

REPORT



# KENYA'S PATHWAY TO SUSTAINABLE FOOD SYSTEMS

Kenya National Food Systems Dialogue Series

## ECONOMIC BLOCS



## PARTNERS





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## Kenyan Food Systems – A Call to Action

### Vision Statement

Together, we will build prosperity for our youth fuelled by food systems that are **inclusive, innovative, collaborative and dynamic**. Based on **data-driven decisions**, we will ensure Kenya's food system nourishes our people with a **diverse diet** that builds **climate resilient livelihoods** in every region of our country.

### Aspirations

The Food Systems Dialogue process throughout our country reinforced the actions needed to reach our **Vision 2030** of 100% food and nutrition security.

We will add aspirations to:

- Increase the number of young people receiving school based agricultural education.
- Increase the uptake of digital agricultural solutions.
- Improve the diversity of diets including fruits, vegetables, dairy, meat and fish, as well as grains.
- Heighten climate action to build the resilience of our people.

### Our ASTGS furthers our Big 4 aspirations by 2022 which are:

- 34% increase in the average daily income of farmers
- 27% reduction in malnutrition among children under 5 years of age
- Create 1,000 Agro-processing SMEs & 600,000 new jobs
- 50% reduction in the number of food insecure Kenyans
- 48% increase in Agriculture sector contribution to GDP
- 47% reduction in the cost of food as a percentage of income

### Leading Actions

#### Youth

We will do this first and foremost with our youth in mind. Kenya's youth will be educated, nourished, and thriving in our food system. This includes a future in which our young people are helping to transform our sector with urban agriculture, agribusinesses, frontier technologies and innovations.

- Our **4K Clubs** and **Young Farmers Clubs** will shape the skills of our youth and ignite their passion for agriculture, preparing them for a future of opportunities and finance possibilities in the agriculture sector.
- We will facilitate their **access to productive resources including land, capital, and agripreneurship skills**, to ensure the full participation of our youth in food systems. Through the Youth Enterprise Development Fund, and creation of incentives for investors and financial institutions, we will provide affordable financing to bolster their agricultural ventures.



- We have a technologically agile youth population. We will **digitize our value chain activities** and equip our youth with the **digital technologies and tools** they need to engage in these value chain activities.

### Digital Innovation

Further, we must harness the power of innovation and digital technologies for our entire system. Our agricultural transformation will be based on digitization. We will foster an environment that allows our innovators to thrive and contribute to this agricultural transformation.

- Using **mobile technologies**, including **mobile applications**, we will equip our farmers with information on markets, and productive resources such as inputs. We will further use these apps in the **deployment of extension services and education** and **foster value added production** of innovative new food products to nourish our communities well.
- We will further boost our agricultural productivity by investing in **irrigation technologies**, particularly for our ASALs.
- To support the efforts of our farmers, we will invest in **Early Warning Systems** deploying the latest technologies **including aerial solutions and geospatial technologies** that will also enhance our ability to effectively plan for the sector.

### Diverse Diets

We will nourish our people with diverse diets, moving from a carbohydrate-based diet, to one with the protein, vitamins and minerals that will promote the health and wealth of our people.

- **Nutrition Action Plans** will be developed to ensure diverse diets including meat, dairy, fish, fruits, vegetables, cereals, and bio-fortified foods are reaching Kenya's people and improving food safety behaviours to **ensure a healthy population**.
- We will diversify our diets by **bringing back forgotten and neglected traditional foods**, and investing in **fisheries, aquaculture, livestock, fruits and vegetables farming**.
- **Diversified production** will make us more **resilient to climate change, reduce resource conflicts** and **support biodiversity and healthy soils** with production that will fuel our bodies with the nutrition we need.

### Climate Change

We will mitigate the impacts of climate change by building the resilience of our people and communities particularly the vulnerable populations in the arid and semi-arid lands.

- We will expedite our **ecosystems restoration** efforts through agroforestry, reforestation and afforestation and ensure sustainable use of our natural resources.
- **Conservation education and awareness** will be disseminated at every level from the farms to schools unto the general population.
- We will **commission research** to inform the diversification of crops to **drought- and pests- and disease-resistant varieties**.
- We will **deploy technology** to monitor land use changes, and to map and monitor natural resources use, including water resources.



## Priority Actions by FSS Action Tracks

### AT1: Ensure access to safe and nutritious food for all

Through Nutrition Education, ensure our children, youth and mothers have access to nutrition information to inform their diet choices.

### AT2: Shift to sustainable consumption patterns

Dramatically increase school meal programs to bring nutritious, diverse, and safe food to our young people.

### AT3: Boost nature-positive production

Expedite our ecosystems restoration efforts through agroforestry, reforestation, afforestation, desilting and healing of degraded lands to bring more area under productive agricultural use and ensure sustainable use of our natural resources.

### AT4: Advance equitable livelihoods

Foster a culture of entrepreneurship, facilitating a shift from predominantly subsistence farming mentality to a more profitable agriculture outlook by commercialization of agriculture, ensuring access to markets through organized cooperatives and outgrower groups, value addition, and harnessing the power of mobile technologies.

### AT5: Build resilience to vulnerabilities, shocks and stress

We will empower our women smallholders, breaking down cultural barriers and norms that hinder their full and equal participation in food systems, thus enhancing their resilience to vulnerabilities, shocks and stresses in food systems.

## Action Areas

Our ambitions and aspirations will only be achieved by all of us working together. Here are some of the key action areas for all partners in our food systems.

Actors	Pathways
County Governments	<ul style="list-style-type: none"> <li>Upscale urban agriculture</li> <li>Plan with Geospatial tools and technologies</li> <li>Accelerate extension services provision to the last mile</li> <li>Strengthen zoning plans to secure agricultural lands</li> <li>Support farmers with inputs</li> </ul>
Regional Economic Blocs	<ul style="list-style-type: none"> <li>Increase and share resources</li> <li>Build Agricities</li> <li>Develop Data Hubs</li> <li>Implement Information Management Systems e.g. Electronic Fisheries Management Information Systems (EFMIS)</li> <li>Utilize County Development Information Systems (CDIS)</li> </ul>
National Government	<ul style="list-style-type: none"> <li>Facilitate trade</li> <li>Enhance food safety standards</li> <li>Promote consumer education</li> <li>Fast-track legal titles clearance</li> </ul>





	<ul style="list-style-type: none"> <li>• Collation of data to support evidence-based decisions</li> </ul>
<b>Private sector</b>	<ul style="list-style-type: none"> <li>• Diversify investments into Agri-enterprises</li> <li>• Boost innovations</li> <li>• Increase value-addition</li> <li>• Be inclusive</li> <li>• Invest in solutions to pest and climate challenges</li> </ul>
<b>Farmers, fisherfolk and livestock communities</b>	<ul style="list-style-type: none"> <li>• Leverage technology</li> <li>• Cooperatives, outgrower groups</li> <li>• Diversify production including traditional crops</li> </ul>
<b>Finance Institutions</b>	<ul style="list-style-type: none"> <li>• Facilitate access to capital</li> <li>• Provide interest friendly loans</li> <li>• Support youth with innovative finance solutions</li> </ul>
<b>Academia</b>	<ul style="list-style-type: none"> <li>• Conduct Research</li> <li>• Share data</li> <li>• Innovate for sustainability and resilience</li> </ul>
<b>Civil Society</b>	<ul style="list-style-type: none"> <li>• Promote consumer education</li> <li>• Boost extension services and education</li> </ul>
<b>Development partners</b>	<ul style="list-style-type: none"> <li>• Support youth initiatives</li> <li>• Invest in digital solutions</li> <li>• Foster nutritional programming including biofortification</li> <li>• Support gender equity programs</li> </ul>
<b>UN agencies in Kenya</b>	<ul style="list-style-type: none"> <li>• Assist with Early Warning Systems</li> <li>• Support crop diversification</li> <li>• Further gender equity</li> <li>• Invest in value chains to build decent livelihoods</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• School health</li> <li>• 4K</li> <li>• Nutrition</li> <li>• School meals</li> <li>• Directorate of policy and partnerships</li> </ul>
<b>Pathways for resilience</b>	<ul style="list-style-type: none"> <li>• Early warning, drones, geospatial databases, GIS, GPS, Remote Sensing</li> </ul>
<b>Pathways for Health</b>	<ul style="list-style-type: none"> <li>• Nutrition action plans</li> <li>• Nutrition education</li> </ul>
<b>Pathways for Gender</b>	<ul style="list-style-type: none"> <li>• Revamp the Women Enterprise Development Fund to ensure women in agriculture have access to financial resources to boost their agri enterprises and facilitate the establishment of new women-owned and women-led agri enterprises.</li> <li>• Enhance women voices by bringing more women on the decision-making table in our public and private sectors board rooms, allowing them to drive agriculture policy processes ensuring gender issues are represented.</li> <li>• Enhance and scale extension services ensuring rural women smallholders have access to these services to boost their agricultural productivity.</li> </ul>

## Building on Existing Commitments

The actions identified build on the country's already strong foundations and commitments to transforming food systems:



- The Government's Big Four Agenda places food and nutrition security for all Kenyans as a national priority through new and innovative initiatives to: reduce cost of food; enhance large scale production; and drive smallholder productivity.
- Vision 2030 sets the agenda for inclusive growth and people-driven sustainable development, particularly under the economic and macro pillar which prioritizes agriculture.
- The Agricultural Sector Transformation and Growth Strategy (ASGTS) presents the GoK's commitment to reforming the sector by increasing output and productivity, boosting incomes in agribusiness and ensuring household resilience and food security.

### **The Big 4 Agenda – 100% Food and Nutrition Security<sup>1</sup>**

Kenya has an ambitious plan towards 2030 including the food and nutrition security pillar of the Big 4. The objectives of the food Security and nutrition pillar are to **enhance large scale food production, drive smallholder productivity, and to reduce the cost of food to improve accessibility to all**. The government's efforts to make food cheap and available to all Kenyans are bearing fruit with various initiatives aimed at supporting farming, livestock rearing and fish production initiated. More farmers are accessing subsidized inputs to lower their cost of production and boost earnings.

#### **These supplement the opportunities identified in the Big 4 on:**

##### **Large scale commercial agriculture production**

- Fisheries (aquaculture, inland and ocean)
- Crop production (maize, rice and potatoes)
- Orchards (fruits, oil and nuts)
- Animal production (dairy and meat)

##### **Agriculture mechanical equipment**

- Leasing, direct sales and operation of warehousing, cold store chains, driers, storage and handling equipment
- Leasing and direct sales of tractors, transplanters, combined harvesters, weeders and irrigation equipment

##### **Agriculture Production inputs**

- Local manufacture, distribution and direct sales of certified crop seeds, livestock feed mills and animal brood stock
- Local manufacture, distribution and direct sales of fertilisers, high quality animal feeds, pesticides, herbicides, fungicides and certified livestock vaccinations

##### **Agriculture support services**

- Dairy processing and cold chain development
- Provision of crops and animal insurance services

Combined these measures will ensure Kenya reaches 100% Food and Nutrition Security.

### **Vision 2030**

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<sup>1</sup> <https://big4.delivery.go.ke/>



Under the Economic and Macro Pillar, agriculture has been identified as one of six priority sectors that promise to raise GDP growth rate to the region of 10% in a number of years. Five priority action areas in agriculture were identified and commitments made include:

**ASAL development – Irrigation:** Increase irrigated land by million acres. 404,800 hectares will be put under irrigation by 2017 especially in the Arid and Semi-Arid area in Turkana and Tana Delta.

**Fisheries Development and Management:** Increase fish production from capture and culture fisheries; reduce fish post-harvest losses per annum and increase exports of marine products by expanding the area of fish farming from the current high potential areas to Arid and Semi-Arid Lands (ASALs) and developing fisheries related infrastructure and strengthening of monitoring, control and surveillance systems.

**Establishment of Disease-Free Zones (DFZ):** Increase volume of beef exports and other animal products by establishing four DFZ to facilitate access of Kenyan meat, leather and leather products to local, regional and international markets. The first zone will be established at the Coast, covering the counties of Kwale, Mombasa, Kilifi, Tana River, Lamu and parts of Taita-Taveta outside the Tsavo National Park. The other three zones will be established in the Laikipia-Isiolo complex and Uasin Gishu and Garissa Counties.

**Fertilizer Cost Reduction Strategy:** Increase use of fertilizer by smallholder farmers to boost yield/output by improving access and affordability of fertilizer through establishing a local fertilizer plant and working with investors for blending.

**Implementation of the Consolidated Agricultural Reform Legislations:** preparation of necessary regulations to actualize implementation of the Acts and setting up institutions such as the Agriculture, Fisheries and Food Authority (AFFA); and the Kenya Agricultural Research Organization (KARO) proposed in the new Acts. Additionally, efforts will be made to fast track passing of the Livestock and Fisheries Bills in Parliament.

### **Agricultural Sector Growth and Transformation Strategy (ASGTS)<sup>2</sup>**

The 10-year ASGTS developed nine bold and ambitious flagships that will help to transform our agriculture sector in Kenya and make it a regional powerhouse, drive 100% food and nutrition security, and ensure food is affordable, especially for those most in need.

The ASGTS prioritizes three anchors to drive the 10-year transformation, with specific targets set for the first five years:

**Anchor 1: Increase small-scale farmer, pastoralist and fisherfolk incomes:** – Raise average annual small-scale farmer incomes by ~40% from KES 465/day to 625/day (~35% increase); Directly benefit ~3.3 million Kenyan farming households.

**Anchor 2: Increase agricultural output and value add:** Expand agricultural GDP from KES 2.9 trillion to KES ~3.9 trillion (~6% CAGR); Grow contribution of agro-processing to GDP by KES ~130 billion over 5 years (~50% from KES 261 billion today).

**Anchor 3: Increase household food resilience:** Reduce the number of food-insecure Kenyans in the ASAL regions from 2.7 million on average to zero, while reducing the cost of food and improving nutrition; Protect households against shocks: environmental and fiscal.

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<sup>2</sup> <https://www.agck.or.ke/Downloads/ASTGS-Full-Version-1.pdf>





Nine big ideas (“flagships”) underpin these anchors to define the strategy in the context of devolution: two flagships to increase small-scale farmer, pastoralist and fisherfolk incomes; two flagships to increase agricultural output and value-add; two flagships to boost household food resilience; and finally three enablers that run across the transformation:

Based on the feedback from the regional dialogues, there are evolving opportunities that should be incorporated into future strategies in each of the Action Tracks of the Food Systems Summit.

### Status towards 2030<sup>3</sup>

The work to transform the food system must be grounded in careful monitoring and data. Kenya has prioritized the implementation of the agenda 2030 and is committed to sustainable development. The principles of Kenya’s national Development Agenda are aligned with the SDGs.

Here is where we stand on progress on Goal 2: Zero Hunger

- 30% prevalence of undernourishment
- 56.5% prevalence of moderate of severe food insecurity
- 19.1% prevalence of severe food insecurity
- The agriculture orientation index for Government expenditures was 0.06 in 2016 and has remained at 0.05 since 2017.
- The indicator of food price anomalies was 13.4% in 2017; 1.37% in 2018; and 6.43% in 2019.
- Rural households purchase around 76 per cent of their food consumption days, with people in semi-arid areas contributing most to this hence their low dietary diversity.

Current interventions to End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture

- Fertiliser subsidy programme to make fertilisers affordable for farmers
- Enhancing strategic Food Reserves
- Promotion of large efficient commercial farming
- Increased agricultural mechanisation
- Enhancing grain drying and storage facilities
- Revitalisation of Industrial crops that provide forward and backward linkages
- Kenya Cereal Enhancement Programme. This is an e-voucher scheme to facilitate access to agricultural inputs to vulnerable subsistence cereal farmers
- Crop Insurance Project meant to enhanced mitigate risks and losses
- Climate smart agriculture

Challenges to End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture

- High population growth rates exerting pressure onto the limited productive arable land, leading to land fragmentation into uneconomical farming units.
- The adverse effects of climate change on long established productive system leading to severe droughts.
- Increase in crops and livestock diseases and pests.
- Underdeveloped rural infrastructure has led to high transport costs for agricultural produce and farm inputs
- Low uptake and adoption of modern technology and declining soil fertility

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<sup>3</sup> [https://sustainabledevelopment.un.org/content/documents/26360VNR\\_2020\\_Kenya\\_Report.pdf](https://sustainabledevelopment.un.org/content/documents/26360VNR_2020_Kenya_Report.pdf)



- Disinterest of lenders to fund agricultural activities
- High post-harvest losses

#### Emerging issues

- Re-emerging transboundary crop diseases and pests like the fall army worms which compromised maize necrosis disease and desert locusts which compromise food production.
- Emerging and re-emerging livestock diseases that hinder trade in livestock and livestock products.

## Regional Dialogues

### Resilient and Inclusive Food Systems for Sustainable Economic and Human Development in SEKEB

May 20, 2021

Report



On May 20, 100 participants from various stakeholder groups in the South Eastern Kenya Economic Bloc (SEKEB) gathered in a virtual dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

- Building resilience in food systems
- Enhancing partnerships
- Strengthening inclusivity in food systems
- Leveraging on enabling and coherent legal and policy framework

The key issues that kept resurfacing in the dialogue were:

- **Policies and regulatory frameworks:** The transformation of agriculture and food sectors in the SEKEB region need to be anchored and rooted in the law and aligned with the counties' budgets, plans and policies. A people-driven policy process is required to ensure policy developed is



responsive to the specific needs of SEKEB. Policy coherence and harmonization between the county and national governments is crucial while the three counties need to also align their agricultural policies.

- **Partnerships and collaboration:** No one actor can do it alone! Partnerships and collaborations are required in training and capacity building, financing, education and research to ensure a common vision is shared in realizing food and nutrition security in SEKEB.
- **Financing:** For existing initiatives to be scaled up to the last mile, financing is crucial. Financing is not about pumping money into projects or giving handouts. Financing can range from organizing farmers into cooperatives and groupings to enable them pull their resources together, to the creation of the SEKEB bank to provide interest-free loans, to governments and private sector creating co-financing systems.
- **Climate change:** SEKEB being an ASAL is vulnerable to the adverse effects of climate change and this is a key factor that needs to be considered when designing solutions to address the food systems challenges in the area.
- **Research and reliable data:** Research and availability of reliable data is crucial to ensuring evidence-based planning, right from the national government level, to SEKEB, to the three counties and up to the smallholder level. Research and reliable data will ensure solutions meet the specific needs of SEKEB.
- **Innovation and technology:** Harnessing agricultural innovations and technologies is critical to realizing efficiency of food systems in SEKEB and contribute to food and nutritional security in the region. Irrigation is a major agricultural technology that is guaranteed to make SEKEB a food and nutrition secure region. The use of digital tools can support the deployment of extension services, financial services, as well as enhance policy participatory processes.

## Findings

### Building resilience in food systems

- **Key issues raised**

Climate change has greatly impacted the already fragile ASAL region, and destroyed land ecosystems greatly derailing the progress of labour output and consistent farming cycles. Livelihoods and farm investments have also been impacted and the food security of the region jeopardized. Only 40% of the rains is reliable, more so, the timing patterns have changed due to climate change thus farmers are usually caught off-guard having not prepared their farms. The ripple effect of these is damaging to food security in the region.

Farmers are buying expensive seeds in hope for rains, and when they don't come or not enough to support the sprouting stage this money goes to waste. Frequent flash storm rains often destroy livelihoods and farm investments.

Coupled with the impacts of climate change, SEKEB faces the challenge of malnutrition occasioned by a lack of diversification of diets. There is generally a lack of awareness among community members on the importance of diet diversification. Extension services are not reaching rural farmers and thus hinder the trickling down of information to support their agronomic practices as well as their diet choices.

Additionally, despite the region hosting several agricultural research institutions, the use of research and data is low in planning for the sector. The region is further challenged by unfavourable policy environment for various actors including the private sector who do not find the business environment favourable.



- **Recommendations**

Building the resilience of food systems in the SEKEB region requires the strengthening of data-led research on weather patterns, planning using evidence approach rather than traditional practices, and maximizing the use of water catchment areas and resources. Investments in innovation and technologies are also needed to further build the resilience of food systems in the region. These technologies include irrigation, use of digital agriculture tools in extension services, supporting market access and managing post-harvest losses through processing of produce. The three counties need to pull their resources together and leverage on each other's strength thereby making the food systems more effective and efficient.

The resilience of food systems in the three counties in the SEKEB region can be strengthened by the counties pulling their resources together. There is need to reduce competition among the counties and grow as a region. This includes maintaining collective processing plants where farmers from all the three counties can access, e.g., Makueni has developed a fruit processing plant, how can farmers from the other counties access it? Farmers must have free access to facilities across the three counties. There is also need to create linkages and have open markets to allow free interaction and access among agribusinesses. Governments should enable the private sector and ensure ease of doing business.

Strengthening household resilience requires creating awareness among communities on the importance of dietary diversity, encouraging kitchen gardening and vertical farming for smallholders. The role of livestock should be acknowledged, and households encouraged to invest in livestock.

Research is crucial in providing farmers with more accurate information on weather patterns and when to plant. Information trickling down to smallholders can further be strengthened and scaled up by engaging young people in extension service which will ensure each county has field extension officers in every ward. Use of digital technology to disseminate extension services is also crucial.

Strengthening private sector can further contribute to developing sustainable food systems in SEKEB. This can be achieved by: developing and approving policies that promote local production; creating enabling environments that promote local ownership across the value chain; promoting new technologies by offering incentives to SMEs; making energy affordable; and maximizing the use of already existing infrastructure such as the Standard Gauge Railway and road networks that have improved the connectivity of the counties.

### **Enhancing partnerships**

Partnerships presents an opportunity for exchange of knowledge, resources, and information sharing which is key to behaviour change. Partnerships are required across the value chain and can be instrumental in enabling smallholders and other value chain actors access financing, training (e.g. on challenges such as post-harvest losses and waste management) and boost innovation. Through networking, partnerships have the potential to strengthen communities and help solve local issues faster, enable locals engage in new practices like research and make it easier for demonstration of new products or practices to a wider audience. Creating local partnerships builds ground root networks that create self-sufficiency and reduce dependency. Faith Based Organizations, Women Groups, Youth Groups etc bring together ready constituents who have a common good.

Enhancing partnerships requires support from the county governments and existing networks. County administration support is required to reduce bureaucracy and administrative bottle-necks to reduce burden on businesses and smallholders. It is important that opportunities available at the county level are





communicated to value chain actors, whether financial or training. All SMEs can, for example, be put in one group to support each other.

There is need to mobilize farmers into cooperatives and groupings to grow crops which can be used to improve health and nutrition outcomes (e.g. pawpaw that can be fortified for porridge to be used in school feeding programs). Research on local needs is required so that partnerships are planned and build around these needs. Some local partnership needs include opportunities for educating and training local producers on value addition to diversify production, access to technology and innovations, market access (including pricing), creating awareness on forgotten crops etc.

### **Strengthening inclusivity in food systems**

- **Key issues raised**

Young people, People Living with Disabilities and women face enormous challenges that hinder their full participation in food systems. Young have a negative perception towards agriculture and this hinders them from seeing the sector as a potential income generator or employer. Additionally, most of the young people in SEKEB have difficulties in accessing parcels of land to engage in primary production of crops and keeping livestock. For example, some youth have even resorted to marking their chicken in family and community poultry sheds as they do not have a place to keep their animals. Since land is primary factor of production, the lack of access to land has prevented many young people from engaging in productive farming.

While data in the hands of a farmer is insight that can be used to enable young farmers to engage in data driven farming, research and data is not readily available for young people thereby relegating the youth to use conventional and traditional means to grow crops and keep livestock.

The tough business environment and stringent requirements required to set an agribusiness is also a challenge for youth, women and People Living with Disabilities in SEKEB. Particularly, licensing is a major hindering factor to youth engagement in agricultural entrepreneurship.

Additionally, accessing markets is also a major challenge. The export market is a means that can be used to attract youth in agriculture as it was seen to guarantee a stable market for young crop producers. However, young people still have a challenge accessing the market.

As with the rest of the world, climate change and other stresses on food systems including the COVID-19 pandemic have discouraged active youth participation in the agri-food sector. The Covid-19 pandemic greatly impacted young people engaged in the sector and those contemplating to join the sector.

- **Recommendations**

The participation of youth, women, and people with disabilities is critical to realizing food systems that are inclusive. The SEKEB has already existing opportunities that need to be leveraged and scaled to enhance the participation of these groups in food systems to realize food and nutrition security. These opportunities include the Kenya Youth in Agriculture Strategy that includes a robust measures and solutions to meaningfully engage young people in agriculture across SEKEB; presence of strong research institutions in agriculture, as well as Technical and Vocational Training (TVETs) institutions. The leadership in SEKEB is viewed as forward thinking which is deemed as a very important facet in ensuring the region



could achieve agricultural transformation. The ASAL nature of the region is deemed as strategic advantage providing and opportunity for youth, women and people with disabilities to venture into profitable value chains. The proximity to the urban centers, particularly the country's capital Nairobi, for the counties is deemed as a welcome opportunity to provide women and youth with stable markets. The SEKEB counties are also well resourced with water from the Athi and Tana rivers which provide opportunity for their successful exploitation through irrigation technology. The creation of the SEKEB Bank will be a great boost to young people interested in agri-business as it will enable access to much needed capital. SEKEB has also initiated successful agro-processing and value-addition that is an opportunity to enhance the capacity and skills of young people as well as provide meaningful employment for them.

To leverage these opportunities and realize the active participation of young people, women and people with disabilities in food systems, it is critical to ensure that these groups have ownership rights and access to productive resources including land, finance, digital agriculture and technology solutions, training and access to research data and information.

The full implementation of the Kenya Youth in Agriculture Strategy is critical. The SEKEB counties should accelerate the process of integration as this would provide an opportunity for connection of youth across the block therefore making it possible to achieve aggregation of produce and peer to peer learning and sharing of experiences. There is also need for friendlier business environments within SEKEB by lessening the stringent licensing requirements for agribusinesses.

Prioritization of youth involvement and meaningful engagement in the agri-food sector in SEKEB is critical. This prioritization should be accompanied by the right policies and investments in youth projects that address the barriers and that incentivize young people to engage in agriculture as a career and business. There should be means and avenues to make agriculture attractive to young people with such incentives as making ag technology solutions ubiquitous for the youth, including some climate-smart technologies such as irrigation. Technology and mechanization further provide additional benefits especially in reducing the labour burden of women farmers.

Access to interest friendly capital is also crucial to attracting more youth, women and persons living with disabilities to participate in food systems to grow and scale their farms and agribusinesses.

Taking a cue from the success of agro-processing and value addition in the SEKEB counties, more efforts should be made in enhancing the capacity and skills of young people in the counties on the subject as value addition and agro-processing is leading to economic gain for agri-food producers. Furthermore, TVETs in SEKEB are an important asset that will aid in providing the requisite technical skills to women and youth to enable them make meaningful contributions to food systems in SEKEB.

Specific to Kitui County, especially for the youth and women living near the Tsavo National Park, it is imperative to deal with the human wildlife conflict that has discouraged quite a number of people from engaging in farming to avoid the losses associated with the conflict.

The establishment of strong youth/women/disabled farmer associations is necessary to strengthen lobbying for supportive policies, market opportunities, group certifications and unified negotiations for prices/loans/ etc. As such, SEKEB should make efforts to enable cooperation and coming together of individual women and youth farmers.

While data in the hands of a farmer is insight that can be used to enable young farmers to engage in data driven farming, research and data is not readily available for young people thereby relegating the youth to use conventional and traditional means to grow crops and keep livestock. It is necessary to ensure



young farmers have access to research information to support their adoption of evidence-based planning of their agricultural endeavours.

### **Leveraging on enabling and coherent legal and policy framework**

- **Key issues raised**

Major discrepancies exist between the national and county functions with agriculture being a devolved function while policy making still rests with the national government thereby making it difficult to deliver on much needed agricultural reforms specific to the SEKEB region. Within the counties, there is lack of alignment in agriculture policies.

Thwake dam is an example of the complexities of the policy environment and the need for streamlining. The three counties in SEKEB have been working closely with the national government on the dam. While the water stored in the dam will likely be used for domestic consumption and will require electricity to pump it, the three counties have no say on prevailing energy regulations which are under the national government. The national framework does not give counties a lot of say in energy policy and this can be a very big setback for domestic water use. Additionally, in terms of irrigation, while the counties have a mandate on crop and livestock husbandry, setting the tariffs for water consumption is the function of the national government therefore the policy prevailing around irrigation can negatively affect the efforts of SEKEB in food systems in recovery of crops and livestock.

- **Recommendations**

The transformation of agriculture and food sectors in the SEKEB region need to be anchored and rooted in the law and aligned with the counties' budgets, plans and policies. It is critical to ensure there is policy coherence and harmonization of overlapping roles and division of policy making responsibility between the two levels of government.

Intergovernmental cooperation, institutional coordination, public participation and stakeholder involvement is required to ensure that policies in the SEKEB region were people driven, optimal and facilitated agricultural transformation leading to food and nutritional security.

There is need to enact policies that address issues specific to SEKEB. Policies are required to support the cooperative sector which has been credited for the success of cotton and coffee sectors in the past. It is crucial to replicate the success in today's agri-value chains in SEKEB. Policies are also required to tackle the challenge of climate change by promoting the use of drought tolerant and resistant crops, massive irrigation, local breeds that can withstand pests and diseases and the use of certified seeds. The huge potential for renewable energy in SEKEB is an important policy priority and laws need to be enacted to enable the use of renewable energy in the area. Legislation is also required in the control of aflatoxin in cereals, a great tragedy that is leading to loss of income for many residents. Proper storage facilities and enactment of policies to ensure that these storage facilities are accessible in the Ukambani region.

In the area of strengthening institutions, the Katumani Research center is an important resource for SEKEB and it is important to ensure that it is well funded and resourced to enable it develop region-specific



research. The Kenya Meat Commission (KMC) is also an important resource for the region, having provided reprieve for livestock keepers by providing a stable and structured market for producers. There is thus need to coordinate with the national government to reform the KMC.

Beyond creating a policy environment that enables the flourishing of irrigation in SEKEB, cleaning and stopping of pollution in the Athi and Tana rivers is crucial to ensuring that the water can be safe for use for irrigation and other purposes.

Public participation is crucial and the policy making process should ensure the inclusion of all citizens in the policy dialogue, including the active participation of special interest groups - people with disabilities, women and youth. The COVID ream has demonstrated how technology can be harnessed to enhance public participation by reaching to people who would have otherwise not participated in forums before. The public participation process needs to utilize these technologies to reach out to people who can make useful contributions to the process.

There is an opportunity in 2021 for the three counties to harmonize some of the finance bill clause to enable effective trade and commodity movement within SEKEB. The three counties need to supplement each other and take advantage of their strategic positions.

Counties have developed nutrition action plans which are more aligned to Kenya national nutritional action plan and a couple more other policies. It is important to sensitize the key stakeholders that could improve policies to address glaring issues around nutrition and malnutrition. The counties' health and nutrition policies should be examined and aligned to ensure they effectively address some of the challenges and link them with food security. Policies to promote the adoption of emerging technologies around value addition, e.g., biofortification to make food more nutritious, are required.

## Discovering CEREB Food Systems for Sustainable, Equitable production and Agro-processing to deliver Safe and Nutritious Food for all

May 31, 2021

### Report



On May 31, 92 participants from various stakeholder groups in the Central Region Economic Bloc (CEREB) gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the United Nations Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

- Strengthening food systems
- Strengthening commercialization
- Strengthening policy environment
- Improving nutritional outcomes

Some challenges explored include:

- Repositioning CEREB as a major food basket in addressing food and nutrition security in Kenya.
- Strengthening commercialization of agricultural produce by focusing on CEREB counties.
- Strengthening policy environment to enhance and protect agricultural land in CEREB counties.
- Leveraging the potential of CEREB to improve on the nutritional outcomes for its population.

The key issues raised were:

- **Policies and regulatory frameworks:** The CEREB region has huge potential for agricultural transformation but this will require strengthening existing policy environment and regulatory





frameworks. Areas that require urgent policy interventions include development and adoption of county spatial plans, adoption of climate smart agriculture and regulation of new market systems to support commercialization of agriculture. There is need for nutrition planning policies that provide the necessary support and evidence for nutrition programming and reporting in the CEREb counties.

- **Research and data:** There is need to invest and use research and data to support and ensure effective planning for the region. A clear research agenda and proper coordination addressing needs in the region is required. CEREb should create a research hub for the region consolidating all data and identify gaps.
- **Climate Change:** Climate change is a major threat in CEREb not only in terms of food security but new disease patterns across the block, both for humans, livestock and crops.
- **Innovation and technology:** Harnessing agricultural innovations and technologies is critical to realizing efficiency of food systems in CEREb and will contribute to food and nutritional security in the region. Irrigation, green housing, digital tools and mobile technologies, as well as climate smart agriculture innovations can enhance the region's food and nutrition security status. The use of digital tools can support the deployment of extension services, training, and education.
- **Financing:** There is need for adequate budgetary allocation and establishment of sustainable finance models for agriculture and nutrition activities in CEREb. There is need to invest in agro-industry in order to unlock and maximize CEREb's potential.
- **Partnerships and collaboration:** No one actor can do it alone! Partnerships and collaborations are required in training and capacity building, financing, education and research to ensure a common vision is shared in realizing food and nutrition security in CEREb.
- **Training and capacity building:** Farmers and stakeholder trainings and capacity building should be made mandatory to facilitate change in farming practices and behaviours over time, including inculcating a culture of learning on the importance of good nutrition.

## Findings

- **Repositioning CEREb as a major food basket in addressing food and nutrition security in Kenya**

Climate Change has had far reaching impacts on farmers, particularly smallholders, in the CEREb counties. Low yields, harvest losses for crops like coffee, and changes in soil composition due to incorrect use of fertilizers have all resulted in losses for farmers, greatly reducing household incomes leading to increased poverty levels in the region leading to increased malnutrition in homesteads and vulnerability to non-communicable diseases.

To mitigate against these impacts, there is need for CEREb to invest in climate smart solutions, including through policy interventions, research and training on crop diversification, investment in post-production processing, ensuring farmers have access to credit facilities and incentivising the private sector and SMEs to produce nutritious food crops, and adoption of agricultural technologies such as irrigation and greenhouses. Existing policies need to be reviewed to be inline with climate smart agriculture.

The Kirinyaga County model is a good example that should be scaled and adopted in other parts of CEREb. Through the Wezesha Kirinyaga program, the county has moved from reliance on only coffee and tea production to new products including avocado, tomatoes, dairy and poultry. The county has invested on improved delivery of extension services as well as engaged research and training on diversification to



mitigate climate change. Extension services also include sensitizing farmers on the need to preserve the environment as well as using quality inputs to improve production.

