10 Addressing malnutrition in all its forms in Africa requires a radical paradigm shift

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1 Current state of food and nutrition security in Africa

1.1 The devastating burden of malnutrition in Africa is not declining

Whereas maternal and child mortality and child growth deficits have steadily declined in Latin America and Southeast Asia in previous decades, little progress has been made in sub-Saharan Africa (FAO et al., 2022). On top of that, recent global crises such as the COVID-19 pandemic and conflicts have disproportionally affected Africa with increases in hunger and undernutrition (Osendarp et al., 2021). This reveals the fragility of African food and health systems to shocks. Seemingly in contradiction with the above, the prevalence of overweight and obesity is rising rapidly on the African continent as the first signposts for non-communicable diseases (NCDs), such as diabetes, high blood pressure, cardiovascular diseases, and cancer. Indeed, in 2019, 37% of all deaths in the African region were already attributable to NCDs (Wangou et al., 2023).

Low-quality diets are the major driver of the global burden of morbidity and mortality worldwide (Development Initiatives, 2021). The leading dietary risk factors are low intake of fruits and vegetables (responsible for 5–8% of premature mortality across regions) and whole grains (2–5%), high intake of red and processed meat (1–6%), and high prevalence of overweight and obesity (5–13%). Low-quality diets confront the African region as a whole with unresolved health issues due to undernutrition, which are increasingly superimposed by overweight, obesity, and diet-related NCDs and its related steep increases in health care expenses. In the long run, these multiple forms of malnutrition undermine human capital in terms of physical health, cognitive capacity, and (agricultural) productivity, unless preventive action is taken to turn the tide (Hawkes et al., 2020).

1.2 Current food systems do not support healthy diets and are unsustainable

Healthiness of diets depends on individual needs, which vary by age, gender, physiological stage (e.g. pregnancy), and physical activity, but in general healthy diets can be defined as being diverse and proportional in food groups. Unbalanced diets (including monotonous and undiversified diets) often supply sufficient calories derived from cereals and root crops but lack essential fats, amino acids, vitamins, and minerals to maintain health. Overconsumption of foods that contain too much or the wrong type of fat, sugar, and salt challenges the body in other ways. The shares of food and beverage markets grow most rapidly in low- and middle-income countries (LMICs), including African countries such as Kenya, Nigeria, and Cameroon. Increasingly, foods that do not fit in a healthy diet are the easiest choice for ever more African consumers in terms of availability and affordability. Moreover, global food production poses uneven

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stress on environmental resources such as land and water, and contributes a large share (>30%) to greenhouse gas emissions.

Sustainable healthy diets (SHDs) can in short be defined as dietary patterns that prevent all forms of malnutrition, promote health, and have a low impact on the environment (FAO/WHO, 2019). SHDs are accessible, affordable, safe and equitable, and culturally acceptable. A healthy diet includes enough fruits, vegetables, nuts, seeds, whole grains, and legumes, and sufficient but not excessive amounts of starchy staples and animal-sourced foods (milk, eggs, poultry, and fish). SHDs need to be safe, and limited in food groups, or substances that could lead to health risks when eaten in excess, such as free sugars (including sugar-sweetened beverages), saturated fat, salt, red and processed meats, and ultra-processed foods (Ruel & Brouwer, 2021). SHDs vary between and within regions, dependent on the trade-offs between health and environmental burden depending on how food is produced (HLPE, 2017). For instance, in areas of sub-Saharan Africa where the prevalence of undernutrition and anaemia is very high, and where animal-sourced foods are currently consumed in relatively low amounts, increased consumption of meat, poultry, or fish may support health (Brouwer et al., 2021).

In 2019, the EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems initiated a global discourse on the 'great transformation of food systems' to deliver healthy diets for a growing population within planetary boundaries by 2050 (Willett et al., 2019). Health and sustainability go hand in hand to quite some extent, with whole grains, fruits, vegetables, nuts, and legumes contributing positively, while red and processed meat contributing negatively to both health and environmental impacts. No region in the world is currently on track to meet the Sustainable Development Goals in limiting environmental burdens related to diets (GNR, 2021). In view of lower agricultural and industrial inputs, Africa and Asia among all regions comply best with keeping food production within planetary boundaries. However, environmental impact is expected to increase when moving towards healthy diets in these regions, and environmental sustainability will be of great concern if these regions develop food systems resembling those in higher-income countries.

