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Transforming food systems: Multi-stakeholder platforms driven by consumer concerns and public demands

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systems.

ARTICLEINFO	A B S T R A C T
<i>Keywords:</i> Multistakeholder platforms Food system governance Food system transformation Healthier diets	Food systems governance for healthy and sustainable diets remains a challenge. New structures are needed to better connect food systems actors. This paper argues that existing multi-stakeholder platforms (MSPs) have the potential to contribute to food systems governance by facilitating linkages between actors and scales. In a non- experimental study existing MSPs ($n = 89$) were explored in four countries addressing food and nutrition se- curity. A diagnostic framework was used to identify MSP's capacities to address governance principles like system-based problem framing, boundary spanning, adaptability, inclusiveness, and transformative capacity. Existing MSPs can play a role in spanning boundaries, thereby increasing adaptability and learning, but seem less

1. Introduction

Today's food systems are facing challenges in delivering healthy diets, reducing both hunger and undernutrition on the one hand, while addressing a rapid rise in obesity and diet-related non-communicable diseases on the other. Currently, 1 in 9 people - 820 million worldwide are hungry or undernourished, with numbers rising since 2015, especially in Africa, West Asia and Latin America (FAO, IFAD, UNICEF, WFP, & WHO., 2019). Around 113 million people across 53 countries experience acute hunger as a result of conflict and food insecurity, climate shock and economic turbulence (FSIN, 2019). More than one-third of the world's adult population is overweight or obese, a trend which has increased over the past two decades (Ng et al., 2014). At the same time, our food systems place an enormous burden on ecosystems. Securing safe and sustainable food for a growing population requires an integrated approach, as provided by a food systems perspective (Fanzo, 2019; Swinburn, 2019; Swinburn et al., 2019; Willett et al., 2019) (United Nations, 2015). Van Bers et al. (2019, p. 97) define food systems as involving 'complex networks of actors, activities, and flows that demand system approaches'.

Food systems could support multiple benefits such as the equitable provision of nutritious and healthy foods (Parsons and Hawkes, 2018),

environmental sustainability, and secure jobs (Béné et al., 2019). However, in order to do so they must be actively steered. Policies and governance arrangements interact with food systems in complex ways (Candel, 2014; HLPE, 2020; McKeon, 2015; Perez-Escamilla et al., 2017), due to the challenge of steering complex interactions between biophysical and social elements in food systems, interacting across multiple scales and between different regions. Different actors at multiple scales need to be engaged to better align actions across sectors to transform the system (Hospes and Brons, 2016). Thus food system governance requires coordination of multiple actors and decision-making processes (Hooghe and Marks, 2003; Stoker, 1998) and therefore an integrated perspective is needed (Béné et al., 2019; Dolan and Humphrey, 2000; Henson and Humphrey, 2010; Massoud et al., 2010; Micheletti et al., 2008; Renting et al., 2012; Schilpzand et al., 2010; Thompson and Scoones, 2009).

promising in shifting to systems-based narratives and thus may have limited capacity to truly transform food

Conventional governance arrangements seem inadequate to respond to these ambitions, suggesting the need for new ways to better engage the various food systems actors, and work more effectively across sectors, administrative jurisdictions, public and private domains, temporal and spatial scales and diverse normative frameworks (Breeman et al., 2015; Siddiki et al., 2015; Termeer et al., 2018). Multistakeholder platforms (MSPs) may be one such governance arrangement to facilitate

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food system governance.

There is already substantial literature providing insights into the potential of MSPs for agricultural research and innovation (Dusengemungu et al., 2012; Sanyang et al., 2016; Schut et al., 2016; Spielman et al., 2009; Tenywa et al., 2011), for food and nutrition policy development (Haggblade et al., 2019; Pittore, te Lintelo, Georgalakis and Mikindo, 2017; te Lintelo et al., 2014), and for food systems governance (Breeman et al., 2015; Termeer et al., 2013; Termeer et al., 2018). However, there is less literature providing insights into the actual role of existing platforms and partnerships active in the food system. Nor on how existing platforms might be further mobilized to support countries to shift to a more holistic understanding of the overall food systems, and a better understanding of complex feedback loops that food systems thinking makes visible.

This paper reports on existing MSPs addressing food and nutrition security and their potential role in effective food system governance. The study covers four countries: Bangladesh, Vietnam, Ethiopia and Nigeria. The paper concludes with recommendations for strengthening the role of existing MSPs in food system governance.

1.1. Conceptualizing food system governance and multistakeholder collaboration

Food system governance relates to 'processes and actor constellations that shape decision-making and activities related to the production, distribution and consumption of food' (van Bers et al., 2016). It encompasses both formal and informal actors, institutions, rules, norms and processes that shape food systems. However, 'food systems are rarely governed as systems, but their complexity demands a system approach' (van Bers et al., 2019, p. 97). In recent decades, the role of national governments in food system governance has declined while the role of corporations and civil society actors, such as consumer associations, has increased. Among the civil society actors, MSPs are gaining more prominence because they can be highly effective in addressing systemic food systems challenges including overcoming resistance to change and supplementing state capacity by building on the agency of stakeholders directly involved in different parts of the food system (van Bers et al., 2019).

