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The UN Food Systems Summit 2021: Lessons of the Gender and Finance Levers

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The UN Food Systems Summit 2021:

Lessons of the Gender and Finance Levers

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Abstract

The United Nations Food Systems Summit (UNFSS), held in September of 2021, aimed to move food systems transformation to the top of the global policy agenda. An important element of the UNFSS were “levers of change,” areas of work expected to make a significant positive change within food systems. The UNFSS levers differed in the way they operated, their visibility, their impact on the Summit’s outcome, and the extent to which they feature in post-UNFSS activities and plans. This paper reviews the operation and effectiveness of the levers by discussing and comparing two key levers: gender and finance. The Gender Lever of Change focused on strengthening the role of women in food systems transformation, while the Finance Lever of Change focused on reforming existing financial structures and broadening financial support for optimal food systems. This paper reviews the activities and engagement of these two levers, the main debates, and the process of consultations. It concludes that the levers were instrumental in framing key principles and concrete directions for action to mainstream gender dimensions and to leverage finance for food system transformation. Lacking an agreed outcome document, the UNFSS established a kind of ‘social experiment’ by forming multistakeholder coalitions behind specific areas for food system transformation and by encouraging governments to design, on a voluntary basis, national pathways for such transformations. The outcomes of this social experiment are highly uncertain but could well turn out a way to overcome existing weaknesses in current fragmented mechanisms for food systems governance.

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1. INTRODUCTION

Achievement of the Sustainable Development Goals (SDGs) will not be possible without major changes to our food systems. Food systems will need to become environmentally sustainable to address the challenges posed by climate change, more inclusive to help end hunger, and more efficient in providing diverse and nutrient-rich foods to end all forms of malnutrition. In recognition of this critical role, in 2019, the United Nations (UN) Secretary General called for a UN Food Systems Summit (UNFSS) which took place in September 2021. The UNFSS aimed to achieve the following:

“Generate significant action and measurable progress towards the 2030 Agenda for Sustainable Development.... Raise awareness and elevate public discussion about how reforming our food systems can help us all to achieve the SDGs.... Develop principles to guide governments and other stakeholders looking to leverage their food systems to support the SDGs... Create a system of follow-up and review to ensure that the Summit’s outcomes continue to drive new actions and progress....”²

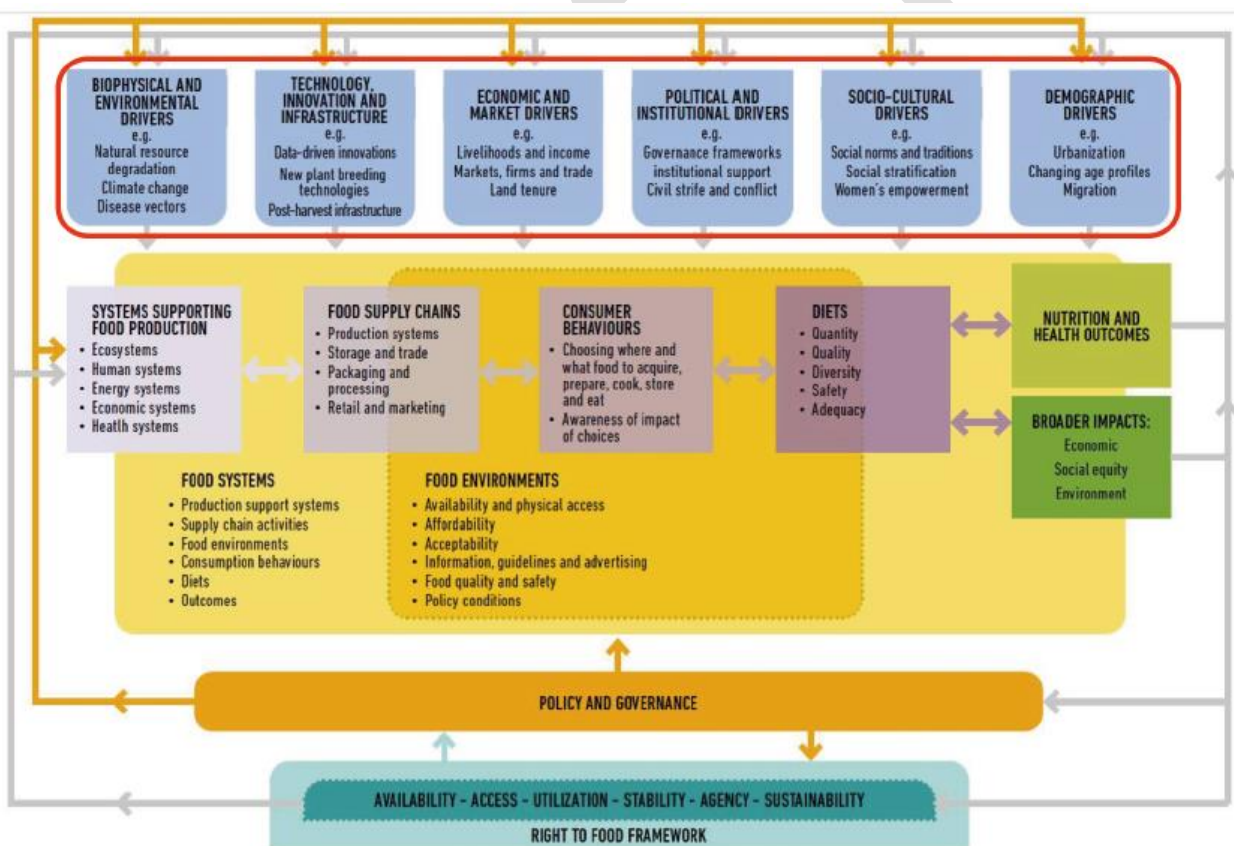
As illustrated in Figure 1, food systems are made up of a complex network of actors and relationships. To induce the transformative food system change considered necessary to achieve the SDGs will require unprecedented coordination across many different policy domains, stakeholders, and contexts. Ahead of the UNFSS, the UN organized a range of consultations and dialogues by countries and by constituency groups³ as well as expert and stakeholder

² <https://www.un.org/en/food-systems-summit/about>

³ Civil society, food producers, private sector, youth, and indigenous people.

assessments of options for change along five thematic Action Tracks,⁴ four Levers of Change (for transversal topics related to Gender, Human Rights, Finance, and Innovation), and a Science Group (to evaluate the scientific basis for the proposals that were expected to emerge from the consultations). The International Food Policy Research Institute (IFPRI) was involved in several of the Action Tracks, prepared analyses for the Science Group on several topics, and played a role as co-lead in the Gender and Finance Levers of Change.

FIGURE 1. Illustration of the Food System



Source: Neufeld et al., 2021.

⁴ *Action Track 1*: Ensure access to safe and nutritious food for all; *Action Track 2*: Shift to sustainable consumption patterns; *Action Track 3*: Boost nature-positive production; *Action Track 4*: Advance equitable livelihoods; *Action Track 5*: Build resilience to vulnerabilities, shocks and stress.

This paper assesses the process, debates, and impacts of these two levers separately, focusing on how gender and finance issues were integrated into the food systems summit process and outcomes. This analysis suggests lessons learnt for effective policy making. A final section concludes with reflections on the institutional arrangements needed to transform food systems in developing countries. It concludes that the levers were instrumental in framing key principles and concrete directions for action to mainstream gender dimensions and to leverage finance for food system transformation. Lacking an agreed outcome document, the UNFSS established a kind of ‘social experiment’ by forming multistakeholder coalitions behind specific areas for food system transformation and by encouraging governments to design, on a voluntary basis, national pathways for such transformations. The outcomes of this social experiment are highly uncertain but could well turn out a way to overcome existing weaknesses in current fragmented mechanisms for food systems governance.

2. THE GENDER LEVER OF CHANGE

2.1 Consultation process

The Gender Lever of Change (GLC) was led by IFPRI’s Director for Africa, with membership from the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the World Food Programme (WFP), the Self-Employed Women's Association (SEWA) and the Center for People and Forests (RECOFTC). In the lead up to and during the summit, the GLC worked with the Action Track teams, the Champions Network, and the UN secretariat to incorporate gender considerations into the food systems transformation solutions that were developed by summit participants and ensure that these solutions accounted for the needs and priorities of women. The GLC placed a gender expert as a

member of the Action Track Leadership teams to ensure the mainstreaming of gender considerations within the game-changing solutions proposed by each of the Action Tracks. The GLC also hosted dialogues in Africa, Latin America, South Asia, Europe, and Central Asia to foster engagement in the summit process among women and other stakeholders, develop an inclusive set of priorities, and arrive at a set of strategic solutions to address gender inequalities in food systems. This dual strategy of mainstreaming gender in the Action Tracks and proposing actions to address inequality sought to ensure that gender and the empowerment of women and girls were central in the summit's agenda.

2.2 Issues addressed by the Gender Lever

Through the dialogues and process of identifying game-changing solutions, the GLC discussed the challenges to and options for addressing gender equality, especially in all possible domains of food systems. This sub-section examines several of these challenges and how they influenced the consultation process.

Identifying the relationship between gender and food systems transformation

Gender dynamics and food systems are intricately intertwined. Women play critical roles in food systems as producers, traders, and processors of food and agricultural products. Furthermore, there is a large body of evidence showing that women play a central role in deciding their households' diets and determining their nutrition outcomes across numerous social groups and contexts (Santoso et al., 2019). However, these contributions have often been overlooked and women's voices and leadership are not recognized in the global food systems discourse. Many food systems actors acknowledge the need to address gender inequities in livelihoods, nutrition, food security, and many other aspects of food systems, but this has not always been followed by

action and adequate investments. The work of the GLC sought to deepen the understanding of the linkages between gender and other food systems transformation goals in order to coordinate action effectively and ensure holistic transformation.

