



Narrative on selection and application of indicators for nutrition

June 2021

Narrative on selection and application of indicators for nutrition

This narrative is complementary to NWGN: Guidelines for selection and application for nutrition in projects, 2021.



The Netherlands Working Group on international Nutrition uses a Creative Commons Attribution 4.0 (Netherlands) License for its reports.

The user may copy, distribute and transmit the work and create derivative works. Third-party material that has been used in the work and to which intellectual property rights apply may not be used without prior permission of the third party concerned. The user must specify the name as stated by the author or licence holder of the work, but not in such a way as to give the impression that the work of the user or the way in which the work has been used are being endorsed. The user may not use this work for commercial purposes.

The Netherlands Working Group on international Nutrition accepts no liability for any damage arising from the use of this publication or the application of the recommendations.

Colophon

Authors: NWGN sub-working group members:

Cindy van den Boom, Food Security and Nutrition Cluster, Inclusive Green Growth Department, Directorate-General for International Cooperation (DGIS), Ministry of Foreign Affairs

Diane Bosch, Wageningen Centre for Development Innovation, Wageningen University & Research

Inge Brouwer, Division of Human Nutrition and Health, Wageningen University & Research, and CGIAR-A4NH

Ans Eilander, Co-Chair Netherlands Working Group on international Nutrition

Marijke J. de Graaf, Department of International Development, Netherlands Enterprise Agency

NWGN - June 2021. The NWGN is a platform of civil society organizations, knowledge institutes, the private sector and the government, based in the Netherlands and working in the field of international nutrition. The NWGN believes that improving nutrition through both nutrition-specific as well as nutrition-sensitive actions contributes to the achievement of all SDGs in a direct or indirect way, while vice versa the achievement of many of the SDGs contributes to improving nutrition.

Suggested citation: NGWN. Narrative on selection and application of indicators for nutrition, 2021

Introduction

The Netherlands Working Group on International Nutrition (NWGN), promotes internal learning and exchange on nutrition-sensitive agricultural and economic development interventions, and how their effects on the food and nutrition security situation can best be monitored. At the same time, the Ministry of Foreign Affairs (MFA) aims to further develop its [Results Framework for Food and Nutrition Security](#) in order to harmonize reporting of results of Food and Nutrition Security projects.

The goal of the Results Framework is to assess progress against the Netherlands' contribution to achieving selected SDG-2 targets in 2030 which, for the Netherlands, are set at:

- A. 32 million people are lifted out of under-nourishment;
- B. 8 million small-scale food producers will double productivity and income;
- C. 7.5 million hectares of farmland will be converted to sustainable use.

With the development of this narrative, the NWGN aims to provide more detailed guidance to MFA staff and practitioners on indicators and methodologies to assess progress on these targets and related outputs and outcomes as listed in the Results Framework for Food and nutrition Security. The recommendations on indicators and methodologies are directed towards practitioners, and are to be included within program/

project monitoring and evaluation (M&E) mechanisms. This narrative will particularly focus on dietary intake and underlying factors (preconditions) as listed in box 1.

The selection of indicators and approaches is based on practical considerations: a) change can take place within a relatively short time span of one year; and b) international validated indicators are available.

Box 1: Selection of outcomes from the MFA Results Framework for Food and Nutrition Security

- A.1. Number of people with a more diverse adequate diet
- A.2. Number of people whose nutritional situation became more resilient to shocks
- B.1.a. Number of small-scale food producers that progressively realize a living income/wage
- B.1.c. Number of female small-scale food producers that progressively empower
- B.2. Number of small-scale food producers whose livelihood became more resilient to shocks

Approach

A NWGN subgroup, involving policymakers, researchers and practitioners applied the following steps in the development of this narrative:

1. Elaborated an inventory and evaluation of available indicators and methodologies to assess progress of Food and Nutrition Security,
2. Ranked indicators, taking into account the findings and conclusions of the 2018 NWGN expert meeting (see annex 1), as well as the complexity and costs for data collection and provided recommendations for selection and use of key indicators
3. Developed a guidance document/e-module (best practice) for the website

The NWGN subgroup used the conceptual framework of Food Systems for Diets and Nutrition, as presented in figure 1, as reference for the selection of outcomes and indicators. In addition it was agreed to focus on a small number

of strategic components within the food environment, consumer behaviour and diet domain.

