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CGIAR
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A4NH

A4NH NOTE | 2018

FLAGSHIP 1
Food Systems for Healthier Diets

Food Systems for Healthier Diets in Nigeria
Stakeholder Workshop on Diagnosis and Foresight

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IITA Transforming African Agriculture 50 1967 - 2017

WAGENINGEN UNIVERSITY & RESEARCH

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1. Introduction

This report documents events of the stakeholder technical workshop entitled **"Food Systems for Healthier Diet in Nigeria: Diagnosis and Foresight**", flagship 1 of the CGIAR Agriculture for Nutrition and Health (A4NH) research program. The workshop was jointly organized by the International Institute of Tropical Agriculture (IITA) - Nigeria and the Wageningen University and Research (WUR), Netherlands. The workshop was held July 2-3, 2018 at Denis Hotel, Wuse 2, Abuja, Nigeria.

The purpose of this report is to document and summarize workshop activities. The report consists of two parts: the Program and the Annexes. The Program section describes the background and objectives of the workshop. It also provides a brief overview of each part of the workshop. The Annexes provide detailed information about the workshop schedule and a list of participants.

2. The Program

1.1 Background

Multiple malnutrition burden, where undernutrition is simultaneously observed along with micronutrient deficiencies and overweight and obesity, is a growing challenge in Africa. The 2008 Nigerian Demographic and Health Survey report a prevalence of undernutrition (underweight) and over-nutrition (overweight) in women of reproductive age of 12% and 20.9%, respectively. Large differences in the nutrition situation across spatial- and socio-economic groups lead to a call for tailored interventions (Kandala & Emina, 2016). This requires an understanding of how consumption patterns have evolved over time and the extent to which dietary needs are met across different settings, including socio-economic, ecological, or regional boundaries in Nigeria. Due to the fast pace of change in the food systems in Nigeria, frequent monitoring of dietary patterns is warranted, and further insight is required into how food consumption patterns may change in the future.

In the A4NH Food Systems for Healthier Diets research program (2017-2022), we diagnose how well national food systems perform in terms of meeting the nutritional needs of consumers, and explore policy and innovation options in food systems that will contribute to improving food security and nutritional outcomes. Nigeria is one of four focus countries in the program.

1.2 Objective

The workshop was organized to discuss the outcome of the first stage of the research on the diagnosis of dietary gaps and foresight on Food Systems for Healthier Diet in Nigeria and gather perspectives and inputs to ensure the research findings generate policy that improve food security and nutrition outcomes in Nigeria. Part of the sub-themes of the workshop are to:

- Bring the Nigerian stakeholders up to date on the overall progress in country-level research on Food systems for Healthier Diets (phase 1, duration 2017-2022)
- Discuss the progress on dietary gap analysis at household level
- Discuss the progress on foresight on the national food system in Nigeria
- Discuss the entry points for food system interventions and preliminary policy implications

- Discuss next steps and future research collaboration under A4NH research program Food Systems for Healthier Diets

1.3 Stakeholders Workshop Program Overview

A two-day workshop entitled **"Food Systems for Healthier Diet in Nigeria: Diagnosis and Forecast"** was held on July 2-3, 2018 at Denis Hotel, Abuja, Nigeria. A total of 40 (of 47 invited) scholars and professionals representing government and non-governmental organizations attended the stakeholders workshop. Invited participants are scientists and professionals from diverse fields ranging from nutrition science, social science, public health, agricultural economics and extension, policy formulation, and program implementation. Special invited guests for the event were: Representatives of the Dutch Ministry of Foreign Affairs, The Netherlands including the representative of the Dutch Government in the CGIAR Systems Council, a presentation of Funders of the Consultative Group for International Agricultural Research (CGIAR). Activities on Day 1 involved an Inaugural Session and 2 Technical Sessions with discussion and feedback at the end of each session. Day 2 programs comprised a technical session and a panel discussion session to identify entry point(s) for intervention. The workshop agenda (see annex A) was adjusted on several occasions during the workshop to accommodate the flow of the discussions.

3 DAY 1 (July 2nd, 2018)

3.1 Inaugural Session – Session 1

The opening session commenced with participants registration, followed by formal seating of the invited guests, welcome remarks from the organizer, unveiling and adoption of the workshop agenda, a brief overview of A4NH research program and A4NH Food Systems for Healthier Diet flagship in Nigeria, and a presentation on addressing diets and nutrition using a food systems approach.

3.1.1 Welcome and Introduction

Dr. Maziya-Dixon Busie, the A4NH Nigeria Country Leader and Senior Food and Nutrition Scientist (IITA), welcomed the distinguished guests and participants on behalf of the organizing committee. She discussed the importance of the workshop and highlighted the significance of the Food Systems in the promotion of healthier diets and achievement of nutritional goals in Nigeria. She remarked the workshop sessions were designed to be intellectually engaging as well as interactive in nature; and therefore, encouraged active participation and contributions from the participants. Following her introductory remarks, there was self-introduction by participants.

Dr Maziya-Dixon Busie welcoming the participants to the event

3.1.2 Welcome Remarks

Dr Tarawali delivering the welcome remarks

The Head of IITA, Abuja Station, Dr Gbassey Tarawali, delivered the welcome remarks. Dr. Tarawali stated that "despite the tremendous achievements of the international Institute of tropical Agriculture (IITA) achievements in contributing towards food security and income generation for African farmers, these efforts are considered inadequate unless beneficiaries are assured of improved food, nutrition and healthier diets. Devising ways in which agriculture can address household dietary gaps is therefore paramount in any research-for-development agenda in order to come up with innovations and policy interventions that can facilitate diet transformation in Nigeria and Africa at large."