Gender inequality is both a cause and outcome of unsustainable and unjust food systems that fail to provide access to healthy and diverse diets for all. Evidence shows that gender discrimination is a leading cause of poverty, malnutrition, and food insecurity (McFerson, 2010). Gender discrimination creates inefficiencies in food production, limits opportunities for food systems actors, and impedes decisions on healthy consumption for individuals and households (Kinkingninoun-Médagbé et al., 2016; Sethuraman et al., 2007). In some contexts, women are responsible for a large share of unpaid household work and are expected to prioritize the food needs of men over their own (Addati et al., 2018). In the labor market, women are often overrepresented in informal, seasonal, and low-wage work. At the same time, they often lack access to productive resources including land, fertilizer, technology, and finance as well as agricultural extension and advisory services (Njuki et al., 2021). For these reasons, countries with higher rates of gender inequality tend to have poorer nutrition outcomes. Sadly, the bulk of these consequences also fall on poor households. Evidence further shows that women and girls experienced greater adversity than men during the COVID-19 pandemic, suffering domestic violence and greater losses of income and access to food (Kumar et al., 2021). Even before 2020, the prevalence of food insecurity was higher for women than men across all continents (FAO, 2021).

Evidence suggests that addressing gender discrimination can significantly benefit women, men, and children. Closing the gender gap has been associated with increased national income and food production (Santoso et al. 2019). Women's empowerment and access to credit are strongly

correlated with diet quality for children as well as better infant and young child feeding practices and women in several studies (Cunningham et al., 2015; Malapit and Quisumbing, 2015). Bonis-Profumo et al., 2021). These themes and challenges came up repeatedly in the consultation process and demonstrate why addressing gender-based discrimination is a critical step to achieving food system transformation.

How to define equitable food systems

Given the large body of evidence that illustrates the harms of gender discrimination in food systems and the potential benefits of addressing these challenges, it would seem imperative that food systems actors work together to create food systems that are just, transformative, and equitable in regard to gender. However, to underpin such cooperative efforts, the GLC needed to establish a clear vision of such food systems. Toward this end, it relied on the vast literature, which presents ample evidence that efforts towards women's empowerment can only be effective when giving due consideration to the diverse roles that women play in food systems and their communities more broadly as producers, entrepreneurs, leaders, caretakers, and consumers. While the benefits of empowerment are well noted, women sometimes face important tradeoffs. In some cases, increased participation in agriculture can place a heavy burden on women who are also expected to fulfill other duties leading to worse nutrition and overall wellbeing (Quisumbing et al., 2021). A holistic approach needs to account for individual needs and aspirations along with the need for broader change in gender norms within households and communities. These challenges illustrate why men and boys must also be included as stakeholders in fostering and maintaining equity. Another critical consideration is how women's control over resources can influence their decision-making power. Facilitating ownership of productive assets can empower women to negotiate their relationships and roles in society. Finally, gender just, transformative,

and equitable food systems must be intersectional, accounting for the ways that women's multiple identities can compound their marginalization. For example, indigenous women may face multiple barriers to empowerment in food systems stemming both from discrimination against their identity as women and indigenous people.

These considerations were identified by the GLC leadership team based on existing research and expertise. They were then utilized to establish a definition of gender just, transformative, and equitable food systems that would serve as common ground on gender issues among stakeholders and establish a starting point for discussion about incorporating gender concerns into food systems transformation strategies.

With these considerations in mind, the GLC established the primary components of gender just, transformative, and equitable food systems. Such systems would sustainably provide equal access to nutritious and healthy foods to all people along with access to resources needed for the production, sale, and purchase of food. They would allow men and women to pursue roles, responsibilities, and opportunities aligned with their individual capacities, goals, and human rights without being limited by gender roles. These food systems would further empower individuals, households, countries, and communities to access and adopt climate-resilient and sustainable production and consumption practices as well as fair trading practices internationally. In sum, the goal is to ensure that food systems transform inclusively with the meaningful participation of all people. In this context, equity includes three primary components (i) outcomes including economic, social, health, and nutrition factors of well-being, (ii) access to productive assets, services, information and legal protection, and (iii) opportunities including education, livelihoods, and decision making. This definition of equitable and just food systems was articulated by the GLC in a discussion document that formed the basis for the stakeholder

dialogues and the discussions within Action Tracks, aiming to identify “game-changing” solutions towards the desired food system transformation.

Synthesizing the evidence base for food system transformation

The GLC team with IFPRI scientists worked with the Science Group of the UNFSS to synthesize available evidence on gender dimensions of food system functioning. The review found that there was strong evidence that women tend to have less access than men to resources, such as essential services, knowledge and information, new technologies, land, credit options, time, and markets. This inequality in access is most often shaped and reinforced by contextual social gender norms. Existing evidence showed that there were research gaps on the context-specific pathways linking women’s empowerment to important outcomes, such as nutritional status and dietary diversity, noting that these pathways may vary between and within contexts. The review found that only few studies examined gender considerations in food systems for women in urban areas or aquaculture value chains and even fewer provided concrete evidence on best practices and effective pathways for engaging men in the process of women’s empowerment in food systems, or addressing issues of migration, crises, or indigenous food systems. An important contribution of this review was the development of a conceptual framework for food systems that puts gender equality and empowerment of women and girls as its center.

Through internal discussions, the GLC identified a list of priority areas for action aiming to address gender inequalities in food systems. The GLC team initially clustered these issues into 5 priority action areas, while adding two cross-cutting elements.

1. *Ensuring women’s right to land:* Women’s access and control over productive resources, such as land, is an important determinant of their economic empowerment in food

systems. Ownership rights can help provide women some control over the stability in their livelihoods, opportunities to grow their wealth, and power to negotiate their roles in their households and communities. Food systems actors need to challenge discriminatory cultural attitudes and institutions about ownership at the national and local level (UN Women, 2013). Similarly, in many parts of the world, legal frameworks need to be improved or better enforced to protect the ownership and tenancy rights of women. Policies and interventions to address these concerns must take on an international human rights framework ensuring women and men have equal ability to own, use, access, transfer, and inherit productive assets. The perception on the part of some participants that these issues fell outside of the mandate of the Action Track they were part of formed an obstacle to reaching agreements on this issue in the stakeholder dialogues. It revealed the risk that critical issues like these might not be addressed, but – at the same time - it underlined the importance of the dual strategy employed by the GLC.

2. *Access to technologies, including digital technologies:* Technology has great potential to make food systems more healthy, sustainable, and productive, but these innovations may exacerbate existing inequalities if their dissemination is not inclusive. There is currently a significant gender gap in access to technology. This includes lack of access to agricultural inputs, farm tools, trading spaces and mobile devices in addition to a lack of women's participation in the ongoing development of new technologies. These differences in technology availability result in lower productivity and profitability between men and women. Public and private actors can address these concerns by focusing research and development funding on projects that include and benefit women. Distribution of existing

technologies and extension services should look for opportunities to engage more with women and monitor gender inclusion indicators in their activities.

3. *Addressing women's unpaid care and agricultural labor burden:* Women often take on a disproportionate amount of unpaid care work. While such efforts are extremely important, they are often overlooked and undervalued. Even when women are able to participate in paid labor, they are sometimes expected to complete long hours of care work in addition to their paid activities. This burden can be extremely detrimental to the health, nutrition, and wellbeing of women. Interventions to improve working conditions and compensation for women should be based on the tenets of Recognition, Reduction, and Redistribution. Specifically, women's unpaid work should be recognized through greater research into women's time use and incorporation of this theme into policy discussions. Their unpaid work burden can be reduced by providing greater access to resources and services such as paid childcare. Similarly, such resource redistribution tends to change the gender dynamics within households, encouraging men and boys to carry a greater share of unpaid work while allowing women to take on paid work.
4. *Economic empowerment of women in food systems:* Women already make important contributions at all levels of food systems, but they are often undercompensated, exploited, and excluded from positions of power. Some of the major contributors to women's economic exclusion include limited social networks, lack of infrastructure, exclusion from credit, technology, and training, laws restricting women's access to resources and harmful gender norms (Peters et al. 2019). Husbands are legally able to prevent their wives from working in 18 countries (WEF, 2020). Women are also prevented from opening bank accounts or attaining credit in 72 countries. Many

interventions have been implemented by governments, NGOs, and the private sector to address these issues, such as government funds to support women entrepreneurs, diversifying supplier bases in the private sector to support women owned and operated businesses, and civil society groups organizing women's cooperatives. While these efforts are effective, new approaches and bold action are needed to create a fundamental shift in economic power structures.

5. *Women's voice, decision making and leadership in food systems*: Women are often excluded from decision-making processes in food systems, which results in decisions that do not reflect their best interests. It is crucial that the perspectives of women, as key food systems actors across the private and public sector, are represented in leadership positions. Inclusion can be achieved by strengthening social movements, cooperatives, business networks, labor unions, and other organizations that represent women. Public, private, and civil society organizations must make a concerted effort to place women in positions of power and accountability mechanisms should be expanded to monitor progress toward shared leadership.