1.3 One billion people in Africa cannot afford a healthy diet

It is estimated that approximately 40% of the world population cannot afford to buy a healthy diet due to the high cost of nutrient-rich non-staple foods (FAO et al., 2023). Surprisingly, the cost of a healthy diet in the USA (3.32 PPP (purchasing power parity) dollars per person per day in 2021) was almost the same for Africa (3.57 PPP dollars) (FAO, 2023; Frankema, this volume). The vast majority of people in Africa (~80%) cannot afford a healthy diet due to low income, in particular those living in East Africa (85%). For comparison, this proportion is 72% in South Asia, and only 1.2% in high-income countries (FAO, 2023).

Food choices are strongly driven by food prices. Staple foods such as wheat, maize, rice, and vegetable oil are generally cheaper per calorie compared to more nutrient-dense foods such as meat, dairy, vegetables, and fruits (Darmon & Drewnowski, 2015). Poor smallholder farmer households, who consume much of the food they produce, still purchase a significant part of their diet, but their food choice is largely limited by their budget: most purchases go to the cheaper staple grains, small amounts of condiments and vegetables, affordable sources of animal protein such as dried fish, and increasingly to cheap processed convenience foods. In sub-Saharan Africa, where more than 60% of farmers experience a single cropping season and a prolonged dry season, the availability of perishable but nutrient-dense foods like fruits, vegetables, and animal-source foods diminishes towards the end of the dry season. During this 'hunger season', food prices rise, the costs of a healthy diet increase, and dietary diversity decreases

(de Jager et al., 2022). Local and global economic shocks also reveal how food prices drive nutrition and health, as shown by the case of Indonesia where an increase in child anaemia was seen after the economic crisis in the late 1990s (Block et al., 2004); by the surge in undernourishment in LMICs following the global bank crisis in 2008 (Brinkman et al., 2010); and more recently following the COVID-19 pandemic (Laborde et al., 2021). These shocks demonstrate the need for more resilience in food systems to warrant that healthy diets can be achieved and sustained.

In high-income countries, a reduction in consumption of animal-sourced foods will mutually benefit environmental sustainability and the wallet of consumers. However, in many LMICs it may be desirable to modestly increase the consumption of animal-source foods to meet nutritional requirements, leaving little room to improve affordability nor sustainability. Clearly, affordability is very critical when striving for food and nutrition security within the planetary boundaries.

2 Sustainable healthy diets and the four paths

In the last five decades, Africa's food demand has increased due to population growth, while rapid urbanization has increased the demand for convenience foods with a high content of fat, sugar, and salt. Both trends are predicted to continue in the decades to come. As outlined above, African diets do currently not meet health requirements within planetary boundaries and are vulnerable to (economic) shocks. In the face of population growth and climate change, there is a strong call for a transformation of African food systems to support human and planetary health. de Haas et al. (this volume) not only describe how countries' food security is linked to average income per capita, but also observe substantial heterogeneity in this relationship. They then compare and categorize African countries based on the productivity of their agricultural sector (proxied by cereal yields) and the extent of structural transformation (proxied by their agricultural labour share). Interacting these variables, they distinguish four paths, which shape the nature of food systems and the feasibility of transformation. But to what extent do agricultural gains and structural changes result in greater nutrition security? Can SHD for all Africans be achieved along these different paths in the coming decades? To understand this, we first address several common narratives and beliefs (or misconceptions) that hinder the progress of transforming food systems towards delivering SHD.