3.1.3 Workshop Overview and Objectives

Mr. Thom Achterbosch, a Senior Researcher from the Economic Research Unit, Wageningen University and Research, Netherlands, explained the workshop objectives. He stated that the aim of the workshop is to get a good perspective on how food systems shape dietary patterns in Nigeria. It is also to inform key Nigerian Stakeholders on the overall progress of research on Food Systems for Healthier Diets (FSHD) flagship in Nigeria. The research findings presented at the workshop are the result of in-depth analysis of secondary data and economic and nutritional modeling. The participants are invited to reflect carefully on the assumptions and outcomes and to suggest directions for future research, in order to ground the next stages of the research program in the Nigerian context. "The expectation of the team is that the participants get valuable information on the role of food systems in healthier diets, give feedback on research findings, and recommend entry points for food systems interventions" – according to Mr Achterbosch.

Mr Achterbosch relating the workshop objectives

3.1.4 The Participants

A total of 40 people made up of scholars and professionals from diverse background attended and actively participated in the workshop. Invitations were extended to 47 high-achieving individuals in the Academia, Government Ministries Departments and Agencies, For-profit private entities, Foreign Mission, as well as Local and International Non-Governmental Organizations (NGOs). Representatives from all these categories were participating in the event (see Annex B). There was also a proper spread across professional domains of

participants, with proper representation of expertise on food and agriculture, as well as nutrition and health.

Cross section of participants at the Stakeholders' Workshop in Day 1

3.1.5 Agriculture for Nutrition and Health (A4NH) Research Program and A4NH Food Systems for Healthier Diets Program for Nigeria

Dr Maziya-Dixon Bussie, Senior Food and Nutrition Scientist, IITA

Dr Busie initiated the workshop session with a presentation entitled *"Agriculture for Nutrition and Health (A4NH) Research Program and A4NH Food Systems for Healthier Diets Program for Nigeria"*. She highlighted the strategic goal of A4NH, and pointed out that the research program seeks to maximize the health and nutritional benefits of the poor from agricultural development through identifying, developing, and supporting synergies between the agriculture, health, and nutrition. In addition, she informed that despite a decline in the prevalence of stunting in recent decade in Nigeria, the burden of malnutrition is still high on the scale of global standard with the country still off course to meet four of the global nutrition target set by the World Health Assembly (WHA) for 2025.

Dr Busie informing and updating the participants about A4NH research program and the flagship food systems for healthier diets

3.1.6 Addressing Diets and Nutrition using a Food Systems Approach

Dr Adeyinka Onabolu, Senior Advisor on Food Security and Nutrition to the Minister of Agriculture and Rural Development in Nigeria

Dr Onabolu giving a presentation on Addressing Diets and Nutrition using a Food Systems Approach

Speaking on *"Addressing Diets and Nutrition using a Food Systems Approach"*, Dr Onabolu indicated that the approach has multiple benefits in terms of directing policy attention from individual behaviour to include social and environmental determinants of health, and generates novel policy strategies stemming from a systems perspective on root causes, and unintended consequences. Further, the food systems approach shifts the perspective beyond a static view, to capture sequential activities, feedback loops, and influences unfolding over short- and long-term time frames. It necessarily involves interdisciplinary collaboration to understand situations and formulate effective responses.

Dr Onabolu foresees that the approach leads to policy innovation in a number of key policy domains: agricultural production, markets and trade systems, consumer purchasing power, and food transformation and consumer demand. Combined, these altered policies will have impact on nutrition outcomes by reshaping the food environment, within which people make choices, which in turn determines diet quality. She further remarked that Food Systems initiative is well entrenched in the government Agricultural Sector Food Security and Nutrition Strategy (AFSNS) 2016-2025. Given that the implementation of the strategy lies within the mandate of the federal states with widely diverging status in terms of food security and nutrition outcomes, the food systems approach should be designed in collaboration with a regional differentiation.

3.1.7 Discussions, Questions and Comments

- Dr Ogundele from Nigerian Institute of Social and Economic Research (NISER) commended the presentation of Dr Onabolu and acknowledged the importance of incorporating Monitoring and Evaluation framework for actualizing the AFSNS (2016-2025). He however, sought clarifications on the targets to be achieved as well as regional, demographic, and socioeconomic coverage of the strategy.
- Some participating organizations (IFPRI and Aliko Dangote Foundation) explored areas of synergies for capacity building especially in the implementation of nutritionally smart programs in collaboration with the Federal Ministry of Agriculture and Rural Development.
- Others recommended that a communication strategy should be developed to address challenges in collaboration with other national MDAs in the implementation of the AFSNS, Components of the AFSNS should be targeted for effective execution, increased advocacy efforts towards improving capacity building of national personnel on Food Systems and Nutrition for FMARD.