In addition to these five priority areas, the GLC consultations identified two cross-cutting themes for gender just, transformative, and equitable food systems. The first is a need to *change gender norms and address institutional barriers to women's empowerment*. Currently, these norms are the root cause of gender discrimination limiting women and girl's access to resources, opportunities, and basic rights. They also sustain gender-based violence (GBV), which is extremely detrimental to the well-being of women and constrains their agency in food systems. The second cross cutting theme is the need for *gender responsive agriculture and food systems policies*. Policy makers must recognize that gender is integral to food systems and that gender

equality compliments and often facilitates other food systems goals. The consultations demonstrated that policy makers recognize the need for these changes to food systems, but that these perspectives are not always incorporated in practice. For each of the priority areas, several specific bold actions were proposed by the GLC team. These are summarized in Table 1.

TABLE 1. Proposed Actions from the Gender Lever

Priority area	Examples of Bold Actions
1. Women's land rights	<ul style="list-style-type: none"> i. Support to the implementation of the Voluntary Guidelines on the Responsible Governance of Tenure of Lands, Fisheries and Forests ii. Global women's movement to advocate for women's rights to land formed through strategic alliances. iii. Ensure international convention and treaty obligations related to gender and food systems are enshrined in national legal frameworks. iv. Remove barriers to women's ownership of and control over assets through rights-based approaches. v. Develop or reform land tenure and ownership legislation to ensure that women's rights are upheld, and voluntary guidelines promoted
2. Economic empowerment of women in food systems	<ul style="list-style-type: none"> i. Transformative finance (design, delivery and assessment of impact) and leveraging different forms of finance in support women in the food system. ii. Gender standards that include workplace dignity for women, equal pay etc with monitoring and accountability mechanisms for private sector companies in the food system iii. Improve women-focused value chain financing in food systems. iv. Guaranteed living wage (including provisions for social protection) for small-scale women farmers, livestock keepers, fisherfolk and other workers in food systems.
3. Addressing women's unpaid care and agricultural work burden	<ul style="list-style-type: none"> i. Reform and resource research, extension and advisory services to ensure that they are responsive and accountable to the needs and interests of women and men. ii. Include time use data and energy expenditure in national statistics. iii. Adoption of gender transformative human-centered design approaches iv. Develop policy (including macro-economic policy) that aims to recognize, reduce, and redistribute unpaid care work. v. Ensure standards for paid care provision, childcare services and the redistribution of care work for women in across the food system.

	vi. Enact legislation to ensure access to transport, safe employment, decent wages, care services and other public services for women.
4. Women's voice, decision making and leadership in food systems	<ul style="list-style-type: none"> i. Strengthen and fund women's social movements and organizations to engage at different levels of food systems. ii. Take affirmative action at organizational, policy and legislative levels to promote women's leadership. iii. Develop a collaborative and accountability mechanism for women's leadership and representation in decision making levels. iv. Increase to 50% the number of women researchers in food security and nutrition and establish national-level research, knowledge and learning platforms on gender equality. v. Strengthen women's knowledge and voice as educated consumers to counteract the movement for processed foods and to advocate for easily available, healthy and sustainably produced food.
5. Access to technologies, including digital technologies	<ul style="list-style-type: none"> i. Ensure technology testing and scale out engages women and is based on analysis of the differential needs of women and men in food systems. ii. Support and develop national research capacity and invest in research and development (of technologies) for, with and by women, particularly indigenous women who face higher compound discrimination. iii. Commit to close the digital gender gap including addressing the gender and social norms around women's asset ownership and decision making. iv. Increase the availability of locally relevant digital platforms catering to women and building their digital skills; availing women-oriented and relevant content. v. Innovative business models that make it easier for women to access and use technologies. vi. Strengthen and finance a gender responsive extension system with 50% of women
Cross-cutting issues	Examples of Bold Actions
Changing norms and addressing institutional barriers	<ul style="list-style-type: none"> i. Apply tools for critical reflection, dialogue and action on restrictive gender and social norms. ii. Mandate the capture and analysis of sex- and age-related and differential vulnerability data and develop and collect data on GBV in food systems programming. iii. Build capacity for the use of gender markers, or gender inclusion score cards in the design and implementation of food system activities.

	<ul style="list-style-type: none"> iv. Support social and women's rights movements/men engage alliances/influential leaders and gatekeepers to advocate for gender more equitable norms. v. Introduce mechanisms for GBV risk mitigation to prevent sexual harassment, abuse and exploitation, across the food system.
Gender responsive agricultural and food systems policies	<ul style="list-style-type: none"> i. Establish multi-stakeholder task forces to carry out national assessments of food policies and develop model policies that promote just and equitable food systems. ii. Translate gender transformative food policies into action plans with clear indicators and targets and a score card for ensuring accountability by countries. iii. Include gender indicators, targets and budgets in National Food Systems Investment Plans with clear financial targets e.g 10% of budget going towards gender specific activities. iv. Build capacities within government, and at local level to implement gender transformative food policies and to facilitate gender and social change.

There was broad consensus within the GLC and among stakeholders around these priority areas, cross-cutting issues, and bold actions. During the consultation process, all the Action Tracks also expressed support for incorporating action toward gender equality into their proposed solutions. One primary challenge for the GLC was fostering ownership of these priorities amongst the Action Tracks. The cross-cutting nature of gender issues meant that it was not always clear in the consultation which priorities aligned best with each Action Track. For the development of national pathways, another challenge faced by the GLC was establishing a link between global and local processes around gender. National representatives expressed agreement for the need to incorporate gender into their national pathways but lacked a framework for operationalizing the goals laid out by the GLC and Action Tracks. Therefore, much of the value added by the GLC

came from advocating for and guiding the operationalization of gender solutions, which will be discussed further in the following section.

2.3 Follow Up of the Gender Lever

To advance the solutions proposed in the consultation process, the GLC partnered with working groups, member states, and organizations supporting women's empowerment to form the "Making Food Systems Work for Women and Girls Coalition for Action". The primary goals of this Coalition are to provide support to countries implementing actions on gender in food systems, coordinate these actions across multiple stakeholders, advocate for policy change, and increase accountability related to gender equality efforts. The first task for the group was to prioritize key actions from the cluster of issues from the dialogues and stakeholder engagement process. Key priorities for the Coalition are;

1. Supporting countries to develop and implement national gender responsive food systems policies
2. Promoting equity and inclusion in food systems organizations /institutions (Global Food 5050)
3. Mobilizing a gender-transformative finance alliance
4. Shifting discriminatory gender and social norms through gender-transformative approaches

To narrow down to these priorities, the team considered actions that had potential for global impact, where multi-stakeholder partnerships are needed to advance the agenda, and where few other organizations were taking leadership.

These goals will be accomplished by creating sub-coalitions and working groups to address specific projects. These groups will collaborate with stakeholders to develop briefs, reports, and other products. They will also advocate for the scaling of successful gender transformation strategies and report to the UNFSS Hub on a biennial basis.

Further work will include an analysis of national food systems transformation pathways to identify countries that have an explicit focus and commitment for gender equality and to provide these countries with technical and other relevant support to implement these commitments.

2.4 Impact of the Gender Lever

The work of the GLC underscored the importance of gender equity in food systems transformation and spurred action on gender from national governments. For instance, a systematic review of national pathways to food systems transformation for African countries reveals some of the outcomes from this process: of the 26 action plans posted on the UNFSS site from African countries, 24 mentioned gender issues. Women's access to land, finance, technology, and other resources for improved productivity was a common theme in these plans. Proposed solutions in this area included changes in ownership laws and the provision of economic development funding for women. Numerous plans also proposed action to create more inclusive value chains. Improving access to education, training, and agricultural extensions for women and girls were some of the major proposed solutions. Many also incorporated gender with actions to meet nutrition goals by better targeting women and girls in social protection, school feeding, and healthcare. Action plans also often included mention of creating and supporting women's cooperatives or farmers organizations, which has the potential to improve agricultural productivity and nutrition outcomes as well as provide women with political capital within their communities. These plans indicate that the GLC has been successful at integrating

gender equity concerns into other food systems transformation goals. In the coming years, stakeholders must hold one another accountable to these goals and provide support for them to be achieved.

Beyond national commitments, the GLC has also spurred action at the international level. Over ten countries, including Canada, France, the US, Finland, and Sweden among others have shown interest in joining the Making Food Systems Work for Women and Girls Coalition for Action. Numerous non-governmental organizations have also joined including the Rome-based UN agencies, SEWA, IFPRI, CARE, RECOTFC, The Micronutrient Initiative, Data 2X, OECD, Google, JHU, and the World Bank.

The GLC team launched the first accountability framework and index for equity and leadership in food systems organizations -Global Food 50/50- in collaboration with Global Health 50/50. Global Food 50/50 is based on the premise that a combination of gender-responsive programming, gender-equitable institutions, and diversity in leadership will lead to more effective organizations and more equitable and inclusive food systems. This inaugural 2021 report reviews the gender- and equity-related policies and practices of 52 global food system organizations as they relate to two interlinked dimensions of inequality: inequality of opportunity in career pathways inside organizations and inequality in who benefits from the global food system. The report shows that organizational commitment to gender equality is high, and that over half of the organizations are transparent about their policies for shaping diverse, inclusive, and equitable working environments. The data also suggest, however, that rhetoric may be used as a substitute for action. Organizational leadership — CEOs and board chairs — remains disproportionately male and dominated by European and North American nationals and only 6% of CEOs and Board Chairs of these organizations are women from low- and middle-income

countries. In the face of multiple global crises, a global food system dominated by individuals and institutions in high-income countries forgoes essential talent, knowledge, and expertise, with serious implications for progress toward a sustainable and equitable global food system.