There is evidence that the nexus between consumer behaviour and dietary outcomes is strongly influenced by the position of women and their empowerment. This refers to a process in which women enlarge their ability to make important decisions and enact them in their life². The six pathways through which agricultural interventions can impact maternal and child nutrition include: a) household level income from the sale of commodities produced; b) women's social status and empowerment through increased access to and control over resources; as well as c) women's time through participation in agriculture. A recent review³ on nutrition-sensitive agriculture also identifies diet quality, women's empowerment, income and livelihoods as underlying determinants of nutrition.

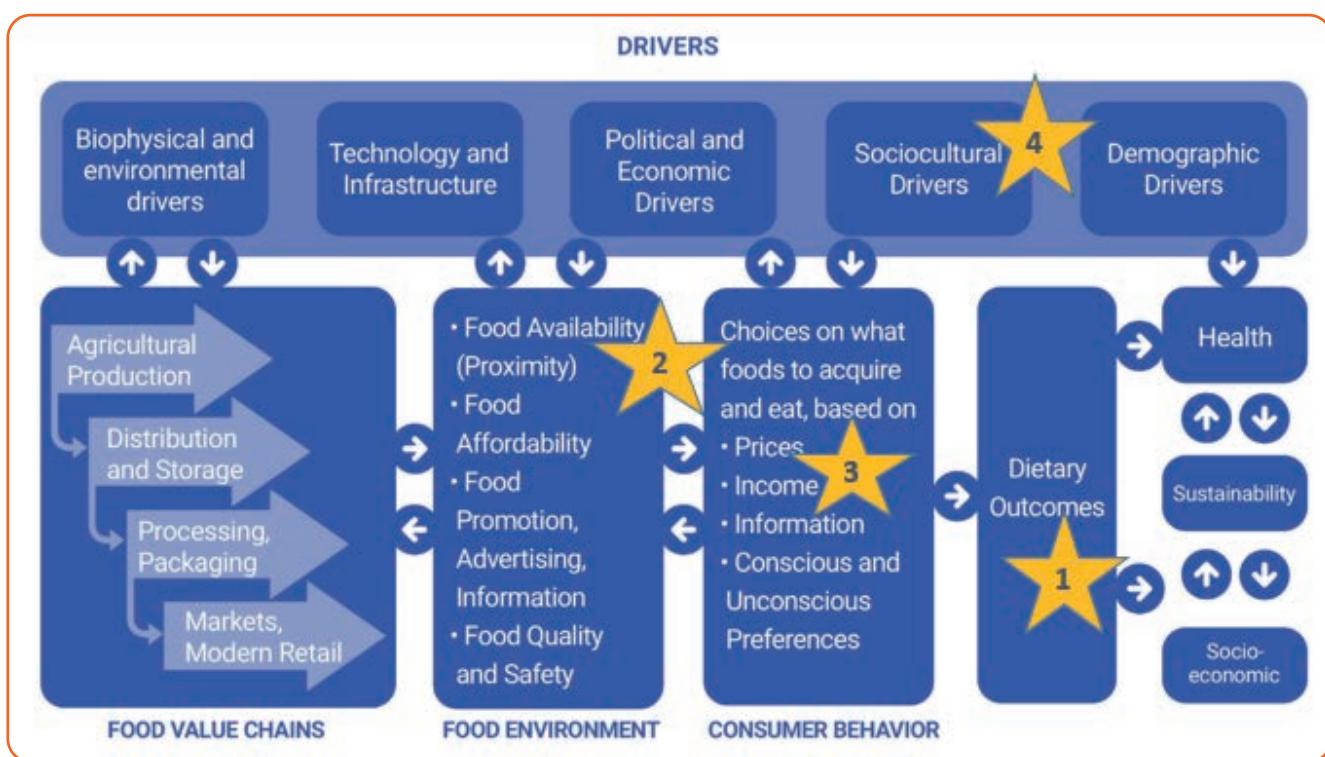


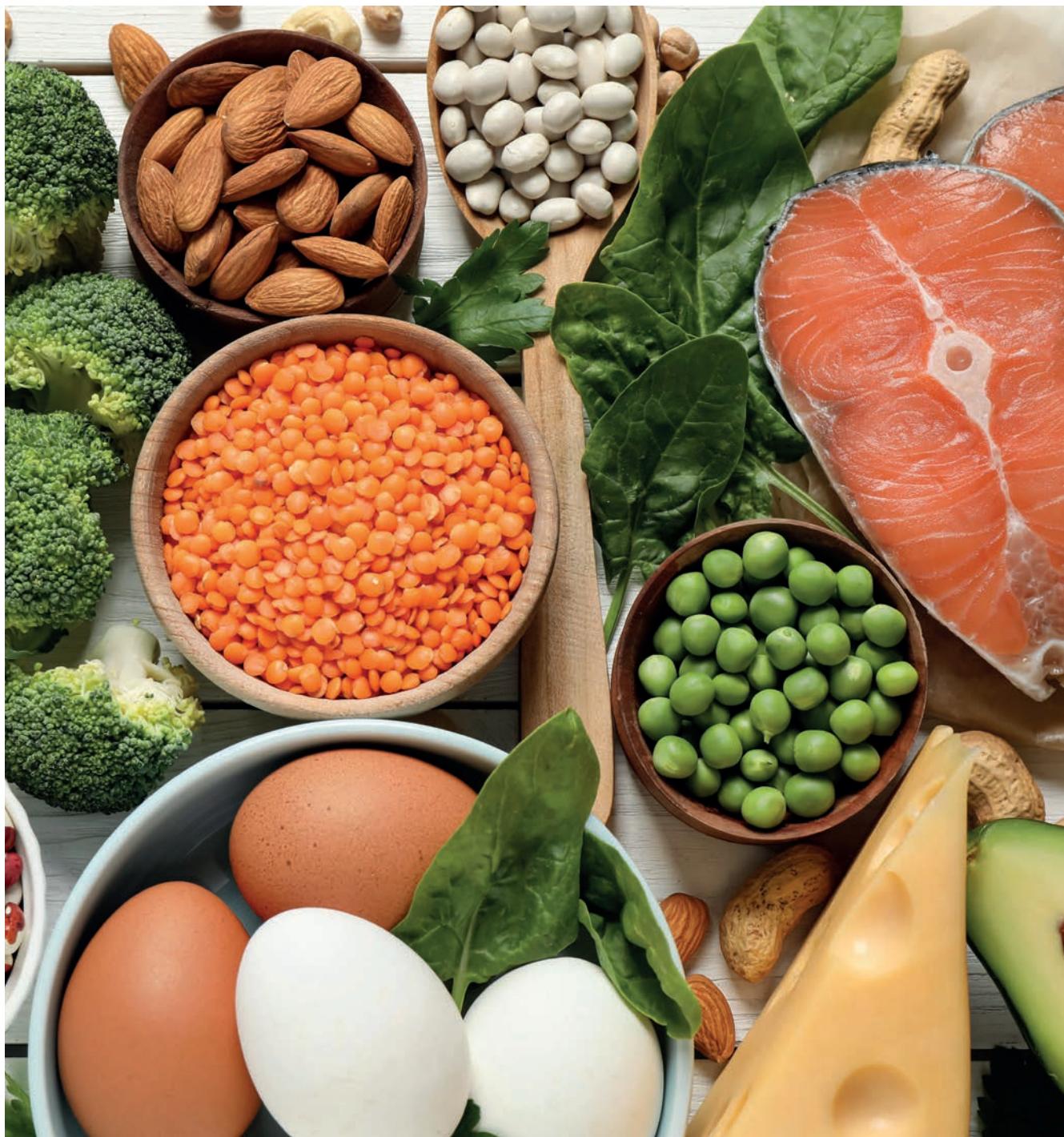
Figure 1. Conceptual Framework of Food Systems for Diets and Nutrition¹

