Governance Arrangements for the Future Food System: Addressing Complexity in South Africa

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Introduction

Feeding the world's population a healthy, affordable and environmentally sustainable diet is one of the greatest challenges of the 21st century and has been highlighted in Sustainable Development Goals 2 and 3 to end hunger and improve health respectively. Currently, there are 795 million undernourished people, 2 billion with micronutrient deficiencies and 600 million obese people (FAO et al, 2015). Overcoming this challenge has proven to be a 'wicked problem,' largely because the food system is highly complex with many interdependencies, non-linear feedbacks and uncertainties (Hamann et al, 2011; Pereira and Ruysenaar, 2010). In South Africa, a number of recent reviews document the failure of existing responses to the complex challenges currently facing the country's food system (Drimie and McLachlan, 2014; McClaren et al, 2015). The reasons for the persistence of hunger and malnutrition in South Africa are complex and interrelated, spanning environmental, health, economic, socio-political and agro-food issues. These challenges make it difficult to achieve the constitutional right of all South Africans to adequate food, despite national and international commitments to meeting these rights. Furthermore, stakeholders in the food system have widely different perspectives and interests, and challenging structural issues such as power differentials among them remains largely unexamined (Vogel et al, 2007). This makes rational discourse among different disciplines, sectors and levels difficult, and prevents effective collaboration to address food security challenges.

The challenges of reducing food insecurity require innovative responses and solutions that fundamentally reconsider its causes. To date, initiatives have been fragmented, piecemeal and difficult to scale (Pereira and Ruysenaar, 2012). This cannot continue. As events in 2011 in North Africa demonstrated, food issues, such as rising prices, can spark social unrest, destabilise fragile economies and wipe out years of development progress (Bar-Yam et al, 2013). Rising demand for food and fuel, coupled with resource depletion and inadequate governance of the global food system, has increased the fragility of the food economy, giving rise to calls for fundamental redesign of how food is produced, accessed and utilised.

This paper draws on a systematic review of food systems literature in South Africa (Pereira, 2014) in order to analyse the current dynamics around food. It argues that the complexity characterizing the South African food system and the resultant negative food security outcomes require new kinds of institutional responses - including governance arrangements - to address these mul-

tiple challenges. One of the greatest challenges creating the wicked problem of food insecurity are the multiple perspectives that different actors in the food system have. Some authors argue that the interdependencies of actors, activities and problems within the food system challenge the efficacy of traditional modes and strategies of governance (Sidiki et al, 2015). However, little is known about more appropriate food system governance strategies that enable actors and stakeholders in communities to come together to address linked issues related to food. These strategies describe food system governance as the process in which "stakeholders in communities come together to address linked issues related to food, for example, food access, obesity, food supply, and nutrition" (Sidiki et al, 2015: 2). The paper draws on a comparative analytical framework suggested by Holt-Gimenez and Shattuck (2011) to identify and group these conflicting perspectives within the South African food system. This opens up of a debate on what approaches are the most relevant for addressing the challenges facing the South African food system.

Methodology

The systematic literature review followed an adapted method from Candel (2014) to answer the question: What is the state of South Africa's food system? A systematic search in the Scopus database for articles published from 1999-2014 conducted for the keywords "Food System" and "South Africa" yielded 20 hits whilst "Food security" AND "South Africa" yielded 322. Using a set of inclusion and exclusion criteria based on relevance to the review's question, 171 articles were included in the final database. A similar search was conducted in the Web of Science database. The search for "food systems" and "South Africa" yielded no additional papers. The second search parameters yielded 277 hits of which 115 were already in the Scopus database. After review, 38 articles were added resulting in a combined tally of 209 peer-reviewed articles. The selected articles were grouped into the following sub-headings: availability, access, utilisation, fisheries, governance, threats/opportunities, and food security measurements.

In order to access grey literature, a Google search with the same parameters was conducted. Only the first four pages of hits were reviewed and an article was selected only if it was a document and was deemed relevant to the information already gathered. These documents were referred to when they provided further information that was not available in the peer-reviewed literature. The review's focus was explicitly on the state of the South African food system, and so emphasis was placed on papers that provided key information that could be collated to bring insight into this issue.