3. THE FINANCIAL LEVER OF CHANGE

3.1 Process and engagement

Financial systems should play a central role in transforming food systems to achieve the SDGs.

The UNFSS established the Finance Lever of Change (FLC) to identify strategies for redirecting financial flows toward investments enabling food system transformation.

The Special Envoy to the Summit invited the World Bank to be the custodian of the FLC. The World Bank, in turn, called upon several other organizations, including the International Food Policy Research Institute (IFPRI) and the Food and Land Use Coalition (FOLU), to join the working group. Over the course of ten months during 2020 and 2021, the FLC held multiple dialogues and consultations with all Action Tracks and other stakeholders, organized several public events, and prepared the document “Food Finance Architecture: Financing a Healthy, Equitable, and Sustainable Food System” (2021) as a formal input to the Summit process. Individual members and institutions participating in the FLC also prepared other analyses of financial issues, including for the Science Group.

3.2 Issues addressed by the Finance Lever

As part of the consultations, the FLC assessed several critical issues as initial steps before identifying options for action: (i) how much would it cost to achieve the desired food system transformation; (ii) what should be the role of financial systems in covering those costs; and,

more specifically, (iii) what should be the role of public financial agencies, including for the multilateral development banks and official development assistance mechanisms?

Estimating the costs of food systems transformation

A first question raised was how much the desired food system transformation might cost in terms of new investments, provision of market incentives, etc. The answer depends on how broadly or narrowly the scope of food systems and the objectives of that transformation are defined, including which SDGs and climate change goals are considered (see also section 3.3). Opinions may differ as to the “policy boundaries” of food systems transformation and, therefore, the costs and financial requirements. Achieving the SDGs in general, and those related to food systems in particular, requires broad-based, sustainable, and inclusive economic growth and political stability. However, the discussion about the policy and institutional requirements for countries to maintain some minimally adequate levels of economic growth, macroeconomic stability, and national and international peace were not included as core elements of the agenda of the UNFSS. Most of the cost estimates have taken those conditions for granted and focus on different components within food systems.⁵

A confusing aspect of the discussion on costs is the bewildering variety of numerical estimates, due to huge differences in methodological approaches related to, inter alia, the extent of inclusion and quantification of the SDGs; the definition of the types of food system externalities being considered; the definition of costs (for example, in the case of environmental externalities, do the cost refer to those for restoring environmental damage already done, for preventive

⁵ A long time ago, Abba Lerner cautioned that “an economic transaction is a solved political problemeconomics has gained the title Queen of the Social Sciences by choosing solved political problems as its domain...” (Abba Lerner, 1972, p. 259).

interventions, or do they also consider the cost of no action?); the type of climate change mitigation and adaptation interventions being considered; the baseline scenarios (or socio-economic and climate-change pathways) used to identify needs for action; whether the focus is on the entire food system or only the agricultural sector; or whether focus is on change in the world at large or just developing countries. Also, the estimation methods varied, including regarding units of measurement for valuing the costs (e.g., market prices, imputed values for externalities, purchasing power parity dollars, etc.).

In their contribution to the Scientific Group, members of the FLC focused their costing exercise on estimates for achieving different components of SDG2 (mainly hunger reduction; see Díaz-Bonilla, 2021a), following the studies reported in von Braun et al. (2020). One of those studies (Laborde, Parent, and Smaller, 2020) uses household survey data to better target food system transformation interventions, which helps to narrow the estimated additional costs and related financing needs: some US\$33 billion per year (of which US\$14 billion would need to be covered by international development institutions, and US\$19 billion by developing country governments). This level of funding would be needed to end hunger for more than 490 million people, double the incomes of some 545 million small farmers, and limit greenhouse gas emissions for agriculture to the commitments made by those countries under the Paris Agreement (as reported by 2020).

ZEF and FAO (2020) is the other study analyzed in von Braun et al (2020). It uses marginal abatement cost curves (MaCC) (usually applied to the economic assessment of climate change mitigation options) to quantify the cost-effectiveness of interventions, allowing ranking alternative actions towards the reduction of hunger and malnutrition. ZEF and FAO estimate the additional investment cost to lift between 800 million and 900 million of people from hunger by

2030 at US\$40 billion to US\$56 billion per year. With an additional budget of US\$195 billion per year to 2030, the same study estimates that up to 1.2 billion people would avoid facing hunger,⁶ while appropriate use of those resources would also contribute to meeting other SDG targets related to nutrition, smallholder incomes, and environmental protection.

The FLC document also assessed the estimates made by FOLU (2019), which calculates costs for the whole world, covering multiple SDGs, not just SDG2. The underlying methodology includes model-based scenario analysis and partial-equilibrium estimates of the costs of food system transformation defined in terms of ten “critical transitions.”⁷ The transitions are labeled “Healthy Diets” (US\$30 billion); “Productive & Regenerative Agriculture” (US\$35-40 billion); “Protecting & Restoring Nature” (US\$45-65 billion); “A Healthy & Productive Ocean”(US\$10 billion); “Diversifying Protein Supply” (US\$15-25 billion); “Reducing Food Loss & Waste” (US\$30 billion); “Local Loops & Linkages” (US\$10 billion); “Harnessing the Digital Revolution” (US\$15 billion); “Stronger Rural Livelihoods” (US\$95-110 billion); “Gender & Demography” (US\$15 billion). FOLU estimates the total additional investment and intervention costs of those transitions at between US\$300 billion and US\$350 billion per year between 2020 and 2030.

In addition to the SDG2 targets, the ten critical transitions would further contribute to achieve climate objectives, employment, gender equality, health, land and ocean conservation, and

⁶ This scenario may be relevant because while the projections under business-as-usual assumptions for the number of hungry people in 2030 would be a maximum of somewhat more than 900 million (including the impact of COVID and under intermediate scenarios of climate change), this does not include the possibility of the emergence of new humanitarian, health, or environmental crises.

⁷ The transitions include primary production in agriculture and fisheries and a large portion of other components of the food system, but not all the actions needed in the processing, transportation, and commercialization activities of the whole food system.

biodiversity. The total cost estimate would be equivalent to between 0.34% and 0.4% of global GDP (valued at in about US\$87 trillion at current prices in 2018-2019). FOLU (2019) further calculated that the potential new business opportunities created by the ten transitions could be as much as US\$4.5 trillion per year.

The FLC experience shows that without agreement on three basic premises, no fruitful discussion on financing strategies is possible. The underlying questions related to these premises include:

- What are the main problems related to the food systems that need to be addressed, and how important are they quantitatively?
- What type of interventions with its costs and operational approaches are needed to address the problems identified?
- What would be the metrics that indicate that the problem has been “solved” (the objectives of the transformation) and how they are collected and monitored?

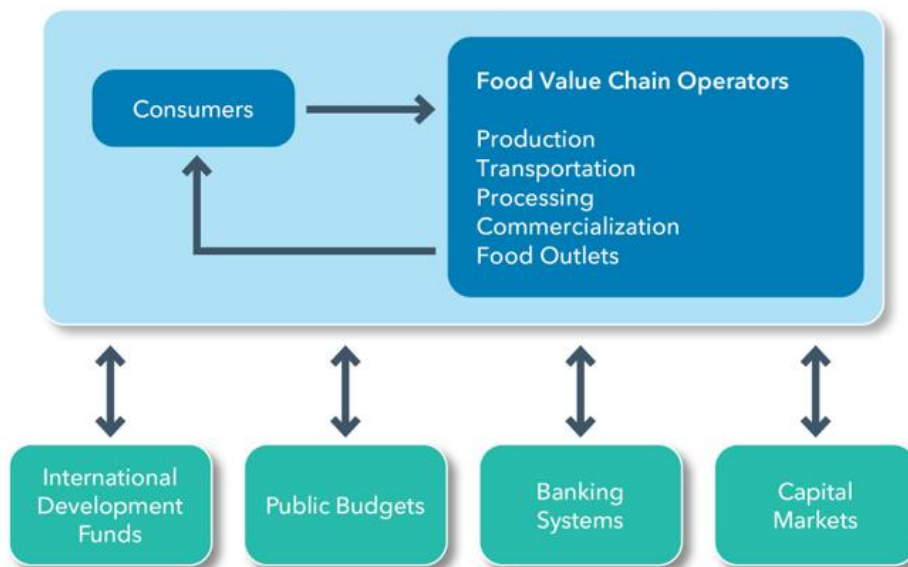
These questions were discussed from multiple angles central to the stakeholder dialogues, as discussed in section 3.3 below. The FLC first tried to clarify the contours of two additional issues to frame the discussions with stakeholders: how to understand the role of finance in food systems and, more specifically, what roles for public international and national funding sources.

The role of finance in food systems transformation

Assessing the initial proposals of the Action Tracks and those proposed during the dialogues also revealed diverging views and understanding of “finance”. Some understood as merely financial investments in capital markets and seeing opportunities for directing investors to supporting disruptive technologies or net-zero carbon approaches. Other mainly thought of roles for

commercial and public development banks, while yet others merely focused on official development assistance or national government budgets. IFPRI's approach, adopted by the FLC, instead, takes a broad view of financing arrangements to facilitate food system transformation, using the flow-of-funds framework laid out in Díaz-Bonilla, Swinnen, and Vos (2021). As shown in Figure 2, they distinguish six types of flows. Two are “internal” to food systems: food-related expenditures by consumers and which, in turn, generate the sales/revenues of operators in agrifood value chains. Four are “external” to food systems: international development flows (concessional and non-concessional loans, grants, and donations); public budgets (expenditures and revenues); banking systems; and capital markets.