From indicators to metrics for practitioners

Common metrics for practitioners to define and compare their results at the level of food environment, consumer behaviour, women's empowerment and dietary outcomes would be helpful. These should build as much as possible on internationally validated indicators that serve for monitoring a particular project/intervention, and also contribute to (sub)-national databases. Given these criteria, and the above-mentioned

intervention pathways to lead to improved nutritional status, the focus will be on the following outcome areas that can be linked to the Results Framework for Food and nutrition Security (MFA):

1. Diet (FNS framework: A.1)
2. Food availability and affordability year-round (FNS framework: A.2)
3. Income (FNS framework: B.1.a and B.2)
4. Women empowerment (FNS framework: B.1.c)



Outcome area 1: Diet

Rationale:

Healthy diets are a prerequisite for improved nutritional and health status, as there is ample evidence that poor diets are the major cause of malnutrition in all its forms. Poor diets are those that lack adequate diversity and have inadequate nutrient density and/or contain too many foods and/or beverages often too high in salt, sugar and/or fat, that, when eaten in excess, could lead to a health risk. For a detailed description of a healthy diet, see Box 2.

The impact of poor diets is aggravated by the high prevalence of infectious diseases depending on health and sanitation-related factors.

Agri-food system interventions, with the primary aim to increase production, productivity and income, have the potential to supply foods needed for a healthy diet but have less impact on health and sanitation factors. Therefore, it is considered more relevant to evaluate agri-food system interventions impact on diets rather than on nutrition status.

It is generally known that alongside increasing production, productivity and income, extra efforts are needed to ensure that these translate to better diets of vulnerable groups. Incorporation of a specific (sub)-objective on improving diets appeared to be essential for

Box 2: What is a healthy diet?

A healthy diet ensures adequacy of energy and all essential nutrients, promotes all dimensions of individual health, and prevents malnutrition in all its forms and diet-related non-communicable diseases, such as type 2 diabetes, cardiovascular diseases, and some forms of cancer. A healthy diet includes enough fruits, vegetables, nuts, seeds, whole grains, and legumes; sufficient but not excessive calories and amounts of starchy staples and animal-sourced foods (milk, eggs, poultry, and fish); and limited or no foods, food groups, or nutrients that could lead to health risks when eaten in excess, such as free sugars (including sugar-sweetened beverages), saturated fat, salt, red and processed meats, and ultra-processed foods. A healthy diet should have only minimal levels, or none if possible, of pathogens, toxins, and other agents that cause foodborne diseases.

The exact makeup of a healthy diet varies depending on individual requirements and physical activity, cultural context, local food availability and access, and dietary customs, but there are general principles for making healthy diets possible. These include ensuring that a diversity of nutritious and safe foods are available and accessible year-round; that healthy diets are affordable to all; that foods are produced with a low environmental footprint; and that consumers are informed, empowered, supported, and willing to make healthy dietary choices.

Source: Ruel, M.T.; Brouwer, I. D. (2021). Nutrition: Transforming food systems to achieve healthy diets for all. In 2021 Global Food Policy Report: Transforming food systems after COVID-19. Chapter 3, Pp. 36-43. Washington, DC: International Food Policy Research Institute (IFPRI).
https://doi.org/10.2499/9780896293991_03.

such interventions to have impact. Without such an objective, the likelihood the intervention will translate in improved diets is very low. Specific nutrition-sensitive interventions are needed to improve nutrition, including social behavioural change, breastfeeding promotion, etc. Besides adding these interventions to a planned project, this complementarity could also be realized by seeking linkages with existing projects implementing nutrition-specific interventions.

To measure progress towards more diverse and healthy diets, it is advised to focus on the diets of women as reflection of household level diets: evidence shows that, as much as possible, women will ensure that household members have food even if this is at the expense of themselves. In addition, dietary diversity is an important component of healthy diets and increased dietary diversity is associated with increased micronutrient adequacy of women and children's diets.

