comparability between environmental and health indicators. It would enable policy-makers in Member States to assess their national diets, informing front-of-pack labelling as well as the design of advertising restrictions and fiscal policies, and guiding the reformulation of products in ways that benefit the health of people and planet. Concerns were noted, however, that to date there has not been universal enthusiasm within the EU for the implementation of nutrient profiling models – but it is encouraging that the EU’s Farm to Fork initiative is considering the development of a sustainable food-labelling framework.

We need nutrient profile models, environmental impact models and overall food-profile models – without these, we can’t do much!

– Professor Mike Rayner, University of Oxford

4.2 Data platform for modelling healthy and sustainable dietary patterns

A challenge facing governments worldwide – and previously highlighted to the WHO European Region by its Member States – is the difficulty of estimating the impact of proposed policy changes (such as to national nutrition guidelines) on environmental sustainability as well as nutrition/health outcomes.

To build capacity to enable Member States to apply global healthy and sustainable dietary principles to country-specific dietary consumption data, the NCD Office is developing a user-friendly, open-access data platform that will build capacity in this area.

The platform will enable Member States of the European Region to model different possible diets using national dietary consumption datasets, rather than a generic dataset – for example, given a national baseline, what would be the impact of an increase in consumption of vegetables of 300 g per day. There will be predefined datasets available (such as the EAT–Lancet diet and pescatarian / vegetarian / vegan diets), but Member States will be encouraged to use their own national nutrition data, which will maximize accuracy and relevance of outputs (including the deaths attributable to specific causes and risk
factors, following the Global Burden of Disease methodology). This enables the choice of evidence-based policy to support adaptation of local diets to meet health and sustainability goals.

While its primary purpose is to enable Member States to fine-tune their dietary guideline recommendations, it could also be used for research and scenario analysis. The database will also indicate whether a diet is globally sustainable – indicating to policy-makers whether a proposed change to diets at national level would be within planetary boundaries if adopted worldwide.

Participants at the meeting were given a short database demonstration by Dr Marco Springmann (University of Oxford). A manual for the database will be published in mid-2021, at which the platform will be open for initial testing, with workshops held for Member States – and participants at the meeting were enthusiastic about taking part.

4.3 Healthy and sustainable public food procurement

Public procurement policies play an essential role in setting standards for procurement of ingredients and foods for public institutions – schools, hospitals, prisons, day-care centres, care homes and public-sector workplaces – which can positively influence healthy and sustainable diets across many population groups.

This third workstream was presented by Betina Madsen, who leads on the procurement of healthy and sustainable foods in the City of Copenhagen. The NCD Office is developing a manual for public procurement officers across the WHO European Region. This will be a vital tool, as procurement offers are key actors but often feel isolated, may be uncertain as to how to prioritize healthy and sustainable diets, and are under pressure to deliver efficiencies in their work.

This manual will highlight how to establish tenders for the procurement of healthy and environmentally sustainable ingredients and foods. Writing the tender is a crucial moment, as what it requests can set the food chain in the right direction – it is a key step in localizing broad political objectives, such as the Sustainable Development Goals that Copenhagen recently incorporated within its tender documentation. The manual will include the criteria
that can be included in the tender (such as preventing waste, minimizing packaging, sustainable fishing and palm oil, fair trade, seasonality and product diversity), the wording of the final contract (such as a requirement to follow up on environmental impact) and how best to evaluate a bid. Criteria can be set according to national priorities and can evolve over time.

There must be a careful balance between ambition and pragmatism, as if the demands made are impossible then there will be no bidders. The market must be able to discuss and reflect on the tender, and there is the possibility for innovative, stepwise approaches to encourage healthier or more sustainable procurement. For example, in Copenhagen local politicians wanted more environmentally friendly delivery vehicles, but the supplier was not yet ready to deliver this – so criteria were included that awarded points for the number of green vehicles, acting as an incentive to increase the number over time.

Also under development is a training package for procurement officers to accompany the manual, which will describe practical examples of the integration of different aspects of health and sustainability within public procurement. The hope is to establish a network of procurement officers across Europe, who can share their experiences – echoing the success of a Denmark-wide network that has already been set up, which has led to sustainability criteria being integrated in cities beyond Copenhagen. As Ms Madsen put it, “You are not alone – we climb the mountain together!”

4.4 Dietary shifts and plant-based food products

Processed plant-based products that substitute for animal-source foods are gaining popularity and becoming much more widely available within the WHO European Region. These are increasingly consumed not only by vegans and vegetarians, but by people who have made the choice to eat meat less frequently, whether for health reasons or to cut climate emissions.

However, as Dr Holly Rippin explained, there is concern that the “health halo” around ultra-processed plant-based products may not be an accurate reflection of their nutritional quality – many of these novel products are high in salt, saturated fat and sugars. A commentary piece (in Global Food Security) notes that the market for these products is fast-growing but that this growth has not yet been reflected in national food-based dietary guidelines. Dietary modelling may also not be taking account of the realities of dietary
patterns: a “vegan” diet, for example, is no longer restricted only to whole foods but also includes these new ultra-processed products.