FIGURE 2:Flow of Funds for Food Systems



Source: Díaz-Bonilla, Swinnen, and Vos 2021.

Considering this flow of funds, several questions needed to be addressed: (1) what is the current size of the relevant financial flows?; (2) how do they compare with the estimated costs for the transformation of food systems?; (3) are the different uses within the financial flows currently supporting activities that are conducive, detrimental, or neutral with respect to the desired

objectives?; and (4) how to steer those flows in support of scaling the investments and interventions needed to achieve sustainable food system transformation (in accordance with the SDGs and Paris Agreement)? Hence, the tasks at hand were to identify, promote and scale up the “good” uses of each of the funding sources for such transformation while discouraging “bad” uses.

Following further assessment and dialogues with stakeholders, the FLC decided against trying to quantify required levels for each type of funding. Instead, it focused on ways to steer existing and new financial resources towards the “good” uses. As a key outcome, the FLC identified five financial “imperatives,” focusing on investment decisions and incentives to encourage food system transformation. These “imperatives” are detailed further in section 3.4 below. We first describe some of the key issues discussed to arrive at these.

Increasing international development finance and national fiscal resources for food system transformation

Overall, international development funds currently going to agriculture and food systems, climate change action, and related uses are small compared with assessed needs. Therefore, one of the topics discussed was how to use existing funds more strategically to leverage and mobilize the vast liquidity in global private capital markets. Examples of such usage include mechanisms of blended and parallel financing; guarantees to de-risk agri-food investment projects; social or environment-themed bonds that can mobilize private investments addressing broad planetary and developmental objectives; and leveraging the International Monetary Fund’s latest issuance of Special Drawing Rights (SDRs) for development finance purposes (on the latter see Díaz-Bonilla 2021a and 2021b, and von Braun and Díaz-Bonilla, 2021).

Other analyses focused on the need to improve the allocation of public budgets for the transformation of food systems. Part of the discussion centered on the repurposing of the agricultural support governments currently provide, totaling around US\$800 billion per year worldwide (OECD 2022). Current support includes a range of subsidies and market price support measures implying both direct and implicit transfers to producers and/or consumers. More than 70% of this support is linked to either production levels or input use and is generally considered “harmful” for distorting markets and supporting unsustainable production practices (OECD 2021, 2022). Also, much support is for basic staple crop production seen to contribute to limited diversification of supply and keeping up the relative cost of healthy diets (Gautam et al., 2022; Laborde et al., 2020, 2021; FAO, UNDP, & UNEP 2021). Studies show there is much scope for repurposing this support for more R&D in productivity-enhancing and greenhouse gas-reducing technologies, incentives for the adoption of those technologies with the potential of greatly contributing to climate change mitigation and adaptation, improving welfare of farmers, reducing poverty, improving food security, and reducing the cost of a healthy diet for all (Gautam et al. 2022; Vos, Martin & Resnick 2022). Reorienting market incentives in agri-food markets this way would moreover help crowd-in more investment finance to support a sustainable transition. Governments also spend large sums of public money on subsidies on fossil fuels, which should be phased out to contribute to reducing GHG emissions (Parry, Black, & Vernon, 2021). More generally, there are many public expenditures that are relevant (positively or negatively) for the desired transformation of food systems, such as social safety nets including incomes, food and nutrition assistance (see some quantification and discussion in Díaz-Bonilla, 2021a). Therefore, broad public expenditure reviews, with a food-systemwide focus, are needed to help reprioritize budget allocations and improve targeting of expenditures in line with sustainable development

objectives. Should this be insufficient, more public revenues would need to be mobilized, requiring reviews of options to broaden the tax base without affecting incentives to food system transformation (Díaz-Bonilla 2021a; Díaz-Bonilla & Echeverría, 2022).

3.3 Main debates in the Finance Lever Consultation Process

The process of dialogue and consultations of the FLC involved broad-ranging discussions but centered on the key premises and questions raised in section 3.2 above.

What do we mean by “food system transformation”?

The literature offers multiple definitions of food system transformation⁸ and similarly, during the FLC consultations a multitude of views were voiced about what should comprise such a transformation. Many participants focused on the aspects related to primary agricultural production, while others discussed landscapes or the territorial aspects of rural development. Yet others concentrated on downstream activities in food processing, trade and distribution, while further proposals focused on influencing food demand and dietary choices.

The desired outcomes of such a transformation were also subject to debate. Broadly, there was agreement among participants that, food system transformation should be driven by (i) nutrition and health-related objectives; (ii) dynamic but competitive and diverse market forces and a private sector able to generate decent employment and share returns in a socially inclusive manner; (iii) productive and efficient use of scarce resources; and (iv) incentives for environmentally sustainable, climate-resilient and nature and biodiversity positive production and natural resource management. It was further acknowledged that these qualitative objectives

⁸ A discussion of the various definitions can be found in von Braun, Afsana, Fresco, et al. (2021).

would require quantification in order to serve policy decision making. Specifically, it was emphasized that such quantification would be needed to enable identification of the cost of interventions, the related financing needs, as well as of the expected social benefits and potential trade-offs. Clearly, the main objectives as defined above are consistent with the SDGs, particularly SDG2, which commits all countries to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture” by the year 2030.

However, food systems have implication for many other SDGS and for the climate objectives of the UN Framework Convention for Climate Change (UNFCCC). For instance, in the case of climate change, Article 2, paragraph 1a of the Paris Agreement commits countries to “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels...” Therefore, the cost associated with proposals for interventions targeting one or the other temperature increase likely will differ starkly.⁹

The dialogues also stressed the need for prioritization and proper sequencing of interventions to achieve the desired food system transformation. Unsurprisingly, stakeholders held different views about the hierarchy of actions to be undertaken and how to weigh possible trade-offs between different food system objectives such actions might generate. Participants from developing countries tended to wanting to prioritize employment, poverty reduction, and food security objectives, while those from developed countries appeared to give greater importance to

⁹ It is also important the link of the quantitative estimates across SDGs. For instance, SDG2 has been defined in different ways from zero hunger to some percentage that is supposed to reflect an unavoidable -minimum level of people suffering from hunger. But one of the targets in SDG1 is to eliminate extreme poverty. Since the extreme poverty line is supposed to be the value of the intake of a minimum of calories, then quantitatively, that would imply zero hunger and not some positive minimum value.

environmental and biodiversity related objectives, as well as to addressing poor diets and overweight and obesity.¹⁰ Such differences in priority setting are also reflected in the outlines of national plans presented by individual countries for the transformation of food systems (more on this in section 4).

What is “the true cost of food”?

The consultations of the FLC group also addressed the controversy around “the true cost of food.” Food systems generate negative externalities, which may not be properly priced (if at all) in the cost of production and the cost of food. Depending on the dimensions considered and the methodologies utilized, the estimates of the costs associated with the externalities generated by food systems range anywhere between US\$6 trillion (van Nieuwkoop, 2019)¹¹ and US\$12 trillion per year (FOLU, 2019)¹². These figures have been compared by some commentators with a total market value of all food produced, since, because of the negative externalities the actual economic value of the food sector is less (or even negative) after subtracting these from the sector’s market value. Conversely, should the cost of these negative externalities be internalized

¹⁰ An exercise during the consultations was to look at documents and compare how many times there were references to environment, nature, biodiversity, and so on (including topics such as coral reefs) and how many for nutrition, poverty, hunger, health, and similar (including references to women, the youth and/or disadvantaged groups).

¹¹ See van Nieuwkoop (2019) “Do the costs of the global food system outweigh its monetary value?” |JUNE 17, 2019. It notes that it may be a conservative estimate accounting only for five “externalities” of the current food system: malnutrition, food loss and waste, food safety, land degradation, and the greenhouse emissions from current agricultural (non-land related).

¹² As part of the Science Group there was a brief by Hendriks, et al. (2021) that also analyzed the costs of current externalities, which were estimated to about US\$19.8 trillion (US\$7 trillion in environmental costs, US\$11 trillion in costs to human life, and US\$1 trillion in economic costs).

in food prices (e.g. through taxes or regulation), the “true cost” of food would be much higher, with obvious consequences for the affordability of food for low-income families.

On the other side of this debate, some argued that also positive externalities should be considered when assessing the societal value created by the operation of food systems. Such positive food system externalities would include, for instance, higher labor productivity, lower health costs, better educational outcomes, and reduced risk of conflict associated with greater food security, lower undernourishment, and better nutrition.¹³ The current food system has allowed the world to move from feeding 3 billion persons in the 1960s to feeding almost 8 billion persons today. The per capita availability of calories and proteins has increased by 20% to 30% during this period. In 2020, real prices of agricultural commodities stood about 15% below their levels of the 1960s. Such a feat was accomplished with only a 6% increase in the area of agricultural land (2019 compared to 1960; data from FAOSTAT). Consequently, in terms of health, malnutrition for lack of adequate intake of energy and proteins dropped from the 11th cause of DALYs¹⁴ in 1990 (with a rate of 986 per 100,000 people) to the 40th in 2019 (with a rate of just 197 per 100,000 people) (IHME, 2019). The benefits of having cut DALYs that much should be significant in terms of health and productivity. The final document from the FLC tried to present both costs

¹³ For instance, the positive contributions of agriculture were emphasized by the message of the Ministers of Agriculture of the Americas to the UNFSS (IICA, 2021). This also shows different visions between groups directly in agriculture and those more interested in nutrition and the environment, as well as the divergence of perspectives between developed and developing countries regarding how to value agriculture and food systems. Also, the links between food insecurity and conflict are widely recognized (see e.g., FSIN 2022) though more research is needed to better understand this nexus (see e.g., Holleman et al., 2017).

