



Local Review of Dietary Shift Solutions

The Dietary Shift Competition



A collaboration between EAT, the Global Alliance for Improved Nutrition (GAIN), and The Food and Land Use Coalition (FOLU).

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This report aims to provide key insights into the Kenyan and Indonesian contexts, the two countries involved in the Dietary Shift (DISH) competition project.

It outlines suggested solutions based on interviews with local food system stakeholders, including representatives from government, think tanks, academia, private sector, and civil society organizations in both countries. The report explores the local context, trends, and dietary patterns while summarizing existing solutions to encourage dietary shifts, alongside the challenges and enabling factors needed to accelerate progress. Proposed solutions include policy reforms, educational initiatives, technological innovations, and community-driven capacity-building efforts.

1 Introduction and Background

The Dietary Shift Competition (DISH) is a collaborative project between EAT and The Global Alliance for Improved Nutrition (GAIN) with support from Food and Land Use Coalition (FOLU). It aims to build on existing capabilities and ensure that recommendations from the forthcoming EAT-*Lancet* Commission 2.0 and the Food System Economics Commission (FSEC) are actionable, agreeable and context-based.

By the end of phase one, the goal is to identify 10 to 14 integrated, viable solutions that are country-generated, context specific for dietary shifts, rooted in existing global solutions. This will be achieved through a local competition for solutions in Kenya and Indonesia, which will help identify feasible pathways to dietary shifts aligned with the Planetary Health Diet (Willet et al., 2019). These solutions will be advocated to decision-makers and policymakers.

This report presents suggested solutions based on interviews with local stakeholders, including representatives from government, think tanks, academia, the private sector, and civil society organizations in Kenya and Indonesia. It highlights the countries' context, trends, and dietary patterns and summarizes existing solutions for dietary shifts,

along with the challenges and enabling factors needed to accelerate progress. Potential solutions include policy reforms, educational initiatives, technological innovations, and community-driven capacity-building efforts.

The report is not a comprehensive review of the literature and local solutions in two countries. Instead, it provides background information and a snapshot of existing dietary-shift solutions while identifying barriers and enabling factors that could support change.

1.1 Solution categories for dietary shifts

As outlined in the *Global Review of Dietary Shift Solutions*, examples of dietary shift solutions are grouped into five categories: regulation and policy, product reformulation and culinary strategies, design of food service or food retail strategies, advertisement and cultural strategies, and technology. These categories have inspired the eligibility criteria in the competition.

2 Kenya

2.1 Geography, dietary patterns and cultural identity

Kenya has a young population, with a median age of under 20 years. Kenya ranks seventh in Africa in terms of population, with nearly 55 million people (World Bank, 2024). The country's geography is diverse, comprising expansive savannas, the Great Rift Valley, coastal regions, and lush highlands. It borders South Sudan, Ethiopia, the Indian Ocean, Uganda, Somalia, and Tanzania. This diverse geography contributes to a rich cultural heritage, characterized by many tribes, ethnic groups, and distinct cultural differences.

Urbanization is steady at approximately 3.7 percent per year (World Bank, 2024a). As of 2023, 16.2 million people, nearly 30 percent of the population, live in cities (World Bank, 2024b). The latest State of Food Security and Nutrition report shows that, as of 2022, 79.2 percent of Kenyans could not afford a healthy diet, an increase of one million people from 2021 to 2022 (FAO et al, 2024). Kenya faces a “triple burden” of malnutrition: undernutrition, micronutrient deficiencies, and overnutrition (overweight and obesity). According to the 2022 Kenya Demographic Health survey, 18 percent of children under five are stunted (low height-for-age), 5 percent are wasted (low weight-for-height), 10 percent are underweight, and 3 percent are overweight. These figures threaten Kenya's goals of reducing malnutrition in line with the World Health Assembly targets, Kenya Vision 2030, and the Sustainable Development Goals. With food and nutrition insecurity driving malnutrition, the Government of Kenya is prioritizing transforming food systems to ensure food and nutritional security for all.

Kenya's food imports are rising due to climate change, seasonal variability, deforestation, loss of biodiversity, low productivity, income poverty, and unsustainable farming practices (only a third of Kenya's lands are arable). Rising input costs and processing limitations in the food

sector also hamper efforts to meet diverse consumer needs. A recent study found that foods high in calcium, animal-source protein, zinc, and iron are generally less affordable, except in regions where small, dried fish is available and affordable. (Ryckman et al., 2022). North Eastern Province, which suffers from low dietary diversity, is particularly affected by food affordability.