The initiatives in this workstream are intended to help to fill these knowledge gaps, giving Member States the information needed to include plant-based processed foods in their national guidance.

A monitoring platform, FoodDB, has been developed to collect “big data” on the composition of supermarket products sold online in the UK, gathering daily information on price, promotions and availability, as well as labelling, ingredients and country of origin. Using this approach, a FoodDB snapshot will be used to assess the healthiness of processed plant-based products, which will be compared to their conventional animal-source equivalents and compared to WHO recommended intake of nutrients. Environmental indicators will also be added to the analysis to give insights into the sustainability, as well as healthiness, of these products. There are plans to extend the FoodDB work to other countries including Hungary, Ireland, Israel and Portugal, to enable the evaluation of food-system policy interventions in-country and compare datasets between countries.

Finally, work has begun to analyse vegan burgers available for sale in five cities – Amsterdam, Copenhagen, Lisbon, London and Moscow. This will initially use webscraping tools and manual collection to gather data on pre-packed burgers sold in supermarkets, and will then extend to collecting samples of the burgers from out-of-home establishments for analysis. In future, the WHO European Region hopes to extend this approach to other cities and food categories, and an expert meeting on the out-of-home sector is planned for June 2021.

4.5 Healthy digital food environments

The WHO European Region working definition of digital food environments is “online activities where flows of services and information influence food and nutrition choices and activities” – this includes social media, online food retail, digital food marketing and food delivery apps. The fifth workstream focuses on ensuring that these environments develop in a healthy and sustainable direction – and this is particularly relevant and timely as the sector is subject to only minimal regulation (as it is so new) but has been dramatically catalysed by COVID-19.
As Dr Afton Halloran (NCD Office) explained, the out-of-home (OOH) food sector tends to be less healthy, often providing energy-dense, nutrient poor processed foods, and the digital food delivery apps that have flourished during COVID-19 lockdowns have significantly extended this food environment. The first online food delivery company in Europe was founded in 2000, but by 2020 the online food delivery market had already reached €11.5 billion. These apps aggregate the offerings from different restaurants and act as powerful agents of change for both consumers and restaurants. Member States have requested assistance in understanding data and research gaps, and Roberto Flore (SkyLab Foodlab) described a research initiative looking at how the apps influence consumer choice.

A further initiative is looking at the menu and nutrition information supplied by food outlets that use these food delivery apps. The WHO European Region and Kingston University London, as presented by Nuwan Weerasinghe, are engaged in collecting this data at national level in the UK and Spain, using web scraping, screen-capture and device farming. The data extracted using these techniques is then cleaned and classified using machine learning, creating an open, secure data lake that policy-makers can use to formulate policies to improve the OOH food environment. The next step will be building a better understanding of the information that stakeholders need, refining data collection and developing tools that put the knowledge into practice.

4.6 Food reformulation

Throughout the meeting, Member States expressed interest on how best to enable and ensure the reformulation of processed foods by food manufacturers to improve nutritional content – for example, by reducing the fat, sugar or salt content or by increasing the content of wholegrains or vegetables. WHO recommends the adoption of policies to encourage reformulation as part of a wider approach to improve the food environment and, while many countries have implemented such policies (some mandatory, some voluntary), many more have yet to do so. Lack of technical expertise and resource is a clear barrier both to policy development and to practical implementation, particularly for food manufacturers that are small- and medium-sized enterprises (SMEs).

In response to this need, and in collaboration with scientific partners, the NCD Office is developing an interactive reformulation manual on processed foods, which was described by Clare Farrand of the WHO NCD Office. The manual aims to build capacity among
policy-makers and SMEs, initially focusing on salt reduction in processed foods but will soon be scaled up to include further modules covering other nutrients and food groups, including “future food” products such as ultra-processed plant-based foods.

There was also discussion about the definition of ultra-processed foods. UPFs is not currently a term used by WHO, which instead uses HFSS foods, but the lack of evidence around plant-based UPFs is one of the reasons why the European Region is doing this work. There is a need to better define terms used, to counter food-industry claims that almost all products are “ultra-processed”, which complicates the design of regulation.

4.7 Systems thinking in practice

Systems thinking – looking at the bigger picture and understanding interconnectivity across different actors and aspects of a system – cuts across all the other workstreams and underpinned the two days of meetings, although there was not a specific presentation devoted to it. While systems thinking has been embraced by some working in the field of NCD prevention, it is still in the early stages of development and use in food systems – and this focus was specifically welcomed by several participants.