Based on the above, the following internationally validated indicator is recommended:

- MDD-W - Minimum Dietary Diversity for Women

However, in the case of interventions that specifically focus on infants and young children, the following indicator is recommended instead:

- MAD - Minimal Acceptable Diet for children (6-23 months) with minimum dietary diversity and minimum meal frequency, with the

extra requirement that non-breastfed children should have received milk at least twice on the previous day.

In case there is specific interest to include fortified foods, a modified dietary diversity indicator can be used, which lists fortified foods as a separate group. The World Food Program (WFP) applies a methodology where special nutritious foods, such as fortified foods, are categorized in the 'flesh food' category so as to fully capture their contribution to micronutrient intake. By reporting both the standard and the modified indicator, it is possible to monitor the effects of promoting dietary diversity, provision of special nutritious foods, and/or food fortification on micronutrient intake.

A promising add-on/alternative to the MDD-W is the '[Global Diet Quality Score](#)' (GDQS which is currently being validated by an research initiative launched by the Intake – Centre for Dietary Assessment. The GDQS has the potential to also provide information on quality of diet in relation to obesity and related non-communicable diseases, i.e. addressing the 'triple-burden' of malnutrition, which refers to undernutrition (wasting, stunting), micronutrient deficiencies and overweight/obesity. These are forms of malnutrition that can co-exist in communities, households and even individuals, e.g. a child can be obese but also anaemic at the same time.

Outcome area 2: Food availability and affordability (access) at household level

Rationale:

Access to diverse and healthy food is a pre-condition for diverse and healthy diets, while increased production and/or income at household level does not automatically lead to improved access to diverse food and healthy diets. To obtain insights into the developments of production and income, and subsequently the relation with access to food and diet, it is important to keep track of production quantities and quality (diversity) as well as related revenues. At the same time, it is important to check the influence of seasonality for which the following indicator is recommended:

- MAHFP - Months of adequate household food provisioning.

At international level (SDGs), the Food Insecurity Experience Scale (FIES) indicator is being promoted to measure access to food at household level. However, given the requirement for large sample sizes and advanced statistical expertise

for processing the data, this indicator is not suitable for use at project level.

Affordability of food can be assessed with the Cost of the Diet^{4,5} (CoD), analysis, which estimates how much it would cost households, at a minimum, to purchase a nutritious diet from locally available foods and whether a diet based on locally available foods can provide the required nutrition quality. To estimate the cost of a nutritious diet, CoD uses linear programming, establishing the lowest cost diet that can meet requirements for energy, protein, fat and 13 micronutrients for individuals in a population, considering age, gender, body weight, physical activity level and whether a woman is pregnant or lactating. WFP, however, uses an average-size and composition of a household to estimate a per capita minimum cost of a nutritious diet. This calculation can be compared with food expenditure data to estimate the percentage of the population that would be able to afford the minimum cost of this nutritious diet.

Outcome area 3: **Income** (covering elements of assets and resilience)

Rationale:

Many projects aim to increase income and wealth of poor rural households. However, income is difficult to measure in a reliable way. Factors like cash/in-kind income, loans/debt, income variations, illiteracy/innumeracy come into play. Furthermore, income is a sensitive topic. Therefore, use of an income proxy can be considered, such as the Poverty Probability Index (PPI), which is a poverty measurement tool created by the Grameen Foundation and Microfinance Risk Management. It is statistically-sound, relatively simple to use, and is made country-specific for 49 countries. Further information can be found on the [PPI website](#). The PPI provides a good view on the economic potential of households or groups of households. However, one should take into consideration that the poverty status

of a household will change more slowly than income.

An alternative, especially for smallholder farmers and (farm) laborers, can be to assess household level income and compare it with a standard [living income](#), which is defined by the [Living Income](#) Community of Practice as 'the net annual income required for a household to afford a decent standard of living for all members of that household'.

