



African Population and Health Research Center



# Accelerating Malawi's Food System Transformation

Diagnostic and Landscaping Analysis by the Food System Transformative Integrated Policy (FS-TIP) Initiative

AUGUST 2021

# Food System Transformative Integrated Policy

## Goal: Sustainable healthy diets for all

A future state in which every human being has consistent access to a nutritious, high-quality diet that promotes human and planetary health, supports child development, prevents disease, and conserves biosphere resources.

- FS-TIP supports governments in Africa that demonstrate robust integrative leadership and capacity in the **development and implementation of an ambitious policy agenda** aimed at achieving sustainable, healthy diets for all their citizens
- Support by FS-TIP includes **building a fact base foundation** that is user-centric in its design, developing a tailored food system transformation strategy, and providing implementation support
- FS-TIP works with stakeholders to develop policies that are **transformative**, resulting in a step change in food systems performance, and **integrated**, factoring in the dependencies and trade-offs across food systems
- FS-TIP has a **long-term, inter-generational perspective**, building on momentum of the Food Systems Summit, but has its focus beyond, building a durable platform for transformation, policy development, capacity building, innovation and investment in support of the SDGs



# Malawi | Diagnostic and Landscaping Analysis







## > Executive Summary

Approach and key insights from  
diagnostic and landscaping analysis

Detailed diagnostic analysis

Detailed stakeholder and policy landscaping analysis

Next Steps : From Diagnostic to Action

Appendix



# Executive Summary | Malawi's food system (I/III)

Though the Diagnostic analysis of Malawi's food system, it has become apparent there is substantial opportunity to build upon Malawi's commitments and support from the development community to improve Malawi's food system

- Malawi shows great commitment to embark on a Food Systems Transformation, as highlighted by:
  - Its extensive Food Systems Summit Dialogues and the multi-stakeholder Taskforce (MoA, NPC<sup>1</sup>, UN Agencies, CSOs, farmer organizations, private sector and development partners) leading these dialogues to help identify Malawi's main food systems challenges and potential ways to address them
  - Its drive to **reduce dependence on tobacco and maize farming**
  - Its **collaboration with international development organizations** (e.g., SVTP<sup>2</sup> - \$235M from WB<sup>9</sup>, IDA, AfDB, GoM) to develop commercial agriculture and build capacity to address the impact of extreme weather conditions which have beset the country in recent years

Malawi's progress so far on food systems transformation and agricultural development has show successes as well as challenges. This is illustrated by progress made on some commitments on food and nutrition security, while progress on others has stalled. Malawi's food system today experiences multiple challenges from access to inputs to nourishing its population. These challenges need to be addressed by **well coordinated and integrated policies**. The momentum around the UN FSS has confirmed the need for a more system-based approach to the food system with involvement of all stakeholders

Malawi's Food System plays a very important role in the country's economy and can be described as largely traditional/informal and facing various challenges. Results from diagnostics analysis (FS-TIP research, Food Systems Summit Dialogues and stakeholder engagements) show:

- Agriculture accounts for almost 30% of GDP, and supports ~85% of the population<sup>11</sup>, yet the domestic food supply does not meet the goal for sustainable healthy diets for all Malawians
  - High food insecurity with ~52%<sup>3</sup> of Malawians having difficulties meeting basic food needs. However, this improves in harvest season (April-June)
  - Limited diet diversity with 70%<sup>4</sup> of dietary energy coming from cereals, roots and tubers, and inadequate consumption of other foods e.g., fruits, vegetables and legumes
  - The country made significant progress in reducing stunting (from 55% in 2000 to 37% in 2015<sup>10</sup>), though the trend has reversed slightly since (from 37% in 2015 to 39% in 2018<sup>10</sup>). The country has also made **significant progress to reduce wasting from 3.9% in 2016 to 1.3% in 2018<sup>10</sup>**
  - Overall high level of undernutrition continues to contribute to negative health outcomes - **23%<sup>5</sup> of child deaths in Malawi are related to undernutrition**



# Executive Summary | Malawi's food system (II/III)

- Difficulties to achieve consumption of a healthy diet by all citizens is linked to supply chain challenges
  - Government's input subsidy program (currently AIP, formerly FISP) has helped increase crop production and yield and could be focused on increasing production of more nutrient-rich foods as well. Low production and yield are due to predominance of smallholder farmers (account for ~75%<sup>6</sup> of production) who have small farm sizes (~1.3<sup>7</sup> acres) and limited access to credit (only ~12%). They use simple farming techniques mainly to grow maize thus reducing availability of nutrient-rich foods
  - Supply chains are underdeveloped with limited private sector investment, leading to accessibility issues and low value addition
- External drivers also have significant impact on the development of the food system. Two key drivers are highlighted below:
  - Malawi suffers from floods and/or droughts annually which reduces food supply e.g., 2015 maize production fell by 30% due to floods in the south<sup>8</sup>. High rate of deforestation for agricultural purposes makes the country even more vulnerable to these extreme weather conditions
  - Challenges in the food system are directly linked with Malawi's low-income status: Malawi is the 3rd poorest country in the world by GDP/capita PPP<sup>9</sup> (\$1,060 in 2019<sup>12</sup>) and income growth is limited for Malawians<sup>2</sup> that depend on agriculture for their livelihoods. Recent investments in agriculture commercialization could help provide a path out of poverty

## Malawi's policy landscape on Food Systems is guided by global and regional declarations as well as the national vision and development plans

- National development plans and policies generally have strong coverage of all elements of the food system; focusing on resilience, food security and nutrition given current poverty levels and increasing frequency of droughts. However, the key challenge lies with ensuring the right prioritization of programs/actions to deliver highest multiplier effect and securing necessary financing to successfully execute programs

## Within the current policy landscape, we see opportunities for more alignment to deal with potential trade-offs as well as realize synergies on some of Malawi's key challenges in its food system:

- Opportunity to realize more synergies between programs by streamlining financing, including funding from development partners: Prioritize main food systems challenges and interventions that deliver most impact, and aligning funding partners on them and
- Linking activities and programs at different levels of the value chain as well as ensuring predictable market access: by better aligning (investment) plans and programs across the value chain, bottlenecks could be avoided (e.g., encouraging production and consumption of nutritious foods without sufficient investments in the cold chain). Connection of farmers to agro-processors, and encouraging consumption of specific foods will ensure predictable market access



# Executive Summary | Malawi's food system (III/III)

## All policy making processes in Malawi will be guided by the newly formed National Planning Commission (NPC)

The NPC was formed in 2020 and has been empowered to oversee the planning and coordination of policy development. As a supra-ministerial body its mandate is to ensure policy making guidelines are followed across all government entities as they aim to achieve the national development planning goals

The formation of the NPC seeks to address key challenges Malawi faced in policy development and implementation process

- Align planning phase at national, sector and district level
- Ensure sufficient human and capital resources are availed to develop plans with consistent quality and following guidance
- Develop M&E framework based on mid-term implementation plans to track progress, through decentralized capacity

## Opportunity to introduce integrated and transformative policies on food systems in the new 10-year mid-term plan and related sector and district plans

- Vision2063 was operationalized in January 2021, Agricultural Productivity and Commercialization is one of three key pillars
- The Vision is translated into national 10-year implementation plans which guide the sector and district level planning

## Policy implementation is partially decentralized, and some challenges exist in prioritizing and coordinating amongst planning and implementing partners and handling overlapping mandates between districts and national sectors

- **Prioritization of programs** and execution of projects may be influenced by projects which demonstrate immediate impact and visible progress at the expense of potentially longer term more impactful projects
- **Human capacity constraints at district level and** - limits the ability to effectively implement plans in a decentralized manner, coordinate with stakeholder and conduct monitoring and evaluation. Overlaps and siloed activities may result in duplication of efforts or conflicting priorities
- **Limited coordination** between development partners and between development partners and the government, missing out on potential synergies and when programming and funding were better aligned. Imperative to strengthen cross-ministerial coordination including involvement of donors, CSO's etc.

## The diagnosis and landscaping analysis and national FS dialogues highlighted the need to design and implement transformative and integrated policies and programs. In order to move from diagnosis to action a set of guiding materials which cover the following steps, were prepared:

- Prioritize set of food system challenges
- Set ambition and formulate policy to address priority challenges
- Design governance, coordination and delivery models for locally-led food system transformation

(for see detailed section [click here](#))





Executive Summary



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# This diagnostic analysis is guided by 7 principles...