This raises the question of how MSPs can be effective in supplementing the role of traditional governance actors. Termeer et al. (2018) developed a framework on the principles for effective food governance arrangements. This framework allows for analysing governance structures which integrate formal and informal food system governance arrangements and the actors necessary for effective food system governance. Our analysis of existing MSPs and their role in food system governance arrangements is guided by the following five principles:

1: *system-based problem framing* which avoids reducing the complex dynamics of food systems to a single problem and recognizes the involvement of many interacting subsystems.

2: *boundary-spanning structures* address the challenge of bridging different subsystems and related fragmented siloed organisational structures (Bizikova et al., 2014; Drimie et al., 2011).

3: *adaptability* addresses the challenge of uncertainties and volatility of food systems as complex socio-ecological systems. Enhanced flexibility, reflexive learning (by doing) and relational learning by sharing information across scales and communities are instrumental in adaptive food system governance.

4: *inclusiveness* underlines the political character of food system governance by addressing the question of whom to include and whom to exclude. Avoiding the often identified problem of limited citizen involvement (Hospes and Brons, 2016), is important to ensure the legitimacy, accountability, justice, fairness and equity necessary for sustainable development.

5: *transformative capacity* addresses the need to overcome inherent resistance within present food systems governance and to support transitions to fundamentally different food systems.

In the literature, a range of terms is used to describe multistakeholder collaboration. Most authors, however, agree that multistakeholder collaboration or platforms generally attempt to achieve goals, tackle challenges or address complex issues that affect the broader society and a diversity of actors within that society (Brouwer et al., 2015; Reid et al., 2015; Cadilhon, 2013; Nederlof, Wongtschowski and van der Lee, 2011; Schut et al., 2017; van Paassen et al., 2014). Platforms and partnerships are more or less formal engagements "bringing together a wide range of stakeholders around broad, general topics within a certain region or country, working across traditional sectors, across scales and integrate cross-cutting themes" (Guijt, cited in (Rappoldt, 2016).

2. Methods

This study was conducted as part of the Agriculture for Nutrition and Health (A4NH) Program (phase II, 2017–2021) of the International Food Policy Research Institute (IFPRI, 2016). An exploratory, non-experimental research design was used involving the identification and mapping of existing MSPs in each of the focal countries, followed by a validation of these findings with in-country workshops with actors from many of the identified MSPs.

2.1. Data collection and analysis

The identification and mapping of MSPs was done in 2017 and 2018. For this study, MSPs were defined as 'governed spaces for multistakeholder interaction, bringing together multiple actors (from different sectors), involving a certain level of institutionalisation'.

Based on this definition, a web- and desk-based search of MSPs working on nutrition and dietary issues was done using general search engines (Google, Bing). Key search terms were networks, platforms, partnerships, collaboration in combination with multistakeholder, (mal) nutrition, diet, and food security. This was supplemented by more specific searches for platforms known by the authors to be active in the focal countries. Initial findings were submitted to a so-called 'quick scan' to identify if the MSP's aims aligned with 'healthy diet considerations', fitted the defined concept of a MSP and if sufficient information was available for follow up analysis.

Further exploration was done using the following key MSP identifiers:

- *Shared aim:* the common goal bringing together multiple actors (from different sectors and backgrounds). An important element was the stated intent of partners addressing aspects of diet quality, chosen as a proxy to assess MSPs' interest in healthy diets because it encompasses aspects of both dietary *adequacy* (getting enough of desirable foods or food groups) and *moderation* (restraining consumption of unwanted foods, food components or nutrients) (Alkerwi, 2014; Herforth et al., 2014).
- *Structure*: including a wide range of MSP configurations, from loose, decentralised and open membership, to well-defined forms of space and governance, closely governed, centralized, and selective membership.
- *Urgency*: the underlying motive to form a platform, either driven by resource dependency (the need to bundle forces, capital, or knowledge); a need to respond to a major concern or crisis; or by societal developments seeking change through involvement of different sectors (Selsky and Parker, 2010).
- *Functionality* of the MSP, related to its dominant activities and functions: knowledge exchange, learning, research, negotiations, delivery of services or interventions.
- *Linkages* (across scales): involving international, national, regional, local levels.

The results were summarized (Excel) using the key MSP identifiers as

the primary coding structure. Next, a network mapping was done for each country to map the MSPs in more detail by identifying key clusters (organisational membership) and key connectors (organisations with multiple memberships). The mapping approach built on the MSP identification and tracking of their members. The network mapping was done by transferring the data into NodeXL sheets and using Gephi network analysis software (Bastian et al., 2009) to visualise the MSPs. Not all identified MSPs could be included in the mapping, due to lack of (sufficient) information on the members, or when MSPs were constituted of personal members rather than organisations (Herens et al., 2018).