The NCD Office is developing a manual on how to promote systems approaches at national level, including opportunities for in-depth and systematic use of input from different stakeholders through a range of participatory methods. This will be published in the coming months and could provide an overarching approach to systemic change of the food system.
Responses to the presentations and roles for the WHO European Region

Participants at the meeting – Member States and experts alike – were encouraged to use a real-time, online tool to share brief anonymous thoughts about the presentations, to provide suggestions for the role of the European Region in addressing these issues over the next three years, and to name their most important takeaway from the discussions.

The role of the European Region in leading, inspiring and developing consensus is clear for participants. There is role to continue to support ongoing collaboration, enabling best-practice sharing between Member States and supporting European research institutes in gaining global visibility. The WHO European Region can be a trusted source of information, providing different levels of detail for different audiences: summarized factsheets, specific guidance on issues such as monitoring/evaluation and modelling, and workshops and manuals for the various open-access tools that are being developed. The development of a food-profiling model that combines nutrition and sustainability indicator was identified as a key priority by over half those responding, not least as this will enable the development of front-of-pack labelling schemes – and the European Region could also act as a conduit to “pick the brains of the private sector on their profiling models” to better ensure consistency and alignment.

The most important takeaway messages identified by participants include the need for WHO to continue to take the lead in its collaborative/convening role. There was a greater realization that all Member States face similar challenges in navigating and prioritizing the fast-moving complexity of healthy and sustainable food systems, including novel areas such as plant-based diets and digital environments, and strong calls for definition of indicators that combine health and environmental factors to enable the development of national-level guidance. Consensus is needed not only on data and research tools, but on the policies and communications guidance that are needed to put the theory into practice.

“[The WHO European Region should] provide independence, trusted, evidence-informed guidance on these topics that are heavily ‘lobbied’ and distorted by some groups.”

“The breakout rooms gave me the opportunity to understand that other colleagues/countries face similar challenges in terms of definition and guidance.”

“WHO should take a leading and inspiring role in bringing together experts from different countries and support the application of global knowledge on local level.”
5. Knowledge gaps and actions

Smaller group discussions among the Member State representatives, the WHO European Region and the HSD experts were an opportunity to identify current gaps in knowledge gaps and the potential actions for the Region and other stakeholders. The suggestions were captured on an online whiteboard and are structured by theme within each workstream below.
## Food-profiling models

<table>
<thead>
<tr>
<th>KNOWLEDGE GAPS</th>
<th>ACTIONS FOR WHO EUROPEAN REGION</th>
<th>IN PROGRESS*</th>
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<tbody>
<tr>
<td>General</td>
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<tr>
<td>● Region specific vs global – needs to be applicable to policy.</td>
<td>● Methodological support to countries so they do not have to start from scratch with systematic reviews, etc.</td>
<td>● Data platform will help countries revise FBDGs.</td>
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<tr>
<td>● Indication of the most practical model to use. How can we develop this?</td>
<td>● Create a universal approach (if possible).</td>
<td>● WHO guidance and tools very much appreciated and useful as trusted standard.</td>
</tr>
<tr>
<td>● Need consensus on profiling models across countries to move forward.</td>
<td>● Need to understand the objective of the food-profiling model – inform consumer or inform industry?</td>
<td>● FAO involved in supporting countries in developing FBDGs.</td>
</tr>
<tr>
<td>● Lack of national-level large datasets.</td>
<td>● Implementation plan to approach these targets – that member countries could produce and use.</td>
<td>● Consultations are ongoing (Ireland) – tendency to be aligned with other countries’ approaches.</td>
</tr>
<tr>
<td>● Lack of consensus in Europe on which model to use EU-wide; also big discussion on whether just one model should be used, as different countries already use different models.</td>
<td>● Guidelines on how to design and implement the food-profiling models – need both sides.</td>
<td>● The EU study being done at the moment; is WHO involved? different scores used in EU: ideal to have one model but if no consensus can be reached, maybe using different models, but find common ground.</td>
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</table>

* Actions already being taken by the WHO European Region and other stakeholders.
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<thead>
<tr>
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</table>
| Cultural aspects and traditional or novel foods | - Some exceptions to traditional foods exist.  
- Lack of nutrient profiling model for new foods on the market; or the fact that there are differences between countries especially for plant-based foods.  
- Cultural differences between countries in foods/food habits need to be reflected. | | |
| Food industry | - Marketing generates tough discussions from industry.  
- Hesitancy in using FPM because traditional foods “unhealthy”. Industry opposition.  
- Lack of reporting on how processed foods are. Should be included in models. | - Need standardized recommendations to take to industry, etc. Will not be accepted if on national level only. | - Developing standardized indicators.  
- Netherlands: NutriScore is an incentive for the food reformulation for the industry.  
- Reformulation of products – cooperation with industry. |
| Environmental aspects | - Now it is more based on health rather than environmental issues.  
- What to do with foods like milk?  
- Need models that look at the bigger picture (including carbon footprint), but it is difficult with different dietary patterns and geography.  
- Food-profiling models can change their name to food and environmental impact profiling models | - Developing core indicators of success for healthy and sustainable diet transition (e.g. red meat consumption, free school meals, etc.), making them publicly available – combination of evidence review and policy-maker consensus.  
- Combine health and environmental perspectives.  
- Development of indicators on sustainability across countries, if possible?  
- Good practice example: WHO’s action on marketing on children - is something similar possible?  
- Collaboration with other agencies (FAO etc.).  
- Framework on how to support countries to adopt: which components to use, what are the data bases that are available, a framework that countries can adopt. | - Ongoing research.  
- Database of effective policies in the Netherlands - could potentially be expanded to encompass policies across the European region. |
## Healthy and sustainable public procurement

