

Submission on HLPE Draft V0 by International Fertilizer Association

- 1. The purpose of this report is to analyse the ways in which food systems influence dietary patterns and hence nutritional outcomes. The objective is to focus on consumers and consider sustainability issues. The report aims to be solution oriented and to highlight efficient policies and programs. Are those major objective(s) clearly reflected in the V0 draft?**

A complete response to these questions is premature. The V0 draft is still missing an important part: the summary and recommendations, where the final analyses of ways food systems (and policy) influence dietary pattern should be consolidated.

Consumers are well considered.

Definitions of sustainable diets and food systems are provided. However, specific sustainability issues are not listed, though they are implicitly included in some of the case studies. The conceptual framework specifies the issues as: economic and environmental sustainability, but does not define the terms. Framing of economic and environmental sustainability is needed; outcomes towards economic sustainability may not always align with environmental sustainability and vice versa.

Efficient policies are highlighted in the case studies, but a conclusion is lacking on what are the main constituents of an effective policy or program, or what policies have been shown not to be effective and why not.

- 2. Do you think that the overall structure of the draft is comprehensive enough, and adequately considered and articulated? Does the draft strike the right balance of coverage across the various chapters? Are there important aspects that are missing? Does the report correctly focus on the links between nutrition and food systems without straying beyond that?**

The overall structure of the document is well designed to identify “what is not working, what is working and where there is potential to improve.”

Chapter 2 describes the triple burden of malnutrition. The link between malnutrition and food systems could be more strongly emphasized by structuring chapter 4 to reflect the potential of sustainable food systems to influence outcomes to lower these burdens: working up from the nutritional outcomes.

- 4. Are production systems and their role in shaping diets and nutritional outcomes adequately addressed?**

The primary production of food is - per definition - agricultural production. Agriculture and agribusiness have been closely associated with culture, trade and politics, from their first appearance in human societies. The conceptual framework identifies agriculture as first actor in the food value chain. The inherent connectivity of agriculture within the food environment needs more emphasis in the next version of this report.

The draft report contains two references on the need for innovation and research towards sustainable agricultural intensification, but lacks emphasis of the fact that food security for all is within reach, but needs strong economic growth, global expansion of food supplies by about 70 percent, and relatively high production growth in many developing countries (FAO 2009: how to feed the world in 2050 but please also consider [Green et al. 2016](#) (Planting seeds for the future of food, Journal of the Science of Food and Agriculture 2016 Jun;96(8):2932. doi: 10.1002/jsfa.7734).

The importance of increasing yield both quantitatively in kilograms (or calories) and qualitatively (in nutritious value, providing not just calories but essential proteins, micronutrients and vitamins) deserves more attention. Supporting farmers to encourage implementation of innovations to improve current agricultural production systems is imperative.

Harvest security is the base for food security. There are many factors beyond the control of the farmer that are a threat to harvest security: for instance the climate, pests, diseases or war. However, the farmer does have control over how he treats his soil and the way he feeds his plants. As part of the daily job, support of farmers is integrated in agribusiness. This support improves livelihoods of small, marginal farmers through the targeted production and dissemination of locally relevant agricultural information. Supporting farmers to adopt optimal cropping practices helps to make the crop more resilient to adverse climate conditions, and increases the farmers yield both in quantity and in quality. Balanced plant nutrition contributes to food and nutrition security by:

- Providing nutrients for plants;
- Preventing soils from becoming depleted of nutrients and replenishing soils that have become nutrient depleted;
- Increasing yields and thus enabling food production to keep pace with population and income growth and the hunger reduction objectives
- Maximizing agricultural productivity without increasing land surface use;
- Addressing nutrient deficiencies in people that undermine both public health and economic growth.

Providing farmers with access to quality inputs, in particular fertilizers, and the knowledge to apply them efficiently and effectively over a long period of time is the first step enhancing economic and environmental sustainable food security.

The following sources provide a rich source of case studies and examples from all parts of the world:

IFA [Farmer Stewardship](#)

IFA [Nutrient Stewardship](#)

IFA [Food and Nutrition Security](#)

IFA [Providing micronutrients to crops to improve human health](#)

IFA [Partnerships to develop macro and micro nutrient fertilization](#)

HarvestZinc and iodine [fertilizer program](#)

5. Does this draft cover adequately the main controversies in the field of Nutrition and food systems? Are there any remaining gaps?