- 1 **Designed with the policy-maker in mind:** Presenting an interface that is concise, compelling and intuitive
- 2 **Outcome-oriented:** Linking indicators that reflect food system outcomes to the drivers that policy-makers can influence to realize transformation
- 3 **Anchored in existing structures:** Building on existing resources and structures with strong buy-in, such as the CAADP biennial review report, and adding new elements only where required
- 4 **Aligned to existing food systems frameworks:** Connecting to UN FSS Action Tracks for its outcome-orientation, and covering all components of the food system (as per HLPE framework)
- 5 **Enabling more detailed views in future:** Structuring analyses to be able to show disaggregated views of indicators in future phases
- 6 **Tailored to Africa and country context:** Adapting indicators to the countries' context, leveraging local data sources and reflecting local ambitions (co-developing where non-existent)
- 7 **Built upon a strong data-foundation:** Leveraging the best data (quantitative) and insights (qualitative) available and identifying gaps where they exist

## ... and has 4 main objectives



Share a comprehensive, concise, and compelling diagnosis of the current food system in Malawi



Contribute and inform the FSS in-country dialogues



Create an ongoing diagnostic and monitoring approach to inform policy making and food systems transformation



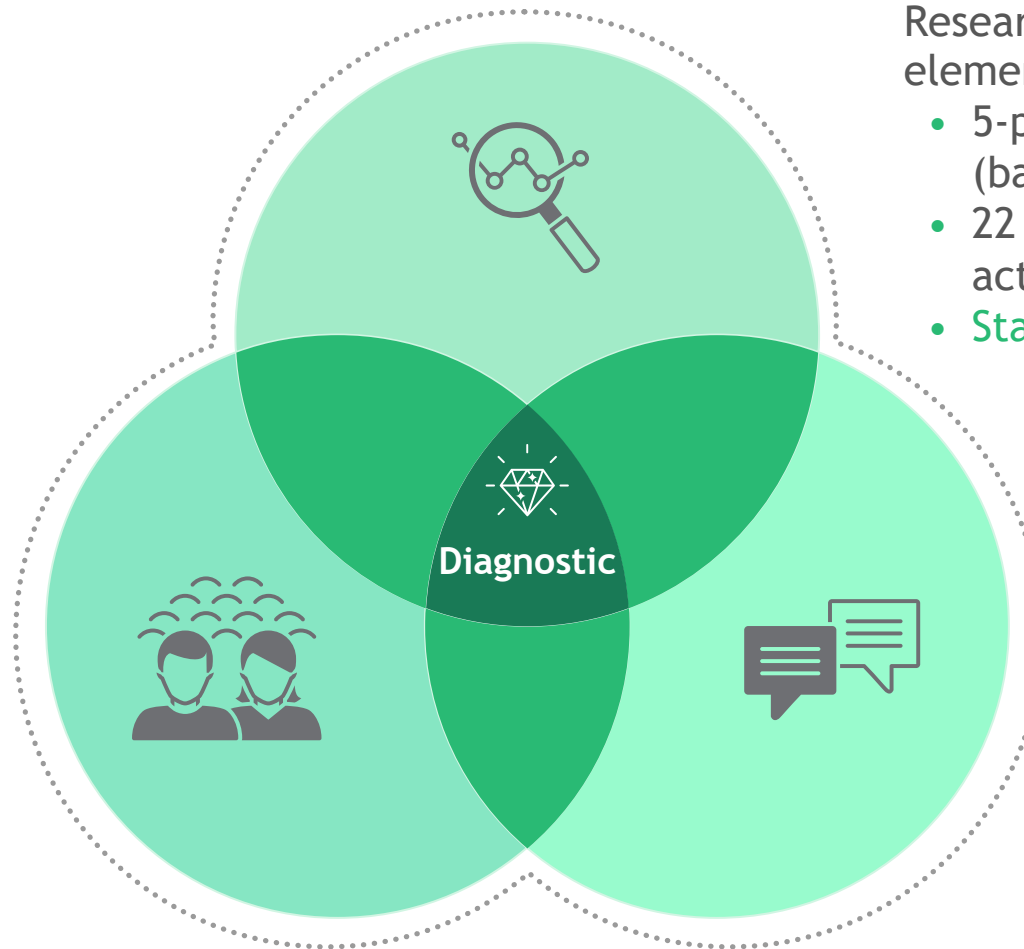
Get feedback from food system stakeholders to improve this diagnostic

# This diagnostic analysis was informed by extensive research and feedback from key stakeholders in Malawi's food system

Research on Malawi's key food system elements:

- 5-part **framework** on food systems (based on the HLPE framework)
- 22 **supra-indicators** across the 5 UN FSS action tracks and 50+ key indicators
- **Stakeholder and Policy landscaping**

Feedback from **various local experts and stakeholders** across the food system e.g. Ministry of Health, WFP, Ministry of Agriculture<sup>1</sup>



Emerging insights from the national, regional and district **Food Systems Summit Dialogues** to articulate food systems transformation gaps and potential ways to address them

1. See appendix for institutions engaged and please reach out to authors of this document for a detailed list of experts and stakeholders



# Identification of main food systems challenges and potential game changing solutions| An iterative process with stakeholders and experts

Country's performance on supra- and key indicators and review of existing policies

Insights from UN FSS Dialogues and potential game changing solutions identified

Input from in-country experts on challenges and potential game changing solutions

Interviews with stakeholders on challenges and potential game changing solutions



**Initial selection** of main food systems challenges and potential game changing solutions



Validation with in-country stakeholders (*ongoing*)



**Validated selection** of main food systems challenges and potential game changing solutions



Detailed analyses and modelling of potential game changing solutions & alignment with stakeholders (*Phase 2*)



**Prioritized** food systems challenges as the basis for policy and program design post FS Summit

*current status*

# Synthesis of Malawi's food system's challenges & potential game changing solutions

## Priority challenges



### Diet quality and nutrition security

52% of Malawians are food insecure, and 70% of dietary energy comes from cereals, roots and tubers with limited consumption of more nutritious foods such as legumes and animal source foods



### Livelihoods equity

Majority (50-70%) of Malawians live under the poverty line with female-led households typically poorer. They manage by consuming cheaper, less nutritious meals contributing to high rate of undernourishment



### Environmental resilience

Almost annual occurrence of floods or droughts combined with overdependence on maize, a drought sensitive crop grown by 70% of Malawians, resulting in high levels of food insecurity



### Infrastructure capacity

Limited local processing, storage and transportation infrastructure, especially for perishable nutrient-rich fruits and vegetables, results in low availability in local markets and high food loss and waste



### Agricultural productivity

Current crop yield is as low as ~20% of potential yield with 75% of crop production coming from smallholder farmers who use crude techniques and have limited credit and insurance access

## Potential game changing interventions

- Strengthen end-to-end planning for nutrition-sensitive production (incl. inputs for nutrient-rich foods, sustainable fish farming and fishing, seeds)
- Develop strategies for behavior change communication and trade to boost healthy foods consumption

- Invest in agriculture commercialization and extension services for a path out of poverty
- Facilitate private sector creation of credit and insurance products for smallholder farmers, particularly women
- Link social support and input programs to maximize synergies

- Prioritize drought & flood resistant crops and animal breeds
- Invest in eco-friendly irrigation, processing, storage and logistics infrastructure to reduce water and food wastage
- Increase awareness of importance of forests & train farmers on conservation agriculture

- Strengthen market linkages and infrastructure to facilitate better storage and local trade
- Develop and implement strategy to increase PPPs to invest in infrastructural development
- Incentivize credit extension for infrastr.

- Increase commercial farming & put measures in place to reduce disease vulnerability
- Invest in community food storage facilities, structured markets to limit food loss & waste
- Improve effectiveness of anchor farming and farming cooperatives via training



# Diet quality and nutrition security | Key challenges and how they can be addressed

Why should this be a priority for Malawi?



## Description of the priority area

- Malawi has recently been working to **reduce dependence on maize** to grow more resilient crops and reduce **food insecurity** (currently ~52%)
- Yet ~17% of the country has poor or borderline **diet quality** (1) with 70% of dietary energy coming from cereals, roots and tubers. This contributes to a high stunting rate of 39% (children <5y) and 23% of all child deaths being related to under-nutrition (3)
- A healthy diet is unaffordable for ~94% of people (6)
- Key steps need to be taken to increase demand, affordability and access to more nutrient-rich foods e.g., legumes, fish, fruits and vegetables



## Benefits of addressing the challenge

- By increasing Malawians' consumption of adequate, healthy diets, Malawi can make progress towards the 2025 goal of **reducing stunting to 27%, reducing child mortality to 2.5% by 2030 and reversing the trend of increasing obesity and overweight rates**. Improved nutrition could also contribute to **better cognitive development increasing Malawians' lifelong productivity**

# Supra-indicator addressed

What challenges need to be overcome to address this?