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<tr>
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<tbody>
<tr>
<td><strong>General</strong></td>
<td>● Integration of different concepts (food vs meal vs product).</td>
<td>● WHO facilitation of coordinating and sharing country-level data sets, harmonization so data sets can be compared; first step: online platform assembling different projects/data sets from country members.</td>
</tr>
<tr>
<td></td>
<td>● Food-profiling models can be used to suggest which foods can be procured.</td>
<td>● Clearer food-profiling models.</td>
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<td></td>
<td>● System context thinking as a need (from producer to consumer).</td>
<td>● Development of definitions.</td>
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<td></td>
<td>● Creating new ways of public procurement.</td>
<td>● Monitoring and guidance.</td>
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<td></td>
<td>● Creating a more diverse way of perceiving diets (revisiting of available categories).</td>
<td>● WHO has important role to get experts together (e.g. advisory boards).</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>● More work needed to get existing recommendations into food procurement.</td>
<td>● Develop public procurement guidelines for healthy and sustainable diets for across the European region.</td>
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<tr>
<td></td>
<td>● Well-developed and well-accepted procurement policies are lacking. Need a gold standard.</td>
<td>● Implementation guidelines for procurement manual.</td>
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<td></td>
<td>● Need for clear and specific guidelines.</td>
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<td></td>
<td>● Incentivizing centralized procurement models to buy local products.</td>
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<td></td>
<td>● Benefit of a manual with technical consensus.</td>
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<tr>
<td><strong>Contextualization</strong></td>
<td>● Need to look at food procurement by setting.</td>
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<td></td>
<td>● Need to adapt to local context.</td>
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<tr>
<td><strong>Industry involvement</strong></td>
<td>● Evidence on how relevant it is to engage with the industry and to what extent.</td>
<td>● What can be the role of WHO in the dialogue with industry?</td>
</tr>
<tr>
<td>KNOWLEDGE GAPS</td>
<td>ACTIONS FOR WHO EUROPEAN REGION</td>
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<tr>
<td><strong>Missing skill sets</strong></td>
<td>● Legal knowledge required for procurement – lacking in most nutritionists/dietitians. Mismatch here.</td>
<td>● Important task to encourage working across different sectors. WHO could establish networks.</td>
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<td></td>
<td>● Knowledge-sharing between the health and procurement industry.</td>
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<tr>
<td><strong>Capacity building</strong></td>
<td>● To identify public procurement officers in the Member States.</td>
<td>● Capacity building for procurement officers.</td>
</tr>
<tr>
<td><strong>Challenges</strong></td>
<td>● Difficulties in entering the public procurement system (for small producers).</td>
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### Dietary modelling

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<tbody>
<tr>
<td>● Some models are not realistic. Need to consider benchmarks of national diets.</td>
<td>● Incorporating longer-term perspectives into the development of new FBDGs – what will be sustainable in the future?</td>
<td>● Sustainable healthy diets indicators – work is done (FAO).</td>
</tr>
<tr>
<td>● How to identify the indicators to include?</td>
<td>● Ongoing dialogue and exchange of opinions – to be continued by WHO.</td>
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<tr>
<td>● Availability of food consumption data needed.</td>
<td>● Training of future generations to work on this methods and tools (holistic – for different settings/levels).</td>
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<tr>
<td>● On nutritional adequacy not on health outcomes. Acceptability to consume – does not take into account convenience, price, taste, etc. Gap in our knowledge – can we get this into our models?</td>
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<tr>
<td>● Modelling real intake as opposed to just supply - whether modelled diets are acceptable to different groups.</td>
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<tr>
<td>● Data around some parts of the food supply chain, about social/cultural values relating to food consumption and integrating these into dietary modelling.</td>
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<td>● Inconsistency of national models prevents international comparison.</td>
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<tr>
<td>● Need for common agreement on food-based dietary guidelines with focus on sustainable diets – taking into account cultural differences.</td>
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<tr>
<td>● Expanding dietary modelling to the different socioeconomic groups.</td>
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<tr>
<td>● Issue of fortification/enriched foods (for example regulation and consumer acceptance).</td>
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<tr>
<td>● Knowledge gaps on importance of food variation. Variety could be lost due to changed/limited diets sole based on labels.</td>
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**General**