While food affordability is worsening, there is a growing awareness of healthy eating. Stakeholders report that the global Covid-19 pandemic increased awareness of health and the importance of nutrition.

Kenyan cuisine is diverse, reflecting the country's many tribes and regions. Staples include maize (used to make ugali, a dense porridge made from maize flour), millet, rice, legumes and beans. Traditionally, fruit and vegetable intake has been low, and fish consumption is limited outside coastal regions like Mombasa, despite access to both the Indian Ocean to the East, and Lake Victoria to the West. The diet typically includes a range of starchy vegetables such as yams, sweet potatoes and arrowroot, with goat and other red meats providing animal protein.

Urbanization, Western dietary influences, and the introduction of fast food have shifted diets towards quicker, more processed meals, particularly among younger people. Slow-cooked traditional vegetables and meals are increasingly being replaced by wheat-based products such as bread.

There is, however, a resurgence in the appreciation of traditional foods, driven by awareness campaigns highlighting their health benefits, and the impact of diet on non-communicable diseases (NCDs). Restaurants are increasingly offering traditional meals as healthier alternatives to modern, processed foods.

2.2 Challenges

A major dietary challenge is the increasing consumption of unhealthy foods high in fat, sugar, and salt, as well as sugary drinks, particularly in urban areas and among young people. Food safety is another concern, as consumers often avoid nutrient dense foods like vegetables and fruits due to perceived safety risks.

The main barriers to dietary shifts in Kenya include political issues, economic constraints, infrastructure deficiencies, cultural factors, and a lack of coordinated support. Stakeholders highlighted economic challenges, such as poverty and limited government financial support, which hinder communities' access to nutritious foods. Agricultural difficulties are compounded by climate change, which disrupts seasonal patterns through droughts and floods.

Infrastructure barriers, such as inadequate value chains and a lack of cold storage solutions at markets and during transport, increase food loss and waste, raising the cost and limiting the availability of fresh produce.

With maize and ugali being so deeply tied to food security, it is often said that “ugali is food, and food is ugali.”



Cultural differences and generational divides over traditional diets also present significant obstacles to broad dietary shifts. With maize for ugali being so deeply tied to food security, it is often said that “ugali is food, and food is ugali” (de Jong et al, 2024, p. 16).

Further challenges include a lack of comprehensive government support and coordination with NGOs and the private sector, which undermines efforts to promote healthier diets. Additionally, the absence of effective fiscal policies and incentives for healthier food options, combined with the high costs of marketing and awareness campaigns, further impede progress towards dietary shifts.

2.3 Current policies and goals

Kenya's *National Guidelines for Healthy Diets and Physical Activity*, published in 2017, outline nine key recommended food groups and their intake.

- Eat a variety of foods from different food groups every day. Include whole or unprocessed starchy foods as part of meals.
- Eat plenty of green leafy vegetables, red and yellow vegetables and fruits every day; and include a variety of other vegetables and fruit.
- Eat beans, peas, lentils, cowpeas, pigeon peas, soya, nuts and edible seeds regularly (at least four times a week).
- Eat lean meat, fish and seafood, poultry, insects or eggs at least twice a week.
- Drink fresh milk, fermented milk or yogurt every day.
- Use oil or fat in moderation in meals; limit the amount of solid fat. Use fortified oil.
- If you use sugar, use it sparingly.
- Use iodized salt, but use it sparingly.
- Drink plenty of safe water. (Kenya Ministry of Health, 2017)

During the UN Food System Summit (UNFSS) in 2021, Kenya identified four main areas of action to help achieve its ambitions of 100 percent food and nutrition security, as outlined in Kenya Vision 2030. These priorities were reaffirmed in the 2023 Stocktaking Moment following the UNFSS:

1. Increase the number of young people and women with access to productive resources that they require to thrive in our food systems.
2. Increase the uptake of digital agricultural solutions
3. Improve the diversity of diets including fruits, vegetables, dairy, meat and fish, as well as grains.
4. Heighten climate action to build the resilience of our people. (SDG Partnership Platform, 2023)

← Ugali, traditionally made with white maize meal, is a staple food in Kenya and several neighboring countries.