The rationale for adopting a 'food system' approach was to allow for a more coherent analysis of the interrelated challenges mentioned above, as well as providing an entry point for a wide range of actors engaged with food issues. The 'food system' concept emphasizes the interconnected relationships between diverse activities in the commodity chain (producing, distributing, trading and consuming of food); various issues linked to food security outcomes (access, availability, utilization, nutrition); the interactions across levels on various scales (time, space, jurisdiction); and various socio-economic and environmental constraints and impacts (Cash et al, 2006; Ericksen, 2008).

Policymakers are beginning to embrace a food system perspective (FAO, 2013) although this is a relatively new concept in South Africa, as indicated by the systematic search described above. As a consequence, this approach has evolved from an analytical tool into a normative idea. This is clearly illustrated by the Food and Agriculture Organization (FAO) (2011), which stated that the future for food and nutrition security lies in the creation of an "integrated" system. However, despite its popularity, the concept of food systems has not been institutionalised (Fresco, 2009). This is striking, because this broader perspective, and its normative connotation, reveals new and important governance challenges. By its nature, food system governance is fragmented and cuts across the usual boundaries between sectors, administrative levels, temporal and spatial scales, public and private spheres, science and policy, and diverse normative frameworks. Food cannot be dealt with effectively by the current fragmented institutional architecture, and therefore, "the governance system should be made more coherent and harmonized, better integrated and coordinated, and more inclusive" (Candel, 2014: 596). In this paper, we we start to unpack what initial steps could be taken to achieve such an adaptive food governance system.

Food Security Outcomes

Whilst South Africa is food secure at the national level, at the household level there is high prevalence of hunger in both urban and rural areas, and evidence of stunting, wasting and micronutrient deficiencies among children (Drimie and McLachlan 2013). The first South African National Health and Nutrition Examination Survey (SANHANES-1) provides a comprehensive snapshot of food security (Shisana et al. 2014):

- The prevalence of hunger was 26.0% of the population
- The largest percentage of participants who experienced hunger was located in rural formal (37.0%) and urban informal (32.4%) localities, reflecting both a rural and urban dimension.

- Demographically, the black African race group had the highest prevalence of food insecurity (30.3%), followed by the Coloured population (13.1%), and then the Indian/Asian population (8.6%).
- Of those at risk to hunger, the black race group again had the highest risk at 30.3%, followed by the Indian population (28.5%), the Coloured population (25.1%) and then the white population (9.4%).
- The white race group was significantly more food secure than other race groups with 89.3% of white households being food secure and only 1.3% having experienced hunger.
- The overall figure for stunting for children aged 1-3 years was 26.5%, up from 23.4% in 2005, as calculated by the National Food Consumption Survey (Labadarios et al, 2007). Stunting was by far the most common nutritional disorder.

Combined with other studies focused on particular case studies, these data point to a national food system that cannot meet the food security needs of the population (Drimie and McLachlan, 2014).

Further data indicate that South Africa is undergoing a 'nutrition transition[1]' where stunting, wasting and undernutrition in young children is occurring alongside increasing levels of obesity and overweight in older children and adults (Kimani-Murage et al 2010). This is known as the "double burden" of malnutrition, which is the co-existence of under- and over-nutrition in the same household, family or community.

In the adult population, being overweight or obese is a vast problem, with the overweight and obesity prevalence respectively at 24.8% and 39.2% amongst women, and 20.1% and 10.6% amongst men (Shisana et al, 2014). The increase in obesity has raised health concerns around a concurrent increase in non-communicable diseases (NCDs) (Shisana et al. 2014). The health implications of obesity are compounded by the steady increase in the per capita food supply of fat, protein, and total calories whilst salt intake is in excess of recommended levels (Hofman & Tollman 2013). Malnutrition, in all its forms, has repercussions on the capability of people to live a full life, work, care for their children, be productive, generate a positive cycle and improve their living conditions. This public health concern is largely concerned with the consumption patterns of South Africans who often do not have access to a healthy diet, and is compounded by

[1] The nutrition transition refers to the increased consumption of fats, refined sugars and animal products in the diet as these become more readily available and more affordable, especially for low-income consumers (Drewnowski & Popkin 1997). Coupled with lifestyle changes from processes like urbanisation, these poor quality diets are associated with rising rates of over-weight, obesity and diet-related chronic diseases, like heart disease, diabetes and some cancers, which is becoming more serious among the poor (Hawkes 2006: 2).

urbanisation trends, an increased reliance by poor households on buying cheap, highly processed food and market dynamics driving volatility in prices (Pereira, 2014).