## Trade-offs to consider

- Fixing price caps on nutritious food could increase their affordability but would reduce farmers' income and discourage production
- Increasing ASF<sup>1</sup> consumption (especially beef) to desirable level would increase diet diversity but may also increase GHG emissions that negatively affect the environment
- While increased local consumption of more nutritious foods (e.g., legumes, animal source foods) would be good for Malawians' health, it could leave less for export and reduce export income if production remains constant

## Policy opportunities

- Policies focus on maize subsidies and availability with less attention paid to increasing production and access to other foods e.g., legumes, fruits

## Implementation constraints

- Difficult to change Malawians' long-held consumption habits e.g., habit of selling rather than consuming ASF
- Need to increase purchasing power of a growing, agriculture-dependent population

How and by whom can this be done?



- MoA to **refine AIP<sup>2</sup> to focus more on nutrient-rich/biofortified foods** e.g., legumes, fruits, vegetables and orange-fleshed sweet potatoes
- MoA<sup>3</sup> and MoH<sup>4</sup> to encourage sustainable **fish farming and fishing** in lakes Malawi, Chilwa, etc.
- Government to revamp NFRA<sup>5</sup>** to ensure it always has adequate stock of nutritious grains and non-grains
- MoF to facilitate private sector processing of diverse, nutrient-rich healthy foods e.g., by reducing tax on healthy foods and increasing tax on unhealthy foods
- MoA and MoH to ramp-up behavior change communication to **sensitize** Malawians on what a healthy diet is and its benefit
- MoA, MoI<sup>6</sup> and MoT<sup>7</sup> to **strengthen market linkages**, infrastructure e.g., cold chain to facilitate local trade of nutrient-rich foods e.g., legumes

# Livelihoods equity | Key challenges and how they can be addressed

Why should this be a priority for Malawi?



## Description of the priority area

- Agriculture supports ~85% of Malawi's population. **Subsistence farming** characterized by low-productivity and limited value-addition results in farmers having a high-risk profile which **limits credit access** and income growth opportunities - **6 14 17 18**
- Consequently, Malawi is the 3rd poorest country in the world by GDP/capita PPP (\$1,060 in 2019)
- It is **easier for cash crop farmers (mainly men) to access credit** than for food crop farmers (mainly women) as cash crop farmers make more money and are thus able to afford high credit costs. **Women-managed farms are also ~40% smaller** than men's (0.9 vs 1.5 acres<sup>1</sup>), which limits their production
- This contributes to female-led households being poorer than male-led ones - lower % eat 3+ meals a day (32% vs 45%) and have livestock (38% vs 46%) - **16**



## Benefits of addressing the challenge

- Unlocking Malawian's income potential is a crucial **sustainable way to empower** them to live high quality lives and reduce the country's poverty burden
- It could also reduce amount of money dedicated to social protection programs thereby making **more funds available for other key projects**

# Supra-indicator addressed

What challenges need to be overcome to address this?



## Trade-offs to consider

- Income growth could lead to inflation which makes food more costly for poor population
- Large scale production of focus crops increases yield but could lower production diversity
- Promotion of better-paying non-farm jobs increases income but could reduce food supply due to reduced farm labor especially among youth who practice more modern agriculture

## Policy opportunities

- Limited systems approach to improve livelihoods, e.g., input subsidies and training have limited effect without market access
- Funding shortages often mean social assistance programs are not implemented

## Implementation constraints

- Costly to de-risk farmers to facilitate credit access
- Complicated process and long timeline to invest in people and infrastructure development for sustainable economic growth
- Difficult to reach most vulnerable population. They are also more interested in quick fixes rather than long-term investments

How and by whom can this be done?



- MoA<sup>1</sup>, MoI<sup>2</sup>, MoF<sup>3</sup>, MoE<sup>4</sup>, MCCI<sup>5</sup> and private sector to invest in agriculture commercialization and extension services to provide a path out of poverty
- MoF<sup>3</sup> and MoE<sup>4</sup> to invest in derisking initiatives to facilitate private sector creation of **tailored credit and insurance products for smallholder farmers particularly women** e.g. invest in agriculture-tailored credit scoring algorithm to aid risk assessment which could reduce credit cost
- MGCD<sup>6</sup> and MoA<sup>1</sup> to **link SCTP<sup>7</sup> to input programs** to maximize synergies and empower beneficiaries to be more economically productive and less reliant on social welfare payments
- MoA<sup>1</sup>, FUM<sup>8</sup>, DCAFS<sup>9</sup> to improve effectiveness of anchor farming programs and farming cooperatives via training and financial empowerment to leverage modern tools and techniques
- MoA<sup>1</sup> to invest in increasing effectiveness of its DAES<sup>10</sup>



# Environmental resilience | Key challenges and how they can be addressed

## Why should this be a priority for Malawi?



### Description of the priority area

- Malawi's **GHG emissions** from food consumption (7) and agriculture (10) are **lower than African and global average**. They contribute ~40% of GHG emissions in the country with these emissions on the rise due to increasing deforestation for agricultural purposes (90% of deforested land - 11)
- This is exacerbating Malawi's **vulnerability to floods and droughts** which ultimately reduces food supply e.g., 2015 maize production fell by 30% due to floods
- Malawi needs to strengthen and expand its agriculture transformation programs to increase environmental resilience



### Benefits of addressing the challenge

- Increasing Malawi's environmental resilience could **increase agricultural productivity and income stability**, and **reduce food insecurity and loss of life and wealth** during extreme weather conditions

# Supra-indicator addressed

## What challenges need to be overcome to address this?



### Trade-offs to consider

- Increasing water allocated for irrigation could reduce water available to generate hydropower for food storage, agriculture extension services and other key sectors
- Prioritization of eco-friendly activities could lead to reduction in AIP<sup>1</sup>'s distribution of chemical fertilizer thus reducing fertilizer use and agricultural productivity
- Preventing deforestation increases environmental resilience but may limit expansion of small landholdings and food supply

### Policy opportunities

- No systems approach towards improving environmental resilience e.g., irrigation and storage schemes are done in isolation

### Implementation constraints

- Land consolidation programs can facilitate irrigation schemes but need to be equitable and beneficial to be attractive to Malawians
- Inadequate resources to enforce forest conservation laws

## How and by whom can this be done?



Need to invest in eco-friendly production and post-harvest activities:

- MoA<sup>2</sup> to revamp AIP<sup>1</sup> to support private sector in growing **nutritious/biofortified drought and flood resistant crops and animal breeds**
- MoA<sup>2</sup> to make affordable and available the right types of fertilizer, in good time, with messaging on correct usage for each season and region
- Mol<sup>4</sup> and MoA<sup>2</sup> to invest in **eco-friendly processing, storage, logistics, irrigation and energy infrastructure** (e.g., solar energy, solar water pumps, etc.) to reduce water and food wastage
- EAD<sup>3</sup> and MoA<sup>2</sup> to **increase awareness** about importance of forests and train farmers on conservation agriculture and agroforestry (especially of legumes) with opportunities to increase income

# Infrastructure capacity | Key challenges and how they can be addressed

Why should this be a priority for Malawi?



## Description of the priority area

- Malawi is **one of the fastest urbanizing countries** in the world with annual urban population growth rate of ~4%. However, it lacks adequate agriculture infrastructure (supply chain, storage, electricity, processing capacity and transport networks - **2 5**) which limits farmers capacity to elongate produce shelf life and reach local and international markets
- This is evident in the high levels of food loss and waste (**8 12**) especially of nutritious but perishable fruits and vegetables - **farmers lose up to half of their hard-earned yields** to rodents, weevils and rotting in the months after harvest



## Benefits of addressing the challenge

- Improved infrastructure has **widespread benefits beyond increasing food safety and availability**. It would also spur development of the agro-processing industry **creating more jobs and facilitating export** of higher value produce for higher income

# Supra-indicator addressed

What challenges need to be overcome to address this?



