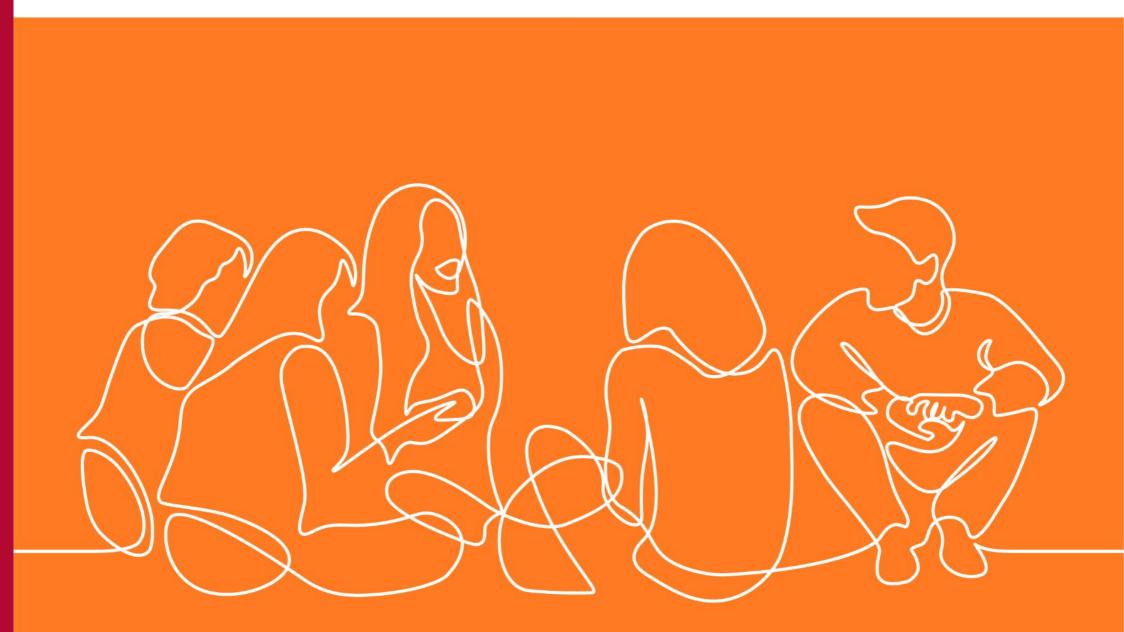


ANNEX 3 TO GAIN CONVENING PAPER 12 Indicator Matrixes from the Stakeholder Consultations

## FOOD | SYSTEMS | FORESIGHT



# **Guide to Matrices Scoring**

	Degree of Meaningfulness	Ease of Measurement	Degree of Moveability
	x-axis	y-axis	Bold text shows 'high'
High	Highly relevant to pathways	Easier to quantify	Change likely in < 3 years
Low	Less relevant to pathways	Harder to quantify	Change likely in > 3 years



# ETHIOPIA

#### Ethiopia Outcome [Cluster] 1: "Ensure availability and accessibility of safe and nutrient dense foods"

High

#### Nutrient-dense Crops

- Percentage reduction in food loss of nutrient dense staple foods
- Percentage increased in production of nutrient dense staple foods
- Percentage of nutrient dense inputs (seeds) provided
- Production of target nutrient-dense foods
- Availability of prices of targeted nutrient-dense foods in local markets

#### Food Safety

- Number of the population who contributed in food safety regulations
- Percentage increase in citizen participation in the regulatory process

#### Food Systems Thinking

- Number of experts at all levels trained on food system thinking
- Number of the households trained on food system thinking
- Percentage of food waste reduced
- Production losses on reduced climate impact
- Number of households producing food on home garden (multiple)
- Number of households receiving support to produce animal source foods
- Percentage increase of the population with food & nutrition security
- Implementation of good agricultural practices
- Indigenous crop, fruit, vegetables identified
- No. of institutions in place the food system thinking
  Item self sufficiency in production of major foods
- Sustainable provision of fortified products

#### **Productivity, Production, and Diversity**

- Improved: yield/additional yield produced; efficiency of supply chains
- Percentage of new production techniques/technology package transfer/extend the communities
- Amount of food/yield produced in terms of healthy diet
- Type and volume of: nutrient dense food (multiple); organic inputs (uses/fertilizers) produced; healthy food/crop available in the market; animal source foods produced in climate smart production system
- Number of: novel food processing technology to reduce time, energy, and women workload; Number of improved traditional food processing techniques to improve the nutrient retention
- Incentives for production of nutrient dense foods in place
- Diversity of crop & livestock produced/or produced on farm
- Functional diversity index