- Incorporating longer-term perspectives into the development of new FBDGs – what will be sustainable in the future?
- Ongoing dialogue and exchange of opinions – to be continued by WHO.
- Training of future generations to work on this methods and tools (holistic – for different settings/levels).
## Environmental aspects

- Connect climate and health – need databases that combine it.
- For example – oat and cow milk. If we replaced cow milk with oat milk. Impact on NCDs.
- Dietary change from one food to other (meat to plants) not replace. Need to look at the whole diet. We do not have this data for nutritional composition and also environmental impact. Towards a more plant-based diet – as a continuum.
- Modelling based on fixed impacts – impacts based on per kg of food item – environmental impact factor changes based on unit of product. Models are useful for current picture but challenging for longer-term picture.

## Actions for WHO European Region

- Including longer-term prediction of different sustainability scenarios and their environmental impacts in the modelling platform.
- Collating/developing data to model different impact scenarios at different scales.

## In Progress

- Attempts to explicitly model change over the longer term at the Potsdam Institute for Climate Impact Research.
## Digital food environments

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<tr>
<td><strong>General</strong></td>
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<tr>
<td>● Lack of dietary information on home delivery of foods and use by population.</td>
<td>● More research, considering portion sizes together with unhealthy or healthy foods.</td>
<td>● Portugal: manual for recommended portion size, including out-of-home sector.</td>
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<tr>
<td>● Lack of information on the nutritional composition of foods on apps. Need compulsory labelling on OOH sector. Impossible to get useful information otherwise.</td>
<td>● Creating good paths and “best practice” examples.</td>
<td>● Learning from positive examples from the cities; good practice example.</td>
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<tr>
<td>● How can meal delivery apps be positive agents of change – how can this be done?</td>
<td>● Investigating the interconnections and providing leadership.</td>
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<tr>
<td>● Connection between physical activity and digital food environments. How is physical activity affected by food delivery?</td>
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<tr>
<td>● How to create resilient digital food environments? Ensure that they work when they are needed (example: crashing of delivery platforms during COVID-19).</td>
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<td>● Changes because of the COVID pandemic (before and after data) to understand consumers’ behaviour.</td>
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<td>● Role of digital food deserts (e.g. limitation in food delivery available).</td>
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<td>● Nutrition information of foods sold on delivery platforms.</td>
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<td>● How can we influence consumer choice?</td>
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<tr>
<td>● Identifying the behaviour/lifestyles of consumers who use these platforms is more helpful.</td>
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<tr>
<td>● How does the menu outline affect consumers’ food choice?</td>
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<tr>
<td><strong>Marketing</strong></td>
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<tr>
<td>● How we address and protect children from marketing in the context of digital environment</td>
<td>● Guidelines and policy to protect children.</td>
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<tr>
<td>● Availability of digital information (accuracy, completeness of online data, targeted information → digital marketing in this context).</td>
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<tr>
<td>Data</td>
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<tr>
<td>● Need for data on foods ordered on apps e.g. how prepared, etc.</td>
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<td>● Will be hard to get accurate data on nutrient composition because of unknowns e.g. ingredients, preparation method etc.</td>
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<tr>
<td>● What can be done with gained data?</td>
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<tr>
<td>Business</td>
<td></td>
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<tr>
<td>● What to do about SMEs? Small outlets cannot measure accurately.</td>
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<tr>
<td>● Not all versions of same product are the same. Can start with large chains, but leaves gap of SMEs.</td>
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<td>● The people setting up these platforms are not skilled/concerned with health.</td>
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<tr>
<td>Collaboration</td>
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<tr>
<td>● Collaboration between experts in food environment and from technology sites: find common ground on how to work together and work well together (completely different fields, learn from each other).</td>
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<tr>
<td>Environmental aspects</td>
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<tr>
<td>● Now it is more based on health rather than environmental.</td>
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## Plant-based diet