Kirinyaga has further worked on an agribusiness model for different groups to improve family income. Youth are given seedlings to become hass avocado seedling sellers to farmers. The county has further invested in greenhouse technology and post-production processing value chains such as dairy milk coolers, hauliers and yogurt processing companies. By looking at ways of improving family income and ensure basic needs are met, families can start thinking of adopting new ways of working.

- **Strengthening commercialization of agricultural produce by focusing on CEREB counties**

Land is a primary factor of production in the agriculture sector and is finite, scarce and inelastic and therefore there is need to enhance its planning so as to maximize its use. Arable agricultural land in the CEREB counties is under imminent threat due to various factors. These factors include conversion of arable land into the more lucrative real estate market, land tenure issues, with the region leading in land cases, and the lack of legal title deeds. Commercialization of agricultural produce requires the region to deal with these issues.

There is need to strengthen the policy environment to enhance and protect agricultural land in CEREB. It is important to have and approve County Spatial plans that would provide a framework for demarcation of land for urban development and to engage in agricultural activities. Counties need to approve spatial plans as well as invest in the development of geospatial databases. It is necessary to build a single information system for the counties powered by geo-spatial technology. This will enhance the ability of CEREB to plan better and inform on agricultural insurance. There is need to engage the youth in these policy and planning processes.



Commercialization also requires investments in new market systems (such as contracted farming), agriculties, new technologies, affordable working capital, commodity and operational marketing in rural areas.

It is critical to deal with land tenure issues in the CEREB region. With the region leading in terms of litigation in land cases, the populace has been denied the opportunity to use their pieces of land to acquire finance from financial institutions. Landowners also need to be sensitized on the importance of having legal title deeds and be encouraged to collect their deeds from registries in the bloc which have quite a number of uncollected title deeds.

To enhance the productivity of land in the region, the CEREB counties need to set in place measures that enhance the ability of smallholder farmers to undertake soil testing so as to enable them to grow the fitting crops according to their soil profile and orientation.

The youth in the region can play an important role in transforming agriculture in the bloc. As such, the CEREB counties need to support young people's efforts to engage in agricultural entrepreneurship, to expose the youth to forums that aid their agency and to involve them in policy planning as well as enable them voice their ideas and showcase their innovations.

Agro-processing and value additions of perishable foods is key in the commercialization and marketing of commodities by farmers using suitable technologies available and affordable to farmers. Marketing systems should be well organized in terms of structures, prices and provision sustainable foods fit for consumption to address household food insecurity.

There is need to regulate contracted farming particularly for runaway companies that subcontract farmers and don't pay resulting in losses for farmers who eventually give up on using their land for agriculture and opt for other income generating activities.

Ensuring market access is also critical. There is need to support farmers access markets, especially during harvest seasons when there is mass production and existing markets cannot take up all the produce from farmers. An investment company that can help farmers into other markets, including export markets can help support this.

Cooperatives and out growers groups can also play a critical role in commercializing agriculture. Smaller groups, of about 70-80 members, thrive better and ensure income flows to farmers as opposed to the larger cooperatives which have had challenges with paying farmers.

Education and training can play an important role and there is need for specialized extension services, ensuring extension officers have the right technical capacity, and can effectively deliver the knowledge and skills especially on new technologies and alternative market systems. The right number of extension service providers is also key to ensuring this information is scaled and is accessible to all farmers in the region.

The counties should also maximize available arable land and ensure arable land that has not been put into proper use is utilized for agriculture.

- **Strengthening policy environment to enhance and protect agricultural land in CEREB counties**



The commercialization of agricultural land in CEREB has been influenced by various factors including its close proximity to the country’s capital Nairobi, population growth and infrastructure projects such as the Thika Superhighway. All these factors have impacted the value of land making it competitive among different land uses, with real estate being more lucrative than other land uses. Land planning is therefore crucial to ensure sustainable utilization and sustainable food production in the limited arable land. Counties need to map out urban centres and differentiate them from agricultural land through County Spatial Plans to limit the overexploitation of arable land for real estate development.

To strengthen the policy environment to protect arable land, counties need to make deliberate efforts to establish minimum and maximum land demarcation guidelines as subdivision of land is affecting the productivity of land in the region. However, policy deterring conversion of arable land to other lucrative uses is not adequate. There is need to move to the next level of agricultural practice to strengthen commercialization of agricultural land and increase its competitiveness. These can be achieved by increasing the profitability of produce through investments in post-production processing and value addition.

Maximizing the agricultural value of produce in land footprint requires the application of agricultural economics on produce planted versus return on investment. CEREB needs to produce lucrative products that can compete with the market demand for available land, e.g. maize in hectare vs horticulture in hectare. It is necessary to move from raw materials to value addition by creating opportunities for investors to come in and add value to produce from CEREB. This will in return ensure profitability to the farmers more than just selling raw materials.

CEREB should design a shared value addition center (AGRICITY) in a central location where all 10 counties can bring their produce for value addition. This will benefit farmers knowing there is a ready market for





their produce. Other shared services would benefit the region by creating networks that farmers can leverage on to maximize opportunity, e.g. crop farmers working with dairy farmers to supply raw materials of fodder production.

Best outcomes of technology and digital interventions can only be achieved by ensuring appropriate technologies are applied to the different agro-ecological zones. It is not a one size fits all. Similarly, extension services models need to meet today's farmers needs deploying new knowledge and skills to make their agricultural endeavors profitable, e.g. Kiambu's Village based agricultural program, where they empower communities to train within their communities.

Pure land tenure system in most CEREBS counties in addition to having much land on litigation has limited farmers' access to finance. Moreover, while land in CEREBS counties falls within medium-high potential land (classified as 17% productive), there is currently no law at the county level that enforces protection of arable land. Majority of land exist as freehold where government has little influence on its use. There is need to have laws at the county level to enforce protection of arable land and have a coordinated system in the use and management of land. A consolidated policy on soil management among other environmental indicators is also required to encourage responsible use of land.

It is important to sensitize the communities in CEREBS counties on effective land use management such as through succession planning to deter irresponsible subdivision of land. This can also be achieved in part by ameliorating degraded land and stopping the further destruction of productive land. Focus on land tenure needs to shift from land ownership to land accessibility to deter land speculation for long period, which hinders the productivity potential of fertile land. Communities also need to be sensitized to look at the value of land within the entire agrifood system and not necessarily in its traditional use of farming.

- **Leveraging the potential of CEREBS to improve on the nutritional outcomes for its population**

Investment in nutrition is a smart investment and it is imperative to create awareness of diet diversification in the CEREBS counties as despite the region being food secure, the region is not nutritionally secure. CEREBS counties need to work on developing a people centered health and agriculture system. There is need to develop Nutrition Action Plans to enable favourable nutrition policies that can spur a movement towards fighting malnutrition.

There is also need to increase budgetary allocation to the agriculture and nutrition sectors as the low budgets are curtailing efforts to develop and implement research as well as to conduct community sensitization and raising awareness on nutrition sensitive value chains and diets. There is a growing recognition in Kenya and the world over that nutrition is a vital component of equitable and sustainable food systems.

Evidence released by Kenya Cost of Hunger Study (2019) shows that there is a huge economic cost due to malnutrition in the country. The country loses 6.9% of its GDP in a year due to undernutrition. Comparing with other nations through the Global Hunger Index, Kenya is doing poorly and has a hunger score of 23.7% that is way above the global average of 18.2%. Currently, around 1.4 million Kenyans are facing acute food crisis and in nutrition terms, 20% of population is obese and overweight while 9% of women at their reproductive age are undernourished and therefore predisposed to pregnancy related complications.





Micronutrient deficiency largely remains unresolved in CEREB region and has continued to spur Non-Communicable Diseases (NCDs), causing irreparable damage to the grey matter of the populace in the counties thereby undermining human capital. Obesity is a rising challenge in the CEREB counties as according to a study, 54% of women in Kirinyaga county of reproductive age are obese therefore putting them at a high risk of NCDs and pregnancy problems. The rising burden of non-communicable diseases including cancer, diabetes etc. that is leading to a huge economic cost in the CEREB counties.

It is imperative to undertake nutrition education in the CEREB region seeing that the region is food secure yet malnourished. Most people eat monotonous diets and should therefore be taught on food diversification. Monolithic consumer diets and unawareness on nutrition sensitive diets make the populace in the CEREB Counties susceptible to the triple burden of nutrition including undernutrition, micronutrient deficiency and obesity. The efforts to beef up aquaculture and the poultry in the region are a good example that will enable the transition to nutrition sensitive diets. Nutrition education to children is also critical so that they can know the importance of nutrition. It is also important to Inculcate a culture of learning on the importance of good nutrition.

While bio-fortification is taking root in CEREB especially in Kirinyaga county, more efforts are required to scale up bio-fortification. Further, producers of bio-fortified food such as the orange fleshed sweet potatoes should be encouraged to consume them as well.

CEREB also needs to increase its investments in research so as to have evidence-based interventions when dealing with the scourge of malnutrition. This can be achieved through the creation of county level food and nutrition data centers.



## Unlocking the Agribusiness & Blue Economy Value Chains to Catalyze Food & Nutrition Security in the Kenya Coast

June 2, 2021

### Report

On 2<sup>nd</sup> June 2021, 86 participants from various stakeholder groups in the Jumuiya ya Kaunti za Pwani (JKP) convened in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the UN Food Systems Summit (UNFSS).

Groups of interest were divided into four breakout rooms during the dialogue to discuss on:

- Expanding opportunities for inclusivity to enhance participation of different population demographics for sustainable and economically viable food systems.
- Leveraging existing enabling and coherent legal and policy frameworks for sustainable food systems.
- Transforming the food system to contribute to dietary diversity and food consumption patterns at household level for positive nutrition outcomes.
- Enhancing public-private partnerships to address food and nutrition security.

Some challenges addressed include:

- Enhancing and incentivizing the meaningful involvement of women, youth and PLWDs in the agricultural and blue economy value chains to accelerate their beneficial participation and contribution to the JKP & Kenya's food systems.
- Enforcement and harmonization of existing policies between the devolved governments in the Jumuiya counties and the national government to fast-track the transition of the agri-food systems in the JKP counties to be more sustainable and resilient.
- Promoting diversification of diets and the transition of consumption patterns for households in the Jumuiya counties to ensure the consumption of safe and nutritious food by all.
- Strengthening Public private partnerships to enable the region accrue maximum benefit towards building a sustainable and resilient food systems

Key issues raised were:

- **Land tenure:** This is a key bottleneck in the achievement of agricultural transformation in the JKP as many smallholder farmers cannot advance and scale their operations without the proper legal documentation that serves as security of land ownership. Additionally, financial institutions have been unable to partner with farmers and/or farmer groups in provision of credit as the residents did not legally own their own pieces of land. It is therefore critical to address the issue of land titles and enable legal land ownership.
- **Undernutrition and micronutrient deficiency:** There is a relatively high status of children wasting and stunting in the region, an indicator of undernutrition in the region. In most cases, the counties that make up the bloc had higher levels of undernutrition compared to the national average. Changing eating habits/consumption patterns, educating the masses on importance of nutrition and reducing multidimensional poverty is critical to fighting malnutrition in the region.



Prioritization of maternal and child nutrition especially among the most vulnerable would also aid in improving the nutrition status of the populace in the region.

- **Climate change:** Food systems have always been under the heel of unpredictable weather. The dynamic climatic conditions are making agriculture to be an even more vulnerable enterprise. In JKP, warmer temperatures have reduced crop yields and the changes in rainfall patterns have seen farmers face dual threats from flooding and drought. Flooding has affected fertile topsoil that farmers depend on for productivity, while droughts dry it out, making it more easily blown or washed away. Extreme temperatures have increased crops' water needs, making them even more vulnerable during dry periods. Shifting climates also mean that agricultural pests can expand to new areas where farmers had not previously dealt with them. In particular, the changing climate has seen the rise of pests such as the desert locust which have ravaged menacingly in the region damaging crops fields and creating significant financial losses to coastal farmers.

The overall impact of climate change on food systems in JKP has been negative and resulted in the reduction of food production, affected the livelihood of residents and influenced the rise of food prices. Some areas are already in a dire situation of hunger and food insecurity.

It is therefore imperative for farmers in JKP to focus on planting crops that are resilient and/or conducive to the coastal environment. Climate smart solutions can help farmers to preserve the environment while maximizing nature's benefits. Solar powered irrigation systems can especially be a reprieve to the farming communities in the bloc as they can help to boost crop production in the region already blessed with rivers and water bodies.

- **Financing agriculture and developing market infrastructure:** Although agriculture is deemed a top priority in JKP, the notion was not backed by the requisite budgetary allocations. As such, JKP counties should ensure agriculture is prioritized and sufficient budgetary allocations made to enable the local growers have the information, knowledge and technologies to compete with the glut of produce coming from the neighboring Tanzania. It was also noted that the region should develop new and upgrade old markets to enable the farmers to effectively sell their produce.
- **Leveraging opportunities in the blue economy & agro-processing:** While deemed to have great potential to increase the livelihoods of the populace in the JKP counties, there is need to build the capacity of youth, women and agriSMEs on the blue economy and on value addition for their full and effective participation.
- **Policy and legal frameworks:** With the recognition that initiatives and programs to spur agricultural transformation should be anchored in policy and law, the region needs to harmonize agri-food policies to aid in unlocking the potential of the agriculture systems in JKP. Moreover, policies that support climate smart solutions, that reduce post-harvest losses and that encourage and spur value addition and agro-processing should be enhanced. JKP counties also need to give more attention to crops such as coconut, cashew nuts, cassava among others that the JKP region has a comparative advantage producing. The region should also enhance policies related to land rights to allow the populace and especially women, youth and PLWDs to access land.
- **Cultural barriers:** Many farmers in the region do not keep livestock, poultry or any farm animals. It is critical to promote new habits that enhance the agricultural orientation in the counties and that enables the transition from agriculture to agribusiness.
- **Effects of Covid-19 on food systems/value chains;** The economic downturn resulting from the Covid-19 pandemic has predisposed more people in JKP into extreme poverty as lockdowns and other restrictions have decimated incomes, spiked unemployment and put nutritious food out of reach for many people especially the poor and the most vulnerable to the pandemic. In some



cases, some agribusinesses that play a critical role to protect people's livelihoods and nutrition have been shut down in the face of the effects of the COVID-19 pandemic. Despite agriculture being an essential service, the restriction of movement from one place to other has spiked post-harvest losses, as farmers are unable to take their produce to markets.

However, many unemployed youth and those who lost jobs due to covid-19 have found a new opportunity in agriculture while seizing the opportunity in the pandemic. JKP counties need to provide the structures of support for those transitioning into agriculture to ensure that they can grow and scale while contributing to agriculture transformation in the region.

## Main Findings

- **Expanding opportunities for inclusivity to enhance participation of different population demographics for sustainable and economically viable food systems.**

There are existing opportunities to mainstream inclusivity in the ongoing projects by development partners and counties. While some of the projects are women, youth and PLWDs focused e.g. two World Bank projects – NSPED and Climate Smart Agriculture project – it is encouraged that these models be used to meaningfully and beneficially involve different population demographics in agriculture activities and in building their agency.

While access to capital has been a major challenge for young people in the Jumuiya counties, it would be beneficial to enhance ongoing efforts to establish a Youth, Women and PLWD Enterprise Fund which could finance agribusinesses with patient capital.

Moreover, innovation, the use of technology and value addition could be avenues to attract and lure young people in the region to participate in agri-food systems. While utilizing the value chains in which the region has a comparative advantage on e.g. cassava, value addition, digitalization and mechanization of the agri-food systems offers opportunities to increase engagement in agriculture for young people, women and PLWDs.

With River Galana, Tana River and other rivers passing through the JKP counties, the sustainable utilization of these water resources could increase youth engagement in agriculture as poor access to water has been a hindrance to youth participation in agri-value chains. The use of irrigation technologies could also improve crop production and incomes and therefore increase their livelihood opportunities in agribusiness.

Mentorship of the youth in the Jumuiya counties has been identified as a means to overcome negative mentalities and stereotypes about agriculture being for the old and those that do not do well in school. Moreover, the revamping of 4K Clubs could also be an avenue to start building interest in farming from an early age and to foster a positive attitude towards agriculture which will also go a long way in promoting stewardship towards the environment and increasing youth involvement in agriculture. Moreover, mentorship could have spillover effects including the reduction of youth radicalization.

With the breakdown of extension services and the lack of information on crop management practices and market information by smallholder farmers in the region, a digital and youth-led extension service system



could be an avenue to utilize young people in providing extension information to rural farmers in the region.

Moreover, by enhancing existing policies on land rights and access, this would enable youth and women to access land, an important factor of production.

- **Leveraging existing enabling and coherent legal and policy frameworks for sustainable food systems**

Communities should be sensitized to actively participate in policy making initiatives in the bloc. While some legislation either targets and/or affects farmers, appropriate means should be made to ensure that the process of public participation ideally identifies and engages the farming communities that will be affected by the laws and policies.

More specifically, it is imperative that:

- The region drafts a framework and better policies that enhance afforestation to help in averting problems related to climate change and global warming. It is also appropriate to have climate change policies that give understanding on disaster risk management and aid in addressing farmer's capacities in managing climate induced disasters.
- The region puts in place policies that enable the sustainable utilization of the water resources in JKP. Moreover, the policies should enable access to boreholes for rural communities without water and pumping equipment in areas that are suitable for irrigation.
- The region revises its policies to enhance the uptake of locally produced foods.
- Fees and levies that are applied to small-scale farmers should be reduced to enable their beneficial participation in agriculture.
- Policies that improve access to land for youth, women and people living with disabilities should be implemented. Moreover, the JKP region should draft policies that enhance the use of idle land to enable young people have access to the resource.
- Policies that aid to revive the cooperative movement should be drafted to enable the region to harness the benefit of cooperatives in pulling resources, enabling good agricultural practices and sourcing for markets for the counties' produce.
- JKP should also legislate social protection policies that enable persons living with disabilities to live a full and productive life and that also enables them to participate in food systems.

- **Transforming the food system to contribute to dietary diversity and food consumption patterns at household level for positive nutrition outcomes**

While water is an important resource that can help boost the nutrition status of the populace in the JKP region, the resource is limited across the region at household level. With water, the residents can be encouraged to have kitchen gardens that they can plant basic food crops that aid to diversify their diets.

Moreover, to improve nutrition security in the region, the bloc should promote the consumption of several indigenous food crops and other sources of diet that leverage on the blue economy. Consumer education on the choice of food is vital especially for the urban dwellers who rely on fast foods. Poor



persons should be educated on maternal and child nutrition practices owing to the fact that the block has 97,000 children stunted translating to 39% of the children in the region. In addition, the communities in the JKP region should be encouraged to keep livestock as a means to diversify their food.

To ensure food safety, markets such as Kongowea should be sanitized and cleaned regularly to avoid food contamination. Food inspectors should be deployed to inspect the quality of food produce and products. The region should also invest in safe storage facilities and improve transportation systems to prevent food from contamination and spoilage.

- **Enhancing public-private partnerships to address food and nutrition security**

It is essential to strengthen the county government systems in the bloc to deliver on their mandate, as this will scale up their efforts in embracing public-private partnership when addressing food and nutrition security in the region.

To enhance public-private partnerships, the JKP bloc should endeavor to work together and improve their collaboration with multiplayers such as research institutions, donors, private sector, and other civil society organizations. The regional governments should also improve the ease of doing business to attract investors in the region.

In financing local farmers, the JKP county governments should actively work with the local banks and other micro-lending institutions to facilitate credit flow to farmers. The county governments in JKP should also consider creating funds e.g. seed funds with low/zero interest rates to support farmers in their activities.

Cooperatives are a good instrument for partnerships and therefore the JKP counties should revitalize cooperatives to enable PPPs with farmers at the core. Since the county governments do not have capacity in conducting agricultural research, collaboration with private and public organizations should be set in place to enable evidence-based interventions and adapted seeds for the climate and soils in the region.





## Repositioning LREB Towards Sustainable Food Systems for Inclusive Human and Socio- Economic Development

June 3, 2021

### Report

On June 3rd, 146 participants from various stakeholder groups in the Lake Region Economic Block (LREB) gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

1. Production, Value Addition & Marketing
2. Partnerships
3. DAPs, Women and Youth
4. Policies and Legal frameworks
5. Nutrition

Some challenges explored include:

- Lack of informative research and data to help the private sector make informed interventions.
- Lack of organised groups within the industry that are open to membership that can promote multi-sectoral collaboration.
- Rigidity in crop diversification.
- Lack of technology, particularly irrigation, mobile applications, that can give early warning systems
- Lack of review on policies that support vast issues such as inclusivity on land tenure.
- Blue Economy development strategies fragmented or missing

The key issues raised were:

- **Land rights:** Although women are given access to the crops they cultivate, and make up 75 % of the workforce in the LREB region, they do not have rights to land tenure.
- **Creating nutrition awareness:** There is need to create awareness on county nutrition development programs. These will inform the public on their deficits and what to consider in their monolithic diets. Schools, Churches and Mosques are good grounds for public participation and awareness pools that need to be considered in order to improve awareness and change behaviours in the region which is very much cultural practice that is predominant.
- **Support Academia:** University institutions such as Rongo University are developing solutions to meet the needs of the LREB region. However, these institutions lack proper systems and funds to maximise their potential. They recently developed a sorghum variant that performs 25% better in the region. Such home-grown interventions should be promoted for incubation and research services.
- **Access to finance:** The cost of credit is unachievable to SME's, Women and Youth. There is need to have a different approach to agricultural credit security. Market lead initiatives ought to be designed to secure uptake of products.
- **Create multi-sector platform:** There is need to have organised groups across the industry who are open to membership that promotes multi sectoral collaboration. These will provide all



stakeholders with a wider view on issues, and in-depth insights that will create sustainable solutions for the LREB communities.

- **Policies:** Ensure that policy processes are inclusive, and the public is engaged through dialogues, open forums and having a wide stakeholder representation. There is need for reconciliation of national policies with County Integrated Development Plans (CIDP) to promote policy coherence and coordination among the two levels of government.
- **Climate change and crop diversification:** Climate variability and change continue to militate against efforts to increase agricultural productivity and food and nutrition security in LREB. There is now need to have interventions such as irrigation, water ways, water harvesting and alternative seed variants that de-risk crop failure.
- **Improving rural infrastructure:** Despite the fact that LREB has good connectivity between the counties, rural road networks are very poor. Road network is the primary mode of transport for agricultural produce as it connects produce to markets and secondary transport channels out of LREB, including rail and air transport.

## Main Findings

- **Production, Value Addition & Marketing**

LREB is affected by frequent floods and droughts which have serious implications on food systems in the region, from production to markets. There is need to have early warning systems to be able to look at the weather and climate variability over the region to inform the stakeholders. These will ensure farmers are well informed so that they are able to effectively utilize prevailing weather conditions and improve resiliency of the region. There is also need to diversify the food and cash crop production in the region as farmers are attached to crops that don't add a lot of nutritional or economical value. Diversification to other crops such as cassava, potatoes, avocado, bananas which can do well in the region and don't require much rain is a viable option.

There are numerous water sources in the region. However, very few irrigation schemes have been developed. There is need to exploit these and other water resource management methods so that farmers do not rely on unpredictable rains.

There is need to move from predominantly subsistence mentality to market oriented ones in farming, case study of Sasini and Standard Group initiative to motivate young people to come into farming. The concept is that we have an ageing farming population and the youth are no longer interested in farming because they are not exposed to the available smart farming methods where you can actually link the market and the farm from your desktop using technology.

The partnership signed with Sasini PLC and Standard Group Media is for a youth talent platform dubbed 'Talanta Mtaani' that features every Sunday on KTN TV between 3-4pm. The new concept in the season 6 of the show is to attract youth into the farming system with offers for smart options and market opportunity such as through Avocado and Macadamia. The show uses artistic talent as the attraction for youth and while on the platform, we expose them to these alternative economic opportunities that Sasini will bring on board.

Companies like Sasini are moving from tea coffee to the more profitable macadamia and avocado farming and the LREB area is rich in terms of soils that can produce excellent macadamia and avocado. There is



need to start introducing new crop options and encourage movement away from the typical traditional maize beans farming to try do cropping for markets that are ready.

Resources should be targeted to the most pressing issues and value chains e.g. omena value chain is well developed and should not still be requiring a share of the meagre resources available. The region should also take advantage of organised groups such as women, youth and church groups and cooperatives to carry out capacity building initiatives.

To make more economic sense, it is critical to mover from individualistic farming to cooperatives. E.g. to produce avocado and macadamia that Sasini may want to export, about 5+ acres of land is required. Farmers should organize themselves through cooperatives and take advantage of the new crops opportunities and use the window that companies like Sasini are offering to engage the market more productively and bring back income streams that were perhaps not there.

Processing plants have been set in counties like Busia and Siaya but there are no raw materials because farmers are not growing the crops e.g. oranges, mangoes, pineapples which can do very well in the region. There is need to encourage farmers to shift to these more profitable ventures.

Extension workers need to be empowered with the right skills and knowledge, including on new market systems so that they can effectively and efficiently transfer these skills and knowledge to smallholders.

- **Partnerships and collaboration**

To create new opportunities for partnerships there is need to support the power of inclusion of the private sector, academia and markets. This should start with designing policies that protect and incentivise partners. Most SMEs consist of innovative businesses or entrepreneurs who are investing in solutions to challenges our food systems are facing.

Close to 98% of all businesses in Kenya are SMEs and creates a barely 30% of job opportunities annually. However, around 4000 of them collapse every year because they lack support in terms of finance. It is essential for Counties within LREB to work together with SMEs and ensure they achieve a full capacity of producing safe and nutritious food.

Promoting partnerships between the established businesses and SMEs is key to scaling and motivating small businesses. The sectors should then work closely with insurance schemes to help them mitigate risks and build resilience. It will be equally important to create financial mechanisms for specific value chains and offer technical support to SMEs to ensure the entire food systems is reliable and produces safe and nutritious food.

The cost of credit is also high and the region should work on the clock to ensure SMEs are given loans with low interest or supported in accessing facilities they require. Landscaping of existing donors or partners working with SMEs is important to identify gaps and areas of building synergies.

Most SMEs are also not registered and the region should look into ways of formalizing the SMEs and vendors to enable them access finance.



- **DAPs, Women and Youth**

The contribution of women in the entire food system cannot be underestimated and therefore building capacity and offering support to women is critical in transforming nutritional landscape in LREB. Land rights should be revised to enable transfer rights of ownership to women as well. It is also important to create awareness and create opportunities for participation of women and People Living with Disabilities (PLWDs) in the food systems. Inclusive approach is key to achieving safe and nutritious food for all.

Young people are beacons of hope in shaping and transforming food systems. With an economic gap of 60% in agriculture sector, plenty of opportunities exist for young people to start or engage in entrepreneurship. The Big Four Agenda that is linked to manufacturing present an opportunity for youth to engage in agroprocessing and in exports of agrifoods to international markets. However, young people require information on access to market both locally and internationally. Enabling access to finance is key to unlocking the potential of young people to contribute to the realization of food and nutritional security.

There is need of skills development for this audience to go beyond being casual labourers to semi-professionals with tertiary skills. It is imperative for the academia in LREB to create research and incubation centers that these skills are harnessed.

- **Policies and legal frameworks**

Review and revision of policies is required to promote new and innovative interventions for LREB food systems. Policies such as energy and pricing on energy need to be promoted as technology requires energy.

When developing sustainable food systems, it is important to improve market demand and inputs. Many agricultural potential regions within LREB remain untapped due to poor land policies and misunderstanding of the same by the populace. A lot of food goes to waste due to erratic weather conditions such as flooding that wipes out crops in lowlands. Construction of dams in such regions is critical to cushion the farmers against future shocks.

Due to cultural system of subdivision, there is less and less land for commercial farming. There is need to have discussions on land sizes that the LREB region can benefit more as model farms for contract farming.

The importance of the Agricultural sector in health is greatly undervalued, agriculture plays a key role as preventive measure with the food consumed, but finances and resources are given to the health docket for curative measures. If policies are addressed to this effect we shall see less sick people and nutrition levels will rise.

Implementation of policies is critical as there are numerous policies that have been developed but not followed through. There has to be a mindset of doing! And this can start by celebrating small wins. There also is need to reconcile national policies and CIDPs policies.



- **Nutrition**

In a region considered food sufficient, LREB has a stunting burden of 20-30% coupled with high prevalence of HIV and Malaria. This clearly depicts that the existing food systems are not addressing the nutritional needs of the populace. Dietary patterns have remained unchanged despite the region noting diversified agricultural food chains. Therefore, emphasis should be stressed on sub systems of production such as agro-processing, storage, marketing, retailing, and logistics/transportation to establish areas of interventions.

Food production systems should be approached from a wider perspective. SMEs should be incentivized to produce nutrient efficient foods. Inclusivity is key to transforming food systems. Consumer education and protection should be enhanced to cushion the populace against misinformation. The existing policies should also be reviewed to ensure proper coordination between key sector players in the food system.

There is need to have deliberate and strategic awareness campaigns to influence taste and preference across the region. In as much as there are greater health risks across the region, there is lack of food diversification thus nutrition deficits continue to be high.

There is a huge market advantage if the region popularized other food crops, and, or livestock breeding to have a niche in the markets including neighbouring Tanzania and Uganda which the bloc has border access to. Promotion of cross border commerce that LREB can take advantage of Lake Victoria (Blue Economy) for export is necessary.

LREB can promote organic foods in the region as there are very many unsafe foods in the retail markets due to poor handling of pesticides and fertilizers. Governments should subsidize seed cost for farmers who grow super foods.



## Accelerate and Sustain Inclusive Growth in Agriculture for Improved Food and Nutrition Security and Resilient Society in NAKAEB

June 11, 2021

### Report

On June 11<sup>th</sup>, 75 participants from various stakeholder groups in the Narok and Kajiado Economic Bloc (NAKAEB) gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

- Sustainable production and natural resources management
- Post- harvest challenges and opportunities
- Value chain development and market access
- Sustainable Consumption and nutritious diets

Some challenges explored include:

- COVID-19 has exposed the fragilities and inequalities in food systems.
- Pastoralists, agro-pastoralist and agriculturalists in these two counties are amongst the most vulnerable due to the impacts of climate change.
- Food systems must be inclusive and partnerships need to be strengthened in order to combat degradation of natural resources and exploitation of local communities.
- To promote partnerships, there is need to have clear and documented understanding of the vision, roles and outcome of every stakeholder and work to meeting them.
- Lack of community and organised groups training and capacity building is proving a challenge to the advancement of NAKAEB and its ability to compete in the region. NAKAEB is behind in areas like export savvy, innovation and diversification.
- NAKAEB farmers, organisations and groups are in need of both soft skills and technical skills which will accelerate engagement of the private sector in areas such as manufacturing and value addition. These private organisations need to be clear on their objectives and commitment. This will enable them to penetrate without much resistance, as most MAA communities have been exploited by private sector.
- Covid -19 pandemic has taken the region many steps back as they were not cushioned from the national restrictions such as curfews, cessation of movement of goods and people. These resulted in a spike in commodity prices across the value chains. This has also created a black market for counterfeit products (sprays, de-wormers, fertilizers) into the market thus compromising quality of output.
- As we protect cultural heritage, we need to be open to new ways of doing business and consider diversifying farming techniques. Climate Change dictates that we ought to change or we fail.
- NAKAEB smallholders, SMEs, Youth and Women groups cited the need for financing opportunities which was lacking proper structures to reach them and is critical to the success of programs.
- Lack of planning and shared stakeholder vision made it difficult to plan, manage and execute programs.





The key issues raised were:

- **Policies and regulatory frameworks:** There is need to review the existing policies to highlight the issue of resource allocation to the food systems sector in the NAKAEB Region. To increase more PPP engagements, there is need to have more policies that protect investors because a lot of the land in the vast NAKAEB region is community owned. It is also good to have frameworks that can incentivise the private sector to set up industries in the area. There is need to review policies in NAKAEB to avoid duplication of work and the share of trans-boundary resources should be equitable. As the region seeks to be aligned to the National agenda, it is imperative to domesticate various policies from the national government, CDIP's that can help to shape the regions food systems in the NAKAEB region.
- **Partnerships and collaboration:** More and smarter – investments in small-scale farming are needed, including through multi-stakeholder partnerships that crowd-in investments from the private sector. PPPs that are transparent with transparent vision to the government and communities are critical to getting their by-in. For better collaborations, there is need for NAKAEB to invest in training and capacity building for people in the region. This will boost local uptake of human resources for industries and value addition companies to set up industries instead of taking the region's raw materials. These will in turn increase jobs for local communities and improve the livelihoods of the people. Partnerships need to have a shared vision from the onset and create win-win solutions for all partners.
- **Nutrition:** There is urgency in dealing with the triple burden of malnutrition in NAKAEB. Multi-sector and stakeholder collaborations to aid in the fight against malnutrition in a holistic approach to nutrition within the food value chain are paramount. All stakeholders ought to have one voice, with the right strategies, objectives, commitments, and well informed research to have right interventions. There is also need to increase food production and diet diversification for the culture rich communities. Lastly, there should be technologies to modernise formulation for some indigenous foods.
- **Climate change:** Drought and floods have occurred concurrently and these has taken farmers and pastoralists in NAKAEB back from progress made. With issues such as the rise of temperatures for the past farming seasons, farmers output has been compromised significantly, farming seasons have reduced (e.g. tomatoes which are usually two seasons can only now be grown in one farming season). There is need to engage organisations that have expertise in climate and weather projections to support effective planning across the sector. Water conservation programs are required to boost storage and water harvesting.
- **Finance:** There is need for financial instruments that will propel the potential of the two counties forming NAKAEB. With regard to the contribution that small-scale agro-pastoralists can play in transforming food systems, Kajiado County has the potential to boost agricultural productivity through irrigation and has approximately 6000 Ha of land under irrigation. There are about 80 small-scale irrigation schemes and 2 large-scale irrigation schemes. As for Narok County, the main economic activities include pastoralism, crop farming, tourism and trade among other activities undertaken in small scale. These are the main employment and income opportunities, where credit and value chain investments need to improve. The county has a robust ecological system that residents depend on for agriculture, tourism, water and many other benefits.
- **Innovation and technology:** Harnessing agricultural innovations and technologies is critical to realizing efficiency of food systems in NAKAEB, however the prevailing challenges with education levels in the region are contributing to low acceptance of innovation solutions within communities. Every intervention proposed has to be implemented by people from other regions and there is no training or know-how for the communities.



## Findings

- **Sustainable production and natural resources management.**

NEMA through its adaptation fund is working with partners including the Kenya Water Towers Agency to identify forest areas and water catchment areas and inject funds into their conservation and encouraging agroforestry.

It is imperative to continue embracing community wildlife conservation by working with the populace to have community conservancies that create more space for the wildlife, developing programs and policies to support wildlife conservation and investing in human-wildlife protection.