The review data were validated and complemented by A4NH focal persons in each country, and MSP findings were presented in three countries (except for Ethiopia). The workshops were organised to capture participants' views on the role of existing MSPs in food system governance arrangements for healthier diets, and to discuss conditions and bottlenecks for successful functioning of MSPs (Schiffer, 2007; Schiffer and Hauck, 2010).

Finally, an integrated conceptual framework was developed on the basis of the five principles diagnostic framework for food systems governance arrangements, as a secondary coding structure (Termeer et al., 2018), combined with the MSP identifiers to diagnose the roles of MSPs in food system governance and reflect on their role in transforming food systems (Table 1).

3. Results

3.1. Overview of MSPs identified

A total of 89 MSPs were identified, 31 in Bangladesh, 15 in Vietnam, 16 in Ethiopia, and 27 in Nigeria (Table 2). To pool the different initiatives together, these MSPs were, in general terms, initiated or driven by:

- International development agencies such as UN institutions (f.e. FAO, UNDP, WFP), Scaling Up Nutrition (SUN) initiatives, the Global Alliance for Improved Nutrition (GAIN), and international NGOs;
- National NGOs and civil society organisations, for example consumer organisations and professional networks;
- Governmental food security and nutrition policy making bodies;
- Research organisations, usually affiliated with the CGIAR (the Consultative Group for International Agricultural Research);

Table 2

Overview of total MSPs identified by driving institution and by country.

Driving institution	Bangladesh	Vietnam	Ethiopia	Nigeria
UN	4	1	3	3
NGO/Civil society	14	1	4	15
Policy	2	3	4	3
Research	6	7	2	5
Humanitarian response	2	2	2	1
International donor	3	1	1	_
Total	31	15	16	27

- Donor driven (research) consortia in support of specific projects, (f.e. EU, USAID, or embassies);
- Humanitarian response organisations.

In some cases, the distinction between driving institutions was a bit arbitrary because driving institutions seem to play multiple roles in various MSPs (e.g. as donor as well as implementor), observed for instance in humanitarian actions.

3.2. MSPs' narratives

The narratives of the MSPs were analysed to identify their main aims and assess how they frame the problems and how they deal with interlinked food system issues. This analysis showed that collaboration among actors was often based on the notion that international institutions, governmental actors, (international) NGOs and businesses need to draw from different sectors to solve problems within their own sector. Additional motives for participating in MSPs were intended costefficiency and improved coordination, most explicitly emerging in (UN) humanitarian response-related MSPs. In all countries, the dominant narrative of most MSPs related to food insecurity, the persistently high rates of child and maternal malnutrition, and the need for dietary improvement (Fig. 1). MSPs generally focus on promoting consumption of nutritious foods with an emphasis on dietary adequacy rather than on moderation.

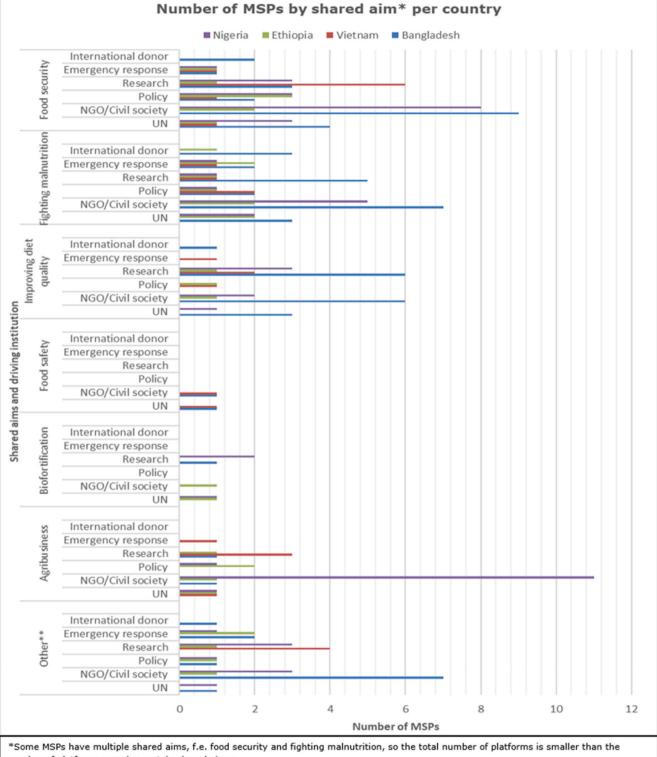
A few MSPs were actively addressing specific topics such as food safety or biofortification. In Nigeria, particularly, several NGO/civil society-driven MSPs were found addressing the development of the agricultural sector for improved food security from a market-led perspective. The available documentation generally showed MSPs tended to focus on a single issue, for example "promoting fortified food for all", rather than multiple strategies to address various aspects of

Table 1

Diagnosing the role of MSPs in food system governance arrangements^a.

