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**Nigeria National Pathways to Food Systems Transformation**

***Introduction***

Food systems contribute a considerable part of national economy and influence many developmental issues, including hunger, malnutrition, disease, poverty, livelihoods, unemployment, conflict, violence, and climate change. Improving food systems can therefore initiate positive change for multiple challenges. Recognizing that none of the 17 Sustainable Development Goals (SDGs) will be achieved without improving food systems, the United Nations Secretary-General called for a Food Systems Summit. The fundamental goal of the Summit is to guide governments and other stakeholders to identify and implement reforms that would transform food systems towards achieving SDGs. The Summit is organized around five interrelated Action Tracks, and four levers of change (human rights, finance, innovation, and empowerment of women and young people) that cut across the 5 Action Tracks. This document outlines priority measures that will facilitate achievement of the five Action Tracks in Nigeria and transform our national food systems.

***Current Functioning of Food Systems in Nigeria***

The current food systems are delivering large amounts of expensive, unsafe, and unhealthy foods, which are produced in environmentally damaging and unsustainable ways, while households with food system related livelihoods remain some of the chronically poor and vulnerable to shocks and stresses.

Empirically, hunger has been on the rise recently in Nigeria, and 44% of the population were classified as moderately to severely food insecure in 2017 – 2019. In 2018, 68% of children 6 months to 5 years old and 58% of women of childbearing age had anaemia (inadequate blood levels); 12% of women were underweight and 28% were overweight or obese; 37% of children less than 5 years old had significantly retarded (stunted) growth and 7% were too thin. Prevalence of diabetes among adults increased from 3% in 1980 to 6% in 2014. Almost a quarter (24%) of adults had high blood pressure in 2015. In 2019, more than 40% of Nigerians lived in poor households (spending less than ₦137,430 per person in the household per year), and food accounts for 57% of total household expenditure nationally. According to a 2017 report, 72% of Nigerians could not afford a diet that is adequate in essential nutrients and 91% could not afford healthy diets that meet all food group recommendations, including fruits and vegetables.

Food supply in Nigeria is generally unable to meet food needs of the entire population even if food was equally distributed; this is an indication of processing and/or preservation shortfalls. Agricultural yields in Nigeria are some of the lowest in the world e.g., in 2017, vegetable yields in Nigeria was 3.8 tons per hectare, compared to 5.7 and 19 tons per hectare in West Africa and globally, respectively. Postharvest losses are also high, with more than 10% of production for several food groups lost postharvest. Available food processing is predominantly not automated, and limited road networks and poor road infrastructure cause delays during the transportation and distribution of foods, resulting in poor food safety.

Furthermore, agricultural practices in Nigeria have contributed to high susceptibility to soil degradation and erosion. More land is also being converted to agricultural use instead of scaling up more environmentally friendly practices such as increasing the number of cropping cycles in a year and increasing yields.

The poor functioning of national food systems has worsened recently due to the COVID-19 pandemic as well as escalating unrests, conflicts, and violence across the country. In addition, although food systems challenges exist across the country, challenges vary in intensity across states and locations within states, indicating the need for location-specific interventions.

***Nigerians’ Expectations of National Food Systems***

Participants at the different national food systems dialogues emphasized the expectation that food systems that will deliver several outcomes, including higher incomes and reduced poverty among smallholder farmers; and enable farmers to spend more money on their children’s education. Through improved food systems, it is expected that women will have greater access to food production resources and/or processing inputs, increased control over resources, greater involvement in decision making, and increased assets ownership. Improved food systems will lower prices of nutritious foods, increase affordability, and increase availability of foods during their off seasons. Also, there will be guidelines that educate the public about healthy diets and guide healthy food choices as well as formulations by industry, who must appropriately label and profile nutrient contents of packages to guide consumers about products that meet healthy diet guidelines. The food systems improvements will facilitate healthier diets, resulting in improved immunity and reduced incidence of both communicable and noncommunicable diseases, evidenced by lower volumes of patients visiting health facilities. Overall, stakeholders prioritized achieving SDGs 1, 2, 3, 4, 5, 8, 10, and 17 as short-term expected outcomes of improved national food systems, and the other SDGs as long-term outcomes. The recommendations from the dialogues have been grouped into 6 solution clusters and presented in the table after this narrative.