Geo-technological surveys ought to be used to map out land and protect agriculture rich zones through fencing to prevent movement of animals to crop fields. Leveraging new management practices to prevent wildlife encroachment e.g. cropping sunflower plants that are less vulnerable to wildlife destruction and that also improve the economic livelihoods of the populace.

To support the 2030 Agenda for Sustainable Development, Action Track 4 will seek to ensure that food systems 'Leave No One Behind' by addressing inequality as one of the root causes of poverty in all its forms: inequality in access to economic opportunities, gender inequality and inequality in access to productive resources and services that restrict the advancement of equitable livelihoods. Adopting new farming methods such as apiculture that allow agriculture to thrive without decimating and encroaching on wildlife spaces and sanctuaries is critical. Sustainable utilization of wildlife by the populace to accrue economic benefits e.g. keeping ostrich, peacocks and crocodiles will be beneficial.

With the support of partners, the county is working to ensure it provides adequate water supply so that the movement of animals from one area to another is minimized thus ensuring there are healthy livestock within the region. The long distances that the animals travel, especially during the very dry seasons has an effect on the health of the animal in terms of productivity. Thus the county is trying as much as possible to have water facilities constructed or where they exist, they are desilted.

For crop husbandry, the county is encouraging proper crop production and moving from rain fed agriculture. Narok has an area of 164,000 Ha of arable land, irrigation potential is about 12,000 Ha but only 3000 Ha are currently under irrigation. Proper systems have not been put up to allow most of this land to be put under irrigation. The big farmers have moved into adapting some of these modern technologies but a number of farmers are still behind on the open furrow system which means a lot of water is being lost. With additional extension services, farmers are being trained on proper irrigation techniques. The Department of Agriculture is coming up with a toolkit to encourage farm pond production which will go a long way in enhancing crop productivity. Work is underway to heal of some of the NAKAEB landscapes (Suswa to Magadi area) – The county government of Narok in collaboration with partners is working on healing these fragile ecosystems where a lot of sedimentation has occurred. If these areas are healed, they can be put into better use either in terms of crops or putting up pans and dams in these areas. Ewaso Nyiro river is being harnessed for irrigation in both counties.

NAKAEB should develop a food security policy; draw up a 20-year food security blueprint; set up a Narok-Kajiado Agricultural Research Center; and roll out an elaborate mechanism for agricultural extension services that responds to the challenges of farmers across these two counties. Narok and Kajiado counties



need concurrence in budgetary allocation for the agricultural and livestock sectors for adaptable investments in research in farming and livestock keeping. Farmers also need to understand the market dynamics of their farm produce i.e. mapping out the path for opportunity.

NAKAEB has to invest more in innovation, technology and artificial intelligence, so as to keep up with emerging trends in agribusiness. Real practical and sustainable solutions for agricultural value chain have to be established.

NAKAEB should do more to partner with the universities in the counties to leverage on their expertise and give them platforms for more research and publishing data from farmers and county governments. There is need to map out agricultural production zones and roll out value addition processing facilities in those zones.

- **Post- harvest challenges and opportunities**

There are many factors influencing post- harvest losses. These include poor inroad infrastructure or light bridges which become challenging for cars to get to the farms. Additionally, due to the erratic weather patterns caused by climate change, farm level grain farmers have a challenge with grain basket harvesting which coincides with cold seasons. This affects the moisture content when drying the grain leading to spoilage of grains. In as much as there are discussions to have grain storage and drying facilities to solve this, farmer training and sensitization of farmers is needed to adopt new farming and seed varieties that are not that sensitive to these conditions.

There are discussions around building affordable metal silos that farmer groups or cooperatives can lease out or hermetic bags in which both can be a partnership with artisans in the counties.

The issue on aflatoxin is high especially where maize is produced. Proper storage structures are needed as a business venture by private sector. Value addition is key especially for horticultural crops such as tomatoes which are produced in the region. Farmers lose income because of lack of proper post-harvest management. With a tomato processing facility being set up in Kajiado county, many farmers can now benefit from this venture, creation of employment opportunities as well the creation of many offshoot businesses like logistics in the bloc.

For fish, meat and milk products there is lack of cooling facilities as well as poor hygiene when handling these products.

Opportunities that Exist in Post-Harvest Technologies include:

Cereals – Maize, beans, wheat, barley

- The green stalls - Facilities constructed by national government in the counties are not adequately utilized. They should be used to benefit the farmers.
- Through capacity building, the farmers can use the facilities to store grains.
- Encourage use of readily available simple technologies such as hermetic bags and metallic silos for storage at household level.

Horticulture products

- Develop a cold chain facility for products such as tomatoes and potatoes.
- Efforts to put up a modern market for tomatoes in Narok town ongoing with cold chain facilities.



- The county government is rehabilitating the existing markets by roofing them, installing sanitation infrastructure and proper waste disposal and cold chain facilities.
- Warehouse receipt systems – possibility of private investors can come up with warehouses for farmers storage.

#### Livestock

- Capacity building for forayers so they don't ruin skin and hides from animals.
- Organised Market for hides and skins – modernised tannery for quality products.
- Meat handling – the law requiring certification. capacity building for meat handling.
- Milk products – 30 milk coolers operationalised in the Narok county.
- Coolers being connected to solar/wind energy to reduce operational cost.

- **Value chain development and market access**

For the region to benefit from export markets, there is need to scale up the food growing and production value chain. These has proven difficult because of the low standard of food quality and sanitary requirements. Farm producers and livestock keepers are not aware of the standard of export thus do not have the skill set or expertise to channel out similar products. If the existing private sector can open their farms for benchmarking, many farmers would gain from the knowledge shared.

Because of the fragmented value chain, there is no scale in production to meet certain quotas for export. There is need for national government associations (such as the Export Council) to come and help NAKAEB build its capacity to explore this potential.

To have valuable players as stakeholders across the value chain, there is need to build strategic relationships from the onset. Long term strategies that everyone is part of from the beginning, documented partnerships that have clear vision, understanding of roles, commitments with every stakeholder, and working measure & evaluation matrix to meeting them.

There is need to review the existing policies to highlight the issue of movement of raw materials out of the region. Products such as leather hides are some of the products that can be processed in the bloc and sold as processed leather within the region. There is need to review policies in NAKAEB to avoid duplication of work, and leverage on existing markets (Macadamia, Coffee and tea export partners) to promote products from the NAKAEB region into their portfolio.

Value chain development drivers are the private sector. There is need to have transparent PPPs with the government and communities to be able to get their by-in. A shared vision from the onset and creating win-win solutions for all partners is necessary. Healthy relationships should be build from the onset. There should be clear understanding of the vision and roles with every stakeholder and work to meeting them. Long term strategies that everyone is part of from the beginning are required.

Training and capacity building will enhance soft skills (transparency, trust, flexibility and patience) creating an environment that will make more people in NAKAEB understand and explore the development opportunities.



More needs to be done to harness the best from technology to ensure increased productive farming, sufficient food supply at affordable prices in the markets and keep families secure from famine and hunger.

The NAKAEB counties need concurrence in budgetary allocation for the agricultural and livestock sectors for adaptable investments in market promotional for export markets. Research in export products both horticulture and livestock needs to be done so that capacity building is conducted to have farmers understand the market dynamics of their farm produce i.e. mapping out the path for opportunity.

NAKAEB has to invest more in innovation, technology and artificial intelligence, so as to keep up with emerging trends in agribusiness. These will help in marketing the products.

- **Sustainable consumption and nutritious diets**

NAKAEB is experiencing the triple burden of malnutrition with undernutrition, over nutrition and micronutrient deficiencies being rampant in the rural and peri-urban areas of the bloc. In Kajiado, 1 out of 4 children experience chronic malnutrition. Currently 25.3% of children under 5 are stunted, 10% are wasted and 22.5% are underweight. Only 44% of infants under 6 months are exclusively breastfed, lower than the national average of 61.4%. In addition, only 37.9% of pregnant women consume the iron and folic acid (IFA) supplementation regiment for the recommended 90 days or more. About 7.5% of children are born with low birth weight while in contrast, 44% of women 15-49 years are overweight, much higher than the national average of 32.8%. The coverage of vitamin A supplement among children in Narok county stands at 66% which is way below the nationally recommended coverage of 80%.

In the bloc, the key drivers for malnutrition include poor access to clean water, inadequate access to health services and cultural practices that discourage seeking health services. Moreover, food insecurity, poor children diets and the lack of men's support to reduce women's workload also contributes significantly to poor nutrition in the two counties.

The populace should embrace diversifying diets by unlocking potential diets such as fish and stop relying only on a few sources of food for their nutrition. Other opportunities also exist in bio fortification of foods and urban and peri-urban agriculture:

- **Food handling and processing:** Improving value chain and food fortification to increase micronutrient contents of foods. Adapting to processing techniques that extend product shelf life is critical.
- **Food trade and marketing:** The region should focus on shortening the supply chain; invest in value addition and logistics, incentive food to make it more available and affordable and food marketing and advertising of foods that promote healthier diets.
- **Consumer demand and food preferences:** Educate consumer on healthy and sustainable diets, provide humanitarian assistance and entrench food and nutrition education in schools as the key agents of change in the nutrition space.
- **Mainstream nutrition across all sector policies** and reintroduce school feeding program. Engaging children as agents of change. **Reviving 4k clubs.** The NAKAEB region should ensure that schools in the bloc adopt 4K clubs.





The populace should embrace diversification of diets by unlocking potential diets such as fish and stop relying only on a few sources of food for their nutrition. Other opportunities also exist in bio fortification of foods and urban and peri-urban agriculture.

Cottage industries that can improve food fortification to increase micronutrient contents of foods, adapting to processing techniques that extend product shelf life is critical. The region should focus on shortening the supply chain; have offtake ready markets, invest in value addition and logistics, promote cross farming methods for both farmers and livestock farmers.

NAKAEB should use community platforms to educate consumers on health and sustainable diets, leverage on its vast partnerships to provide humanitarian assistance and entrench food and nutrition in schools as the key agents of change in the nutrition space. Engaging children as agents of change is key, and this will be possible with the reviving of 4K clubs.

NAKAEB should collaborate with stakeholders to ensure farmers can cultivate foods without human-wildlife conflicts.

There is need to promote: Inclusivity, technology uptake in farming systems, value and appreciate the role of indigenous knowledge in the food value chain. Nutrition education is paramount as well as women empowerment in the ecosystem. Although WHO recommends that health facilities should be within 5km reach for the populace, NAKEB has not been able to reach this.

In improving the nutritional status of the populace, systems thinking is important as it facilitates the shifting of culture to enable proactivity in dealing with nutritional issues rather than being on the reactive end. It also enables stakeholders to act on preventing nutrition deficiencies rather than curing them (in consideration that some nutritional deficiencies are irreversible). System thinking is also imperative in facilitating multi-sector collaborations and multi-stakeholder platforms that seek to create synergies between different players to improve nutritional outcomes. It also enables stakeholders to view the challenge from a full lens while including aspects of food, health, sanitation and access to water, gender equality etc.

The region should adopt community integrated services to reach the hard to reach areas to address malnutrition. Narok county is working in collaboration with other stakeholders to reverse this trend in food and nutrition policy. The Department of Agriculture, Livestock and Fisheries as well as the Department of Health in liaison with other stakeholders have been advised to develop an implementable Food and Nutrition policy for the county. The document is in an advanced stage in development. Some of the key interventions that Narok is going to undertake include:

- Promote sustainable food production considering soil fertility, biodiversity and management practices are friendly to fragile ecosystems.
- Support the role of markets and private sector.
- Provide agricultural inputs and financial services at affordable prices



## Towards Sustainable, Profitable and Equitable Food Systems in North Rift Economic Bloc (NOREB)

June 14, 2021

### Report

On June 14, 235 participants from various stakeholder groups in the North Rift Economic Bloc (NOREB) gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

- Maximizing the potential of NOREB as the breadbasket of Kenya and beyond
- Incentivizing private sector/SMEs to enter new value chains and take advantage of domestic urban and export markets
- Addressing the challenge of under nutrition in NOREB
- Towards better natural resources management and sustainable land use in NOREB
- Building resilience to food systems shocks and stresses in NOREB – lessons from the field

Some challenges explored include:

- Strengthening NOREB's role in national food security as the breadbasket of Kenya in terms of quality, and quantity of agricultural produce and value addition, and the harmonization of existing policies for optimal delivery of a sustainable and resilient food system.
- Incentivising the private sector/SMEs be incentivized to enter new value chains and take advantage of domestic urban and export markets. Additionally, incentivising young people, women and PLWD to actively participate in agricultural production and realizing food and nutrition security.
- Adapting food systems to the pressing realities of the nutrition situation in NOREB, ranging from seasonal spikes in acute malnutrition in ASAL counties to over nutrition in high potential areas. Addressing the underlying causes of malnutrition in NOREB and transforming food systems to provide and promote safe, nutritious and diverse diets to address malnutrition.
- Sustainably harnessing water and land resources for irrigation to improve and diversifying production and diets.
- Mitigating against the impacts of climate change to contribute to the overall resilience of food systems.
- Addressing the needs of pastoralists, building the resilience of NOREB's livestock sector through livestock disease control including transboundary diseases.

The key issues raised were:

- **Policies and regulatory frameworks:** Weak governance of food systems is negating the status of NOREB as Kenya's breadbasket. There are many discrepancies between national and county government policies and strategies on agri-food systems. There is a need to harmonise key agriculture policies and strategies affecting food and nutrition security in the region. Knowledge



exchange and best practice in dealing with key agriculture, livestock, fisheries and nutrition issues facing the region is critical and should inform policies. Additionally, the national government needs to stop overregulation of the agricultural sector as this is hampering the ease of doing business.

Furthermore, the land use policy in the region should be reviewed to prevent the continuous subdivision of fertile and arable land into non-functional and uneconomical units and strengthen the land tenure system.

To address transboundary issues, such as livestock disease control, NOREB has managed to develop a Transboundary Disease Control policy which is in its final stages. It is critical for the NOREB counties to come together to address this issue and both the national and county governments need to allocate sufficient budgets to the sector to help develop a common policy to address other transboundary issues.

Policy interventions are also required to address the challenge of access to farm related inputs. NOREB should work closely with both smallholders and large-scale farmers to support formulation of farm inputs subsidies policy.

- **Partnerships and collaboration:** There is need for enhanced public private partnerships in agriculture to deliver on agricultural transformation in the NOREB region. Partnerships should include joint planning and resource mobilization for sustainable projects to boost food security in the region and tackle the shocks the region faces. NOREB county governments should foster and strengthen partnerships with the private sector to enhance the commercialization of agriculture within the region. It is also critical to curate partnerships with research institutions to deliver on evidence-based approaches to improve agricultural productivity, e.g. using climate smart crops, and in ultimately ensuring food and nutritional security.
- **Nutrition:** It is critical to relook at NOREB's entire food support system and not just the production systems. Although some regions are food secure, there are still issues of post-harvest losses, access to markets, malnutrition etc. There is need to strengthen governance of food systems to promote access to safe and nutritious food for all residents. Nutrition should be considered as a primary concern across the NOREB counties to prevent proliferation of diseases and the rise of the financial costs of health care. One Health approach which works across transdisciplinary lines and sectors needs to be promoted.
- **Climate change:** Climate change is a global issue that is also a major concern for NOREB. The impacts of climate change on food systems have been vast – agriculture productivity of both crop and livestock sub sectors has been significantly reduced and in turn nutrition and diets have been affected. NOREB is experiencing a rise in crop and livestock diseases and pest manifestation. There is need to prioritize funding to fight fight vulnerabilities, shocks and stresses associated with climate change that are rampant in the block. These funds should go into strengthening resilient assets such as water, land and livestock within the region.
- **Finance:** Improving resource allocation to the agriculture and nutrition sectors to enhance progress towards food and nutritional security in the NOREB counties is critical.



- **Value chain development:** NOREB counties need to diversify from traditional value chains to harness the new market opportunities for demand of animal source foods and fish in the region. Efforts also need to be made in diversification from the main maize agri-system to non-traditional crops such as avocados, macadamia nuts, and coffee. Investments also need to be made in processing and value addition to increase the shelf life of agriculture produce. Formation of regional farmer groups and cooperatives will allow farmers in the region to leverage on joint marketing and other opportunities in the region. The National government also needs to start giving more attention and prioritise the beef and cereals value chains at the national level similarly to coffee and tea. As such, efforts should be made to reform the sectors.

## Findings

- **Maximising the potential of NOREB as the breadbasket of Kenya and beyond**

There needs to a heightened focus on food security in all areas of the NOREB Region with food and nutritional security being accorded the same weight as national security. The county governments should be keen to and rededicate efforts to strengthening food systems from the household level across the region. As a means of improving livelihoods in the region, the population should be encouraged to engage in production of high value food crops. Addressing the challenge of inequality in access to food for some regions of the bloc is critical. While there is a food surplus in the southern region, the northern region has a food deficit. The county governments need to improve access to food and the building of road infrastructure to improve connectivity between the north and south will greatly improve this.

There is need to strengthen the quality and quantity of agricultural produce in the region through value addition. While NOREB produces over 50% of the country's maize, the region is experiencing challenges which need to be addressed to maximize the region's potential as a food basket. These challenges include:

- Aging farming households with youth shying away from farming as a career.
- Low quality produce and cheap imports caused by poor food quality controls e.g., high aflatoxin prevalence in imported grain.
- Wanton environmental degradation has caused erratic weather patterns leading to unfavorable crop production.
- Land fragmentation for settlement and other land use which has caused low productivity in agricultural rich regions.
- Poor policy implementation
- High cost of production in the country compared to cost of producing imported food.
- Postharvest grain losses which account for close to 30% due to lack of proper storage facilities
- Unfavorable market dynamics e.g. monopolistic tendencies by dealers and unscrupulous middlemen
- Scrapping of input subsidies

To effectively address these challenges, there is need to carry out a situational analysis of the food systems in the region to know how to direct investments. Further, existing opportunities should be leveraged. These opportunities include adoption of technology in food production, marketing, and value addition. There is need to leverage on structured marketing and selling well demonstrated by Warehousing Receipting System (WRS) and the already legislated Kenya Commodity Exchange. It is necessary to carry



out farmers sensitization and training on efficient crop husbandry as well as encouraging them to get into organized groups including cooperative societies. To mitigate against the impacts of climate change, agricultural insurance is critical. The meteorological department can also be a key partner in addressing climate change impacts by tracking changing weather patterns and developing early warning systems.

To further maximize the potential of the region, it is critical to harmonize policies to optimize delivery of a sustainable and resilient food system. NOREB county governments should work on domesticating national policies and seek good will from both levels of government to actualize the documents and make them practical. This requires getting buy in from executives and the assembly so that resources are directed to key sectors of the agricultural policy implementation. The counties need to integrate their priorities and have a common agenda through the County Integrated Development Plans (CIDPs). Policies are required along the entire value chain to boost agriculture in the region. It is necessary to create policies that are attractive to investors and remove multiple taxation between the counties. To guarantee success, it is necessary to build capacity on the implementation of the policies.

- **Incentivizing private sector/SMEs to enter new value chains and take advantage of domestic urban and export markets**

New market opportunities exist in the Asian Tigers with high -growth economies such as South Korea. Other market opportunities include Kuala Lumpur, Pakistan, Russia. Through the Ministry of Foreign Affairs, these markets can be opened to SMEs in NOREB. The national government has allocated a huge budget under the Big-4 Agenda to finance agro-processing as part of value addition. To leverage these opportunities, NOREB needs to encourage private sector to form groups to enable them access technical advice from extension officers, NGOs, County government extension officers and enable them access loans. Additionally, government needs to subsidize fertilizers to make them more affordable to farmers hence boost production. The county governments should also enable the purchase of agricultural inputs in bulk. Agro-insurance to cushion private sector against natural calamities including climate change and pandemics is critical.

Other opportunities to boost private sector investment exist in NOREB and the county governments need to use these to attract and encourage SMEs and private sector to invest in the region. NOREB has a ready workforce that is conversant with standards-grading, sorting and packaging of produce. The region's tropical climate is conducive in boosting the quality and nutritional content of both fruits and vegetables compared to products from other countries. There is also improved infrastructure in the major horticultural producing areas of the region and the government has provided a conducive environment for doing business with minimal interference as demonstrated in the horticultural business is in the hands of private sector. The government through the ministry of agriculture has developed the National Horticulture Policy 2012-2022 which has been fully adapted and is being implemented to boost horticulture production in marginalized areas through irrigation. The region has also witnessed a major shift from rain fed agriculture to use of irrigation, hence assuring all year-round production. Adoption of modern and advanced production technologies has seen the enhancement of entire production through double production rates. Exporters in the region have also employed agronomists by exporters to offer extension services and aggregation centers such as the one at the University of Eldoret have been set up. The Moi international airport is strategically positioned in the region to transport produce.





To further support SMEs and the private sector, the county governments need to address other emerging challenges including climate change impacts, mutation/invasion of pests and diseases, high freight charges, little interest among the youth and Maximum Residual Levels (MRLs) which has pushed sampling of Kenyan produce, peas and peas in pods to 10%. There is need to also address the challenges faced by youth, women and PLWD so that they can actively participate in agricultural production and realization of food and nutrition security. NOREB counties need to address the issues of lack of access to land, and financing for agricultural inputs for youth. Further investments need to be made in training on agronomy and good farming practices.

- **Addressing the challenge of undernutrition in NOREB**

The nutrition situation of counties represented in the NOREB region is diverse, ranging from seasonal spikes in acute malnutrition in ASAL counties to over nutrition in high potential areas. The underlying causes of malnutrition in NOREB include unfavourable market systems, weak food distribution links, unpredictable weather patterns that poses a serious threat to crop and livestock production, limited sources of livelihoods forcing communities to stick on one diet, and limited food fortification.

Adapting to these pressing realities is critical. As a result of periodic extreme weather events, risk awareness and preparation is a critical intervention for building community resilience in the region. It is necessary to prioritize climate change across policies, plans and strategies in the region as well as review land tenure policies to facilitate sustainable land use approaches. There is a need to restructure trade and market systems to ensure food surplus south serves the northern deficit. Addressing food distribution challenges can be achieved by putting in place the necessary physical infrastructure and creating linkages between production, transportation, and storage across the NOREB.

The norms and beliefs affecting consumption patterns in the region should be addressed. capitalizing on social empowerment is key. The region should set up a social registry and establish social protection programs. There is need to prioritize gender equality by addressing maternal workload and offering necessary support to women as key players in nutrition landscape. NOREB counties need to finance agriculture to meet the region's nutritional requirements while also making it to be more viable for the young people. Online platforms should be used to address malnutrition and other related issues in the region through nutrition awareness and education.

A bottom-up approach to extension services should be employed and farmer to farmer food and nutrition security knowledge transfer should be encouraged. Kitchen gardening should also be encouraged to diversify diets locally and markets be enhanced to diversify food choices. It is necessary to link pastoralists to insurance services to cushion themselves against climate shocks. It is also instrumental to promote food fortification for products such as milk and maize.

To accelerate joint action across sectors for improved nutrition across policy, legal and implementation spheres, a multisector approach in fight against malnutrition is required. There is need to widen sensitization of nutrition from the narrow lens of health care perspective to the wider lens of food ecosystem. It is necessary to develop a common communication and understanding of all policies and plans within the NOREB region and initiate integrated programs to fight malnutrition within the bloc.



Partnerships should be reenergized, and a common results framework be developed for the region. A stakeholder mapping exercise should be carried out and define clear roles and responsibilities as well as accountability for each actor. Strengthening the capacity of government, business community and partners to leverage on research for improved nutrition is essential. The region needs to prioritize consistent financing by directing investments in the nutrition sector. Strengthening regulations governing food safety in the region, embracing technology transfer and monitoring and evaluation of food systems is critical.

At the community level, it is necessary to engage and involve communities in improving their livelihoods, dietary diversity, and care practices for improvements in nutrition across the NOREB region. This includes creating poverty reduction strategies at community level, involving all community members regardless of their gender in income generating activities, developing conducive policies and support for smallholder farmers, diversification of crops and livestock products, and supporting local production of nutritional products.

- **Towards better Natural Resource Management and Sustainable Land Use in NOREB**

NOREB is in a unique position with part of the region being very dry and the other very wet and fertile. Effective natural resource management and sustainable land use is critical to enhancing the resilience of NOREB. There are several programs that are being implemented by partners including JICA which is working in the northern regions to enhance food security. JICA is implementing several projects for climate change mitigation including the Capacity Development Project for Sustainable Forest Management (CADEP-SFM) in Kenya working together with the Ministry of Environment and Forestry, Kenya Forest Service, and the Kenya Forest Research Institute. The project has equipped the Kenya Forest Service with GIS technology for monitoring land uses changes and trained personnel so that they can monitor land use changes. Lands being monitored include farmland and crop lands. Another long term project is the tree breeding activities which is preparing improved varieties of *Acacia tortilis* and *Melia volkensii*. NOREB has a lot of potential to include these tree species in the dryer areas through afforestation.

In Turkana County, JICA is implementing a project on Enhancing Community Resilience against Drought through Sustainable Natural Resources Management and Livelihood Diversification (ECoRAD 2). The project has identified water sources and installed new boreholes in the region. The focus of the project is on sustainable natural resources management mainly for the pastoralists and existing vegetation restoration while livelihood diversification targets individual households. Using the CoDUSYS system, the project has identified over 1800 boreholes in the county and the conditions of these boreholes including their functionality, types of pumps etc. after identification, county officers or extension officer use mobile devices to verify the information and capture data on site and send to the centre.

Another project is the vegetation restoration in Pelekech, Turkana West, by using natural materials to fence, the project has created 5 acres of reseeding plots. For Zai Pit Farm for producing vegetables which can also be used for the School Vege-lunch program to improve the diet and nutrition status of school going children in 10 schools.

Through the Initiative for Food and Nutrition Security in Africa (IFNA), JICA is improving the agrifood nutritious status in dry areas. IFNA is working to accelerate the implementation of people-centred nutrition policies, programmes, and activities on the ground. The program emphasizes the inclusion and empowerment of women, youth, small-scale farmers and other marginalized groups in foods systems.



IFNA also coordinates and produces genuinely synergistic impacts among multiple sectors, strengthens the monitoring and evaluation of interventions as well as support sustainable systems for nutritional improvement and the prevention of malnutrition.

AGRA is also working in the region and has several programs in areas like Samburu, Elgeyo Marakwet and Nandi County that involves sustainable land management around the Mt. Elgon ecosystem. In Samburu, AGRA is carrying out projects to support food and nutrition security and water nexus. AGRA seeks to have productive agriculture that makes better use of available water resources.

Agricultural land in NOREB is under threat from urbanization. The conversion of agricultural land to real estate limits access to food and with a growing Kenyan population, there will be about 10 million additional mouths to by 2030, increasing the demand for food. It is critical to address this threat from urbanization and there is need to better manage our land to bring agricultural productivity to bear. The rate of agricultural productivity has not been growing in tandem with the population growth. The government needs to increase budgetary allocation for agriculture from the current 3% to 10% so that the county governments and national government can come through especially with regards to extension service.

For small-scale farmers, especially women and youth, beyond having access to land, we need to address the issues of access to finance, access to improved seed and fertilizer. It is possible to double or triple yields in one season if issues of productivity are addressed. It is important to ensure farmers adopting good agronomic practices including having the appropriate seed varieties and inputs. With climate change, we need to better manage our water and better manage emerging pests and diseases. Smallholders, women and youth need to take up the many existing organic applications and organic traditional practices to ensure they build the resilience of their farms and of their communities.

Crop diversification from maize and beans is also critical to growing incomes for women and youth. There needs to be a level of diversification in smallholder systems to ensure they are better utilizing their farms.

To enhance gender inclusion and inclusivity in food systems, AGRA's *Value4Her* seeks to build the capacity of women entrepreneurs across Africa for them to better show up at the table and participate in profitable agri-business. The program provides capacity building on issues to do with financial literacy, linkages and access to markets, and access to finance. There is need to address the systemic challenges that are barring women from participating effectively in agriculture. Overcoming barriers such as access to land, and cultural barriers. The absence of land denies women to access finance. Women also experience disproportionate access to knowledge. AGRA is working with counties to enhance extension services to women and has reached over 1.1 million farmers in the last 5 years in 25 counties, of which 63% of these farmers are women.

Sinyati Women's (Apiculture) Group in Baringo County is a good demonstration of how food security can further be enhanced through diversification of income streams particularly for women. The women group has shifted from a largely pastoral lifestyle, overcoming cultural barriers to set up a bee keeping venture. In addition, the women make beads and oil and do beadwork which they sell to generate additional income. Market access is a major issue that needs to be addressed and adopting the dairy model (where smallholders sell to cooperatives for processing and sending to market) could further boost their venture and fetch good prices for their products. The women also partnerships across the region so that they can learn from each other. Working in groups has further helped to lighten the workload of the women and enabled them to balance their caregiving responsibilities with their business ventures.



- **Building resilience to Food Systems shocks and stresses in North Rift Economic Bloc (NOREB) – lessons from the field**

Like the rest of the world, NOREB has been adversely impacted by climate change which has in turn impacted its food systems. The recent locust outbreak, increase in occurrence of wildfires, rise in crop diseases and pest manifestation including invasive species, frequent weather events such as flooding which has resulted in the erosion and rising of lakes in the region, and health impacts are among some of the events the region is experiencing. Urgent interventions are required to mitigate these impacts and build more resilient food systems for the region.

There are programs in place such as the World Vision adaptation farmer regeneration, nutrition program and adaptation measures through the Kenya CSA program which should be scaled and adopted across the region. There is need for an environmental assessment program to inform the development of programs that are being implemented. Drought tolerant crops especially in the dry land areas should be promoted. Already green ground nuts and other drought tolerant crops are being grown to ensure food supply. Diversification is key. The region is starting to invest in this by promoting the production of non-traditional crops and fruits such as avocados, macadamia nuts, and coffee. In Turkana County, they are promoting diversification programs such as planting trees on the farmers so that farmers are also able to diversify their income.

Value addition is another important element of sustainable food systems. Preservation, processing and packaging of agriculture produce including fruits such as mangoes should be prioritized. To address the food insecurity challenge, there is need to invest more in climate tolerant crops and promote these and increase the nutrition value for people. Land use management is a key component of adaption and mitigation measures that need to be adopted and scaled up. It is necessary to invest more in solar energy and to investigate the benefits and challenges of linking solar energy generation and use to irrigation. There is also need to take advantage of the existing human capital by promoting youth involvement in agriculture. Employment is a key challenge for millions of youths and agriculture has a great potential. Women groups in agriculture should be supported and related programs uplifted.

The livestock sector is an important contributor to the regional economy and has also been impacted by climate change particularly in relation to livestock disease outbreaks which has an impact on food safety. This has also impacted both local and international trade thus hampering market access. The NOREB counties have experienced high trans boundary livestock diseases in different breeds (cattle, sheep) due to cattle grazing and uncontrolled borders. This has brought frequent quarantines to control the diseases. Additionally, indiscriminate use of antibiotics (drugs) on livestock is also a major concern. Conflicts around land and grazing land by the farmers also negatively affects food sector and often results in the breakdown of livelihoods.

There is need for concerted efforts on livestock diseases control. With the Transboundary Disease Control in place (peace and security and diseases control, land use), there is need to encourage counties to come together to respond to the challenges through this policy framework. The transboundary policy to guide diseases control shows the importance of a multi-stakeholder approach (food safety, public health, economic dev). NOREB is also looking at how to streamline the One Health concept working across transdisciplinary lines. It is necessary to dedicate significant resources towards control of animal disease



and to also raise awareness of food safety and related health consequences resulting from animal diseases.

- **Enhancing partnerships to mitigate the effects of COVID-19 and other shocks on food systems in NOREB**

Following the outbreak of COVID-19, the ban on international travel brought restrictions on movement of goods greatly disrupting food supply systems. Farmers were affected as they could not receive the seeds on time or transport their produce to the market. Livestock sales, livestock drugs, fertilizers were affected hence affecting food supply to the markets. There were market closures due to the public health restrictions and supply of food. Jobs and businesses losses as well as loss of lives robbed many rural families of breadwinners greatly hampering many households' ability to afford food hence affecting their livelihood. In addition to COVID 19 disruptions, conflict and drought continue to affect food systems i.e., in Baringo County, markets are closed and roads into the area have been barricaded and this has cut access to food.

There is need for partners to work together by pulling resources together to mitigate the effects of COVID 19. It is critical to invest in mitigation of drought and how to deal with drought shocks. The World Food Program (WFP) and partners are implementing interventions designed to strengthen livelihoods and to withstand the shocks. There is need to engage communities in program implementation. This requires training of selected community members to identify and plan interventions. Joint planning is necessary as well as resource mobilization for sustainable project to boost food security in the region and tackle the shocks the region faces.



## **Towards a Future of Food that is Sustainable, Equitable and Secure in Nairobi City County**

**May 19, 2021**

### **Report**

On May 19, participants from various stakeholder groups in the Nairobi City County convened in a virtual dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the UN Food Systems Summit in September 2021.

Communities of interest were grouped around the following areas during the dialogue:

- Aligning the vision of Nairobi City County Food System Strategy with UN goals for urban communities and fleshing out actions within the strategy that can better support this vision.
- Identifying additional ideas, solutions, partnerships, and action plans that can be introduced or adopted to realize the overall objectives of a sustainable urban food system.
- Identifying ways and means of building the capacities and capabilities of Nairobi City County government and local stakeholders to carry on, extend and leverage on opportunities to achieve an inclusive and resilient urban food system while withstanding shocks such as COVID 19.
- Degree of stakeholder analysis in the Nairobi City County Food Systems Strategy including their needs and requirements for transforming the food systems.
- Scope of stakeholders' activities and their contribution towards a resilient and inclusive Nairobi urban food systems: synergies between county government and stakeholders.

Main challenges addressed include:

- Enhancing and strengthening the capacity of Nairobi City County to feed itself while engaging in sustainable production practices, improving peoples' livelihoods, and meeting the Sustainable Development Goals.
- Foster the formulation, implementation, monitoring and evaluation of strategies and policies including the Nairobi Food Systems Strategy to deliver sustainable urban food systems in the city.
- Shortening the supply chain of food by adopting technology and improving infrastructure for food systems transformation.
- Strengthening governance of food systems by taking stock of the food systems to identify key actors and areas of synergies in the food systems.
- Replanning urban areas to create open spaces for urban agriculture and kitchen gardening.
- Dealing with food waste especially in market centers and repurposing the waste to make organic fertilizer.
- Ensuring access to healthy, safe, and nutritious food especially for the urban poor living in settlements.