#### **Food Fortification**

- Number of: biofortified and industrially fortified food products (multiple); fortified nutrient dense staple food seeds released; institutions in the production of biofortified foods; decision makers trained on food system (production & consumption) fortification
- Awareness on consumption of biofortified foods
- Budget allocated fuels for fortified production & consumption Indigenous Food
- Number of indigenous food: improved technologies (varieties, agronomy, management, fertilizer, soil protection) developed and identified for production and processing; alternative products developed

#### Food Safety

- Number of institutions (importers, manufacturers, wholesalers, retailers) implementing: internal quality management system; hygienic practices; GHP/GTP/GMP [Good Hygiene Practices, Good Trading Practices, Good Manufacturing Practices] in the country
- Reduction in: percentage of adulteration; food borne disease associated morbidity and mortality; share of population with food borne diseases
- Tools for regulation of food safety standards implemented

#### <u>Other</u>

- Percentage of rural population accessing electricity
- Capacity building for production of nutrient foods
- Distribution and accessibility of products
  - Strong implementation of directives for food safety

## **Degree of Meaningfulness**

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Ethiopia Outcome [Cluster] 2: "Sustainable and equitable consumption of healthy, safe and nutrient-dense diets throughout the life cycle"

High

<ul> <li>80% of the district to have food system &amp; nutrition focal person</li> <li>50% increase in nutrition literacy from the 2022 food &amp; nutrition baseline survey</li> <li>Expand the Seqota declaration woredas to 85% in the scalability phase</li> <li>For local ownership half of the expanded woredas to allocate budget</li> <li>Improve the dietary diversity by 50%</li> <li>Increase the number of women who follow the food based dietary guidelines by 80%</li> </ul>
• Reduce attitude towards women violence

Lov

### Degree of Meaningfulness Relevance to our goals

High

Ease of Measurement

Can be quantified

#### New Inputs, Technology, and Start-ups

- Number of studies conducted for documenting new agricultural inputs and technology
- Amount of funding/resources used/allocated for new agricultural start-up businesses or innovation on agricultural inputs & technologies (multiple)

#### **Monitoring and Evaluation**

- Number of monitoring and evaluation actions conducted
- Number of extension workers using M&E system
- Establish Results Based Monitoring and Evaluation (RBME) system

#### **Extension Services**

- Number of farmers, DA, & experts colocated in the area
- Number of producers subscribed for agricultural extension services
- Amount of money allocated for food system transformation & extension support
- Number of reports delivered on the established system
- Percentage of farmers who could transport their products to market using motor driven vehicles
- Number of food processing industries

#### **Inputs and Technology**

- Number of: centers established for agricultural input and technology production/multiplication; agricultural input/technology suppliers licensed/certified; agricultural input (fertilizer) distribution points within the accessible radius (kebele village, which is the smallest admin unit in rural Ethiopia); ag-inputs distributed at each production season; new agricultural innovations introduced in a year
- Number of farmers: subscribed for digital/agricultural extension support services; using modern/digital agricultural technology (or it may be prevalence), (multiple); participated in using new agricultural inputs; produce agri-inputs & technologies;
- Percentage of farmers: covered by digital technology; using more than one agricultural input; using natural fertilizer for their land; using organic/natural fertilizer
- Increased diversity and timely delivery of agricultural inputs & technology (multiple)
- Quantity of organic fertilizers/inputs used

#### <u>Training</u>

- Number of extension service providers trained
- Ratio of agricultural extension workers to farmers
- Increased capacity of extension officers & technical advisors
- Time gap to distribute ag-inputs of different production seasons (standard time should be set)
- Accessibility of agricultural input providers (distribution points) from producers (farmers), including finance (multiple)
- Amount of input (fertilizer and selected seed) distributed to farmers on timely basis (multiple)