2.1 Economic growth will resolve malnutrition in the long term, right?

Except for the path of 'agricultural stagnation' (situations in which yields are low and stagnant, and agricultural employment predominates), all of the paths describe some form of agricultural and/or economic growth. Whereas this is a valuable goal, it is questionable that such growth will automatically solve the problem of malnutrition. Although increased income may translate to a more diversified and nutritious diet for some privileged population groups, it is not that straightforward. Long-term studies, for instance in India, have shown that childhood malnutrition does not necessarily improve when national income grows (Subramanyam et al., 2011). Disparities in economic gain within countries can also enlarge the nutrition and health gap between rich and poor. Moreover, the balance can easily tip over to the other side: several middle-income countries, such as Mexico, Brazil, and South Africa, exemplify how unguided food systems can become the main contributors to morbidity and mortality in society, by stimulating overconsumption of unhealthy foods (Popkin, 2015). This should not be seen as collateral damage of economic development and something that needs to be endured, or a temporal phase that will

simply pass, because the damage will be profound and long-term. Therefore, economic growth in itself is no guarantee for better nutritional outcomes, and may even lead to vast increases in malnutrition-related health care costs.

2.2 Closing yield gaps might provide enough food, but will it nourish people?

Worldwide, agricultural investments in food systems for human consumption have mainly fuelled the production, productivity, value chains, and markets for just a few staple crops, notably wheat, maize, rice, cassava, and potatoes, with the goal to produce more calories and to stimulate economic growth. As outlined in the previous section, it is unlikely that economic growth by itself will resolve the problem of malnutrition. But there is a second issue at stake: there is also a mismatch between agricultural investments and nutritional requirements of consumers. Contemporary African diets are often unbalanced in the sense that too many calories are derived from cheap staple foods (>60% of total energy intake), leaving too little space for foods that deliver other essential nutrients. A continued narrow-minded focus on staple crops will maintain the *status quo* of unbalanced diets and poor nutritional health. Instead, more emphasis is needed on innovation, value creation, and financial incentives of nutrient-dense crops such as vegetables, fruits, dairy, nuts, and legumes. Another mismatch may exist between food crops and climate suitability, which may lead to increased environmental burden (Mahaut et al., 2022). Thus, from the perspective of both health and sustainability, a healthy diet-oriented food systems agenda regarding agricultural production is required. Since local food systems do not exist in isolation, such an agenda should not only address local production for internal markets, but also include dietary targets for trade and import policies.

2.3 Consumers demand what is best for them, don't they?

Food choice depends on a complex interplay between culture, knowledge, availability, price, quality, palatability, preference, convenience, perceived food safety, needs, and aspiration (Verain et al., 2021). Food choice is by no means a purely rational process (Aunger & Curtis, 2013). Consumers depend on what is on offer, but their choice will ultimately be based on a mixture of rational and emotional drivers with health concern as only one factor in this mix (Blake et al., 2021). Lack of awareness or ignorance of what the body needs to support present and future health may withhold consumers from making healthy dietary choices. But even when they do know what is good for them they may not act on it, and therefore guidance is required (Brouwer et al., 2021).

2.4 Are the four paths equipped to nourish Africa by 2050?

From the above, it is apparent that neither economic growth nor closure of yield gaps will result in a healthier population *per se*. Of the four paths, those that are more inclusive, notably the paths of agriculture-inclusive structural change and agriculture-led growth, are more likely to bring about equitable food and nutrition security, but are still unlikely to tackle malnutrition in all its forms. As can be seen in Table 10.1, there are no clear differences in nutritional and dietary outcomes between the four paths. This is likely because nutritional and dietary outcomes are the resultant of the way food systems are structured, and the degree by which nutrition policies have been implemented. It is therefore apparent that much more is needed to improve basic nutrition and health for Africa's growing population in spite of the path that is followed.

Table 10.1 Prevalence of key nutritional outcomes in example countries categorized by their situation along four paths of agricultural and economic change[1]