The key issues raised were:

- **Food systems governance:** “Governance is the production”. This was a popular axiom throughout the discourse thus emerging as a critical factor to consider when transforming food systems in the county. Despite Nairobi City contributing 60% of country’s Gross Domestic Product, it was ascertained that only 2-18 percent of food was produced within the county raising concerns on how Nairobi can feed a whopping 4.5 million residents. It was noted that food consumption within Nairobi City County is higher than its production capacity. Therefore, the county needs to dive deep into understanding the key players in the food value chain (production, transportation, processing, storage and distribution). Additionally, it is paramount to keep an eye on the interplay between production and infrastructure development from outside the city and within processing zones in the county to facilitate better storage services and swift distribution of food to consumers.
- **Policy and legal frameworks:** It is undoubted that programs and initiatives are mainly anchored on policy and legal frameworks. As such, achieving food and nutrition security in Nairobi City County will require the harmonization of Agriculture Bill and Street Vendors Bill of 2019 to aid in creating an enabling environment for urban food systems transformation. Furthermore, Nairobi City County Food Systems Strategy needs to be adapted to local conditions in Kenya so that it can particularly speak to the challenges and opportunities within Nairobi. It was noted that some bills mentioned in the strategy are not properly aligned with the strategy itself and thus reviewing the same is critical. Since the county government is mandated to protect consumers against unsafe food, the county should heighten consumer protection in the markets and enforce food safety standards.
- **Urban planning and zoning:** The county government needs to work closely with the urban planning department to consider interventions that will initiate replanning of the city with consideration to creating interlinkages between agriculture and other land uses. This would then create open spaces and facilitate access to public land for urban agriculture. Architectural city planners need to mainstream kitchen gardening when approving housing plans. Urban and peri-urban production are imperative when reducing negative externalities involved in transportation of goods from far distance. Regreening the city is also necessary for improving the overall health and to actualize this, the county needs to collaborate with Civil Society Organizations.
- **Inclusivity in sustainable urban food systems:** With food wastage on the rise, the County needs to involve low-income earners in repurposing waste as a way of diversifying their livelihoods e.g. by making of fertilizer from food waste. Public involvement is critical to addressing policies aimed at redressing fairness and justice on food access for the marginalized in Nairobi. To achieve the overall objectives of a sustainable urban food system, it is important to include consumers in the development of policies, strategies, and guidelines to capture their views and representation. Some farmers are innovative and the county needs to bring them on board when employing a bottom up approach to capacity building to help in dispensing knowledge and expertise with other farmers.
- **Capacity building:** Despite Nairobi City County offering extension service to farmers, field officers are experiencing challenges in adapting to the changing agriculture ecosystem due to limited agriculture and technology prowess. Nairobi City County and Ministry of Agriculture need to collaborate and conduct a targeted professional development of existing capacities on new concepts of climate smart agriculture. The county needs to look at the entirety of food systems, strengthening capacity on the supply and demand side of the food chain. Owing to the fact that professionals retire, the city should focus on including succession plans in hiring and capacity building to maintain a sustained supply of skilled agriculture workforce.



## Main Findings

- **Aligning the vision of Nairobi City County Food System Strategy with UN goals for urban communities and fleshing out actions within the strategy that can better support this vision**

The current food systems in the county are not delivering on sustainability outcomes. Although the strategy reflections to end hunger are prominent and many county bills put reference to sustainability, this does not happen in practice. As such, the County needs to review and position the bills accordingly. As sustainability in food systems is paramount, it is critical for Nairobi City County to strengthen issues of environmental sustainability in its strategies.

One of the key challenges for Nairobi is shortening the supply food chain. The county needs to domesticate SDG 12 on responsible consumption and production in its strategic plans to encourage urban and peri-urban agriculture production geared towards supporting urban production and reducing negative externalities involved in transportation of food from distant areas. With the recognition that initiatives and programs to spur sustainable urban food systems ought to be anchored in policy and law, the county needs to harmonize the Agriculture Bill and Street Vendors Bill of 2019 to aid in achieving food security in the city. The strategy is quite generic and does not speak to challenges and opportunities within Nairobi City County and therefore adapting the strategy to fit the local conditions within the city is critical when identifying areas of intervention.

- **Identifying additional ideas, solutions, partnerships and action plans that can be adopted or introduced to realize the overall objectives of a sustainable urban food system**

In supporting urban production, the county needs to initiate partnerships with urban planning department to have some areas zoned for urban agriculture. Additionally, the architectural city planners need to mainstream open spaces for urban farming and kitchen gardening. The current supply chain generates a lot of food waste and therefore the county should negotiate with Kenya Railways to leverage on the upcoming infrastructure so that a cold storage is provided within the rail system to prevent spoilage of fresh produce before reaching the markets.

Stakeholder participation in formulation of policy and legal frameworks is critical and serves as a component of good governance. The county needs to consider consumer representation in the development of policies, strategies, and guidelines. One of the key aspects critical to achieving sustainable urban food systems in Nairobi City County is the need to enhance and foster public private partnerships to deliver value within the entire food value chain. This would not only mainstream finance in the agriculture value chain but also empower small-scale farmers in production and dissemination of relevant technology as well as improving infrastructure in the supply chain to ensure a timely delivery of food to consumers. In management of food waste, the County needs to create linkages with farmers so that market waste is returned to the farms to feed livestock and generate natural fertilizers. With recognition that food governance is indispensable in the food value chain, the county needs to embrace a more inclusive approach to governance of food systems and to ensure challenges and opportunities in the systems are well captured and areas of interventions established.



- **Identifying ways and means of building the capacities and capabilities of Nairobi City County government and local stakeholders to carry on, extend and leverage on opportunities to achieve an inclusive and resilient urban food system while withstanding shocks such as COVID-19**

For easy identification of gaps, the Nairobi City County government needs to first map the existing urban capacities and key actors in its food systems and then chart a way forward while coordinating effectively with local actors. The county should move from policing to working towards implementation of sustainable outcomes to its urban food system. The county also needs to focus on implementing the existing policies and filling the capacity gaps to hasten the realization of sustainable urban food systems in the city. Despite efforts by the Nairobi City County to offer extension services to farmers, many of such officers are awakened by predicament of adapting to a revolutionary agriculture witnessed today. As a result, it is necessary for the Nairobi City County and the National government to collaborate and conduct a targeted professional development on new concepts of climate smart agriculture to its extension staff.

Since the County needs to look at the entirety of food systems, strengthening capacities on the supply and demand side of the food chain is important. Since professionals retire, the city needs to focus on including succession plans in hiring to maintain a sustained supply of skilled agriculture workforce. Moreover, the county should incentivize farmers to boost their productivity and cushion them against unprecedented shocks. Due to extreme vulnerabilities of weather and climatic shocks, it is necessary to put in place strategies to monitor and ensure contingency of early warning and control systems. Availability of food to residents is a key area that requires intervention and the county needs to enhance food aggregation within the county for local consumption.

- **Degree of stakeholder analysis in the Nairobi City County Food Systems Strategy including their needs and requirements for transforming the food systems**

Inclusivity is a key driver of food systems transformation. The county therefore needs to involve urban and peri-urban farmers in policy formulation and strategy implementation activities, while laying a conducive environment that encourages innovation and the development of capacities of actors to deliver on food and nutrition security. The current market infrastructure is in deplorable state and the county should enhance and strengthen multisector stakeholder partnerships to improve the state of the markets by setting up state-of-the-art facilities such as warehouses and cold rooms. Moreover, the county needs to strengthen processing and agro processing in the city by facilitating the setting up of micro and major agro processing facilities that provide a ready market for agricultural produce. This would motivate farmers to intensify their production efforts. Since financial institutions play a major role in transformation of food systems, the county should pursue a public private partnerships (PPP) economic model, as it will yield a direct investment that could aid in transforming Nairobi's urban food systems.

- **Scope of stakeholders activities and their contribution towards a resilient and inclusive Nairobi urban food systems: synergies between county government and stakeholders**

It is paramount to enhance food safety and affordability of nutritious food for everyone including the vulnerable populations living in the slum areas. As a result, the county government needs strengthen value chain linkages through financing trade and ensuring fresh produce reaches consumers.



The available food is too expensive for low-income earners and county should work to lower food pricing. The county should also focus on heightening monitoring systems and improve market data collection to protect consumers against unsafe food that is mostly consumed by the urban poor. To scale sustainability efforts, the county needs to support farmers who engage in sustainable farming practices. The stakeholders emphasized on the need for the national government to conduct training to county government on building resilient and inclusive Nairobi urban food systems. On recycling food waste, the county needs to establish a compost center in each market to transform the waste into organic fertilizer.

## National Dialogues

### Agriculture Data and Digital Transformation: Considerations in Policy & Implementation Frameworks

June 9, 2021

Report



On June 9, 104 participants from various stakeholder groups within the agriculture sector, particularly in the digital innovation and agricultural technologies space gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the United Nations Food Systems Summit.

Innovation has been identified as a cross cutting lever of change for the Food Systems Summit. Communities of interest were grouped around the following topics during the dialogue:

- Kenya Agriculture Digital Transformation Road Map
- Mapping Policies and Structures for Kenya's Preparedness for Digital Agriculture
- Use of GIS Data for County Spatial and Food Systems Planning
- Showcasing adoption of digital innovations to increase production, marketing and access to affordable, nutritious and safe food in Kenya
- Bridging the digital divide for access to information and services to make Food Systems Finance Accessible for Rural People, vulnerable communities and marginalized groups

The key issues raised were:



- **Open Data:** Data must be open and an open data platform could be a useful platform for providing a central way in which the fragmented data sources can be brought together so that the consumers of the data can access them through a single source.. With many organizations collecting data, there is lack of consistency in the kind of data that is collected, as well as inconsistent methodologies. There is need for standardization of data and data sets so that these data sets can make sense and speak to each other. This can be resolved through a uniform national approach.
- **Data Governance:** Data governance is critical to addressing the issues of data collection, aggregation, access, cost implications, capacity building among other challenges. There is need for proper policy and legal framework to encourage data use and data collection and the use for decision making.
- **Financing:** Digital infrastructure is capital-intensive and requires public private partnership to share the costs involved.
- **Partnerships and collaborations:** There is need to embrace partnerships in order to scale and sustain digital solutions.
- **Youth:** Young people are technological agile and to attract them to actively participate in agricultural activities, deployment of digital solutions in agriculture is critical. The transformation of agriculture through digitization will contribute to more resilient and sustainable food systems as the involvement of young people will ensure we have a bigger workforce in the agriculture sector.

## Main Findings

- **Kenya Agriculture Digital Transformation Road Map**

Agriculture digital solutions are key to the realization of many SGDs (zero hunger, Zero poverty, Gender Equality etc). Digital solutions also have a central role in meeting different African social, political, and economic goals such as the Agenda 2063. The future of agriculture is pegged on digital systems. From improved farm produce, better environment ecosystems to better health for all, digital solutions can play a crucial role in the realization of food and nutritional security. Digital innovations create a huge opportunity to eradicate poverty in Kenya and Africa. Digital and technological innovations should be embraced to realize great wins for the country. This will boost economic incomes for farmers, provide better and real time markets, generate employment for youth and help resolve the need of over importing foodstuff.

With the 21st century technological advancements, other risks can come up. Issues such as deforestation, and depleting land or natural resources require digital interventions which can help protect and prevent further damage to these resources. To meet the challenges of climate change, digital innovations are necessary and more so, will boost family household incomes, create employment for youth and appropriate better land use. So far GSMA has mapped out 33 Million small holder farmers on its pilot mapping project, which is 1/3rd of the target, and is set to meet its goal by 2030.





Ease of capturing data should be a priority that is promoted by all stakeholders across the value chain. This will help developers like Microsoft partners to provide the right data from farmers to markets. To engage youth in agriculture, innovation solutions are the key to their inclusion. There is also need for training SMEs, to include digital solutions in their business operations.

Privacy and data protection is key so that we do not expose farmers and consumers to vulnerable online predators. There is also need for transparency in the research being collected and objectives of output well communicated. This will give such operations integrity and openness to sharing from farmers to end consumers.

We should prioritize digital solutions such as IOT, AI and renewable energy solutions which will make agriculture and its practice modern and in line with other industries such as retail. There is need for developers to make digital solutions easy to use and accessible, just as social media has been able to achieve.

One stop solutions for farmers is what will get them into the habit of using digital solutions. Data driven solutions will remove some elements of human interventions which are bottlenecks to advance productivity and food-systems. Digital transformation will boost processes like traceability, soil moisture and environment conservation.

Reviewing and clearly defining the role of the different levels of government, government agencies and ministerial departments in relation to data collection, handling and storage is required. To create long term impact, there is a need to ensure sustainability of efforts to incorporate ICT and digital capabilities in the agriculture sector in Kenya. Unfortunately, most of the efforts have been project based which end after the funding cycle of the program. Some of the efforts the Ministry of agriculture is undertaking to transform the sector digitally include;

- The Kenya Agriculture Markets Information System which provides farmers with information on the prices of various commodities.



- The E-voucher systems that enables farmers buy pre-prepared input packages of seeds, equipment and consumables from selected suppliers.
- E-extension
- Using GIS to map agricultural land, working with county government to create spatial land plans that can be used to safeguard productive agricultural land and the creation of suitability maps to inform farmers on the best value chains to engage in.
- Working with FAO, the Ministry of Lands and other partners to digitize land records.
- Creation of soil maps together with CropNuts to understand soil fertility issues around the country.
- Shifting the ministry officials towards digital orientation and enabling a cultural shift among them to enable a digital transition.

Data is critical in structuring evidence-based policy intervention. There is robust data held in silos by various government and research institutions. It is essential to consolidate, digitize and centralize this data for the benefit of farmers and other key players. Having a centralized data centre will foster data sharing and provide a reliable single source of truth. The roles of different levels of government, government agencies and ministerial departments should be clearly defined and/or amalgamated to avoid duplication of data. Moreover, there needs to be harmonisation of agricultural data from different sources – Statistics department at MOALF, Kenya Bureau of Statistics (KBS), AFA. The data unit at MOALF should be strengthened and the government should explore the use of robotic digital solutions to improve the quality of data.

Development of a simple application such as the Electronic Fisheries Management Information System (EFMIS) where traders can collect commodity prices to inform farmers on market dynamics is crucial. Marine spatial planning is also useful, as it will inform the exploitation of the blue economy.

Due to the fast-paced technology and interdisciplinary nature of the agriculture sector, universities and the Kenya School of Agriculture should relook at their curriculum and retool the sector with requisite technology to produce competent and skilled agriculture experts with capabilities in data and technology. There needs to be a shift to have agriculture specialists being digitally capable rather than the digital specialists getting into the agriculture sector.

It is also crucial to Integrate agriculture management information systems within food systems to provide extension services, monitoring and evaluation, capacity building etc.

It is necessary to create an enabling environment (people and infrastructure) for a federated data ecosystem where policies are enacted to govern standards and protocols for responsible sharing and use of data.

- **Mapping Policies and Structures for Kenya's Preparedness for Digital Agriculture**

Kenya's digital landscape reveals the enormous potential the country has and can leverage on to transform agriculture through digitization. The country has a very young and technological agile population that is very good at adapting to new skills. There is also very high internet connectivity and the use of mobile phones that is driving innovation with 46 million mobile phone subscriptions in 2018 and



42 million active internet subscriptions. There are mobile phone accessible services across the country including mobile money services which has had a huge impact particularly for smallholder farmers.

Mobile money services have supported many rural communities enabling them to improve their farming methods, reduce their costs, e.g. they are able to have direct contact with input suppliers, output suppliers and this results in reduced costs and also marks the beginning of evolving from mere subsistence farmers to more entrepreneurial farming.

The government's national broadband strategy envisions the transformation of Kenya into a globally competitive knowledge-based society enabled by affordable digital to extend broadband from 9000 miles to 50000 miles covering every part of the country. The strategy also has a focus on agricultural systems, food and nutrition security and therefore aligns with the strategy of the Ministry of Agriculture in improving supply chain efficiencies, improving verification of quality, and being able to apply technologies such as the use of AI in

To leverage on these opportunities and ensure that the country realizes the transformation of agriculture through digitization, there is need to overcome some challenges that would deter or slow down progress. Data governance is critical. There is a range of legislation in place that can support the transformation of agriculture through digitization but there is lack of sufficient regulations to govern this strategy. In Kenya, Article 35 of the Constitution governs open data establishes a regulatory framework. The Access to Information Act operationalizes this framework. Data governance is critical to address the issues of data collection, aggregation, access, cost implications, capacity building among other challenges. There is need for proper policy and legal framework to encourage data use and data collection and the use for decision making.

It is important to build a culture and appetite for data among farmers. It is important to promote a lot of documentation. Many farmers across the country do not document their practices, procedures, products, and a lot of what they do. In terms of generating an appetite for data, we need to encourage a lot of documentation across the country so that the use of data becomes relevant to their work and what they do. We can then create more reliance and then all these data collection and big data will become more useful for farmers.

There are multiple stakeholders who collect and store agricultural data including public institutions like the Ministry of Agriculture, private sector players, and development partners. Data is all over the place and there is no one place where you can get all these data. It is not clear how useful this data is if it is left in silos with these organizations. A public platform would be the best, and KALRO would be the most appropriate institution to host such as a platform as the leading research institution in agriculture and livestock in the country.

With many organizations collecting data, there is also lack of consistency in the kind of data that is collected, as well as inconsistent methodologies. There is need for standardization of data and data sets so that these data sets can make sense and speak to each other. This can be resolved through a uniform national approach. With everybody collecting data separately, it is difficult for individuals who need to access that data to make sense of it because they are in different formats. The open data platform could be a useful platform to provide a central way in which the fragmented data sources can be brought together so that the consumers of the data can access them through a single source.



Despite the large number of internet access in Kenya, cost is still an obstacle for most rural communities where most smallscale farmers are based therefore limiting their ability to enjoy the maximum services they can get through internet connectivity. This could be a stumbling block towards achieving complete digitization of the agriculture sector. The data has to be open i.e. data that can be freely used.

To address the barriers of access, the infrastructure, digital skills and the cost of data and the cost of devices is an important aspect to focus on moving forward because if we are encouraging people to use technology then those technologies must become accessible. We must also democratize data and an open data portal is a good starting point.

Kenya open data platform would be the best for ag data storage. Open ag data makes it easily accessible and makes it possible for users including smallholder farmers and tech service providers to use that data to provide their services and give out information that becomes very useful in supporting farmers. A public platform for open data is crucial because the cost of accessing data is prohibitive for most smallholder farmers. There is need for agriculture data governance protocols. The absence of a regulatory framework for the collection, sharing and use of agriculture data leads to a range of challenges currently facing farmers who consider the option of smart farming technology.

The Kenya Agricultural and Livestock Research Organization (KALRO) believes setting up a data hub can play a key role as a central facilitator for access, sharing and utilization of data and data products and services that can improve the livelihoods of farmers and performance. KALRO has four main objectives – how do aggregate and manage the data, how to promote data sharing and uses, how to inspire innovation and action around data, and how to improve capacity and practises around data.

KALRO's approach asks some basic questions – how do we apply tech and data to spur local innovation? How do we integrate ICT into research? How do you digitize? How do you build the capacity of farmers, stakeholders and KALRO and then how do we scale? KALRO came up with a strategy to build use cases which can scale and have impact. A number of use cases around mobile apps, technologies, agriculture intelligence – to provide ag intelligence using data – have been developed.

KALRO's game changing big data platform is building a data ecosystem to harvest all the data. The platform includes over 1 million farmer data, agricultural datasets, remote sensing data, geospatial data sets, and climatic/weather datasets. Market data, weather data, field station agricultural data are all streamed in real-time. KALRO does a lot of modelling and data mining analytics and comes up with advisory in terms of trends, and markets which now can advice policy, advise research so that it becomes demand driven.

Another good example that can benefit the agriculture sector is the Civil Aviation Authority which has come up with very good regulations that provide clarity on the use of drones in the country. This could be very useful in helping regulate the use of drones in the collection of agricultural data across the country especially in remote areas where there is limited infrastructure.



- **Use of GIS Data for County Spatial and Food Systems Planning**

Data is critical for efficient and effective planning by county governments. The use of digital solutions such as early warning management systems can help county governments adequately prepare and cushion farmers against the impacts of unpredictable climate conditions. Other capabilities of these agricultural technologies and innovations include crop spraying, crop sensing and crop gap analysis. In the case of Vihiga County, the County Development Information System (CDIS) has been beneficial to government as it has helped interlink departmental data and information to help in effective planning and decision making as well as monitoring.

Collectively, all initiatives/interventions have enabled the county to assess and monitor their economic, social and environmental impacts as well as contribute to the country's Sustainable Development Goals key indicators framework. The information gathered and analysed is then used to support development of county plans and development interventions that subsequently feed into the County Integrated Development Plan (CIDP) and other plans.

Through digitizing the farms the county has been able to map and plan; Seedling distribution to farmers (20,000 coffee seedlings, 20,000 avocado seedlings, and 30,000 tea seedlings); and distributed fertilizer and certified maize seeds to 34,000 farmers.

There are a number of organizations that are willing to partner. These include the Kenya Space Agency set up in 2018, which is open to partner with county governments and private sector in providing land information systems. Drone service provider Astral Aerial Solutions are working towards partnerships that will give better solutions to governments and farmers alike.

For county governments to better adopt these systems for food systems planning, there is need for standardised systems that can be integrated across. Financial investment is required not only from government but private sector. There is also need for training and capacity development for farmers to embrace digitisation. Anything new is challenged thus there is need to create awareness and educate on the use of data being received or land being mapped.

There is need to give more ground data to system developers to be able to present interventions that are real time. Land systems administration and mapping is key for planning the best use of land and allocate required solutions to it. Without this, farmers are blind to the optimum productivity of their land. The systems developed can be integrated to revenue systems that can create a loop from pre- production to market. This ensures traceability across the value chain.

- **Showcasing adoption of digital innovations to increase production, marketing and access to affordable, nutritious and safe food in Kenya**

Harnessed collaboration between private sector and government will drive scale and sustainability in access to digital solutions for the small holder farmer. There is need to promote agriculture among the youth and digital solutions are an avenue for ensuring youth inclusivity. There is currently an intergenerational crisis where an average farmer in Kenya is 60 years old while an average Kenyan is 18 years old. Several initiatives are currently in place and are working with the youth to engage them in agricultural activities particularly those employing digital innovations and technologies. These initiatives have a gone a long way into solving the youth unemployment challenge in the country. There is need to invest in such initiatives to ensure scale and sustainability.





Digital solutions have multiple capabilities including providing market information to farmers; access to agribusiness information on delivery of right inputs and sustainable agribusiness opportunities to power agriculture transformation; and improved extension service delivery in Kenya. Locally available and accessible digital solutions are necessary. The availability of data and dissemination of information to farmers locally is key for improved agricultural practises. Technologies that are bundling services help with scale and sustainability for both crop and livestock. There is need to create a reliable network that can help us bridge the gap and offer sustainable solutions to farmers by creating sustainable supply chains. Sustainability challenge continues to be a major issue for digital solutions provision to farmers. Currently, there is lack of enough Investment on public sector extension services to farmers. It is critical that village-based extension advisors working with the communities are deployed to help bridge the data gap for farmers.

Kuza Biashara is revolutionizing the resilience of small holder famers via youth led digital exchange networks to improve food security within rural communities, creating jobs and local enterprises. Youth are working as advisors on good agriculture practises. Kuza Biashara is also creating microlearning and micro mentoring for farmers who cannot access internet and smart phones. The organization is helping youth in rural areas through incubators which help young people have sustainable enterprises.

Hello Tractor is another initiative that is solving the mechanization problem by making locally designed farm tools for farmers in Sub-Saharan Africa. Trutrade, is solving the linkage to the market problem using the TruTrade app and WhatsApp and pay farmers directly via mobile money. There is creation of awareness for improved inputs and good agricultural practises. M-commerce makes it possible to order inputs online and access to improved inputs for farmers by Zydipus together with the VBA model by administratively growing extension. Through Farmers Pride's Digishop, agriculture solutions, especially inputs and extension services are being delivered. Digishop has enabled information access on input price, availability, and quality which plays a role in the adoption of improved inputs by farmers.

- **Bridging the digital divide for access to information and services to make Food Systems Finance Accessible for Rural People, vulnerable communities and marginalized groups**

E-wallet and E-voucher systems are essential in enabling farmers accessibility to seed and other farm inputs thus bridging digital divide across agriculture value chains. Moreover, they have extra benefits as they also help in making payments more transparent and real time therefore also bridging the gender pay gaps and divides. The Rural space should be the first mile to support and not the last mile. The rollout and use of mobile enabled e-voucher system has played a critical role to improve livelihoods of rural farmers. Most rural farmers have now embraced digital transactions and reduced physical banking. Use of USSD has consequently improved the convenience of farmer's to access input financing while also enjoying a seamless mobile money transfer services.

Majority of women, youth and vulnerable groups in rural areas do not participate in the digital space. An eminent gender pay gap exist especially in commercial farms where female workers are paid lower compared their male co-workers. Such skewed payments make women more vulnerable, and they are not able to participate equally in the digital space as they barely afford to buy mobile phones. It is therefore imperative to create equal opportunities in the digital world by supporting farmers to access





credit through mobile applications. Embracing big data analytics to inform decisions is becoming a norm and therefore we should work on taking technology to farmers and not taking farmers to the technology.

Penetration of mobile technology in Kenya stands at 109 %, the highest in Africa. However, affordability of mobile phones and accessibility of network and markets is still a big challenge. With over 75% of Kenyans populace relying on agriculture, there is a need to embrace public private partnerships to provide long-term solutions to the aforementioned challenges especially in the breadbasket areas. Digital infrastructure is capital-intensive and requires public private partnership to share the costs involved.

Credit scoring tools are scarce. This is evidenced by the low consumption of agriculture related lending. Credit scoring tools are important in de-risking lenders. Aggregation of this data is therefore critical when availing funds to farmers. Moreover, loans should also be aligned with respect to cropping seasons.

Data protection and privacy is a key intervention to safeguard farmers against unscrupulous dealers. Digital and financial literacy should be conducted to rural farmers in order to instil knowledge on the dynamic technological space. Farmers should group themselves in cooperatives and this will easily attract investment and technology transfer.



# Creating an Enabling Environment for Sustainable Food Systems through Policy and Legal Frameworks

## *A National Dialogue for Policymakers*

July 21, 2021

### REPORT

#### Overview

On July 21, 234 national and county government policymakers as well as other stakeholders within the sector gathered in a virtual Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

A streamlined, well-coordinated and harmonised policy and regulatory environment, at the national, regional, and county levels, is critical to realizing the vision for a transformed food system in Kenya. During the regional sub-national dialogues held in the country between May and June 2021 as part of the preparations for the Food Systems Summit, several policy issues were raised.

#### Policy issues raised included:

- The need for policies that support climate smart solutions, reduce post-harvest losses, encourage, and spur value addition and agroprocessing.
- Ensuring inclusivity in policy development formulation by engaging communities on the ground at the grassroots, and there is multistakeholder participation, including that of marginalized populations such as People Living with Disabilities, Women and Youth.
- Protection of agricultural land must be anchored in a strengthened policy environment and policy strategies are also required to address transboundary issues such as livestock diseases.

The discussions during the national policymakers' dialogue focused on these policy issues and drew solutions and commitments to strengthen the policy and regulatory environment for food systems transformation in Kenya.

#### Communities of interest were grouped around the following six areas during the dialogue:

- A. Creating an enabling environment for sustainable food systems.
- B. Policy coherence and harmonization at the national and county level.
- C. Strengthening land use policies.
- D. Designing inclusive policies for the involvement of the children, youth, women and PWDs in food systems.
- E. Policy strategies for sustainable food systems.
- F. Policy formulation and enactment of laws that affect the agricultural sector: the role of the legislature.

#### Key Findings

- A. Creating an enabling environment for sustainable food systems



Sustainable food systems and the transformation of food systems in Kenya require an enabling environment where all actors work together in cohesion. Each actor has a role to play. The national and county governments, development partners, civil society, and communities on the ground, including vulnerable populations, such as women, youth and people living with disabilities, each have a role to play. Partnerships will create vehicles for the next decade, and all actors must commit to taking forward all partnerships.

Food systems transformation is central to achieving the 2030 Agenda, particularly SDG 2 on achieving Zero Hunger, and underpin advances in climate change and natural resources management, health, education, and other sectors critical for economic development and poverty reduction. While strategies and action in these areas already exist, they are often siloed within individual sectors and ministries. It is critical to start identifying and implementing collective pathways towards more sustainable food systems. All actors need to agree on common framing for a future that is better at meeting the food-related needs of our people both in terms of quantity and quality, and in terms of the environmental realities we are facing. To achieve this, inclusivity is critical. Beyond the Food Systems Summit in September, action must continue, and commitments must be delivered. Political leadership and continued cross-sectoral engagement from all actors to achieve the ambitious and transformative agenda that is emerging from the Summit is necessary.

### **1. Kenya's Agriculture Reform Agenda**

Policy reforms play a big role in creating an enabling environment. For Kenya, policy reforms began with the enactment of the 2010 constitution which provides for devolution and has allowed counties to be the drivers of implementing agricultural initiatives.

Under the Big 4 Agenda, the objectives of the food security and nutrition pillar are to enhance large scale food production, drive smallholder productivity, and to reduce the cost of food to improve accessibility to all. The government's efforts to make food cheap and available to all Kenyans are bearing fruit with various initiatives aimed at supporting farming, livestock rearing, and fish production initiated. More farmers are accessing subsidized inputs to lower their cost of production and boost earnings.

#### **By 2022, the aspirations under the Big 4 Agenda include:**

- 34% increase in the average daily income of farmers.
- 27% reduction in malnutrition among children under 5 years of age.
- Create 1,000 Agro-processing SMEs & 600,000 new jobs.
- 50% reduction in the number of food insecure Kenyans.
- 48% increase in Agriculture sector contribution to GDP.
- 47% reduction in the cost of food as a percentage of income.

Beyond 2022, the Agricultural Sector Growth and Transformation Strategy (ASGTS), 2019-2029, has identified nine bold and ambitious flagships that will help transform the agriculture sector in Kenya and make the country a regional powerhouse, drive 100% food and nutrition security and ensure food is affordable especially for the most in need.

A proposed agricultural policy that covers all elements of the food systems including fisheries, cooperatives, farmer organizations, livestock, research, agro-processing etc. that has been formulated. The policy document has already been ratified by cabinet and is currently in first reading stage at the National Assembly. The agriculture policy will help to catalyze more reforms within the agriculture sector.



The country's input reform strategy has seen major progress on reforms in the delivery of inputs, credit and markets through the e-voucher and warehouse receipts systems. Some policy reforms have garnered impressive results. For example, the E-subsidy program is in line to reach 1.5 million farmers. To date, 200,000 farmers have already been registered to the program. The Warehouse receipt system has already supported 30,000 farmers. As a result of this policy change in the fertilizer sector, investments in the fertilizer industry have risen to approximately 350 million in the last 2 years.

Further, through the digitization roadmap, several government services have been digitized therefore laying the foundation of the digitization of the agricultural value chain. On food safety, there are elaborate plans to formulate a food safety policy while working closely with the Ministry of Health, the private sector, and other crucial stakeholders. There are also several policies within the pipeline that relate to the crops, livestock and fisheries subsectors. It is anticipated that all policy reforms will be made before August 2022.

Further, Kenya's Vision 2030 aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment. Under the economic and macro pillar, agriculture and livestock is one of the six priority sectors that promise to raise the country's GDP by 10%.

**Five priority action areas in agriculture were identified and commitments made including:**

- **ASAL Development** – Irrigation: Increase irrigated land by million acres. 404,800 hectares will be put under irrigation by 2017 especially in the Arid and Semi-Arid area in Turkana and Tana Delta.
- **Fisheries Development and Management:** Increase fish production from capture and culture fisheries; reduce fish post-harvest losses per annum and increase exports of marine products by expanding the area of fish farming from the current high potential areas to Arid and Semi-Arid Lands (ASALs) and developing fisheries related infrastructure and strengthening of monitoring, control and surveillance systems.
- **Establishment of Disease-Free Zones (DFZ):** Increase volume of beef exports and other animal products by establishing four DFZ to facilitate access of Kenyan meat, leather and leather products to local, regional and international markets. The first zone will be established at the Coast, covering the counties of Kwale, Mombasa, Kilifi, Tana River, Lamu and parts of Taita-Taveta outside the Tsavo National Park. The other three zones will be established in the Laikipia-Isiolo complex and Uasin Gishu and Garissa Counties.
- **Fertilizer Cost Reduction Strategy:** Increase use of fertilizer by smallholder farmers to boost yield/output by improving access and affordability of fertilizer through establishing a local fertilizer plant and working with investors for blending.
- **Implementation of the Consolidated Agricultural Reform Legislations:** preparation of necessary regulations to actualize implementation of the Acts and setting up institutions such as the Agriculture, Fisheries and Food Authority (AFFA); and the Kenya Agricultural Research Organization (KARO) proposed in the new Acts. Additionally, efforts will be made to fast track passing of the Livestock and Fisheries Bills in Parliament.

**As a signatory to the Comprehensive Africa Development Programme (CAADP) and the Malabo Declaration, Kenya has committed to the following seven (7) thematic areas:**

- Continue pursuing the values and principles of the CAADP process.
- Enhance public and private investment in agriculture; and to ensure its efficiency and effectiveness.



- End hunger in Africa by 2025 by doubling current agricultural productivity levels and halving post-harvest losses.
- Halve poverty by 2025 through inclusive growth.
- Triple intra-African trade in agricultural commodities and services by 2025.
- Enhance resilience of livelihoods and production systems to climate variability and related risks.
- Mutual Accountability for Actions and Results.

At the inaugural Biennial Review in 2017, Kenya was on track on three out of seven thematic areas, towards meeting the CAADP/ Malabo targets in 2025. In 2019, Kenya had only one out of the seven commitments on track, a decline from the 2017 performance. The 2021 Biennial Reporting process is being concluded and the country hopes to perform better than it did in 2017 and 2019. The challenge experienced in the Biennial Reporting is not so much a lack of performance, but more unavailability of data and information which means better coordination is required in the sector moving forward.

Further, Kenya is working with the other members of the East African Community to increase food trade opportunities that will take advantage of the large market in the region, over 170 million people and soon 260 million when the DRC joins the EAC.

The EAC region has harmonized policies, protocols and systems and has various instruments in place to facilitate this including:

- **EAC Agriculture and Rural Development Strategy 2005-2030.**
- **EAC Food & Nutrition Security Strategy and Food Security Action Plan.**
- **EAC Regional Strategy and Action plan on Aflatoxin Prevention and Control.**
- **EAC Agricultural Inputs System: seeds, fertilizer, disease & pest management.**

**To further strengthen the policy environment, the region is working on:**

- SPS Protocol and CAADP Programme.
- Harmonization, Adaption & Implementation Standards.
- Digital Systems for Agricultural Trade.
- Shared responsibilities to facilitate food trade: EAC Common External Tariff (CET); EAC Single Customs Territory (SCT); Simplified Trade Regime (STR); One stop border post.
- NTBs – the EAC has established a mechanism for identification, tracking and elimination of NTBs; NTBs legislation and regulations already enacted by the East African Legislative Assembly.
- Handling emerging issues: COVID 19.