***Food Systems Actions Alignment with other National Roadmaps and Global Solution Clusters***

The outlined actions for transforming Nigerian food systems complement existing efforts to improve development outcomes, including the Economic Recovery and Growth Plan, the Agricultural Policy, the National Policy on Food and Nutrition, National Health Policy, National Policy on Food Safety, among other frameworks. Solution clusters of global food systems game changers that particularly align with the identified pathways for Nigeria include clusters around the Action Areas of promoting food security and reducing hunger; cross-cutting actions; enabling, inspiring, and motivating people to enjoy healthy and sustainable options; manage sustainably existing food production systems; rebalancing agency within food systems; localizing food systems; and food systems resilience. Other aligned solution clusters that are not situated within these priority Action Areas include fortifying staple foods and crops. Key progress milestones will include significant improvements in crop yields, reductions in national costs of healthy diets, and reductions in poverty headcount ratio.

**Expected impact of Food Systems Transformation –** All Nigerians have equitable livelihoods as well as resilience to vulnerabilities, shocks, and stresses, and consume sustainable and adequate quantities of safe, nutritious foods produced using sustainable and nature-positive approaches. Impact Indicators include:

* Percent reduction in unemployment
* Percent reduction in poverty
* Percent reduction in food imports
* Percent reduction in stunting prevalence
* Percent reduction in micronutrient deficiencies prevalence among women and children
* Percent reduction in underweight prevalence
* Percent reduction in overweight/obesity prevalence
* Percent reduction in noncommunicable diseases
* Percent increase in performance of children in schools in disadvantaged areas in external examinations
* Percent reduction in food systems-related greenhouse gas emissions
* Percent increase in agriculture value added per worker