Photo: [H.Holmes/RTB](#)

2.4

Examples of local solutions

The following dietary shift solutions and suggested actions are based on a interviews and discussions with key stakeholders in Kenya's food system. Their examples include both existing programs and initiatives, as well as proposed measures to accelerate shifts.

2.4.1

Regulation and policy

Stakeholders emphasized that national solutions must encompass nutrition regulations for processed foods, the implementation of clear food labeling, and tax relief for farmers who produce healthy foods like fruits and vegetables. Policies should also focus on improving financial access to healthy diets at the community level and ensure consistent guidance on food safety and nutrition across all sectors. The discussion also highlighted the inadequacy of agricultural services, underlying the need to strengthen these services to support dietary shifts.

Further examples include:

- **Regulations on marketing and advertising:** Implement government regulations to limit the advertising of unhealthy foods near schools.
- **Repurpose food taxes:** Raise taxes on foods high in fat, sugar, and salt to discourage unhealthy consumption.
- **School meals:** Strengthen government guidelines and funding for school meals to ensure interventions are targeted and based on scientific evidence. Policies could promote locally grown, nutritious foods while discouraging unhealthy, processed options.
- **Agricultural extension services and market access:** Strengthen market linkages for farmers growing indigenous or healthy foods and bolster private-public partnerships in delivering extension services.
- **Labeling:** Develop a front-of-package labeling scheme on more products to inform people about their health impacts.

2.4.2

Product reformulation and culinary strategies

Biofortification was highlighted by several stakeholders as a key technological innovation to improve diets. Although challenges such as certification, market access in the seed value chain, and import difficulties persist, biofortification can significantly impact health in areas where staple foods dominate micronutrient deficiencies. Examples include:

- **Fortified foods and biofortified crops:** Introduce vitamin A-enhanced sweet potatoes, and iron-rich beans to address nutrient deficiencies.
- **Innovative product development:** Expand the range of healthier products by using more traditional resources such as millet, sorghum and cassava flours for porridges instead of maize.
- **Fishpond initiatives:** Develop fishponds to diversify diets and test the integration of fish into local consumption.
- **Insect-based products:** Introduce insect-based products, where culturally acceptable, to enhance the nutritional value of food.
- **Diverse and resilient agricultural production:** Promote diversified production and improve soil health to increase the availability of diverse foods.

2.4.3

Design of food service or food retail strategies

Partnerships with restaurants and food apps like Uber Eat can involve educational campaigns targeting chefs in public and private food services. Examples include:

- **Food service collaboration:** Encourage and train chefs and others in the food service industry to create appealing recipes that promote traditional foods.

2.4.4

Advertisement and cultural strategies

Various campaigns to promote healthy and diverse diets, including those focusing on beans, were identified by stakeholders as crucial for driving behavioral change. Examples include:

- **Promotion of healthy eating habits:** The Ministry of Health is collaborating with the Department of Agriculture to synthesize healthy eating practices and encourage household vegetable gardening as a national goal.
- **Awareness and education campaigns:** Promote healthy diets by developing recipes and raising awareness on preparing traditional foods in nutritious ways to shift cultural perceptions. Local food demonstrations can help communities understand the added value of local foods. Community education programs can inform farmers about healthy diets, supplemented by government-led initiatives such as school feeding programs.
- **School-based interventions:** Target youths through school-level interventions and technology to foster an appreciation for nutritious foods from an early age. Educating students on good nutrition, who can then influence their households, can drive more effective dietary shifts. School gardens and urban gardening projects serve as testbeds for cultivating certain vegetables, acting as both a community education tool and a source of produce for canteens and other local food providers.
- **Student-led extension programs:** Implement programs where students identify and address dietary problems at the farmer level, particularly in urban areas, to improve access to fresh produce.

- **Promotion of indigenous and traditional foods:** Launch campaigns to boost access and demand for indigenous vegetables in urban areas by linking rural farmers to city markets and processing traditional foods to enhance availability and convenience. This effort could be accelerated through the creation of aggregation and distribution hubs for indigenous vegetables in urban centers.
- **Innovation in urban agriculture:** Promote modern farming technologies such as hydroponics, vertical farming, and rooftop farming, which can be particularly effective in urban centers.
- **Beans campaign:** Encourage the inclusion of beans in diets to address soil health, climate change, and non-communicable diseases. Integrate this campaign with education and community initiatives, such as Nairobi Burger Week, to broaden its appeal and impact.
- **Cross cultural culinary learning:** Foster healthier food choices and sustainable consumption by sharing diverse methods of household food preparation and preservation across Kenya’s different cultures.