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<tr>
<td>● Need to have definitions on other types of plant-based diets (e.g. flexitarian, etc.) other than vegetarian/vegan. How do lay people understand the term “plant-based diets”?</td>
<td>• WHO to take care of the terminology. Need to define what it is, and make it feasible, and possible actions for actors within the food supply chain.</td>
<td>• FNH-RI – combining different types of data around nutritional, environmental, also social and cultural.</td>
</tr>
<tr>
<td>● New trend? Eating pattern vs ingredients.</td>
<td>• Study consumer understanding of different types of diet.</td>
<td>• Dietary pattern analysis based on 24hr recall to model more granular sustainable/healthy dietary patterns for different population sub-groups at Wageningen.</td>
</tr>
<tr>
<td>● Figure out the discrepancy between different contexts.</td>
<td>• How to communicate and facilitate the producers.</td>
<td>• Support people to identify the best plant diets.</td>
</tr>
<tr>
<td>● How to drive the transition of diet of the whole industry (from farmers to consumers).</td>
<td>• Support people to identify the best plant diets.</td>
<td>• International research needed; often research is limited to national contexts.</td>
</tr>
<tr>
<td>● Data on marketing, exposure to marketing – including sustainability of marketed foods – guidelines around sustainability of marketed food products.</td>
<td>• Need more studies on traditional plant-based diets.</td>
<td>• Development of new products (support innovators) - creating new categories.</td>
</tr>
<tr>
<td>● Need more studies on traditional plant-based diets.</td>
<td>• International research needed; often research is limited to national contexts.</td>
<td>• General</td>
</tr>
<tr>
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<td><strong>Health</strong></td>
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<td>● Knowledge about sugar in plant-based diets.</td>
<td>● Reduce negative impacts of these dietary shifts from a health perspective.</td>
<td>● IARC PDB and cancer.</td>
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<td>● Lacking knowledge on nutritional quality of food.</td>
<td>● Country-level marketing policies – e.g. climate claims in food marketing in Denmark.</td>
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<tr>
<td>● The place of fortification in plant-based diets?</td>
<td>● Take a lead and learn from e.g. Irish example presented earlier in the meeting.</td>
<td>● Ongoing research on plant-based meat – health outcomes.</td>
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<td>● “Real” plant-based dietary patterns vs ultra-processed plant-based diet.</td>
<td>● Specify different options in different contexts in fortification needed.</td>
<td>● Support research on health benefits and risks.</td>
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<tr>
<td>● Rather than looking at single foods, looking at whole diet. Understanding shifts in dietary patterns – need data.</td>
<td>● Data on how much plant-based products are consumed.</td>
<td>● Factsheet developed.</td>
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<td>● Micronutrients on satiation/obesity. Texture/structure/satiation of foods and how it relates to how we digest them – the physiological impacts.</td>
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<td>● Identify consumer perception (identifying consumer demand for change to promote our agenda).</td>
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<td>● Clear recommendations on processed plant-based food needed.</td>
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<td><strong>Environment</strong></td>
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<td>● UPF plant-based foods: how they affect our health and climate.</td>
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<td>● Health impact (more in-depth research) and sustainability of food (water use, etc.).</td>
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<td><strong>Inequality</strong></td>
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<td>● Affordability and inequalities on different levels: replacements are currently expensive; there is existing health inequality from data and uncertainty if this dietary shift will add to it.</td>
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### General gaps

<table>
<thead>
<tr>
<th>Definitions</th>
<th>KNOWLEDGE GAPS</th>
<th>ACTIONS FOR WHO EUROPEAN REGION</th>
<th>IN PROGRESS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>● Definition of processed food, pros and cons of processing food, the role of ultra-processed food in the society (from the cultural perspective).&lt;br&gt;● Need for definition for HSD. Idea to agree working definitions, though challenging to get consensus to include biodiversity, greenhouse gas, waste. FAO – definition?</td>
<td>● Overview of policies that are under consideration to promote healthy sustainable diets.&lt;br&gt;● WHO needs to set a definition of healthy and sustainable diets.&lt;br&gt;● Drop HFSS – healthy is about micronutrients as well as fat, salt, sugar. Health-promoting foods?&lt;br&gt;● How to combine the definitions, to focus on the right products (precise definition), some processed food can be healthy, do we need this categorization at all?&lt;br&gt;● Provide media training to reach out and engage the community.&lt;br&gt;● Communication tools to improve public discourse – social media, radio.</td>
<td>● Food Systems Dashboard (2020). Could be a starting point for new harmonized indicators e.g. food environment, nutrition status.</td>
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<td>Data</td>
<td>● What indicators we use for calculations.&lt;br&gt;● Links between different types of diets and overweight and obesity.&lt;br&gt;● Economic impacts of unsustainable diets.</td>
<td>● Database of data sources, encouragement of open data policy, connecting to food purchasing, commercial data sets – guiding role for the WHO European Region in coordinating with FAO in ensuring supply and consumption data is better connected.</td>
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<td>KNOWLEDGE GAPS</td>
<td>ACTIONS FOR WHO EUROPEAN REGION</td>
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<td><strong>Policy</strong></td>
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<td>● COVID shows that policy responses to pandemic situation needed.</td>
<td>● Has to be international level standards – monitoring at national level to aid mapping and comparison of food systems across Regions.</td>
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<td></td>
<td>● FBDG development in more countries. Need methodological guides for countries that lack FBDGs.</td>
<td>● How to communicate about systems change and how to apply it in the countries.</td>
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<td>● Food-system transformation based on FBDGs and knowledge base.</td>
<td>● Need to incorporate systems thinking in health policy (rather than local).</td>
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<td></td>
<td>● Approaches/recognition for national dietary recommendations.</td>
<td>● Database of policies to support healthy/sustainable diets – implemented policies, status of implementation (date of implementation), impact evaluation.</td>
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<td>● Agriculture is unified and health is fragmented. How can we develop common health and agricultural policy for the Region?</td>
<td>● WHO could give an overview of existing and interesting interventions that are done across EU countries, practical examples and contacts (so not from scientific literature).</td>
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<td>● Not having definitions in general such as meat consumption limits, what is a sustainable diet for individuals/society.</td>
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<td>● There is a need for a standard model that different countries can adopt from.</td>
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<td><strong>Education and awareness</strong></td>
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<td>● Education – who is responsible? What programs are available? Who should be educated? (schoolchildren, GPs, etc.). Who is responsible for the awareness raising?</td>
<td>● Next to general nutrition knowledge (Food Pyramid/plates, etc; not only biological) education on FOP labelling (France just started for general population on Instagram) (for schools, but also important for general population). WHO could help by asking government to include this in curriculum and provide teaching material (including for secondary schools) and especially for disadvantaged areas.</td>
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<td>● Identify consumer perception (identifying consumer demand for change to promote our agenda).</td>
<td>● Should tackle consumer demand over agriculture – but personal frame of reference?</td>
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<tr>
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| **Systems change** | ● Integrating macro perspective when discussing micro interventions. Applying the global level to the local level.  
● Identifying effective policies to support the transition to healthy, sustainable diets – evaluation of policies and their impacts on dietary behaviour, development and implementation of these policies to evaluate.  
● Systems thinking does not help with prioritization. Food prices and taxes priority to address food choices – do not get that from systems thinking. Systems thinking makes things too complex. | ● Consider integrating the food system perspective into other workstreams, as has relevance to other topics.  
● Database of policies to support healthy/sustainable diets – implemented policies, status of implementation (date of implementation), impact evaluation.  
● Should include whole food system, but some elements can be covered by WHO, some by FAO.  
● WHO should focus more on the individual rather than the system. | |
| **Environment** | ● Method of calculating the climate impact of food.  
● There is still a need for data regarding sustainability of different foods and how to combine different sustainability aspects in the formulation of national guidelines.  
● Clear distinction – midpoint indicators of diet – environmental footprint and reduce NCDs and increase nutritional adequacy. | ● What is being done on the country level, EU level, guidance how to combine it? How down to the food data does one want to go? Linking the ingredients to the nutritional and environmental outcomes.  
● Should be focusing on climate change over health, obesity, COVID etc. Trade-offs; or all win-wins. | |