Section 4.2.1 (looking to the future; technology) should include a section on finding a balance in inputs and outputs in the primary agricultural production of food: to increase yields, agricultural

- a. on what exactly is meant by the term has considerable impact on development of policy and on all the factors currently mentioned in the box "Food Environments" of Figure 1.

Controversies:

- Food technology:

On-farm or close to farm processing of food to make it more nutritious (e.g. culturally preserved fermentation techniques to increase availability of iron or zinc from grains),
versus

Technology increasing nutrient content of food on an industrial scale or production of functional foods.

- Supplementation, providing vitamins and minerals as dietary supplement in the form of tablets, capsules, powders:

Provided by governments input is required, and technology is needed to ensure sustainable agricultural intensification.

The same section also includes a paragraph on food technology and fortification. The controversies around fortification are often a result of misunderstanding definitions behind the terminology.

A dedicated section to identify controversies associated with the terms food technology, supplement, fortification, biofortification is needed as:

- a. These are key elements in any policy or programme to improve micronutrient status.

Good understanding of NGOs during famine or emergency situations,

versus

Required purchase by the consumer.

- Fortification:

- a. **Food fortification**, adding micronutrients to foods or carriers like salt, oil:

Voluntary: Consumer has a choice in buying fortified food,

versus

Mandatory: For example mandatory addition of iron to flour or iodine to salt, to increase micronutrient status of the whole population.

- b. **Biofortification**, producing staple food and vegetables with a higher content of micronutrients or vitamins than are currently available:

Genetic biofortification: Breeding crops with a higher potential to accumulate essential mineral elements (zinc, iron) or vitamins (Vitamin-A),

versus

Agonomic biofortification: Enabling crops to accumulate more mineral elements (simultaneously also improving yield) by applying micronutrient containing fertilizers.

6. The project team is working on a categorization of food systems. Are you aware of specific approaches of use in that perspective, and particularly of quantitative indicators that could be used?

To build the conceptual framework defining food systems is indeed essential as stated in paragraph 1.3 (Conclusions on typologies of food systems). "... typologies of food systems that could be constructed for diets and nutrition. This report will focus squarely on this conceptual framework as its guide to detail what is not working, what is working and where there is potential to improve."

As this is going to be further developed, it is hard to judge what is missing or in need of adaptation at this moment. IFPRI, 2015 is cited but the document it refers to is not mentioned in the reference section. I base the feedback below on the tentative descriptions in table 2. This lacks indicators that would allow to qualify food system as to their potential to prevent micronutrient deficiencies: the third aspect in the triple burden of malnutrition. How can food systems be monitored for their ability to ensure an optimal intake of micronutrients and vitamins from the daily diet, and what are the drivers that affect this aspect of food systems ?

7. Does this draft adequately show the multiplicity and complexity of diets and nutrition issues across different food systems and specific contexts with a good regional balance?

The reader is impressed with complexity and multiplicity of the subject at hand. The report focus is on the developing countries. Issues in developed countries, in particular in respect of micronutrient deficiencies are considered less. As food systems for developing and developed countries are very different, also the approach to micronutrient deficiency will have different aspects for both.

8. What areas of the document are in need of strengthening or shortening?

Chapter 4 needs strengthening: not necessarily by increase in volume but by restructuring to provide the reader with more guidance to differentiate the main points from the details. In 4.2.2 more attention could be given to agricultural policy and innovations that will enable primary agricultural production to become not only more sustainable but also more nutrition-sensitive. The conclusions 4.3 are very general and would benefit of a concise summary of main points made in the previous paragraphs of chapter 4.

9. Chapter 4, Section 4.1 contains case studies/examples of effective policies and actions in 5 different contexts/countries across the food system for diets and nutrition. Could you offer other practical, well-documented and significant examples to enrich the report and provide better balance to the variety of cases and the lessons learned, including the trade-offs or win-win outcomes in terms of addressing the different dimensions of diets for FSN?

See references provided under question 4.

11. Is the report too technical or too simplistic? Are all the concepts clearly defined?

It is not too technical, the topic is very complex and the HLPE has done a very good job in collecting the data and designing a structure that provides a place for all the elements in the food system.

12. Are there any major omissions or gaps in the report? Are topics under-or over-represented in relation to their importance?

No major gaps or omissions other than what has been identified above. The HLPE are best placed - using their combined expertise - to judge on the relative importance of the different topics. HLPE might consider to consult academic experts in agronomy, who would be well placed to provide an overview on current state of research and innovation in sustainable production intensification.