Food system challenge	Governance principle	FSG indicator	Related MSP identifier
To deal with interlinked issues, drivers, and feedback loops	System-based problem framing	Beyond one dimensional problem definition Integrative narrative Feedback mechanisms Room for reflection	Shared aim/Ongoing discourseUrgency
To organize connectivity across boundaries of sub-systems involved	Boundary-spanning structures	Interaction across levels and sectors Public-private partnerships Spanning siloed governance structures	 MSP composition Key connectors Linkages across scales
To respond flexibly to inherent uncertainties and volatility in non- linear systems	Adaptability	Monitoring systems Decentralization and self-organization Flexibility Learning while doing	StructureFunctionalityLeadership
To involve actors who are affected by the problems and the proposed policies	Inclusiveness	Involvement of marginalized voices Involvement of local communities and networks Social differentiation amongst participants	MSP compositionStructure
To overcome path dependencies and create adequate conditions to foster structural change	Transformative capacity	Addressing path dependencies and lock-ins Leadership Resources Political will	 Shared aim/Ongoing discourse Key connectors Linkages across scales Leadership

^a Based on the five principle diagnostic framework for food systems governance arrangements ((Termeer et al., 2018).



number of platforms covering certain shared aims; ** The category `Other' includes aims such as: (nutrition) policy coordination, scaling nutrition interventions, health, achieving SDGs, youth &

agriculture, nutrition sensitive agriculture, equity & land reform, (coordination of) humanitarian aid.

Fig. 1. Number of MSPs by shared aim per country.

malnutrition or food insecurity. These findings suggest that the MSPs used a relatively 'classic' vocabulary of (child and maternal) malnutrition and health, and food production for dietary improvement, rather than a broader narrative around healthy diets or food systems. Zooming in on the narratives showed that the MSPs gravitated towards the following thematic areas: food and nutrition policy coordination and implementation; nutrition and agricultural (crop) research; humanitarian and emergency food aid; food safety, particularly found in the two Asian countries.

Overall, the activities and outputs of the MSPs related to:

- Joint action for awareness raising, campaigning and advocacy around the central theme of the MSP;
- Capacity building and knowledge sharing;
- Support to (nutrition) policy development and coordination;
- Coordinating and scaling of (nutrition) interventions;
- Coordination of humanitarian actions and resource mobilisation;
- Research activities and dissemination of findings.

3.3. MSPs as boundary spanning structures

Using network mapping, the composition of MSPs and their ability to organize connectivity across boundaries of involved sub-systems were explored. Our MSP mapping included (sub)national MSPs as well as MSPs linked to international institutes. In all countries, some MSPs succeeded in clustering many actors, but generally MSPs consisted of 20-40 institutional members. Some of the identified MSPs were excluded from the network mapping because traceable information about specific members was lacking, In most MSPs members were predominantly (I)NGOs, UN, international (research) organisations, and government policy actors. Actors involved in food production or consumer affairs were also present. The private sector and actors involved in food storage, transport, trade, transformation, retail and provisioning were relatively limited or absent as members of MSPs. This suggests that MSPs are unlikely to play a (large) role in vertical supply chain coordination. In addition, relatively few connections between sub-national and national level MSPs were identified, suggesting that the different MSPs act within their own local or regional environment rather than reaching out to other MSPs. This suggests that MSPs' role as a mechanism to connect actors across different scales is limited.

Apart from similarities between MSPs in the countries, differences related to the nature of actors involved, were also observed, usually as a result of different governmental systems in the countries. For example, Nigeria has a federated system and significant regional variation exists in terms of language, culture, and economic development, whereas Bangladesh and Vietnam both have stronger centralized government structures and greater homogeneity in terms of language and culture in their population. In all countries differences in regional foci did occur, relating (in part) to disaster or conflict prone areas where a greater emphasis on humanitarian relief and emergency food aid was found. Furthermore, MSPs seemed to operate mostly from capitals and other large cities, with a limited downstream flow of information to other parts of the region/country, often leading MSPs to be more focused on urban issues.

The identified key connectors between MSPs showed that these were usually institutions with ties to or imbedded in international organisations or governmental structures. Large international donors (DFID, EU, USAID) and UN institutions (WHO, UNICEF, and FAO) were found as major connectors. National connecting institutions were mainly line Ministries (often Livestock and Fisheries or Health), with the Ministry of Agriculture being a critical key connector across all countries. Actors from local or national civil society organisations or businesses rarely served as key connectors.

3.4. MSPs contributing to adaptive governance and inclusiveness

MSPs' structure, functionality and leadership were explored to assess their ability to respond flexibly to uncertainties and volatility in food systems. We identified MSPs involved in formal food governance arrangements, MSPs working on agricultural and nutrition research projects, and MSPs driven by individual members, rather than institutional priorities, around a particular topic of concern.