	Low birth weight[2] %	*Stunting*[3] *(children <5 years)* %	*Anaemia*[4] *(adult women)* %	*Food group diversity score*[5]	*All-5*[6] %	*Global dietary recommendation*			*Obesity*[10,11] *(adult women)* %	*Diabetes*[11] *(adult women)* %
						Overall score[7]	*NCD-Protect*[8]	*NCD-Risk*[9]		
Agriculture-inclusive structural change										
Ghana	14.2	17.5	35.4	4.5	20	10.5	3.0	1.5	23.6	9.1
Senegal	18.5	17.9	52.7	5.5	28	10.9	3.6	1.7	18.7	9.8
South Africa	14.2	21.4	30.5	5.5	23	9.1	3.3	3.2	46.7	16.7
Agriculture-extensive structural change										
Gabon	14.2	17.0	52.4	5.1	24	9.6	2.8	2.2	26.1	14.4
Namibia	15.5	22.7	25.2	NA	NA	NA	NA	NA	34.1	10.5
Nigeria	NA	31.5	55.1	4.5	23	9.7	2.7	2.0	20.4	8.1
Agricultural growth										
Ethiopia	NA	36.8	23.9	NA	NA	NA	NA	NA	11.6	7.2
Uganda	NA	25.4	32.8	5.0	32	11.3	3.6	1.3	14.0	7.2
Zambia	11.6	34.6	31.5	NA	NA	NA	NA	NA	18.6	8.8
Agricultural stagnation										
Burundi	15.1	50.9	38.5	NA	NA	NA	NA	NA	14.3	6.7
Niger	NA	44.4	49.5	3.9	15	10.6	2.7	1.2	14.1	7.7
Zimbabwe	12.6	23.5	28.9	4.8	24	10.9	3.5	1.5	31.2	9.0

Data sources: [1] For the methodology behind the classification of countries in one of the four 'paths': de Haas et al. (this volume). The classification is based on a cross-sectional stocktaking of the situation in 2021, as in their Figure 1.5. For the nutritional outcomes, the following sources have been used: 2022 Global Nutrition Report, https://globalnutritionreport.org/reports/2022-global-nutrition-report/; Global Diet Quality Project, https://www.dietquality.org/; and NCD Risk Factor Collaboration, https://ncdrisc.org/index.html. [2] Birth weight < 2,500 g, reported for the year 2015. [3] Height-for-age Z score < −2, reported for the year 2018. [4] All women, either pregnant (haemoglobin concentration < 110 g/L) or non-pregnant (<120 g/L), reported for the year 2019. [5] The Food Group Diversity Score is the number of food groups consumed the previous 24 hours, out of ten food groups: (1) grains, white roots and tubers, and plantains, (2) pulses, (3) nuts and seeds, (4) dairy, (5) meat, poultry, and fish, (6) eggs, (7) dark green leafy vegetables, (8) other vitamin A-rich fruits and vegetables, (9) other vegetables, and (10) other fruits. A higher average population score (ranging from 0 to 10) indicates inclusion of more food groups in the diet. [6] Proportion of the population who consumed all five food groups typically recommended for daily consumption in FBDGs around the world: at least one vegetable; fruit; pulse, nut, or seed; animal-source food; and starchy staple in the previous day or night. [7] The Global Dietary Recommendations (GDR) score indicates meeting WHO recommendations of food consumption from nine health-protective food groups (NCD-Protect) and eight food groups to limit or avoid (NCD-Risk) during the previous day or night. The score ranges from 0 to 18 and is expressed as an average score. [8] The NCD-Protect score is an average score for consumption of foods that are protective against NCDs (such as fruits, vegetables, whole grains, pulses, nuts and seeds, and fibre) during the previous 24 hours, ranging from zero to nine.[9] The NCD-Risk score is an average score for consumption of foods that pose a risk for NCDs (free sugar, salt, total and saturated fat, and red and processed meat) during the previous 24 hour, ranging from zero to nine. [10] Body mass index (BMI) > 30 kg/m^2; [11] Data are projections for 2025. NA: data not available.

3 Shaping future-proof African food systems: placing consumers in the centre

To eradicate malnutrition in all its forms, it is imperative to bring an SHD perspective into the discourse. This perspective requires us to reverse our thinking: the starting point is first and foremost to understand what consumers require to nourish their bodies so that they can live healthy, productive, and purposeful lives, while respecting planetary boundaries. This should then dictate what, how, and where the required food should be produced, manufactured, and traded to bring SHD in reach for all Africans, while providing a decent income for those involved. Consumers also need to be empowered to demand what they require to live healthy lives in healthy environments. Agriculture can then be developed as a viable sector within these constraints.