## Trade-offs to consider

- Improved infrastructure could lead to increased food supply but also higher production and consumption of unhealthy ultra-processed food
- More non-farm jobs would increase income but could reduce food supply due to reduced farm labor especially among youth who practice more modern agriculture

## Policy opportunities

- Limited rural grid electricity development
- Limited focus on increasing private sector investment/PPPs in food supply chain

## Implementation constraints

- Need to determine how to raise funds and prioritize investment in capital intensive infrastructure development
- Long timeline to improve infrastructure and upskill Malawians to properly use and maintain infrastructure



How and by whom can this be done?

- MoA<sup>1</sup>, Mol<sup>2</sup> and MoT<sup>7</sup> and private sector to **invest in affordable and sustainable energy sources (e.g., solar), market linkages and infrastructure** (e.g., cold chain) to facilitate processing, storage, local trade and consumption of nutrient-rich foods especially perishable fruits and vegetables
- Mol<sup>2</sup>, MoT<sup>7</sup>, MCCI<sup>3</sup>, MoF<sup>4</sup>, MoE<sup>5</sup> and MAIIC<sup>6</sup> to develop and implement strategy to **increase public-private partnership** to invest in infrastructural development
- MoF<sup>4</sup> to incentivize **credit extension** to build infrastructure
- Ministry of Local Government and Rural Development should invest in behaviour change communication to train people on how to properly use and maintain public infrastructure



# Agricultural productivity | Key challenges and how they can be addressed

## Why should this be a priority for Malawi?



### Description of the priority area

- Agriculture accounts for almost **30% of Malawi's GDP**. Opportunity for higher productivity as **current crop yield is as low as ~20% of potential yield\***
- **~75% of crop production comes from smallholder farmers** with small farm sizes (~1.3 acres) and low crop yield thus limiting food supply for sustainable healthy diets
- ASF supply **has increased by 55% since 2010** but remains 23-68% below African and global average. Fish from nearby lakes such as Lakes Malawi and Chilwa, is key source of animal protein
- Limited production is exacerbated by high food waste **(8)** and loss **(12)** levels that increase food insecurity



### Benefits of addressing the challenge

- Increasing Malawi's agricultural productivity will **increase food availability and affordability** leading to increased food security and nutrition
- It will also **increase farmers' income** and reduce need for agriculture deforestation as available farmland could yield enough to meet nutrient need

# Supra-indicator addressed

## What challenges need to be overcome to address this?



### Trade-offs to consider

- Increased mechanized farming and fertilizer usage may increase GHG emissions which hastens climate change thus making Malawi more vulnerable to floods and droughts
- Increased commercial agriculture may increase vulnerability to infestations e.g., FAW<sup>5</sup>
- Large scale production of focus crops increases yield but could lower production diversity

### Policy opportunities

- Generalized input subsidies do not address unique soil needs thus limiting yield potential
- Focus on increasing cereal production with little attention on other nutritious food e.g., legumes
- Farmer training and timely supply of inputs to ensure proper fertilizer application and harvest are not addressed

### Implementation constraints

- Need to prioritize farmers to subsidize for maximum yield while protecting most vulnerable
- Poor market structure limits trade and income opportunities from increased production
- Land consolidation can facilitate large scale farming but need to be beneficial to landowners
- Rapid population growth puts pressure on limited land



## How and by whom can this be done?

- MoA<sup>1</sup>, Mol<sup>2</sup>, FUM<sup>3</sup> and private sector to increase **commercial farming and ensure safety measures** are installed to reduce disease vulnerability
- MoA<sup>1</sup> to invest in increasing effectiveness of its Department of Agriculture Extension Services
- MoA<sup>1</sup> to revamp AIP to support private sector in growing **nutritious drought and flood resistant crops and animal breeds**
- MoA<sup>1</sup> to make affordable and available right types of fertilizer, in good time, with messaging on correct usage per season and region
- MoA<sup>1</sup>, Mol<sup>2</sup> and MoT<sup>6</sup> to invest in **community food storage** facilities, **structured markets** to limit food loss and waste
- MoA, FUM, DCAFS to improve effectiveness of anchor farming programs and farming cooperatives via training and financial empowerment to leverage modern agricultural tools and techniques