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| **Country Cluster 1**: **Investing in food security and nutrition knowledge dissemination, skills’ development, and information management systems to enhance agricultural productivity – Action Tracks 1, 2, 3, 4, 5** |
| **Programme** | **Expected Outputs** |
| **Short term** |  |
| Collect information on weather soil, crops, livestock, aquaculture, and poultry management through radio and disseminate through various platforms for planning agricultural activities | * Information about weather patterns and crop/livestock suitability information is collected
* Messages and guidelines around safe, nutritious, and sustainable food production for all food system actors is developed and standardized
* Radio scripts and information brochures are developed and disseminated on weather patterns and production suitability information
 |
| Establish agricultural production and processing hubs, and enable access for farmers, including women and youth | * Food production and processing technology hubs are established, and access assured for youths and women
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| Develop model for identifying and building capacity of agricultural extension agents to deliver improved agricultural extension services. | * Agricultural extension services are improved and expanded
 |
| Strengthen capacity of regulators and food handlers on food safety standards to ensure its adoption and enforcement. | * Street food vendors and food businesses are trained on basic nutrition and food safety
* Regulators are trained and deployed to monitor and enforce standards in the production, processing, and marketing of food
 |
| Scale up appropriate nutrition education programmes for increased consumption of nutrient rich and diversified diets, fortified/bio fortified foods, and reduced household food waste. | Nutrition education programmes are scaled-up towards increased consumption of nutrient-rich diversified diets and reduction in household food waste |
| Develop and produce quantitative food-based dietary guidelines including child/adolescent-specific guidelines for informed nutrition education. | Quantitative food-based dietary guidelines based on life cycle approach are developed and widely disseminated |
| Establish food safety standards for food production, meals, and snacks to ensure provision of safe and healthy foods | Nutrient, ingredients, and food safety standards are established for food production, meals, and snacks |
| **Long Term** |  |
| Strengthen technical and vocational training programmes for youth and women for food systems related livelihoods | Agricultural internships are created, for in-school and out-of-school youths to facilitate development of hands-on skills on food systems related livelihoods |
| Establish guidelines on food labelling, advertisement, and marketing | Food labelling and advertisement guidelines and regulations are established, and food labelling is mandated |
| Embed nutrition education in school curricula to enhance positive orientation and modify children’s eating behaviours. | Nutrition education is embedded in school curricula to enhance positive orientation and modify children’s eating behaviours |
| Digitize nutrition education through games, apps, infographics, and social media to foster behavioural change communication. | Nutrition education is digitalized through games, apps, infographics, and social media |
| Revise agriculture curriculum in tertiary institutions to include greater field learning and increased attraction to the youths for livelihood | Agriculture curriculum in tertiary institutions is revised to include greater field learning and increased attraction of agriculture to youths |
| Develop nutrient profiling system to guide food labelling, nutrition and health claims, and marketing. | Nutrient profiling system is developed to guide food labelling, nutrition, and health claims, and marketing. |
| **Country Cluster 2: Building sustainable, responsive, and inclusive food systems – Action Tracks** **1, 3, 4, 5**  |
| **Short Term** |  |
| Improve physical security of lives and property, including farmlands and transportation systems | Physical security of lives and property, including farmlands and transportation systems, is greatly improved |
| Strengthen supply chains for agricultural input and improve access for women and youth | Supply chain for inputs is improved |
| Increase LGA level organization of farmers into commodity groups/cooperatives for easy access to services | LGA-level organization of farmers into commodity groups and cooperatives is increased and there are increased linkages of groups to services |
| Conduct capacity audit on production farm equipment, extension agents, input suppliers, irrigation facilities, storage facilities across the country. | Agricultural production and storage facilities (including farm equipment, extension agents, input suppliers, irrigation facilities, and storage facilities) are audited at LGA level |
| Establish safe grazing reserves for pastoralists through PPP | Safe grazing reserves for pastoralists established |
| Preserve forest reserves and engage forest guards to secure forests against criminals, kidnappers, and bandits. | Forest reserves are preserved or established and secured |
| Develop traditional and innovative sources of finance together with business coaching and advisory services. | Traditional and innovative sources of finance and tailored-risk management products are developed and are accessible to smallholder farmers |
| Scale-up rainwater harvesting systems to reduce flooding of farms while conserving water for dry season farming. | Rainwater harvesting systems are scaled up for irrigation purposes |
| Reform land tenure system for easy access for youth and women. | Land tenure system is reformed, and women and youths have easy access to land |
| Map and classify agricultural lands across the country for production, processing and distribution of specific crops and livestock. | Agricultural lands in states are mapped and classified for crops and livestock production, processing, and distribution purposes |
| Provide insurance services to smallholder farmers, and women producers | Insurance services are provided to smallholder farmers and women producers |
| Scale-up smart agriculture initiatives that require fewer natural resources and produces more food. | Smart agriculture initiatives, including biofortified crops, hydroponics, and aeroponics are scaled-up |
| **Long Term** |  |
| Recover and restore various fish stocks and other aquatics  | Fish stocks and other aquatic foods are recovered and restored in rivers, rivulets, and streams |