More commitments are still required to adopt and implement harmonized EAC policies, standards and systems for sustainable integration. Regional integration should be deepened to harness greater opportunities. EAC partner states should leverage synergies around complementing each other's comparative advantage and strength. Political good will and support of both regional and continental commitments is crucial. More partnerships towards investments in agriculture are required and private sector involvement is critical for sustainable investment and development.

## **2. The role of different actors in strengthening policy reforms**

To improve the policy formulation process, it is essential to coordinate with the counties as the implementation of agricultural activities is mainly within their docket. Stakeholder consultation and public participation is crucial within the policy formulation and implementation process.



The UN in Kenya is playing its part and is currently developing the new UN Cooperation Framework in Kenya for the next five years. The commitments and strategies developed through the dialogue process in the country will be incorporated into the work of the UN agencies so that the UN supports the Government and communities of Kenya in achieving food systems transformation, ensuring that no one is left behind. The learnings from these FSS Dialogues should be taken forward and turned into concrete pipeline of SDG Partnerships, Investments and Financing to sustain real impacts on the ground into the future also keeping in mind the evolving context in Kenya on climate change and the transition from SDG Funding to Financing.

The Agriculture Sector Network (ASNET) was formed to look at processes across the value chain and has been a focal point to members of the association serving across the country. A key focus for the network is on relation to creating an enabling environment through policy and legal frameworks is to provide governance training to its members. This is critical in strengthening the network's structure and processes. Through its partners, GIZ, AGRA, and RTI, ASNET has helped mobilize training on governance and policy training and is committed to doing more. Through its work with the Government of Kenya, during the height of Covid-19 pandemic restrictions, ASNET was able to work with truck drivers across the border points and helped reduce post-harvest losses. Through its work with Council of Governors, the network worked with farmer networks to articulate the voice of farmers and associations to enhance productivity in Kenya. ASNET has a Technical Agriculture Group that comprises of private, public, and government partners who are helping in developing and implementing their mandate.

Since food systems transformation is a local as well as a global challenge, there is a need for multilateralism in the consideration of policy reforms. As such, the Ministry of Foreign Affairs is quite involved within the process. Through its multilateral stations, the Ministry of foreign affairs is positioning Kenya as a thought leader in the food systems agenda.

### **3. Addressing barriers to policy reforms**

While there have been impressive gains in food production globally, 1 billion people still do not have access to adequate and nutritious food across the globe. Through policy reforms, there is a need to consider a few mismatches within food systems including the mismatch between population and agricultural growth, the mismatch between food production and food access as there is enough food to feed the global population, mismatch between food prices and consumer purchasing power, and the mismatch of information and knowledge in local and global markets. Policy reforms should address the mismatch between population growth and agricultural growth. By 2030, Kenya will have a population of almost 60 million. Agricultural growth should follow the trajectory of growth.

When negotiating treaties and agreements, the food and agriculture sectors (especially in terms of comparative advantage in food production) is one of the major considerations that is made. An example is the comparative advantage in food production enjoyed by Tanzania and Uganda compared to Kenya. As such, treaties and agreements need to reflect this. It is also crucial to have the right information to inform the formulation of these treaties.

There is a need for better policy coherence on the conflicting considerations in the aspects of politics, policy and practice. At most times, the three aspects are not aligned. To sustain policy reforms, there is a need to have political will. In Kenya, the recognition of the importance of agriculture through the Big 4 Agenda has been a driving force to enable progress in policy reforms. There needs to be coordination in the food systems area with food being the center for development. Policies should therefore bring alignment and better coordination of the food and agriculture sectors.





Further policy reforms should be directed towards solving the pre-production, on-farm as well as postproduction challenges. All these facets need to come into alignment. There is also a need for better alignment in skills.

The policy reform agenda should also be conscious of global and regional disruptors including climate change, pandemics, and plagues as well as political crises and civil strife. These disruptors are negating the efforts towards the transformation of food systems, the achievement of zero hunger and the sustainable development goals in general. Climate change is a major factor that is affecting agricultural production. Policies should be directed towards ensuring the ubiquity of drought resistant seeds as well as resilient technologies. There is need to look at efficient irrigation policies in Kenya. More policies that address innovative land leasing, crop and livestock, women and youth, crop / pest control, nutrition and climate smart policies which are key in these times are required.

To be more competitive, there needs to be availability of high-quality seeds that are made accessible to small holder farmers. To exemplify this, some seed varieties used in Kenya now were used in the United States in the 1930s. As such, we cannot be competitive in food production.

With the youth bulge in Kenya and the region, there needs to be policy measures that enable a substitution effect of generations in the agriculture sector. Policy reforms and measures should be directed towards enabling the youth to access the critical tools and resources that they require to be productive within the agriculture space including access to local and international markets as well as improving access to finance. While digital technologies are useful in attracting youth into the agriculture sector and to bring efficiency within agricultural value chains, the youth are having difficulty in accessing these technologies. Moreover, their access is inhibited by taxes such as the digital tax as well due to the expensive nature of internet. There is need to build the capacity of young people on multiple fronts to ensure that they have the right information, knowledge, and skills to be productive within the agriculture and food systems space.

To create an enabling environment through policy and legislation, there also needs to be a relook at the time it takes to formulate policies in Kenya. Currently, it averagely takes between 5-10 years to pass a policy. While noting that this is long, efforts should be made to help drive micro-reforms such that policies can be made within 2-3 years.

As agriculture is a devolved function, there is need to strengthen the Joint Agriculture Sector Consultation and Cooperation Mechanism (JASCOM) and the County Agricultural Sector Coordination Mechanism (CASCOM) frameworks. Collaborative efforts are required to build resilient ecosystems in Kenya. Each food system is dynamic and there is need for continuous dialogue. It is also important to improve mechanisms for funding to ensure counties implement agriculture initiatives.

## **B. Policy coherence and harmonization at the national and county level**

Harmonizing policy at both the national and county levels is a complex undertaking. There is a long way to go but progress is being made. Harmonization is critical as the lack of it affects implementation modalities and duplication of roles. Food systems incoherency is seen and evident where there is no synergy in policy. Intergovernmental sectors have no framework for working in synergy thus end up working in silos.



Devolution has not been implemented as fast as was envisioned. According to the 2010 constitution, health functions have been devolved 98% while agriculture 95%. Unfortunately, policies give most control to the national government and parliament. This has caused a lot of conflict between the national government and county governments on arising policy issues. Stagnation of pending bills such as Dairy & Fisheries, Nuts and Oil crops, Tea Act, Coffee Act, Pyrethrum bills, commodity bills are some of the many pending bills affected by the conflict between the two levels of government.

There are many complex issues in areas such as Tana River County, not only across counties but with neighboring Tanzania, where a lot of food is coming into the country. It is critical to shield farmers from unfair competition. A competitive framework policy is required to protect farmers who work in hardship areas including support in form of subsidies or guaranteed buy back from the government.

Most farmers don't know anything about policies or which ones protect them. There is need to have public participation from the farm upwards for farmers to have an understanding and contribute to these policies and legal frameworks. Additionally, there are challenges with extension services provision due to budgetary issues in counties. Whereas other counties rely on private sector or donor partners to fund such, for counties that solely rely on county extension services, they are affected by the conflict between the county and national government.

To achieve coherence, there is need to break the silos and create synergies and tradeoffs in policy areas. JASCOM and CASCOC must be strengthened and guidelines for dispute resolution developed. It is also important to recognize synergies that are needed in policy e.g., devolution sector working groups. It is necessary to enhance research and development on what's working and what's favorable for the locals. Examples include tax cuts, research hubs, innovation centers, demo farms, etc.

The government is working to promote local interventions that support locals and shifting towards looking at national subsidies (e-vouchers) that seeks to increase small scale farmers. Public support is required to launch some of the initiatives that government is promoting, for example, a fish processing initiative in the LREB where there is no incentive from locals to use the facility. Its existence is not well known or accepted.

The Joint Agriculture Sector Consultation and Cooperation Mechanism (JASCOM) has been formed to address these issues and is helping in many areas including dispute resolution. JASCOM should be strengthened, meet more frequently and given more authorizing powers to act. There is need to give control to counties as they have firsthand information and implementation powers on the ground where farming happens. The national government should give guidance and let counties carry out implementation activities.

## **C. Strengthening land use policies**

### **1. Leveraging ICT and Innovation for geospatial planning and development**

By leveraging on digital technologies, policymakers can effectively support the delivery of the food and improve food supply systems in Kenya. Geospatial information provides a unique input to the government in its policy preparation, monitoring and evaluation. This data along with digital information and industry innovations play a large role in promoting national stewardship, enabling faster, more accurate and trustworthy information to be made available to decision makers to inform decisions, monitor progress, and assess the impact of various interventions.



The youth are keen on using technology to farm and want to do farming based on facts and figures, i.e., precision farming where they can plant at the right, plant the right seed and in the right environment. This can only be facilitated through digital transformation. Digital transformation has also been instrumental in democratizing geospatial information making the technology available to the individual by way of location enabled devices. With an increasingly interconnected world, geospatial information has become integrated into everyday life.

The effects of climate change have also become a defining issue of our time necessitating the need for an effective and accurate use of geospatial data. Governments continue to remain highly relevant in the geospatial industry by providing high quality, reliable, trusted, and up to date geospatial information for a wide range of application from national resilience to the effective management of property and land use. The 2030 agenda recognizes the importance of geospatial information for sustainable development, monitoring and accountability and also highlights the need for timely and reliable information to build an accountable actions and evidence-based decision. Specifically, SDGs 1, 2, 3, 6, 11, and 13 can greatly benefit from innovation around geospatial information.

Increased sources of data improve the accuracy of data and spatial information which in turn enable accurate or near real time data processing for applications demanding automation and automated processes. Systems interoperability encourages interoperability among stakeholders, enhances cooperation and information exchange between government agencies and partners and will also advance the accuracy of geospatial information and promote the use of data driven decision making mechanism to improve service delivery.

There is need to review existing policy and regulatory framework to encourage greater collaboration and condition of ICT enabled innovation by bridging stakeholder togetherness to create service and reinvent ways of outreaching. Interventions such as the Data Protection Act 2019, Kenya Space Policy and the ongoing National Addressing System of Kenya will help in improving the frameworks for the use of geospatial data.

Challenges in geospatial planning include limited capabilities including lack of human and technical capacity, limited financial resources, data protection and cyber security. As we increase connectivity, concerns about data privacy will require a balance between innovation and consumer protection. Kenya is one of the few countries in Africa with a substantive data protection law, the Data Protection Act 2019.

Satellite and geospatial systems have the capacity to reduce implementation costs and streamline monitoring and support data driven decision making, e.g., the GIS Base Sampling Frame that the Regional Centre for Mapping of Resources for Development (RCMRD) has been implementing with the Ministry of Agriculture has supported the scaling of the Kenya Crop Insurance and resulted in a 70% cost reduction. There are adequate policies but there is need for coherence to address the mismatch in the whole implementation ecosystem between the policies, politics, and practice. There is also need for holistic, inclusive and recognitive strategies to support policy actualization. Even where there are policies, there is ambiguity and lack of clarity on implementation modalities especially when these agricultural policies are cross sectoral, e.g., the achievement of some of the targets in the ASTGS require some collaboration between the agriculture ministry and other ministries and county level targets require collaboration in infrastructure investment. There is need for greater collaboration across all levels to actualize and realize the wins and the gains we need to see. This is what is lacking. There is also need to create clarity beyond development of policies and create clear guidelines in the implementation of strategies across the different ministries. It is important to borrow and learn from good practice in the region, e.g., in Rwanda,



ministries' budgets are vetted together with the cross sectoral collaborators to ensure alignment with the relevant national and sectoral plans thus promote cohesion in implementation.

In the case of Flexible System Camera Cost, the National Spatial Plan has provided policy statements to inform the development of county and sectoral plans. Agriculture policy should provide clarity and address the grey areas in land use governance, e.g., there is need for stricter measures in land use conversion because we have seen a lot of conversion of agriculture lands to urban areas. There is a need to have reforms in land governance guided by natural capital accounting. Kenya has already started looking into natural capital accounting to monitor land use conversions and it also provides the opportunity to investigate the future guided by geospatial information systems and technologies to give indication of land use changes in future and inform proper planning.

There is need to strengthen both the national and county strategies linking production to markets and post-harvest management i.e., industries, technologies for value addition, and infrastructure development that will achieve the targeted reduction in food losses to 6% from the current 30%. The country losses approximately Kes. 72 billion annually from food loss. Precision agriculture is the future. There are lots of recommendations to deal with land fragmentation and agriculture optimization, but this is also dependent on mechanization and technology advances to support intensification rather than expansion. These includes basic to smart technologies and data influenced agriculture and mechanization that take advantage of the collective farmers' capability in an agroecology to overcome the current perceived agricultural transformation barriers. E.g., India has strengthened agrotechnology use to improve its agronomic management and reduce cultivation costs, pulling farmland through contract farming. This ensures that precision agriculture also works for smallholder farmers and going beyond access to mechanization and technology to linking and creating harmony between production and market access and making sure there is a clear linkage between production and a clear access to markets. This can happen at the county level. There is also need to prioritize measures to reduce dependence on rainfed agriculture by prioritizing and investing in ground water and optimizing irrigation methods and water use. Coherence at the national and county level and the sectors is critical to actualizing some of these goals.

It is vital to consider technologies for natural resources accounting. RCMRD has been strengthening the country's use of geoinformation for land resources monitoring, land potential assessments including projections into the future looking at how climate will change to see exactly how we need to readjust and refine our adaptation strategies. RCMRD is also working on Greenhouse gases accounting for countries in Eastern and Southern Africa and has also been instrumental in developing land use and land cover maps that can support monitoring of some of the key issues.

It is crucial to address the nexus between gender, climate change and agriculture. As per the United Nations Development Program (UNDP), there is need to invest in women as part of the climate responses, create responses and strategies with gender sensitivity in mind then we can have a greater return across the SDGs and the broader development goals.

## **2. Mechanism to protect land against subdivision**

Regional Economic Blocs such as the Narok Kajiado Economic Bloc are putting measures in place to protect land against subdivision. Kajiado has prepared and approved a spatial plan that has helped in land zoning and helped in land management in the county. The county has also approved a county land policy. There county is cognizant of the issues of subdivision in high agriculture potential areas. Group ranches in the ASAL areas are also pushing for rangelands to be subdivided into individual holdings which is conducive in the drier areas. Small holdings in the long run are not able to support sustainable production for both crop



and livestock, and the level of farmers in the region will also not allow them to do intensive production which requires a lot of capital input.

The county is also developing draft development regulations that will operationalize the land policy and the spatial plans. Kajiado is also going down to Ecosystem Management Plans especially in the areas that are sensitive and require more focus outlook in terms of how management should be done within the ecosystem which is more detailed and smaller in range. The Amboseli Ecosystem Management Plan is already in place and is specifically looking at group ranches and private lands around the Amboseli National Park that requires a better and far much deeper management due to its sensitivity and its importance as a world-renowned conservation area.

The region is also looking at having a Community Land Act to manage community lands and pass policies and regulations that are specific to community land. Narok County is in the process of developing spatial plans as well as ecosystem management plans for areas that are sensitive both in terms of food production and supporting other livelihoods. Moving forward, the counties are looking at interacting and linking up with other agencies that have a greater role and will be able to support in actualizing land management.

The Kenya Land Policy Sessional Paper 3 spells out how land should be used effectively for maximum production. There is need to look at this at the county level. As counties, it is critical to develop land use policies to support land use and address the issue of land fragmentation. Counties need to zone lands into various uses based on land capability studies so that the land is put in the best possible use.

To boost production, agricultural statistics are needed, and it is crucial to also change the way these statistics are collected. Previously these were collected using extension officers who use estimates, and largely collect qualitative and not quantitative data. There is need to shift to the use of technology to collect quantitative agricultural statistics in real time on a continuous basis. Policies should support this. Geospatial technologies are crucial in supporting this and Counties should embrace geospatial technologies in collecting their data.

The Kilimo project in Vihiga, in collaboration with France aims to improve how agricultural information is collected at the farm level using farmers and incorporating technology in the collection of the information. Farmers provide information using a mobile phone. The project aims to find out at any time, how much land is under production for a particular crop, and what type of fertilizer the farmer using. Once the crop is planted, the growth is monitored from planting to harvesting using remote sensing technologies – satellite and drones – to monitor green mass and using this information to predict production. This enables the development of predictive models which can be used as standard models going into the future. Policies need to change to have more focus at the production level in the counties, at the community level and at the farm level. Further, to better manage soils, the use of agricultural inputs need to be tested at the farm level. This involves determining what is lacking in the soils and only putting in what is required to minimize the use of fertilizer.

#### **D. Designing inclusive policies for the involvement of the children, youth, women and PWDs in food systems**

The government has developed a strategy to draw consultations and understand the challenges hindering youth involvement in agriculture. Some of the problems identified include: the Lack of access to market and financing; limited knowledge and skills; and Climatic and environmental issues. There is discrimination for People Living with Disabilities (PWDs) and support for them to stand on their own is critical. Local



government should involve PWDs to help address issues together. In response to some of these issues, the Ministry has designed programs to remodel the 4k club to include the modern-day child. The Enable Youth program was also initiated to form to set up trainings and accelerators to offer youth incubation. Subsidy programs are now being given to the youth and women for productive capacity.

The current 8-4-4 curriculum being phased out did not have a distinct subject called Agriculture taught in primary schools and the subject was only an elective in secondary schools done by few students. This created minimal interest among the youth on venturing into agriculture seriously. There has been negative connotation towards agriculture as a no-pay career, which needs to change for more youth inclusivity. In 2019, the government came up with the CBC curriculum to act as a game changer. CBC introduces agriculture to the formative stages of a child by introduction to environmental activities in Pre-primary 1 and 2 with agricultural components, and environmental, hygiene and nutritional activities in Grade 1, 2 and 3 in which agriculture is also integrated. Agriculture as a learning area is introduced in upper primary (Grade 4 to 6) and in lower secondary (Grade 7 to 9).

Further, the Technical and Vocational Education and Training (TVET) program is boosting efforts to get more youth into agriculture. In 2021, over 10000 students enrolled in Agriculture in 2021 through TVET, a growth from previous years. Technology used in agriculture is well taught in the vocational centres. There are more than 1000 institutions in the country currently training young people in Agriculture but there is need for more institutions to be involved in agricultural training all over the country. It is critical to recognize agriculture competencies from diverse settings (class, farm, etc.) and offer certificates, like those who have acquired this knowledge from classrooms.

There is need to increase opportunities towards accessibility of funds for youth, women and PWDs. This includes ensuring services are at the grassroot level for increased sensitization among youth, women, and PWDs. It is necessary to create a one-stop shop access of the affirmative funds by women and youth. To increase the uptake of the funds, it is necessary to:

- Ring fence the amount disbursement to this special interest groups.
- Enhance sensitization and create awareness about the funds in areas of low uptake.
- Leverage on the digital space.
- Diversify various products towards the Food systems.
- Strengthen collaboration and partnership with county and national governments, involvement in investor conferences and providing information on available financing mechanisms.
- Identify and promote county specific interventions through the affirmative funds.

Currently, funds have gone to support many businesses dealing with agriculture towards: High quality seedlings, greenhouses, poultry production, purchase of beehives, fish farming, value addition, among others.

The current draft of the Kenya Social Protection Policy has set up a pillar that speaks to shock responsive social protection. The government is taking an integrated approach towards social protection among key sectors like agriculture. The Kenya Social and Economic Inclusion project outlines a clear strategy for inclusion of the poor and vulnerable segments of the country's population.

In the Lake Region Economic Bloc (LREB), there is a pillar on policy and inclusivity with a specific focus on rural agriculture and empowering women. The region is working to improve agriculture for subsistence and commercial production where women play a big role. LREB's economic blueprint has ensured





inclusivity through education. The entry point of this blueprint is working with schools, and those not able to go to school. For those lacking access to school education, youth and women groups are being created to help push such skills through teachers, TVET groups, SACCOs, and other stakeholder institutions. A key concern noted for the youth, women, and PWDs in the regions is the lack of capital investments and technical skills. The region is working to endow these groups with funds and skills to be involved in productive farming. While the region is endowed with enough produce for subsistence use, it is working on its export capacity to improve livelihoods through revenue generation. There is need to include the commercial aspect of agriculture in the education system with the goal of incubation opportunities towards commercial production.

There is need to support PWDs. This population should not be isolated and local administration like chiefs can be a good entry point in supporting PWDs.

## **E. Policy strategies for sustainable food systems**

### **1. Climate smart agricultural practices promoting resilience to climate shocks**

The Kenya government has developed various policies that have come to support climate change impacts interventions. In response to the changes in the climate systems and its impacts, the government has developed and executing appropriate policies, strategies, and plans to inform and guide adaptation and resilience measures, thus ensuring sustained food and nutrition security in the face of climate change. The government has developed key documents including:

- Kenya Climate Strategy 2017-2026.
- Kenya Climate Smart Implementation Framework 2018-2027.
- Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029.
- Draft Kenya Climate Smart Adaptation Monitoring and Evaluation Framework.
- Development of County Climate Risk Profiles.
- Establishment of Multistakeholder Climate Change Platform.

The policies have been initiated to sustain food systems at different levels and they are at different levels of completion. There are various overarching policies that support these including the Agriculture Policy, National Cooperative Policy, National Agriculture Mechanization Policy, Urban and Peri-urban Policy, Agro-chemicals Policy, Organic Agriculture Policy, Sugar Industry Policy, National Insurance Policy, Cereals Policy, National Agricultural Soil Management Policy, National Livestock Policy, Veterinary Policy, and Kenya Livestock Insurance Policy.

In addition to the policies, there are various other regulations and policies that guide specific sectors based on the value chains – Dairy sector regulations such as the Camel Development Policy, Feeds Policy and National Agricultural marketing Strategy and the Climate Smart Agriculture Strategy. The objective of these policies is to help take measures on climate change and to enhance adaptability and capacity for resilience of farmers and pastoralists and fisherfolks so that they can mitigate on the adverse impacts of climate change. Programs are developed based on the strategies and policies that the ministry develops. There are various other programmes being implemented by the ministry including: Kenya Smart Agriculture Project being implemented in 24 ASAL counties, National Agricultural and Rural Inclusive Growth project which is in 23 high-medium potential counties. There are also other programmes targeted to specific counties such as the Regional Pastoral Resilience Livelihoods project which is being implemented across the region in Uganda, Kenya, and Ethiopia. Other projects towards ending drought



emergency are being implemented with the support of development such as the IUCN. As well, the Treasury is supporting the ministry in coming up with other initiatives to support the counties.

Controlling cross border pests and diseases is still a major challenge and there is need for an effective surveillance system and regional cooperation. The cost implication of controlling pests such as the desert locust is high and regional cooperation is required. Multilateral cooperation is required among countries in the region so that the burden of controlling these diseases and pests is lessened and enhance trade.

## **2. Strengthening institutional coordination in Climate Smart Agriculture interventions**

In terms of water provision for both productive and domestic sectors, 75% of this comes from the country's five water towers and this has a lot of relevance to food systems. The country is currently not doing well on its forest cover with the 2015 Global Forest Resources Assessment report estimating that the country has 7.2% forest cover. The Ministry of Water, Sanitation and Irrigation is working on a strategy to attain 10% forest cover which requires 1.8 billion seedlings. Working together with Kenya Forest Research Institute (KEFRI) and Kenya Forest Service (KFS), the ministry is working on strengthening the capacity of institutions to raise the seeds required.

The ministry is also mobilizing other government agencies, including the Ministry for Interior and Coordination of Government to establish 1500 Chief's Nurseries, each producing 200,000 seedlings. Having in place institutional arrangements to achieve this strategy is critical and the Steering Committee, chaired by the Minister of Interior is being strengthened. There is also a Technical Committee with 10% being chaired by RPS. All existing tree nurseries are being certified and registered through KFS to further boost efforts towards attainment of this strategy. Innovative approaches are being employed including Adopted Forests initiative and the Greening Kenya Initiative which includes components of awareness creation and use of champions such as Sportsmen and Women.

A Deposit Bonds Regulation is in the process of being unveiled to help in mitigating land degradation. The aim is for the deposit bond is to ensure investments do not harm the environment and incase of damage, the deposits are available to help reclaim and restore those environments. To help manage the problem of waste, including food waste and plastic waste getting into food systems, the government implemented a ban on the manufacture, sale, export and importation of plastic carrier bags through a Gazette Notice in 2017. The government is also providing subsidies for plastic recycling plants.

Kenya's Nationally Determined Contribution (NDC) to the Paris Agreement has heightened the country's ambition to 32% and the waste sector is among those being looked at keenly. The country hopes to reduce emissions by implementing green growth and employment programmes that are moving the country from linear to circular economy. Already, the country has been working on a framework to accelerate green growth and circular economy for businesses in Kenya, which will include the food systems businesses. The government in collaboration with the private sector has also developed a very good platform, as part of the Partnering for Green Growth and the Global Goals 2030 (P4G) which is a global platform accelerating pioneering green partnerships to drive inclusive and resilient economic growth. The Cabinet has also approved a Sustainable Waste Management Policy and Bill 2020 that should be in place soon.

Kenya is also a signatory to the Bamako Convention on the ban and input into Africa and control of trans boundary movement and management of hazardous wastes. We don't want this hazardous waste to get into the food systems. There is need to generate critical data on food waste to strengthen interventions. Agriculture is a climate sensitive sector and as the government has made commitment to abate GHG emissions by 32% by 2030, there is need to do more to reduce the emissions from the agriculture sector which is generally the biggest emitter at 40%. There is need to work closely to achieve the country's targets on land degradation. Under the United Nations Convention to Combat Desertification, to achieve



land degradation neutrality, the country is trying to balance land degradation and positive land restoration actions by 2030 and will fully restore an additional 9% of the degraded lands, some which are in the agriculture sector and in the food systems. The government is committed to the challenge of restoring degraded land by 5.1 million ha which is relevant to food systems.

### **3. Climate Smart practices in JKP to increase agricultural production, food and nutrition security**

The Jumuiya ya Kaunti za Pwani (JKP) transformation plan is anchored on 10 sector pillars and flagship projects drawn from six coastal counties and the region the five-year Integrated Development Plan has prioritized three dominant pillars – agribusiness food and nutrition, the blue economy and natural resources and the environment. The focus of JKP is to enhance the Agribusiness Food and Nutrition Strategy to build on the specific value chain such as the cassava value chain, and the Fisher is value chain and to enhance a smart agriculture, which will require enhanced policies or knowledge of specific crops that will be productive in the region.

In terms of the climate smart practices in JKP, the region is using this approach to manage landscapes which include cropland, livestock, forest, and fisheries, to address the challenges of climate and increase agricultural productivity, build resilience to the effects of climate change, and reduce greenhouse gas emissions. The region is also looking at improving the use of use of quality seeds and planting materials, integrated pest management, improved water use management.

All the JKP have commissioned studies on diversified water harvesting technologies for domestic use, livestock, and crop production and on sustainable soil and management for increased crop production. Sustainable mechanization is also critical, and the region is investing in the use of small tractors, precision and use of machineries that are powered by renewable energy.

The counties are also using technologies for decision making by use of simple decision-making tools. The counties are also using genetically diverse systems of crop improvement and using varieties suited for a wide range of agro economic systems and farming practices that are resilient to climate change.

In terms of policies, the policy intervention within the region, Taita Taveta has a draft master plan to address climate change and has also developed the Taita Taveta Climate Change policy, together with the Taita Taveta Climate Fund. All counties need to develop similar policies, and this can be cascaded from the Agriculture Policy, the Agriculture Strategy, the Climate Smart Agriculture Strategy, Climate Smart Agriculture Implementation Framework, which have already been released to the counties and should be integrated into the county development plans. The Governors' manifestos can also be used to develop various policies that affect climate smart programmes. The region is implementing various projects, working with the World Bank to implement the Kenya Climate Smart Agriculture programme in Taita Taveta, Lamu and Tana River counties for specific value chains such as green grammes, dairy, beef, aquaculture, and sorghum. The National Agriculture Rural Inclusive Growth programme is being implemented in Kilifi and Kwale deploying climate smart agriculture practices. The JKP counties has held several dialogues aimed at improving both livestock, crop and fish production in the coastal regions including the Korosho in Mali Programme for cashew nut value chain, coconut production through distribution of hybrid seedlings to various coastal counties, setup of cassava processing plant in Kilifi and setting up seed multiplication centers in Kilifi and Taita Taveta. The region has also spearheaded banana production in the county of Taita Taveta through setup of a banana processing plant. The beef sector has also been bolstered through the setup of Baichuma Export Processing Zone in Taita Taveta and Tana River. There are discussions on the development of holding zones and market auction centers across the counties. Improved fish production through the Go Blue programme, and promotion of drought tolerant crops such as sorghum and green grammes is also taking place. All these programmes are aimed at



improving production, improving resilience, nutrition and food security and pushing farmers against effects of climate change.

#### **4. Kenya National Nutrition Action Plan; status of implementation, challenges and opportunities**

Malnutrition remains a global challenge with huge social and economic costs and the biggest risk factor for the Global Burden of Disease. Kenya is facing a triple burden of malnutrition, where we have undernutrition, micronutrient deficiency, and overweight and obesity that include diet related non communicable diseases. Childhood undernutrition is directly associated with huge annual economic losses, estimated at Kes. 374 billion, equivalent to 6.9% of the GDP. Malnutrition is also one of the leading causes of infant and young child admissions in health facilities in the period between 2017 and 2019 and is directly associated with 19.4% of child deaths.

As Kenya becomes urbanized people are adopting unhealthy diets which include consumption of foods with high sugar and fats and inadequate physical activity. This lifestyle transition is contributing to increased prevalence of obesity and diet related non communicable diseases such as diabetes and heart diseases. On the other hand, hidden hunger in micronutrient deficiencies of iron and folate, iodine in vitamin A, remain a major public health concern in our country. Yet micronutrient deficiencies can be addressed sustainably through nutrition sensitive agriculture that prioritizes crop and livestock diversification in order to enhance access to micronutrient rich foods.

The government has created a favorable policy and regulatory framework for the elimination of malnutrition, through the Constitution of Kenya article 43, which gives every citizen the right to highest attainable standard of health, access to reasonable standards of sanitation, freedom from hunger and access to adequate food and of acceptable quality, clean and safe water, social security and education. Article 53 gives every child the right to basic nutrition. The Vision 2030 and Mid-term Plan under the Big Four agenda and sectoral policies such as Kenya Health Care Policy, and the Food and Nutrition Policy of 2012 also place nutrition high as a favorable policy. Several legislations that are covering universal salt iodization, breast milk substitution and Article 68 provides for promotion of supply of foodstuffs, of sufficient quality in adequate quantities, promotion of nutritional knowledge at all population levels, maternal and micronutrient supplementation, promotion of lifestyle and intervention to reduce the disease burden. It also provides a favorable policy and regulatory environment for elimination of malnutrition.

The Kenya Nutrition Action Plan, 2018-2022 aimed at accelerating and scaling up efforts towards elimination of malnutrition, as a problem of public health significance in Kenya by 2020 has also been implemented. The plan has several areas, nutrition specific interventions focus areas. Working with other stakeholders in the Ministries of Education and Agriculture, the ministry has codeveloped national school meals and nutrition strategy, the Kenya agri nutrition strategy and the 1 million kitchen gardens initiative to improve diet diversification. Blended flours standards have been developed under Food and Nutrition security pillar of the Big Four agenda. Safe nutrition is also being integrated in the social protection programme under nutrition improvement through cash and health education in five counties.

The ministry is also working with counties and thirty-two counties have already adopted county specific nutrition action plans which is an effort towards creating an enabling environment for ending malnutrition.

Issues of food safety are also of concern to the Ministry of Health and there are various laws that provide tools for governance of food safety Executive Order no. 1. The Ministry of Health has a large mandate of food safety. The legal instruments that exist are diverse and varied. One of the challenges is that because



food safety requires multisectoral approach, sometimes it's difficult for the Ministry of Health to coordinate this across the ministries and other players.

#### **5. Policies/ programmes in place to ensure availability, accessibility and affordability of fish as a nutritious food across the country**

Fisheries contribute a lot towards food security and nutrition in the country. There are challenges because fisheries depend on water and changes in water quality and the volume affects fisheries. Rising lakes destroy the infrastructure and rivers bringing flood waters carry silt which affects breeding grounds of fish and makes fishing a dangerous business because of unpredictable weather. Drought on the other side affects fishponds by drying up ponds and affecting businesses.

Some of the strategies that have been initiated by the ministry to support the adaption of the sector to climate change include producing high performance brooders that grow and mature very fast and are also prolific in breeding. Investments are also being made in aqua culture technologies that use minimal water, i.e., aquaponics which involves recycling water. Pilots are being done in secondary schools targeting more than 1000 schools so that the younger people get interested in fish farming. The ministry is also strengthening collaboration with communities in mapping and protecting critical fish habitats. For purposes of ownership and sustainability, it is critical to ensure that the communities fully participate in the initiatives.

Restoration programs for the coral reefs (fish breeding habitats) are also being implemented to ensure increased fish production. There are also improvements in data collection and analysis, including time series data for making projections and how climate changes are likely to affect the fisheries. The ministry is also boosting inland fish productions in the lakes and dams by restocking with young fish to boost production for communities. Safety for harvested fish is also being ensured through the setup of accredited laboratories to boost consumer confidence on products being produced.

Fish farmers are being assisted to transition from small-scale fish farming into semi-commercial to make fish farming a productive business so that beyond food security, we are also creating wealth and jobs among young people. Building capacity is critical and this is being done at the Coast and Lake Victoria so that the younger people can venture into deep sea fishing to enhance their catches and improve production.

Addressing the challenges in the fisheries sector requires a multisectoral approach e.g., addressing sustainable land management issues, afforestation, and controlling pollution which affect the water quality and quantity which in turn affects the fisheries.

#### **F. Policy formulation and enactment of laws that affect the agricultural sector: the role of the legislature**

There is need for intergovernmental coordination in policy formulation processes to ensure that there is buy in from different stakeholders on the agriculture and food policies. As agri-food systems use transboundary and share resources, there is a need to lift boundaries when considering issues relating to food systems. Regional economic blocs could help to provide a regional dimension to food issues. There are policy and compliance gaps in the aspects of nutrition that need to be addressed especially on food fortification, incentives for healthy food and disincentives for unhealthy food that lead to malnutrition. The policies within the food and agriculture landscape should help to create an enabling environment for the private sector to operate. Private sector investments in agriculture should be encouraged and policies should enhance public private partnerships.