2.5 Enabling factors

Several enabling factors can accelerate dietary shifts in Kenya, including better support for farmers, education and capacity building, policy reforms, and multi-sectoral cooperation. Assisting farmers with technologies such as irrigation systems and water harvesting can reduce dependency on seasonal conditions, while leveraging the phone network and increasing the use of digital applications can bolster food production.

Bridging the gap between policy and practice requires aligning public policies with private sector actions, thereby fostering an environment conducive to nutritious food initiatives. Strengthening the health system’s capacity to address diet-related issues and investing in rural research can further support sustainable shifts. Improving the efficiency of value chains and promoting local businesses are crucial to making healthy foods more accessible and affordable throughout Kenya.

2.6 Conclusions

Interviews with food system stakeholders in Kenya reveal key insights into the challenges, enabling factors, and proposed solutions for dietary shifts. The main obstacles in Kenya are related to affordability and accessibility of healthy foods. Stakeholders note a negative trend towards increased consumption of fast food and highly processed items high in sugar, fat and salt, especially in urban areas and among youth. The influence of social media and the “supermarketization” and influx of unhealthy snacks and fast food are seen as exacerbating the problem. Barriers to dietary shift revolve primarily around the affordability and accessibility of healthy foods, along with cultural preferences for less healthy options over traditional healthy staples.

While awareness about health is growing, knowledge about healthy and sustainable diets must expand further. Stakeholders emphasize the importance of building knowledge and capacity among those directly involved with food, as well as policymakers and other decision-makers. Regulatory measures were also highlighted as necessary to steer changes. Furthermore, collaboration is considered a key enabling factor. Strengthening ties between policymakers, farmers, youths, chefs, and other stakeholders can build community trust, reinforce the link between healthy diets and cultural norms, and increase the adoption rate of recommendations.

3 Indonesia

3.1 Geography, dietary patterns and cultural identity

Indonesia is the world's fourth most populous country, with more than 277 million people (World Bank, 2024c). Its population is across an archipelago of over 17,000 islands, shaped by a wide range of cultures, ethnicities, and geographical regions. A significant majority of Indonesians—162 million—reside in urban areas, and the urban population is growing at a rate of 1.8 percent per year (World Bank, 2024d) (World Bank, 2024e).

Traditional Indonesian cuisine is characterized by high rice consumption, typically accompanied by vegetables, fish, chicken, eggs, and an array of spices and herbs. However, the cuisine varies greatly across the archipelago, reflecting the country's vast geographic and cultural diversity. In the eastern Indonesia, such as Papua and Maluku, nuts and sago are staple foods, while on Java, the most populous island, vegetables like spinach and cassava leaves are more common. Rice remains the primary source of carbohydrates, while fish and chicken are key sources of protein. Spices and herbs not only enhance flavor but also offer various health benefits.

While fruits are generally affordable and widely available, their consumption remains relatively low due to dietary preferences and cultural habits. Food in Indonesia is closely linked to cultural practices and social interactions; traditional dishes are often prepared for festivals and communal gatherings, underscoring the region's rich cultural heritage. Although traditional diets are generally balanced, there is a growing concern about the rising consumption of

processed foods and sugary drinks, particularly in urban areas. Efforts are being made to promote healthier eating habits by integrating more fruits and vegetables into daily diets.

Globalization, urbanization, and the influence of social media are reshaping Indonesian dietary habits, especially among the younger generation. Wheat products, processed foods, fast food, and snacks—often high in sugar, fat, and salt—are becoming more prevalent, spurred by social media trends and urban lifestyles. Despite the availability of traditional foods, modern diets have increasingly shifted towards more animal-based dishes, and the rise of food delivery apps has made international cuisines more accessible. These changes are contributing to nutritional challenges, with over 90 percent of the population not consuming enough vegetables and an increasing reliance on animal-based products.

Promoting healthier dietary habits is crucial for Indonesia as it seeks to preserve its culinary heritage, ensure nutritious food for vulnerable populations, and address modern health challenges. There are some positive trends, such as growing awareness of healthy eating and rising demand for organic and plant-based options, particularly in urban areas among those who can afford them. Recent studies suggest that Indonesian consumers are becoming more health-conscious and environmentally responsible, with a preference for sustainable, eco-friendly, and organic products.