Addressing malnutrition in all its forms in Africa thus requires a radical re-focus of local food systems, such that all actors in the system strive to attain SHD for all individuals in society. This contradicts the current (global) situation where production and purchase of calories and immediate economic benefit are prioritized over long-term health and well-being. As also outlined by de Haas et al. (this volume), transformation of agri-food systems is a complex and multi-faceted process, being a necessary but not sufficient component of a much broader food systems transformation where the many actors who produce, process, distribute, and market foods to consumers interact intensively with social and ecological systems. In the remainder of this chapter, we describe what we believe is needed to reach the ultimate goal to not just feed, but to nourish Africa's population with SHD in 2050. Placing SHD in the centre of food system transformation will support such a paradigm.

3.1 What do consumers need? Defining diet quality within the local context

Nutritional requirements are defined in terms of the amounts of essential nutrients that are required to achieve and maintain good health, specified for different population groups, such as women, men, and children. However, these requirements have little value towards consumers, since their reference frame is foods, not nutrients. Therefore, nutritional requirements need to be translated to food-based recommendations within local contexts. Formulation of national food-based dietary guidelines (FBDGs) can bridge the gap between global recommendations and context-specific realities. FBDGs comprise food intake recommendations that guide consumers towards healthier dietary habits, while taking cultural, socioeconomic, and environmental aspects into account. To date, 11 African countries have formulated national FBDGs.[1] Nevertheless, these guidelines are generally not widely known, and, to be effective, still require to be fully adopted into policies and public health communication as well as in agricultural sector and food industry actions. Environmental sustainability can be integrated into FBDGs, as exemplified by several high-income countries. FBDGs can be used to educate consumers on SHD, as well as all actors in the food system, from producers to vendors and policy makers, to improve the quality and sustainability of the food on offer.

3.2 Nutrition-sensitive agriculture

To cater for SHD for consumers, it is crucial to define a healthy diet-targeted food systems agenda that involves all actors in the agricultural sector. The question of what, how, and where to produce, manufacture, and offer foods will then be guided by human and planetary health, be it for the local, regional, or global market. This implies not to increase investments in staple cereals, as usually occurs, but to put investments and innovation in nutrient-dense commodities such as fruits, vegetables, legumes, and nuts. Innovation may come from sustainable agriculture and

Table 10.2 Food system typologies based on a composite of four indicators

	Value added per worker	*Dietary energy share derived from cereals, roots, and tubers*	*Number of supermarkets per 100,000 people*	*Degree of urbanization*	*Examples of African countries*
	US$	*Energy %*	*N*	*%*	
Rural and traditional	653–1,444	61–70	0.5	26–42	Malawi, Ethiopia, Mali
Informal and expanding	1,698–3,886	50–61	1.6	37–58	Ghana, Nigeria, Angola
Emerging and diversifying	3,999–7,527	41–49	4.4	50–70	South Africa, Algeria
Modernizing and formalizing	11,261–20,060	33–43	9.6	66–84	–
Industrialized and consolidated	29,726–82,625	27–33	17.3	77–92	–

Source: Marshall et al. (2021).

mixed production systems with long-term benefits, such as restoration of soil health and reversal of biodiversity loss. It may also imply that traditional knowledge and practices to grow and process long forgotten crops are revisited in the light of climate adaptation. Demand and supply will need to be aligned, guided, and measured by what constitutes SHD. All actors in the supply chain can actively contribute to this by making product portfolios more compliant with SHDs. Greater benefits are achieved when such nutrition-sensitive agriculture includes behaviour change communication targeting nutrition and health outcomes, interventions for safe water, sanitation and hygiene, food fortification, and when women's empowerment is addressed (Ruel et al., 2018).

3.3 Transformation of pluriform food systems

Food systems can be characterized by their productivity, share of dietary energy derived from starchy staples, number of supermarkets per 100,000 inhabitants, and degree of urbanization (Table 10.2). Africa harbours three out of the five types of food systems, and any country within Africa is home to different types. Food systems are not uniform between and within regions, and are constantly evolving. When measuring these food system typologies against features of SHD, more whole grains and pulses and less processed convenience foods are consumed in 'rural and informal' systems (types 1–2), while consumption of fruits and vegetables and packaged foods is higher in 'emerging and industrializing' food system types (types 3–5). None of the food system types currently adhere to SHD. When thinking through the transformational processes that food systems require, strategies to ensure SHD for consumers will need to be aligned with stages of food system development, both nationally and sub-nationally. To inform transformational processes, we need a deeper understanding of how consumers make food choices within their context-specific food environment.

