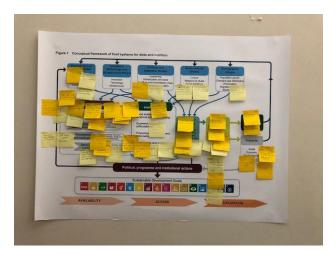


A4NH-CGIAR and Partners Consultations on Food Systems

18-19 February 2019, ILRI Campus, Addis Ababa, Ethiopia

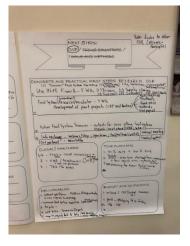
18-19 March 2019, Lakeshore Gulshan, Dhaka, Bangladesh

Consolidated Report of the Meetings









CGIAR Research Program on Agriculture for Nutrition and Health led by the International Food Policy Research Institute (IFPRI),

Wageningen University & Research, The Netherlands

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Acknowledgements

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We would like to extend our sincere thanks to all participants of both meetings who dedicated their time and effort, through various contributions – as panel members, presenting and facilitating group work, actively contributing to discussions, and writing minutes of the sessions. Our appreciation is also expressed to the Workshop Organizing Committee, who were spread out around the world but efficiently worked together to invite and communicate with the participants and arrange logistics and materials for the meeting: Tigist Defabachew (IFPRI), Tiruwork Melaku (ILRI), Mestawet Gebru (Bioversity International), Nazmul Alam (IFPRI) and Lucy Elburg (WUR). We are grateful for the editorial support given by Janet Hodur (A4NH). Thanks are extended to the catering staff of the meeting rooms and the reception at the ILRI Campus in Addis Ababa and the Lakeshore Hotel in Dhaka.

Abbreviations and Acronyms

A4NH CGIAR Research Program on Agriculture for Nutrition and Health

BCC Behavior Change Communication

BIHS Bangladesh Integrated Household Survey 2015

CoP Community of Practice
CRP CGIAR Research Program

CCAFS CGIAR Research Program on Climate Change, Agriculture and Food Security

CIFOR Center for International Forestry Research

CIMMYT International Maize and Wheat Improvement Center

CSO Civil Society Organisation

EPHI Ethiopian Public Health Institute

EIAR Ethiopian Institute of Agricultural Research

FAO Food and Agriculture Organisation of the United Nations

FBDG Food-based dietary guidelines

FSHD A4NH Flagship Program on Food Systems for Healthier Diets

GAIN Global Alliance for Improved Nutrition

HEI Healthy Eating Index

HLPE Committee on World Food Security (CFS) High-level Panel of Experts

ICRAF World Agroforestry Center

ICRISAT International Crops Research Institute for the Semi-Arid Tropics

IDS Institute of Development Studies, Sussex
IFPRI International Food Policy Research Institute
ILRI International Livestock Research Institute
IITA International Institute of Tropical Agriculture
IMWI International Water Management Institute

LMIC Low- and Middle-Income Countries

LSMS Living Standards Measurement Survey

MoA Ministry of Agriculture

NNCB National Nutrition Coordination Body

PIM CGIAR Research Program on Policies, Institutions and Markets

PMU Program Management Unit

PPRC Power and Participation Research Center, BAngaldesh

RCT Randomised controlled trial

SPEAR A4NH Flagship Program on Supporting Policies, Programs, and Enabling Action through

Research

USAID United States Agency for International Development

WLE CGIAR Research Program on Water, Land and Ecosystems

WUR Wageningen University & Research

Foreword

CGIAR has placed great emphasis on food systems research, with eight agri-food system programs and an emphasis on food systems in its 2019-21 business plan. The 2017 CGIAR Performance Report was titled "Transforming the Global Food System." However, operationalizing these aspirations into a food systems research agenda and portfolio is challenging. As in any systems research, partnerships and coordination are critical to leverage the diverse contributions required to address "enough" elements of the system to contribute to food systems change. The systems change outcomes are relatively well understood: jobs and income, sustainability and health. However, the necessary elements and their tradeoffs, and how they come together to sufficiently contribute to the desired development outcomes, are complex.

Given the importance of a food systems approach to nutrition and health outcomes, the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) made a concerted effort in preparing its 2017-22 proposal to develop a new research program area called Food Systems for Healthier Diets. Given that food systems research was relatively new to CGIAR, external partnerships were developed to enhance existing CGIAR expertise. In planning this new research, it was agreed that Wageningen University & Research (WUR) was best placed to lead the proposed flagship. The research plan was favorably reviewed and incorporated into the current phase of A4NH. A4NH proposed to use the Food Systems for Healthier Diets flagship to link its work on food systems to that of other CRPs (and Centers) and help link CGIAR researchers to the nutrition and public health communities with which A4NH works.

You will see from this meeting report that the CGIAR Centers and CRPs and some other key partners responded to our invitation to meet to discuss joint food systems research narratives and agenda and develop specific research actions. I attended both meetings and was very impressed by the background preparation of Centers and CRPs on their expertise and interests in food system research and their efforts in listening to other perspectives and working together to develop draft narratives and proposals for joint follow-up actions.

We would like to use the report of these two meetings to contribute to CGIAR and partner thinking on food systems research in two ways. The first is a contribution to a CGIAR food systems research strategy discussion as part of its Research Strategy to 2030. The second is to initiate the follow-up actions proposed in partnership with interested CGIAR Centers and CRPs and partners to start to build a body of practice and evidence.

I would like to thank all the participants as well as their Center and CRP managers who supported their participation, intellectually and financially. I also appreciate the team, listed in the acknowledgements, that organized the meetings and this report and will be actively engaged in next steps.

John McDermott

Director, CGIAR Research Program on Agriculture for Nutrition and Health

Executive Summary

In its role as an integrating CGIAR research program (CRP), Agriculture for Nutrition and Health (A4NH), through its Food Systems for Healthier Diets flagship, hosted two meetings with CGIAR partners in Ethiopia and Bangladesh in February and March 2019, respectively. The two-day meetings aimed to contribute to developing a common understanding on food systems and identifying greater linkages in addressing drivers and interventions of food systems across the CGIAR system. The meetings brought together around 80 participants, representing A4NH, the Food Systems for Healthier Diets research flagship, CGIAR centers, Agri-food systems CRPs and global integrating CRPs, and local partners. The meetings were structured into six sessions: (1) Introduction to a food systems approach and the healthy diet perspective in A4NH; (2) Participant perspectives on entry points for food system pathways: a panel discussion; (3) Application of the food system approach in Ethiopia and in Bangladesh/Vietnam; (4) Opportunities for CGIAR partner actions – entry points and thematic areas; (5) Refining actions and common narratives and theories of change; and (6) Next steps. The sessions were comprised of a mix of activities including presentations, panel discussion, interactive working group activities, plenary working group results presentations, and formal and informal sharing of experiences.

Using the Committee on World Food Security (CFS) High-level Panel of Experts (HLPE) conceptual framework of food systems for diets and nutrition, participants were asked to map their activities to the components of food systems (drivers, food supply system, food environment, consumer behavior, diets, food system outcomes). As expected, most activities were clustered around food supply systems, agricultural production, and value chains of specific crops, focusing on specific outcomes such as environmental and economic sustainability, but less on diets and nutrition. A lower density of work was found around consumer behavior and the food environment, and activities herein where isolated in the respective CRPs and Centers with limited linkages between them. Challenges identified relate to methodology (assessing consumer behavior and food environment, but also linking the different components of the food system, addressing heterogeneity and the dynamic character of food systems, and effective combination of qualitative and quantitative analysis of food systems), to analyzing tradeoffs and synergies of drivers and food system outcomes, to effective involvement of the private sector and inputoutput integration. Nine thematic areas were identified that offer potential for collaboration among CRPs and Centers: (1) Consumer behavior and drivers; (2) Food environment: making markets work for diets; (3) 'Somebody else's problem' (integration of single-crop work to the whole diet perspective and tradeoffs and synergies of drivers and food system outcomes); (4) 'Bottom-up meets top-down"; (5) Urbanization as a demographic driver of food systems; (6) Public-private collaboration; (7) Bridging foresight modelling with qualitative analysis; (8) Making small initiatives greater than the sum of their parts, and (9) Alignment of policy related activities. The first four thematic areas were further developed into priority actions for diagnosis, innovations, and ensuring policy engagement for anchoring and scaling up. Furthermore, narratives were developed on why, how, and for what a CGIAR-wide collaboration in the four thematic areas is needed.

To move forward, detailed activities including partners, time planning, deliverables, and tentative budget were identified related to the development of a **Community of Practice** (CoP) focused on food systems that contributes to a common global and a CGIAR-focused food system narrative. The development of such a CoP should start in 2019 with first information exchange at the end of that year. Concerning **Metrics and Tools**, emphasis in 2019 will be on supporting the development of a Compendium of Food System Indicators, and developing a concept note on Consumer Behavior and Food Environment research, with an expert consultation workshop in November 2019. In addition, specific activities were identified for country teams in **Ethiopia**, **Nigeria**, **Bangladesh** and **Vietnam**.

In both countries, a network reception was organized with the researchers, attended by a mix of donors, NGOs, and government officials of different ministries and government agencies. During these receptions, an overview was given of A4NH and its research flagship Food Systems for Healthier Diets, and a summary of outcomes of the two-days meeting was presented. External participants described their work relative to food systems, discussed the usefulness of the program, and provided several suggestions for improving linkages with local partner programs.