## **Degree of Meaningfulness**

Low

### Ethiopia Outcome [Cluster] 5: "Access to markets, market information, infrastructure and specialization"

	• Introduce warehouse receipt system for producers	Nutrient-dense Crops         • Number of farmers participating in nutrient dense production         • Number of nutrient dense commodity adopted traceability system         • Number of nutrient dense crops producers benefiting from incentive schemes         • Hectare of land covered by nutrient dense crops/Number of farms participating in production of nutrient dense cluster         • Hectare of land covered by nutrient dense commodities         • Online grading platform developed and operational         Market Information & Online Trading         • Number of commodities included in the national market info system         • Percentage of woredas with access to national market info system         • Expand/scale up the national market information systems platform for all woredas and commodities         • Develop online trading platform         • Percentage of users trading via the online platform         • Percentage of users accessing contract farming mechanism         • Create contract farming mechanism
1		<ul> <li>Develop scheme for incentivizing nutrient dense product</li> <li>Establish modern infrastructure along the market value chain</li> <li>Introduce traceability system to nutrient dense producers</li> </ul>

## **Degree of Meaningfulness**



Relevance to our goals

Ease of Measurement



<ul> <li>Capacity building of groups addressing issues on food and climate</li> <li>Existence of value addition during food processing</li> <li>Inclusion of grassroot people in government led initiatives (i.e. The Nairobi River Generation)</li> <li>Benefits of omega 3 and 6 for under 5 yrs old and pregnant mothers</li> <li>Exchange programmes supported by the government for learning purposes</li> <li>Government setting aside fundings in terms of grants to support community-led initiatives</li> </ul>	<ul> <li>Nutrition <ul> <li>Adult raised blood sugar</li> <li>Number of advertisements, seminars, workshops, posters on nutrition</li> <li>Number of cardiovascular disease among adults (Diabetes, cardiovascular diseases)</li> <li>Number of trained healthcare workers and general public on nutrition</li> <li>Number of wasting in children under 5 yrs old</li> </ul> </li> <li>Public-Private Partnerships <ul> <li>Creation of public-private MOUs to strengthen partnerships</li> <li>Joint public-private initiatives</li> <li>More community based organisations working hand in hand with the government and private sector</li> </ul> </li> <li>Other <ul> <li>Organic fertiliser production</li> <li>Free tariffs for farm produce</li> <li>Free tariffs for farm tools/inputs</li> </ul> </li> </ul>
<ul> <li>To sensitize through support systems in the community, individual farmers</li> <li>Practicality of government initiatives not just formation of commissions.</li> <li>Prevent loss of nutrients (i.e. during handling and storage, if the products are damaged we get to lose the intended nutrients)</li> </ul>	<ul> <li>Level of knowledge of preparation of nutritious foods</li> <li>All perishable produce should be quickly/safe delivered.</li> <li>Bio-circular technology</li> <li>Reduction in incidence of child obesity in kids</li> </ul>

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Low

## **Degree of Meaningfulness**

- Value addition technologies of traditional foods in agriculture research
- Variety of indigenous root, pulse, tuber, and vegetable stocked by agro dealers

- Private schools providing one warm, nutritious meal to all learners per day
- Private schools with standard kitchen for school meal prep
- Public schools providing one warm, nutritious meal to all learners per day
- Research works on traditional foods
- Public schools with standard kitchen for school meal prep

- Proportion of households recycling food remains for other purposes
- Amount of food salvaged and rechanneled for consumption
- SME's empowered to manage food losses

Relevance to our goals

Can be quantified

### Kenya Outcome 3: "Boosting-nature positive production at sufficient scale"

**Agricultural Inputs** 

fertilisers

price

• Affordable fertiliser (2500 [Kenyan shillings])