3.4 The food environment as entry point for behavioural change

Central to food system transformation is the question how people's food choices can be steered towards SHD within their local context. Enabling food environments are required

that educate and entice consumers to make choices in line with SHD. Food environments are the physical spaces where consumers choose their food (Turner et al., 2018). These span from kitchen gardens to farm fields, from roadside stalls and kiosks to wet markets and supermarkets, from schools and universities to office canteens and sports facilities, from kindergartens to elderly homes, from rural health posts to hospitals, from street food vendors to restaurants, and from bill boards to TV commercials (Downs et al., 2021). Provision of information and awareness creation about SHD, using national FBDG as a tool through all available communication channels, can be a first important step (HLPE, 2017). Whereas price is an important consideration in food choice, availability and acceptability are just as important. True social and behavioural change can only be expected when emotional and subconscious motives are targeted consistently. It will therefore be key to consider psychological traits, emotions, and social norms of consumers when creating demand for more sustainable and healthier food options.

In view of their heterogeneity, 'one size fits all' measures to transform food systems are likely to fail. Nevertheless, lessons can be learned from other environments that can be tried and tested elsewhere (Turner et al., 2018). There are several good examples of how consumers can be nudged towards healthier choices by reframing social norms, vendor retail innovations, product labelling, taxing of undesired foods, and making healthy food the default choice. Such social and behaviour change strategies can support innovations in the food environment to steer consumers into the right direction (Fretes, Marshall and Leroy, 2024). Within the African context, some well-designed school feeding programmes have led to more food security, increased demand for local produce, and better knowledge and attitudes regarding dietary practices. More recently, several innovative strategies in local food environments have been developed successfully, such as 'baby restaurants' in Madagascar, where mothers can come with their infant to receive a balanced meal, and door-to-door selling of healthy porridges by mobile food vendors (MQSUN+, 2018), ready-to-cook vending of vegetables-on-wheels in Nigeria (Snoek et al., 2022), increased vegetable offer in meals by street-food vendors in Benin, and milk vending machines that allow choice of quantity (Ayuya et al., 2020), or pre-cooked dehydrated beans in small packages, both of which are more affordable, in Kenya. More evidence on what works and what can be scaled within the context of food environments in African food systems is needed to guide decision and policy makers.

3.5 Challenges in shaping future-proof African food systems

Food systems are characterized by multiple intersecting inequalities that undermine their resilience. Therefore, socioeconomic, gender, health, and environmental inequalities need to be addressed when transforming African food systems. Change will undoubtedly create tensions between the interests of different actors in the food system, which is probably best managed through social protection of the poorest and most vulnerable people. Food system transformation will inevitably meet resistance when trade-offs extend to more powerful players on the local, national, regional, and global market, or to other sectors, such as the environmental, health, transportation, and energy sectors. However, there may also be unexpected synergies that can serve multiple purposes and can be strengthened. Timely identification of threats and opportunities and guidance how to navigate them will enhance the implementation of effective interventions towards food system change, and for consumers to achieve SHD.

4 Multi-sectoral collaboration is crucial to achieve SHD for all

No single stakeholder group within the food system will be able to bring about a food system transformation like the one described above. Bold leadership and governance will be needed to unite consumers, farmers, retailers, investors, researchers, policy makers, and many others, in order to build a shift in Africa towards SHD, supported by policies that prioritize and support the alignment of dietary and food system change. This requires strong political commitment and governing bodies at (sub) national levels, and engagement with stakeholders from public and private sectors, and international organizations (FAO, 2022). Governments do have a toolbox to control agri-food production, e.g. trade and market interventions, price incentives and fiscal subsidies to producers and consumers, and general services support, which can be employed to influence the availability, affordability, and accessibility of the required foods.

Of note, market price controls such as minimum prices for staple foods like wheat, maize, rice, and sugar may negatively affect the production of more desirable crops in terms of nutrient density, such as fruits, vegetables, and legumes. Currently, support of agricultural production mostly favours cereals, sugar, and meat, while fruits and vegetables are even discouraged in some LMICs (FAO, 2022). Trade and tariff policies can also be barriers for nutritious foods in domestic markets and can gravely undermine the availability and affordability of SHD. Governments need to increase expenditures that collectively support food and agriculture to overcome gaps in sustainable production of nutritious foods (for instance by availing resources and green technologies), and to provide a decent income to improve affordability of healthy diets (FAO, 2022). At the same time, overproduction and overconsumption of emission-intensive or otherwise problematic commodities may be dis-incentivized.