The long-term costs of food insecurity on society are likely to be significant, particularly as investments into education and health will not provide the intended dividends if the food system is failing. The solution does not lie in the realm of science, health or agriculture alone. It requires a multi-dimensional approach that includes education, women's empowerment, market regulation, technological research and, above all, political commitment. It demands a nuanced analysis and understanding of the underlying food system.

The Underlying Food System

The South African food system is dichotomous. This dichotomy is evident in the formal, commercial sector, which is connected to international agribusiness and international finance that contrasts with a larger number of poorer, small-scale farmers and informal traders who operate at the margins of the formal system. Although markedly different, the two are embedded. 'Adverse incorporation' illustrates the extent to which poverty and economic marginalization are as much a function of incorporation into the economy on adverse terms, as a result of exclusion from it (Du Toit 2009). South Africa remains characterized by the highly skewed distribution of assets such as land and capital, and the impacts of migrant labour – all rooted in the colonial and apartheid 'land grab', forced removals and 'jobless de-agrarianisation' where people leave agricultural production without diversifying into alternative livelihoods (Du Toit, 2009). This, in turn, reflects the spatial legacy of the former homelands and apartheid cities and the deep inequalities in the development of human resources. This legacy continues to shape the current South African food system.

This system is vulnerable to a range of environmental shocks and stressors. A powerful example is that of changing water availability. Natural water resources are unevenly distributed across the country, with more than 60% of the surface flows arising from only 20% of the land area (Basson et al. 1997 in Carter & Gulati, 2014) and since the agricultural sector currently consumes 60% of the total water resource in the country, any increase in irrigation for growing food would thus impact the water and energy systems (Benhin, 2006). The article by van Bormann and Gulati (this issue) discusses these environmental threats to the food system in more detail.

Fisheries are also under threat. At the local level, fish, like snoek in the Western Cape, provide a crucial source of protein for traditional fishing communities along the South African coastline (Isaacs, 2013). Commercial fisheries contribute about 0.5% to South Africa's GDP whilst direct-

ly employing approximately 27 000 people (WWF, 2011). However, 50% of South Africa's marine resources are fully exploited, a further 15% are overexploited and some of the most popular seafood choices for South Africans include species that are classified as collapsed (WWF 2011). Although there is consensus that there is a decline in these marine resources, a lack of adequate data makes it difficult to institute effective governance mechanisms. Of particular concern is the lack of fisheries policy (although this is being addressed under new regulations) that takes into account the importance of small-scale fisheries for livelihoods and food security, further trapping marginalized communities in food insecurity (Sowman & Cardoso, 2010; WWF, 2011).

The land-based food system faces other challenges. Only 13% of South Africa's land is arable with 3% of the arable land considered as high-potential land (Carter & Gulati, 2014). As of 2012, figures show that 87% of arable land was still owned by white, commercial farmers (Van Der Elst, 2012). This is indicative of South Africa's dualistic agrarian structure that comprises around 35 000 large-scale, mostly white commercial farmers, who produce almost all of the country's marketed output, and a much larger number (approximately 4 million) of small-scale, black farmers who are largely confined to the ex-Bantustans (Aliber and Cousins, 2013). The issue of land reform fits into a larger debate around the need for agrarian reform to integrate marginalised farmers and communities in the country's food system. Land reform has been criticized for its limited impact, with the incorporation of a few select black farmers into formal value chains being overshadowed by the on-going consolidation of agribusiness described below (Greenberg, 2013). High barriers to entry for emergent farmers, manufacturers and retail outlets continue to hinder the integration of previously disadvantaged groups into the formal food system (Hamann et al. 2011).

With an urban population of 64% (World Bank, 2015), access to food has been largely predicated upon an expansion of formal food traders upon which many informal food retailers and traders depend (Baiphethi & Jacobs, 2009). Supermarkets expanded into lower income areas by outcompeting local wholesalers and small retailers on cost and quality (Battersby, 2011; Igumbor et al. 2012). The increasing reliance on purchasing food to supplement subsistence production has extended into peri-urban and rural areas (Pereira et al 2014). In turn, a growing reliance on local stores and supermarkets has undermined the ability of households to invest in household food production (Igumbor et al. 2012).