The Kenyan constitution 2010 is the ground zero for food systems transformation in Kenya as it provides for the devolution of the agriculture, livestock, cooperatives, health, youth as well as the land and natural resources sectors. With this, the implementation of policy initiatives and interventions has been closer to the people that need it most more than before.

The clustering of counties to form economic blocks is therefore a game-changer for Kenya's food systems as it allows stakeholders to have a wider sense of regional and transboundary issues when solving the problems that ail our food and agriculture sectors. Similar to the agriculture policy, there is a policy framework that lays the foundation for the operationalization of regional blocs. With both policies at the national assembly, it will be crucial to ensure that both policies are passed for effective implementation of reforms in the agri-food sector. For faster progress towards food systems transformation in regional blocs, there is a need to coordinate the priorities of the regional bloc member counties and to harmonize their policies, investments as well as their County Integrated Development Plans (CIDPs). With a joint approach, there will be efficiency and alignment in the implementation of policy initiatives and activities.

Although policy formulation rests with the national government, there is a growing need for intergovernmental coordination in the formulation of agri-food policies to ensure that all stakeholders are aligned. With this, there should be convergence of the devolved government priorities with that of the national government. The strengthening of inter and intra governmental platforms such as JASSCOM & CASSCOM and ensuring that they work with regional economic blocs will also help to fast-track progress.

The policies formulated within the agrifood sector should look at breaking Inter-County barriers that inhibit trade. The harmonization of local tariffs will also go a long way in encouraging trade and efficiency in production for areas with comparative advantage. There is a growing elevation of the discussion on food systems in the country. This provides an opportunity to create awareness on food system transformation to the members of the county assembly as well as legislators in the national Assembly who can then aid to ensure that prop

There is need to move to a food systems approach rather than just an agriculture intensification and livelihoods enhancement approach. The food systems approach will enable stakeholders to have a holistic view of issues to avoid providing piecemeal solutions. While there is a vibrant discussion on the aspects of agriculture, deliberations on the issue of nutrition is still low. Policy initiatives should look at addressing all forms of malnutrition that affect all sectors of the population including undernutrition manifested through stunting and wasting, obesity and micronutrient deficiencies.

There should be an emphasis to involve multi-stakeholders from different subsectors in policy formulation. This is especially critical since food and nutrition issues are multi-faceted and multi-sectoral. As well, there needs to be policy harmonization so that agricultural policies are not in conflict with each other. For example, there is a state department that has over 40 policies and in some, there lacked coherence.

In the policy formulation process, evidence and research should be the basis of the formulation. Moreover, there needs to be an evidence-based review of the policies in the food and nutrition sector in a move that will assess the effectiveness of these policies.

In terms of policy gaps, there needs to be a relook at policies that enhance the fortification of staple foods through bio-fortification. For example, there are only a few varieties of beans as well as sweet potatoes that are fortified. Moreover, there needs to be enhancement of compliance on industrial fortification of staple





foods including maize, rice, cassava etc. Policies that create an enabling environment for the private sector should be enhanced. In particular, support should be directed towards agriSMEs to ensure that they can thrive. There needs to be policies that promote Public Private Partnerships (PPPs) to ensure investments are directed towards the most deserving subsectors such as in logistics, research and insurance.

Incentives for consumption of healthy foods should be enhanced to ensure that healthy foods can be accessed by a wide variety of consumers. In this there needs to be lower taxes on nutritious foods. Moreover, there needs to be disincentives to the consumption of salt and sugars as they are a leading cause of obesity.

There needs to be policies that fast-track the digitization of the agribusiness supply chain especially SMEs and the process of extension. Through digitization, it is also possible to come up with smart markets. Policies formulated should also help to address women and gender related issues in food systems.



## Independent Dialogues

### Transforming Pastoralism Sustainably and Innovatively to Address Key Drivers of Food Insecurity and Malnutrition: A Multisector Dialogue from Kenya's Frontier Counties

May 18, 2021

#### Report

On May 18, the Global Alliance for Improved Nutrition (GAIN) in partnership with Concern Worldwide; the Coalition of European Lobbies for Eastern African Pastoralism (CELEP), Center for Research and Development in Drylands (CRDD) and other stakeholders from the Frontier Counties Development Council (FCDC) region held a virtual independent dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the UN Food Systems Summit (UNFSS).

Communities of interest were grouped around the following areas:

- Strengthening and supporting pastoralism as a key economic driver that leads to sustainable food systems in the Northern Frontier region
- Overcoming policy constraints and leveraging on policy and legal frameworks change to transform pastoralism in the FCDC region
- Building community resilience to vulnerabilities, shocks and stresses brought about by climate change
- Increasing access to livestock finance and strengthening marketing coordination to build viable livestock value chains

Some challenges addressed include:

- Strengthening and supporting pastoralists to undertake pastoralism as a viable economic activity that contributes to a sustainable food system in the northern frontier counties.
- Incentivizing pastoralism and building change towards market access for pastoralist communities.
- Leveraging on enabling and coherent legal and policy frameworks to anchor pastoralism as a key economic driver for the pastoralist communities in the FCDC region.
- Strengthening multi-stakeholder and multi-sector partnerships to enable the region to catalyze progress towards ending food insecurity and malnutrition in the shock prone communities in the arid and semi-arid lands (ASALs) in the Northern frontier counties.
- Promoting private sector investments and financing tools in the ASAL regions enabling the de-risking of the livestock sector to enable pastoralist accrue maximum benefit towards credit services.
- The need to adopt a holistic approach that would look at nutrition issues for all population groups from conception to adulthood in the FCDC region.



The key issues addressed were:

**Climate change:** The FCDC region has experienced climate shocks, disease outbreaks, locust invasion and unreliable rainfall patterns that has affected livestock productivity over time. However, through the efforts made in the counties by a multitude of state and non-state actors, a tremendous growth of livestock numbers has been witnessed in the last nine years. To further strengthen and building the resilience of communities against vulnerabilities, shocks and stress, the frontier counties need to reinforce and resource a steering group that will address the issues of disaster risk management in conjunction with the National Drought Management Authority. In addition, the steering group would oversee and take regular reporting from all partners working to build resilience in the frontier counties. Research is a critical component in building a nature positive sustainable economy. As such, the region needs to invest in research to find amicable solutions to cope and adapt with climate change hazards and in restoration efforts that help to rebuild soil health.

**Development of livestock marketing systems:** Despite the region's growth in livestock numbers, there exists gaps in marketing systems and hence the populace is unable to make economic gain from the livestock increase. The national government through the Ministry of Agriculture, Livestock, and Fisheries (MOALF) should support the region towards establishing functional livestock marketing systems that enable access to regional and international markets. Additionally, the ministry needs to assist in developing the livestock value chains within ASAL regions to transform livestock production from just a way of life into a viable economic sector that provides economic gains to the livestock keepers.

**Policy and legal frameworks:** With the recognition that initiatives and programs to spur pastoralism transformation should be anchored in policy and law, the region needs to employ a regional approach to designing and implementing policies. FCDC counties should especially adopt and localize the IGAD protocol on Transhumance and strengthen nutritional security of the region by adopting and implementing the Kenya Nutrition Action Plan. The Kenya Nutrition Action Plan provides a framework for nutritional technical support and looks at advocacy needed across board while involving the government, private sector and other stakeholders.

**Undernutrition and micronutrient deficiency:** Complimentary feeding practices remained inefficient in the region with diet diversity as low as 8% among women of childbearing age. To improve diet diversification in the frontier counties, the region needs to spearhead and scale initiatives that improve local production of food crops at the household levels. The region should adopt a holistic approach that looks at nutrition issues for all population groups from conception to adulthood.

**Financing Pastoralism:** The livestock sector has largely remained underfinanced in the FCDC region. One of the reasons for underfinancing the sector is the presence of low cash flows in the region that act as a disincentive to financial service providers. To eliminate the constraint, it is necessary to curate multi-stakeholder partnerships to find innovative solutions to financing including through credit guarantee schemes, insurance, value chain financing schemes, digital financing, and technical service provision on both the demand and supply side. Additionally, financial institutions in the region need to diversify their collateral requirements to lending. Additionally, the frontier counties need to boost infrastructural development particularly with regard to transport, communication and processing to create an enabling environment for private sector investments in the region.



## Findings

- **Pastoralism as a sustainable food system: Opportunities, Challenges and Lessons learnt through devolution**

The region has been susceptible to climate shocks, disease outbreaks, locust invasion and unreliable rainfall patterns that have affected livestock productivity over time. Investment in coping and adaptation efforts e.g. drilling water boreholes and harvesting rainwater into pans by FCDC has seen the livestock numbers to grow six fold since commencement of devolution in 2012. Sadly, this growth is posing a serious threat to natural ecosystems. The Ministry of Agriculture, Livestock, Fisheries and Irrigation needs to support the region towards establishing functional livestock marketing systems through regional and international markets to enable offloading of livestock and prevent overcrowding. This would not only help in improving the livelihoods of pastoralists but also ensure such activities are driven by market needs and do not have a negative impact on the environment. The Ministry should also support the frontier counties to mainstream pastoralism as a main economic activity, offer budgetary support, and assist the region in developing livestock value chains within ASAL regions to transform livestock production from a way of life into a viable economic sector.

- **Incentivizing food systems: Inclusivity and change towards equitable market access among pastoralist communities**

The national government has programs aimed at integrating pastoralism into the formal sector. These include the Regional Pastoral Livelihood Resilience Project (focused on improving market access to target communities for livestock and livestock products) and the Drought Resilience and Sustainable Livelihoods Program that targets six counties (Baringo, Isiolo, Samburu, Marsabit, Turkana and West pokot) with components of improving livestock infrastructure, natural resource management, growth management and capacity building. Currently, the national government has rolled out the Kenya Livestock Insurance Program, the Kenya Climate Smart Agriculture Project and enacted a Framework for Ending Drought Emergencies' where the State Department for Livestock was heavily involved. Through enactment of the Livestock Bill of 2021, the proposed marketing authority would help ASAL regions to develop effective marketing systems and address issues faced by pastoralists.

The newly constructed Bachuma Livestock Export Processing Zone in the coastal region will subsequently provide livestock market access for the northern frontier counties. To cater for larger catchment areas of Marsabit, Wajir and Garrisa, the national government in collaboration with World Bank is in the process of setting up a class A slaughter facility in Isiolo.

On integrating gender issues, the government has mainstreamed gender markers in policies and fully integrated women across all stages of programs and plans.

- **Leveraging on enabling and coherent legal and policy frameworks to anchor pastoralism as a sustainable food system**



Many policy and legal frameworks have continued to provide opportunities to strengthen pastoralism as a sustainable economic activity. However, ASAL regions need to domesticate such policies to turn pastoralism into a viable activity. Some of the existing frameworks include:

- The Kenya Economic Recovery Strategy for Wealth and Economic Creation that includes a whole chapter dedicated to ASAL regions and further elaborated plans on livestock, tourism, land tenure, disease control and disaster and risk management.
- Kenya's Economic Blueprint (Vision 2030) that focuses on pastoralism as an opportunity. It looks at setting up livestock disease free zones in the ASAL regions.
- ASAL Policy of 2012, which centers ASAL development around pastoralism and further urges full exploitation of the sector as a key economic driver in the FCDC region.
- Development of a National Livestock Policy.
- Devolution which brought opportunity for resources to be rolled down to the ASALs counties and conferred powers to legislate on issues particularly affecting the livelihoods in those regions.
- National Land Policy that laid a foundation for Community Land Act which serves as the main legislation that allows communities to register and manage land in a sustainable manner.
- The newly ascended Bill to establish the Livestock and Livestock Products Marketing Board.
- Livestock Identification and Feasibility Policy.

Within IGAD region, which Kenya is a signatory, there is a policy framework for pastoralism in Africa developed by the Africa Union and that provides an opportunity for IGAD members to plan for transnational mobility, diseases, and conflicts across borders. Other regional policies include the IGAD Protocol on Transhumance as well as the Regional Strategic Framework on Rangeland Management for Arid Lands. All these policies provide a basis on how certain livestock components are entrenched into cross-sectoral programs, initiatives and strategies. Therefore, the FCDC region needs to adopt a regional approach to harmonize and domesticate these policies and lobby funds for policy implementation. Due to low levels of pastoralism data, the region should improve availability of livestock data.

On matters subsidiary legislation, the frontier counties need to domesticate national policies instead of developing other policies that are impracticable and incompatible with the national ones. It is necessary to link policies such as those stipulated in IGAD Protocol on Transhumance to challenges affecting people within the FCDC region and align programs and initiatives with respect to Kenya's Economic Blueprint. Many policies are non-functional due to financial constraints and the region needs to resource for policy implementation by setting aside budgetary allocations.

- **Ending food insecurity and malnutrition through sustainable multi-sectoral platforms among shock prone communities in the ASALs**

One of the key interventions to strengthen FCDC resilience in the fight against food and nutrition insecurity is to develop clear-cut policies and guidelines for achieving improved health and nutrition outcomes. In this regard, it is critical for the region to adopt and implement the Kenya Nutrition Action Plan that not only provided a framework for nutritional technical support but also looked at advocacy needed across board. The action plan is envisaged to provide guidelines and development of capacity for nutrition at county and national levels to ensure that nutrition sensitive programs and activities are executed. When developing nutrition programs, the region needs to take a holistic approach that looks at nutrition issues for all population groups from conception to adulthood and this can be done by involving partners critical to improved health and nutrition outcomes at the onset of such plans. Platforms for



overseeing and coordinating multi-sectoral interventions in relation to nutrition are missing in the region and FCDC needs to scale up nutrition movements through establishment of sub-national Scaling Up Nutrition (SUN) chapter to address these issues. The region also needs to put in place measures for monitoring and evaluation to measure accountability in implementation and allow for mutual tracking and reporting progress by the sectors involved.

High maternal workload, limited access to clean water and inaccessibility to antenatal care are some of the gender barriers hindering women from accessing nutritious foods in pastoral community. Complimentary feeding practices remain inefficient in the region with diet diversity as low as 8 % among women of childbearing age. The region needs to enhance and scale initiatives that can improve local production and growth to diversify diets at the household level.

- **Increasing private sector investments and financing tools and de-risking livestock sector in the ASAL counties**

The FCDC region is majorly relies on pastoralism and converting livestock assets into cash can be time consuming. The presence of low cash flows in this region in turn act as a disincentive to financial service providers. It is critical for the region to embrace multistakeholder partnerships to find innovative solutions to financing e.g. de-risking tools such as blended financing. Additionally, financial institutions should diversify their collateral requirements to lending. Another challenge of finance in FCDC is poor infrastructure. The region needs to boost infrastructural development particularly with regard to transport, communication and processing to create an enabling environment for private sector investment and increasing business operations. There is also the challenge of information asymmetry especially on the supply side of the livestock sector e.g. pastoralist way of life, their requirements, production systems and savings. Moreover, the region is largely operating in an informal economy and this hinders financial institutions from accessing customer loyal requirements or due diligence. It is necessary to develop programs towards enabling ease of doing business in ASALs by offering registration services to businesses and persons.

- **Supporting Pastoralism as a key economic driver and a sustainable food system**

There is need to counter the notion of unsustainability of pastoralism as research has already proven sustainability and viability of the sector. In strengthening support for pastoral sustainability, FCDC should incentivize the private sector to finance value chains and increase uptake of de-risking tools such as blended financing approaches. In driving pastoralism agenda forward, FCDC should work closely with the national government to strengthen institutions mandated to deliver on sustainable pastoralism while also encouraging leaders at the national level to champion for policies that transform pastoralism in the area. The region needs to allocate sufficient budget for the livestock sector.

- **Building community resilience to vulnerabilities, shocks and stress**

Climate shocks and natural disasters are common in ASALs regions. To build coordination and resilience, FCDC should reinforce and resource a steering group that will address the issues of disaster risk management. In addition, the steering group would oversee and take regular reporting from all partners





working to build resilience in the frontier counties. It is necessary to identify opportunities and areas of synergies in the frontier counties by enhancing and catalyzing private sector engagement. Research is a critical component in building a natural sustainable economy e.g. pastoralism. As such, the regions needs to invest in research to find amicable solutions to climate change and soil health. The region also needs to embrace community led and one health approaches to nutrition and food security.

- **Increasing access to livestock finance, strengthening coordination, and building inclusive food systems**

Infrastructural development is critical to transforming pastoralism into sustainable food systems. The region thus needs to embrace multistakeholder partnerships to realize this. Pastoralism transformation is possible with devolution, but a strengthened coordination is required at both levels of governance to actualize this. For climate risks and disaster management, it is critical that the region partners with the national government to effectively mitigate the impacts. To increase uptake of livestock insurance, the two levels of government should subsidize the insurance package. Women are considered as frontline advocates for malnutrition and thus their participation and engagements across all nutritional programs is critical especially in the frontier counties where gender barriers are common. The national government also needs to launch programs that promote registration of persons and businesses to address the informal economy exhibited in the FCDC region.

- **Overcoming policy constraints and building viable value chains**

The region needs to domesticate national policies in their jurisdiction and resource for their implementation. Additionally, software issues around value chains especially at the lower levels should be addressed. It is necessary for short-term chains to be dealt with at county level while the long-term chains are left to the national government. It is essential to break women barriers to engaging effectively in value chains and embrace public private partnerships to solve a myriad of issues experienced in the frontier counties. The national government also needs to implement other sector policies that create an enabling environment for pastoralism to thrive e.g. Water Policy among others.



## Strengthening and Amplifying the Voices and Leadership of Women in Food Systems

June 18, 2021

### Report

#### Summary

On June 18, 80 participants from various stakeholder groups gathered in a virtual Independent Dialogue as part of the Kenya United Nations Food Systems Dialogue series in preparation for the Food Systems Summit.

Communities of interest were grouped around the following areas during the dialogue:

- ❖ Religion Science and food systems nexus with a focus on women in food systems.
- ❖ Supporting women in entrepreneurship
- ❖ Fiscal justice / enabling policy for women in food systems
- ❖ Building partnerships for gender equality and food systems transformation in Kenya
- ❖ Women access to equitable resources in agriculture
- ❖ Institutionalization of policies to benefit the grass root women who are not aware of the existing policies
- ❖ Digitalization in support for women in food production
- ❖ Support for women amid climate change in green financing
- ❖ Building resilience to food systems shocks and stresses

The dialogue focused on the role that women play in food systems, the gender inequalities that women face in food systems, challenges in women contribution towards food systems, measures that can allow better inclusion, and solutions that are already in place to allow for better inclusion in policy process and gaps. Five key topics guided the dialogue which are 1) Access to markets and infrastructure at scale 2) supporting women farmers and agri-entrepreneurs with technology, finance, capacity and legal rights 3) Fiscal justice and an enabling environment for policy, leadership and decision making, representation and budgeting 4) climate change and green financing and 5) youth and development in foods systems.

#### Key challenges explored

- ❖ Women do not benefit from most resources available (land, financial products) yet they provide 42-65% of the agricultural work force.
- ❖ Ownership of land for women is still a major hiccup leading to limited access to finance due to lack of collateral and consequently resulting in productivity gaps of up to 30% between men and women.
- ❖ The triple burden of malnutrition affects women and their households more in African households and this has been exacerbated by the COVID-19 pandemic.
- ❖ Gender inequality is one of the causes and results of unsustainable food systems.
- ❖ Increased under-representation of women and youth in food systems
- ❖ Women are inadequately involved in decision making and this has had an impact on: (1) health, (2) poverty levels and (3) general quality of life.



- ❖ Women led micro, small and medium enterprises (MSMEs) are less likely to access formal finance loans and support.

## Key issues raised

### Food system and Value chain development:

The complexity of food systems requires holistic and coordinated approach throughout the value chain. It also requires the integration of various actors from education, finance and gender equality. Tackling gender issues should ensure inclusion of both men and women and assurance that women and men participate and benefit equally from agriculture. This is because in most cases, women experience equitable constraint to agricultural resources compared to men. In addition, women have a crucial responsibility in the food systems as they provide food for their families, produce fruits and vegetables for nutrition and they also act as transporters and vendors. Therefore, to include and empower women, it was reported that FAO had put in place various strategies to lead a more resilient and sustainable food system by:

1. Supporting women enterprises and business schools.
2. Improving productivity and profitability of women in agricultural activities and access to opportunities in terms of market information and input.
3. Supporting both national and county governments in mainstreaming gender in various policies.
4. Sensitizing communities on gender issues, socio-cultural norms, decision making and policy making.
5. Contributing to rural women productivity in agriculture and family nutrition (Scaling up nutrition, a collaboration with SUN network).
6. Working directly with other women partners and government extension officers in promoting women's role in food production.
7. Land governance programs among others are in place for women in agricultural production labour and other segments in the agricultural value chain in Kenya.

### Financing for Women:

Financing of the agricultural sector by the Kenyan banking industry is currently very low (below 5 percent). What makes the situation worse is that there is skewed access to the finance provided against women. Additionally, gender issues play out not only in production but also in the agricultural business space. Access to capital to start and scale up businesses is one of the challenges faced by women due to lack of assets to leverage on capital leading to a vicious cycle. Time to invest in the business is also a key challenge faced by women as they must divide their time between taking care of their families and their businesses. As a result, the productivity gap between businesses ran by men and women is at 34%.

Three key solutions that were discussed that can be used to ensure women are included in financing include:

1. **Digitization:** Women are faced with numerous domestic responsibilities and are thus disadvantaged in access to finance from the traditional sources. This is particularly contributed to by the distance to the finance source and the opportunity cost involved. Digitization offers a solution to this problem. The banking sector has thus launched a digital platform called STAWI



(4 commercial banks being involved) with the goal of money access anywhere, anytime among small businesses and entrepreneurs, especially women.

2. **Development of Women centred products-** Tailoring financial services to suit women. i.e. different types of financial products to cater for different women is key in addressing the lack of inclusivity in finance for women in agriculture.
3. **Finance plus-** Provision of advisory services on good agricultural practices that can help maximize productivity is key. These services can be provided concurrently with financial services for women in agricultural production.

Moreover, other solutions include the value for her initiative by AGRA, that aims at strengthening women led agribusinesses in Africa. This is achieved through increasing linkages with regional and global markets, improving technical and managerial skills and training women on the various market dynamics involved.

On the issue of fiscal policies which is key in determining economic equalities and inequalities, it was highlighted that there are ways of ensuring equality and having gender specific policies on taxes. The highlighted points include:

- Revenue redistribution which investigates the different levels of incomes in the economy and ensures that those that earn less pay less and vice versa.
- Repricing of products, which affects people behaviour. This is achieved for instance, by having disincentives for harmful products.
- Representations- this was noted as a key problem in tax policies and there was a need for representation of women to evade economic inequalities.

Some of the discussed economic inequalities that exist between men and women are:

- Lack of access to land and financing which affects participation in food systems.
- Consumption patterns- Women spend most of their income on the well-being of the household e.g. on health and food purchase. There is therefore a need to look at the person in a household that a particular policy affects. This is because if a tax negatively affects a woman then the effect will be felt by the household e.g. the increased tax on bread, cooking gas, airtime and fuel in Kenya.
- Time poverty- Women must divide their time between income generating activities, childcare and domestic work. They are thus disadvantaged in advancing their education and other self-improvement activities.

Therefore, a tax system should be created that integrates gender specific gaps. Government spending should also focus on activities that women spend their money on e.g. health care and nutrition.

### **Partnerships and collaboration:**

It was noted that strengthening of women's capacity can be done through policies that are gender inclusive and through government and multisectoral partnerships. These partnerships include local administration, private sector, finance providers, research institutions, technology providers, civil society and advocacy groups. Encouraging rural partnerships and collaborations could result in value addition of farmer products with the establishment of firms such as rural processing (cottage industries) which could help women not go far looking for jobs and neglecting their children. Different ways of encouraging partnerships, include:



- Local administration: to locate right groups, offer protection and security for women
- Private sector for right pricing
- Financial institutions: bespoke products
- Academia: Information, research and incubation
- Advocacy partners: know-how
- Tech providers: Solutions
- Civil Society: Rights protection

In addition, due to the adverse effects of the pandemic, there is need for partners to work together by pulling resources together to mitigate the effects of COVID 19. It is critical to invest in mitigation of drought and how to deal with drought shocks. Engaging communities in program implementation and training of selected community members to identify and plan interventions is key. Joint planning is necessary as well as resource mobilization for sustainable project to boost food security for women.

### **Policies and regulatory frameworks:**

Although most development partners have turned to supporting women, this could be enhanced by putting in place enabling factors that sustain women participation in food systems. When women are supported, 100 to 150 million of people can get out of hunger. There is therefore the need to level the field and ensure women have access to productive resources. Additionally, the need for (1) redirecting policies to focus on gender inclusivity and financial inclusivity and (2) need for global proposition for women empowerment within the food system.

### **Nutrition:**

Malnutrition is mainly affecting women and children. A bottom up approach can be used e.g. through sharing of excess produce at the household level to food insecure households which on the other can help reduce post-harvest losses. It was cited that women's voices tend to be ignored yet amplifying women's roles could play a great role in addressing food safety and nutrition. As, women play a huge role in food nutrition. Therefore, consumer education for nutrition would be better if addressed to women more.

Currently the malnutrition situation has been made worse off by the pandemic with major strides made before the pandemic being reversed. And, women play a key role in family nutrition and food insecurity, nevertheless, their role has continually been downplayed. It is therefore necessary to strengthen women's voices for improved nutrition in households. This can be achieved through:

1. Empowering drought prone communities to withstand shocks.
2. Empowering and supporting urban food security especially for vulnerable households
3. Making the food supply chain efficient.
4. Inclusive financial systems such as social capital.
5. Value addition to reduce post-harvest losses and food nutrient fortification.
6. Addressing policy gaps to ensure food safety and nutrition.
7. Encourage partnerships, both global and grass root ones (allow also link between the government, private sectors and the community).



## **Youth and development**

It was emphasised that young women and men should take the opportunities available in agriculture (those aired by the panellists and speakers) so that they can be on the table where decisions on empowering women in agriculture are being made. A holistic approach of connecting women to women, women to finance and access to digital training is key to strengthen women involvement in agricultural production. Youth and women participation in gender dialogues, food security summits and alike, should be emphasized and cultivated for desired changes in food systems. There is a need to train and create awareness to young people on climate smart farming practices unlike the traditional ones that have dire consequences due to changes in climate, land degradation and other social dimensions such as consumer food preferences. Hence, young women farmers could change from rain-fed agriculture to conservation agriculture, irrigation farming which is more sustainable and be encouraged to uptake pest, disease and drought resistant seed varieties which contribute to food security.

## **Findings and Recommendations**

### **Gender Integration in food systems**

Research has shown that empowering women leads to several positive outcomes along the food value chain and hence addressing the unique challenges faced by women is key. Moreover, research has shown that when women farmers have equal access to agricultural inputs (fertilizer and seed) as men, yield can increase by 19%. Considering all the challenges that women face, several strategies need to be put in place or those already in place should allow for better inclusivity.

Foremost, there is a need to factor in women when structuring policies and ensure that women also occupy positions of leadership. Subsequently, there is need for policies that ensure women have access to productive resources such as fertilizer and seed. This can be executed through subsidies for inputs that can be accessed through digital platforms i.e. the E-voucher system. Also, digitalization would help deal with the time constraint faced by women. Further, support for women led MSMEs to ensure they have equity in accessing markets and attain greater bargaining power is instrumental and increase for energy supply for running production and value addition processes carried out by women farmers, need to be factored. A clear focus should be made on women and youth farmers to strengthen their participation in agriculture. There is therefore (1) need for redirecting policies to focus on gender inclusivity and financial inclusivity (2) need to follow policy implementation for successful outcomes on gender equality in food systems and (3) need for sustainable collaboration and establishment of partnerships, globally and locally, for increased women empowerment within the food system and gender equality.

### **Market and infrastructure**

1. Need for digitalization and ensuring women are aware of inclusion in digital market access
2. Developing strategies for women to be able to access funds especially in the case that loans require physical collateral and have high interest rates which women are not able to pay back
3. Need for partnerships that engage women in policy making on various food systems and agricultural activities
4. Support women businesses and allow them to be part of the partnerships
5. Bank customer segmentation to address the financial needs of women

### **Capacity building in terms of market access**





1. Establish data driven programs to enable women to grow profitable products
2. Finance- structure right finances to look at the cycles between payment of loans and farmers' harvest time
3. Digitalization- establish easy platforms such as USSD platforms that share information such as market information on pricing, consumer products demand and extension support.

#### **Fiscal justice for women working in food systems**

1. Promote exports to generate more income for the women and revenues for the government
2. Surplus- be resourceful about surpluses
3. Mandatory registration of women in cooperatives to ensure access to finance
4. Equitable access to resources (production, capital, extension services)

#### **Partnerships support for women in agriculture**

1. Improving partnership with financial institutions to enhance women access to funds
2. Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women)
3. Connect grass root women to multistakeholder platforms to share their experiences and challenges
4. Link research organizations and various ministries with grass root women to create awareness on new technologies
5. Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women
6. Partnership with national and county government to implement policies that are gender mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.

#### **Climate action and inclusive financing- Access to green finance**

1. Inspire confidence among ladies to tap into funds that can help them invest in agriculture. A member mentioned the climate action fund that has been initiated by the world-bank. One of the members also stated that there is a lack of awareness among women on such initiatives and there is therefore need for awareness creation one such programmes are started.
2. Kenya is largely arid and semi-arid (89%) and therefore innovative ways should be sought to shift reliance from rain-fed agriculture. These include: Irrigation machinery, irrigation pumps and drilling of water ponds, climate smart agriculture local innovations
3. Create financial products at the bank level that cater for women such as agricultural insurance products that support women.
4. Agro-forestry- This can be done through encouraging tree planting among faring households especially fruit trees that can help mitigate on the effects of climate change.
5. Soil health - support and promote soil rejuvenating through local solutions to enhance productivity and conserve biodiversity.
6. Promote urban farming and use of kitchen gardens among land constrained women and urban farmers.



## Way Forward

Increased awareness on women inequalities and the need for gender integration in food systems and policy is required. This can be done via capacity building, mainstreaming gender in policies and supporting women to increase agricultural productivity. Moreover, complementing financial services with advisory services on how women can optimize their yields and revenues is important for this to be maximally productive and effective. Lastly, establishing sustainable partnership for all actors (at the bottom and on the top) is important in strengthening and amplifying the voice of women in food systems, for women empowerment in Kenya.



## Creating an Enabling Environment for Food Fortification in Kenya

### 2<sup>nd</sup> Food Fortification Summit

29<sup>th</sup>-30<sup>th</sup> June 2021

### Report

#### Relevance of Food Fortification in Kenya

##### Nutrition Situation in Kenya

In Kenya, malnutrition remains a public health concern that negatively impacts the foundations of economic, social and cultural life in the country. According to the 2014 Kenya Demographic Health Survey (KDHS), malnutrition among children under 5 years remains high, with stunting, wasting and underweight rates at 26%, 4% and 11% respectively with wide regional variations. In rural areas, stunting rate is higher (29%) compared to urban areas (20%) (GOK, 2015). The Kenya National Micronutrient Survey (KNMS) (GOK, 2011) reported high prevalence of micronutrient deficiencies. Vitamin A deficiencies, including marginal deficiency among children aged below 5 years was 61.8% and 27% among pregnant women. Further, zinc deficiency stood at 83.3%, 68.3% and 82.3% for children under 5 years of age, pregnant women and women of reproductive age, respectively. Similarly, anaemia and iron deficiency among pregnant women was 41.6% and 36% respectively while in pre-school children it was 26.3% and 21% respectively. Dietary habits have also been found to be poor. Only 5% adults consume the recommended servings of fruits and vegetables (KNBS, 2015) and 22% of children aged 6-23 months meet the minimum acceptable diet (MOH, 2016).

##### Benefits of Good Nutrition

- Builds immunity
- Prevents diseases
- Maintains good health

##### Benefits of Fortification

Fortification is beneficial for both consumers and producers of the fortified products. For consumers fortification helps:

- minimize the risk of micronutrient deficiency
- correct existing micronutrient deficiency
- improve the dietary intake and hence the nutritional status that may be sub-optimal as a result of changes in dietary habits/lifestyles
- increase survival rates and improve physical and mental development in children, which results in improved mental function and improved school performance
- contributes to health of communities leading to reduced losses in man-hours and medical costs and increased productivity

For the producers of the fortified products, fortification helps:



- improve the nutritional quality of the product
- enhance the credibility of the company as it complies to national laws and regulations
- expand the market share and consumer brand loyalty through improved products
- improve overall health of their employees, leading to less need for supervision.