Recently, a simplified methodology for benchmarking and measuring living income of rural households in low-income countries has been elaborated and is being validated, by a WUR research team led by G.W.J. van de Ven, as referred to in the bullets.

- [Poverty Probability Index](#)
- [Living income benchmarking](#)



Outcome area 4: Women's empowerment (covering elements of intra-household dynamics and gender equity)

Rationale:

The position of (young) women is directly associated with the nutritional status of their children⁶. Better access to land and means of production for women leads to increased access to diverse food. Increased income for women leads to better nourished children⁷. Women's empowerment is a precondition for nutrition improvement. Measuring effects on women's empowerment is therefore not only important for promoting gender equity, but also for its contribution to sustainable nutrition improvement. Within this context, the following two tools are recommended:

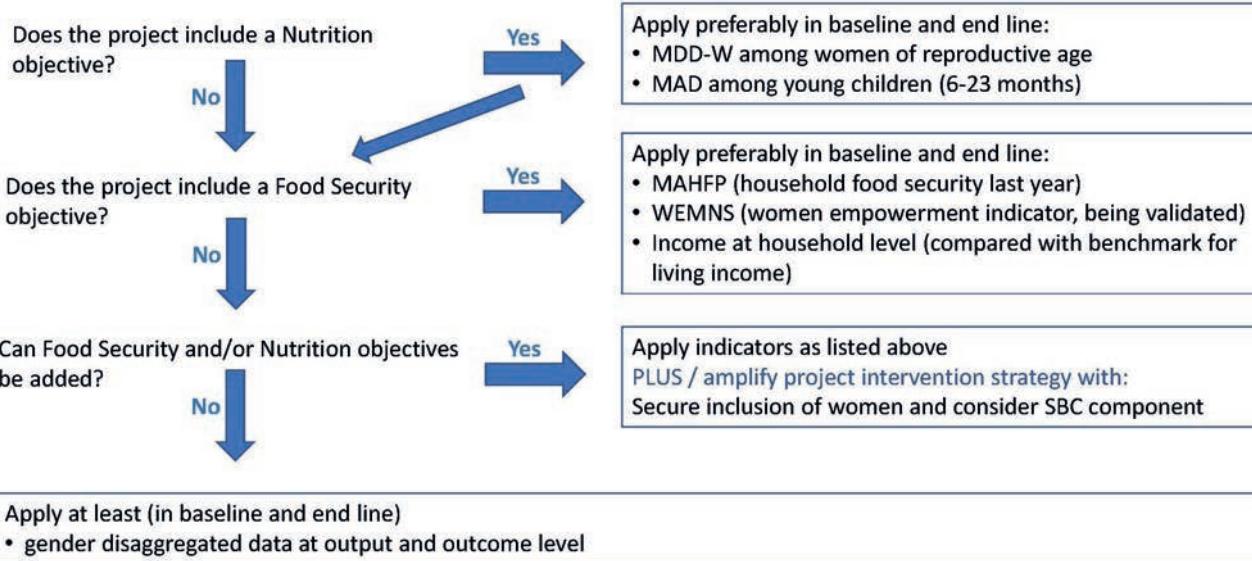
- Gender disaggregated data at output and outcome level is recommended for all projects.
- Women's Empowerment Metric for National Statistical Systems (WEMNS), which is still under development with involvement of IFPRI

experts, can be referred to as a simplified version of the project- Women's Empowerment in Agriculture Index (Pro-WEAI). As for the Pro-WEAI, it has turned out to be too complicated/time consuming to apply all modules, i.e. the full questionnaire at project level. However, a selection of relevant modules could be used at project level. In the near future (before the end of 2021), the WEMNS will be better suited to use as indicator for women empowerment at project level.

Decision Tree

The decision tree presented below recommends (combinations of) indicators context depending on the project objectives and ambitions. Based on the insight that improved access to food, through increased production

Decision tree for measuring Food Security and/or Nutrition outcomes within Agri-Food / Food System interventions



and/or income, does not necessarily lead to improved diets, it is recommended to include a nutrition Social Behaviour Change (SBC) component. It is a strategy that triggers people/society/communities to adopt healthy, beneficial and positive behaviour practices, based

upon informed decisions. In this way, a shift towards more nutritious and healthy diets will be stimulated. In addition, the importance of including and empowering women cannot be overestimated for sustainable improvement of food and nutrition security.