Knowledge creation and capacity building for people working directly with food, as well as for policymakers and other decision-makers is essential

3.2 Challenges

According to the latest State of Food Security and Nutrition Report 2024, approximately 46 percent of Indonesians have been unable to afford a healthy diet for the last three years (FAO et al., 2024, p. 192). Younger generations face additional challenges due to changing taste preferences and the pervasive promotion of fast foods on social media.

Educational initiatives and policy advocacy have been employed to address these barriers. Successful programs have involved peer-to-peer learning, robust support from organizations such as GAIN, and the introduction of diverse foods through various activities. Nonetheless, challenges remain in ensuring the sustainability of these campaigns, measuring their impact, and securing meaningful youth participation in policy-making processes. Government involvement and raising awareness about healthy eating are crucial to overcoming these barriers.

3.3 Current policies and goals

Indonesia is actively working to transform its food systems to promote healthier and more sustainable diets. This ambition is reflected in the Long-Term Development Plan 2025-2045 and the pathways submitted to the United Nations Food Systems Summit (UNFSS).

The government has issued the “Isi Piringku” (My Plate) dietary guidelines, which advocate a balanced diet with appropriate proportions of carbohydrates, proteins, fruits, and vegetables. These guidelines aim to promote both health and environmental sustainability, and include the following key messages:

- Eat a variety of foods
- Eat plenty of vegetables and fruits
- Eat high-protein foods (animal or vegetable source)
- Eat a variety of staple foods
- Limit consumption of sweet, salty and fatty foods
- Eat breakfast everyday
- Drink enough safe water

- Read food labels
- Wash your hands with soap and running water
- Perform adequate physical activity and maintain a normal weight (FAO, 2024).

Indonesia has also developed additional guides to emphasize aspects such as nutrition, diversity, food safety, activity and weight management, as well as specific recommendations around portion sizes for each meal (FAO, 2024). Indonesia’s Food Law also underscores the need for transforming food systems to ensure food security, nutrition, and sustainability, aligning with global commitments set by the UNFSS.

The UN Food System Summit Dialogues identified a number of potentially game-changing solutions for Indonesia, focusing on five key priorities: (1) ending hunger, improving diets and promoting coastal and ocean-based food; (2) protecting and restoring natural resources; (3) fostering inclusive business; (4) building resilient local food systems; (5) encouraging inclusive governance” (Summit Dialogues, 2021, p. 4-5).

Indonesia’s strategic national pathway for food systems transformation, submitted to the UNFSS, highlights several key approaches:

- Comprehensive and integrated development: Addressing cross-sectoral issues and action areas to ensure a holistic approach to food system transformation.
- Inclusiveness and multi-stakeholder collaboration: Promoting multi-stakeholder collaboration and partnerships through national platforms to ensure inclusivity in the transformation process.
- Food systems regionalization: Localizing food systems across Indonesia to reflect the country’s diverse ecological, sociocultural, and economic conditions.

The Long-Term Development Plan 2025-2045 draft outlines a comprehensive strategy to transform food systems by focusing on creating an inclusive, resilient, and sustainable

food system. It emphasizes localizing food production according to Indonesia’s rich biodiversity and sociocultural contexts. The plan also underscores the need to strengthen the agricultural sector and support smallholders, who play a crucial role in the food system.

3.4 Examples of local solutions

3.4.1 Existing regulations and policies

- **Food diversification program:** The “Pangan Beragam, Bergizi, Seimbang dan Aman” (diverse, nutritious, balanced and safe food) initiative promotes dietary diversification by encouraging the consumption of various foods, including local grains, legumes, and tubers, to reduce dependence on rice.
- **Nutrition improvement through biofortification:** Initiatives include fortifying staple foods such as rice and wheat with essential micronutrients to address micronutrient deficiencies.
- **Regulation on food labeling:** Policies mandate that food products are labeled with nutritional information, aiding consumers in making informed choices. Labels must include data on nutritional content, sourcing, and sustainability.
- **Regulations on advertising:** Targeted measures restrict the marketing of unhealthy food, particularly to children especially.
- **School meal programs:** Programs to improve nutrition in schools, ensure that meals provided are healthy and balanced. This includes guidelines on foods that can be sold in school canteens.
- **Sustainable agriculture policies:** Regulations promote sustainable agricultural practices aimed at reducing environmental impact, and enhancing the resilience of food production systems to climate change.