• Government to give free access into getting the organic

• Prices for organic fertiliser should be subsidized at a low

	<ul> <li>Decreased chemical pesticides/fertilisers per hectare of arable land</li> <li>Increase in proportion of government subsidy allocated to organic fertiliser</li> <li>Increased digitisation of agriculture input services to increase quality and traceability</li> <li>Increased organic fertiliser consumption (multiple)</li> </ul>
<ul> <li>Consumption of local organic food</li> <li>Digitisation of fertiliser access</li> <li>Fortification value added product</li> <li>Involve children from as low as 5 yrs on importance of farming/tree planting</li> <li>Provision of viable seedlings for higher yields in the field</li> <li>Youths involvement in tree-planting exercises on their own</li> <li>Fortification of processing the organic foods for marketing</li> <li>More universities to be accredited offering agriculture courses</li> </ul>	<ul> <li>Youth Involvement</li> <li>Giving of viable and quality seeds to the young farmers for higher yields</li> <li>Increased school agriculture programs</li> <li>Increase in proportion of youth engaged in food production</li> <li>Increase in share of agribusiness (input supply/value addition/innovation) by youth</li> <li>Youths involvement in agribusiness (i.e., supplies and sales)</li> <li>Introduce training on agriculture at an early level (like in high school)</li> <li>Venture into early trainings/awareness forums for the youths on agriculture (like from high schools)</li> <li>Having more youth companies/suppliers doing business with private/government agencies</li> <li>Increased value added processes or processing units to provide market and employment for youth</li> <li>Introduce digitised farming, like smart farming for the youths</li> <li>Venture into digitised farming (i.e. smart farming to the youth, say from 22 yrs)</li> <li>Youth involvement in value addition</li> </ul>
	food activities (solar dryers, solar irrigation pumps)
	<ul> <li>Increased use of healthy soil management practices</li> <li>Increased use of science and innovation approaches to improve production/productivity</li> </ul>

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## **Degree of Meaningfulness**



**Technical Assistance** 

Measurement

of

Ease

Can be quantified

#### Average technical assistance officer Youth and Women Entrepreneurs Data on access to extension services at the ward Introduce competitions and awards among young level and uptake of those services farmers and groups to enhance food security Educate the community members on ways to Number of youth and women who become • maintain and develop spaces/increase food security agripreneurs Introduce communities on new ways of reusing, • **Agriculture Technology Use** recycling on improved farming Access to housing • Number of visits by TA per farm • Data on access to efficient digital infrastructure • Youth and Women Entrepreneurs Digitised gender and age disaggregated data • Give tenders to youth and women agripreneurs Improvement employment • • Data on access to funding and technical support Improvement of security • Gender and agriculture disaggregated Percentage of rural population using agriculture • • technologies in farming **Agriculture Technology Use** Social amenities (i.e. hospitals) Access to accessible road networks • Improve innovation and tech . **Indigenous Foods** Processing units • **Indigenous Foods** Availability of indigenous food **Decreased Corruption** • Improvement/advance of production systems Assist the graduates that learn agricultural/food • Research and innovation [on indigenous seeds] security courses to get jobs **Decreased Corruption** Give jobs to food security and agricultural courses **Indigenous Foods** Adopt new ways to maintain and add value • **Decreased Corruption Youth and Women Entrepreneurs** Enhanced public participation at the ward, Advancement in skills, technical know-how, and • constituency, and county level innovation Timely access to information, such as budget cycles Share of power between gender • and documents. Compartmentalized budget reports **Agriculture Technology Use** for efficient social accountability Access to higher education on tech use Equitable distribution of resources and social funds

Lo⊻

## **Degree of Meaningfulness**



Put strict measures on the chain of command to

eliminate corruption cases

Relevance to our goals

Low

## Kenya Outcome 5: "Build resilience to shocks, stress, and vulnerabilities"

High

	<ul> <li>Nutrition <ul> <li>Adult underweight</li> <li>Anemia in adults</li> <li>Child and adolescent underweight</li> <li>High mortality deaths in children under five years</li> <li>Low or lack of immunity in children and old people</li> <li>Proportion of households with lactating mothers and malnourished children under 2 yrs</li> <li>Short life span due to lack of required foods/vitamins in body</li> <li>Underweight children at birth due to malnourished pregnant mother</li> <li>Underweight in women</li> </ul> </li> </ul>
	<ul> <li>Poverty</li> <li>Number of children considered poor</li> <li>Poverty in society due to weak bodiesmen can't do manual labour</li> <li>Proportion of children in poor households</li> <li>Proportion of households that are absolutely poor</li> <li>Proportion of households that are food poor</li> <li>Proportion of households that are hardline poor</li> </ul>
	<ul> <li>Other</li> <li>Coverage of crop and livestock (IBLI) insurance among smallholder farmers and pastoralists;</li> <li>Coverage of irrigation systems (efficient) among smallholders nationally</li> <li>Status of community governance structures (proportion of smallholders involved in community governance systems) that support resilience building</li> </ul>
<ul> <li>Unproductive society due to wear and tear (early death) [labour productivity of population]</li> </ul>	<ul> <li>Increasing market linkages and last mile distribution</li> <li>Prevalence of market linkages among smallholder farmers and pastoralists</li> <li>Proportion of smallholder farmers and pastoralists linked to markets and marketing systems</li> <li>Technology adoption and buffering capacity among smallholders</li> </ul>