¹⁴ The overall burden of disease can be better assessed using the disability-adjusted life year (DALY), a measure that combines years of life lost due to premature mortality (YLLs) and years of healthy life lost due to disability (YLDs). One DALY represents the loss of the equivalent of one year of full health.

and benefits in a nuanced way.¹⁵ It should be noted that other, in good part food-related, health risks have moved up the list of key determinants of lost disabled life years. According to the most recent global burden of disease study (2019), the greatest cumulative impact on health comes from the striking rise in metabolic risks (namely overweight/obesity, high blood sugar, high blood pressure, and high cholesterol), which accounted for nearly 20% of total health loss worldwide in 2019 (Murray et al. 2020).

Participants agreed on the relevance of proper accounting of the true cost of food but, lacking a common, widely accepted approach, the issue was left for further consideration. Consequently, the implications for financing food system transformation were not assessed. While related, ‘true cost accounting’ is not the same as estimating the cost of interventions and investments for sustainable food system transformation. True cost accounting focuses on the cost of externalities, which is not the same as the cost of alternative solutions. Of course, if the cost of externalities were to be internalized in market prices, incentives to food production and consumption would radically change and influence financing needs and flows. Hence, the matter should remain on the agenda of the UNFSS follow up.

What role for banking systems and capital markets?

During the consultations, special attention was paid to the role of national public development banks (PDBs). Especially in Africa and Latin America, many PDBs were dismantled during a wave of financial liberalization in the 1990s. PDBs were considered inefficient, fraught with

¹⁵ Unfortunately, the Executive Summary referred only to costs, missing the more nuanced wording of the main text. In any case, agreement on the quantitative levels of both costs and benefits will be difficult lacking an agreement common methodology. Also, some comparisons may be inadequate if costs are in stock values and the economic benefits may be in flows.

corruption, and captured by powerful private interests, all of which led to significant fiscal costs. Nonetheless, PDBs continue to be of importance in a variety of developing country contexts. Given the mixed past performance of PDBs, some participants doubted they should be assigned any significant role in the transformation of food systems. Others, in contrast, emphasized the significant command of resources that PDBs still possess in many countries, which could be leveraged to address failures in financial markets and deal with current underinvestment in the development of agriculture, food systems and rural areas. Participants agreed, however, that for PDBs to effectively perform such a developmental role, they should overcome their shortcomings of the past.

The FLC also analyzed the need to change how risk is assessed and integrated into financial decision-making, given rising risks such as climate change, social unrest, and litigation. The recommendation of the Task Force on Climate Related Financial Disclosures (TCFD),¹⁶ if implemented fully, would make companies, banks, and investors provide information, in a more transparent and uniform way, about financing activities with high GHG emissions. Currently, there are no similar mechanisms for disclosure of the other risks mentioned in the FLC (such as health and social ones).

The UNFSS dialogues also discussed ways to overcome the present lack of a robust pipeline of investable opportunities (including individual projects, impact investment funds, green bonds, and other instruments) with adequate profiles of risk/reward to attract investors, and clear, measurable, and monitorable impact objectives. In this regard, there were some proposals on

¹⁶ The Financial Stability Board (FSB), established by the G-20 in 2009 to ensure that the financial system is resilient to all forms of risks, created the TCFD in 2015, with the mandate of developing a set of voluntary disclosure recommendations for publicly listed companies about the climate-related financial risks those companies face.

investment funds (see below the proposal from Action Track 3), as well as discussions about project preparation/incubation/acceleration facilities, perhaps established within the CGIAR, to develop such pipeline and link private capital and banks with investable opportunities for small farmers and rural populations in social and environmentally relevant activities (see proposals in Díaz-Bonilla et al. 2018; and Apampa, et al. 2021).

Influencing consumer choices and production decisions in food value chains

Consumer expenditures determine the incomes of food systems operators. As such, consumer choices will also be central to determining the shape and scope of the transformation of food systems. Therefore, the consultations raised some possible policy interventions related to the basic determinants of demand: prices (including taxes and subsidies), incomes (including social transfers), social needs (including food aid, social safety nets, school meals, etc.), preferences (influenced by education, quality standards and other regulation), and “the food environment” (which, may be considered the market, interpreted in broad economic, institutional, and spatial terms.¹⁷

Regarding producers and food value chain operators, governments also influence production and investment decisions through regulations and controls related to health, nutrition, and food quality and safety, but further interventions will be needed to address climate objectives, such as stopping deforestation and reducing food loss and waste.

¹⁷ Some may include urban development and zoning requirements and incentives to avoid “food swamps” (i.e. geographical areas where only commercial outlets of non-healthy food are located), “food deserts” (i.e. geographical areas where there are no commercial outlets of healthy food); incentives to the developing of local circular economies; prohibition of sales of certain foods and beverages in or close to schools; and similar measures.

3.4 Proposals that emerged from the Finance Lever Consultation and Action Tracks

As mentioned earlier, the document prepared by the FCL identified five “imperatives”, focusing on investment decisions and incentives to leverage and steer finance for food system transformation flows (Food Finance Architecture, 2021):

1. Reshape public support and incentives using subsidies and market mechanisms to redirect capital out of unhealthy, destructive assets and towards the support of public goods.
2. Integrate health, environmental, and social risks into financial decision-making, future-proofing portfolios by measuring and disclosing food system risks and redirecting investments into new business models to mitigate exposure.
3. Scale fit-for-purpose financial products and business models, mobilizing private capital by de-risking and mainstreaming innovative financial instruments and regenerative assets while improving access to finance and services for primary producers through new supply chain partnerships.
4. Secure equitable food systems by rebalancing bargaining power, investing in rural infrastructure to drive sustainable production and development, and implementing fair prices and living wages to ensure access to affordable, healthy diets.
5. Strengthen food governance and stability as the foundation of the entire food system to build physical and financial resilience to shocks.

The dialogues within the FLC and with the Action Tracks also led to several proposals related to financial topics, outlined in Table 2.

Table 2. UNFSS Financial Proposals

Action Track 1	Establish a Zero Hunger Fund
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	Establish a catalytic SME financing facility to transform food systems
Action Track 3	200 million US dollars Climate Smart Food Systems Impact Investment Fund
	Soils Investment Hub
Action Track 4	Global matching investment fund for small-scale producers' organizations
	Invest in the future - making food systems finance accessible for rural people
	Public Development Bank Initiative to Catalyze Green and Inclusive Food System Investments
Action Track 5	Blended financing mechanism to small projects/initiatives locally owned by women and youth along agricultural value chain in Northern Uganda

Source: Summaries of proposals by UNFSS Action Tracks.

Several proposals related to adjustments in the operation of banking systems discussed before, such as “Establish a catalytic SME financing facility to transform food systems”; “Global matching investment fund for small-scale producers’ organizations”; and “Invest in the future—Making food systems finance accessible for rural people.” In particular, the “Public development bank initiative to catalyze green and inclusive food system investments” proposal evolved into a coalition (see also below). The proposal “Blended financing mechanism to small projects/initiatives locally owned by women and youth along agricultural value chains” referred to a particular approach (blended finance).

The two proposals from Action Track 3 focused more on instruments from capital markets. The “\$200M Climate Smart Food Systems Impact Investment Fund” intended to provide long-term expansion debt financing to SMEs operating in Asia Pacific, Latin America, and Africa to fund climate-smart interventions. Of course, the amounts needed are far larger than that, and the

support that small farmers and SMEs in food systems need include more than climate-smart interventions. The idea of creating preparation/incubation/acceleration facilities can help to develop larger programs and projects.

The idea of a dedicated fund to end hunger was presented by Action Track 1 and led to the suggestion of creating a Zero Hunger Alliance & Fund, with the specific objective of supporting institutionally and financially those countries that want to join a global partnership to end hunger (which included the idea of a zero-hunger bond guaranteed by the Special Drawing Rights; see Díaz-Bonilla, 2021a).

3.5 Follow-up on the Financial Lever's Proposals

The main follow up is to focus on the two main approaches to operationalize the vision of the transformation of food systems: (a) coalitions and (b) national programs (also called “pathways”). These are discussed further in section 4. The institutions participating in the FLC have also been interacting with the International Fund of Agricultural Development (IFAD). The UN Secretary General designated the Rome-based UN agencies as leads of the UN hub for the follow-up to the Summit, with IFAD in the lead to continue the financial work both through the coalitions and support to the preparations of the national plans.

3.6 Impacts of the Finance Lever and related consultations

Most participants in the dialogues were already keenly aware of the importance of finance in transforming food systems. The relevance of the FLC, though, was to help clarify the scope of finance as relevant to food systems and provide some guidance to core issues discussed in sections 3.2 and 3.3, such as how to approach the calculation of costs of alternative interventions and investments for food system transformation and how to assess financing needs and financing means covering six types of flows of funds. Finance is also central to the work of some coalitions

formed as part of follow up of the UNFSS. At this point, it is too early to assess the true influence of the work of the FLC. The way in which the national plans will be designed and financed will be a first test (see also next section).