## Executive Summary

Approach and key insights from  
diagnostic and landscaping analysis

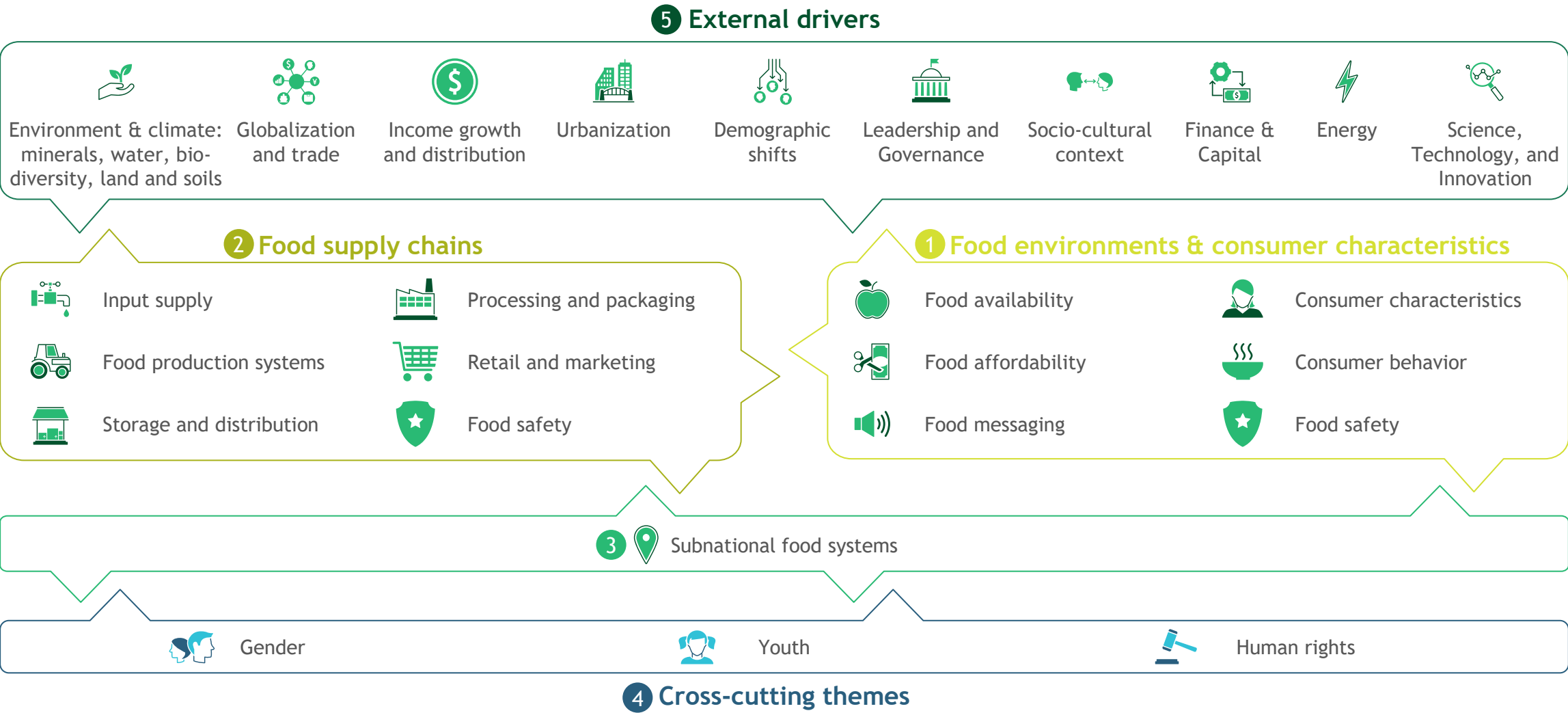
### > Detailed diagnostic analysis

Detailed stakeholder and policy landscaping analysis

Next Steps : From Diagnostic to Action

Appendix

# Diagnostic | A 5-part framework to describe the food system





# High-level view | Food environments and consumer characteristics (I/II)

	<b>Food availability</b>	<ul style="list-style-type: none"> <li>• ~52%<sup>1</sup> of total population is food insecure, largely unchanged since 2014</li> <li>• Malawi's staple crops are <b>maize, rice, cassava and sorghum</b><sup>2</sup>, but maize is the dominant crop contributing to high share of dietary energy coming from cereals, roots and tubers (70% in Malawi vs 58% East African average and 50% global average)<sup>8</sup></li> <li>• Mangoes and bananas are the most grown fruits making up 65% of plots planted with fruits<sup>10</sup></li> <li>• Supply of <b>animal sourced protein has increased by 55% since 2010</b>, but remains below African and global average for now - 10 vs 13 vs 31 g/capita/day<sup>4</sup>. Fish from nearby lakes such as Lakes Malawi and Chilwa, is main source of animal protein</li> <li>• Government is working towards increasing food supply by <b>subsidizing</b> fertilizers, maize seeds, legumes and groundnut seeds through its input subsidy program, and embarking on <b>agriculture commercialization projects</b><sup>3</sup></li> </ul>
	<b>Food affordability</b>	<ul style="list-style-type: none"> <li>• A <b>nutrient adequate diet*</b> costs ~102% of household food expenditure, and ~71% of the population cannot afford it<sup>1</sup></li> <li>• A <b>healthy diet**</b> costs 219% of household food expenditure, and ~94% of the population cannot afford it<sup>1</sup></li> <li>• Limited farming of nutritious legumes and livestock limits their supply and increases cost of nutrient adequate/healthy diet resulting in <b>diets dominated by readily available and cheaper carbohydrates</b>, e.g., maize.</li> </ul>
	<b>Food messaging</b>	<ul style="list-style-type: none"> <li>• Food messaging campaigns in place that focus on maternal and child health</li> <li>• Limited attention paid to communicating food guidelines to the general population and limited control on marketing of unhealthy foods</li> <li>• Various food communication programmes in place that <b>focus on food production and nutrition, emphasis on food hygiene practices</b> has been limited, but there is emerging <b>research on improving food hygiene</b> to reduce incidence of diarrhoea<sup>5</sup></li> </ul>

## High-level view | Food environments and consumer characteristics (II/II)



### Consumer characteristics

- Malawians' have low purchasing power with ~50-70% of them living under the national poverty line (US\$ 1.90 income a day)<sup>11</sup>
- Due to low purchasing power, price is major determinant when selecting food products, irrespective of quality and nutritional value
- % of income spent on food varies across income groups - up to 65% for very poor households, ~60% for poor households, >40% for middle income and <40% for "better-off" households<sup>6</sup>
- Consumption of more expensive but unhealthy ultra-processed foods often seen positively as a display of higher social status - these foods are mostly consumed by higher income Malawians



### Consumer behavior

- Malawians consume a lot of maize and starchy roots (e.g., cassava and potatoes)<sup>1</sup>. Adult Malawians also consume ~70% of fruits (e.g., mangoes and bananas) and ~19% of vegetables an average adult consumes globally<sup>12</sup>
- Higher income households eat more animal sourced protein, especially fish from nearby lakes<sup>10</sup> such as Lakes Malawi and Chilwa, and ultra-processed foods
- Many Malawians see large livestock (e.g., cows) as assets for sale and for use during ceremonies, rather than for everyday consumption. As a result, efforts are ongoing to encourage people to grow smaller livestock (e.g., poultry) that are easier to eat at household level
- Due to higher income in urban areas, a higher share to the population (77%) eats more than 3 meals a day, while this is true for only 24% of Malawians in rural areas<sup>6</sup>
- To compensate for lower productivity, poor households supplement their food access and income by engaging in casual agricultural labour for food or monetary payment, known as 'ganyu' <sup>6</sup>
- To cope with food insecurity, 63% of households rely on less preferred or cheaper foods, 50% reduce food quantity and 46% reduce number of meals eaten<sup>6</sup>

## High-level view | Food supply chains (I/II)

	<b>Input supply</b>	<ul style="list-style-type: none"> <li>Government runs an <b>Affordable Input Program (previously Farm Input Subsidy Program)</b> which subsidizes input - fertilizers and maize seeds<sup>2</sup></li> <li>High subsidy rate of ~80% increases adoption of maize-legume intercropping and fertilizer utilisation contributing to <b>legumes and maize productivity increasing up to 30% and 70% respectively since FISP inception</b></li> </ul>
	<b>Food production systems</b>	<ul style="list-style-type: none"> <li>Most crop production is subsistence-based - <b>smallholder farmers account for 75% of production</b><sup>1</sup></li> <li>Top 5 produced crops in 2019 were maize, sweet potatoes, cassava, sugarcane and mangoes, with ~70% of Malawians cultivating maize<sup>1</sup></li> <li>Livestock production currently accounts for 10-20% of agricultural production value. Recently, the government has been promoting livestock production to <b>diversify income away from maize and tobacco</b>, and manage weather variability<sup>3</sup></li> <li>Malawi has embarked on agricultural transformation initiatives, such as the Shire Valley Transformation Program (\$235M from WB, IDA, AfDB, GoM) and Agricultural Commercialization Project (\$95M WB credit financing)<sup>4</sup>. These will aid <b>commercialization of wide range of food and cash crops</b> e.g., vegetables, maize, cotton, etc. with farmers deciding what to grow</li> </ul>
	<b>Storage and distribution</b>	<ul style="list-style-type: none"> <li><b>Limited infrastructure for food storage and transportation</b> with agricultural infrastructure index of 31 lower than East African (36) and global (53) average<sup>5</sup></li> <li>High level of food loss (~9% vegetables, 10% fruits, ~12% pulses)<sup>5</sup></li> </ul>



## High-level view | Food supply chains (II/II)



### Processing and packaging

- Agro-processing contributes up to **11% to Malawi's GDP**<sup>6</sup> mostly from processing, transporting and trading farm produce
- Key farm produce that is processed includes cereals, cassava, potatoes and soy



### Retail and marketing

- **Informal small-scale trade and cross-border trade** are important sources of food security in Malawi<sup>7</sup> as they supplement farmers' own harvest and allow traders earn a living. Local markets are largely informal with formal retail channels concentrated in urban centres
- **Poor road networks and communication networks** (2019<sup>12</sup> unique mobile subscriber penetration rate of only 30%) limits the efficiency of the food market and entire supply chain
- Poor Malawians sometimes engage in trade by barter to exchange excess produce from own farm for other food items they lack<sup>8</sup> and engage in casual agricultural labour for food or monetary payment locally known as 'ganyu'



### Food Safety

- No nationwide strategy for food safety control<sup>9</sup>
- Inadequate monitoring of food standards as **most of the food is traded in informal markets** and the Malawi Bureau of Standards has limited capacity to effectively monitor informal market activities
- **Extensive distribution of hygiene kits and vaccine against rotavirus** (most common cause of severe diarrhoeal disease) has resulted in **87%** of the population using **safely managed drinking water** services<sup>10</sup> and **~80% reduction** in percentage of sick people **suffering from diarrhoea** - from 15.2% in 2016 to 3.3% in 2020<sup>11</sup>

# High-level view | Subnational food systems



## Subnational food systems

In the past few decades, Malawi's subnational system was divided into 3 regions - North, Central and South. However, a fourth Eastern region was recently created. Focus is on subnational food systems under the 3-region regime due to limited data on Eastern region's food system given its recent creation

- North:
  - Houses **13% of the population** at average population density of - 84 persons/km<sup>2</sup> - less dense than other regions<sup>1</sup>
  - It has the most **favourable climatic conditions** for cultivating crops and a higher % of households have livestock e.g., 50% of households hold chickens vs 32% and 30% for central and southern households respectively<sup>3</sup>
  - Its high agricultural productivity enables **57%** of adults have **3+ meals** daily and it **sells agricultural commodities to the central and southern regions**<sup>3</sup>
- Central:
  - Houses **43% of Malawi's population**<sup>1</sup> at an average of 211 persons/km<sup>2</sup>
  - Climatic conditions are mostly suitable for **cereal and tobacco production**<sup>3</sup> with **40%** of adults having **3+ meals** daily
  - **Increasing temperatures are improving yield** in the central and northern regions but reducing yield in the south where temperatures already exceed crops' thermal threshold<sup>3</sup>
- South:
  - Contains 13 districts and is the most populated region housing **44% of Malawi's population** at an average of 244 persons/km<sup>2</sup> - making it the **most densely populated** region<sup>1</sup>
  - It is situated at the lowest altitude and is **drier than central and northern regions**, experiencing only one short rainy season between December and February<sup>2</sup>
  - **Agroclimatic conditions are unfavourable** in the south with drought and flood events occurring almost annually. This has weakened the food system resulting in higher food insecurity than in other regions and only **38%** of adults eating **3+ meals** daily. The soil on the limited arable land is overused and susceptible to erosion and degradation during floods and droughts<sup>3</sup>
  - To address these challenges, the south is home to one of the **largest agricultural transformation projects** in Malawi - Shire Valley Transformation Program (\$235M funding from WB, AfDB, GoM) to increase agricultural productivity and commercialization for targeted households in the Shire Valley<sup>4</sup>

