

# Operationalizing sustainable healthy diets in the context of climate change; looking at Animal Source Foods as part of sustainable healthy diets in LMICs

NWGN/NFP expert workshop The Hague, March 14, 2024

## Summary report

### Background

Climate change causes major challenges to achieve Food and Nutrition Security (FNS) – this is a very urgent issue for NWGN members and Dutch stakeholders supporting FNS in low and middle income countries (LMICs).

*“Globally, food systems have been estimated to account for around 30 percent of global GHG emissions, 70 percent of freshwater withdrawals, 40 percent of land use and major disruptions in nutrient cycles across ecosystems. (...). Livestock-derived food production is directly tied to GHG emissions, accounting for between 72 percent and 78 percent of total agriculture emissions.” (UN Nutrition 2021<sup>1</sup> p. 20-21)*

There is great variation in the consumption of animal-source foods (ASF) between countries and individuals. While in western countries consumers are advised to reduce their intake of meat, especially red<sup>2</sup> and processed<sup>3</sup> meat for human and planetary health, in many low and middle income countries (LMICs) ASF are often unaffordable and hardly consumed among resource poor populations where they could play a key role in reducing the prevalence of undernutrition among vulnerable groups in resource-poor settings. Not only do they supply high quality protein, but also highly bioavailable micronutrients like iron, zinc and calcium, vitamins and essential fatty acids, and other less well known bioactive factors<sup>4</sup> which are especially important for young children and pregnant and lactating women

### Expert workshop presentations

The workshop was official opened by Arine Valstar – Co-Chair of NWGN - and Ivo Demmers - Executive Director of NFP - facilitated by the event moderator Ellen Mangnus, whereafter the Director of the Inclusive Green Growth Department - Ministry of Foreign Affairs (MFA) – René van Hell started the first series of 3 presentations and key note, by setting the scene stating the concern of the Ministry about the role of ASFs. Sustainable access to good quality food is a requirement for life but is increasingly affected by climate change and by armed conflicts. René emphasised the importance of innovations that lead to sustainable and/or alternative protein sources.



Photograph 1 - René van Hell, MFA



Photograph 2 - Saskia Osendarp and Lawrence Haddad answering questions from the audience.

Saskia Osendarp – Executive Director of Micronutrient Forum - in her keynote spoke about the “two intertwined crises” of climate and nutrition.

<sup>1</sup> UN Nutrition 2021, “Livestock-derived foods and sustainable healthy diets” <https://www.unnutrition.org/library/publication/livestock-derived-foods-and-sustainable-healthy-diets>

<sup>2</sup> “Red meat” is defined as beef, pork, lamb and goat (excluding poultry, fish, eggs and all processed meats) and a “diet high in red meat” as 23g (18g–27g) a day. Quoted from “UN Nutrition 2021, Livestock-derived foods and sustainable healthy diets” p.15

<sup>3</sup> “Processed meats” are defined as including meat preserved by smoking, curing, salting or the addition of chemical preservatives and a “diet high in processed meats” as 2g (0g–4g) per day (GBD 2017 Diet Collaborators, 2019). Quoted from UN Nutrition 2021, Livestock-derived foods and sustainable healthy diets” p. 15

<sup>4</sup> UN Nutrition 2021, Livestock-derived foods and sustainable healthy diets

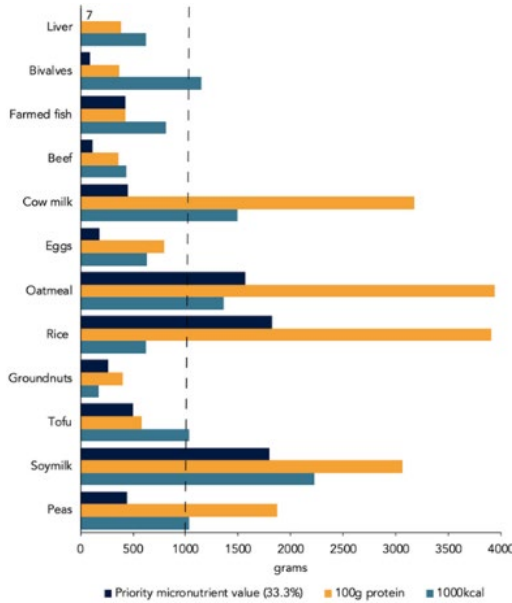


Figure 1 - Portion sizes of food items, required to meet micronutrients, protein and energy needs.

Saskia presented that greenhouse gases (GHG) along the supply chain from “Our World in Data” clearly shows that beef and lamb have the highest GHG footprint per kilogram food product compared to chicken, eggs and fish, products which also score well on nutrient content.

In his presentation Lawrence Haddad – GAIN Executive Director, and World Food Prize Laureate - distinguished three groups of consumers that each requires a different approach: the group that consumes too much ASF; the group that increases ASF consumption, like Nigeria, and the group with low ASF consumption, like many LMICs. Lawrence zoomed in on the different pathways that connect climate change and nutrition and emphasised that holistic integrated solutions to deliver sustainable nutrients are highly effective when scaled, while for infants promotion of breastfeeding is one of the most sustainable approaches worldwide.