Lo⊻

## **Degree of Meaningfulness**

High

# MOZAMBIQUE

#### Mozambique Outcome 1: "Sustainable Food and Nutrition Security"

#### **Education and Training**

- **Bovine vaccination coverage** •
- Increased government funding for health programs •
- Increased number of graduates in nutrition courses •
- Number of government commitments to subsidize • local products
- Number of locally produced food processing • companies
- Percentage of government financial resources for ٠ financing local innovation initiatives
- Percentage of health services that implement cooking ۲ demonstration programs
- Percentage reduction in hunger •
- Increased the production area •
- Number of education programs at all levels (education, • health, and communities)

#### **Food Systems Coordination**

- Establish a platform for monitoring activity progress •
- Massive assessments of beneficiaries •
- Meet twice a year to plan and review activities •
- Number of committees created •
- Number of defined food systems [types] •
- Number of planned periodic sessions •
- Percentage of committees that submit activity plans/reports

#### **Education and Training**

Number of individuals who conserve or store • agricultural surplus as seed

#### Agriculture Inputs

- Increase in production area
- Monitoring and quality control of food systems

#### **Education and Training**

- Expansion of nutritional rehabilitation programs in the community
- Integration of nutritional education into social protection .
- Number of alternative nutritional education programs, . sustainable alternative systems adopted and implemented
- Percentage of individuals trained and participating in agricultural • fertilization using legume crop residues
- Percentage of individuals trained and practicing surplus • conservation methods
- Percentage of individuals who practice integrated crop ٠ management, "crop rotation"
- Percentage of primary schools with a school garden production • program
- Percentage of rural committees or groups trained in food ٠ processing
- Percentage of communities with new sustainable food systems

#### **Food Systems Coordination**

3 district/provincial/national coordination committees • established Number of commitments identified and assumed • Number of intra/inter-sectoral coordination meetings held • Number of sectors identified and involved in food systems ٠ Number of third-party events, where the committee is invited • Percentage of districts that have an updated map of food and • nutritional development actors Percentage of intra/inter-sectoral coordination committees . Percentage of local committees that incorporate private sector . actors Agriculture Inputs Percentage of input production capacity locally ٠ • Percentage use of agricultural inputs (pesticides, herbicides, etc.) **Education and Training** Number of educational activities on the cultivation of plants or foods resistant to water stress Number of individuals educated on food transport systems •

High

#### **Food Systems Coordination**

- Define the role of each committee member
- New activities identified and defined

#### **Agriculture Inputs**

Index of use of local organic matter ٠

## **Degree of Meaningfulness**

Lo≷

Measurement an be quantified of Ease

#### Mozambique Outcome 2: "Enhanced Value Chains"

Agribusiness and value chains

- Number of actors involved in agribusiness • Number of actors involved in agricultural value chains
- Number of farmers involved in new value chains
- Number of sales contracts for processed agricultural products to large shopping centers and tourist bodies

**Training and capacity development** 

- Involvement of local artists (singing, theater) to disseminate key messages
- Number of skilled technicians available at the community level
- Number of workshop conducted between SMEs [small and midsize enterprises]
- Number of farmers trained in agribusiness

Other

- Increased employment positions for the local population
- Number of farmers have cellphones for access to market information
- Certification of agricultural products
- Increased consumption of locally produced products Number of farmers who increased agricultural areas and productivity

#### Processing

- Number of processed agricultural products
- Number of processing business units established
- Availability of processed agricultural products on the market
- Percentage of processed products, such as nutritious porridge

#### Storage and distribution

- Number of distribution units built to preserve food products
- Number of access roads built to flow production and boost agricultural markets
- Number of infrastructures built for product storage (multiple)

#### Training and capacity development

- Number of farmers trained in: food processing; market information systems (price, etc)
- Number of farmers with increased technical capacity •
- Periodic training for farmers promoted by SMEs
- Promotion of workshop programs aimed at promoting the value chain
- Percentage of farmers with access to technical assistance •
- Number of success stories disseminated/published for motivation
- Use of community agents to disseminate information