## High-level view | Cross-cutting themes



### Gender

- Female Malawians make up ~51% of the population<sup>1</sup> and 57% of them are agricultural landowners<sup>2</sup>
- Malawi ranks 33<sup>rd</sup> of 54 African countries with a gender score of 45.3/100<sup>5</sup> - a 4.8 decrease since 2010
- Although female Malawians have equal property ownership and inheritance rights<sup>2</sup> as their male counterparts, in reality they have **limited control over resources and decision making** in households and communities, especially in rural areas
- ~27.5% of households are headed by female<sup>6</sup> (29.0% in rural, 19.4% in urban)
- A slightly higher share of female-led households (89%) is engaged in agriculture compared to male-led households (83%) with **females being more involved in food crop farming** vs males who are more involved in cash crop farming
- The share of **households with livestock** is higher among **male-led** households (46%) than **female-led** households (38%) suggesting that **male-led households are wealthier than female-led households** - livestock is owned by wealthier households
- Wealthier status of male-led households is also reflected in number of meals eaten - 45% of male-led households eat 3+ meals a day vs 32% of female-led households



### Youth

- ~51% of Malawians are under 18 years of age and ~54% are of working age (15-64)<sup>1</sup>
- Unemployment amongst people aged 15-24 years is ~40% higher than total unemployment rate (~41% vs 29%)<sup>1</sup>
- ~80% of rural youth participate in the agri-food system<sup>3</sup>









### Human Rights

Malawi's constitution promotes equal opportunity for all to access food, employment, infrastructure and other basic needs/essential services. The country ranks:

- 99<sup>th</sup> of 101 countries in 2018 food security index - ~52%<sup>1</sup> of total population is food insecure vs 10% global average
- 107<sup>th</sup> out of 195 countries in the 2017 human rights index
- 139<sup>th</sup> of 162 countries in 2016 economic freedom score



# High-level view | External drivers of the food system (I/II)







	<b>Environment and climate</b>	<ul style="list-style-type: none"> <li>Malawi's topography is varied containing valleys and highland peaks. Its flood plains, wetlands, and forests are <b>increasingly experiencing droughts and floods which hinder agriculture</b> e.g., 2015 maize production fell by 30% due to floods in the south, followed by a countrywide drought that put 17% of the population at risk of food insecurity<sup>1</sup></li> <li>Climate change expected to result in <b>1-3°C temp.<sup>2</sup> increase</b> between 2019-2050 and increased drought and flood events</li> <li>Higher temperatures increases risk of wetland recession <b>reducing fish supply</b></li> </ul>
	<b>Globalization and Trade</b>	<ul style="list-style-type: none"> <li>Malawi is a <b>net agricultural produce exporter</b> exporting ~\$1.9Bn<sup>3</sup> of agricultural produce in 2017 vs ~\$0.4Bn imports - ~30% vs ~6% of GDP respectively. It is able to meet ~95% of its cereal demand from domestic sources, importing the remaining 5%<sup>9</sup></li> <li>Agriculture accounts for over <b>80% of Malawi's export earnings<sup>4</sup></b>. Tobacco, tea, and sugar are Malawi's principal exports with tobacco accounting for over 60% of exports, while wheat and meslin are main agricultural imports</li> </ul>
	<b>Income growth and distribution</b>	<ul style="list-style-type: none"> <li>Malawi is the 3rd poorest country in the world by GDP/capita PPP (constant 2017 international \$)<sup>5</sup> -\$1,060 in 2019</li> <li>Income is unevenly distributed with Gini index of 45/100 in 2016; largely unchanged since 2010 (46/100)<sup>5</sup></li> <li>Agriculture is central to Malawi's economy, contributing nearly <b>30% of GDP</b>. It employs <b>~65% of the formally employed</b> and supports ~85% of the population (including subsistence farming)<sup>4</sup></li> </ul>
	<b>Urbanization</b>	<ul style="list-style-type: none"> <li>Although only 17% of the population currently lives in urban areas, Malawi is <b>one of the fastest urbanizing countries</b> in the world with an annual urban population growth rate of ~4%<sup>6</sup></li> <li>At 192 people per sq. km of land, Malawi's population density is over 4x that of Sub-Saharan Africa average (45)<sup>5</sup></li> </ul>
	<b>Demographic shifts</b>	<ul style="list-style-type: none"> <li><b>Population</b> of ~18M (2018) <b>projected to double to &gt;38M by 2050<sup>7</sup></b></li> <li>~51% of Malawians are under 18 years of age and ~54% are of working age (15-64)<sup>5</sup></li> </ul>
	<b>Leadership and Governance</b>	<ul style="list-style-type: none"> <li>Malawi is a presidential republic, with policy development centralized at national level</li> <li>Presidential and National Assembly <b>elections occur every 5 years</b>, with the latest in 2020. Change in ruling party may result in inconsistent policy landscape</li> <li>In the past few decades, it had 28 districts across 3 regions - Northern, Central and Southern regions with 6, 9 and 13 districts respectively<sup>8</sup>. However, a new Eastern region was recently created</li> </ul>

1. World Bank climate change knowledge portal 2. USAID Malawi fact sheet 3. WITS 4. ExportGov 5. World Bank 6. UN Habitat 7. Population pyramid 8. Commonwealth of Nations 9. Akademiya2063\_Malawi FS-TIP\_External Drivers Policy Brief

## High-level view | External drivers of the food system (II/II)

	<b>Socio-cultural context</b>	<ul style="list-style-type: none"> <li>• <b>Nsima</b>, a <b>maize-based dish</b>, is Malawi's staple food while <b>tea</b> is an accompaniment to most Malawians' breakfast<sup>5</sup></li> <li>• <b>Life expectancy</b> at birth is 64.3 years - almost <b>3 years higher than Sub-Sahara African average</b> of 61.5 years<sup>1</sup></li> <li>• Although HIV prevalence has dropped from 14.4% in 2000 to 9.2% in 2018, it is still over 2x Sub Saharan African average of 4.1%<sup>1</sup></li> </ul>
	<b>Finance &amp; Capital</b>	<ul style="list-style-type: none"> <li>• Only 12% of Malawians engaged in agriculture have access to macro and micro credit<sup>6</sup>. It is <b>easier for tobacco farmers to access credit</b> than for other farmers as they make more money and are thus able to afford high credit costs<sup>2</sup></li> <li>• Savings groups such as Village Savings and Loans Association (VSLA) are bridging access to credit gaps especially in rural areas although they cannot finance large investment activities</li> <li>• As part of Vision 2063, Malawi plans to develop an Agricultural Finance Policy (AFP) and revitalize the Agricultural Credit Facility (ACF) to increase access to capital to aid agriculture commercialization efforts</li> </ul>
	<b>Energy</b>	<ul style="list-style-type: none"> <li>• Installed capacity of ~500 MW, <b>~70% of which is hydropower</b>. Heavy reliance on hydro often constrained by drought and low water levels. There are 3 ongoing projects to provide additional ~470 MWs of power - 350 MWs hydropower, 120 MWs solar power<sup>7</sup>. This would result in more reliable solar energy constituting 10-15% of electricity generation capacity</li> <li>• Only ~10-15% of Malawians have access to electricity<sup>7</sup></li> <li>• Rural areas lagging behind urban areas in access to electricity (5% vs. 62%)<sup>3</sup></li> </ul>
	<b>Science and technology</b>	<ul style="list-style-type: none"> <li>• The share of Malawi's agriculture research spending as a % of total government expenditure sits at avg. 0.87% from 2010-2014<sup>7</sup></li> <li>• Agricultural research is focused on improving <b>irrigation, soil management</b> and other practices to increase productivity and manage impact of droughts and floods<sup>4</sup></li> <li>• <b>Government of Malawi and donor agencies</b> are major research funders and technology investors e.g., USAID, via Feed The Future, provides research, training &amp; technical assistance to increase farmers' productivity and access to financial services<sup>3</sup>; World Bank &amp; IDA's Shire Valley Transformation Program includes investment in farm irrigation and drainage<sup>4</sup></li> <li>• Research is largely <b>conducted by local institutions</b> e.g., Department of Agriculture Research &amp; Technical Services (DARTS), Mwapata Institute, Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University, University of Malawi, etc. and supported by international organizations such as International Food Policy Research Institute (IFPRI)</li> </ul>