Promoted or proposed policies:

- **Local food movement initiatives:** Support local food movements that encourage the consumption of locally sourced and produced foods, thereby reducing the carbon footprint and supporting local economies.
- **Urban farming and community gardens:** Initiatives to encourage urban farming projects and community gardens, enhancing city self-sufficiency and improving access to fresh produce.
- **Reduction of food waste:** Proposed regulations aimed at reducing food waste at the consumer and retail levels, including initiatives to improve food storage, preparation, and waste recycling.
- **Healthier dietary guidelines:** Promotion of revised dietary guidelines emphasizing the consumption of more fruits, vegetables, whole grains, and sustainable sources of protein.
- **Repurposing taxes:** Implementation of taxes on unhealthy food and beverages to discourage their consumption.
- **Promote youth involvement:** Encouraging active youth participation in the creation of food system policies to ensure their perspectives are heard from the outset. Efforts to help local governments promote local foods to other parts of Indonesia, aligning local narratives with national policies.

3.4.2

Product reformulation and culinary strategies

- **Product reformulation:** Indonesia participates in the ASEAN Leaders' Declaration on the Reformulation and Production of Healthier Food and Beverage Options. This initiative seeks to reduce the content of sugar, salt, and unhealthy fats in processed foods and beverages. The Ministry of Health has implemented regulations to limit the use of trans fats and promote reductions in sodium and sugar in processed foods.

→ 'Cooking with Banana Leaves',
Ubud Readers and Writers
Festival, Ubud, Bali, Indonesia.
Photo: [Matt Oldfield](#)

- **Promotion of local and traditional foods:** Efforts are underway to revive and promote local and traditional foods, which are often more nutritious and sustainable. The government supports initiatives that highlight the benefits of traditional Indonesian cuisine, encouraging the use of local ingredients and cooking methods through educational campaigns and support for local food production.
- **Culinary education and training:** Programs are being developed to educate chefs and culinary professionals on healthy cooking techniques and the use of local ingredients. Culinary schools and training centers incorporate modules on nutrition and sustainable cooking practices.

3.4.3

Design of food service or food retail strategies

- **Culinary festivals and events:** Organizing culinary festivals and events to celebrate local and traditional foods, raising awareness of their nutritional benefits and cultural significance.
- **Restaurant partnerships:** Collaborating with restaurants to incorporate more local and traditional foods on their menus, encouraging consumers to opt for healthier and more sustainable options.

- **Healthy food certification programs:** Implementing certification programs for restaurants and food service providers that meet specific health and sustainability criteria, helping consumers identify healthy dining options.
- **Farmers' markets:** Establishing farmers' markets to create direct link between local producers and consumers, supporting local agriculture and ensures the availability of fresh, nutritious foods.
- **Retail partnerships:** Partnering with retail chains to stock and promote local, sustainably produced foods, thereby increasing the visibility and accessibility of healthier options.
- **Direct farmer-to-consumer platforms:** Developing digital platforms to connect farmers directly with consumers, enhancing the efficiency of the food supply chain.
- **Regional food systems:** Developing regional food systems to support local farmers and reduce the carbon footprint associated with food transportation..
- **Promotional campaigns:** Running promotional campaigns in retail stores to highlight the benefits of healthy and sustainable foods, including discounts, special displays, and in-store tastings.
- **New applications:** Developing apps to help consumers find healthy snacks, incorporating



features like barcode scanning for health ratings and gamification elements.

- **Front-of-pack labels:** Introducing front-of-pack labels that provide clear and accessible nutritional information, helping consumers make healthier choices.