Introduction

In its recent business plan, CGIAR has mirrored the growing emphasis on food systems thinking in almost all international agriculture and food fora. However, any systems research is difficult. The challenge will be to ensure that food systems research is effective at providing knowledge and evidence that can make a difference to priority outcomes – income, inclusive growth, sustainability, and health.

In its role as a global integrating CGIAR Research Program (CRP), Agriculture for Nutrition and Health (A4NH) has proposed to link its work on food systems to that of other CRPs (and Centers) and help link CGIAR researchers to the nutrition and public health communities with who it works. Although there are varying degrees of research around food systems elsewhere in CGIAR, it has one flagship, Food Systems for Healthier Diets (FSHD), led by Wageningen University & Research (WUR), leading research on this topic. As part of this effort, A4NH hosted two meetings with CGIAR researchers, to contribute to developing greater linkages addressing drivers and interventions of food systems across the CGIAR system.

In preparation for the two-day meetings, CGIAR partners were asked to compile information from the CRP or Center they represent on the following questions: (1) What does the CRP or Center want to be known for in food systems for sustainable and healthy diets; (2) Where in their CRP or Center do food systems, diets, nutrition, and health fit, (3) List of key thematic area(s) the CRP or Center wants to work on with A4NH-FSHD, and (4) List of nutritionists working in the CRP or Center. In addition, a short description of the food systems framework developed by the Committee on World Food Security (CFS) High-level Panel of Experts (HLPE) was shared, with the request to indicate which components of food systems are covered by the CRP or Center. The Centers and CRPs were also asked to bring posters or briefs showing major tools, metrics, and methods used to assess diet, dietary choices, food choices and/or consumer behavior by the CRP or Center and for which the CRP or Center would like to promote and be known for.

The meetings brought together 39 and 48 participants in Ethiopia and Bangladesh, respectively, representing A4NH, FSHD, other A4NH research flagships, CGIAR centers, Agri-food systems and global integrating CRPs, and local partners. Participants acted as keynote speakers and presenters, co-facilitated sessions, facilitated work groups, and presented work groups outcomes. The two-day workshops were structured into six sessions, following welcome remarks by Dr. John Mc Dermott, A4NH Director, and included:

- Session 1: Introduction to a food systems approach and the healthy diet perspective in A4NH
- Session 2: Participants' perspectives on entry points for food system pathways: a panel discussion
- Session 3: Application of the food system approach in Ethiopia and in Bangladesh/Vietnam
- Session 4: Opportunities for CGIAR partner actions entry points and thematic areas
- Session 5: Refining actions and common narratives and theories of change
- Session 6: Next steps.

The sessions comprised of a mix of activities including presentations, panel discussion, interactive working group activities, plenary working group results presentations, and formal/informal sharing of experiences.

As part of the meeting, A4NH and its partners in Ethiopia and Bangladesh, including WUR, Bioversity International, the International Food Policy Research Institute (IFPRI), and the International Livestock Research Institute (ILRI), convened a meeting across CGIAR and with Ethiopian and Bangladeshi partners to develop a more coordinated food systems research agenda that aligns with Ethiopian and Bangladeshi development priorities and plans. During this networking event, a brief summary of progress in food systems for healthier diets in Ethiopia and Bangladesh was given and the relevancy for the Ethiopian and Bangladeshi organizations was discussed with the different CGIAR and partner researchers involved.

The next sections of the consolidated meeting report will summarize the outcomes of the sessions in both Ethiopia and Bangladesh. Meeting programs and participant lists for both meeting are attached as appendices to this report, together with a short summary of the HLPE conceptual framework.

Welcome and Opening

The A4NH food systems meetings in Ethiopia and Bangladesh were opened by A4NH Director Dr. John McDermott, , who welcomed all participants. A short round of introductions by participants was followed by an explanation of the purpose of the meeting, and a short overview of the two-day program, including understanding the food system approach and the work in A4NH's Food Systems for Healthier Diets (FSHD) research flagship, to mapping participants' activities on the HLPE framework, to further discussion of specific activities focused on the four key FSHD focus countries (Ethiopia, Nigeria, Bangladesh and Vietnam) but also in other countries, finally arriving at a concrete list of actions for potential collaboration.

Session 1: Introduction to the food systems approach and healthy diet perspective in A4NH

This session comprised two presentations, by Professor Ruerd Ruben, WUR and Managing Partner representative in A4NH's Program Management Committee, and Dr. Inge D. Brouwer, FSHD flagship leader.

Introduction to a food systems approach, analysis of drivers of change, and application to national food system environment analysis (Prof Ruerd Ruben, WUR)

The presentation started with an overview of the portfolio of CGIAR programs, highlighting the A4NH-Agrifood system CRP interfaces (fish/aquaculture, fruits/vegetables, pulses/nuts, dairy/poultry/pork, processed wheat/rice/maize) and A4NH-global integrating CRP interfaces (resilient food systems in the Climate Change, Agriculture, and Food Security (CCAFS) CRP, inclusive food systems in the Policies, Institutions, and Markets (PIM) CRP, and sustainable food systems in the Water, Land, and Ecosystems (WLE) CRP). The definition and focus of food systems as used in A4NH was introduced and the specific attention for nutrition and health outcomes and the central role of diets as the major link between food systems and nutrition and health outcomes was highlighted. The importance of backward thinking in the FSHD flagship was illustrated: starting with the diet, entry points that put into movement the whole system are identified and pathways of change that involve multiple stakeholders are supported. The HLPE framework linking agriculture, nutrition, and health was explained, comprising three major elements: results (performance), components (structure), and drivers (conduct). The complexity of food systems was emphasized, comprising multiple levels, agents, and outcomes, with interactions, feedback, and learning loops including incentives and innovations to overcome trade-offs and support synergies. A reflection was given on what makes a food system innovation, comprising six points: (1) Focussing on healthier diets as an outcome; (2) Understanding key drivers of systems change; (3) Linking technological interventions to behavioral change; (4) Involving private, public and/or civic agents; (5) Multiple value chains combining local and global solutions; and (6) Identifying solutions in other areas than where the problem occurs. This was followed by some examples from A4NH: reducing post-harvest losses in tomato chains, dietary diversity promotion through income and market diversification, and school meals. System interventions are activities (interventions) that support changes in the relationships (interactions) between food system activities/stakeholders that are likely to result in better (improved) diets, and possible entry points indicated were policy incentives, business innovations, and civic-driven campaigns. Overlapping interests of A4NH and other CRPs offer opportunities for linking: Animal systems (dairy, poultry, pork); Fish (aquaculture), Forestry (fruits), Cereals (processed cereals e.g. pizza), Roots & Tubers (processed foods e.g. chips), Markets & Institutions (food prices & governance), Climate Change (Energy & CO2 emissions), Water & Ecosystems (water use efficiency).

Healthy diet perspective (Inge Brouwer, WUR)

After a short explanation of the objective of the Food Systems for Healthier Diets research flagship and its three clusters of activities (Agenda setting [Diagnosis & Foresight], Food System Innovations, and Engagement [Anchoring & Scaling up]), the presentation highlighted what a healthy diet entails. A healthy diet should optimise health (contrary to curing disease) and should not offer too little (related to adequacy and diversity) or too much (related to moderation of unhealthy dietary components) and should be safe.

Starting from a review of priority burdens of disease in a country, using the best available evidence, foods and food groups (and their recommended amounts to be consumed) that should be consumed or should be avoided to prevent the priority diseases burden are identified. These result in so-called technical recommendations, which should be translated to the local situation using knowledge on local dietary patterns, costs, and sustainability. These translations usually result in food-based dietary guidelines (FBDG) which reflect healthy diets and usually comprise message such as: eat at least one handful of nuts daily, or five portions of vegetables daily, often accompanied by a visualisation, often a pyramid. Sometimes, these guidelines are further transformed into healthy eating indices, such as the Healthy Eating Index (HEI), a measure of diet quality to assess and evaluate the extent to which Americans are following the dietary guidelines. However, challenges are related to missing biological evidence on the association between food and some diseases, especially in low- and middle-income country (LMIC) settings, the absence of FBDGs in LMIC, and the absence of consumption data and of contextualised performance indices (therefore proxies like the HEI are used). It was indicated that sustainable diets comprise more than nutritionally adequate, safe, and healthy diets, and following the Food and Agriculture Organization of the United Nations' (FAO) definition, attention should also be given to the environment, economy, and culture. However, reaching all outcomes at the same time is difficult, if not impossible, and examples of tradeoffs with safety and with environmental sustainability were presented.

Session 2: Participants' perspectives on entry points for food system impact pathways in current CRPs

In this session, the perspectives of selected CGIAR Centers and CRPs (In Ethiopia and Bangladesh) and key local partners (in Bangladesh) were inventoried and discussed in a panel setting, facilitated by John McDermott (A4NH).