### **History of Food Fortification in Kenya**

In Kenya, Food Fortification dates back to 1972 when voluntary salt iodisation began. In 1978, the Government of Kenya (GOK) made the iodisation of salt mandatory and specified the levels. This led to a decline in the prevalence of total goitre from 16% in 1994 to 6% in 2004 (MoPHS & SCUK, 2011). In 2009, the Ministry of Health (MOH) together with Kenya Bureau of Standards (KEBS) and other stakeholders reviewed the levels of iodization which are in-use to date. Following the success of universal salt iodization, some industries started voluntary fortification of maize and wheat flour: The last decade has seen increased efforts and resources directed towards shifting from voluntary to mandatory fortification

In 2005, Kenya National Food Fortification Alliance (KNFFA) was formed to coordinate food fortification activities in Kenya. The food fortification logo was developed in 2006. Standards for oils and fats, wheat and maize flour and sugar fortification were developed in 2006, 2009 and 2011 respectively. Mandatory legislation for the fortification of wheat flour, maize flour, fats and oils was published in the Kenya Gazette notice supplement through amendment of the Food Drugs and Chemical Substances Act, CAP 254 the Laws of Kenya, Notice No. 62 of June 2012. It provided for addition of Vitamin A (retinol) in vegetable oils and fats, as well as the addition of Vitamin A (retinol), Iron and Zinc among other micronutrients in wheat and maize flours (GOK, 2010). In the same year (2012), Kenya adopted the 2006 East African Community (EAC) fortification standards. The EAC standards aimed at harmonizing requirements that govern food commodity trade for vegetable oil and fats (fortification with Vitamin A), wheat and maize flour fortification with Iron, Zinc, Retinol (Vitamin A), Thiamine (Vitamin B1), Riboflavin (Vitamin B2), Niacin (Vitamin B3), Pyridoxine (Vitamin B6), Folic Acid (Vitamin B9) and Cobalamin (Vitamin B12) across the East Africa region. A second amendment of CAP 254 was under taken in July 2015 under Kenya Gazette Notice No. 157 to make reference to the EAC standards for food fortification (GOK, 2015). The timeline below indicates the major milestones in the history of food fortification in Kenya:

- 1970: Standards for salt iodization was established (33.7mg/kg)
- 1973: Iodization standards were revised to 50.5mg/kg
- 1978: Mandatory fortification of salt
- 1989: Iodization standards were revised to 168.5mg/kg
- 2005: The Kenya National Food Fortification Alliance was established
- 2006: Standards for oils/fat were established and the fortification logo was developed
- 2009: Iodization standards were revised to 50-84mg/kg
- 2010: The standard for sugar was established
- 2012-2015: Technical regulation was developed and reviewed
- 2016-2020: Surveillance, Monitoring, Enforcement and Evaluation of staple food fortification

### **Stakeholder Commitments to drive Food Fortification in Kenya (to be included in the UN Food**



### Systems Summit document)

Numerous commitments were made by a range of stakeholders on the closing day of the summit. Table below provides details on the commitments:

**Table 3: Stakeholder Commitments in the Food Fortification Summit 2021**

Stakeholder	Commitments
Government	<p>Coordination of implementation of the Kenya National Food Fortification strategic plan 2018-22 including strengthening of the KNFFA.</p> <p>Provision of human resource.</p> <p>Enhance enforcement of the law on mandatory food fortification.</p> <p>Evidence-based review of existing policies and regulations where necessary.</p> <p>Support research for evidence generation.</p> <p>Capacity building both at the National and County levels of stakeholders in the food fortification environment.</p> <p>KNFF coordination of partners.</p> <p>Strengthening of the partnerships.</p>
Civil Society Alliance	<p>Continue to support government to design, enact, and enforce large scale staple food fortification programs.</p> <p>Mobilize policy makers and parliamentarians towards strengthening food fortification.</p> <p>Support county governments to enhance compliance, monitor, strengthen coordination platforms, and create awareness and demand.</p> <p>Support availability of quality vitamin/mineral premix and the capacity of the food industry to fortify.</p> <p>Work with government and partners to promote fortification.</p> <p>Promote the distribution of fortified foods.</p> <p>Advocate for enabling environment.</p> <p>Develop capacities of small and medium scale millers to fortify</p>
Private sector: Cereal Grains Millers (CMA)	<p>Work with the government and other partners to coordinate efforts in fortification; work with the government in policy legislation.</p> <p>Self-regulation; work with a map of quality i.e. product testing compliance index for each of the millers.</p> <p>Work with consumers to access nutritious foods.</p> <p>Encourage other associations to self-regulate</p>
Private sector: United Grains Millers Association (UGMA)	<p>By the next food fortification summit, would have:</p> <ul style="list-style-type: none"> <li>reached 90% of members on issues; labeling, batching and quality control. (sensitization to fill the gaps)</li> <li>data in the database indicating where UGMA stands.</li> <li>worked with the government to harmonize regulations.</li> <li>eliminated 50% of the problems in fortification with the help of the partners</li> </ul>



Private sector: Oils industry association	Review objectives and agenda of fortification plan to take stock of progress
Private sector: Pre-mix suppliers	Continue improving the standards of the premixes to meet the standards that meet food safety requirements. Availability of premix; Ensure stock is available in the country. Ensure reliability of premix. Partnerships; enhance technical advice and support. Support formulation of food fortification policies, regulations and guidelines
UNICEF	Partnership to promote food fortification. Support the Kenya Food Fortification Association. Support the monitoring of activities. Promote consumption of fortified foods. Improvement of provision and access to nutritious foods. Support development of food fortification policies, regulations and guidelines
JKUAT	Strengthen governance of all food fortification activities within the country. Support creation of new knowledge. Capacity building through training. Create more awareness on food fortification through various channels. Support monitoring and evaluation to inform programming and policies





## Securing accountability for the right to adequate food in Kenya

### Participation

Total number of participants								168			
Number of participants in each age range	0-18		19-30		31-50		51-65		66-80		80+
Number of participants by Gender	Male		Female		Prefer not to say and Other						
Number of participants in each sector											
Crops/Agriculture*					88	Food retail					
Fish and aquaculture						Food industry				3	
Livestock						Financial services				2	
Agroforestry						Healthcare				5	
Environment and ecology					6	National or local Government					
Trade and commerce					2	Nutrition*				4	
Education					13	Utiities					
Communication					13	Industrial					
Food processing					3						
Others:					29						
Number of participants from each stakeholder group											
Small/medium enterprise/artisan					10	Member of Parliament					
Large national business						Local authority					
Multinational corporation						Government and national institution				15	
Small-scale farmer					18	Regional Economic Community					
Medium-scale farmer					7	United Nations					
Large-scale farmer					1	International financial institution					
Local Non-Governmental Organization					29	Private Foundation / Partnership / Alliance				6	
International NGO					26	Consumer Group				8	
Indigenous people					3						
Science and academia					22						
Workers and Trade Union											
Others:					29						



## Principles of Engagement

Food Systems Summit provide an opportunity for diverse, purposeful and respectful exchanges between food systems stakeholders, at all times taking into account the Principles of Engagement of the Food Systems Summit.

**Act with urgency:** We recognize the utmost urgency of sustained and meaningful action at all levels to reach the respective 2030 Sustainable Development Goals.

**Commit to the Summit:** We commit to practice what we preach personally and professionally to contribute to the vision, objectives and the final outcomes of the Food Systems Summit.

**Be respectful:** Within our respective capacities and circumstances, we will promote food production and consumption policies and practices that strive to protect and improve the health and well-being of individuals, enhance resilient livelihoods and communities and promote good stewardship of natural resources, while respecting local cultures, contexts.

**Recognize complexity:** We recognize that food systems are complex, and are closely connected to, and significantly impact, human and animal health, land, water, climate, biodiversity, the economy and other systems, and their transformation requires a systemic approach.

**Embrace multi-stakeholder inclusivity:** We support inclusive multi-stakeholder processes and approaches within governments and communities that bring in diverse perspectives, including indigenous knowledge, cultural insights and science-based evidence to enable stakeholders to understand and assess potential trade-offs and to design policy options that deliver against multiple public goods across these various systems.

**Complement the work of others:** Recognizing that issues related to food systems are being addressed through several other global governance processes, we will seek to ensure that the Food Systems Summit aligns with, amplifies and accelerates these efforts where practicable, avoiding unnecessary duplication, while encouraging bold and innovative new thinking and approaches that deliver systems-level transformation in line with the Summit's principles and objectives.

**Build trust:** We will work to ensure the Summit and associated engagement process will promote trust and increase motivation to participate by being evidence-based, transparent and accessible in governance, decision-making, planning, engagement and implementation. We – from member states to private businesses to individual actors – will hold ourselves accountable for commitments made with mechanisms in place to uphold this accountability.

<b>How did you organize the Dialogue so that the Principles were incorporated, reinforced and enhanced?</b>	<b>Describe in under 2,100 characters including spaces</b>
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	<p>The UNFSS Dialogue's principles and guidelines were adhered to in planning and organizing the Independent Dialogue. The Dialogue was convened by Rural Outreach Africa, Welthungerhilfe, Route to Food Initiative, and the African Population and Health Research Center.</p> <p>A working group was formed with representatives from various organizations with rich expertise in various topics related to food systems.</p> <p>Each participating organization played an active role in designing, decision-making, planning, engagement, implementation, and executing the Dialogue.</p> <p>The participants were also selected carefully to represent all the stakeholders involved in the food system, especially smallholder producers.</p>
How did your Dialogue reflect specific aspects of the Principles?	<p><b>Describe in under 2,100 characters including spaces</b></p> <p>The dialogue embraced multi-stakeholder inclusivity by holding two sub-national dialogues to get the perspectives of the rural and urban poor, who were not in a position to participate in the national online dialogue. The results of these sub-national dialogues were presented at the national dialogue and are included in this report. In facilitated discussion groups, respect was observed as each person got the chance to give their views without interruption.</p>
Do you have advice for other Dialogue Convenors about appreciating the Principles of Engagement?	<p><b>Describe in under 2,100 characters including spaces</b></p> <p>All the principles recommended by Food System Summit 2021 are very essential for a human rights-based approach. All the conveners should follow this to get various perspectives from different sections of society. The Conveners should particularly focus on the representation of the rural community, and other vulnerable groups who are rarely included in discussions that affect their right to food.</p>

### Method

The outcomes of a Dialogue are influenced by the method that is used.

Did you use the same method as recommended by the Convenors Reference Manual?



- **YES > Please move to Section 4: Dialogue Outcomes**
- **NO > Please share more information about the method used in the comment box below.**

Please consider commenting on how the event was curated as well as the reaction of participants to this curation. It may also be appropriate to comment on the facilitation in the Discussion Groups: were points of divergence and convergence both able to surface? Were all voices heard?

**Describe in under 4,200 characters including spaces**



## Dialogue Focus & Outcomes

### Major Focus

**Please detail the focus of your Dialogue. For example, it could be (i) a comprehensive exploration of food systems, (ii) an exploration of one of the five Action Tracks or levers of change of the Summit, (iii) examination of links between one or more of the Action Tracks and levers of change, (iv) or another specific theme. N = 2762**

[WelthungerHilfe \(WHH\)](#), [Rural Outreach Africa \(ROA\)](#), [African Population and Health Research Center \(APHRC\)](#), and [Route to Food Initiative \(RTFI\)](#) are organizations working towards realizing the human right to food in Kenya. WHH is working in Kenya with programs to support smallholder farmers drive the food and nutrition security agenda within their communities. APHRC, as a think tank, specializes in the generation of policy evidence for improving people's health and well-being. ROA serves rural communities in Kenya and intervenes in addressing aspects of food security, nutrition, and socio-economic development. Finally, RTFI works towards realizing the right to food in Kenya and supports public discourse on practical solutions to food systems bottlenecks.

The Independent dialogue focused on securing accountability for the right to adequate food in Kenya and exploring pathways to sustainable, inclusive, resilient, and equitable food systems. The topic focused on Action Track 1 and Action Track 3. The dialogue provided an opportunity to reflect on how the Constitutional right to adequate food can be put into practice. It also evaluated whether our current approach to food and farming systems, policies, legal frameworks, and investments, both from public and private sectors, promote the right to adequate food.

In the subsequent remarks made at the dialogue, speakers reiterated key issues and statistics on food systems, security, nutrition, and possible opportunities. In addition, this report presents thematic highlights as referenced by group discussions. Participants in this dialogue were drawn from smallscale producers, civil society, CBO, national and local government, research, academia, media, local and international NGOs, consumer groups, private companies, and human rights advocates. The plenary and group discussions were informative and lively. In this report, the discussion outcomes are based on **five** key discussion themes: 1) We need a way that ensures accountability for the Right to Adequate Food in Kenya. This is a role for multiple actors but are there existing policies addressing issues in food systems? Are they inclusive in their representation? 2) Smallholder and urban farmers are critical stakeholders in addressing food and nutrition security but their role might be overlooked. 3) There is a lot of power-play in food and farming systems - can these be identified and managed to drive more inclusivity? 4) We desire to have sustainable, inclusive, resilient, and equitable food systems; and 5) Food safety and adequacy are increasingly becoming important.

Action Tracks Please tick if this entry is related to one or more of the Action Tracks		Keywords Please tick if this entry is related to one or more of the following keywords			
Action track #1 ensure access to safe and nutritious food for all	X	Finance		Governance	X
Action track #2 shift to sustainable consumption patterns		Policy	X	Trade-offs	X
Action track #3 boost nature-positive production	X	Innovation		Human rights	X



Action track #4 advance equitable livelihoods		Data and Evidence		Environment and Climate	X
Action track #5 build resilience to vulnerabilities, shocks, and stress		Women and Youth empowerment			X

## Key Findings

Please share your appreciation of the main findings (or conclusions) that emerged from your Dialogue. For example, your key findings might detail a) the need to establish new connections between certain stakeholders, b) an agreement on actions that stakeholders will take together (expressed as intentions or commitments), c) a decision to explore specific aspects of food systems in greater depth. **Describe in under 5,600 characters, including spaces. (N=5365)**

The role of different stakeholders in food and nutrition security should be complementary. However, increasingly dangerous precedence of a learned generation of the population unwilling to or limited to participate in agriculture is being set. This situation keeps cementing a role in the value chain of a net consumer, increasing pressure on the few producers to meet food needs. We need to build the food systems thinking that is holistic and grounded on science and practical experience. What has been done before and worked? Can farmers identify their roles in food systems and not entirely rely on the Government? The evidence of large commercial agriculture establishments narrowing the dietary diversity, access to agricultural inputs, technologies and services, and priority for markets need to be keenly looked at as they pressure humanity to move towards industrial farms. Farmers can produce using ecologically sound principles to mitigate against climate variability, but can they get support from all quarters? These farmers need to access relevant training on the realities of farming and embrace strategies with corrective potential.

It is critical to know and understand who feeds us. A monitoring and accountability system that measures the uptake and impact of support by smallholder farmers needs to be established. More people can get into processing or value-addition and production with many growth opportunities and farmer-friendly policies in place. When farmers come into groups, they strategically influence what options are available, i.e., nutrition and health. The presence of collective action in food systems cannot be overemphasized. The training and bargaining which groups can leverage for community resilience is phenomenal and can be encouraged at the policy level, especially at formulation. Education and capacity-building initiatives will help a great deal. Smallholders need a consistent update on new scientific and ecologically sound approaches to farming, unto which they integrate indigenous technical knowledge.

As a way of addressing the concerns of sustainability, equity, resilience, and inclusivity in food systems, several actions can be taken up;

1. Civil society organizations, Government, consumers, and farmers can resolve.
2. The farmer can receive moderated funding which allows them to grow and encourage equity. The farmers will have to push for policies through active and strategic advocacy that ensure their agenda reaches the highest office of the land. Food policies should be farmer-friendly to ensure the farmers is protected and empowered.



3. There is a need to build knowledge systems that teach sustainable farming approaches like agroecology for healthy food systems enhancing livelihoods of smallholders, food and nutrition security for all, and the health of the planet.
4. There is need for strong producer movements, by farmers, for farmers! The need to hold open multi-stakeholder dialogues will be increasingly helpful.
5. Hold the Government accountable and make sure that they are accountable for the promises made to farmers.

On the right to adequate food, participants agreed to continue in civic education on rights, collect evidence of violations, make them more visible to the public, bring these to court, and get orders that hold duty bearers responsible. The right to food is a fundamental human right, not something that politicians give us. Food should be universally accessible because it is a human right. Universal food access must be recognized as a policy like universal health coverage, universal access to education. The UN needs to recognize this and include food in a vital needs compact with health.

The role and power of consumers to create change was also emphasised as consumers can practically vote with their forks, buying from, and supporting food and farming systems they want to see. Their resolve is also to continue engagement in ongoing civic education on food rights. Finally, they will generate and utilize gender-disaggregated data to promote a complete shift away from gender-neutral approaches. A couple of indicators will define the success of these actions.

Four key ones are when we see:

- Improvement in health and well-being status of citizens, including reduced child malnutrition, improved food, and nutrition security statistics.
- Increased budget allocations to agriculture, with a focus on smallholder farming and projects that support food sovereignty and food access (not cash crops for export)
- A fiscal policy in Kenya that does not punish the poor (through taxation on essential foods); and that will incentivize agroecological transition in agriculture
- Food system policies and implementation frameworks that are responsive to the needs of farmers, and marginalized groups

The success of the above actions will be visible in several ways. First, we will be able to see more affordable, safe, and adequate food for everyone. The production of safe, diverse foods will significantly rely on farmers embracing agroecology principles, taking up more bio instead of synthetic pest and disease management approaches, and improved food safety standards for Kenyans. With proper implementation of the policies related to agriculture, food, and nutrition security, there will be a positive shift in the country's food and nutrition security situation. County governments will also be taking up policies that ensure food is produced safely, diversified, and redistributed where practical. As a result, improved citizens' health and well-being, including reduced child malnutrition and improved food and nutrition security levels, and reduced food-borne illnesses will be seen. In summary, areas where participants will need to undertake a couple of actions:

- a) Create consumer awareness on the:
  - i. impacts of excessive use and growing misuse of chemical inputs in production and work closely with regulators
  - ii. alternatives and sustainable practices



- iii. the value of having a food rescue system to ensure that food does not go to waste when it can be redistributed or stored safely
- b) Pilot interventions promoting urban farming in informal settlements in Nairobi
- c) Promote a culture of small-scale urban farming across socio-economic divides.

Consolidation of feedback through the Food Systems Dialogue becomes a critical factor of success if taken up by all key stakeholders.

<b>Action Tracks</b> Please tick if this entry is related to one or more of the Action Tracks		<b>Keywords</b> Please tick if this entry is related to one or more of the following keywords			
Action track #1 ensure access to safe and nutritious food for all	X	Finance	X	Governance	X
Action track #2 shift to sustainable consumption patterns		Policy	X	Trade-offs	X
Action track #3 boost nature-positive production	X	Innovation		Human rights	X
Action track #4 advance equitable livelihoods		Data and Evidence	X	Environment and Climate	X
Action track #5 build resilience to vulnerabilities, shocks, and stress		Women and Youth empowerment	X		

## Discussion Topic Outcomes

### Discussion topic 1/5: Stakeholder roles in ensuring food, and nutrition security (N=4957)

The dialogue discussed and highlighted the roles of different stakeholders (Government, private sector, civil society organizations (CSOs), and communities), in ensuring food and nutrition security and ensuring the right to adequate food for all. It observed that current policies will become increasingly important in addressing food systems issues if adequately implemented. This change will require smooth coordination of food systems issues at and across the county and national levels. Another key outcome of the discussion was funding levels and the engagement of smallholders in policy formulation. Several speakers noted that the context in which discussions on policy occur has been changing, albeit slowly. The involvement of the smallholder in policy formulation seems to be very lean and not allowing a robust engagement. However, the Constitution of Kenya<sup>i</sup> remains very decisive on the need to have stakeholder engagements at the heart of any policy formulation at national and county levels.

Discussants agreed that producers must be at the center of policy-making, sustainable environmental management, and the whole food chain, i.e., farm-to-fork. The participants did note that while in the community, there could be farmers that are less informed on good agronomic practices, the lack of knowledge amongst producers comes at a high cost not only to their livelihoods and success in their craft, but also to consumers and the environment due to exposure to unsafe, unsustainable practices. As a regulator and enabler, the Government needs to take up its role more decisively and discharge its mandate. Some of the contextual aspects that came up include the need for farmer linkages in counties to reap the benefits of training and cross-learning. Farmer-to-farmer extension, including the regular extension from Government, CSOs and NGOs, can help address knowledge gaps. Stakeholders need to go on the ground and facilitate shifts in behavior and thinking. Cooperatives will allow a unity of purpose in farming communities, leveraging on their multi-skill base and delivering benefits of group training. The farmers need to know how critical their role is in the food system.

In seeking sustainable food systems, we need to change the current narrative. A bottom-up implementation is an excellent possibility if a blueprint in agriculture is co-developed and a holistic food systems approach is applied. Focusing on youth exposure to agriculture from the onset to school will fortify their interest in food systems. The process of ensuring accountability for the Right to Adequate Food in Kenya should be centered and driven by rights holders, including smallholder farmers who are increasingly becoming more susceptible to food insecurity.

Some of the main action points from the discussion include:

- All stakeholders need to incorporate the welfare of producers in food systems activities and interventions.
- Work with farmers to establish the best evidence-based farming methods.
- Support group collective action for strengthening farmer knowledge, and practices through farmer-farmer sharing on practical concepts such as growing organic food, crop rotation, and composting.
- Support knowledge access for smallholders as the ultimate equaliser -- it increases equity, fairness, and transparency in the food production system.

<b>Action Tracks:</b> <i>Please tick if this entry is related to one or more of the Action Tracks</i>		<b>Keywords:</b> <i>Please tick if this entry is related to one or more of the following keywords</i>			
<b>Action track #1 ensure access to safe and nutritious food for all</b>	X	<b>Finance</b>		<b>Governance</b>	X
<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>	X	<b>Trade-offs</b>	
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	X
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>		<b>Environment and Climate</b>	X
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women and Youth empowerment</b>	X		

**Discussion topic 2/5: Who feeds us? The role of smallholders and urban farmers in food and nutrition security (N=3264)**

It was noted that there was still an ongoing need to support smallholder farmers. This support is not because they do not have the potential in production but rather because they hold significantly higher potential. Now, they produce to feed up to 70% of the population, with only 25% of resources. However, these farmers still face several challenges, including:

- Lack of extension and education services
- Limited access to markets and marketing information (value chains)
- Too many intermediaries involved in brokerage
- Land sub-division, leaving too few pieces for farming
- Variable weather patterns
- Influx of imported goods
- An aging population of farmers
- A culture that negatively impacts women from producing food.

What we need to see is:

- Have more people able to meaningfully participate in public dialogue, especially women and persons living with disabilities.
- A reduced influence of agrochemical companies on government policymaking.
- A strengthened extension service that educates farmers on safe food production will be imperative.
- The sub-national dialogues brought to bear the vulnerable state smallholders are in.

In their assessment, discussants do agree that there's a need for a paradigm shift. The thinking that food insecurity is a net result of climate change is a "tired assertion." The systemic issues impeding progress towards inclusive food and nutrition security require scrutiny. A couple of suggestions were made about how individuals, corporates, and government entities can apply supportive actions:

- Individuals can (need to) buy from small-scale farmers and can demand provision for retailers to stock from these farmers.

- The Government is a significant player in food systems and thus needed to promote the local level procurements. They can also avail the much-needed subsidies and incentives to farmers using sustainable and ethical production methods. If they consider creating spaces where farmers can learn about these practices, a significant shift in behavior will start developing.
- The youth need an enabling environment for working in the entire value chain – the Government can prioritize this.

Agriculture has to maintain a capacity to conserve, regenerate and reward. Improved market surveillance to reduce food waste will be needed. This process should be embedded in enhanced value addition and support to farmers through market cooperatives that increase access to global markets. We see large-scale farmers embracing organic farming and organic ways of producing large-scale agricultural products for human consumption. Finally, a short and localized food value chain is needed - from production to processing/value addition and marketing. Smallholders need to access information on market dynamics, pricing of products, and general empowerment by value-chain. These will help guide a consistent transformation that seeks household food and nutrition security, imparts farmer decision-making abilities, and leads them to food sovereignty. Urban farming continues to inspire hope. It is key to the production of and access to safe, nutritious, and healthy food. It has been on the increase in cities through the pot, backyard, and multi-story gardens. It also offers additional income to the smallholders who sell their surplus production.

In the closing of this discussion, proposed action points included:

- There is need for all interventions to embrace shorter, localized food value chains - from production to processing/value addition and marketing.
- Access to information on market dynamics, pricing of products, and general empowerment of smallholders to effectively engage at market level should be prioritised.

<b>Action Tracks:</b> Please tick if this entry is related to one or more of the Action Tracks		<b>Keywords:</b> Please tick if this entry is related to one or more of the following keywords			
<b>Action track #1 ensure access to safe and nutritious food for all</b>	X	<b>Finance</b>		<b>Governance</b>	X
<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>	X	<b>Trade-offs</b>	X
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	X
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>		<b>Environment and Climate</b>	X
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women and Youth empowerment</b>	X		
<b>Discussion topic 3/5: Power dynamics in food and farming systems (N=3430)</b>					
This session highlights the perceived and actual roles of different aspects, i.e., gender, politics, finance, and multinational corporations in food and farming systems. The participation of women and youth in food systems following (dis)empowerment is queried. This participation is also examined based on "how we can incentivize women, youth, people differently-abled <sup>ii</sup> , and other					



vulnerable groups to aid their participation in food systems more meaningfully." Finally, it explores what the power dynamics are and paints a picture of what the status is.

Several actions will influence power dynamics in food systems in the next three years:

1. We will see increased democratic space in the food system. This shift will create equal freedom for all people to participate. As it is, citizens have been reduced to listeners, without space and/or adequate attention given to the people's views. If the farmers are consistently positioned at the center, we will witness changes in these power dynamics. Strategies and interventions need to be grown from and informed by a ground-up approach, where farmers are the first point of information and guidance on what change is necessary and what is required to support them.
2. With a strengthened regulatory framework, much traction will be gained. Laws, policies, and regulations need to be genuinely farmer-centered and pro-poor. The regulatory framework in place needs to exhibit an expanded understanding of the food system – it is not just about production, productivity, and export. In parallel, there is a need for awareness among farmers on existing laws that support them and available redress channels. Fundamental changes in how we view social capital strategies will define the next three years. The social capital available at the local level, such as farmers' cooperatives, can serve as avenues for educating smallholder farmers on best practices for safe and sustainable food production. This voice and communication will rely on social capital, unified voices, and increased communication in society. We need to express what we want and need for a food systems change!
3. Embracing human-centered approaches will always be critical to determining power dynamics in food and farming systems. The food system and processes in food production should prioritize people's health, welfare, and well-being instead of merely focusing on profit-making. We will need a sustained civic education drive. This result will be achieved by ensuring continuity of civic education on the food system that targets people at the grassroots and leverages the devolved governance structure in Kenya. Participants did agree that people empowerment and effective communication should be at the center of civic education efforts. Community organizations and initiatives could be used to do this. Local farmers and consumers can also be urged to join these initiatives and learn
4. The need to have enhanced public participation in all sub-sectors of food systems will be inalienable. Therefore, we will have to derive common understandings on the definition of public participation, alongside formulation of verifiable criteria for public participation that ensures inclusion of people at the grass-root level (small scale farmers and consumers) and accountability.

For successful engagement and favourable political economy framework, we need:

- A change from the current top-down approach to a bottom-up approach is needed.
- Sustained civic education on food policies, regulatory framework and food systems interventions in general for more meaningful participation and involvement of everyone
- Strengthening of the regulatory framework guiding various aspects of food systems



<b>Action Tracks:</b> Please tick if this entry is related to one or more of the Action Tracks		<b>Keywords:</b> Please tick if this entry is related to one or more of the following keywords			
<b>Action track #1 ensure access to safe and nutritious food for all</b>	X	<b>Finance</b>		<b>Governance</b>	X
<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>	X	<b>Trade-offs</b>	
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	X
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>		<b>Environment and Climate</b>	X
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women and Youth empowerment</b>	X		

#### **Discussion topic 4/5: Sustainable, resilient, inclusive, and equitable food systems (N=3876)**

A couple of aspects were presented at the Food Systems Dialogue session 4 for what constitutes a food system that is sustainable, resilient, inclusive, and equitable. Agroecology as a principle means working with nature to farm effectively. It allows the food system to achieve these four indicators.

Education and awareness are needed on the components that drive resilience in farming systems. Household food consumption patterns have been changing, and so have been food markets. Embracing kitchen gardens to add to the household's daily food basket is a great strategy to improve food and nutrition security. The power of these gardens lies in undertaking them in minimal spaces, water needs, and attention. Thus, smallholder farmers can be taught that even if marginalized, they still contribute a considerable proportion of the food needs. This appreciation will help boost their morales in both production and consumption of home-grown food.

The participants did note that the danger of food commodification still lurks amidst us. This situation will continue to become more pressing, especially as discussions on food systems remain "much talk and little action." Better information flows will reinforce the momentum for better monitoring and evaluating these efforts at developing ideal food systems. There was agreement that when food becomes a market commodity, it is not produced in dignity and we think about the money aspect only. There is often the tendency to forget that we will also buy food grown that same way. The consequences of producing for money take away inclusivity and thinking about others and the environment. On sustainability, the focus is three-fold, i.e., environmental, economic, and social. For environmental causes, land, water and seed will need to be protected and conserved. Where farmers can depend on farming for their lives, economic questions will arise. They are spending much money and get close to zero harvests. Social sustainability will raise additional questions in food systems. These include whether farmers are getting new and up-to-date knowledge on appropriate farming practices and extension that empowers them. Finally, culture also has a place in the food systems. The improved breeds and varieties have sometimes gone against cultural norms, e.g., broiler or intensively farmed chicken has not been well received in farming and increasingly urban communities.

It was noted that there remains no justice in the food system if chemicals and additives in farming are making the wrong people richer while disenfranchising the smallholder farmer. Consequently, there is hope in making our food systems equitable. We do not have to harm other organisms to feed consumers, to make money out of farming. Prudent management of natural resources provided to us by mother nature will benefit every player in the food system ensuring equity - if normalize safe food!

Now, more than ever, the smallholder farmer needs to embrace value addition, access their pool of seed adapted to their agroecology, and be in cooperatives or associations that advocate for their needs. A great deterrent to equity in farming systems is capitalism. The subsidy regime fronted by the Government and other stakeholders are heavily inclined toward commercial farmers. Middlemen and other players like chemical sellers are the ones who benefit from the farming system. There need to be policies that ensure the farmers are protected and empowered. The farmer groups have been deliberately disenfranchised to take advantage of them. This observation is around the world. Consumers are very important stakeholders in the food system, and there is a need to empower them. They need to know their rights and how food produced conventionally impacts their health to demand better food production and policies that protect their health and their children's future.

The main action points derived from this session include the need to:

- Empower consumers to take up their role in determining the way local food systems are structured and managed
- Onboard environmental conservation thinking in the design and management of our food systems

<b>Action Tracks:</b> Please tick if this entry is related to one or more of the Action Tracks		<b>Keywords:</b> Please tick if this entry is related to one or more of the following keywords			
<b>Action track #1 ensure access to safe and nutritious food for all</b>	X	<b>Finance</b>		<b>Governance</b>	X
<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>	X	<b>Trade-offs</b>	
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	X
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>		<b>Environment and Climate</b>	X
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women and Youth empowerment</b>	X		
<b>Discussion topic 5/5: Food safety and adequacy (N=4150)</b>					



Participants expressed their views on what food is all about. The responses were summarized as i) food is self-care, ii) food is dignity, iii) food is about choice and having an excellent variety to choose from, iv) food should be safe, v) food is political, and vi) food is community. Participants also did define a set of actions they felt would have the most significant impact on food adequacy and safety in the next three years. There will be an increase in the uptake of biopesticides to grow food. This uptake will offer farmers an alternative to synthetic pesticides harmful to the environment and human health.

Providing farmers with the correct information will be crucial in the next couple of years. Currently, the Government is seen pushing smallholder farmers to embrace fertilizers and other farm inputs. These have been shown to have direct impacts on their farms through degrading effects on their soils and yield declines. There will be a drive to have more shifts in work with nature in regenerating the soil, increasing food and nutrition security, and improving biodiversity and ecosystem services. The withdrawal of toxic pesticides will be a significant issue. At least 33% of active pesticide ingredients currently registered and sold as products in Kenya have been withdrawn from the European market. This withdrawal is due to their potential severe impact on human and environmental health. However, there are products on the Kenyan market, which are indeed classified as carcinogenic (45 products), mutagenic (31 products), endocrine disrupting (51 products), neurotoxic (175 products), and many which show apparent deleterious effects on reproduction (360 products). The present implications of this on farmers and consumers are significant and worrying.

Consumers continue to demand safe food. This act will be increasing as more information and awareness becomes available to the masses. Kenya exports organic food to markets in Europe. While this is viewed as a good income stream for both specialized and selected producers, it is time that consumers demanded the same quality of food that is exported. Consumers can also contribute to producing some of the food they consume at home through embracing urban farming on their backyard gardens and balconies. We will see a heightened series of efforts that push on the Government to act. More power will be demanded of the Government by the people. Several practitioners will push the Government to ensure that there is enforcement for all the guidelines. These guidelines will directly influence access to production inputs, actual production activity, sales and marketing, and certification. For example, before the food gets to the supermarket shelves, it will need to be certified as safe. This certification will rely on systems in place to guarantee the application of safety principles. If we have Kenyan food policies that can guarantee food safety, many gains will be realized.

Presently, there is little political goodwill when it comes to food safety; most policies and laws end up supporting multinational corporations. There was thus a call to observe that “security starts with us, and we need to know how food is grown. If we demand safe food, farmers will work towards that as they will respond to the needs/demands of the market”. *With proper distribution and storage of food, we will see more food availability. There are seasons when food surpluses are recorded in the country for some regions, as others record dry spells and failed harvests. What if the Government ensures that during this high production season, storage is appropriately stored? What if the food can be (equally) redistributed through a food rescue system?* We need to support local food systems. Let us have the media highlighting the fundamental issues related to the Right to Adequate food for all. They need to do more feature stories related to food safety to create awareness. Finally, it was agreed that with increased budget



allocations to agriculture, and with a focus on smallholder farming, projects should support food sovereignty and food sustenance (not cash crops for export).

The discussion agrees on a set of crucial and pivotal actions to be undertaken:

- Deliberately work on better food storage and distribution systems all levels
- Shift towards more environmentally sound methods of farming that protect the soil and biodiversity
- Consumers have to demand for better food and be actively involved in championing good practices and sustainable food systems.

<b>Action Tracks:</b> <i>Please tick if this entry is related to one or more of the Action Tracks</i>		<b>Keywords:</b> <i>Please tick if this entry is related to one or more of the following keywords</i>			
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<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>	X	<b>Trade-offs</b>	X
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	X
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>	X	<b>Environment and Climate</b>	X
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women and Youth empowerment</b>			

### Areas of Divergence

**Please share the areas of divergence that emerged during your Dialogue. An area of divergence is an issue where participants held diverse views, different opinions and/or opposing positions. For example, this might be related to a) strengths and vulnerabilities within food systems, b) areas that need further exploration, c) practices that are needed for food system sustainability, d) stakeholders whose interests should be prioritized. N = 1500**

Overall, the participants share a view on need for adequate food for all. However, the areas of divergence in food safety and adequacy were given to express two themes. First, the pesticides industry is a multi-billion sector and will not sit back and watch as they lose market and business for their products. Therefore, we might need to look for ways of incorporating them to see if they can produce safe alternatives (biopesticides) to the harmful chemicals. Second, double standards where the Government sets higher standards on food safety for the export market than they do for local markets. There is a need to push consumers to demand the same measures.

In power dynamics in the food system, some divergence was also noted. The "Business as usual" situation will continue to threaten sovereign food systems in Kenya and the country's industrial agriculture agenda. For example, national budget allocations for the past five years remain at less than 4% of the national budget. In addition, Africa is an untapped export market for pesticides, so there is an increase in pesticide exports to the continent. Then, *Nation-wide* public opinion on politically sensitive issues such as Genetically Modified Organisms and chemical pesticides and fertilizers to inform government budget allocations and political priorities (not the other way



around). Some participants have heard of their friends or relatives who do not quite mind having food whether GMO or not as long as they can get to sell, and eat.

These sessions did discuss why civil society actors still need to be part of the food systems dialogues. Issues related to food systems and their discussions are within democratic processes, public participation and overall inclusivity. The collaborating organizations and dialogue participants hold to a firm belief of an all-encompassing process which brings farmer and consumer interests and perspectives on board -- especially in the wake of concerns on stakeholder values, corporate capture, accountability and human rights.