| Support cultivation of bio-fortified crops and utilization of biofortified commodities as industrial raw materials | Biofortified crops are widely cultivated and used as industrial raw materials |
| Establish national frameworks for the application of Climate Services *(Domestication of Global Framework for Climate Services by WMO)* | National Framework for the Application of Climate Services is prepared and implemented  |
| Adopt Climate-Smart Agricultural practices and eco-friendly system of land development with biotechnology | Climate-smart agricultural practices and eco-friendly production systems are adopted |
| Build capacity of communities to engage in agro-forestry based production | Increased involvement of local communities in agroforestry livelihoods |
| **Country Cluster 3**: **Value chain and Market system development for improved productivity, improved livelihoods, and poverty reduction – Action Tracks 1, 4, 5** |
| **Short Term** |  |
| Promote women groups’ aggregators, for specific commodity value chains, to increase market access for women producers. | Women groups aggregators are promoted and linked to markets |
| Increase amenities and improve storage facilities through promotion of private-public partnership | Food storage and processing mechanisms are improved |
| Enhance farm product transportation through improved and expanded railways. | Transportation of food commodities via the rail system is increased |
| Automate food value chains to support traceability of products | Food value chains are automated to facilitate product traceability |
| Produce blended foods from local food sources for prevention and management of moderate acute malnutrition (MAM) | Blended foods for the prevention and management of moderate acute malnutrition are produced from local food sources |
| Establish micro-processing hubs to reduce post-harvest losses, prioritizing women processors | Micro-processing hubs are established, and women processors prioritised |
| Create physical spaces and schedules for farmers especially youths and women to sell their products. | Physical spaces and schedules are created for smallholder farmers to sell their products directly to consumers |
| **Long Term** |  |
| Promote public-private partnerships to address infrastructural deficits | Food systems’ infrastructural deficits are addressed through public-private partnerships |
| Establish grain reserve services and functional commodity markets to cater for emergencies | Food reserve services are decentralized, and functional commodities markets are established  |
| Upgrade market infrastructure to include cold rooms for fresh foods and other perishables | The structure of markets is upgraded to include cold rooms for fresh foods, vegetables, and other perishables |
| Establish free-trade zones to promote local and international trade | Free trade zones are established in rural areas to promote local and international trade |
| Re-introduce market boards and improve agro-logistics support | Marketing boards are re-introduced, and agro-logistics support is improved  |
| **Country Cluster 4**: **Increase demand for, and consumption of adequate, nutritious, and healthy foods, including in humanitarian contexts – Action Tracks 1, 2, 4, 5** |
| **Short term** |  |
| Promote homestead food production and animal husbandry with improved varieties for household consumption. | Homestead food production for household own consumption, including fruits, vegetables, the breeding of ruminants/wild game and small animal husbandry, is promoted |
| Develop technical and vocational training for women and youth along food value chains to increase job opportunities | Job opportunities for women and youth are increased by developing technical and/or vocational training linked to services demanded by major value chains and/or processors |
| Scale-up conditional cash transfer programmes and integrate livelihood development activities | Conditional cash transfer programmes are strengthened and scaled-up and livelihood-development activities are integrated into such programmes |
| Expand and improve social protection programmes including creation of food banks to deliver healthy, safe, and sustainable diets to poor communities and in humanitarian emergencies | Social protection programmes such as Home-Grown School Feeding Programme, and other food aid programmes are expanded and improved, and schools are used as key environment for delivering healthy, safe, and sustainable diets |
| **Long term** |  |
| Promote use of traditional/ local vegetables for preparation of meals for school feeding programmes, hospitals, military, and other public institutions | Traditional/local vegetables are included as ingredients for preparation of meals for feeding programmes in public institutions |
| Establish and scale-up home storage of food through processing and preservation to minimize food waste and build-up household food stocks | Promising household level food preservation techniques are scaled-up to increase food storage during periods of surplus, minimize food wastes, and build household food stocks |
| **Country Cluster 5: Promotion of peace-building initiatives, EWS, food marketing and regulation standards and an enabling environment for food systems activities – Action Tracks 1, 2, 3, 4, 5**  |
| **Short term** |  |
| Strengthen collaboration between government, households, NGOs, and research organizations to mitigate the effects of climate change. | Government, households, NGOs, and research organizations collaborate to act on climate change |
| Promote policy reforms and enabling acts to ensure preservation of ecosystems to improve food production during adverse weather conditions. | Policy reforms and enabling acts to preserve forests, greenbelts, wetlands, watersheds, and critical ecosystems to avoid flooding, promote irrigation, and recharge aquifers for improved food production during adverse weather conditions are promoted |
| Promote public-private partnership to monitor, track, report and disseminate information on potential climatic stresses in states. | PPP is promoted on climatic early warning systems to monitor, track and report on potential climatic stresses in states |
| Establish policies to facilitate increased competitiveness of local manufacturers in the food market. | Policies (including tax breaks and low-interest credit for local innovators) to facilitate increased competitiveness of local manufacturers in the food market are promulgated |
| Establish inclusive platforms for engagement of vulnerable groups including women and youth in policy planning and implementation processes | Inclusive platforms are set up to facilitate participation of vulnerable groups, including women and youths in policy planning and implementation |