MSPs linked with formal food governance processes were often led by global actors. Usually one or two international organisations served as chair/co-chair of the MSP, mostly UN agencies together with relevant government bodies. For example, in all countries we found the global SUN Movement actively supporting the formation of MSPs, funded by key donors such as the EU, USAID, DFID or bilaterally, to assist in developing national nutrition plans, working directly with the national government. The coordination between line ministries generally served to improve horizontal coordination and implementation of national multisectoral nutrition programmes and to support multisectoral policymaking. These joint leadership arrangements were created to support a sense of mutual ownership and responsibility for nutrition issues, seeking to secure institutional buy-in from all line ministries which impact nutrition outcomes, rather than allowing nutrition to remain tucked away inside (usually) the ministry of health. These joint leadership arrangements were often led by an office higher than a specific ministry, for example the office of the Prime Minister.

MSPs linked with research projects were mainly driven by donors or CGIAR agencies such as IITA in Nigeria, IFPRI in Bangladesh and Ethiopia, and CIAT in Vietnam, also involving various national and international universities. The CGIAR agencies were leading in institutionalising the MSPs and generating research-related outputs.

The issue based and professional MSPs were usually driven by a collaboration between individuals and included voluntary membership. Some of these MSPs used closed channels within social media, for example WhatsApp, (e.g. the Nigerian Nutrition Association), making further desk-based review of their structure and activities impossible.

Funding of the MSPs was often project or programme based, with a set timeframe, based on core funding from key international donors. Upon completion of the assignment or closure of the project, many MSPs tended to turn inactive or fall apart. This seemed to apply particularly to the externally supported MSPs for food policy arrangements and research driven MSPs. Other MSP governance concerns were lack of clarity in vision or objectives, lack of interagency information exchange and coordinated leadership, undesirable power imbalances, gaps in the capacities of field level workers, data harmonisation problems, and dependency on individuals active in MSPs rather than on institutions.

3.5. MSPs contributing to transformative capacity

The transformative capacity of MSPs and their ability to overcome path dependencies and create adequate conditions to foster structural change was explored by re-examining the MSPs' discourse, key connectors, linkages across scales, and observations on leadership. As mentioned, the malnutrition agenda dominated the discourse in most MSPs. International organisations, varying from donors to research institutions, were heavily engaged in driving the MSPs' agenda setting, in guiding the MSPs' organisational design and in providing the necessary resources. Some persistent characteristics were observed in MSPs, such as a focus on access to, and availability of nutritious foods, or food safety, whereas political issues, existing inequalities (e.g. between population groups), or environmental issues did not seem to be translated into the work of MSPs. The MSPs supporting governmental planning and policy implementation, as well as those structured around agricultural and nutrition research projects were particularly limited in terms of flexibility, adaptive capacity and inclusiveness because their activities were bounded by predefined scopes of result definitions, offering little room for adaptation to changing realities. These

Table 3

Conditions and bottlenecks for MSPs to adopt an effective role in food system governance.

FSG principle	FSG indicator	Current challenges and barriers	Supportive conditions for MSPs in FSGA
System-based problem framing	Beyond one dimensional problem definition	 Prevailing narrative of individual (organisational) members of the MSPs on reducing malnutrition. Current policy focus targeting specific groups at risk of malnutrition (children under 5 years of age, lactating mothers) instead of shifting to healthy diets for the overall population, and groups at risk (e.g. elderly). 	• The mind-set of policy makers and other actors needs to change from food security to food systems for healthier diets whilst not forgetting about food insecurity.
	Integrative narrative	 Healthy diets are not high on agenda of MSPs as a result of lack of awareness among stakeholder on healthier diets and foods systems thinking. Media is spreading information on healthy and safe foods that is not necessarily evidence based. This affects the efforts of MSPs to inform consumers correctly. 	 Build food systems understanding among MSP members and policy makers. Develop complementary materials for behavioural change campaigns (BCC) on healthy diets. Build on existing evidence on the links between diet, obesity and non-communicable diseases. Include food systems and healthy diets, in guidelines and curricula for education.
	Feedback mechanisms	NI ^a	 Identify a lead MSP to coordinate MSPs active in food systems.
Boundary-spanning i structures i i i i i i i i i i i i i i i i i i i	Room for reflection Interaction across levels and sectors	 NI Results of MSP activities are often not communicated to policymakers. 	NIUsing existing MSPs for information sharing.Support participation of higher-level staff in MSP activities.
		 MSPs have limited influence on government policymaking. processes because government staff with influence in policymaking are not involved in the MSPs, and/or government staff sends less influential staff to MSP meetings. 	
	Public-private partnerships	 Connections between MSPs and industry are weak or absent. Risk of conflicts of interest and/or distrust. 	 Targeted efforts to engage private sector. Support efforts to build trust between nutrition and private sector actors. Recognize the potential of engaging actors from private sector in enforcing opportunities for sustainability. (e.g. funding) and outreach across a wider range of food system actors.
	Spanning siloed governance structures	 Generally, the step from information sharing to concrete actions is lacking, as well as follow up on action points or agreements made during meetings. (I)NGO involvement in some countries brings language and cultural barriers which often hampers communication (e.g.in Vietnam, Bangladesh). 	 Formulate a strategy for better coordination across MSPs. Appoint coordinating body to support alignment with national goals. Involve international organisations.
Adaptability	Monitoring systems	 Calls from government for MSPs are generic and do not guide their development and functioning. Government calling for the establishment of (technical) working groups or MSPs as part of the national policy processes, but lacking consistency in government's investment. MSPs not involved in monitoring the implementation of policies. 	Move from voluntary commitment to more formalized commitment with clear responsibilities for MSP members.
	Decentralization and self-organization	 Poor (inter)sectoral collaboration within and between MSPs limits their development and potential to self-organize for joint action and advocacy. 	• Use/mobilize MSPs to bring many different types of stakeholders together.
	Flexibility Learning while doing	NIRelevant initiatives remain at small scale or as pilot projects.	 NI Invest in learning from and expand on (small scale) initiatives driving change in current discourses, e.g. move from narratives on reducing malnutrition to those on on promotion of healthy diets.
Inclusiveness	Involvement of marginalized voices Involvement of local communities and	• Consumers/consumer groups and farmer groups are often left out of MSPs and/or operate as groups in isolation. <i>NI</i>	• Use MSPs to connect consumers with producers. <i>NI</i>
	networks Social differentiation	NI	NI
Transformative capacity	amongst participants Addressing path dependencies and lock- ins	• The absence of/unclear TOR and Action Plans for MSPs, hampering clarity of objectives and roles of different MSPs and risks duplication or overlap of MSPs activities.	Define clear strategies and plans of operations for each MSP
	Leadership	 Poor MSP leadership can lead to unresolved conflicts of interest within the MSP, lack of clarity on objectives and thus limit capacity for decisive action. 	 Support/enhance leadership skills of MSPs. Showcase so-called role model MSPs for others to learn from Enhance external communication of the MSPs to increase awareness on the MSPs' activities, increase opportunities for collaboration and avoid duplication of work.
	Resources	 MSPs do not undertake joint fund-raising efforts, which threatens their sustainability. 	• Engage with (I)NGOs, (international) donors and private sector parties.
	Political will	NI	NI