3.4.4 Advertisement and cultural strategies

- **Healthy eating campaigns:** The government and various organizations run public awareness campaigns across social media, television, and radio to educate consumers on the benefits of healthy eating.
- **Celebrity endorsements:** Engaging celebrities and influencers to promote healthy eating habits, particularly targeting young demographics.
- **Educational content:** Creating and disseminating educational content on how to read and understand nutritional labels via social media and other digital platforms.
- **Discounts and incentives:** Providing discounts and incentives for purchasing healthy and sustainable foods, often promoted through retail and food service campaigns.
- **Healthy food challenges:** Organizing challenges and competitions to encourage healthier eating habits, supported by social media and community events.
- **Culinary festivals:** Hosting culinary festivals to celebrate traditional Indonesian foods, raising awareness of their nutritional benefits and cultural significance.
- **Local food movements:** Supporting local food movements that promote the consumption of locally produced and traditional foods through community gardens, farmers' markets, and local cooperatives.
- **Integrating health messages into cultural practices:** Incorporating health messages into cultural practices and events, such as traditional ceremonies and festivals, to promote the healthy eating.
- **Storytelling and folklore:** Using storytelling and folklore to convey

the importance of healthy and sustainable diets, leveraging Indonesia's rich cultural heritage.

- **Engaging with youth:** Initiatives such as Health Heroes Indonesia engage youths online and offline to educate peers on limiting consumption of sugar, salt, and fats and promote healthier local snacks.
- **Social media campaigns:** Using platforms like Instagram and TikTok to reach young audiences and promote awareness of healthy diets.
- **Educating consumers:** Ongoing consumer education through social media, "edutainment" content, and influencer collaborations to showcase healthy food options.

3.4.5 Capacity building and knowledge sharing

Training programs for farmers and food producers:

- **Sustainable agriculture training:** Educating farmers on organic farming, efficient water use, and soil conservation practices.
- **Nutrition-sensitive agriculture:** Training that integrates nutritional goals into agricultural practices, ensuring food production aligns with healthy diets.

Educational initiatives for health professionals:

- **Nutrition education for health workers:** Training health professionals to provide better nutritional advice and support, including courses on nutritional science and dietary guidelines.
- **Community health programs:** Training community health workers to promote healthy eating habits and sustainable food practices at the grassroots level.
- **Monitoring and integrating:** Developing apps to monitor the health of pregnant women and integrate primary care through digital platforms.

Capacity building for policymakers:

- **Policy development workshops:** Workshops and seminars to enhance policymakers' capacity to develop and implement effective

food and nutrition policies.

- **Cross-sectoral collaboration:** Encouraging collaboration between sectors such as agriculture, health, and education to create integrated food policies.

Educational Campaigns:

- **Targeting chefs and food service staff:** Nutrition education for chefs and food service staff to promote the use of healthy ingredients and cooking methods.
- **Awareness campaigns:** Public awareness campaigns to inform consumers about the benefits of healthy eating and guide them in making healthier choices when dining out.
- **Educational programs:** Schools and community-based programs to teach the younger generations about traditional foods, their health benefits, and the importance of healthy and sustainable diets.

Knowledge sharing

- **Collaborative research projects:** Universities and research institutions collaborate on projects exploring sustainable food systems and healthy diets. The findings are shared through publications, conferences, and online platforms.
- **Data repositories:** Creating centralized repositories for sharing data on food systems, nutrition, and health, accessible to researchers and policymakers.
- **Modeling and mapping:** Conducting diet modeling and mapping to identify micronutrient intake among children and nutrient-dense recipes, as well as promote food-based recommendations.
- **Farmer field schools:** Providing a platform for farmers to exchange knowledge and best practices in sustainable farming techniques and nutrition-sensitive agriculture.
- **Peer-to-peer learning:** Encouraging community-based peer-to-peer learning to promote healthy eating, sustainable food practices, and recipe modification and intervention programs.

- **Workshops and seminars:** Organizing educational workshops and seminars for community groups to discuss sustainable food systems and healthy diets.
- **Home gardening:** Promoting home gardening and working with local governments on food environments and food waste initiatives to support a circular economy.
- **Sustainability in food production:** Efforts are also directed towards more sustainable food production methods, taking into Indonesia's diverse geographies and cultural contexts, which necessitate tailored approaches.

3.5 Enabling factors

Indonesia's efforts to promote healthier and more sustainable diets combine a blend of local initiatives and national policy frameworks aimed at transforming its food systems. Key enabling factors include:

- **Policy integration and multi-level governance:** Initiatives such as the SHIFT program in Semarang demonstrate effective collaboration between local and national authorities, fostering sustainable food practices like urban farming and food waste management. This model is being considered for wider application across Indonesia.
- **Improving affordability and access:** Economic and infra-structural reforms are essential to make nutritious foods more affordable and accessible. This includes shifting agricultural policies towards nutrient-dense foods, investing in transportation and logistics to reduce the cost of nutritious foods, and strengthening social protection mechanisms to bridge the gap between current food budgets and healthy diets costs.
- **Educational and behavioral change campaigns:** Efforts focus on raising public awareness and education to encourage dietary shifts towards healthier and more sustainable choices. This involves behavior change communication strategies and social assistance programs.
- **Research and policy development:** Ongoing research into food environments provides insights that shape policy actions promoting sustainable, healthy diets, such as managing the proliferation of ultra-processed foods and ensuring the availability of fresh, nutrient-dense foods options.