3.2 Session 2: Food Systems Diagnosis

3.2.1 Assessing dietary and nutrient gaps at the household level using Living Standards Measurement Surveys (LSMS) Data

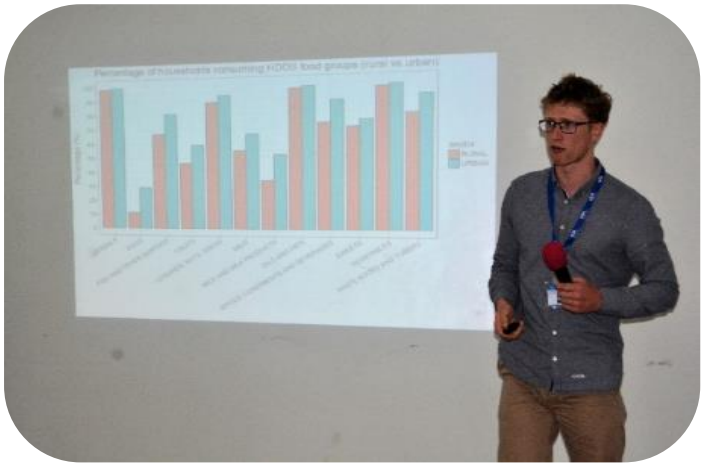
Dr Elise Talsma,Wageningen University & Research (WUR)

Dr Talsma of the Wageningen University & Research delivering her presentation

Dr. Talsma started her presentation by highlighting the need to have a glimpse of dietary intake in the countries of focus. She highlighted that information on dietary intake pattern can be captured from the national food consumption surveys (NFCS) and the LSMS, which are designed to monitor livelihood and poverty dynamics for Nigeria and its geopolitical regions. NFCS remains the gold standard but is very expensive and time-consuming to conduct; hence, it's not regularly updated. Given the paucity of data on NFCS, she remarked that LSMS data remains the most updated and readily available data across countries to assess changes in dietary intake at regular intervals. Her presentation in considerable details enlightens on what constitute adequate diet and in what quantity. The approach is to calculate household dietary gaps – i.e. difference between food intakes and the target amounts - based on food groups which make up "healthy diets," according to the Dietary Approaches to Stop Hypertension (DASH) and Global Burden of Disease dietary guidelines. Nutrient and dietary gaps are estimated for the individual from household data, in terms of adult female equivalent (AFE) which proxies intra-household distribution of food. These surveys are large and nationally representative, and they are a rich source of information from the food system perspective as dietary intakes can be linked to different aspects of the food systems.

3.2.2 The state of the dietary and nutrient gaps in Nigeria: Assessment at the household level for the whole population

Tomas Morley, Wageningen University & Research (Economic Research)



Mr. Morley presenting on dietary and nutrient gaps in Nigeria

Mr Morley used the latest rounds of the Living Standard Monitoring Surveys from Nigeria (2015-16) to analyze dietary and nutrient gaps in Nigeria based on Household Dietary Diversity Score (HDDS), Dietary Appproaches to Stop Hypertension (DASH), Global Burden of Disease (GBD), and Average Nutrient Gap. Substantial efforts were needed to prepare the data for analysis.

His presentation shows wide geographical variations in HDDS in Nigeria with the North Eastern and North Western region recorded the least average score. In terms of location, households in rural area are less diversified in diet than those in urban areas in Nigeria where the consumption of fruit and milk products are more common. There is evidence of general low consumption of fruits and dairy products in Nigeria. In more than half of all households the estimated intake of calcium, fat, iron, riboflavin, vitamin B12, vitamin C and zinc is inadequate.

3.2.3 Discussions, Questions and Comments

- The results from the analysis show some similarity with that of the National Demographic and Health Survey. Recommendations on standardization of units for data collection and explanations for some outcomes were made by participants.
- Disaggregation of data at state level, seasonality, and household income generating activities, should be explored. The DASH approach should be modified to capture the Nigerian context. DASH can be validated once the National food survey is completed in 2019. In the absence of a National food based dietary guideline, empirical results using the LSMS data is useful and applicable.
- In targeting consumer behaviour in relation to the nutrition transition and diet-related health risk, lifestyle patterns and market segmentation should be explored.

3.3 Session 3: Food System Foresight

3.3.1 Global and national drivers of Nigeria's food systems, based on the Nigeria food systems review paper and quantified drivers for Nigeria

Thom Achterbosch, Wageningen University & Research (Economic Research)

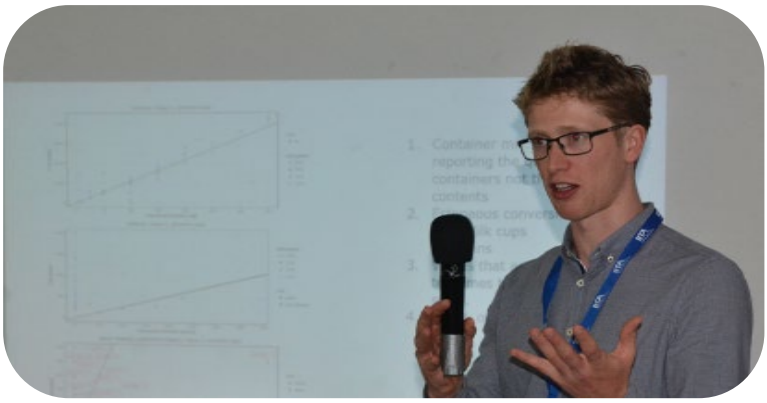
Mr Achterbosch presenting on drivers of change for accessible nutritious and

"Food and nutrition security (FNS) involves a high degree of complexity and uncertainty", remarked Mr Achterbosch in his presentation. It must be assumed that the current dietary patterns in Nigeria will change under the influence of changes in the age structure of the population, economic growth and other trends. He informed that scenario analysis provides decision makers with a tool to anticipate plausible future change, and formulate policy options and strategies that are robust and future-proof. He further highlighted methodology and steps involved in A4NH FSHD foresight on food systems and diets to include: a conceptualization of a policy intervention; scenario assumptions; country-specific projections in global context using macroeconomic modeling and proofing with microlevel data; estimates of drivers of diet gaps; reflect on projections and search for leverage points to improve outcomes; and make policy recommendations.