#### Sales, marketing, and promotion

- Monetary value attributed to small and medium farmers for promotion of food crop production
- Number of farmers/producers: with access to markets to sell their products; with signed contracts for sales of agricultural products; producing for SMEs; involved in out grower scheme (number of contracts)
- Participation of SMEs in FACIM and other regional and international fairs to exhibit agricultural products
- Added value of investment for marketing and promotion of agribusiness

#### Agribusiness and SMEs

- Number and type of agricultural products by SMEs (multiple)
- Number of consumers of agricultural products produced by SMEs •
- Number of individuals with companies whose main activity is agriculture
- Number of small and medium-sized enterprises (SMEs) involved in promoting agribusiness
- Number of SMEs: doing commercial agriculture and trained; integrated into associations; integrated into information systems; involved in agricultural activity; that received technical assistance on food systems to become eligible for financing
- Percentage increase in SMEs joining value chains
- Percentage of the population involved in agribusiness
- Rate of economic growth resulting from the implementation of agribusiness

#### Other

- Increased agricultural production and productivity
- Number of agricultural value chains created/developed
- Number of farmers financed by the project •
- Number of farmers with business plans developed
- Number of value chain established
- Percentage of farmers who had access to agricultural inputs
- Percentage of rural population with access to water
- Number of policies, laws and standards that favor the development of resilient value chains
- Number of farmers with access to information on financing availability
- Awards for SMEs that stood out in the food systems over the five years
- Number of SMEs awarded for demonstrating commitment to improving the food system over the five years
- ۲ د



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ase of Measurement Can be quantified

High

- - Added value of SMEs participation in agriculture
  - Cultural exchange between SMEs and their production
  - Percentage of farmers who adopted good agricultural practices (GAP) as resulted ct's technical assistance
  - Increase in value of agribusiness products
  - Increase in value of SMEs at rural, urban, and national levels

#### Mozambique Outcome 3: "Increased resilience of food systems to climate change and conflict"

#### • Number of resilient crops introduced

- Increased oxygenation in forests (increase in plants)
- Proportion of repopulation of agricultural plants
- Reduction in the annual rate of hunger and poverty

- Increase in management committees and training of community leaders [forestation]
- Number of families benefiting from crops in mangroves
- Percentage reduction in the price of cooking gas and electricity in rural areas.
- Increased use of biofuels
- Measurement of the reforested area

- Implementation of economic production models based on sustainable development
- The quantity of sand moved on storm days

• Reduction in complaints about deforestation at the community level

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## **Degree of Meaningfulness**

# NIGERIA

#### Nigeria Outcome 1: "Enhanced agricultural productivity from knowledge dissemination, skills' development, & information management systems"

High

Ease of Measurement Can be quantified

- Number of agricultural produce or food exported after screening
- Number of food products that meetup 'gap recorded' the international market
- Number of women and youth platforms created for information
- Number of agricultural produce or food not containing contraband products or chemicals after testing
- Number of food safety manuals produced
- Number agricultural information made accessible to farmers
- Number of farmers trained on safety standards
- Monitoring and evaluation of training outcomes
- Post-training supports and follow-up [follow-up support and activities after a training]
- Number of early warning pollution advisories
- Number of appropriate technology options deployed for production and processing
- Percentage of difference of success by group 'gap recorded' recorded compared with previous months/years (timeline) [Percentage improvement of 'groups' (women & youth) over time to close gaps between them and men]
- Number of updated reviews on new food/ag safety guidelines
- Training duration and intensity

Women- and youth-related training & capacity building

- Number of women and youth-led organizations trained on: using production and processing technology and practices (multiple)
- Numbers of women- and youth-led organizations
- Number of appropriate technologies adopted and domesticated by women and youth groups (multiple)

Producer and production-related training & capacity building

- Number of organizations and farmers that have access to climate smart data/information (multiple)
- Number of farmers and organizations trained on: food safety guidelines/standards (multiple); proper use of herbicide, pesticide; behavioral change in adapting new and better technology on improved agricultural products; use of early warning tools
- Number of farmers and organizations using the safety guidelines for improved production
- Number of trainings and disseminations conducted on climate smart agriculture, technology, and climate data (multiple)
- Number of: new curriculum introduced in the agriculture education system (multiple); Training modules for farmers on increased production; training modules developed and delivered to farmers (smallholders)