The panel in **Ethiopia** comprised the following CRPs/Centers and representatives: Frank Place (PIM), Ralph Rootheart (WorldVeg), Dawit Solomon (CCAFS), Hugo de Groote (CIMMYT) and Amy Ickowitz (CIFOR/ICRAF). In general, all panel members saw opportunities to collaborate and align with the food system approach for healthier diets. Specific topics of mutual interest identified by panel members and audience were

- The role of specific foods in the diet and food quality (PIM) and safety (WorldVeg), being vegetables (WorldVeg), biofortified crops (CIMMYT, AfricaRice, RTB), fruits trees and neglected underutilized and wild foods (CIFOR/ICRAF, Bioversity), specific fish based products for target groups and (small) fish varieties (WorldFish/CRP Fish), combined with increasing knowledge on food composition (CIFOR/ICRAF, ICRISAT) and role of landscapes (CIFOR/ICRAF)
- A common narrative and advocacy on the importance of specific foods or food groups for diets and nutrition, especially related to animal sourced foods (ILRI/CRP Livestock) in LMIC and neglected, underutilized and wild foods (CIFOR/ICRAF)
- Food systems in urban areas and poor urban population (ICRISAT)
- Sharing joint projects, for example related to food-to-food fortification with vegetables (WorldVeg, CIMMYT), healthy gardens (WorldVeg), including impact assessment using expensive (cost sharing) RCTs (CIMMYT), behaviour change communication (BCC) (CIFOR/ICRAF, CIMMYT, ILRI/CRP Livestock), promotion of polycultures (WorldFish/CRP Fish)
- Research into drivers of consumer food choice, including pricing of nutritious foods (PIM), and gender (PIM), acceptance of biofortified crops, acceptance of reduced pesticides use (CIMMYT), acceptance of pulses, millets and sorghum (ICRISAT)
- Sharing of tools and methods including sharing of foresight tools and methods (PIM, CCAFS), assessment of consumption (WorldVeg), evaluation methods such as randomized trials and learning.

The panel in **Bangladesh** comprised of the following CRPS/Centers: Johanna Lindahl (ILRI, CRP Livestock), Matty Demond (International Rice Research Institute (IRRI), CRP Rice), Bill Collis (WorldFish, CRP Fish).

Also in the Bangladesh meeting, all panel members recognized opportunities to collaborate and align with the food systems approach for healthier diets. Specific topics of mutual interest identified by panel members and the audience were:

- Focusing on the consumers and understanding why they eat what they eat (consumer choice) and the system behind adoption of new foods; developing a framework to understand diets beyond ingredients (patterns of eating, occasions, meals, dishes), raised by IRRI. This includes development of new tools, such as an app to understand food choices, raised by IRRI and WUR. This should focus on the whole diet and not on a single crop such as rice, noted by IRRI.
- Ensuring inclusion of low-income consumers in benefit of intervention (WorldFish). Although fish production and consumption has significantly improved, this caused fish to be too expensive for low income consumers, depriving them of access to fish in their diet.
- Strengthen collaboration with private sector (WorldFish, CIP) and the need to provide viable business propositions (WorldFish) as well as broadening the private sector we are working with (CIP).
- Increased attention to environmental sustainability, and especially reducing food loss and waste, in fish production (WorldFish).
- Incorporation of safety considerations in food systems for healthier diets work, especially focussed on animal source foods (ILRI, WorldFish) and especially related to modernization of diets and the role of informal markets
- Food systems in urban areas and the role of biofortification and biofortified products in the food basket of urban poor (HarvestPlus), linking rural and urban producers and markets (CIP).
- Food environment (CIP)
- Production of nutritious foods (CIFOR/ICRAF): home gardening for poor populations and agroforestry

Session 3: Application of the food systems approach in Ethiopia and Bangladesh/Vietnam

In this session, the food systems approach towards healthier diets presented earlier was illustrated with activities carried out in country, facilitated by Inge Brouwer (WUR).

In **Ethiopia**, the session started with a presentation by Namukolo Covic (IFPRI) on the mapping of CGIAR research projects in Ethiopia to explore the prevailing environment for nutrition and health sensitivity across within Centers and CRPs in Ethiopia. A systematic qualitative desk review of available projects, documents, and interviews with key informants provided key findings for A4NH research flagships FSHD and Supporting Policies, Programs, and Enabling Action through Research (SPEAR). The mapping criteria were presented separately. Some bias occurred and not all areas received enough attention; women and children are included, the latter to a lesser extent. Most findings were mapped under FSHD and programs looking at Diagnosis & Foresight were more available over those on Innovations or Anchoring & Scaling. Translating evidence into action needs to have more attention, and these are precisely the areas which attain less focus. Qualitative data analysis should receive more attention, as well as a focus on urban projects.

This presentation was followed by an overview of the food system analysis carried out in Ethiopia under the umbrella of FSHD, by Mestawet Gebru (Bioversity International). The objective of the paper was to identify and discuss what type of research can support operationalizing food systems approaches to improve the quality of diets in Ethiopia. In the paper, 25 priority research areas were identified and connected to the three flagship clusters of activities: Diagnosis & Foresight, Food Systems Innovations, and Anchoring & Scaling. Then Daniel Mekonnen (WUR) presented the results of a study on determinants of dietary gaps, looking at factors influencing nutrient adequacy and household dietary diversity in Ethiopia and Nigeria, using living standards measurement study (LSMS) data. Demewez Moges Haile (EPHI) presented the process implemented to develop food-based dietary guidelines in Ethiopia, guided by a technical task force with representatives of several ministries and civil society groups. Alan de Brauw

(IFPRI) reflected on what food systems innovations are, introducing a diagram of potential food systems innovations in a matrix defined by production-consumption and technological-institutional innovations. He highlighted the baseline results of an intervention about to start in Ethiopia, indicating that people did not really know what good food is and that the food processing industry was relatively young.

The session was ended by Namukolo Covic (IFPRI), presenting the challenges and opportunities identified during validation of the mapping exercise. Opportunities were related to the governments' commitment towards nutrition security through different policy instruments and existing related platforms; existing multi-sectoral nutrition coordination structures and related process and the A4NH/WUR MSc Students Grants project. The following recommendations were made: (1) develop nutrition mainstreaming guidelines for the CGIAR system; (2) establish nutrition platforms for the CGIAR system and stakeholders; and (3) promote better collaboration through joint projects.

In Bangladesh, the session started with a presentation by Nazmul Alam (IFPRI) on the food systems paper for Bangladesh. Comparable to the Ethiopia food systems paper, the aim was to describe the stateof-the-art knowledge on foods system components in Bangladesh and develop a research road map to build evidence-based knowledge on food system innovations. The stakeholders, process, and progress of the development of the paper was presented and preliminary results led to 10 tentative areas of research. This was followed by a presentation by Inge D Brouwer (WUR) on dietary gap analysis for Bangladesh, based on analysis of the Bangladesh Integrated Household Survey (BIHS) dataset. Using the technical dietary recommendations of the Global Burden of Diseases study, Bangladesh showed the highest score on consuming healthy and unhealthy foods. Although it seems there is sufficient consumption of vegetables, insufficient amounts of fruits, legumes, milk, and nuts/seeds are consumed, while there is too much consumption of cereals. Intake of fat and multi-micronutrients appeared to be inadequate. These findings lead to the following recommendations: (1) maintain dietary diversity and levels of vegetable consumption; (ii) increase number of households consuming animal source foods, including dairy; (iii) increase amounts of fruits, animal source foods, including dairy (but not too much), nuts/seeds and legumes consumed; (iv) reduce amounts of cereals consumed; (v) monitor unhealthy food consumption (not yet problematic although more than 70 percent of households consume sweets), (vi) reduce energy but increase fat intake (protein does not seem to be a problem) and increase intake of calcium, iron, zinc, riboflavin, vit B12, and vitamin A. Saeed Moghayer (WUR) presented the analysis done in the framework of CCAFS on economy-wide scenarios for transition to a low-carbon, hunger-free Bangladesh. Four scenarios were developed from proactive to reactive environmental management and from top-down authoritarian to decentralised, participatory transparent governments. Preliminary results of the quantification of the scenarios and future nutritional gaps were presented as well as the first steps in household-level microsimulation. Stef de Haan (CIAT) presented the progress in the baseline study of the three FSHD benchmark sites in Vietnam. The benchmark sites provide a model to bridge scale and resolution, provide a baseline for food system characterizations, achieve integration and collaboration, and coherence of food system components, commitment, and documentation. Preliminary results of the baseline were presented and a first characterization of the food systems in the three benchmark sites was given based upon which potential innovations will later be prioritized. The session was ended by a presentation of Mahbubul Ashan who represented Hossain Zillur Rahman (Power and Participation Research Center, PPRC), on the policy baseline assessment. Based on the traumatic experience of the famine of 1974, ensuring food security became and still is a high political priority. Actors/networks as well as needs, aspirations, and initiatives on the ground are seen as more important for progress, and understanding how these, vis-a-vis interest/power, shape policy outcome is important.

Session 4: Opportunities for CGIAR partner actions – entry points and thematic areas

The objective of this session was to get to know and understand the focus of work of the different Centers and CRPs and to identify where there are opportunities for collaboration. The session comprised two parts and was facilitated by John McDermott (A4NH) and Ruerd Ruben (WUR).

Mapping of CGIAR Centers/CRPs' interest to enrich current programs with a food systems perspective

In four working groups, each person was asked to write their Center or CRP name and a topic of interest on a note and paste that on to the poster depicting the HLPE framework. Centers/CRPs were allowed to paste multiple notes to the framework. The results of the different working groups were presented in a plenary session and summarized by Ruerd Ruben (WUR).

In **Ethiopia**, the working groups were facilitated by Inge Brouwer (WUR), Gina Kennedy (Bioversity International), Alan de Brauw (IFPRI) and Chris Bene (CIAT). It was obvious that activities of the different centers did cover the different components of the HLPE framework, but the density of activities per component differed. As expected, most activities were clustered around the food supply system, agricultural production, and value chains of specific crops, focusing on specific food system outcomes like environmental or economic sustainability, but less on diets and nutrition. Lower density of work was found around consumer behavior and the food environment, reflecting knowledge gaps in these areas as well as gaps in methodologies, metrics, and tools to assess these areas, and gaps in interventions except those related to nutrition education or BCC.