 a NI = not identified.

observations, in combination with the limitations faced by most MSPs with respect to consolidate funding arrangements and membership raise some key questions about MSPs' transformative capacity in food systems.

4. MSPs at play in food systems governance arrangements: reflections

While MSPs hold much potential, the ability of existing MSPs to play a relevant role in food system governance arrangements depends on their functionality and their ability to effectively bring together actors for collaborative action. The next paragraphs offer a reflection on the role of MSPs in food system governance, the challenges and supportive conditions, as summarized in Table 3, building on the five principles of the food system governance arrangements diagnostic framework (Termeer et al., 2018).

4.1. System-based problem framing

The MSPs seem to act predominantly as convergence spaces to address key issues of (national/local) urgency, such as malnutrition among children and women, quality of food, or food safety concerns, presenting their main aims in narrowly defined problem frames. Healthy diets were not high on their agenda, maybe due to a lack of awareness among stakeholders about food systems in general and on healthier diets, or due to lack of priority among donor agencies for these issues. Such an urgency-driven mobilisation of stakeholders, found in formal as well as in informal governance arrangements, seems to draw mostly on the need to develop a joint problem understanding to generate commitment for action, and, if needed, to advocate for other actors to join.

Resource-dependency (Selsky and Parker, 2010) emerged as another key driver for MSPs, whereby organisations participate in MSPs to navigate the challenges of limited resources and overlapping interests. This focus might be related to the fact that often international bodies seem to push platform initiatives 'from behind', in their efforts to establish coordination structures. No strong indications were found for the presence of feedback mechanisms and reflexivity, i.e. processes "in which people engage to discuss tensions regarding group objectives, recognize contradictions, and deal with differences in a respectful way" (Clancy, 2014, p. 4).

Overall, it is not evident that MSPs, collectively, embrace systembased problem framing. Currently, MSPs are not yet supporting broader food systems governance (Gillespie, van den Bold and Hodge, 2019, p. 123), but limit themselves to the aims and objectives of nutrition governance emphasizing the preferred nutrition outcomes and perhaps neglecting other food systems outcomes such as sustainability or socio-economic outcomes (UNSCN, 2017).

4.2. Boundary-spanning structures

Many MSPs, particularly those driven by international actors, were aligned with formal food governance arrangements, usually through MSPs driven by international research to inform food security policies or MSPs supported by global initiatives such as the Scaling up Nutrition Initiative (SUN, 2014). At the same time, MSPs tend to maintain their focus to their own aims and activities rather than trying to connect with other MSPs. Poor collaboration within and between MSPs repeatedly emerged as a concern, because this limits MSP development, their ability to self-organize and come up with joint action and advocacy plans.