Supermarkets can be seen to both enable and constrain food security outcomes within the food system. However, the role of supermarkets to provide affordable, but nutritionally poor foods in low-income areas may accelerate the nutrition transition whilst not necessarily addressing nutri-

tion insecurity (Battersby and Peyton, 2014). Recent case studies have shown an increased consumption of 'fast food,' defined by Feeley et al. (2009) as "convenience foods obtained from take-away vendors", and usually characterised as energy dense, low in micronutrients and fibre and high in simple sugars and salt.

Doyer et al. (2007) have shown a significant trend towards cooperation in the South African agribusiness supply chain in the early 2000s. This trend together with business mergers provides an explanation for the current structural changes and concentration evident in the food sector. As well as a few large supermarket chains controlling food sales, in the food-manufacturing sector a few, large, publicly listed companies control both production and sales in most food categories. With the increasingly concentrated nature of the food sector, food manufacturing and to a certain extent retail companies have been common targets of protest in South Africa, particularly where there have been adjudicated cases of collusion and price fixing (Hamann et al. 2011).

Finally, there is the issue of food waste and food losses. Although there are few data available, Nahman et al. (2012) estimated that costs attributed to household food waste were approximately R21.7 billion per annum. Food losses across the entire food value chain were estimated at R61.5 billion per annum, the bulk of which arise at the processing and distribution stages of the fruit and vegetable value chain, as well as the agricultural production and distribution stages of the meat value chain (Nahman & de Lange 2013). As a neglected, yet relevant aspect of the food system, more research needs to be done on food waste. Understanding food waste and food loss could provide insights as to where in the value chain the most effective interventions for creating a more equitable and sustainable food system could be.

How have policymakers responded to this complexity?

In 2002, South Africa instituted the Integrated Food Security Strategy (IFSS) that, whilst good on paper, experienced serious institutional challenges. To be effective, the Strategy requires not only institutional reform within governmental departments, but also recognition that governance of the food system cannot happen within the public sector alone (Drimie and Ruysenaar, 2010). Put simply, the IFSS failed due to an over-emphasis on agriculture (food availability), compounded by inadequate institutional arrangements to align and coordinate related activities and programmes of state and non-state actors (Drimie and Ruysenaar, 2010). It relied more on dealing directly with relieving the burden of food price inflation from poor households such as welfare payments, school feeding schemes, food packages (Kirsten, 2012). Whilst these interventions might act as safety nets for poor households, they do not fundamentally alter the on-going

inability of households to afford food. The IFSS was clearly inadequate in providing a framework for addressing the complex dimensions of the food system.

A new Food and Nutrition Security (FNS) policy emerged in 2013, which was endorsed by Cabinet. This led to the development of an implementation plan in 2015. However, the over-riding characteristic of this policy development process was a lack of genuine consultation and co-development with stakeholders from across the food system, including those most affected by food insecurity. This meant that the policy and plan was limited in its identification of problems with the food system and necessary responses. Policy should respond to the needs of affected people and tackle systemic inadequacies, particularly in the case of a food system that has led to widespread hunger. Meaningful consultation ensures that policy and legislation responds to needs and gives an opportunity for people to participate in democracy, something required by the South African Constitution. This process led to policy directives that were deemed inadequate by a wide cross-section of people (see Freeth and Drimie, this issue).

The proposed institutional arrangements, although an improvement on the IFSS, remained limited under the direct control of government with little space for broader participation of other stakeholders outside of the state. Whilst the FNS recommends inter-sectorial coordination, and an integration of existing policies, guided, motivated and lead by the Presidency, there is little to indicate that it will lead to practical outcomes that were different to those of the IFSS. Lines of accountability and coordination between involved government departments, while frequently referred to, remain unclear. Furthermore, without external consultation, there is little to no buy-in to policy implementation from relevant actors in the food system.