In Bangladesh, the working groups were facilitated by Inge Brouwer (WUR), Marrit van den Berg (WUR), Devesh Roy (A4NH) and Peter Oosterveer (WUR). As in Ethiopia, it was obvious that activities of the different centers did cover the different components of the HLPE framework, and that linking the different components is a crucial next step: linkages between components of HLPE to make it a food systems analysis; linking bottom-up with top-down (aggregation and disaggregation) and linking around a geographical area (scale). Challenges were identified in (i) food environment and consumer behavior, (ii) Little political, program, or institutional action and evidence, (iii) Mixing qualitative analysis and quantitative process analysis and (iv) Private sector involvement and citizen science. Knowledge gaps were identified in drivers (influence of macro-policies on the food system for healthier diets, influence of political drivers such as land tenure and leadership on food systems for healthier diets, multiple drivers and interactions such as tradeoffs and synergies, policy processes and institutional change), components (Consumer behavior, including aspirational, acceptance, religion, ethical considerations, and food environment issues such as labelling, input-output integration, or circularity) and outcomes (Trade-off and synergies between nutrition/health, environment, food safety, income). Overall, it was realized that there was a gap in addressing heterogeneity, for example in response to interventions, as well as how to take into account the dynamic character of food systems.

Based on the presentations and plenary discussion in both countries, nine thematic areas were identified, offering potential for collaboration among Centers and CRPs using a food systems approach:

- Consumer drivers/consumer behavior change (Ethiopia and Bangladesh)
 - Assessment, innovations (using information communications technology)
 - Pathways for scaling (Ethiopia)
 - Use of private sector methodology to understand consumer behavior (Bangladesh)
 - Link back to the food environment and food supply chain, and link to diets and health outcomes
- Food environment: making markets work for diets (Ethiopia and Bangladesh)
 - Link with private sector, but how to do so? (Bangladesh)
 - Assessment, innovations testing, pathways for scaling (Ethiopia)
 - Link back to food supply chain (Ethiopia)
- **Urbanization as demographic driver of food systems for healthier diets** (Ethiopia and Bangladesh)
 - Including urban food system policies as innovation
 - Rural-urban linkages
- Public-private collaboration (Ethiopia)
 - Food processing and link back to food supply chain
 - Innovative partners
- Bridging foresight modelling with qualitative analysis (Bangladesh)

- Mixed methods and how to enhance relevance of findings
- 'Somebody else's problem': (Ethiopia, Bangladesh)
 - Tradeoffs and synergies in food systems outcomes and drivers (Bangladesh)
 - Everyone's looking at their single contribution rather than how to improve the whole diet (Ethiopia)
 - · Integration of value chain approaches: looking at common 'determinants'? (Ethiopia)
 - Circularity (Ethiopia)
- 'Bottom-up meets top-down' (Bangladesh)
 - Aggregation disaggregation
- Making small initiatives greater than the sum of their parts (Bangladesh)
 - Improve synergies, make them more 'impactful'
- Alignment of policy-related activities (Ethiopia)
 - Tradeoffs and synergies?
 - Common in country platforms?

Common food systems methods and tools and their potential application

Indicators, metrics, methods, and tools used by the different CRPs and Centers were inventoried and discussed for (1) diagnosis and foresight analysis of food systems; (2) assessment and evaluation of food system innovations, and (3) policy analysis and platforms. For each topic, the top two actions that need to be taken were identified and discussed. In both countries, the session started with a short introduction on the progress of the development of a Compendium of Indicators for Food System analysis, in Ethiopia by Gina Kennedy (Bioversity International) and in Bangladesh by Inge Brouwer (WUR). The presentation gave an overview of sources and selection criteria for the most suitable indicators covering the drivers, components, and outcomes of food systems. A selection of these indicators was presented as examples.

In **Ethiopia**, the working groups were facilitated by Gina Kennedy (Bioversity International), Inge Brouwer (WUR), Alan de Brauw (IFPRI), and Raffaele Vignola (WUR). In **Bangladesh**, the working groups were facilitated by Stef de Haan (CIAT), Marrit van den Berg (WUR), and Peter Oosterveer (WUR). The top 2 actions identified in each working group at each meeting can be found in Table 1.

Table 1. Priority actions identified in A4NH-CGIAR Partner Consultations in Ethiopia and Bangladesh				
	Ethiopia Consultation	Bangladesh Consultation		
	Diagnosis and Foresight			
2.	Assessment of dietary gaps or imbalances: what is CGIAR's comparative advantage of closing those gaps? - Availability of questionnaires to understand out-of-home consumption - Consolidating data across CGIAR (everyone is looking for dietary gaps and identifying how their 'crop' can close the gap) - How should dietary gaps and trends influence agricultural investments (related to implications for circularity, imbalances on water, energy, greenhouse gases) How to assess the food industry/consumer demand and trends herein, and how can we influence these?	There are many methods used in different organisations to assess diets, consumer behavior, drivers etc. - Which methods and tools are validated and which ones are more 'fluid' and need more evaluation? Gaps in methods and tools were identified in - Tracking health impacts/changes - Stakeholder analysis (especially including the health sector and NGOs as they are		
		often missing) - Measurement of food waste and food loss		
	Food System In			
1.	How can CGIAR innovate in terms of its collaboration? - Breaking silos (governments and CGIAR), (i) around big data, engaging other multistakeholder platforms, or (ii) by A4NH driving the process of dialogue across CGIAR	How can we measure impact of food system innovations? - Minimal designs need a baseline - There are many tools available and used in the CGIAR Centers, but they are not always known. - Challenge is to find the best combination of the different tools		

	Improved coordination around (i) logistics for 'perishable' foods (cold chains and processing), (ii) institutional change (what institutions are delivering meals to large populations), (iii) technologies (growing digitalization e.g. mobile money, market/price info; food-feed; water consumption along value chain), (iv) seasonality, filling dietary gaps in other seasons	- How can we best combine qualitative and quantitative evaluations in food systems innovations so they strengthen and inform each other? How to capture the dynamic nature of food system innovations? - What can we learn from businesses about innovation? - Elaborate and extensive testing before putting in market - Seeding using advertisements
	Policy Analysis and	
1.	Action around national food system transformation Need to promote and support country ownership Coordination across CGIAR on engaging with policymakers to prevent too-frequent visits with mixed messages	There are many policy methods, metrics and tools that apply to the food system, however, sometimes they focus on specific policy issues and areas within the food system for healthier diet. - Can drivers be fixed or influenced based on decisions? - Some of the methods that have been used or could be used include modelling, policy space, process and network analysis, cross country comparison, RCTs, policy surveys, expert panels, focus groups – interview and time series analysis. - How do we ensure the issue of equity beyond just the gender issue that is common in policy work is well captured as we build knowledge around food system and healthier diets - Using a mixed-method of both quantitative and qualitative measures could create a robust outcome of policy analysis.
2.	Facilitate and support multi-stakeholder approaches, including getting the views of the private sector at the national level.	The group also identified policy approaches, which include policy theory, anthropology, policy dialogue.

Networking reception with donors and Ethiopian and Bangladeshi stakeholders

At the end of Day One in Ethiopia and Day Two in Bangladesh, an informal reception was organized to network with donors and Ethiopian and Bangladeshi stakeholders. The network reception was well attended in both countries with a mix of donors, NGOs, and government officials of different ministries and government agencies. After Namukolo Covic (IFPRI, in Ethiopia) and Nazmul Alam (IFPRI, in Bangladesh) welcomed the visitors, John McDermott (A4NH) introduced A4NH and Inge Brouwer (WUR) presented FSHD and reported on the progress and results of the partner consultation. Based on these presentations, a discussion with the audience took place focused on, according to the organizations present, the importance of including the following topics: (i) the role of home gardening; (ii) capacity building of policymakers in food system thinking and acting; (iii) inclusion of urban and rural populations, and the linkages between these two; (iv) inclusion of consumer behavior and children; and (v) circularity, including waste and water.

Session 5: Refining actions and common narratives and theories of change.

This session focused on refining actions and common narratives and theories of change for three priority thematic areas, chosen by voting from the thematic areas identified in Session 4. In **Ethiopia**, the following thematic areas were prioritized: (1) Consumer Behavior; (2) Food Environment; and (3) 'Somebody's else

problem'. In **Bangladesh** the following thematic areas were prioritized: (1) Consumer drivers, (2) Food Environment, and (3) Bottom-up meets top-down. Session 5 consisted of two parts.

Identifying potential actions per priority thematic areas into food system development stages

During the first part of Session 5, in three working groups, each covering one thematic area, priority actions for (i) diagnosis and foresight, (ii) developing and piloting food system innovations, and (iii) scaling and anchoring in national food system innovations were discussed. The session in **Ethiopia** was facilitated by Alan de Brauw (IFPRI), with working group facilitation by Daniel Mekonnen (WUR), Namukolo Covic (IFPRI) and Raffaele Vignola (WUR). In **Bangladesh** the session was facilitated by Marrit van den Berg (WUR) with workgroup facilitation by Saeed Moghayer (WUR), Nazmul Alam (IFPRI) and Stef de Haan (CIAT). The results of the discussions are given in Table 2.