#### Other training & capacity building

- Number of curriculum developed and introduced at the primary, secondary, and tertiary systems in Nigeria
- Number of organizations trained on use of the product & advisories generated
- Courses 'gap recorded' of climate change impacts on food security & development of new curriculum for introduction Training on food security 'gap recorded'
- Adoption of trained skills in agriculture practices
- Training needs assessment [Investigating what training beneficiaries need] <u>Other</u>
  - Data on seasonal availability of food products
  - Number of early warning tools developed by national MDAs
  - Number of local organizations established as a consequence of the training on early warning tools
- Number of: food / agriculture policies on food safety; regulatory bodies on new safety standards; policy documents and guidelines on safety developed
- Training quality and effectiveness
- Number of farmers taking food/ag safety precautions (multiple)
- Number of platforms created for shared information
- Relevance and applicability of training content

## **Degree of Meaningfulness**

Lo≷

#### Nigeria Outcome 3: "Improved productivity, improved livelihoods, and poverty reduction from value chain and market system development"

<ul> <li>Percentage increase in production</li> <li>Percentage increase in provision of improved seeds and other inputs</li> <li>Percentage of market boards established</li> <li>Percentage decrease in post-harvest loss</li> <li>Number of free trade zones established</li> <li>Increase in number of far</li> <li>Increase in road network</li> <li>Number of free trade zones established</li> <li>Number of free trade zones established</li> <li>Increase in storage facilities</li> <li>Percentage increase in profacilities</li> <li>Percentage increase in profacilities</li> <li>Number of free trade zones established</li> <li>Increase in number of fare trade zones established</li> <li>Increase in road network</li> <li>Number of free trade zones established</li> <li>Number of free trade zones established</li> <li>Increase in number of fare trade zone</li> <li>Number of free trade zones established</li> <li>Increase in road network</li> <li>Number of free trade zone</li> <li>Number of free trade zone</li> <li>Number of new markets esemi-urban areas</li> </ul>	rough radio in local rmers that have g tools ess of GSM phone and farmers al agricultural areas mers with electricity established ocessing and storage policies implemented stablished in rural and
Low Degree of Meaningfulness	High

## High

- Increase use of indigenous food processing and preservation techniques (e.g. tomatoes, yams, etc.)
- Nearness of farm to market or to community/town population
- Number of offtakers linked with farmers to buy crops at farm gates
- Number of on-farm preservation techniques
- Track the cost of nutritious foods compared to less healthy options
- Child mortality rates assess changes in child mortality rate
- Monitor the prevalence of diet-related diseases such as obesity, diabetes, and heart failure diseases
- Educating the vulnerable groups on the nutrition and health
- Provision of adequate storage and transport facilities
- Provision of storage facilities (local)
- Dietary diversity score -- assess the variety of food groups consumed by malnourished 'gap recorded'
- Indigenous technology of preservation, adoption of safe indigenous practices of storage
- Adequate electricity supply
- Develop recycle culture, foods that are non-degradable due to spoilage should not be disposed of as waste, rather, they can be turned into compost
- Encourage local processing of farm produce
- Advocate information-share on pest control
- Knowledge of the vulnerable groups and understanding their wants and needs to help in providing the necessary nutrition and healthy food
- Easy access roads from farm to market

#### Anaemia and stunting

- Anaemia prevalence in children
- Reduction in anaemia among women (multiple)
- Reduction in anaemia amongst pregnant women and adolescent girls (multiple)
- Reduction of children (under the age of 5) with stunted growth (multiple)
- Stunting rate among <5 children (multiple)</li>
- Advocate proper handling of food to reduce pest attack
- Promote adequate packaging of food items
- Food access and availability
- Minimum dietary diversity for elderly
- Malnourished among the elderly
- Number of elderly that receive geriatric care
- Food supply chain diversity
- Number of IDP camps reduced (multiple)

- Safe, indigenous practice for food preservation and storage
- Semi-preservation of food items
- Semi-processing of perishable food items
- Stakeholder involved in creation of a market for farm produce

High

 Stakeholder involvement in food production/processing

## **Degree of Meaningfulness**

Relevance to our goals

Lo⊻

Low

# TANZANIA

### Tanzania Outcome 1: "Sustainably improved food production and productivity"

High

<ul> <li>Engagement of rural population on mobile transfers/transactions</li> <li>Extension staff - farmers ratio (recommended 400-500 per staff)</li> <li>Rural roads density (including feeder roads)</li> </ul>
<ul> <li>Adoption rate of sustainable food technologies and practices along the food value chains</li> <li>Digital readout devices have been applied (eg. moisture meter, oxygen increaser pumps)</li> <li>Percentages of food producers, crops, livestock keepers, fishers using sustainable pre-post harvest for production technologies practice</li> <li>Percentages of food value chain actors using sustainable and healthy food handling practice</li> <li>Solar irrigation systems have been adopted</li> </ul>