Inadequate consultation in drafting the policy has thus undermined its ability to provide real policy direction for three reasons. Primarily, the lack of engagement with relevant stakeholders resulted in a limited understanding of the diverse problems that characterize a complex system, secondly there is a lack of buy-in from non-governmental stakeholders who were not consulted on the policy, but who nevertheless have an important part to play in its effective implementation and finally, even within government departments, there remains an incoherent grasp of the coordination required to implement the policy. In essence, the policy process betrayed a weak recognition of the complex, societal challenge of the underlying food system.

The challenge of “governing” multiple perspectives

One of the key characteristics underscoring the complexity of the South African food system is that different stakeholders contest the causes and effects of the South African food system on many levels, (see Freeth and Drimie, this issue). It is of little surprise that leaving its governance solely to a government department that is poorly equipped to deal with the interlinked priorities of poverty and hunger has yielded little. Food insecurity is not a technical issue that can be addressed by programmes run by departments. Nor is it an economic question dealt with in an inherently skewed market. As outlined previously, it is a complex interaction of both these and other challenges; one of the biggest being the interdependencies of actors and their activities as well as their different framings of the problem of food insecurity that makes traditional governance strategies ineffective. As Hamann et al (2011) highlight, one of the immediately apparent characteristics of the 'wicked problem' of food insecurity is the diverse perspectives of the role players in the system where divergent interpretations of the problem can lead to detrimental outcomes.

Although it is too early to reflect critically on the FNS policy, the inadequate engagement with non-state actors is not promising in terms of responding to the needs of affected people and tackling systemic inadequacies. Recognizing and dealing with the power dynamics between different actors remains one of the biggest challenges that food policy has so far failed to be able to handle. This is clearly a major reason why the South African policy environment has struggled to achieve the intended food security outcomes. Leaving the governance of the food system to government alone is problematic, as it is a broad societal issue with multiple perspectives and vested interests, as illustrated below.

Identifying the diverse positions of actors in the food system is the first step towards to more coherent and systemic governance strategy. Holt Gimenez and Shattuck (2001) offer a comparative analytical framework for understanding these different political and social positions within the food system, characterizing them as 'Neoliberal', 'Reformist', 'Progressive', and 'Radical', respectively. While strategic and tactical overlaps exist, efforts to address food insecurity tend to split ideologically between those that seek to stabilize and reform the corporate food regime, and those that want fundamentally to change it.

The 'Neoliberal' position is based upon the intellectual tradition of economic liberalism, market-based, driven by the private sector and managed by institutions such as the European Union's Common Agricultural Policy and the World Trade Organization (WTO). In South Africa, this would be represented by some of the large agri-businesses. Agribusiness, largely represented by the Agricultural Business Chamber, is opposed to market interventions stating that if the market

were to be regulated, competition would decrease and companies would not have the incentives to invest in technologies and provide consumers with better products and services (Ramabulana, 2011). The business argument is that providing sufficient and affordable food to South Africa's growing and urbanising population requires investment in large-scale commercial agriculture (Ramabulana 2011). The food retail sector has arguably been more flexible in adapting to changing socio-political and environmental conditions, it nevertheless remains within the neoliberal paradigm (See Pereira 2013).

'Reformist' positions aim to mitigate the social and environmental externalities of the corporate food regime, although their intention is identical to that of the Neoliberal trend: the reproduction of the corporate food regime. Reformists call for mild reforms, for example through an increase of social safety nets, consumer-driven niche markets, and voluntary corporate responsibility mechanisms. A good example in South Africa is the Food and Agricultural Organization of the United Nations (FAO, 2011). In a move to step away from the neoliberal market policy that has benefitted large corporates often to the detriment of smaller enterprises (See Greenberg 2013), civil society, represented by the Congress of South Africa Trade Unions (COSATU), has advocated for the introduction of a regulatory body that would control prices and exports of food and farm produce in a similar role of that of the abolished marketing boards (Sibanyoni & Ndlangisa, 2010 in Ramabulana, 2011).

Many actors within the Progressive position advance practical alternatives to industrial agri-foods, such as sustainable, agro-ecological and organic agriculture and farmer–consumer community food networks – largely within the economic and political frameworks of existing capitalist food systems. This is often coupled with calls for groups demanding food justice for people that are marginalized or exploited by the dominant market-led system. The rise of 'alternative food networks' is the social movement critique of the increasing disconnect between the majority of consumers from how their food is produced. It includes the organic, local and slow food movements and the more mainstreamed processes of food labelling and certification from bodies like Fair Trade and the Forest Stewardship Council (Pereira and Drimie 2016). Various rights-based legal organizations or organic certification bodies in South Africa may position themselves as progressive (FAO, 2014).