Table 2. Priority actions/questions identified per priority thematic in A4NH-CGIAR Partner Consultations in Ethiopia and Bangladesh		
Consultations ii	Ethiopia Consultation	Bangladesh Consultation
Consumer Behaviour		
Diagnostics/ Foresight	a. Sharing and stream lining of survey instruments and methods b. Understanding consumption patterns and behavior Partners: WorldVeg/WorldFish/CIMMYT/ILRI/African Rice	 a. Studies on drivers of food choice in rural and urban systems incorporated in the planned WorldFish survey. Partners: WorldFish, IRRI, HarvestPlus, CIP, ILRI, USAID/RDC, CIAT, IFPRI, FAO, Ministry of Health in Bangladesh b. Study on interface between food environment and consumer behavior in urban low- and middle-income areas Partners: WUR, ICCDR, IRRI, HarvestPlus Other ideas: cost of quality diet (CIP (BNA project), IFPRI); interlinkages with drivers
		(ICDDR'B, CIAT)
Food system Innovations	a. Sharing knowledge, barriers and working together to influence consumption if healthy foods b. Industry regulation on processed foods	 a. Diversification of school feeding program in Bangladesh – cooked meal, providing milk in schools; Partners: WFP, FAO, Governement of Bangladesh, HarvestPlus, WorldFish b. 'pro-poor commercialization' producing foods that are of interest to the poor (WorldFish) c. Food safety innovations across the value chain in Bangladesh Partners: FAO, BFSA, IRRI, ILRI)
Scaling up/ Anchoring	a. Engagement of national partners (CGIAR wide not as a center; not only looking at commodities – more on nutrition/diets	 a. Food certification and labelling; What does CGIAR offer: (i) many pilots on rice (IRRI); (ii) frameworks; (iii) HarvestPlus relationships with Codex; (iv) evaluations of pilots (across many CGIAR Centers) Partners: Codex, BSTI, BFSA, Ministry of Health, private sector, feed- and food-specific associations, Global GAP; b. How to use multistakeholder platforms to promote healthier diets (related to anchoring) Partners: FAO c. Promoting and scaling biofortification (Dissemination case studies – zinc rice, OFSP) Other ideas: promote use of dietary guidelines (testing different ways of promoting); improve collaboration with food safety; what work has been done on consumer preferences around food safety?

	Food Environme	ent
Diagnostics/ Foresight	a. What is available at what price in rural/peri-/urban areas in what food outlet (outlet typology) and what are the drivers of the food environment (policies, subsidies etc.) related to diet quality b. Track changes in the rural/urban/peri-urban food environment with a diet quality lens (also developing predictive models including relevant components such as climate) Partners: National statistics agencies, national universities and research institutes), IFPRI, WUR, CIMMYT, IITA, Bioversity	Understand the food environment and its drivers for different income groups (e.g. types of food available, accessible, affordable, what are the business models active, mapping and analysis of actors) a. Develop a framework to map and analyse food environment b. Organize a workshop to validate the framework
Food system Innovations	a. Based on diagnostics develop simplified tools and methods to assess the food environment and tools for impact evaluation Partners: INFORMAS b. Innovative interventions and policies at food supply chain, on policy level (regulations for prices, labelling, advertising), which need to be informed by the diagnostics	a. Design, test and pilot of innovations: Business model for access and affordability (CIAT, Bio, WUR), Voucher (IFPRI, WUR), Institutional markets, schools (GAIN, USAID) Designing and piloting innovations: link GAIN Garment industries with USAID project b. Regulation Partners: IFPRI/WUR
Scaling up/ Anchoring	a. We need to show the value of the food system work: what does it cost the government if they don't intervene etc.: cost/benefit analysis of inaction in terms of health, economic effects: this needs to be done in parallel with a potential intervention: Interventions become a place to do cost-benefit analysis b. Cost-benefit alone will not lead to scale but just an advocacy tool for scaling c. Identify national platforms to channel research findings	a. Using country platform for crowding private sector b. Engage policy makers Other ideas: Engaging with actors throughout the different steps related to diagnosis, innovations and scaling; build partnerships from the start.
	'Somebody else's problem'	Bottom-up meets top-down
Diagnostics/ Foresight	a. Assessing dietary imbalances gaps and to fill them b. Demand assessment (e.g. food away from home Partners: National nutritionist in centers	a. Build inventory of top down and bottom up approach- link to other initiatives b. Data to characterize the food systems (combine crowd sourcing and citizen science) Partners: A4NH Program Management Unit (PMU), CIAT, HarvestPlus, National Statistical Offices, Euromonitor
Food system Innovations	 a. Breaking silo's (Government, CGIAR) e.g. Big Data sharing platform; log coordination b. Technical (digitalisation, market inform and input), sustainability and circularity 	a. Work with innovation platform approach b. Incentives for individuals to participate in citizen science Partners: ICDDRB, IRRI, Euromonitor, AC Nielsen, A4NH PMU
Scaling up/ Anchoring	a. Promote and support country ownership b. Facilitate and support national bodies	a. Understanding of the processes, political economy all that is needed for bottom up scaling and top down not reaching the household level b. Communicate in an understandable way. Partners: SPEAR, IDS

Developing common CGIAR and partner food system narratives

In the second part of Session 5, the groups were asked to draft a common narrative for the priority thematic area assigned to them, starting with identifying the problem and the key issues we do not know enough about; followed by what solutions are proposed for addressing and eventually 'fixing' the problem, and

ending with what we want to achieve, including steps to be taken for scaling. The groups were stimulated to adopt a Theory of Change thinking to facilitate thinking about the different parts of the narrative. This session was facilitated in **Ethiopia** by Chris Bene (CIAT) with workgroup facilitation by Daniel Mekonnen (WUR), Namukolo Covic (IFPRI) and Raffaele Vignola (WUR). In **Bangladesh**, the session was facilitated by Peter Oosterveer (WUR) with workgroup facilitation by Saeed Moghayer (WUR), Nazmul Alam (IFPRI) and Stef de Haan (CIAT). The results are given in Table 3.

Table 3. Common narratives for prioritized thematic areas in A4NH-CGIAR Partner Consultations in Ethiopia and Bangladesh

Ethiopia Consultation Bangladesh Consultation Consumer Behavior Key Problems Key problems: food availability due to food loss in the value Consumers not eating enough healthy and safe foods; what is the constraint and where, in terms chain of culturally acceptability, accessibility, Lack of awareness availability, affordability, or knowledge? Solutions: how to get the right messages across to people, What are the constraints female garment targeted to specific groups (e.g. school gardens) workers newly migrated to the city face in eating packaging and labelling would also help a healthy and safe diet? Why? What is the intervention of production systems: cross-center system in place and the constraints collaboration (affordability, time)? Living environment, working environment, and End: healthier and sustainable diets: how the drivers shopping environment; can be addressed Solutions: Assessment to understand why they are not eating well; Intervention points: meals at work, street food, and local shops; Opportunities with food processors and private sector; Improving value chain local shops, stocking with healthier and safer options; Food delivery system (meal in a box), but there are some environmental trade-offs and not sure how this could be done affordably. End: Changes in food habit through accessible, affordable food supply towards a healthy diet. **Food Environment** Key problems: Key problem Move beyond anecdotes to evidence-based Women cannot physically access places were information on the food environment nutritious foods & information about food are How can we make the food environment work provided. Intra-household decision making on and accessible for healthy diets? food and nutrition is largely unknown (gender, Solutions: age). Do men follow women's decisions? Do Do we have enough evidence to say that women/men have sufficient knowledge of agricultural policies are affecting availability of nutrition? food, e.g. Zambia ag subsidies are all supporting Solutions: maize production? Information provision and improvement in food Do we need policy instruments to support a more access. Regarding information provision, we diverse food environment? Solutions are distinguish two blocks: information to consumers interventions to affect the food environment and information to the market/entrepreneurs. dynamics in a way to support healthy diets Women's physical access to food could be Leveraging the strength of centers/CPRs on enhanced through mobile fruit and vegetable value chains for healthier baskets stores visiting women's groups meetings, other End: places where women go, and women's homes. End: Food environments are more supportive to a healthy diet activities embedded in changed norms around women's access to public places and in the public and private sector. 'Somebody else's problem' Bottom-up meets top-down Key problems: Key problems: We are providing individual, rather than holistic, Disconnect between local demands and research solutions, for creating healthy and sustainable Bridging scales: between national and

subnational there are different issues at stake

- We are in institutional and 'thematic' silos and they don't help us to address/promote healthier and sustainable diets overall.
- Why do silos exist?
 - Institutional structures and our individual institutional mandates
 - o Transaction costs
 - Misunderstanding that things are not related (systems thinking!)
 - Easier to work on smaller problems, than more complex ones
 - o Leadership and coordination
- Do we understand the priority problems? Solutions:
 - We need to identify the incentives that overcome the transaction costs. Probably beyond financial incentives. Something that makes it easier to do our research.
 - Time saving: we need better content management
 - Shared commitment to a common goal that has an impact: what policies are we try to influence in Ethiopia that can improve nutrition, for example? Can we simplify the goal? Responsible for ensuring we have shared commitment to a common goal.
 - Basket funding
 - We will not change the institutional or ministerial structure. How do we work around them?
 - o You can create competition by aligning.
 - We should narrow down the problems to a few top priorities and then organize people/teams around these. We need to have a critical mass of people and their time.
 - Part of this is to break the value chain approach of CGIAR, which is very challenging.
 - We need to get specific, either by a location or the problem.

End (discussions more on activities):

- 1. Identify geographical location(s).
 - Haven't these been selected? Shouldn't we just use the A4NH/FSHD focus countries – Bangladesh, Ethiopia, Nigeria, or Vietnam?
- 2. Define the problems and identify priorities based on the research questions identified in the country stakeholder consultations.
 - In the case of Ethiopia, this is the 25 research questions listed in the report.
- 3. Design a shared theory of change with the national partners.
- 4. Joint fundraising around these priority problems.
- Link our efforts to existing platforms. Ideally, these should be nutrition platforms that already exist with some degree of national political traction. These could be other topics (e.g., WASH) with food system components.