4. LESSONS FROM THE GENDER AND FINANCE LEVERS

4.1 Potential for progress

Comparing the experiences of the GLC and the FLC provides some insights into the ongoing efforts toward sustainable food systems transformation. Both experiences give some grounds for optimism. The FLC made clear that there is ample scope to direct global and national financial resources to cover the perceived cost of the desired transformation of food systems. A wide range of credible instruments were identified that can be deployed to redirect and leverage existing resources and reset market incentives for food production and consumption. Similarly, the UNFSS process demonstrated political will to incorporate gender perspectives into food systems transformation activities and produced numerous strategies to do so in ways that would improve productivity, nutrition, and equity. Many participating governments and other actors have made commitments to enact such strategies. The challenge on both scores (finance and gender) is how to operationalize those interventions in practice. To that effect, the UNFSS (as well as COP26) proposed two mechanisms, as mentioned earlier: the formation of coalitions with a thematic focus and the design of integrated national plans for food system transformation (labeled “national pathways” at the UNFSS).

4.2 Coalition building

The coalitions are meant to support stakeholders working toward transformation and hold them accountable to their commitments. In the case of the “Making Food Systems Work for Women

and Girls” Coalition, there were already a significant number of similar organizations, alliances, and processes taking place in food systems prior to its formation. There were also concerns whether gender equality and the empowerment of women and girls should be a separate coalition or whether the issues should be embedded /mainstreamed in all other coalitions. While there are advantages to a mainstreaming approach, the mainstreaming and the strategic approach are not a one-or-the-other choice but rather complement each other. The goal is therefore to mainstream gender and the empowerment of women and girls into the other coalitions, the hub and national pathways as well as address the strategic priorities identified by the GLC through the Making Food Systems Work for Women and Girls Coalition. The coalition must seek to address areas that are not yet coordinated or receiving sufficient support for other sources. It can also seek to add value by documenting good practices related to the focus areas of different working groups, build networks with similar initiatives, and create connections among the private sector, researchers, governments, and civil society. The established governance structure has been clearly defined to ensure effective leadership and inclusion of stakeholders from all backgrounds. Most activity within the coalition will take place in the Coalition Working Groups (CWGs), which will develop and implement workplans according to designated priorities. A key challenge remains the hosting of the Coalition with all the Rome-based agencies having strong gender programs, as well as how to effectively engage other agencies and to support countries as they implement their national food systems transformation pathways.

As noted, in the case of finance, several coalitions were created as part of the follow up activities of the UNFSS, such as the “Coalition of Action for Inclusive and Sustainable Food System

Finance – The Public Development Banks (PDB) initiative,”¹⁸ and the “Good Food Finance Network.”¹⁹ The institutions that led the FLC continue to interact with those coalitions and with IFAD as part of the Rome-based UN coordinating hub.

However, not all the coalitions that came about as a result of the UNFSS have the same degree of institutional backing. In general, to be effective, coalitions must clarify their governance, funding, and operational structures and approaches, and those with overlapping topics may need to consolidate around common structures.

4.3 National pathways: design, implementation, and evaluation

By mid-2022, about 108 countries had prepared written outlines of national pathways for the follow up to the UNFSS. Most consist of short documents with qualitative expressions of general intentions but providing little detail. These pathways thus are in need of operationalization. The UN Secretary-General announced at the UNFSS that the UN resident country coordinators will be tasked to coordinate the support by UN organizations around the design and implementation of national programs of food systems transformation. Even more important is that the countries structure their own multi-stakeholder consultation mechanisms to support the design and coordination of their national plans. Countries with weak governance could benefit greatly from the establishment of institutional mechanisms at the country level and international support to help design, finance, implement and evaluate their national programs. The fiscal constraints entailed by the public responses to the COVID-19 pandemic and the recent global food price crisis increase the need for these country-based arrangements. In this regard, the work of the

¹⁸ <https://foodsystems.community/commitment-registry/coalition-of-action-for-inclusive-and-sustainable-food-system-finance-the-public-development-banks-pdb-initiative/>

¹⁹ <https://goodfood.finance/>

FLC suggesting different ways to shape and scale up the financial flows needed to support the programs and investments for the transformation of food systems should be most helpful during the current phase of operationalizing the national pathways.

5. CONCLUSIONS

The UNFSS was a critical opportunity to develop plans and catalyze actions towards food system transformation. Two central mechanisms of the summit were the Finance and Gender Levers of Change. Both mechanisms hosted dialogues, consulted with stakeholders, and helped develop actionable solutions that could address ongoing gender discrimination and financial challenges in food systems. In some cases, food system stakeholders were very receptive to the solutions proposed in the levers and Action Tracks and made commitments to enact them in their activities related to food systems. Both levers also established systems and partnerships to follow up with actors on progress toward their gender and financial goals, offer technical support, coordinate between different transformation activities, and ensure accountability. The UNFSS process has provided important insights to guide these efforts moving forward. While solutions have been identified and agreed upon, operationalizing these plans will pose challenges. Coalitions established in the wake of the UNFSS will need to have inclusive and effective governance structures, well-established sources of funding, and clearly delineated roles to effectively instigate change. National action plans will need to establish specific and measurable goals, as well as define the policies, investments and detailed programs needed to achieve the desired transformation of food systems. They must also establish clear incentive frameworks to mobilize stakeholders and coordinate effectively within and across national boundaries. The work of the Gender and Financial Lever Groups seem to have helped making important steps in that direction.

This said, the process ahead will be challenging. The follow-up to the UNFSS has, as yet, no accountability framework, lacking an agreed outcome document. The commitments to the national pathways are voluntary and the coalitions have been formed mainly among like-minded stakeholders. Hence, keeping governments accountable and encouraging behavioral change among all key market players will be most challenging. Present international and national mechanisms for the governance of agriculture and food is fragmented and, to say the least, poorly coordinated between the various dimensions of food, land and water systems (see e.g., Vos, 2015). In this regard, the process of the UNFSS could be seen as a social experiment born as a necessity, given these challenges and governance shortcomings. The national pathways, if building on continued broad stakeholder consultations, could well serve to overcome some of the fragmentation in the policy and regulatory environments for food systems. The coalitions might prove the basis for new social contracts around food system transformation. Strong will and activism will be needed, however, to make this still gigantic leap for mankind.

REFERENCES

- Addati, L., Cattaneo, U., Esquivel, V., & Valarino, I. (2018). Care work and care jobs for the future of decent work. Op. cit.
- Bonis-Profumo, G., N. Stacey, and J. Brimblecombe. 2021. Measuring women's empowerment in agriculture, food production, and child and maternal dietary diversity in Timor-Leste. Food Policy 102. Available at: <https://doi.org/10.1016/j.foodpol.2021.102102>
- Cunningham, K., Ruel, M., Ferguson, E., & Uauy, R. (2015). Women's empowerment and child nutritional status in South Asia: a synthesis of the literature. Maternal & child nutrition, 11(1), 1-19.
- Díaz-Bonilla, E. Loboguerrero, A.M. Verchot, L. Viglizzo, E. and Mirzabaev, A. 2018. "Financing a Sustainable Food Future." T20 Argentina: Food Security and Sustainable Development Task Force Brief. Washington, DC: IFPRI.
<https://t20argentina.org/wpcontent/uploads/2018/06/TF3-3.5- Task-Force-3-FINAL-v4-EDB-revisedafter-peer-review.pdf>

- Díaz-Bonilla, E. Swinnen, J. and Vos, R. 2021. “Financing the Transformation to Healthy, Sustainable, and Equitable Food Systems,” in *Global Food Policy Report 2021: Transforming Food Systems after COVID-19*, 20–23. Washington, DC: IFPRI. <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/134334/filename/134555.pdf#page=15>
- Díaz-Bonilla, E. 2021a. “Financing SDG2 and ending hunger.” United Nations Food Systems Summit. <https://dx.doi.org/10.48565/scfss2021-ba75>. For the Scientific Group (compilation in https://sc-fss2021.org/wp-content/uploads/2021/09/ScGroup_Reader_UNFSS2021.pdf)
- Díaz-Bonilla, E. 2021b. “Using the new IMF Special Drawing Rights for larger purposes: Guaranteeing ‘pandemic recovery bonds’.” IFPRI Blog. <https://www.ifpri.org/blog/using-new-imf-special-drawing-rights-larger-purposes-guaranteeing-%E2%80%98pandemic-recovery-bonds%E2%80%99>
- Díaz-Bonilla, E. and Echeverría R. 2022. “Climate Finance: Funding Sustainable Food Systems Transformation.” In *2022 Global Food Policy Report: Climate Change and Food Systems*, Chpt 5. Washington, DC: IFPRI. <https://doi.org/10.2499/9780896294257>
- Fang, P. Kennedy, A. and Resnick, D. 2020. “Scaling up and sustaining social protection under COVID-19.” COVID-19 Policy Response Portal Project Note 3. Washington, DC: IFPRI. <https://doi.org/10.2499/p15738coll2.134033>
- FAO, IFAD, UNICEF, WFP, and WHO. 2021. *The State of Food Security and Nutrition in the World 2021*. FAO. <https://doi.org/10.4060/cb4474en>
- FAO, UNDP, and UNEP. 2021. *A multi-billion-dollar opportunity. Repurposing agricultural support to transform food systems*. Rome: Food and Agriculture Organization of the United Nations. <https://www.fao.org/3/cb6562en/cb6562en.pdf>
- FOLU. 2019. “Growing Better: Ten Critical Transitions to Transform Food and Land Use.” The Food and Land Use Coalition. <https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/FOLU-GrowingBetter-GlobalReport.pdf>
- Food Finance Architecture. 2021. Financing a Healthy, Equitable, and Sustainable Food System 2021. <http://documents.worldbank.org/curated/en/879401632342154766/Food-Finance-Architecture-Financing-a-Healthy-Equitable-and-Sustainable-Food-System>
- FSIN. 2022. *Global Report on Food Crises 2022*. Rome: Food Security Information Network. https://www.foodsecurityportal.org/sites/default/files/2022-05/GRFC_2022_FINAL_REPORT.pdf
- Gautam, M. Laborde, D. Mamun, A. Martin, W. Piñeiro, V. and Vos, R. 2022. *Repurposing Agricultural Policies and Support: Options for Transforming Agriculture and Food Systems to Better Serve the Health of People, Economies, and the Planet*. Technical Report. Washington D.C.: World Bank and IFPRI. <http://hdl.handle.net/10986/36875>