After the first round there was time for Questions & Answers from the audience.

The second series of presentations started with Marcel van Nijnatten - Ministry of Agriculture, Nature and Food Quality - Coordinator Food Security Unit - who made it very clear that the Western world consumes “way too much” beef, which is one of the drivers of climate

change. In LMICs this impact is considerably lower. Marcel pleaded for context specific approaches that result in more yield per animal and per input, instead of increasing the number of animals as it is currently done in the Netherlands. “Let’s not make the same mistake in LMICs” but aim for “leap-frogging” instead. Disruptive innovations like precision fermentation: converting grass into casein (protein) without a cow in between could be an effective approach, while other countries may benefit from lab meat and green manure. The ministry does require collaboration with the other angles of the Dutch Diamond to bring this forward.

Dhanush Dinesh, the Founder and Director of Clim-Eat, warned the audience of smoke screens and false narratives employed by “big agro”. These are not the farmers but a few large scale companies in the livestock industry. About 800 – 1000 times more funding goes to livestock than to alternative sources of protein. “Big agro” also uses innovation to develop smoke screens, e.g. for creative accounting. Dhanush highlighted the existence of at least 240 distinct technologies for calculating emissions from livestock. While he expressed a desire to share a success story about influencing consumer diets to moderate ASF consumption, he acknowledged that this remains a contentious topic to address.

The last presentation in the second series was by Jan van der Lee – Senior Researcher Sustainable Livestock Systems, Wageningen University & Research - who presented how central livestock production is in the nutrient flows of food systems in LMICs (next to providing food, converting low grade biomass, traction, stable livelihoods/storing capital). Clearly there is a trade-off between health and sustainability issues. The tool developed by NEADAP<sup>5</sup> considers 14 sustainability aspects to compare production systems. Jan presented a table that scored agro(-pastoral), mixed crop-livestock and specialised systems for different sustainability aspects, including nutrition.

Sustainability objectives	System	{agro-} pastoral	mixed crop-livestock	specialized
Food & nutrition		+	++	+++
Feed-food competition		+++	++	-
Climate change adaptation		+ to +++	++	- to +
Climate change mitigation		+	+	++
Biodiversity & natural resources		+++	+	-
Income & livelihood		+	+++	+
Employment and economic development		0	++	+++
Social equity and liveability		?	++	- to +



Table 1 - Key animal farming systems - performance and sustainability objectives

<sup>5</sup> Netherlands East African Dairy Partnership

This series of presentation was also followed by a engaging session of Questions & Answers with the audience.



*Photograph 3 - Dhanush Dinesh, Marcel van Nijatten and Jan van der Lee answering questions from the audience.*

## Key challenges and opportunities

After the two series of presentations, the group was asked to join one of the 8 tables aimed for discussion on a separate theme in the climate – nutrition domain. Each table discussed the main challenges and opportunities for the different 8 themes. At the end of discussion, each group formulated two key issues/questions for the speakers in their role as panellists during the last part of the programme.



*Photograph 4 - Table discussions*



*Photograph 5 – Presenting the issues from the table discussions to the panellists.*

Panellists largely agreed on the key issues (see annex 1) to address and discussed various (entry points for) promising sustainable solutions. These ranged from occasionally disruptive innovations to financial measures aimed at facilitating a potential transition to plant-based diets – e.g. by adjusting existing subsidies to incentivize and support producers to adopt sustainable practices.

## Closing remarks

While the role of ASF remains complex, the good news is that their impact on human and planetary health often goes hand in hand. It is at this interface where solutions can be developed for each context, and where they will be most impactful.

Animal-source foods should be sustainably produced in alignment with local consumption patterns, and ecosystems and at an appropriate scale for the local context. Where available this can be guided by the new generation of Food-based Dietary Guidelines (FBDGs) as they integrate sustainability as well.

NWGN recommends to approach the role of ASF in sustainable healthy diets from a food system perspective while ensuring equity and women empowerment and building upon indigenous knowledge.

At the same time there is still a lot that we don't know. Moving forward there is a need for more data/metric (e.g. the food sector can learn from the climate sector to gather more data) and taking opportunities where we can team-up and co-learn from the climate sector (e.g. delta plans following climate change in Bangladesh).

## Next steps NWGN and NFP

The NWGN will build on the results of this workshop in formulating its *position on the role of ASF in Sustainable Healthy Diets*. The NWGN will engage the different stakeholders from the Dutch Diamond present in our midst and others that could not attend, and look forward to collaborating with NFP and our speakers who expressed a keen interest in supporting the synergies between nutrition and climate.