Annex 1

Main takeaways of the 2018 NWGN expert meeting on nutrition-sensitive programming and metrics.

Making interventions within the agro-food sector/food systems more inclusive and nutrition sensitive is necessary to improve diets. To develop and scale this potential, ongoing monitoring at project/programme level is required, alongside rigorous evaluations and research. In addition, targets for Nutrition Sensitive Agricultural programmes should be realistic and focused; individual programmes should not aim to achieve everything. To address malnutrition adequately, integrated approaches are needed, through co-location of different nutrition-sensitive and nutrition-specific programmes that can leverage each other.

- There is consensus about the importance of nutrition for sustainable development; however, 'making agricultural or economic development interventions nutrition sensitive' is often viewed as too complicated in terms of programming, monitoring and evaluation (M&E). Nutrition, as a topic, needs to become more 'accessible' for policymakers and practitioners that do not want to go fully into detail: there is a need for 'nutrition for dummies' to realize nutrition-sensitive agriculture in a cost-effective way at the centre of SDG 2.
- The Nutrition Community, involving practitioners, policymakers and researchers should engage (more) in a shared learning agenda.

For this, common M&E approaches and metrics would be helpful.

- There is a need to further clarify the different objectives, potential and requirements of monitoring, evaluation and (applied) research of NSA interventions. This includes the specification of who should be involved and how the different components relate and complement each other. External evaluations require rigorous and independent approaches. Preferably the focus should be on the quality of evaluations, rather than on the quantity, i.e. not all programmes require an external evaluation.
- Contextualization of programmes and questionnaires is key - what works in one context cannot be standardized across countries. For example, taking vegetarian diets into account and / or gender equality, food distribution and food allocation, cultural differences between regions.
- Applying a gender lens and aiming for women's empowerment through agriculture remains critical. However, we need to understand exactly what works for women: programmes that reach women do not necessarily benefit them, and even when they do benefit, empowerment is not guaranteed. In addition, women's empowerment can also have unintended negative consequences on health, childcare and food security. WEAI and pro-WEAI are helpful tools to unpack the agri-nutrition pathways and to help fine-tune programming.

References

- 1 de Brauw, A., et al. (2019). Food System Innovations for Healthier Diets in Low and Middle-Income Countries. CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), IFPRI Discussion Paper 01816. <https://a4nh.cgiar.org/2019/04/24/food-systems-innovations-for-healthier-diets/>.
- 2 Ruel, M.T., Alderman, H. (2013). Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? Lancet 382, 536–551. [http://dx.doi.org/10.1016/S0140-6736\(13\)60843-0](http://dx.doi.org/10.1016/S0140-6736(13)60843-0).
- 3 Ruel, M.T., Quisumbing, A. R., Balagamwalab, M. (2018). Nutrition-sensitive agriculture: What have we learned so far? Global Food Security Volume 17, June 2018, Pages 128-153. <https://doi.org/10.1016/j.gfs.2018.01.002>.
4. Cost of the Diet; <https://www.wfp.org/publications/2020-fill-nutrient-gap>. For description: Deptford et al. (2017). Cost of Diet: a method and software to calculate lowest cost of meeting recommended intakes of energy and nutrients from local foods. BMC Nutrition. <https://bmcnutr.biomedcentral.com/articles/10.1186/s40795-017-0136-4>.
5. Herforth et al, (2020). Cost and affordability of healthy diets across and within countries. Background paper for The State of Food Security and Nutrition in the World 2020. Rome: FAO. <http://www.fao.org/3/cb2431en/cb2431en.pdf>.
6. <https://www.unicef.org/rosa/what-we-do/nutrition/adolescent-and-womens-nutrition>.
7. <http://www.fao.org/3/ca1506en/CA1506EN.pdf>.