 Researchers are in for the publications and science (sometimes old by the time it is published), but decisionmakers act on immediate needs.

Solutions:

- Have grounded pilots at local levels (action research), grow from there, trying to connect to the top-down
- Governance of research: who makes decisions about funding and how actively are bottom-up actors involved (consumer associations, market boards, etc.)?
- Really work with the private sector and SMF's

End:

Session 6: Next steps: identification of concrete activities

During this session concrete steps to move forward were identified, based on the outcomes of the previous sessions. In both countries, four working groups were formed on (1) Community of Practice (CoP); (2) Metrics and Tools, and two countries: (3) Ethiopia and (4) Nigeria in the Ethiopia meeting, and (3) Bangladesh and (4) Vietnam in the Bangladesh meeting. In both countries, the session was facilitated by Ruerd Ruben (WUR) and workgroups were facilitated by John McDermott (A4NH), on CoP; Gina Kennedy (Bioversity International) and Inge Brouwer (WUR) on metrics and tools in Ethiopia and Bangladesh respectively; by Namukolo Covic (IFPRI, on Ethiopia), Adebowale (Debo) Akande (IITA, on Nigeria), Stef

de Haan (CIAT, on Vietnam) and Nazmul Alam (IFPRI, on Bangladesh). Each working group was asked to come up with two to three concrete and practical steps, including identifying the key partners, the time planning, the tentative budget and the deliverables. Results of the CoP and Metrics and Tools groups in Ethiopia and Bangladesh are summarized together with the outcome of discussions for each country separated.

Community of Practice

Steps	 Development of a Community of Practice focused on food systems that contributes to a common global food system narrative and CGIAR-focused food system narrative. Activities of the CoP might include: webinars, blogs, short notes briefs on interesting publications (information sharing), events from A4NH, sharing funding opportunities for student thesis, opportunities to get face to face of people working in the country (e.g. in Ethiopia), special session in conferences to bring people together, bringing people from research, NGOs, other government agencies. Start with information sharing but develop into stimulating of joint research. Components of such a CoP could be CoP1: focussed on the 5 components of the HLPE framework (consumers, food environment, value chains, outcomes, drivers) In Bangladesh the importance of Consumer behaviour/demand was emphasized – agenda setting: understanding consumer demand/choices for different consumer groups (particularly base of pyramid) from different perspectives (companies, civil society, research)
	 CoP2: Food System Research and Innovations Incubator – allows for writing common proposals In Bangladesh also the importance was emphasized on linking research to practice – efficient supply chains for nutrient dense perishables; role of innovation (citizen data, apps); learning rural-urban links
	 CoP3: Future Food Systems Scenarios – to identify research portfolio beyond 2022 (similar to the Davos Forum, Rockefeller Bellagio Group) CoP4: Info Exchange (annual meetings, webinars, special journal issues etc.)
	- The CoP is global with special chapters per region, and sub-chapters of countries
Partners	Suggested during the Ethiopia meeting: - CoP1-3 A4NH-FSHD and CGIAR research partners and communicators (from IFPRI, CGIARs communication offices in A4NH) - CoP4 need for hiring a fully funded person (preferably at WUR)
	In Bangladesh, the following was added: - SAPLING (BRAC is the Secretariat), BRAC, GAIN, WFP, Consumer Association of Bangladesh (CAB); chambers of commerce; researchers representing public and private interests
	 Choice of facilitator needs to be strategic Assume A4NH facilitates if there is an interested community Digital partners, MERL-Tech, Digital Green, tech platforms, CGIAR Big Data Platform, EcoFrost
Time Planning	 Suggested during the Ethiopia meeting: CoP1 development in the first half of 2019 (the activities of Metrics and Tools can support this and feed into one of the components of the CoP) CoP2: asap; start CRPS and Inter-academic council, building on the national science council for food systems. CoP3: to be determined for 2020, in 2019 start planning for 2020, end 2020 Scenario Report
	 CoP4 in the second half of 2019 In Bangladesh, the following was added: Virtual is fine, but twice/year face-to-face meetings are necessary, around other major events Launch should be around an event. For example, this could be around SAFANSI in Bangladesh in June 2019; ANH Academy in Hyderabad in June 2019; SUN Global Gathering in November 2019 (location tbc) In this first meeting, the 'community' and/or audience needs to be defined.

Deliverables	Suggested during the Ethiopia meeting:
	- COP1 Internet Platform; Common Food System Narrative (March 2020); Map
	CGIARs projects information into the five CoP1 components, working groups
	development plans, webinars, blogs
	- CoP2: joint projects
	- CoP3: start up development plan
	 CoP4: a full-time person for development and maintenance of CoP hired at WUR in 2019
	In Bangladesh, the following was added:
	- CoP first meeting and terms
	 Process documentation for lessons learned around setting up a CoP
	- Synthesis report/brief/infographic
	- Webinars
Budget	Suggested during the Ethiopia meeting:
Dauget	- CoP1 in kind
	- CoP2-4 joint pledging, public-private partnerships
	In Bangladesh, the following was added:
	- Budget can be small to cover side event, virtual convenings
	- Facilitated by A4NH (max \$10K)

Metrics and Tools

Steps	Suggested during the Ethiopia meeting:
Steps	
	- Encourage CGIAR Centers with quantitative 24-hour recall data to provide this data
	to the FAO GIFT Platform
	- Facilitate and encourage exchange of dietary information across CGIAR Centers
	including progress on development of a Healthy Eating Index
	 Host a workshop (Nov 2019) in Addis to discuss way forward with Food Environment
	and Consumer Behaviour indicators
	 Long-term need to develop a Food Environment Indicator
	In Bangladesh, the following was added:
	 Compendium: sharing for peer reviewing. Extension beyond indicators and food
	system analysis, adding policy process tools (IFPRI/IDS); food system analysis
	approach
	 Linking Macro and Micro work in South Asia: combining Magnet modelling &
	consumers food choice
	- Sharing methodology used to assess and monitor consumer behaviour.
Partners	Suggested during the Ethiopia meeting:
Tarticis	- All nutritionist or pseudo-nutritionists in the CGIAR. A preliminary list was developed
	which will be updated through consultations with the different CGIAR Centers
	(CIFOR/ICRAF, CIAT, Bioversity International, WorldFish, ICRISAT, IFPRI, ILRI,
	HarvestPlus, WorldVeg, CIP). The list also included external specialists especially in
	the area of Food Environment and Consumer Behaviour Change
	In Bangladesh, the following was added:
	- For compendium (SPEAR IMMANA HP WUR); for linking macro and micro analysis
	(IRRI + WUR + HP)
Time	Suggested during the Ethiopia meeting:
planning	- Initiate linking CGIAR centers with FAO GIFT database will happen before end of
	March (Gina)
	 Start a link group (maybe using ag2nut platform) to link with all identified
	nutritionists/pseudo-nutritionists and start active information sharing on index/intake
	(Gina/Inge)
	 Organise workshop in November 2019 (Inge, Chris, Amy, Stef) in Addis Ababa,
	Ethiopia
	 Develop a draft Concept Note, before the workshop as input
	In Bangladesh, the following was added:
	For Compendium: 1 internal surveys (sept 19); validating workshop (nov 19);
	For linking macro-and micro analysis: first implementation (Sep 2019); first result
	meeting (Nov 2019-Feb 2020)
Deliverables	Suggested during the Ethiopia meeting:
_ 3 0. 0.0100	- Email distribution list/contacts of nutritionists/pseudo nutritionists in CGIAR,
	development of ag2nut like platform, ask people to sign up.
	- Workshop programme and report
	- Concept Note draft
	In Bangladesh, the following was added:
	- draft compendium;
Dudget	- working paper methodology and results (2020)
Budget	Suggested during the Ethiopia meeting:

 30K for the workshop – travel, accommodation, meeting rooms, etc (donors and
CGIAR will cover costs for attending own staff)
In Bangladesh, the following was added:
 Link with workshop suggested in Ethiopia
 Concerning linkage macro and micro analysis: 30k for implementation (work); and
10k usd for meeting

Ethiopia

Steps	 Taking stock of what research is already taking place in Ethiopia, and leverage products to partners and other CRPs, using, for example, ILRI/A4NH seminars and NIPN policy and research seminars Scoping exercise of food environment data within CGIAR Centers and government partners, particularly looking at data and information on non-staples and processed foods, that is not yet published. It was realised a data platform was needed. National process to shape knowledge on food systems/ food environment/ consumer behaviour Comprehensive study on water and food systems (IMWI) Grain market: how much do maize and wheat contribute to household purchases (CIMMYT) How will increase of micronutrients content in cereals change the food basket?
Partners	 Federal Government working on trade; EPHI/MoA/CSA; Sekota Platform; Addis City Administration; National Research Institutes (such as EIAR), Addis Ababa University, National Nutrition Coordination Body (NNCB, esp. MnE sub-committee). Commitment of partners will have to be confirmed with respective HQs and "selling points" e.g. for IMWI gender entry point would be crucial.
Deliverables	 linkages between water and food basket (based on FBDG) impact Vitamin A maize on food basket (with a gender lens) Report of the scoping study on data that already exists Shaped by national process, data generation on FE/consumer behaviour with gender lens
Time/planning	 at least one of the ILRI/A4NH seminars should address some of the steps/deliverables mentioned above linkages between food basket and water (depending on FBDG timeline, second half of 2019) Vitamin A Maize impact: 2020-2021 (based on release of vitamin A maize) Scoping study on Food Environment data late 2019 (involving MSc/PhD from WUR)