The sessions in the present workshop are a prelude to a more comprehensive foresight process. Participated are invited to participate in a foresight process that will be implemented with food systems stakeholders and researchers in Nigeria in 2018-19. The study will explore how population and economic growth will affect the national food balance (demand, supply and trade) and food and nutrition security at regional level. The objective will be to identify effective leverage points for directing Nigeria's food systems towards contributions to healthier diets.

3.3.2 Synthesis of global foresight studies

Tomas Morley, Wageningen University and Research (Economic Research)



Mr. Morley making a presentation on synthesis of global foresight studies

As a way to introduce the concept of foresight on FNS to the participants, Mr. Morley presented results from a review of global foresight studies. He discussed the process for identifying gaps in the present study. "Through database searching (Scopus, Cab Abstracts, Econ Lit), snowballing, expert inputs and grey literature search, it was discovered that there was no systematic reviews of model results. In addition, there was no quantification of uncertainty in models results. The present study then incorporate these gaps in the National food systems modelling and foresight" explained Morley. He also highlighted the analysis was built on aggregate models using micro-macro linkages on global database.

3.3.3 The projected impact of food systems drivers on dietary gap and SDG2

Thom Achterbosch, Wageningen University & Research (Economic Research)

Mr. Achterbosch sharing results on food systems drivers in Nigeria

Mr. Achterbosch presented food systems analysis forecast for Nigeria using MAGNET model (a leading global economy-wide model used for global projections on agriculture/biobased/climate, food security and nutrition as well as country-specific assessments) on Global Expanded Nutrients Supply (GENUS) database for 225 products in 175 countries. He presented preliminary results on foresight on the national food system in Nigeria, under scenario assumptions derived and adapted from the shared socioeconomic pathways (SSP). The analysis comprises scenarios for business-as-usual (SSP2), intensified food and nutrition challenges (SSP1), lower challenges (SSP3). Economic growth (real GDP) in the scenarios is projected to outpace population growth in all scenarios, but with variation: GDP per capita in Nigeria is brought between 2015 and 2050 up to the level of lower middle income countries such as South Africa, or to the level of higher middle income countries such as Russia and Turkey under the upper bound growth projections.

It was shown that structural change in agriculture and food system transformation are important elements in diet change in Nigeria. The Nigeria (agri-fish-) food system is undergoing substantial change under the influence of global and domestic drivers, and model analysis gives insight into the processes of adjustment. Nigeria is currently the country with the lowest level of input use in agriculture (in value terms) in the global database that underpins the MAGNET model, and the with a reserve of just 5% of agricultural land that can be brought into production. Model projections suggest that a process of intensification of agriculture in combination with land transformation appears critical for the evolution of food and nutrition security. Without transformation demand growth from the burgeoning middle classes will be sourced through the harbours, and "footloose" production systems will thrive. With transformation demand pull may benefit the rural development and nutrition agenda for the rural population. A striking result is that intensification in the analysis results in greater diversity of the production systems, which in turn cascades into positive effects on the diversity in the food supply. This suggests that intensification in Nigeria would lead to the availability of foods with higher density in micronutrients than without intensification.

Food accessibility is projected to improve on average for Nigeria over the projection period, as measured by an upward push to the ratio of income against food prices; nevertheless, given that real food prices may rise, depending on land supply & intensification in agriculture, food access is considered a possible barrier for the improvement of consumer diets in Nigeria. This implies that structural change in agriculture, and food system transformation important elements in diet change. Projections for energy intake are favourable, overall food security may improve, yet with import bills rising to as much as 160 million USD annually in 2050. The evolution of impact of these food systems changes on diet and nutrient gaps needs further analysis and interpretation. The study will be completed with the input from discussions in the workshop and presented in a later stakeholder workshop.

3.3.4 Discussions, Questions and Comments

- LSMS for various years need to be utilized in the analysis so as to see trend and be able to make reasonable comparison of how dietary pattern evolves over time. Assumptions need to be improved especially as it relates to land transformation and substitutability.
- Increase the scope of the research to capture food quality and safety. Worth exploring is the effect of upward future population trajectory and urbanization on food quality and safety.

4 DAY 2 (July 3rd, 2018)

3.4 Session 4: Food Systems Foresight – Contd.

The second day of the workshop was kick-started with a welcoming note from Dr. Busie, followed by self-introduction by participants.

3.4.1 Recap from DAY 1

Thom Achterbosch, Wageningen University & Research; Mary Ukam, IITA

Miss Ukam and Mr Achterbosch giving a brief recap of DAY 1 activities

Mr. Achterbosch and Miss Ukam in a brief and concise manner, relayed activities in DAY 1 to the participants. Notably questions and comments from the participants during DAY 1 presentations as well as reactions and responses of the presenters were highlighted.