<b>Action Tracks:</b> <i>Please tick if this entry is related to one or more of the Action Tracks</i>		<b>Keywords:</b> <i>Please tick if this entry is related to one or more of the following keywords</i>			
<b>Action track #1 ensure access to safe and nutritious food for all</b>	X	<b>Finance</b>		<b>Governance</b>	
<b>Action track #2 shift to sustainable consumption patterns</b>		<b>Policy</b>		<b>Trade-offs</b>	
<b>Action track #3 boost nature-positive production</b>	X	<b>Innovation</b>		<b>Human rights</b>	
<b>Action track #4 advance equitable livelihoods</b>		<b>Data and Evidence</b>		<b>Environment and Climate</b>	
<b>Action track #5 build resilience to vulnerabilities, shocks and stress</b>		<b>Women &amp; Youth empowerment</b>			



## Treating the Policy Disease in the United Nations Food Systems Dialogues

### A Case Study of Kenya as an African Union Member State

#### AHADI Mentors and Think Tank Independent Dialogue Dynamic Outcomes: A Pre-UN Food Systems Summit

July 29<sup>th</sup>. 2021

#### Background

The UN Secretary-General, António Guterres, has called on all world leaders to take part in a historic Summit in 2021 that will help establish the future direction for food systems and accelerate collective action to that end. This reflects the increasing recognition that transforming food systems is central in efforts to achieve all the 17 Sustainable Development Goals (SDGs) by 2030. The United Nations Food Systems Summit (UNFSS) comes at a time when there are increasing calls for inclusive and equitable transformation of Africa's food systems, especially in the wake of recent disruptions from COVID-19, Climate Change vagaries and other related stressors.

The COVID-19 pandemic has exposed the fragilities and inequalities in food systems thereby necessitating an urgent need to ensure that food systems are more sustainable, inclusive and resilient. The Food Systems Summit will launch bold new actions to deliver progress on all 17 SDGs, each of which relies to some degree on healthier, more sustainable and equitable food systems.

The summit shall provide a platform to help stakeholders better understand and manage complex choices that affect the future of food systems within the context of the 2030 Agenda and to meet the challenges of poverty, food security, malnutrition, climate change, and natural resource degradation. The summit shall **call people to action towards a transformation of the world's food systems so as to deliver on safe, equitable and sustainable food systems around the world**. The Food Systems Summit reflects the urgent need for global change in five actions areas (action tracks) namely:

1. Ensure access to safe and nutritious food for all;
2. Shift to sustainable consumption patterns;
3. Boost nature-positive production;
4. Advance equitable livelihoods;
5. Build resilience to vulnerabilities, shocks and stress

When our food systems fail, the resulting disorder threatens our education, health and economy, as well as human rights, peace and security. As in so many cases, those who are already poor or marginalized are the most vulnerable. There is widespread recognition of the need for change for food systems need to become more resilient, sustainable and equitable in line with the SDGs. The UNFS Summit slated for September 2021 with a series of build-up dialogues/activities seeks to awaken the world to the realisation that we all must work together to transform the way the world produces, consumes and thinks about food. It is also. The Summit will bring together key players from the worlds of science, business, policy, healthcare and academia, as well as farmers,





indigenous people, youth organizations, consumer groups, environmental activists, and other key stakeholders to generate solutions that will require everyone to take action to transform the world's food systems

## The Participation Challenge

In a bid to make her contribution to ongoing UNFSS pre-summit dialogues Kenya organized its policymaker's dialogue on "Creating an Enabling Environment for Sustainable Food Systems" with government stakeholders and Government Ministries to create a unified voice on Kenya's pathway to the Food Systems Summit and respond to the specific policy issues raised at the regional economic block levels. The dialogue which was held on Wednesday 21st July 2021 from 9.00a.m to 12.00 was attended by over 200 stakeholders. The Agile Harmonized Assistance for Devolved Institutions (AHADI) Mentors and Think Tanks were represented by 10 mentors.

The issues raised at regional economic blocks that prompted national policy dialogue included: Policy development, regulation and harmonisation was a key issue raised in each of the regional dialogues.

- The need for policies that support climate smart solutions, reduce post-harvest losses, encourage and spur value addition and agro-processing is critical.
- While counties noted the need to align agricultural policies at the county level, the need for policy coherence and harmonization between county and national government was highlighted as crucial.
- Inclusivity in policy development was a key issue raised. The need for community, youth and multi-stakeholder engagement in policy making was noted.
- The need to strengthen the policy environment to enhance and protect agricultural land was raised.
- The importance of policy strategies for Food and Nutrition Security was raised including the need for a trans-boundary livestock disease policy.

This Dialogue was organized and a specialized group of Development Mentors and Think Tank who have been working to strengthening devolution under AHADI for over 7 years in Kenya participated but did not contribute due to time constraints. The group under moderation of Douglas Ouma, Retouch Africa(RAI) and certified UNFSS moderator further facilitated the team to further dialogue and conducted a robust analytical work on the global dialogue outcome to date to identify overlooked issues. The following are the key outcomes based on the 5 Action tracks and cross cutting issues. The recommendations are at two levels, one African Union level and Country and sub national levels (Kenya specific case).

Proposed Gamechanger Solutions by AHADI Specialized Think Tank

### 3.1 Policy propositions for Africa Common Position on UNFSS

#### 1. Additional 24 gamechanger propositions to African Common Position on UNFSS based on identified overlooked issues in the ongoing dialogues as shown below

Action Track	Overlooked Gamechanger Propositions
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<p>Action Track 1: Ensure access to safe and nutritious food for all</p> <p>Action Area 1.1: Promote Food Security and Reduce Hunger</p>	<ol style="list-style-type: none"> <li>1. Increase road, rail, ports and other transport and logistics connectivity and reduce tariff and other non-tariff barriers to ease food access and lower the cost of food</li> <li>2. Increase smallholder farmer incomes, agricultural productivity and equity by enabling access to inputs, technology, mechanized services and finance through public-private partnerships.</li> <li>3. Address smallholder farmer self-vulnerability by ensuring priority access to seeds that support crop diversity, and services, support, advice and inputs to optimize soil health</li> <li>4. Launch Coalition of Youth in African Agriculture within the formal AU framework</li> </ol>
<p>Action Track 1: Ensure access to safe and nutritious food for all</p> <p>Action Area 1.2: Improve Access to Nutritious Food</p>	<ol style="list-style-type: none"> <li>1. Establish food and nutrition business development, innovation and financing hub for high-impact African agri-SMEs distributed around regional clusters around and within Africa (“hub and spoke” strategy)</li> <li>2. Modernize the micronutrient value chain to support staple food biofortification and complementary food industrial fortification strategies</li> </ol>
<p>Action Area 1.3 Make Food Safe</p>	<ol style="list-style-type: none"> <li>1. Develop systems and capacities to track and monitor food safety standards over time</li> <li>2. Develop systems and capacities to enable rapid responses to foodborne disease and related outbreaks</li> </ol>
<p>Action Area 1.4 Cross-Cutting Issues</p>	<ol style="list-style-type: none"> <li>1. Develop Digital Data and Knowledge Management frameworks to guide multiple food systems transition and transformation pathways in various settings and circumstances that ultimately support the “access to safe and nutritious food for all” framework around food security and the reduction of</li> </ol>

	hunger, and access to food that is both nutritious and safe
<p>Action Track 2: Shift to sustainable consumption patterns</p> <p>Action Area 2.1 Enabling, inspiring and motivating people to enjoy healthy and sustainable options</p>	<p>1.Strengthen and deepen implementation of the “One Health” framework within a sustainable food systems context</p>
<p>Action Area 2.2 Slashing food loss and waste and transitioning to a circular economy</p>	<p>1. Establish multi-stakeholder frameworks (public and private sector, business and households) that innovatively address overall food loss and waste with a bias towards incentives rather than sanctions in a way that builds a circular economy</p> <p>2. Pilot and/or scale up existing investments in reducing on-farm and post-harvest losses through networks, partnerships and other collaborations</p>
<p>Action Track 3: Boost nature-positive production at sufficient scale</p> <p>Action Area 3.1 Protect natural ecosystems from new deforestation and conversion for food and feed production</p>	<p>3.1.1 Explore and pilot the Sustainable Agriculture and Just Rural Transition initiative with a view to mainstreaming it into domestic policies that direct resource allocations and investment towards sustainable agricultural practices that support climate action</p>
<p>Action Area 3.3 Restore degraded ecosystems and rehabilitate soil function for sustainable food production</p>	<p>3.3.1 Promote sustainable food production through a mix of practices that balance and build ecological connectivity and human-wildlife coexistence among local communities</p>

<p>Action Track 4: Advance equitable livelihoods and value distribution</p> <p>Action Area 4.1 Rebalancing Agency within Food Systems</p>	<p>4.1.1 Pilot and roll out the Farmer Field and Business School concept (that builds on the Farmer field School framework) as a participatory, women and youth-focused training, extension services and business development and market support approach</p> <p>4.1.2 Empower youth as innovators and change makers through training, mentorship, dedicated services and the requisite visibility and incentives</p> <p>4.1.3 Women and Youth's economic empowerment in agriculture and agribusiness from tilling the land to manufacturing- (WYEEAA Manufacturing Retouch Model).</p>
<p>Action Area 4.2 Eliminating Worker Exploitation and Ensuring Decent Work in Food Systems</p>	<p>4.2.1 Promote policy-coherent living incomes and social protection measures in value chains for smallholder and small scale farmers and agricultural workers</p>
<p>Action Area 4.3 Localizing Food Systems</p>	<p>4.3.1 Develop and promote integrated food strategies that are relevant to geography and location (regions and provinces, counties or districts, cities and towns, rural centres)</p> <p>4.3.2 Promote multi-stakeholder networks and platforms (public, private and 4<sup>th</sup> sector, non-state actors) across agricultural value chains within above national geographical and locational ecosystems.</p>
<p>Action Track 5: Build resilience to vulnerabilities, shocks and stress</p> <p>Action Area 5.1 Food Systems Resilience</p>	<p>5.1.1 Explore integrated approaches to resilient food systems (country examples)</p> <p>5.1.2 Establish systemic approaches to crisis management from disaster reduction to forecasting and monitoring to early warning and emergency response and mitigation</p>
<p>Action Area 5.2: Universal Food Access to build resilience</p>	<p>5.2.1 Promote local food for local production across strategic national food supply chains and food systems that are pandemic resilient</p>

Action Area 5.3: Climate resilient pathways to food system transformation	5.3.1 Develop strategic climate-resilient pathways through benchmarking of smart practices and development of context- relevant processes, systems and tools
<p>Action Track 6: Governance (classified as cross cutting issues)</p> <p>6.1 Action Area: Planning and Governance</p>	<p>6.1.1 Establish National and Regional Food Systems Action Hubs on a multi-sectoral, multi-stakeholder basis that places Food at the core of the development (and SDG) agenda</p> <p>6.1.2. Equip Leaders, farmers and key actors in food systems value chain with transformational leadership skills to inspire and motivate farmers and other players in food systems value chain to high performance levels</p> <p>6.1.3 Mindset shift – Change narrative by thinking positively about agriculture and governance</p> <p>6.1.4 Tackle corruption head on in food systems value chains as it is an engrained issue and also a mental sickness that is encouraged by dysfunctional systems.</p> <p>(educate the population on enterprise and wealth creation that is sustainable and long lasting; upholding professional values; a Judiciary which is supposed to deal with offenders need to be above reproach like Ceasor's wife)</p>

### 3.2. Summary of Policy prescriptions and Gamechanger Solutions for National and Subnational levels

	Action Track	Recommendations
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1	<p><b>Ensure access to safe and nutritious food for all</b>  <b>Enabling all people to be well nourished and healthy</b></p> <p>Achieving Zero Hunger  ii. Increasing access to affordable and nutritious food  Increasing food safety</p>	<p>Increase agricultural water by 100% in ten years.</p> <p>2. Increase smallholder balanced crop fertilization and fertiliser use by 50% in five years.</p> <p>3. Increase livestock water and livestock feeds in the ASALs by 50% in five years.</p> <p>4. Introduce value addition and agricultural products processing in all the counties that produce targeted products for the wider Africa continental trade area within the next five years.</p> <p>5. Increase fish products by 80% in five years to meet both domestic demand and export demand.</p> <p>6. Increase road, railway coverage /interconnections and reduce tariffs on food transportation network to ease food access and lower cost of food</p>
2.	<p><b>Shift to sustainable consumption patterns</b></p> <p>(Promoting and creating demand for healthy and sustainable diets, reducing waste)</p> <p>i. Improving food environments  ii. Reducing food waste</p>	<p>1. Incentivize the private sector to participate in marketing and export of the locally produced products while also participating in processing and value addition.</p> <p>2. Commercialize the tradition grown food crops and invest in upgrading the same to ensure farmers engage in upgraded traditional food crops that are high yielding</p>
3.	<p><b>Boosting Nature-Positive Production at sufficient scale</b> Acting on climate change, reducing emissions and increasing carbon capture, regenerating and protecting critical ecosystems and reducing food loss and energy usage, without undermining health and nutritious diets</p>	<p>1. Ensure availability of both macro (N, P, K) and micronutrients (S, B, Mn, Fe, Co, Zn, Mn, etc.) fertilisers in all agro input shops and wholesalers in all agricultural corners of the country.</p>
	<p>Youth are less involved in Agriculture and Agribusiness.  The potential of the youth to contribute actively to the transition towards more sustainable food systems, through innovative solutions and concrete actions</p>	<p>1. Harness the creativity and energies of the youth towards pursuing the nature positive agricultural production, and in harmonious collaboration with the relevant actors.</p> <p>2. Continuous emphasis on the link between resilient food systems and associated environmental and social systems to a larger extent.</p> <p>Promotion and support to <b>business incubation for youth</b> as a key driver for commercialization of agro opportunities</p>





	<p>Lack of effective frameworks that optimise community participation in management of sensitive ecosystems vs. government protectionist models.</p>	<p>1. Apply <b>The Yala Hub Participation Framework for Optimizing Community Participation</b> in the Management of Yala Wetland Ecosystem in Lake Victoria Basin, Kenya. A 5-steps model with Community Facilitator and Information Resource Hub (By Prof Victor Odenyo and Dr Douglas Ouma, University of Eldoret, Kenya).</p>
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4.	<p><b>Advance equitable livelihoods</b></p> <p>Raising incomes, distributing risks, expanding inclusion, creating jobs</p>	<ol style="list-style-type: none"> <li>1. Develop a policy that compels counties to employ community extensional agricultural officer in every village as the smallest unit of devolved structure.</li> <li>2. Review agricultural land policy to allow for agricultural land consolidation to allow for mechanization and create settlements villages that have all the requisite amenities</li> <li>3. Provide guidelines in conjunction with the Ministry of Education. Looking ahead, registration of primary and secondary school will be approved against evidence of some size of an agricultural e.g. 2 hectares. The school should work with the authority to find land where students will undertake their agriculture activities as an extension of the 4K club.</li> <li>4. Ministry of Agriculture in conjunction with the Ministry of Education, Media house, and Communications Authority of Kenya should provide guidelines on free compulsory agricultural based programs with reasonable period of viewership on all media stations both radio and TV targeting children (cartoon form) and adults. This will motivate young people to venture into agriculture as the adults share best practices in agriculture.</li> <li>5. The Ministry of Agriculture in conjunction with the Ministry of Lands should design a guideline on the minimum land subdivision units to protect land for farming.</li> <li>6. Through a multi-agency approach, the Ministry of Agriculture should map out all the agriculture lecturers, agriculture retirees and other agricultural experts in colleges and universities to develop a pool of database. An intergovernmental agreement with counties should be put in place where all this expertise will be attached to the 47 counties in the Ministry of Agriculture and allocated a village to directly support counties with strategies on food security and strengthen the pool of knowledge.</li> <li>7. Parliamentarians should endeavour to defend the biodiversity, indigenous cultures and national systems. There is need for policies that will allow farmers to produce food using indigenous seeds that are readily available and that they can be share amongst themselves. The policies should allow farmers to produce safer and healthier food in an environmentally safe way, not</li> </ol>
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		<p>punitive policies designed to eliminate farmers and have our food system controlled by corporations out to make profits at the expense of our health and our environment.</p> <p>8.Youth to own land and resources and participate in value addition</p>
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5.	<b>Build resilience to vulnerabilities, shocks and stress</b> Ensuring the continued functionality of healthy and sustainable food systems)	1..Adopt Inclusive social protection measures Invest in early warning system for disaster management 2.Develop pro-poor food systems policy which include capacities for smallholders and highly vulnerable to weather shocks and stresses in food system (i.e. investments in small stocks, irrigated gardens, financial access) 3.The catalytic role of central banks in building resilience to vulnerabilities, shocks and stresses especially on low presence of financial institutions, poor access to finance and high administrative costs -Unlocking of finances - central banks could leverage on exchanges to achieve monetary and price stability in the economy
	<b>Crosscutting/Governance</b>	
1.	Investment going down, No incentives for farmers, High cost of inputs due to Inadequate transformational Leadership Capacity/Skills	1. Equip Leaders, farmers and key actors in food systems value chains with transformational leadership skills to: -inspire and motivate farmers and other actors in food systems to high performance levels Model: CAADP-USAID/Africa Lead on ‘Champions for Scaling Up Food Security Initiatives’ has been a game changer. The over 2000 trained champions introduced major changes in their regions. e.g. current Vice President of Tanzania Dr Philip Mpango Mindset shift – Change narrative by thinking positively about agriculture and governance
2.	Corruption in food systems	1. Tackle corruption head on food systems value chains as it is an engrained issue and also a mental sickness that is encouraged by dysfunctional systems.  (educated on enterprise and wealth creation that is sustainable and long lasting; upholding professional values; a Judiciary which is supposed to deal with offenders need to be above reproach like Ceasor's wife) Joint Sector Reviews at County Levels to receive and debate County Annual Progress Report



## Conclusion

In sum Kenya Food Systems stand to benefit by incorporating the proposed policy and game-changing interventions in its National Policy and Strategy to implement the UNFSS outcomes. This will however, require business unusual mindset and studious implementation by all actors in the food systems.

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## A Summary of Youth Requests On Kenya's Food System (What Youth Want)

June 2021

### Report

Written and compiled by youth champions from the Youth for sustainable Development, Kenya. The youth champions who led on the process and the dialogues include:

Dankan Katam and Hilda Terer from Nandi County,  
Cetric Mululu and Simon Wanyonyi from Bungoma County,  
Henry Nyamogesa and Wycliff Otieno from Kisumu County Lucy  
Asewe and Josephine Otieno from Siaya County Crispus Alama  
and Stella Sululu from Mombasa County Oliver Bada and Jeniffer  
Njoli from Taita Taveta County Shila Ukumbini and Filex Pedro  
from Kilifi County  
Kenneth Ramah and Caren Kimeli from Nairobi County  
Mary Ngina, Margaret Wanja and Edith Kirori from Machakos County Chrispus  
Mukumbu, Karen Wayua and David Kimaili from Makueni County Felicita Nkatha  
and Josphat Lengipis Laikipia County  
Umar Osman and Farida Bashu from Isiolo County Ruth  
Nashipae and Kelvin Leteipa from Kajiado County





## YSD proposed Game changers.

The following are the key ask by the youth to the Kenya National Food System Dialogue for inclusion in the Kenya presentation to the UN during the 2021 Food Summit. More importantly, the youth implore the Kenya national and county governments to implement these game changers to deliver a healthy, thriving planet with decent jobs and food and nutrition security for the Kenyan youth. The game changers are advanced by 26 youth who are part of the [Youth for Sustainable Development](#) network comprising over 2000 youth. They arrived at the conclusions after delivering community dialogues between February and May 2021 on issues related to food security. The 26 youth engaged farmers, food industries, food vendors, Nutritionists, Public Health officers, the county governments, private sector, religious leaders, and consumers. They employed diverse methods such as social media, face to face meetings, radio discussions, round-table discussions, and phone interviews. In total 30 youth-driven dialogues took place across 13 counties including Isiolo, Laikipia, Kajiado, Taita Taveta, Kilifi, Mombasa, Nairobi, Kisumu, Nandi, Siaya, Machakos, Makueni and Bungoma. The dialogues included face to face discussions, Twitter and Facebook live conversations chats and radio talk shows on the 5 action tracks.

1. Information, knowledge, and skills public campaigns and institutional approaches. A public interest-oriented information campaigns, knowledge sharing and skills building have potential to trigger and shape youth participation in the food system especially around action track 4 on equitable livelihoods. Institutional and system approaches like the education system need to integrate the knowledge generation and basic understanding around the food issues on a sustainable manner. Public health information systems should provide information on nutrition, schools should include information on sustainable food production and consumption in the curriculum; public extension systems should support smallholder farmers, fisherfolk, and invest in climate resilient/agroecological food systems. Once youth are sensitized on the opportunities that abound within the food system, they will invest their time and skills in farming, processing, and distribution. Similarly, for action track one on access to safe and affordable nutritious food, consumer awareness is needed to build “informed choice” and therefore shape the market through creating a demand for healthy foods. This is crucial to address the twin epidemic of undernutrition and obesity.



*Jeniffer Njoli, Food system Youth Chmpion, during a radio talk show on food system challenges in Taita*



*“Unsafe foods are junk foods being sold on the streets of Nairobi... Safe foods that are maintaining food security in Nairobi County are maize, wheat, beans, peas, banana, potatoes & pumpkins”- Bill Sahani, deaf youth member of YSD.*

*“I believe all foods can be safe and unsafe... some will say that cereals, fruits and vegetables are safe but that is only true if the farmer used the correct means to grow them & the seller and transporters did not tamper with them”- Kristina Kamanga.*

*“I always feel vegetables sold in Nairobi are not safe for consumption while the cereals are safe”- Njeri Waithera.*

*“For example, at my home area I saw a woman washing her vegetables on a river that is nearby, then after there she sells it to customers, this is so unhealthy, and we warned her of doing such a thing again”- Samuel Njuguna.*

*“I also doubt meat because, you might be in need of Beef, (cow's meat) but another type of meat is presented to you... Mainly 'kienyeji ' food like Cassava, Maize and potatoes or yams which are planted from the soil. They're considered safe unlike Bread or soda that is manufactured” – Maxwell Oduol.*

*“How about the one that is preserved using chemicals to last longer? Or chicken injected with hormones? Recently there has been also 'plastic fish' Animal protein is become increasingly unsafe”- Tabitha Mwai.*

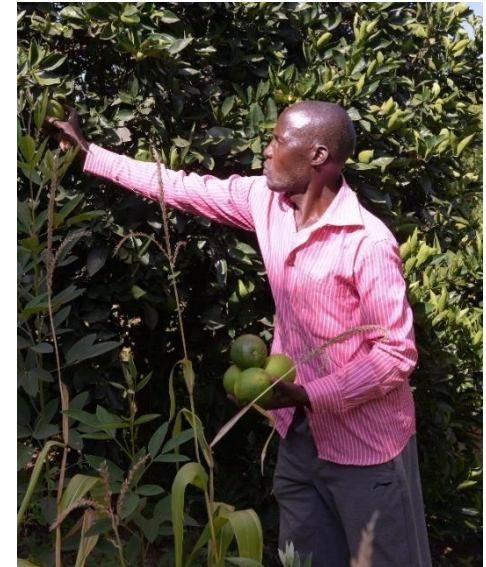
*“All food is safe and unsafe to human consumption but the safe one considers approved by the ministry of health for consumption” – Videliz Njoki.*

*“Organically produced food are safe because they are not contaminated with chemicals”- Alfred Abuka.*



2. Shift focus from agriculture for business to a “right based” normative framework of developing policies. A consumer oriented commercial model has proven expensive in terms of climatic and ecological destructions. This has also led to a huge number of undernourished and obese. It has also resulted in apathy amongst small scale farmers as struggle with rising costs of inputs (communities lost their seed banks and traditional knowledge). A people centered policy framework based on advancement of a right to food will serve both the current and future generations. The government has an obligation to serve public interest by actively discerning and rejecting false promises.

*“The quality of food begins at the farm, the young small-scale farmers I talked to, want to be sensitized and supported with adequate facilities to produce quality food. They should be encouraged to use certified seeds and good animal breeds in their farm, embrace organic farming, provided with adequate storage facilities and information regarding modern farming be made available to them”. Henry Nyamogesa, Youth champion, Kisumu County*



3. Focus on young small-scale farmers. All the youth that participated in the dialogue highlight access to land and access to Finance as an issue. To create employment for these and other youth, the government needs to shift its investments toward small scale farmers as opposed to large scale commercial farming. A focus on small scale farming has a great promise for the fight against poverty, large scale employment creation for the youth, has less impact on climate and solves food safety issues associated with use of chemicals. This focus will depend on building suitable agriculture and associated infrastructure around the youth small scale famers for production, processing, and marketing of their produce.

*“Agriculture can be a great employer for us as youth who have been unable to find employment in our areas of study. Lack funding to begin this venture and measures should be established to enable the youth to access funding through loans and even grants to enable them practice farming and earn income to meet their daily needs instead of depending on employers. The youth are also denied a chance to access land which is a basic factor of production by the older generation who control land. This is a limiting factor for those who wish to practice farming”. Dankan Katam, Nandi County*

*“We do not have lands to invest, furthermore we seek employment in places such as supermarket as there, exists is less toil, we do not engage much in farming as other rich people do large scale and there is too much corruption in getting seeds and tenders.” Lucy Asewe, Siaya County*



*“Women play a vital role in advancing food security, participating in all aspects of rural life. Women own less land, have limited ability to hire labour, and have impeded access to credit, extension, and other services. Women farmers cultivate smaller plots and less profitable crops than male farmers thus need for the county to invest in infrastructure and systems that will enhance this as well as bridge the gap”. Baha Nguma, Kilifi County*

4. Agroecology. The Youth for Sustainable development call upon the county and national governments to ensure greater public investment in agroecology and support for smallholder food producers, including access to finance to support agroecology related activities. Approximately 1.3 million people in Kenya are currently facing Crisis (IPC 3) or worse levels of acute food insecurity. This food crisis is further exacerbated by the climate and biodiversity crisis facing communities. Our agriculture and food system is at the center of this crisis, the way we produce and consume food is having a major impact on our land, our environment, our soils, our health, and our economy. It was as early as in 2009 that a scientific assessment carried out highlighted that ‘business as usual’ was no longer an option for agriculture, and transition to ecological agriculture was needed. We need to transition our food production system to a climate resilient sustainable agriculture. There is growing support for Agroecology with FAO member countries agreeing Principles for Agroecology. Kenya should adopt and implement the guidelines. Agroecology works with nature. Agroecology builds resilience, improves economic stability by diversifying income source, maximizes on Labour needs and production over time, reducing vulnerability to commodity price swings and this is something that is beneficial for those at the bottom of the pyramid.

*“To address the ongoing challenges, the Machakos county government needs to urgently shift funds away from industrial agriculture and support ecological farming. Such an action will increase farmers’ income, build resilience, and empower local farmers. This will break the cycle of dependency on large quantities of chemical fertilizers and pesticides and address the multiple challenges facing small-scale producers.” Stanley Muli, FAS Ltd, Machakos County*

*“ Due to the climate change, as young farmers in our county , we need support to be able to shift from growing maize to growing fruit trees, rearing chicken, and fish. Livestock rearing should be encouraged to women as they spend most time at home. More people need to grow their own food by embracing kitchen gardens and small-scale farming.” Daniel Ngao, young farmer in Machakos County*



*“Laikipia County is very vast and getting to some of the areas where farmers are practicing farming is very challenging both in dry and wet seasons. Laikipia north which is the most arid experience drought for the better part of the year and putting in consideration that we are a pastoral community. We need support in coming and practicing with climate smart agriculture methods that we can use”. Josphat Lengipis, Laikipia County*

5. Policy and SDGs: Agriculture has a role to deliver on the Leave No One Behind agenda and Sustainable development goals (SDGs).
  - a. The Youth for sustainable development, Kenyan youth are calling for the excluded populations’ access, participation, and their meaningful representation in decisions regarding their involvement in agroecology for inclusive livelihoods. Policies must be developed and delivered in an inclusive and participatory manner.
  - b. Agriculture has a role to play in delivering the three dimensions of sustainable development; Social, environmental, and economic, but policies must make sure that the 3 dimensions are delivered in a balanced manner.
  - c. The Policies need to be favorable to all farmers and especially the young (youth) small scale farmers ensure that we deliver the SDGs targets and the right to food and employment.
  - d. There should be awareness sessions on Policies that exist for the young small-scale farmers, and how they can favor the farmers. Awareness should be through all available platforms, online and offline to ensure everyone despite their marginalization and location, has access.

The relevant targets in SDG 2 include:

- 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round.
- 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons.
- 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
- 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters and that progressively improve land and soil quality.





*“To have an effective value chain, policies need to be put in place. We need to analyse what is around us in all sectors. Nothing stands on its own. For example, if we build aggregation centres, we need good roads to transport products, electricity to run the storage centres and so on. Therefore, sector departments must work together to achieve food security. Consolidated efforts need to be made when it comes to food systems.” Francisca Mwanzia, Machakos County*

*“I think the government and other related agencies have had plans, programs and policies to ensure there is no food shocks and insecurity before, but they should now work on policies that can be carried through by the people directly involved in the food production system. Only then can we be assured of a food secured society”. Caleb, Makueni County*

*“We enquired about policies, the County government staff claimed, and I Quote ' You are youth, you should google, everything is available online.' and she hung up. My worry is that some of the young farmers in Kajiado can't access online things and will continue being left behind”. Kelvin Leteipa, Kajiado county*

*“We need an agriculture policy in our county, and more trainings, preparedness measures and coping strategies put in place to help my community and the small-scale farmers especially be resilient to vulnerabilities, shocks and stress including the conflicts including Resource based conflicts, tribal, political conflicts and human wildlife conflicts”. Umar Osman, Isiolo County*

**The game changers above will respond to key issues raised and compiled by the youth during the dialogues.**

#### **Key issues raised.**

Across the counties, YSD members raised lack of access to information, knowledge and skills and productive assets as the main obstacles inhibiting meaningful participation in the food system.

- 1- Information, knowledge, and skills- accurate and reliable information is not available without having to search for it. Public campaigns and information around food systems ranging from production methods and resources, seeds etc. to consumption promotions is mainly sent out by producers marketing their products and services. Agricultural extension services too, are provided by seed companies and/or manufacturers of





agrichemicals and fertilizers. The consumers were found to lack information on food safety issues, nutritional value and hence they lack capacity for informed choice that can shape the market.

- 2- Access to productive resources such as land, Information Technology, finance, and equipment is limited.
- 3- Policies. The youth indicated having low awareness of existing policy. They overserved that their interaction with policy including awareness of their entitlements and opportunities was lacking. They felt that with policy awareness they could benefit in government programs, participate in shaping and food system and monitoring of its effectiveness. Land rights infringement and exclusion of the PWDs, youth and women in employment and decision making was also cited as a policy gap. The youth in the city mentioned that reports of high levels on antibiotics in food products sold in supermarkets was a consequence and a weak consumer protection policy.
- 4- Lack of food safety nets for people who lost income due to COVID 19 elaborated the weakness of the food system to cushion the population against shocks and stress. In some areas, youth reported how erratic weather caused by climate change has resulted in human animal conflicts as animals migrated to human settlements in search for food and water.
- 5- Infrastructure including lack of storage facility, a weak transport system coupled with dilapidated rural roads was cited as a cause for post-harvest loss and a general loss of nutritional value.
- 6- Cost of organic food in the city was highlighted as a major cause of poor nutrition. Mothers mentioned that they could hardly afford processed milk and therefore feed their babies with milk indurated with preservatives.

In view of the high levels of unemployment amongst the youth, YSD members raised a vision of re-engineered food system that can provide decent work for all youth ranging from young unemployed graduates to those with low levels of schooling, from young women to young men, and from urban and rural based youth. Re-engineering of the system means a change of values, from a business to a rights-based orientation, from a profit centered to a people centered approach. This system change is urgently needed by the deaf youth from Nandi County who aspire for jobs in the local tea factories. When they engaged factory management in a dialogue around deaf participation in factory work, the response was “it is too dangerous here for deaf youth.’

While tackling income poverty is important to young people, YSD members felt that income opportunities created by a transformed food system should help them(youth) make a positive impact on human development. Youth want to help meet the nutritional needs of the population through provision of safe and affordable nutritious food.

Towards the realization of the vision above, several pre-conditions were articulated.



- 1- cushion the youth from the vagaries of climate change including erratic weather conditions.
- 2- tackle ecological degradation especially soil and water pollution including erosion.
- 3- building their resilience to shocks and stress including disaster preparedness.

## Conclusion

The food system in Kenya is making strides towards sustainable, inclusive, and stable food systems. This calls for meaningful stakeholder's involvement for greater impact. In the recent food systems dialogues facilitated by food systems youth community volunteers, YSD Kenya majored on the youth and PWDs as the target groups. YSD Kenya recognizes the urgency in addressing the challenges identified through the community and national dialogues to ensure unhindered access to safe, quality, and nutritious food for all, especially those in marginalized and fragile areas. YSD Kenya has already begun building the capacity of small-scale youth farmers in Machakos, Makueni, and Taita Taveta counties to embrace agroecology: organic farming, mulching, drought-resistant seeds, crop rotation, and adoption of renewable energy in farming to build community resilience. There is need for recognition of a regenerative, productive food sector that can meet the nutritional demands of the community, provide environmental benefits and services while creating employment and sustaining livelihoods.



Youth under YSD Kenya are doing their best to bring about change in their communities. Alone, we can't create the bigger social change. We are therefore calling on the governments to join us in our struggles by creating a Theory of Change underpinned by on the preconditions outlined above and development pathways defined by the "game changers" outlined in this paper.

God bless us all, long live Kenya, prosperity, and good health to the Kenya youth, soil, and environment.

**Youth for Sustainable Development, Kenya** ([Youth for Sustainable Development](#))



County Food systems Dialogues led by YSD youth champions - Taita



County Food systems Dialogues led by YSD youth champions - Siaya

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The role of the youth in agriculture has been misplaced and the youth need to know about the new agriculture methods. The food value chain is more than tilling of the land and the 'dirty' /tiresome labour, but involves innovation,technology,smart farming and so much more. Therefore they need to identify the role they can take up in the food value chain and come up with innovative ideas of securing livelihoods through agriculture. #machakosfoodsystemsresearchroundtable VSO KENYA Youth for Sustainable Development Mary Mutula Charles Mwangi Waituru

**Youth For Sustainable Development -Bungoma chapter**

Food System Summit 2021 is approaching and we would like to ask you a question. What do you think can be done to improve the food systems in Bungoma County to eliminate poverty & provide productive employment & decent work for all? #FoodSystemsYouthKe #FoodSystemsHero

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FFR 10

- i The Kenyan government has a constitutional obligation to ensure the Right to Food for all Kenyans as required under Article 43 of the Constitution.
- ii This group denotes a category of the vulnerable often referred to as persons living with disabilities i.e. PLWD