Clearly, food system transformation to achieve SHD is not something that can be done overnight. It will require strong political will, careful planning, and patient lobbying. It will require a coherent plan, grounded in national policies, and implemented and governed by institutions that are equipped with adequate resources, capacity, and authority. Stand-alone interventions that only target one specific component of the food system may even be counterproductive. Food system transformation will require all actors to deliver their part, guided by a common vision. Multi-sectoral collaborations, consisting of consumers and public and private sectors, will be crucial to reach that goal and to mitigate trade-offs. Essential elements include those that can accelerate transformation such as development of national action plans as a follow-up of the UN Food System Summit 2021 and its bi-annual 'Stocktaking Moments', to build trust and to enable social licencing (Figure 10.1).

5 Conclusion

In the first chapter of this book, four paths of change are highlighted to describe the context of African agri-food systems and how these may change towards 2050. We conclude that neither of these paths will lead Africa towards SHD for its inhabitants, unless an SHD perspective is adopted. Taking the dietary needs of consumers as the starting point in reshaping food systems to deliver SHD represents a long-term investment in a strong workforce and manageable health care expenses. A continued narrow-minded focus on productivity, calories, yields, and inputs of a few staple and cash crops is unlikely to serve human and planetary well-being and equity in Africa. What is needed is leadership and a common long-term vision that guides re-shaping of food systems to nourish the continent.

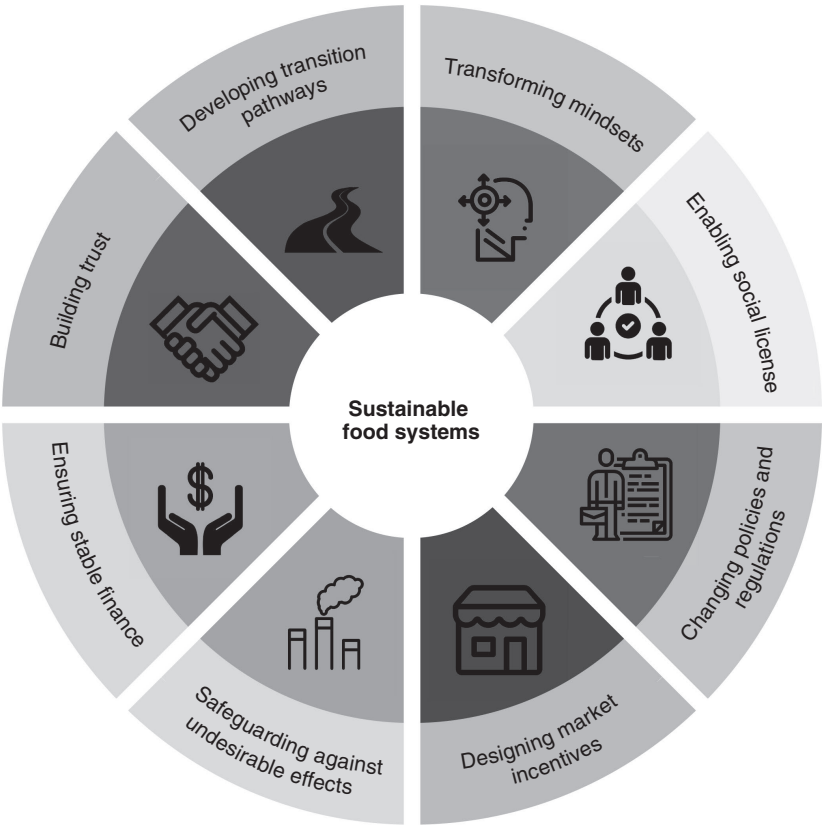

Figure 10.1 Essential elements for accelerating the systemic transformation of food systems.
Source: Herrero et al. (2020).

Note

1 See https://www.fao.org/nutrition/education/food-based-dietary-guidelines.

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