3.4.2 The evolution of consumer food demand

Tomas Morley, Wageningen University and Research (Economic Research)

Mr Morley discussing evolution of consumer food demand

Using map representations, Mr. Morley showed spatial view of fruit, meat and dairy consumption across geographical regions in Nigeria utilizing the World Bank 2015-2016 LSMS. The analysis shows that Grains and Flours constitute major food expenditure in the North (East, Central, and West) and South West, while Starchy Roots, Tubers, and Plantain dominate food expenditure share in the South East and South-South. Food demand modelling was also carried out to capture the responsiveness of demand to a change in the prices of some food items (e.g. beef and chicken, bread and imported rice). From the result estimates, it was shown that consumer expenditure has significant effect on demand for beef and chicken while price has no significant effect. Similar to the above, expenditure strongly influence demand for both bread and imported rice. While price has significant positive impact on demand for bread, no significant effect was observed for the demand imported rice. Mr Morley, however, pointed some limitations to the above estimations. First, the model fails to consider cross-price elasticities. Second, information on food groups would provide a more-informative analysis but data on prices of all of them are not readily available. Third, the model did not capture a simultaneous rise in prices and rises in income of agricultural households.

He also informed that micro-macro simulation modelling approach is more sophisticated to accommodate exogenous drivers that shape the national projections of Nigerian economy.

3.4.3 Diversification in the agri-food Economy

Thom Achterbosch, Wageningen University & Research (Economic Research)

In continuation of "The projected impact of food systems drivers on the dietary gap and SDG2" presentation, Mr. Achterbosch made a case for a diversification in the agri-food economy. His presentation shows that calorie per capita intake projections will increase in a positive direction. This may bring about the development of innovations that generate increase in food production over time. Based on preliminary projection estimates – to be improved based on the workshop outcomes - it was shown that Citrus, Tomatoes, Onions, Plantain, and Cowpeas would witness more than 50% increase in production between 2015 and 2050. It was also revealed that hen-eggs, Poultry meat, Pig-meat, and Game-meat would record 30% increase in supply over the projection period. Through a series of scenario analysis, it was shown that structural change in agriculture and food system transformation are important elements in diet change in Nigeria. The study will be completed with the input from discussions in the workshop and presented in a later stakeholder workshop.

4.2 Session 5: Entry Points for Interventions

4.2.1 Food Systems for Healthier Diets: Partnering for Innovations in Nigeria

Jordania Valentim, Global Alliance for Improved Nutrition (GAIN)

Ms Valentim pointed on the direction of partnerships which would be valuable to FSHD in Nigeria. She highlighted that Partnership for Innovation in Nigeria for FSHD may focus on private sector pathways which foster business viability and sustainability. She also informed that operationalization of legislation and policies, social license to operate, business growth, brand reputation and mitigation, among others, are key levers that would foster better partnerships and innovation in FSHD in Nigeria. She further remarked that business case for fostering research in Nutrition and creating demand for Investment funds in FSHD should be explored as against donor funding to ensure sustainability.

Ms Valentim sharing information on innovative partnerships for FSHD in Nigeria

5.1.2 Behaviour change around vegetable consumption: consumer motives and accessibility

Dr Elise Talsma,Wageningen University & Research (WUR)

Dr Talsma shared a planned intervention under A4NH Food Systems program. The project is aimed at increasing consumption of fruit and vegetables in low income groups in Nigeria through food systems innovation with a focus on the Urban and Peri-urban location in Ibadan, Oyo State.

Dr Talsma sharing a planned intervention on FSHD in Nigeria

5.1.3 Post-harvest losses (weight and quality degradation) in tomato supply chains for the market in Lagos

Thom Achterbosch, Wageningen University & Research (Economic Research)

Mr. Achterbosch discussing key findings from an ongoing intervention on tomato trade in Oyo and Kano State in Nigeria

Mr. Achterbosch discussed key findings from an on-going intervention on Tomato Trade in Oyo State and Kano State targeted at reducing post-harvest losses. The program is to introduce reusable crates at the farm collection point and trade tomatoes in these crates to the retail point at the market in Lagos, in a partnership between Agrofair, IITA, IFDC and WUR. The first and second round of measurement revealed that waste was reduced by up to half by using the crates. He remarked that it is imperative to understand the coordination and trust between agents in the supply chain as well as change in the distribution of value when helping business attract investments and Funding

5.1.4 Discussions, Questions and Comments

Suggested entry points for intervention were discussed. The participants also offered innovative ideas that could enhance FSHD in Nigeria. Key innovations suggested were:

- Small scale modularized food processing using renewable energy;
- Promotion of indigenous underutilized species towards healthier diets using media campaign;
- Innovation in logistics systems to enhance supply chain;
- Explore informal markets to ensure farmers benefits.
- Incentives for nutrition smart food processing for private sector (a more inclusive approach to capture rural poor in the interventions). It was noted that the urban poor is also a neglected group which the project addresses.

5.1.5 Panel Discussion

As a form of getting feedback from the workshop and harvest ideas that would enrich future research agenda on FSHD in Nigeria, a panel discussion (comprising a representative from the Federal Ministry of Agriculture and Rural Development (FMARD), Nigerian Institute of Social and Economic Research (NISER), Sahel Consulting Nigeria, Dangote Foundation, Federal University of Agriculture Abeokuta (FUNAAB), and Agricultural Counsellor, Embassy of The Netherlands) was conducted.