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6. Next steps

A suggestion that was enthusiastically received was a proposal for the WHO European Region and partners to establish a new network of Member States and experts, to meet the need expressed by Member States for knowledge-sharing and capacity-building. An equivalent network in physical activity, HEPA Europe (health-enhancing physical activity), was established in 2005 to bring together different relevant sectors, and this could be a useful model.

The workstreams will continue to develop and deliver, with small-group expert meetings planned (including on digital food environments and the out-of-home meal sector) and the publication of manuals and other tools as set out during the meeting. There will be ongoing discussions with Member States as to the data that they would find most useful (which can inform, for example, the data lake in the workstream on digital food environments), how they want to use the information, and what further tools would be helpful in developing and delivering guidance and policy.

Learning from the workstreams will also inform planned WHO European Region activities in the run-up to UN Food Systems Summit in September 2021, which will address how the food system can be inclusive, responsible, healthy and contribute to the 2030 Sustainable Development Goals.
### 7. Key sources


Healthy and Sustainable Diets: Key Workstreams in the WHO European Region: Factsheet 2021. WHO European Region; 2021 (https://apps.who.int/iris/handle/10665/340295).

Annex: Participants at the expert meeting

Member states

**Austria**

**Judith Benedics**, Department VII/A/3 (Nutrition, Mother, Child and Gender Health), Federal Ministry of Social Affairs, Health, Care and Consumer Protection

**Karin Schindler**, Head, Department VII/A/3 (Nutrition, Mother, Child and Gender Health), Ministry of Social Affairs, Health Care and Consumer Protection

**Belgium**


**Denmark**

**Iben Humble Kristensen**, Academic Officer, Sustainable Diet and Health Division, The Danish Veterinary and Food Administration

**Trine Grønlund**, Special Advisor, Ministry of Food, Agriculture and Fisheries

**Anne Pøhl Enevoldsen**, Head of Division, Sustainable Diet and Health, The Danish Veterinary and Food Administration

**Finland**

**Sirpa Sarlio**, Ministerial Advisor, Ministry of Social Affairs and Health

**Hungary**

**Eszter Sarkadi-Nagy**, Expert, National Institute of Pharmacy and Nutrition

**Ireland**

**Ursula O’Dwyer**, Health Promotion Policy Advisor, Irish Department of Health

**Netherlands**

**Liesbeth Temme**, Researcher, Public Health Nutrition, National Institute for Public Health and the Environment

**Portugal**

**Maria João Gregório**, Director, National Program for the Promotion of Healthy Eating, Directorate-General of Health, Ministry of Health