## Annex 1: Key issues per breakout table

### **Table 1: Climate and environment impact of different animal source foods**

Issue 1: Within any given category of animal source food, it is essential that we boost sustainability of production

Issue 2: In many contexts, replacing higher-impact foods with lower-impact foods will play a key role (e.g. ruminant meat for blue foods)

### **Table 2: Sustainable fodder production**

Issue 1: Increasingly, drier (and wetter) seasons hamper chain efficiency and ASF output. Urgent solutions needed for more, better and year-round fodder for animals.

Issue 2: Food-feed competition at farm, regional and national levels. Profitability of ASF at the expense of food production. Can nutrient loops and dual purpose crops bring synergies?

### **Table 3: Mixed production systems**

Issue 1: Mixed farming systems offer great potential, but how to support it: project proposals look at single value chains; governments may promote a single product in an area. Market may not be conducive for mixed systems. So how to also innovate mixed systems (e.g. stroken landbouw (strip farming) is that considered mixed system)

Issue 2: Many farmers have mixed systems but would like to specialise in one value chain; And: how to prevent “we are” making choices for farmers.

### **Table 4 Role for pastoralists**

Issue 1: Context (of climate) determines possible needed adaptation and mitigation as reducing livestock numbers will have different effects on the livelihood of pastoralists – as livelihood and purpose differ (dowry, sale, milk and dairy products) – and coverage of nutritional needs.

Issue 2: To improve the production of milk implies that you need additional services for this (breeding, veterinary health, fodder, specific feeds), and availability of water sources.

### **Table 5: Potential of Neglected and Underutilised Food Crops (NUFCs) for Sustainable Healthy Diets**

Issue 1: What is needed for successful improvement of consumer demand, production and utilisation of neglected and underutilised foods for climate, environment, food security and nutrition

Issue 2: What would be the role and power of the Netherlands and national LMIC governments to drive the shift towards diversification and production of neglected and underutilised foods with other stakeholders.

### **Table 6: Consumers and the food environment**

Issue 1: How can we tap into power of the consumer to make the change (by making choices) towards sustainable healthy diets in different contexts,

Issue 2: How can we engage with the large and powerful companies more intensively in dialogue at corporate and employee level for affordable and sustainable healthy foods.

### **Table 7: Food loss & waste reduction and management to lower environment impact**

Issue 1: There appears to be a lack of data allowing us to really map where food loss and waste is occurring that would allow for a consolidated and coordinated approach whereby we can use existing techniques, cultural practices and community solutions

Issue 2: The Dutch economy is a huge player in terms of the international food trade both in terms of export and import and it needs to be explored to what extent that contributes to the problem but also what opportunities for solutions and reductions of food waste and loss are there.

### **Table 8: Potential of food fortification and micronutrient supplementation in Sustainable Healthy Diets**

Issue 1: We would like to know or confirm if in the production and shipment of premixes and supplements climate aspects are being considered?

Issue 2: Is sustainability/climate impact something that we could promote to be included in claims that food producers, but also premix producers? And if so, how should we go about this?

## Annex 2: Expert Workshop Agenda

### Part I - Informative

TIME	ITEM	INFO / SPEAKER
12.00	Registration & Networking	Join us for a nice cup of soup & sandwiches and connect with fellow participants
12.30	Official Welcome	Moderator <b>Ellen Mangnus</b>
12.35	Opening Remarks	<b>Arine Valstar</b> – NWGN Co Chair & <b>Ivo Demmers</b> NFP Executive Director
12.45	Setting the Scene	<b>René van Hell</b> - Ministry of Foreign Affairs – Director Inclusive Green Growth Department
13.00	Keynote Speech	<b>Saskia Osendarp</b> – Executive Director Micronutrient Forum
13.15	Climate & Nutrition (I-CAN)	<b>Lawrence Haddad</b> – GAIN Executive Director & World Food Prize Laureate
13.30	Q&A with audience	
13.45	Sustainable production aspects of animal sourced food	<b>Marcel van Nijnatten</b> - Ministry of Agriculture, Nature and Food Quality Coordinator Food Security Unit
13.55	Consumer Behaviour & Influence	<b>Dhanush Dinesh</b> – Founder and Director of Clim-Eat
14.05	Sustainable Livestock Production	<b>Jan van der Lee</b> – Senior Researcher Sustainable Livestock Systems, Team lead Livestock International, Wageningen University & Research
14.15	Q&A with audience	
14.25	Closing part 1 & Breakout Instructions	Moderator Ellen Mangnus
14.30	Break	

## Annex 2 (continued)

### Part II - Interactive

14.50	Group work and Table Discussions	Through these interactive sessions, all participants can exchange ideas, learn from each other's experiences, and contribute to meaningful outcomes. Each table will have a facilitator.
15.30	Break	
15.50	Group feedback and panel discussion 1	Focus on discussions concerning sustainable livestock production
16.15	Group feedback and panel discussion 2	Focus on discussions of the other topics
16.40	Closing of panel discussion	Moderator Ellen Mangnus
16.45	Event closing	Arine Valstar – NWGN Co Chair & Ivo Demmers NFP Executive Director

**Drinks and Networking till 18.00**