Key remarks from the panel discussion were;

- Food system of Nigeria is poorly understood and requires more work - *Federal Ministry of Agriculture and Rural Development (FMARD)*
- A review of the current National Food policy based on results from this study is recommended. Cross sectoral consistency should be encouraged for the policy to be effective - *Nigerian Institute of Social and Economic Research (NISER)*
- Data driven decision policy making, communication of policies to direct actors and innovation in the implementation of such policies should be considered to drive healthier dietary change in Nigeria – *Sahel Consulting Nigeria*

Cross section of panel discussants during the workshop

- Public Private Sector Partnerships play a key role in implementing innovative intervention – *Aliko Dangote Foundation*
- Imperfect data is an entry point for intervention – *Federal University of Agriculture Abeokuta (FUNAAB)*
- It is imperative to build trust across sectors actors to drive change; data driven decision should be promoted (collection and combination of data); food system should structure the city not the other way round - *Agricultural Counsellor, Embassy of The Netherlands*

5.1.6 Closing remarks

Dr. Busie Maziya-Dixon in her closing remarks noted that there has been significant improvement in terms of institutional framework surrounding nutrition and health in Nigeria with reference to the recent lunch of the National Nutrition Council consolidating the support at policy level. Leveraging on existing framework, it is clear that advocacy efforts are required to foster collaboration and build partnerships to drive the agenda in Nigeria.

Dr. Maziya-Dixon Busie giving concluding remarks

She reiterated that the workshop was the beginning of the journey and that several tools will be used, including social media platforms, to advance the agenda on dietary changes in Nigeria and stimulate further discussions and knowledge sharing regarding the A4NH research on Food Systems for Healthier Diets. She promised to keep respective stakeholders updated on the progress of the research. She also thanked the participants for honouring the workshop invitation and participating actively during the sessions.

Group photographs during the workshop

5 Workshop conclusions and follow-up

Nigeria is facing a triple burden of malnutrition. Overweight prevalence, already over 20% among women of reproductive age in the 2008 DHS, is the most pressing concern. Better understanding of how consumption patterns have evolved in the past, and the extent to which dietary needs are met across different settings, including socio-economic, ecological, or regional boundaries in Nigeria, is pivotal for food and nutrition policy.

The A4NH Food Systems for Healthier Diets research program (2017-2022), funded by the international donor community through the CGIAR, wishes to partner with the food and nutrition stakeholder community in Nigeria. In the program, we diagnose how well national food systems perform in terms of meeting the nutritional needs of consumers, and explore policy and innovation options in food systems that will contribute to improving food security and nutritional outcomes.

A workshop was organized to discuss the outcome of the first stage of the research on the diagnosis of dietary gaps and foresight on food systems in Nigeria, and gather perspectives and inputs to ensure the research findings generate policy that improve food security and nutrition outcomes in Nigeria. The workshop convened a mixed audience of 40 participants, with backgrounds in nutrition and health, and food and agriculture.

The main conclusions from the workshop are the following.

(1) The dietary patterns in Nigeria are of concern in the presence of the triple burden of malnutrition and rapidly evolving rural and urban food systems. This warrants frequent monitoring of the composition and adequacy of diets across population groups. Diagnostic tools are proposed on the basis of household consumption and expenditure surveys (LSMS).

- The current state of household dietary diversity in Nigeria suggests that access to nutritious food products is challenging in Nigeria, specifically for the rural population. In more than half of all households the estimated intake of calcium, fat, iron, riboflavin, vitamin B12, vitamin C and zinc is inadequate. These findings result from a desk study into the quality and adequacy of diets for all households in Nigeria using the 2015-16 LSMS data, and are consistent with observations from the 2008 Demographic and Health Survey. Due to the fast pace of change in the food systems in Nigeria, frequent national monitoring of dietary patterns is warranted, and further insight is required into how food consumption patterns may evolve in the future.
- Data from household consumption and expenditure surveys – in particular Living Standards and Measurement Survey - were shown to provide the most updated and readily available data to assess changes in dietary intake at regular intervals. FCNS remains the gold standard for assessing the quality and adequacy of diets in Nigeria, yet most encompassing consumption and nutrition surveys are implemented once every decade. It was proposed to position a dietary gap analysis based on the LSMS data as a tool for the biannual or triannual monitoring of diets in-between the anchor points of a full-scale FCNS.

(2) Agriculture and nutrition policy strategies are implemented against a background of evolving food systems. As consumption growth from the expanding middle classes will occur in the context of competitive international food markets, Nigeria may lose out on opportunities to benefit from the demand pull for the rural development and national

nutrition agenda. Structural change in agriculture and food system transformation are key elements in diet change in Nigeria.

- Nigeria's agricultural systems make very low use of agricultural inputs and mechanisation, and the opportunities for expanding supply by bringing more land into production are limited. Model projections by WUR suggest that a process of intensification of agriculture in combination with land transformation appears critical for the evolution of food and nutrition security in Nigeria. Without such transformation, a plausible future path is that demand growth from the burgeoning middle classes – in particular for meat and dairy products – will be sourced largely from importation, and food produced to the cities will generate limited backward linkages to the agricultural production systems and rural hinterland.
- With transformation, demand pull may benefit the rural development and nutrition agenda for the national population. Intensification in the analysis results in greater diversity of the production systems, which in turn cascades into positive effects on the diversity in the food supply. The preliminary model results suggest that, for example, citrus, tomatoes, onions, plantain, and cowpeas could witness more than 50% increase in production between 2015 and 2050. hen-eggs, poultry and pork could record 30% increase in supply over the projection period. The implementation of the federal Agricultural Sector Food Security and Nutrition Strategy (AFSNS) 2016-2025 by the state governments provides ample opportunities for delivering on the necessary conditions for a transformation towards a more diverse agricultural production systems.