Additionally, economic incentives encouraging producers to offer healthier options and aligning these with local taste preferences can improve dietary habits. Collaborating with local governments and community groups, along with supporting digital platforms that connect farmers directly with consumers, can further facilitate access to healthy foods. Engaging and incentivizing chefs and restaurants to promote plant-based diets and recognizing leaders who champion dietary shifts are also crucial.

3.6 Conclusions

Interviews with stakeholders in Indonesian food systems provide key takeaways regarding challenges, enabling factors, and potential solutions for promoting dietary shifts.

Major barriers include the changing food culture among young urban populations and affordability and accessibility of healthy diets. Stakeholders report a growing trend in the consumption of fast and highly processed foods, particularly among urban youth. This shift is perceived as being largely driven by social media, the influence of international food delivery services, and the influx of unhealthy snacks and fast food, which negatively impact urban food environments.

Despite challenges, there is a growing awareness of health issues among the population. However, understanding of what constitutes a healthy and sustainable diet remains limited. Stakeholders stress the importance of knowledge creation and capacity building for workers, policy-makers, and decision-makers.

Regulatory policies are needed to steer these changes, and collaboration is identified as a key enabling factor.

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5 Appendix

Methods

The interviews were conducted via online meetings in July 2024 and consisted of 19 stakeholders from Kenya, and 9 in Indonesia. They covered a wide variety of stakeholder groups, and included academia and research, think tanks, policy makers, civil society organizations, youth groups, chefs, small and medium enterprises.

All stakeholders were asked the same overall questions:

- How would you describe the dietary patterns in the country at the moment (typical intake, challenges overall, positive trends etc.) compared to Kenya's culture and heritage/cuisine? How do you describe Kenya's cuisine/gastro-nomic identity?

- What is an example of a solution for dietary shifts that you are currently working on?
- What makes this solution successful? Any impact achieved? What were the barriers that you faced?
- What sort of enabling factors would need to be implemented to speed up dietary shifts in Kenya?
- What are current barriers for dietary shift changes in Kenya at national and local levels?
- What are the key solutions that can be implemented to accelerate progress towards dietary shifts and who are the key stakeholders to bring onboard?

The follow-up questions varied, but generally asked for more insights and further reflections around the answers given by the interviewee.

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Kenya interviewees

First name	Last name	Organization
Antonina	Mutoro	African Population and Health Research Center (APHRC)
Arthur	Muiruri	Kenya Agriculture Students Association
Bertha	Mkandawire	AGRA
Catherine	Macharia	Tanager
Chilufya	Chileshe	SDG2 Advocacy Hub
Dorothy	Mituki	Egerton University
Eddie	Olang	Akili Kids!
Eunice	Njogu	Kenyatta University
James	Muturi	Delish & Nutri
Jane	Ambuko	University of Nairobi
Kristin	Gutekunst	SDG2 Advocacy Hub
Lavender	Namdiero	SDG2 Advocacy Hub
Mary	Nderitu	Trans-Africa Agribusiness Solutions
Mildred	Eboi	Kenya Bureau of Standards
Nanzala	Lazerus	SDG2 Advocacy Hub
Nic	Omundo	Chef
Phyllis	Andambi	MoH Nairobi County Government
Stella	Kimani	Welthungerhilfe-Kenya
Winnie	Yegon	FAO

Indonesia interviewees

First name	Last name	Organization
Ade	Wiradnyani	SEAMEO RECFON
Fahmida	Umi	SEAMEO Recfon
Hera	Yosuf	Ministry of Health
Jaqualine	Wijaya	Food Sustainasia
Mulia	Nurhasan	CIFOR-ICRAF
Puput	Susanto	RISE Foundation
Rina	Agustina	Universitas Indonesia
Roby	Bagindo	Tastemade & Masak.TV
Sherly	Mailani	Health Heroes Indonesia