Analysis of key connectors found that organisations that are wellconnected can link different MSPs and realize their boundary spanning potential. Boundary spanning work is about exploring, negotiating, disrupting and realigning organisational and other boundaries and requires brokering to re-align critical boundary dissonance in multistakeholder settings (Velter et al., 2020). The identified connectors were mostly international organisations and formal state actors. Building further understanding on what drives and constrains boundary-spanners, i.e. actors who initiate and manage the interfaces between the international-government boundaries, between government-community boundaries, and between MSPs, could help strengthen the boundary spanning potential of MSPs.

4.3. Adaptability

Barriers and challenges hindering MSPs to be more adaptive in food systems governance include conflicts of interest; coordination problems; lack of continuity; multiple national policies; and unclear structure and rules. Sustainability of MSPs is also a critical challenge. Many MSPs were established within a predefined time frame, dependent on donor funding and with a specific goal, such as to disseminate findings from a project. Clear indications for adaptability offered by the food system governance framework, were not traced in the MSPs. Poorly organised monitoring, evaluation and learning processes, limited potential to self-organize, (seemingly more prominent in the case of government aligned MSPs), and limited flexibility prevent adaptability. This is in line with other studies reporting similar constraints in supportive conditions for effective multi-stakeholder processes (Kok et al., 2019; Saint Ville, Hickey and Phillip, 2017; Tesfaye et al., 2019; Turner et al., 2020). This may be explained by the urgency-driven mobilisation strategies used by most MSPs, with solution-driven agendas demanding direct actions and concrete results which are perhaps at odds with adaptability.

4.4. Inclusiveness

Several categories of actors were routinely missing in the MSPs such as citizens, including consumers or community voices, and the private sector. A few examples of agro-industry engagement were found, but not in all countries. Scepticism and distrust were observed with respect to involving the private sector due to fear of conflicts of interest. At the same time, private sector involvement was well recognized for their important role in food systems as well as for their potential for funding.

Various authors (Hospes and Brons, 2016; Termeer et al., 2018) also observed that limited involvement of civil society and private sector remains a challenge in food system governance. Dealing with actor dynamics, such as social relations and power differences, seems a critical challenge for many MSPs as it relates to established political contexts and anchored inequalities which are often sensitive and hard to tackle (Maestre et al., 2017). Additionally, inclusiveness is not inherently assured in MSP formation (Dentoni et al., 2018). As Dentoni et al. (2018) point out MSPs emerge when a particular problem becomes urgent for specific stakeholders who believe that they need to intervene, but cannot do this on their own (Roloff, 2008). Collaboration typically starts with a small number of organisations, usually actors who self-select as pioneer members (Zeven et al., 2016) based on the belief that together they are the "right ones" to address the problem at hand (Schouten and Glasbergen, 2011). Although MSPs are keen to claim legitimacy based on the participation of "all categories of stakeholders" (Cheyns and Riisgaard, 2014), it is generally this pioneering group which negotiates the terms of engagement and the conditions that determine further MSP membership (Zeyen et al., 2016). New member recruitment may easily become a political process when the founding members prefer certain stakeholders over others, thus hampering inclusiveness (Fransen and Kolk, 2007).

4.5. Transformative capacity

Overall, no evidence was found that MSPs were actively engaged in dialogues addressing the need to move to fundamentally different food systems which provide healthy and/or sustainable diets. Furthermore, challenges around human and financial resources, and weaknesses in leadership and collaborative skills are likely to jeopardize MSPs' governance structures and durability. Potentially, the transformative capacity of food policy-related MSPs and topic-driven MSPs lies in activities as raising awareness, advocacy, harmonisation or lobby. The transformative capacity of research driven MSPs relates to making a change in the narrative based on showcasing evidence and best practices. Some of the MPS, for example national SUN platforms, have successfully shifted the framing of nutrition issues, moving from a technical based framing of nutrition to understanding that (lack of) progress is largely due to political and wider societal factors (SUN, 2021). This suggests that while MSPs have not (yet) played a central role in food system transformation there may be potential, MSPs in their current formation may be less well suited to support this transformation unless some critical issues are addressed.

5. Discussion

The exploratory approach combining a review with network mapping generated a structured overview of existing MSPs in the four countries. By characterising MSPs in terms of shared aims, structure, composition, and connections, their role as collective actors in food system governance was described. By applying the five principles of the diagnostic framework the strengths and weaknesses in the current practice of MSPs could be identified.

Limitations to our study relate to the web- and desk-based nature of our empirical data, limiting the researchers to the use of open access sources, written in English. This may have resulted in a skewed focus on international research and donor driven MSPs. There may be other MSPs active in the field, primarily using local languages for communication which were not captured, as well as MSPs lacking online presence. Another difficulty was information from websites being out-dated or having static information updates. Information on functionality and structure of MSPs was scarce or absent, particularly in cases of subnational MSPs and the social media based MSPs. The implementation of validation workshops was a valuable addition to our data and enriched our findings, but only partially addressed the potential gaps in observations mentioned.

Our findings also show that a (multi-stakeholder) platform definition is not easy to apply, since many of the MSPs did not necessarily come from different sectors or were collaborative projects with a set time frame and defined end date rather than a structural MSP.