(3) Innovation and policy strategies provide entry points for transforming food systems to contribute to healthier diets in Nigeria

- Current entry points for addressing the composition and adequacy of diets from the public sector include large-scale fortification of staple food, and the implementation of quality and safety standards in food processing. In the workshop, several other leverage points in the food system were identified.
- These include innovation strategies for expanding the supply of affordable and nutrient-dense food, including vegetables, legumes and fruit, meat and dairy products. On ongoing intervention in this area is to reduce food and losses and waste, particular for vegetables and other perishables. Other strategies would address consumer behaviour change by working with private sector towards changes in the food environment, for example exploring the possibilities of addressing the consumer food choice at schools, work canteens, in urban centres, and through food marketing.

The following follow-up is foreseen after the workshop:

A4NH research on food systems will seek to provide a valuable contribution to the preparation for the upcoming national Food Consumption and Nutrition Survey (FCNS), through several of desk and action research with partners in the country.

A process of developing an agenda for food systems research in Nigeria is organized in the form of a review paper with food system stakeholders, under the leadership of IITA and WUR. The process will be completed in 2018 with a final draft and workshop in December.

Supported by the positive feedback from workshop participants, WUR will initiate the research for the validation of the DASH and Global Burden of Disease metrics on household expenditure and consumption survey data as recognized metrics for the monitoring of dynamics in household dietary patterns on frequent intervals of 2-3 years.

A policy discussion with World Bank National Bureau of Statistics, IFPRI Nigeria and IITA and WUR will be organised around the strenghts and weaknesses of using the 2015-16 LSMS data for policy analysis. A research paper that will identify is under preparation. The paper will examine the implications of using the dataset both for analysis of dietary patterns and as a policy information agricultural input use and policies. The paper will provide suggestions for improving the quality of the upcoming survey 2018-19 survey.

A participatory foresight analysis, combining expert workshops and economic scenario modeling, is being planned for implementation in Nigeria. The main aim of the study will be to test and strengthen the policy strategies for food security and healthier diets in the context of plausible changes in Nigeria's food systems over the coming years and decades. The study could for example address the multiple effects of rising import competition and international trade on Nigeria's agricultural development prospects and accessibility of food.

The identification of business cases around supply-side and consumer-led innovation strategies is a key feature of the A4NH Food Systems for Healthier Diets program. This component of the program is run by GAIN, in partnership with the SUN Business Council. In addition, a mapping of the landscape for developing partnerships on food systems for healthier diets with existing professional networks in Nigeria will be done with collaborators in the country.

ANNEXES

ANNEX A. Stakeholder Technical Workshop Agenda

Day/Time	Activity	Responsible Person
	Sunday July 1	
	Arrival of participants from outside Abuja	Participants
	Monday July 2	
08:00-08:30	Registration	*Faith Obuba, Adekunle Yusuf*
	Session 1: Introduction	*Busie Maziya-Dixon, IITA (moderator)*
08:30-08:45	Welcome remarks	*Dr Gbassey Tarawali, International Institute of Tropical Agriculture (IITA)* *Dr Amin M. Babandi, Federal Ministry of Agriculture and Rural Development*
08:45-09:00	Self-introduction	All
09:00-09:10	Workshop overview and objectives	*Thom Achterbosch, Elise Talsma; Wageningen University and Research*
09:10-09:25	Overview of the Agriculture for Nutrition and Health (A4NH) Research Program	*B. Maziya-Dixon, A4NH Country Team Leader*
Day/Time	**Activity**	**Responsible Person**
09:25-09:30	Discussion	
09:30-09:45	Agriculture and food in relation to nutrition: Addressing diets and nutrition using a food systems approach.	*Adeyinka Onabolu, Senior Advisor on Food Security and Nutrition, Federal Ministry of Agriculture and Rural Development (FMARD)*
09:45-10:00	A4NH food systems for healthier diets, ambitions and work program for Nigeria	*B. Maziya-Dixon, International Institute for Tropical Agriculture*
10:00-10:15	Discussion	
10:15-10:30	Coffee/Tea break	
	Session 2: **Diagnosis**	*Debo Akande IITA (moderator)*
10:30-10:45	Update of A4NH food systems in Nigeria: Setting the research agenda.	*Dr B. Maziya-Dixon, International Institute for Tropical Agriculture*
10:45-11:15	Assessing dietary and nutrient gaps at the household level using Living Standards Measurement surveys: Approach	*Dr Elise Talsma, Wageningen University and Research (Human Nutrition and Health)*
11:15-12:15	Discussion: • Assessment of diets for the whole population in the absence of comprehensive country specific dietary guidelines and with infrequent food consumption and nutrition surveys. • Targeting consumption behavior in relation to the nutrition transition and diet-related health risks.	*Olutayo Adeyemi, Transform Nutrition West Africa: Stories of Change Project* *Victor Adejoh, Synergos, Abuja*

12:15-12:45	The state of the dietary and nutrient gaps in Nigeria: Assessment at the household level for the whole population	*Tomas Morley, Wageningen University and Research (Economic Research)*
12:45-13:00	Discussion	
13:00-14:00	Lunch	*Hotel*
14:00-14:30	The state of the dietary and nutrient gaps in Nigeria: Differentiation across socioeconomic groups, urban/rural and regional sub-groups of the population	*Elise Talsma and Tomas Morley, Wageningen University and Research*
14:30-15:00	Discussion • Using household survey data for nutritional analysis and changes in food consumption over time • Relation to the upcoming National Food Consumption and Nutrition survey.	*Dare Akerele, Federal University Agriculture-Abeokuta (FUNAAB)* *Adeyinka Onabolu, FMARD*
15:00-15:15	Coffee/Tea break	