## **Degree of Meaningfulness**

Relevance to our goals

Lo⊻

#### Tanzania Outcome 2: "Increased financing of agriculture & private sector involvement in food systems"

High

Fewer loan application rejections Percentage of farmers with an access of credit from financial institutions Percentage share of agricultural finance • of the overall lending portfolio by public and private financial institutions Access to financial education Enabling policy and institutional frameworks (governance) for increased private sector investments in sustainable food systems

Low

Degree of Meaningfulness Relevance to our goals

#### Tanzania Outcome 3: "Nutritious, healthy diets and safe food for all; and school feeding programmes"

High School feeding Number of children consuming school meals + milk at schools Number of schools providing school meals Proportion of schools providing fortified foods Number of millers fortifying foods in the country Child and adolescent anemia Number of households consuming more than 5 food groups Number of sun dryers installed for drying vegetables and fruits Appropriate (cold chain) storage facilities for fruits and vegetables in the food markets Availability and accessibility of infrastructures Proportion of children and adults for doing physical activities engaging in physical activities Proportion of facilities established in schools for doing physical activities Quality of food environments around schools

Lo⊻

## **Degree of Meaningfulness**

Transport infrastructure	Transport infrastructure
Guardrails & barriers [on roads]	Transport: cost; network
Lane marking [on roads]	Electricity & energy
Road lighting	Electrification rate
Road signs & signage	
Bridges and overpasses	Increase percentage of population using electricity for
<ul> <li>Pavement conditions index</li> </ul>	productive use
Road width	Geographical coverage [of electricity]
<ul> <li>Surface smoothness [of roads]</li> </ul>	Affordability [of electricity]
<ul> <li>Traffic signals and intersections</li> </ul>	Nutrition
	<ul> <li>Nutritional status of children (stunting, wasting, and</li> </ul>
Electricity & energy	underweight, decrease in rate of stunting, wasting, and
Household connections [to electricity]	underweight)
Voltage levels	• Prevalence of undernourishment (population that doesn't
Access to modern energy services (AC, heater, cooking	have access to dietary food, reducing this % significant step
tools, fridges)	toward improvement)
Market information	
Market Information system	<ul> <li>Access to appropriate packaging</li> </ul>
Digital Market platforms	Business and industrial access
	Dietary diversity
• Use of post-harvest technology (drying, cooling, processing,	Market infrastructure and facilities
colding)	Reduction in spoilage
<ul> <li>Education &amp; healthcare facilities</li> <li>Enhanced handling practice</li> </ul>	<ul> <li>Awareness &amp; training</li> <li>Technology adoption</li> <li>Environmental sustainability</li> <li>Improve storage facilities</li> </ul>

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## **Degree of Meaningfulness**

digital tools for agricultural and food-related purposes

ICT Adoption Rate: Percentage increase in farmers and food producers using

Percentage of the population, particularly in rural areas, with access to and

ICT

## High

Ease of Measurement Can be quantified

effectively using digital tools for agricultural (e.g. weather, agricultural practices, smart agriculture leading to reduced impact on agriculture) and food-related purposes **Equity and income** Equity: Reduction in income inequality among different groups, expressed as a percentage change, measured using indicators such as the Gini coefficient (multiple) Income Distribution Measures: Changes in income distribution indicators (e.g. Gini coefficient) within the food system **Gender and inclusion** Social inclusion efforts: number of programs promoting the inclusion of marginalized communities/groups in food systems Gender-sensitive policies: Number of policies implemented to promote gender • equality in agriculture and food systems Women and Youth Participation: Percentage increase in the participation of • women and youth in leadership roles in agricultural cooperatives and organizations Proportion of youth and women participating in decision making process and • access to resources (land, financing, improved agri-inputs, extension services) **Government and governance** Budgetary allocations (analyze government budget allocations to the • agriculture and food sector) Policy analysis and documentation (eg. trade policy) Stakeholder consultations (NGOs) Inclusion of historically marginalized groups in food system planning and benefits

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High