Still, this paper makes the argument that healthy and sustainable diets need a wider set of food system governance arrangements than provided by established governance arrangements and policies MSPs can play a relevant role here. Based on this work, it can be concluded that existing MSPs are generally driven by a societal concern, e.g. child malnutrition, or food safety, and contribute to raising awareness and mobilising actors for advocacy, harmonisation or lobby. In doing so, existing MSPs build on the assumption that they contribute to the process of policy development and transformative change primarily through urgency-driven action in response to consumer concerns and public demands. In addition, in the academic literature, as well as in practice, nutrition governance and food system governance coexist side by side rather than as an integrated governance arrangement. This study found that existing MSPs currently prioritize nutrition governance, whereas food system governance arrangements are not (yet) a priority, thus limiting their ability to drive transformative change. This was found across all four countries involved in this study, and across the different types of MSPs examined. Apparently, similarities in MSP structures, MSP governance and actor dynamics and the challenges they face are remarkably similar in the different cultural contexts and national policy frameworks and in the different countries.

We also found that there are limits to what existing MSPs can contribute to food system governance arrangements for food system transformation and that we should be cautious to expect too much from MSPs. The evidence is not very strong that MSPs are naturally able, willing or capable to play a role in transformative change without proper support strategies. MSPs have potential to play a role in food system governance arrangements but only if supported in developing stronger MSP governance capabilities.

5.1. Strengthening MSP governance capacity

A key challenge is to find ways to strengthen MSPs' capacity for transformative change through enforced system-based problem framing and collaborative structures supporting horizontal and vertical coordination. We identified several actions that could strengthen existing MSPs in such a role.

First, a guiding strategy is required for food system governance at country level, involving stakeholder mappings, including MSPs, and offering support for MSPs to carry out designated activities and showcase good practices. MSPs are not able to drive such systemic changes by themselves. They would need other, powerful actors in the food system (e.g., private sector actors in food, processors, retail, consumer organisations and civil society organisations) to join.

Second, the boundary spanning capacity within and between MSPs should be strengthened. This involves capacity development at the individual level (skills, intentions and personal characteristics), the interaction level (trust between the boundary spanners from different organisations, including MSPs), the organisational and institutional environment (responsiveness, culture) and the wider political and policy environment (van Meerkerk et al., 2017). Several studies highlight strategies to strengthen adaptive capacities and inclusiveness of MSPs, such as strengthening the capacity for social learning (Lindsay, 2018) strengthening leadership skills, clearly defining responsibilities, and ensuring effective integration of knowledge and insights, human capacity and coordinated participation in decision-making (Dutra et al., 2015). Strengthening the bridging role of key connectors, invest in their skills and thus in the boundary spanning capacity of MSPs, could contribute to better different sub-systems connectivity, such as public-private partnership-, (sub)regional-, or intersectoral connectivity.

Third, MSPs' role in food system governance arrangements could be strengthened by enhancing their adaptive capacity and inclusiveness geared towards integrating social learning, leadership, and clarity on roles, responsibilities, and participatory decision-making. In addition, practical capacities could also be enhanced, such as access to implementation packages, outreach to the media, and effective funding.

6. Conclusion

This study contributes to the literature on food system transformations for healthier diets in the light of the debate on how MSPs can support food systems governance arrangements and considers complex societal challenges and supporting processes of systemic change. Zooming in on how MSPs organize their governance processes to better understand and predict the complex relationships with systemic change and societal problems, could help identify how existing MSPs can be supported to be more inclusive and include a more diverse range of voices (civil society, citizens, etc), while at the same time support their ability to mitigate key challenges (e.g., conflict of interest).

Another contribution of this study is the observation that there is scholarly work ongoing on food systems governance as well as nutrition governance, but somehow these domains seem quite separate. In many ways, the goal of this project, supporting food system transitions to a narrative about healthy diets really brings those two issues together.

Contributors

Marion Herens, Kat Pittore and Peter Oosterveer jointly developed the design, and methodology of the study. Marion Herens organised the implementation of the study. Data collection and analysis was done by Marion Herens, Kat Pittore, Sanne Bakker, all from Wageningen Center for Development Innovation (WCDI), Wageningen University and Research, and Bram Peters, formerly WCDI, currently CordAid.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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List of Acronyms

A4NH	Agriculture for Nutrition and Health
CIAT	International Center for Tropical Agriculture
CGIAR	Consultative Group for International Agricultural Research
DFID	Department for International Development ¹
EU	European Union
FSG	Food System Governance
FSGA	Food System Governance Arrangement
GAIN	Global Alliance for Improved Nutrition
IFPRI	International Food Policy Research Institute
IITA	International Institute of Tropical Agriculture
(I)NGO	(International) Non-Governmental Organization
MSPs	Multi Stakeholder Platforms
SUN	Scaling Up Nutrition
UN	United Nations
UNDP	United Nations Development Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

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 $^{^{1}}$ DFID is renamed, and is the current Foreign, Commonwealth & Development Office.

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