**United Kingdom of Great Britain and Northern Ireland**

**Jennifer Garry**, Team Leader, Nutrition Science, EU Transition, Nutrition and Health Claims, Diet, Obesity and Physical Activity, Health Improvement Directorate, Public Health England
Experts

Benjamin Allès, Research Team on Nutritional Epidemiology, French National Research Institute for Agriculture Food and Environment, France

Chloe Astbury, Postdoctoral Researcher, Food, Systems and Policy Evaluation, Global Health, University of York, Canada

Anna Bach Faig, Professor in Public Health, Universitat Oberta de Catalunya, Spain

Benjamin Bodirsky, Modelling expert, University of Medicine, Berlin and the Potsdam Institute, Germany

Charlotte Bunge, Researcher, Consultant in Sustainable Food Systems, Charité – Berlin School of Public Health, Germany

Joana Caldeira Fernandes da Silva, Chief Specialist in Nutrition, Safefood, Ireland

Gerda Feunekes, Executive Director, The Netherlands Nutrition Centre, Chair of European Public Health Nutrition Alliance (EPHNA), Netherlands

Lene Frost Andersen, Professor in Nutrition, University of Oslo, Norway

Jan Gojda, Centre for Research on Nutrition, Metabolism and Diabetes, Charles University in Prague, Czech Republic

Mirjana Gurinovic, Principal Research Fellow, Member of EC High-Level Expert Group International Platform for Food Systems Science (IPFSS), Centre of Research Excellence in Nutrition and Metabolism Institute for Medical Research, National Institute of Republic of Serbia, University of Belgrade, Serbia

Inge Huybrechts, Scientist, International Agency for Cancer Research, France

Roberto Flore, Manager, DTU SkyLab FoodLab, Technical University of Denmark, Denmark

Sumudu Karunarathna, Independent researcher in the field of non-communicable diseases, health systems and health economics

Tim Key, Professor of Epidemiology, University of Oxford, United Kingdom

Jennie MacDiarmid, Professor of Sustainable Nutrition, University of Aberdeen, United Kingdom

Betina Bergmann Madsen, Public Procurement Officer, City of Copenhagen, Denmark

Charmaine McGowan, Scientific Officer, Safe Food, Ireland

Tarra L Penney, Assistant Professor, Food, Systems and Policy Evaluation, Global Health Program, Global Strategy Lab, DIGHR, School of Kinesiology and Health Science, Faculty of Health, York University, Canada

Christos Politis, Professor, Faculty of Science, Engineering and Computing, Kingston University London, United Kingdom

Mike Rayner, Professor in Population Health, University of Oxford, United Kingdom

Franco Sassi, Chair in International Health Policy and Economics, Director, Centre for Health Economics and Policy Innovation, Imperial College Business School, United Kingdom

Pauline Scheelbeek, Assistant Professor, Nutritional & Environmental Epidemiology, London School of Hygiene and Tropical Medicine, United Kingdom

Elena Smirnova, Head, Laboratory of Demography and Nutritional Epidemiology, Federal Research Centre of Nutrition, Biotechnology and Food Safety, Russian Federation

Marco Springmann, Senior Researcher in Population Health, University of Oxford, United Kingdom

Nuwan Weerasinghe, Researcher, Faculty of Science, Engineering and Computing, Kingston University London, United Kingdom
European Commission

Rada Chehlarova, Team Leader, DG SANTE. D1, Farm to Fork Strategy
Anna Mirandola, Policy Officer, DG SANTE. DDG2.D.2, Multilateral International Relations
Heidi Moens, Policy Officer, DG SANTE.E1, Food Information and Composition

Alexander Rogge, Legislative Officer, DG SANTE.E1, Food Information and Composition
Dimitrios Sarikizoglou, Policy Analyst, DG SANTE.C2, Health Information and Integration in all Policies
Jan Wollgast, Scientific Officer, JRC.F1, Health in Society, European Commission Joint Research Centre

Food and Agriculture Organization

Ana Islas Ramos, Nutrition Officer, Food and Nutrition Division, FAO

World Health Organization Regional Office for Europe

Nino Berdzuli, Director, Division of Country Health Programmes
João Breda, Senior Adviser, Division of Country Health Policies and Systems

WHO European Office for Prevention and Control of NCDs

Carina Ferreira Borges, Head, a.i.
Kremlin Wickramasinghe, Programme Manager, a.i. Nutrition, Physical Activity and Obesity
Clare Farrand, Technical Officer, Nutrition
Karin Geffert, Consultant
Afton Halloran, Consultant
Mirjam Heinen, Consultant
Kathrin Hetz, Consultant
Regina Malykh, Consultant
Holly Rippin, Consultant
Dodkhudo Tuychiev, Programme assistant
Olga Zhiteneva, Technical Officer

Meeting rapporteur: Katy Cooper
The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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