| Establish conflict early warning systems, and build capacity for peace building and conflict resolution for all communities | Conflict early warning systems are established for all communities and capacities built for peace building and conflict resolution.  |
| Review and revise Nigeria Agriculture Policy to be all inclusive (youth, women, and the vulnerable groups) | Nigeria Agriculture Policy is reviewed and revised to be all inclusive in process and content, with food and nutrition systems transformation made a key component |
| Support legislation to discourage production of unhealthy foods and increase investment in the nutrition value chain | Legislation (e.g., sugar taxes and tax incentives for affordable, healthy foods) to discourage production of unhealthy foods is achieved |
| Encourage multi-stakeholder engagement for an all-inclusive policy formulation, regulation of advertisement and marketing of unhealthy foods | Multi-stakeholder engagement for all-inclusive policy formulation, and regulation of advertisement and marketing of unhealthy foods is achieved |
| Facilitate the passage of the Right to Food Bill and implementation of its Act. | Passage of the Right to Food Bill is facilitated and the associated Act implemented  |
| Advocate for accountability of government and industries for mandatory food fortification and food system awareness creation by CSOs | Civil Society Organizations hold industries and governments accountable on mandatory food fortification and facilitate food systems related awareness creation and behaviour change |
| Ensure fiscal sustainability of all sectors in national budgetary allocations | Fiscal sustainability of all sectors is ensured in national budgetary allocations |
| Develop a subnational food systems dashboard | Subnational food systems dashboard is developed to collect data about food systems characteristics into one place to identify and prioritise transformative actions for each state |
| Establish a National Food Systems Transformation Support Facility  | National Food Systems Transformation Support Facility is established to provide technical assistance for the implementation of food system transformative actions, coordinate actors and achieve synergies, link country actions with global actions, and facilitate other high-level enabling environment for food systems transformation |
| Develop feedback mechanisms through which food systems transformation service providers can engage with national coordination office | Feedback mechanisms are developed through which food systems transformation service providers can engage with national coordination office  |
| Create a Food Systems Command Centre as part of the National Food Systems Transformation Support Facility | Food systems command centre is created to gather, store, manage, and share data on all aspects of food systems as well as LGA- and household-level information.  |
| Implement regional and global commitments and integrate their indicators, into the data platform | Regional and global commitments, including the Comprehensive Africa Agricultural Development Programme (CAADP) and its indicators, are integrated into data platform |
| **Long term** |  |
| Create index of financial institutions that provide funding to smallholder farmers and SMEs | Index of financial institutions that provide funding to smallholder farmers and SMEs is created |
| Decentralize and fast-track registration of food products with regulatory agencies | Registration of food products is decentralized and fast-tracked; costs, barriers and bureaucracies in product registration are reduced, while ensuring quality, safety, and standards of food products |
| Develop regulatory standards for manufacturing agricultural machinery, to prevent the proliferation of inefficient machinery in the country | Standards are developed by regulatory authorities for agricultural machinery to prevent proliferation of inefficient machinery in the country |
| **Country Cluster 6: Linking research, innovation, and extension for a sustainable food system – Action Tracks 1, 2, 3, 4, 5** |
| **Short term** |  |
| Increase research investments in traditional crops | Research investments in traditional crops are increased  |
| Incentivise private sector to create business solutions that provide healthy food alternatives for consumers | Private sector is incentivized to create business solutions that provide healthy alternatives to consumers, especially through leveraging local and traditional food products |
| Strengthen capacity of existing food systems related research institutes to promote regenerative agriculture and restoration  | Capacity of existing food systems-related research institutes is strengthened to promote regenerative agriculture and restoration of ecosystems by adopting Ecosystem-Based Approach |
| Improve regulation and coordination of existing fortification programmes | Regulation and coordination of existing fortification programmes is improved, including improved compliance monitoring and enforcement, and expansion of mandatory fortification programme |
| Ensure the stability and quality of micronutrients premixes, throughout the value chain by producers and marketers  | Quality and stability of micronutrients in micronutrient premixes are ensured throughout the value chain and production of local premixes is ensured through research |
| Promote private sector-research institutes partnerships to develop packaging and other solutions to ensure micronutrients retention in fortified foods  | Private sector and research institutes partner to develop packaging and other solutions to increase shelf-life and ensure fortificants in foods are preserved until consumption  |
| **Long term** |  |
| Improve nutrient value of staple crops through bio-fortification  | Nutrient value of staple crops is continuously improved through biofortification  |
| Develop resilient crop seed varieties, livestock, and aquaculture  | Resilient seed, livestock, fish, and aquaculture varieties are developed and promoted for use |
| Promote private sector-research institutes partnerships and create linkages to address capacity gaps revealed by capacity audits  | Private sector and research institutes form partnerships and linkages to address capacity gaps revealed by capacity audits |
| Convert agricultural waste to value-added products to reduce ecosystem degradation and promulgate policies that encourage the use of eco-friendly bags | Research on conversion of agricultural waste to useful products conducted e.g., production of eco-friendly bags and packaging from waste  |