The Radical trend also calls for food systems change on the basis of rights, but focuses much more on entitlements, structural reforms to markets and property regimes, and class-based, redistributive demands for land, water and resources, as captured in the notion of food sovereignty. According to La Via Campesina, the global movement that first proposed a food sovereignty declaration in 1996, food sovereignty is "the right of peoples to healthy and culturally appropri-

ate food produced through sustainable methods and their right to define their own food and agriculture systems". It advocates for people, in particular peasants and farmers, to take control of the food system back from corporates and elites. Such an approach has been advocated by the opposition party, the Economic Freedom Fighters (EFF) who call for a redistribution of land without compensation and agrarian reform (EFF manifesto 2014). The strong language echoes similar movements globally and reflects a position about fighting against, not compromising or collaborating with, dominant power structures represented largely by agribusiness.

Holt Gimenez and Shattuck (2011) argue in conclusion that change will require sustained pressure from a strong global food movement, built on durable alliances between Progressive and Radical trends. Through use of the framework, it is clear that there is a wide array of conflicting perspectives within the food system. Largely as a result of an inadequate understanding of the systemic challenges embedded in the food system and the intensely conflicting perspectives about what the problem is and what to do about it, policy responses have in many instances been muted in their attempts to remedy an ailing food system. This opens up a question on what approaches are the most relevant for addressing the challenges facing the South African food system. The development of a policy response and ensuing governance of the system would be better handled through multi-stakeholder engagement and dialogue. As argued, bringing together a wide cross-section of the various positions would help strengthen the identification of problems and solutions, as well as ensure policy was responsive to the needs of affected people, as required Constitutionally. As such multi-stakeholder dialogue should be seen as part of a broader governance of the food system that is led by the state but does not prejudice other actors outside of the state.

However, some stakeholders, in particular those with more radical perspectives, would probably not countenance such dialogue, as they would see it as essentially reformist. This reflects an understanding of multi-stakeholder dialogue as being naïve and unable to deal explicitly with power dynamics; that it is therefore merely a tool for reinforcing the status quo. Ultimately, if multi-stakeholder dialogues are not clear about divergent interests and the real power that some actors wield, they may fall within a 'reformist' agenda and achieve nothing more than "tinkering at the margins".

An alternative is that of using dialogue to change the underpinning narrative through which food insecurity is addressed. Instead of seeing the food system as a site of conflict, it could be seen as a societal quest, which would give people of all persuasions a chance to take part in solving the problem. Bringing a diverse set of actors around a table to discuss both possibilities and untenable solutions may be the best option for transparent decision-making. This requires innovative

thinking and commitment that essentially creates an institutional form that allows for learning, experimentation and adaptation of responses.

Conclusion

Transforming the food system requires a much deeper understanding of that system, including the future trends that are giving it substance. Dialogue and debate about the dangers of these trends and the various substantive options that exist require new ways of engaging across the system. Most people are all highly dependent on the food system, no matter how imperfect it is, and so any change has to take this inertia into account. Engaging in dialogue that enables people to air their views and concerns is the first step to creating the kind of buy-in that may be able to build enough confidence to start shifting the system.

In South Africa, the National Development Plan (NDP) Vision 2030 provides an important starting point for establishing the mechanisms to address food insecurity. The NDP explicitly emphasizes social dialogue as the way to drive change in the country through renewed engagement and commitment between the private sector, organized labor, civil society and the state. This reflects recognition, at least within the NDP, that addressing food insecurity cannot be the sole responsibility of the state. If this vision is translated into both a practical plan and a political statement of intent for the next presidential period and beyond, it will do much to guide the development programming, resource allocation and implementation across sectors.

Taking this further, the interactions with different stakeholders by their very nature demand a flexible, learning approach that prioritizes the process as much as the outcome. This is a different approach to the tendencies of government departments to "go it alone" and raises the real challenge of how to activate citizenship and a responsive government. This requires institutions that can convene and facilitate multi-sectorial action.

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