- Global Health 50/50, IFPRI. 2021. *2021 global food 50/50 report: A review of the gender- and equity-related policies and practices of 52 organizations active in the global food system*. Washington, DC: Global Health 50/50. <https://doi.org/10.2499/p15738coll2.134569>
- Hendriks, S. de Groot Ruiz, A. Herrero Acosta, M. Baumers, H. Galgani, P. Mason-D'Croz, D. Godde, C. Waha, K. Kanidou, D. von Braun, J. Benitez, M. Blanke, J. Caron, P. Fanzo, J. Greb, F. Haddad, L. Herforth, A. Jordaan, D. Masters, W. Sadoff, C. Soussana, J. F. Tirado, M. Torero, M. Watkins, M. 2021. "The True Cost and True Price of Food." United Nations Food Systems Summit. For the Scientific Group (compilation in https://sc-fss2021.org/wp-content/uploads/2021/09/ScGroup_Reader_UNFSS2021.pdf)
- Holleman, C. Jackson, J. Sánchez, M.V. Vos, R. 2017. "Sowing the seeds of peace for food security: Disentangling the nexus between conflict, food security, and peace." FAO Agricultural Development Economics Technical Study 2. <http://www.fao.org/3/a-i7821e.pdf>
- IHME. 2019. *Global Burden of Disease*. GDB Compare | Viz Hub. <https://vizhub.healthdata.org/gbd-compare/>
- IICA. 2021. "Principales mensajes en camino hacia la Cumbre de las Naciones Unidas sobre los Sistemas Alimentarios, desde la perspectiva de la agricultura de las Américas." Rev. 1. Cuadragésima Primera Reunión Ordinaria del Comité Ejecutivo. San José, Costa Rica. 28-29 de junio de 2021. <https://repositorio.iica.int/handle/11324/17632>
- Kinkingninhoun-Médagbé, F. M. Diagne, A. Simtowe, F. Agboh-Noameshie, A. R. and Adégbola, P. Y. 2010. "Gender discrimination and its impact on income, productivity, and technical efficiency: evidence from Benin." *Agriculture and human values*, 27(1), 57-69.
- Kumar, N. Quisumbing, A. Gelli, A. Gentilini, U. and Shapleigh, S. 2021. "Toward inclusive food systems: Pandemics, vulnerable groups, and the role of social protection." In *2021 Global food policy report: Transforming food systems after COVID-19*. Chapter 5. Washington, DC: IFPRI. https://doi.org/10.2499/9780896293991_05
- Laborde, D. Mamun, A. Martin, W. Piñeiro, V. and Vos, R. 2020. "Modeling the impacts of agricultural support policies on emissions from agriculture." IFPRI Discussion Paper, No. 1954. Washington, DC: IFPRI. <https://tinyurl.com/y4cvmv5v> (Also available as World Bank Working Paper: <http://hdl.handle.net/10986/34453>)
- Laborde, D. Mamun, A. Martin, W. Piñeiro, V. and Vos, R. 2021. Agricultural subsidies and global greenhouse gas emissions. *Nature Communications* **12** (May 10). <https://doi.org/10.1038/s41467-021-22703-1>
- Laborde, D. Parent, M. and Smaller, C. 2020. "Ending Hunger, Increasing Incomes, and Protecting the Climate: What Would it Cost Donors?" *Ceres2030: Sustainable Solutions to End Hunger*. Washington, DC: IFPRI; Winnipeg, Canada: International Institute for Sustainable Development; Ithaca, New York: Cornell University. <https://hdl.handle.net/1813/72864>
- Lerner, A. 1972. "The economics and politics of consumer sovereignty." *American Economic Review* Vol. 62, No. 1/2 p. 258–66. <http://www.jstor.org/stable/1821551>

- Malapit, H. J. L., and Quisumbing, A. R. 2015. "What dimensions of women's empowerment in agriculture matter for nutrition in Ghana?." *Food Policy*, 52, 54-63.
<https://doi.org/10.1016/j.foodpol.2015.02.003>
- McFerson, H. M. 2010. "Poverty among women in Sub-Saharan Africa: A review of selected issues." *Journal of International Women's Studies*, 11(4), 50-72.
<https://vc.bridgew.edu/jiws/vol11/iss4/4>
- Murray, Christopher et al. 2020. "Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019." *The Lancet*. 396: 1223–49. [https://doi.org/10.1016/S0140-6736\(20\)30752-2](https://doi.org/10.1016/S0140-6736(20)30752-2)
- Neufeld, L. Huang, J. Badiane, O. Caron, P. Forsse, L. S. 2021. "Advance Equitable Livelihoods." United Nations Food Systems Summit. For the Scientific Group.
https://knowledge4policy.ec.europa.eu/sites/default/files/4_Action-Track-4_Scientific_Group_March-2021_0.pdf
- Njuki, J. Eissler, S. Malapit, H. J. Meinzen-Dick, R. S. Bryan, E. Quisumbing, A. R. 2021. "A review of evidence on gender equality, women's empowerment, and food systems." *Global Food Security*, 33, 100622. <https://doi.org/10.1016/j.gfs.2022.100622>
- OECD. 2021. *Agricultural Policy Monitoring and Evaluation 2021*, OECD Publishing, Paris.
<https://doi.org/10.1787/2d810e01-en>
- OECD. 2022. *Agricultural Policy Monitoring and Evaluation 2022*, OECD Publishing, Paris.
<https://doi.org/10.1787/7f4542bf-en>
- Parry, I. Black, S. and Vernon, N. 2021. "Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies," IMF Working Paper WP/21/236 .IMF, Washington, DC.
- Peters, H. E. Irvin-Erickson, Y. Adelstein, S. Malik, A. A. Derrick-Mills, T. Valido, A., and Esplage, D. 2019. "Qualitative evidence on barriers to and facilitators of women's participation in higher or growing productivity and male-dominated labour market sectors in low-and middle-income countries." Urban Institute. <https://tinyurl.com/2kjs5d2k>
- Quisumbing, A. R. Sproule, K. Martinez, E. M. and Malapit, H. 2021. "Do trade-offs among dimensions of women's empowerment and nutrition outcomes exist? Evidence from six countries in Africa and Asia." *Food policy*. 100. 102001.
<https://doi.org/10.1016/j.foodpol.2020.102001>
- Santoso, M. V. Kerr, R. B. Hoddinott, J. Garigipati, P. Olmos, S. and Young, S. L. 2019. "Role of women's empowerment in child nutrition outcomes: a systematic review." *Advances in Nutrition*. 10(6). 1138-1151. <https://doi.org/10.1093/advances/nmz056>
- Sethuraman, K., and Duvvury, N. 2007. "The Nexus of Gender Discrimination with Malnutrition: An Introduction." *Economic and Political Weekly*. 42(44). 49–53.
<http://www.jstor.org/stable/40276745>

- United Nations. Office of the High Commissioner for Human Rights, & Women, U. N. 2013. “Realizing Women's Rights to Land and Other Productive Resources.” UN. <https://tinyurl.com/48vr2f99>
- van Nieuwkoop, M. 2019. “Do the costs of the global food system outweigh its monetary value?.” World Bank Blog. June 17, 2019. <https://tinyurl.com/24tak8uj>
- von Braun, Joachim; and Díaz-Bonilla, Eugenio. 2021. Letter: Perpetual bonds can help states fight hunger. Financial Times. First available online on June 06, 2021. <https://www.ft.com/content/6c0fae16-0662-42b5-a2b5-90b4b6facc78>
- von Braun, Joachim, Kaosar Afsana, Louise O. Fresco, et al. 2021. “Food Systems – Definition, Concept and Application for the UN Food Systems Summit.”
- Vos, R. 2015. “Thought for Food: Towards a Strengthened Global Food Security Governance”, in: José Antonio Alonso and José Antonio Ocampo (eds.) *Global Governance and Rules for the Post-2015 Era*, New York: Columbia University Press. Pp. 249-282.
- Vos, R. Martin, W. and Resnick, D. 2022. “Repurposing agricultural support: Creating food systems incentives to address climate change.” In *2022 Global Food Policy Report: Climate Change and Food Systems*. Chapter 2, Pp.16-27. Washington, DC: IFPRI. https://doi.org/10.2499/9780896294257_02
- World Economic Forum. 2020. “Global Gender Gap Report 2020.” Geneva. <https://www.haindaniels.com/assets/HainDanielsGenderPayGapReport2020.pdf>
- ZEF (Center for Development Research, University of Bonn) and FAO. 2020. Investment Costs and Policy Action Opportunities for Reaching a World without Hunger (SDG 2). Bonn and Rome.