Nigeria

Steps	 Scoping Study on consumption pattern and behavior as well its driver in Nigeria. The study is expected to take place in 10 states initially in Nigeria by the World Fish starting the second quarter of this year, they are willing to include vegetables, rice and some cereals and possibly extend beyond the ten states that World Fish initial planned to work. The study is expected to complement the outcome of the ongoing Nigeria Food System paper and the National Consumption survey. Identification of site-specific interventions based on data that engineered proof of concept of FSHD in Nigeria. The project is expected to be in the form of a survey and workshop in the first quarter of 2020. The workshop is expected to be hosted by IITA (in-kind contribution), four centers or programs (World Vegetable Center, HarvestPlus/CIP, AfricaRice, World Fish) have made initial commitment to support some participants to attend the meeting. A4NH/FP1 is also expected to provide other funding.
	- Three layers multi-stakeholders platforms for policy development on FSHD. A structure needs to be developed based on the FSHD Abuja workshop last year December. o The first layer will be a composition of a National Steering committee/Advisory Council in Nigeria; this will compose of policymakers at Directors levels in core Federal Ministries that are core to FSHD in Nigeria. We will expect to have quarterly meetings to discuss around the issue in Nigeria, opportunities that exist within the ministries, capacity strengthening and entry point for policy advocacy. The expected outcome is that the council could become an inter-ministerial committee that will drive FSHD for its sustainability in Nigeria.

	 The second layer will be the FSHD FP1 partners in Nigeria + CGIAR and other non-CGIAR centres working in Nigeria. It is expected that this layer will sharpen and support the direction of the FSHD implementation work in Nigeria and generate a body of knowledge, evidence through research into the FSHD agenda in Nigeria. They will also act as a resource for strengthening national institute under FP1. The third layer will be a platform for all FSHD partners (public, private, CSO and FBOs) in Nigeria to engage with each other; this may be in the form of participation in any of the workshops in Nigeria or a general FSHD online platform or combination of both. We think this platform could be supported through existing donor mechanism on the multi-stakeholder platform on Agriculture and Nutrition in Nigeria.
Partners	 Scoping Study: WorldFish together with World Vegetable Center, AfricaRice, HarvestPlus Site-specific interventions: IITA (host) with four centers or programs (World Vegetable Center, HarvestPlus/CIP, AfricaRice, World Fish) Three layers multi-stakeholders platforms: core Federal Ministries in Nigeria
Deliverables	 Report on Scoping Study end of 2019 Site-specific interventions: Survey and workshop report Three layers multi-stakeholders platforms: not identified
Time Planning	 Scoping Study (WorldFish to share details to partners next week, to provide input and draft budget, the study will start in the second quarter of 2019) Site-specific interventions: Survey and workshop report in first quarter of 2020 Three layers multi-stakeholders platforms: not identified
Budget	 Scoping study: no funds indicated Site specific interventions: IITA (in-kind contribution), initial commitment by the four centres to support some participants to attend the meeting, funds from A4NH/FSHD Three layers multi-stakeholders platforms: Sources of funding could include USAID country mission, BMGF and Dangote Foundation.

Bangladesh

Pre-amble	 Some critical issues were put in perspectives to achieve this objective, which included; Do we know where Bangladesh currently is on the subject of FSHD and what are the existing interventions? What do we consider to be the current gap? Do we concentrate activities in the south where donor-funded are currently crowded or do we focus on the North where there seems to be a major need with a high poverty level? Projects could start in the South because of the donor zone of influence in that region and knowledge gained in the south could be extrapolated to develop a diverse project for the Northern part. Are we considering the adolescents rather than just the girls and women: Without a major consensus, there is an overarching theme on the activities to engaged on which is the Access of women and children to nutritious and safe food and information on
	family diets. - Should be thinking about the broad issue of equity beyond gender most notably in an ethnically diverse country like Bangladesh.
Steps	 Awareness and information sharing among the diverse family and community. Developing and strengthening of the market supply chain through ICT Support and training of food vendors in Dhaka city on the supply of nutritious meals
Partners	CIP, A2I, FAO, WFP, HarvestPlus, private sector, A4NH and selected local NGOs, WF, IFPRI, MoF, MoPME,
Deliverables	- ## of households gained access of safe nutritious food - ## of households improved diets - ## of people received training on nutrition and diet - ## mobile food vendors developed at local level
Time/Planning	The activities are expected to be implemented between year January 2020 and December 2023.
Budget	Co-funding between A4NH, FAO, CIP, HarvestPlus, BNCC

Vietnam

Steps	1 Environmental Imprint/Foodprint of Food Supply Chain (meat, rice, vegs) 2 Data Integration in the Data Hub/Warehouse with Vietnam Zero-Hunger Initiative
	3 Food System Master class for different users

Partners	1 ILRI, CIAT WUR, CCAFS, Livestock CRP ->where: supply chain, Transect, 8 regions		
	2 CIAT, ILRI, VN 0-Hunger Init.		
	3 WUR, CIAT, ILRI, MALICA, CIRAD where: Hanoi & Extended		
Deliverables	For 1:		
	- Food prints of diets by region (8) Benchmark (3)		
	- Database of 3 systems per commodity		
	- Food prints per system + chain		
	- Food prints scenario's (current/ideal/futures		
	For 3:		
	- Training materials (FC course)		
	- Practitioner network		
	- Replica training		
Time/Planning	For 1:		
	- 2019: - Food print (8 regions + Transect)		
	- Data Invent. of systems		
	- 2020: - Food print by product /chain		
	- 2021: - Food print by diet		
	For 2:		
	- 2021: - Organizing		
	- 2020: - Q1 Training in Vietnam		
Budget	For 1:		
	- A4NH - complem. 150 K/year		
	- Livestock CRP – to be negotiated		
	- In Kind – time		
	For 2:		
	- Need to approach donor		
	- Vietnamese institutions		
	- Self-Funding (Participants)		
	- In kind – time, materials		

Closing

The two-day partner consultations were closed by Inge Brouwer (WUR) and John McDermott (A4NH), by asking the non-A4NH/FSHD partners to express their opinion on the process and outcomes of the two days of deliberations. In **Ethiopia**, the partners unanimously expressed the usefulness of the workshop in terms of linking up on food systems, finding entry points for collaboration, knowing what FSHD is doing, and receiving input to improve their own programs. In **Bangladesh**, participants were also all positive about learning what approach A4NH and FSHD use and appreciating the consumer perspective as the starting point of food systems analysis. Members of A4NH's Independent Steering Committee were in attendance, and their opinions were also asked. They expressed their appreciation of seeing FSHD at work, especially the participation , the brainstorming, and the establishment of new collaborations, all adding to a rather unique cross-collaborating workshop in the CGIAR. However, they emphasized the plans that were made were ambitious and success will depend on the commitment of participants to what was agreed upon. John McDermott ended the workshop emphasizing that country support is needed and partnerships with country organizations is crucial. He asked all participants to support the countries' strategy work going forward .

Programme of the A4NH-CGIAR Partner Consultation

Day -1- Ethiopia (18 Febr 2019) and Bangladesh (18 Mar 2019)		
Time	Topic	Presenter/facilitator
09:00 - 09:30 09:30 - 09:40 09:40 - 10:00	Registration Welcome Remarks SESSION 1	John McDermott, A4NH
07.40 - 10.00	Introduction to food system approach, analysis of drivers of change and application to national food system environment analysis	Ruerd Ruben, WUR
10:00 - 10:15	Healthy diet perspective	Inge Brouwer, WUR
10:15 - 10:45	Coffee break	
10:45 - 11:30	SESSION 2 Participants perspectives on entry points for food system impact pathways in currently ongoing CRP's. Guided Panel discussion with representatives of:	John McDermott, A4NH
11:30-13:00	SESSION 3 Application of the food system approach in Ethiopia, Bangladesh and Vietnam	Inge Brouwer, WUR
13:00 - 14:00	Lunch	
14:00 – 15:30	SESSION 4 Opportunities for CGIAR partner actions – entry points and thematic areas	
	(1) Mapping of CRP/Centers interest to enrich current programmes with a food system perspective (Carousel session)	Ruerd Ruben, WUR /John McDermott, A4NH
15:30 - 16:00	Coffee break	
16:00 - 17:30	SESSION 4 (cont)	
	Opportunities for CGIAR partner actions – entry points and thematic areas	Inge Brouwer, WUR
	 (2) Common food systems methods and tools (M&T) and their potential application M&T for diagnosis and foresight M&T for evaluation of food system innovations M&T for policy analysis & platforms 	
18:00 -	Networking event with Ethiopian nutrition, donors and public health partners	

Day -2- Ethiopia (19 Febr 2019) and Bangladesh (19 Mar 2019)		
Time	Topic	Presenter/facilitator
08:30 - 9:00	Recap of yesterday – identification of priority thematic areas	Inge Brouwer, WUR
09:00 - 10:30	SESSION 5 Refining actions and common narratives and theories of change	
	(1) identifying potential actions from three priority	Alan de Brauw, IFPRI
	thematic areas into food systems development stages (planning and foresight, developing and piloting food system interventions and innovations, and scaling and anchoring in national food system transformation)	Marrit van den Berg, WUR
10:30 - 11:00	Coffee break	
11:00 - 12:30	SESSION 5 (cont) Refining actions and common narratives and theories of change	
	(2) Developing common CGIAR and partner food system	Chris Bene, CIAT
	narratives from entry points and thematic areas. What are the different contributions that Centers and CRPs can make to sustainable and health diets and inclusive food systems? –	Peter Oosterveer, WUR
12:30 - 13:30	Lunchbreak	
13:30 - 16:30	SESSION 6 Next steps: identification of concrete activities concerning (1) Community of Practice; (2) A4NH focus countries (Nigeria, Ethiopia), (3) tools and methods	Ruerd Ruben, WUR
16:30 - 17:00	Summary and wrap up	Inge Brouwer, WUR
17:00	Closure	John McDermott, A4NH