	Session 2: Diagnosis	*Adeyinka Onabolu (Moderator)*
15:15-15:45	Global and national drivers of Nigeria's food systems, based on the Nigeria food systems review paper and quantified drivers for Nigeria	*Mr Thom Achterbosch, Wageningen University & Research*
15:45-16:00	Discussion: ☐Political drivers for the Nigeria food system.	*Dare Akerele, FUNAAB*
	Session 3: Foresight	*Adeyinka Onabolu (Moderator)*
16:00-16:15	Food systems foresight, an introduction.	*Thom Achterbosch and Tomas Morley, Wageningen University and Research*
16:15-16:30	The projected impact of food systems drivers on the dietary gap and on Nigeria's achievements under the Zero Hunger goal (SDG2)	*Thom Achterbosch, Wageningen University & Research*
16:30-17:00	Discussion The role of food quality and safety standards in a changing food system.	*Adebowale Akande, International Institute of Tropical Agriculture*
17:00	Adjourn	

Tuesday July 3		
	Session 4: Foresight (cont.)	*John Mazunda, International Food Policy Research Institute (IFPRI) (Moderator)*
09:00-09:15	**Recap from day 1**	Rapporteur
09:15-09:45	The evolution of consumer food demand: insight into rural and urban trends and drivers	*Tomas Morley, Wageningen University & Research*
09:45-10:15	Discussion • Diversification in the agri-food economy. • Priorities for the follow-up research on diagnosis and foresight.	*Dare Akerele, FUNAAB*
10:15-10:30	Coffee/Tea break	
	Session 5: Entry points for intervention	*B. Maziya-Dixon, International Institute for Tropical Agriculture*
10:30-11:00	Ongoing and planned interventions under the A4NH food systems program • Post-harvest losses (weight and quality degradation) in tomato supply chains for the markets in Lagos • Behavior change around vegetable consumption: consumer motives and accessibility.	*Elise Talsma (Wageningen University and Research), Jordania Valentim (GAIN/AIM), Thom Achterbosch (Wageningen University & Research)*
11:00-11:15	Discussion ☐Important innovation pathways for food systems and healthier diets.	
11:15-12:15	Panel discussion with stakeholders from policy and private sector: • What have been the learnings for policy and innovation on food systems for healthier diets in Nigeria? • What is the perspective for further partnership with the A4NH Food systems for Healthier Diets program (duration 2017-2022)?	
12:15-12:30	Closing remarks	WU&R FMARD IITA
12:30-13:30	Lunch	
13:30	Departure	

ANNEX B. List of Participants

	Name	Position/Affiliation
2	Dr Femi Ogundele	Nigeria Institute of Social and Economic Research (NISER)
3	Dr. Olaide Aderibigbe	Head, Product Development Programme, National Horticultural Research Institute (NIHORT)
4	Dr Catherine-Badejo Oladoyinbo	Lecturer, Department of Nutrition & Dietetics, Federal University of Agriculture Abeokuta
5	Dr. Akinbinu Adeyinka	Federal Ministry of Agriculture & Rural Development (FMARD)
6	Mrs Zainab Ojochenemi Towobola	Deputy Director (Nutrition & Food Safety Division), FMARD
9	John Mazunda	Country Program Manager, International Food Policy Research Institute
10	Olusegun Fadare	Research Analyst I, International Food Policy Research Institute
12	Jordania Valentim	Manager Partnerships, FSHD, Global Alliance for Improved Nutirition
14	Dr Adeyinka Onabolu	Senior Advisor on Food Security & Nutrition, FMARD
15		
16	Falaq Tidjani	Sahel Consulting Nigeria
17	Dr. Akerele Dare	Lecturer, Federal University of Agriculture Abeokuta
19	Adewale Falade	Dangote Foundation
20	Achterbosch Thom	Wageningen University & Research
21	Elise Talsma	Wageningen University & Research
22	Tomas Morley	Wageningen University & Research
23	Dr Maziya-Dixon Busie	Senior Scientist, International Institute of Tropical Agriculture (IITA)
24	Yusuf Adekunle	Research Associate, (IITA)
25	Dr Debo Akande	Senior Agribusiness Development Specialist, IITA
26	Dr Gbassey Tarawali	Head of IITA, Abuja Station, Nigeria
27	Dr Olutayo Adeyemi	Transform Nutrition, West Africa
28	Babatunde Makanjuola	Food and Agricultural Organization (FAO), Nigeria
29	Nkeiruka Enwelum	Food and Agricultural Organization (FAO), Nigeria
30	Temitope Danilola	Research Associate, Center for Public Policy Alternatives (CPPA)
31	Abdul-Hameed Bankole	Research Associate, Center for Public Policy Alternatives (CPPA)
32	Tengu Abur	IITA
33	Segun Afolabi	IITA
34	Thompson Ogunsanmi	International Fertilizer Development Center (IFDC)
35	Olitsa Maxwell	International Fertilizer Development Center (IFDC)
36	Adejoh Victor	Synergos
37	Dr William Martha	IITA
38	Edward Baars	IITA
39	Michael Uwemedimo	CMAP

40	Bram Wits	Netherland Embassy
41	Udoh Brian C	Netherland Embassy
42	Marlies den Boer	Policy Officer, Ministry of Foreign Affairs, Netherlands
43	Gerard Baltissen	Netherland Embassy
44	Melle Leenstra	Netherland Embassy
45	Wim Speringhs	Netherland Embassy
46	Oyeleke Bola	TOPAN
47	Akinyinka Akinyoade	Leiden University