Participant List

Name	Organization	Meeting Attended: Bangladesh (B) or Ethiopia (E)
Abu Hasan ALI	WorldFish	В
Adebowale AKANDE	A4NH/IITA	E,B
Adefris TEKLEWOLD	CIMMYT	E
Ahmed AKHTER	IFPRI	В
Alan de BRAUW	IFRPI	E
Alan NICOL	IMWI/WLE	E
Amanda WYATT	A4NH	E,B
Amy Ickowitz	ICRAF/CIFOR	E
Bernard BETT	ILRI	E,B
Bekele G ABEYO	CIMMYT	E
Bill COLLIS	WorldFish	В
Bob PAALBERG	ISC-A4NH	В
Jeroen BORDEWIJK	ISC-A4NH	В
Chris BENE	CIAT	E
Daniel MEKONNEN	WUR	E
Dawit ALEMAJEHU	EPHI	E
Debashish CHANDA	GAIN	В
Devesh ROY	A4NH	В
Donald Mavindidze	IFPRI-HP+	E
Elena MARTINEZ	A4NH	В
Farhare IBRAHIM	CIP	В
Frank PLACE	PIM	E
Fred Grant	CIP	В
Gina KENNEDY	Bioversity International	E
Gordon PRAIN	CIP	В
Hazel MALAPIT	A4NH/IFPRI	В
Hugo DE GROOTE	CIMMYT	E
Iain WRIGHT	ILRI/Livestock CRP	E
Inge BROUWER	WUR	E,B
James GARRETT	Bioversity International	В
Janet HODUR	A4NH	В
Javed RIZVI	ICRAF	В
Jo LINES	LSHTM	В
Jody HARRIS	IDS	В
Johanna LINDAHL	ILRI/CRP Livestock	В
John MCDERMOTT	A4NH	E,B
Joyce KINABO	ISC-A4NH	В
Kaleab BAYE	AAU/Bioversity International	E
Keith LIVIDINI	HarvestPlus	В
Kendra BYRD	WorldFish	E
Khairul BASHAR	HarvestPlus	В
Kristie DRUCZA	CIMMYT	E
Lucy ELBURG	WUR	E,B
Mahsina Seyda AKTER	WUR/ICDDR'B	В
Mahbubul AHSAN AFM	PPRC	В
Manika SHARMA	A4NH/IFPRI	В
Mark LUNDY	CIAT	В
Marrit VAN DEN BERG	WUR	В
Mary NYAMONGO	ISC-A4NH	В
Matty DEMONT	IRRI	В
Moti JALETA	CIMMYT	E
		E
Namukolo COVIC	A4NH/IFPRI	
Nazmul ALAM	A4NH/IFPRI	В
Peter OOSTERVEER	WUR	B E
Raffaele VIGNOLA	WUR	
Ralph ROOTHAERT	WorldVeg	E
Rashida SHAB	FAO	В
Richmont SEKI	FAO	В

Robert PAALBERG	ISC-A4NH	В
Ruerd RUBEN	WUR	E
Rudaba KHONDKER	GAIN	В
Sabine DOUXCHAMPS	CIAT	В
Saeed MOGHAYER	WUR	В
Saito KAZUKI	AfricaRice	E
Sali Atanga NDINDENG	AfricaRice	E
Samuel GAMEDA	CIMMYT	E
Saiqa SIRAJ	BRAC	В
Shamia CHOWDHURY	WorldFish	В
Siboniso MOYO	ILRI	E
Stef de HAAN	CIAT	В
Stepha MCMullin	CIFOR/ICRAF	E
Solomon ADERU	IFPRI	E
Solomon DAWIT	CCAFS	E
Tawanda MUZINGHI	CIP	E
Tigist DEFABACHEW	A4NH	В
Tiruwork MELAKU	ILRI	E
Ursula TRUEBWASSER	WUR	E
Victor MANYONG	IITA	В
Wahidol AMIN	HarvestPlus, IFPRI	В
Wanjiku GICHOHI	ICRISAT	E

The conceptual framework of Food Systems for Healthier Diets: a short summary (based on HLPE, 2017)

In recent years, several conceptual frameworks for food systems have been developed, from very simple linear associations between production and consumption to very complex frameworks with circular interrelationships and feed-back loops between components and outcomes of food systems. Focus of the different frameworks depends on the perspective and orientation of the developers on main entry points for change, being for example environmental or climate concerns, economic or policy development focus, or health concerns.

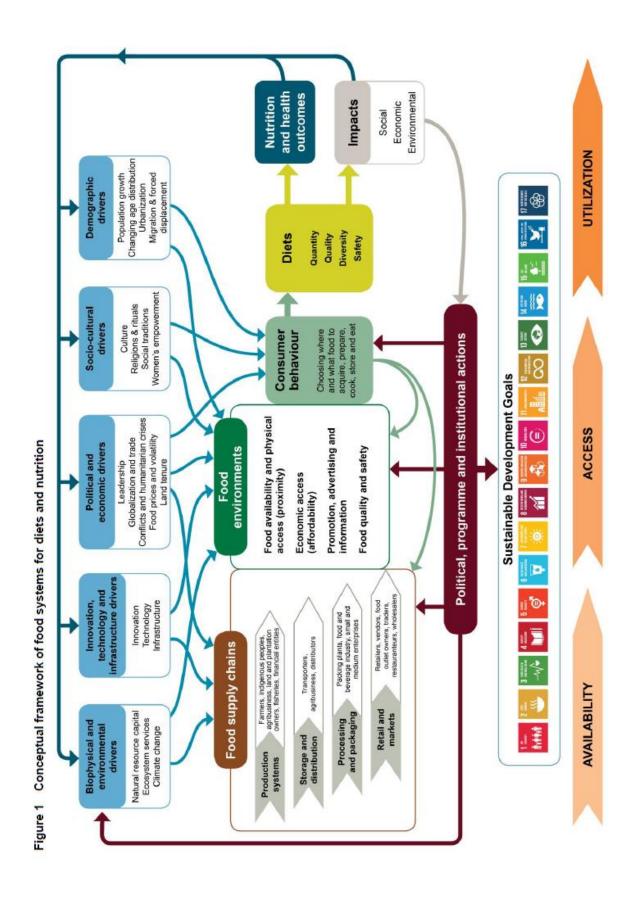
To build a common understanding of the importance of food systems for nutrition and health, the Food Systems for Healthier Diets (FSHD) flagship has chosen to use the conceptual framework developed by the High-Level Panel of Experts on Food Security and Nutrition (HLPE, 2017). It is acknowledged that this framework has some disadvantages or omissions, for example that it is still too linear, that a lot of feedback loops are missing. However, FSHD is convinced that the HLPE framework will support the understanding of what a food system is in a relatively simple way for stakeholders at different levels. The framework will also support the collaboration of all kinds of stakeholders within the food system, as their place in the food system can be made visible and the interconnection between components makes the importance of working together towards a common goal more obvious.

A food system is defined as being all the elements (environment, people, inputs, processes, infrastructure, institutions, etc) and activities related to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including social, economic, and environmental outcomes. FSHD has a specific focus on nutrition and health outcomes and views the central role of diets as the key link between food systems and their nutrition and health outcomes.

The framework recognizes three major components of a food system: food supply chains, food environments, and consumer behavior, that determine whether a healthy diet is consumed. The food supply chain encompasses all activities that move food from production into the food environment, and includes production, storage, distribution, processing, packaging, retailing, and marketing. Decisions by actors in the food supply system influence the types of food available and accessible to the consumer. The food environment broadly includes the range of food sources and products that surround people as they go about their daily life. It is the physical, economic, political, and socio-cultural context in which people engage with the food system to acquire, prepare, and consume food. It provides opportunities and constraints that influence the decisions about what to eat. It determines whether food is available to the consumer at a convenient distance, at an affordable price, and with good quality. It also provides information to the consumer about foods and diets. Consumer behavior reflects the choices that people make, at household or individual level, on what food to acquire, store, prepare, and eat, and on the allocation of food within the household. Consumer behavior is influenced by personal preferences, such as taste, convenience, culture, aspiration, and other factors, but also by the existing food environment. The three components impact the capacity of people to eat a healthy diet.

A wide variety of food systems and food environments can exist or co-exist at local, national, regional, and global levels, interacting in multiple ways. Food systems are also dynamic and under pressure to change, from five main categories of drivers influencing nutrition and diets: Biophysical and Environmental drivers (biodiversity, ecosystems, climate change, and variability); Innovation, Technology and Infrastructure drivers; Political and Economic drivers; Socio-Cultural drivers (including gender relationships); and Demographic drivers (including urbanisation, migration, and age distributions). These drivers impact food systems and their ability to deliver healthy diets to the population.

Food systems through diets have a variety of outcomes, not only related to nutrition and health, but also to all other dimensions of sustainability, including economic, environmental, and social equity. Changes in food systems may have a positive change in diets, but this may be accompanied with unintended environmental, economic, and social consequences.



HLPE. Nutrition and Food Systems. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome, 2017