# Current status of Malawi's food system captured in supra-indicators




Action Tracks	Supra-indicators	Malawi	World	Unit
 Action Track 1 <i>Ensure access to safe and nutritious food for all</i>	1 <b>Diet quality:</b> Food Consumption Score	Poor: 1% Borderline: 16%	N/A	Percent
	2 <b>Nutrient supply:</b> Net supply in country of key macro and micronutrients as a share of total consumption requirements for a healthy diet	Nutrient gaps (see deep dives)	N/A	TBD
	3 <b>Undernourishment:</b> % of population undernourished	18.8	8.9	Percent
	4 <b>Overweight &amp; obesity:</b> % of population overweight or obese (adult population)	20.1	39.1	Percent
	5 <b>Food safety:</b> Food Systems Safety Index	66.7	75.3	Index (0-100)
 Action Track 2 <i>Shift to sustainable consumption patterns</i>	6 <b>Affordability:</b> Cost of a healthy diet as a percent of household food expenditure	219	95	Percent
	7 <b>Sustainability of diets:</b> Per capita GHG emissions of food consumption	1,369	2,603	Kg CO2eq./person
	8 <b>Food waste:</b> Food waste index	146	121	Kg/capita/year
	9 <b>Food environment:</b> Composite index combining food environment policies	3	N/A	Index (0-14)
 Action Track 3 <i>Boost nature-positive production</i>	10 <b>Emissions:</b> Green House Gas (GHG) emissions from agriculture	7.5	30.1	MtCO2e
	11 <b>Land:</b> Average % forest land being deforested for agriculture use over past 3 years	0.55	0.17	Percent
	12 <b>Food loss:</b> % food loss across supply chain	TBD	5	Percent
	13 <b>Regeneration:</b> Biodiversity and habitat index	50.7	54.5	Percent
 Action Track 4 <i>Advance equitable livelihoods</i>	14 <b>Income:</b> Gini coefficient (specific) based on incomes across the food system	0.75	N/A	Coefficient (0-1)
	15 <b>Income:</b> Gap between farmgate price and wholesale price	68%	N/A	Percent
	16 <b>Gender equity:</b> Women empowerment in agriculture index	0.84 <sup>1</sup>	N/A	Index (0-100)
	17 <b>Economic:</b> Household Resilience Capacity Index	0.26	N/A	Index
 Action Track 5 <i>Build resilience to vulnerabilities, shocks and stress</i>	18 <b>Risk distribution:</b> Proportion of men and women engaged in agriculture with access to macro and micro credit financial services	12%	N/A	Percent
	19 <b>Social:</b> Government social security budget as a % of total requirements to cover vulnerable social groups	87.0	N/A	Percent
	20 <b>Environmental:</b> ND-GAIN (Notre Dame Global Adaptation Initiative) Country Index	35.2	49.0	Index (0-100)
	21 <b>Production diversity:</b> % production from top 5 crops	75%	N/A	Percent
 Governance	22 <b>Governance:</b> Presence of food systems related governance bodies and mechanisms	3	N/A	Index (0-14)

1. To be verified by in-country team if more recent data is available - current data from 2014 WEIA index





# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
1. Diet Quality: Food Consumption Score (FCS) <sup>5</sup> (Aggregates household-level data on diversity and frequency of food groups, weighting according to the relative nutritional value)	Score	Poor 1%, Borderline 16%	N/A	N/A	...
	<b>Commentary</b> Most Malawians do not have an adequately diverse diet - 70% of dietary energy comes from cereals, roots and tubers <sup>1</sup> . This is largely due to <b>overreliance on maize cultivation</b> , which reduces production and availability of nutrient-rich foods (e.g., fruits, vegetables) and increases their prices <b>Drivers</b> <ul style="list-style-type: none"> <li>• Availability: farmers typically <b>sell limited high quality nutritious food</b> while retaining staple crops, e.g., maize, for own consumption</li> <li>• Affordability: on average a nutrient adequate diet <b>is ~130% of household expenditure</b><sup>2</sup> (see supra-indicator on affordability)</li> <li>• Food preparation and consumption practices based on culturally acceptable methods, instead of nutrition-sensitive strategies</li> </ul>	<b>Implications &amp; Interventions</b> Low food consumption score and limited dietary diversity have negative impacts on population's health, well-being, and productivity. Potential interventions: <ul style="list-style-type: none"> <li>• <b>Stimulating production</b> (e.g., provide/increase farming inputs subsidies for livestock, legumes, fruits, etc. through AIP) <b>and consumption of nutrient-rich/biofortified foods</b> e.g., legumes, fruits, vegetables and orange-fleshed sweet potatoes</li> <li>• Providing nutrient rich foods to most vulnerable population through <b>alternative channels</b> e.g., school feeding programs</li> <li>• Increasing behavior change communication on nutrition-sensitive food purchasing and preparation (e.g., through nutrition sensitization campaigns, educational programs)</li> </ul>			



# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
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**2. Nutrient supply:** Net supply in country of key macro and micronutrients as a share of total consumption requirements for a healthy diet

See details under commentary

## Commentary

Inadequate supply of macro- and micro- nutrients as maize is predominant crop grown (grown by ~70% of Malawians) with limited farming of nutritious legumes and livestock thus limiting their availability and increasing cost of nutrient adequate diet (see supra-indicator 6)

	Production (per day, AME)	Consumption (per day, AME)	Recommended intake (per day)	Adequacy comment
Kcal	2265.9	3659.4	2750.0	Not sufficient
Protein	70.9	109.7	50.0	Sufficient
Calcium	1181.9	2876.8	1000.0	Sufficient
Zinc	16.0	21.4	27.4	Not sufficient
Iron	61.0	162.3	14.0	Sufficient
Folate	514.5	666.7	400.0	Sufficient
Vitamin B12	0.5	2.8	2.4	Not sufficient
Vitamin A	345.8	797.9	600.0	Not sufficient
Vitamin B6	2.0	3.3	2.0	Sufficient
Vitamin C	100.0	209.7	60.0	Sufficient
Riboflavin	0.8	1.4	1.7	Not sufficient
Thiamin	2.7	3.1	20.0	Not sufficient
Niacin	17.0	21.1	1.5	Sufficient

## Drivers

- Local production of staple and non-staple food is insufficient to meet the country's demand especially during/after floods and droughts<sup>2</sup>
- Low but rising production of meat, fish and eggs<sup>1</sup>- with production of animal sourced foods not yet sufficient to provide diverse diets for all
- Limited imports, which tend to be more expensive, to fill dietary gaps
- High levels of food loss along the value chain result in part of the population not having access to a diverse diet<sup>1</sup>




## Implications & Interventions

As Malawi works to improve food security, it should ensure households have adequate access to macro and micronutrients

- Encourage producers and processors to increase production and consumption of nutrient-rich/biofortified foods for the domestic market e.g., via sponsoring home gardening projects
  - Invest in **electricity, logistics and other infrastructure** to increase production, storage and distribution of perishable food
  - **Government to revamp NFRA** to ensure it always has adequate stock of nutritious grains and non-grains
  - Developing **alternative sources of proteins** that have limited impact on environment (e.g., fish from Lakes Malawi, Chilwa)
- Parallel efforts should be pursued to improve access, distribution and household consumption of diverse nutrient-adequate foods






# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
3. Undernourishment: % of population undernourished	Percent	18.8%	21.6 <sup>3%</sup>	8.9%	...
	<b>Commentary</b> Undernourishment has been on the rise from ~17% in 2014 to ~19% in 2018 <sup>1</sup> due to food insecurity which affects ~52% of Malawians <ul style="list-style-type: none"><li>23% of all child deaths are related to under-nutrition with 39% of children (&lt;5y) are stunted while ~4% suffer from acute malnutrition<sup>2</sup></li><li>Only ~60% of children &lt;6 months are exclusively breastfed and 8% of children 6-23 months receive minimum acceptable diet<sup>2</sup></li></ul> <b>Drivers</b> <ul style="list-style-type: none"><li>Subsidized maize production and tobacco cultivation for export reduce supply/availability and affordability of more nutritious produce</li><li>Food insecurity is often worsened by drop in production during floods and droughts especially in the southern region</li><li>High disease burden (~27%<sup>3</sup>) also weakens the immune system and increase chances of undernourishment</li></ul>	<b>Implications and Interventions</b> WHO global nutrition target is to reduce prevalence of stunting in Malawi to 27% by 2025 <sup>4</sup>  Malawi is at risk of continuous high level of undernourishment due to increased floods, droughts and rising population adding pressure on limited arable land. Potential interventions include: <ul style="list-style-type: none"><li>Provide subsidies for farming nutritious and/or biofortified food (e.g., livestock, fruits and vegetables) along with resilience and soil management support through agricultural programs such as AIP<sup>5</sup> to increase availability and affordability of nutritious food</li><li>Inter-ministerial (Min. of Agric, Health, etc.) collaboration to sponsor targeted behavior change communication to drive desired nutrition, hygiene and other health practices</li></ul>			
4. Overweight and Obesity: % of population overweight or obese(adult population)	Score	20.1	27.7	39.1	
	<b>Commentary</b> Although Malawi's obesity rates are lower than regional rates, both adult and child obesity are rising steadily by ~8% CAGR (2010-2016) <sup>6</sup> <ul style="list-style-type: none"><li>13% children and adolescents are overweight or obese (weight-for-height) with higher prevalence in urban areas than rural areas</li><li>25% women and 15% of men are overweight/obese. The richest women are 3x more likely to be overweight/obese than the poorest<sup>4</sup> due to higher consumption of unhealthy ultra-processed foods</li><li>Ngoni women have 54% higher risk of being overweight or obese as others linked to higher meat and alcohol consumption<sup>4</sup></li></ul> <b>Drivers</b> <ul style="list-style-type: none"><li>Rising urbanization with increased sedentary behaviours and less consumption of own-grown food in urban areas</li><li>Cultural factor: overweight seen as a sign of affluence and wellbeing<sup>4</sup></li><li>Women with higher education levels and from wealthier households more likely to be overweight/obese</li></ul>	<b>Implications and Interventions</b> Rising overweight and obesity rates are linked to rising rates of diet-related NCDs such as diabetes (increased from 4.6% of adults in 2000 to 6.3% in 2014) and raised blood pressure (increased from 26.5% of adults in 2000 to 28.7% in 2015), contributing to overall disease burden in country. Overweight in mothers (increasing BMI) is associated with overweight and obesity in their children. Potential interventions: <ul style="list-style-type: none"><li>Increase tax on unhealthy foods such as sugar-sweetened beverages and salty snacks</li><li>Inter-ministerial (Min. of Agric, Health, etc.) collaboration sponsoring targeted campaigns for individuals and households focusing on both overnutrition and undernutrition, promoting healthy diets and physical activity for urban and peri-urban populations</li><li>Strengthening guidelines on food marketing and messaging</li></ul>			



# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
5. Food safety: Food Systems Safety Index	Index (0-100, 100=best)	66.7	54.7	75.3	...
<div> <div> <b>Commentary</b>  <p>Although food safety has improved in recent years, there are still substantial gaps to reach global standards 6 ministries have oversight of food safety issues with 15 directorates within these ministries and further sub-departments<sup>1</sup> Malawi's food regulatory framework is extensive with many policies and standards, but it is fragmented and lacks harmonization A food safety act is currently being developed within the Ministry of Health<sup>1</sup></p> <p><b>Drivers</b></p> <ul style="list-style-type: none"> <li>Limited interdepartmental or inter-ministerial collaboration due to an overlap in departments and mandates reduces efficiency and effectiveness</li> <li>Quality of inspection services impacted by under-resourcing of food inspectors and lack of guidance and consistency on who, how and when to conduct inspections<sup>1</sup></li> <li>Surveillance of foodborne disease is constrained by underdeveloped infrastructure and limited research on the bacteriological and chemical contamination of food. However, significant steps have been made in surveillance of aflatoxins due to their political exposure and significant impact on both trade and health</li> <li>Due to high level of food insecurity and malnutrition, focus is on food production and nutrition with less emphasis on food hygiene practices</li> </ul> </div> <div> <b>Implications and Interventions</b>  <p>The resulting high levels of food loss, food waste, and increasing disease burden (e.g., liver cancer associated with aflatoxins) have economic and health costs to the population</p> <p>In absence of an integrated approach to food safety regulations and enforcement, foodborne diseases will continue to lower the quality of life of people in Malawi, affecting overall productivity and well being</p> <p>Possible policy interventions could focus on the following:</p> <ul style="list-style-type: none"> <li>Restructuring to create an integrated food system with clear delineation of initiatives, policies, etc. among all ministries, sub-directorate and departments is crucial to ensuring ownership and increasing efficiency and effectiveness</li> <li>Increasing research, infrastructure, staffing and other resourcing to increase capacity to proactively identify and prevent incidence of foodborne diseases</li> <li>Adopting a risk-based approach to food safety especially in the short term as capacity is being increased. This could involve prioritizing high-risk areas contributing to foodborne disease and determining frequency of inspection based on health risk</li> <li>Increase commercial farming and ensure safety measures are installed in them to reduce disease vulnerability</li> <li>Invest in safe community food storage facilities and structured markets to limit food contamination, loss and waste</li> </ul> </div> </div>					




Note: The 6 ministries with oversight of food safety issues are Ministry of Health, Ministry of Agriculture, Irrigation and Water Development, Ministry of Industry, Trade and Tourism, Ministry of Education, Science and Technology, Ministry of Local Government and Rural Development and Ministry of Finance

Note - Superscript refers to sources on [source page](#)








# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
6. Affordability: Cost of a healthy diet as a percent of average household food expenditure (%)	Score	219%	167%	95%	...
	<b>Commentary</b>	<p>A healthy diet that costs 219% of household food expenditure is very expensive and out of reach for ~94% of the population<sup>1</sup> as is a nutrient adequate diet that costs ~102% of household food expenditure and is unaffordable for ~71% of the population<sup>1</sup></p>			
	<b>Drivers</b>	<ul style="list-style-type: none"> <li>Relatively high % of cereal farming - ~70% of Malawians cultivate maize while only ~25% and ~45% farm fruits and livestock - thus impacting supply and affordability of more nutritious food<sup>2</sup>. Production drops further during floods and droughts making food even more expensive</li> <li>Foods typically come from own production - which relies on land parcels that are too small (1.3 acres<sup>2</sup> vs US average of 444<sup>3</sup> acres) and crude agriculture practices which limit yield - or they are bought from markets constrained by poor infrastructure</li> <li>Low-income levels among farmers (~65% of population) limits purchasing power and ability to buy products when own production is insufficient</li> </ul>			
7. Sustainability of diets: Per capita GHG emissions of food consumption	Kg CO2eq./person	1,369	2,780	2,603	...
	<b>Commentary</b>	<p>Malawi's GHG emission related to food consumptions is much lower than than the African and world averages</p>			
	<b>Drivers</b>	<ul style="list-style-type: none"> <li>Short distance covered by consumed food as 75% of crop production is for subsistence farming<sup>4</sup></li> <li>Limited mechanization of agriculture and agro-processing</li> <li>Relatively small land area<sup>2</sup> lowers environmental cost of transportation of food to urban centers</li> <li>Low farming and consumption of animal products, which tend to have higher environment impact, in processing, storage and transportation</li> <li>High level of food loss, which if lowered could reduce emissions and food insecurity</li> </ul>			
		<b>Implications and Interventions</b> <p>Malawians spend up to 65% of income on food, mainly on cheaper cereals, roots and tubers (source of 70% of dietary energy) which keep them full but are less nutritious than the costlier animal source food, legumes, fruits and vegetables.</p> <p>In addition to promoting agricultural diversification for export, there is need to promote diversification for domestic consumption:</p> <ul style="list-style-type: none"> <li>Sensitize communities on the benefit of cultivating and consuming indigenous nutrient dense foods such as beans</li> <li>Encourage farming of nutritious and/or biofortified foods e.g., via AIP, tax credits, etc. to increase supply and affordability</li> <li>Invest in processing, storage and logistics infrastructure to reduce food loss and waste and extend produce shelf-life. Added benefit of increasing income potential and purchasing power</li> <li>Leveraging public procurement to deliver healthier meals and grow demand for nutritious foods (e.g., schools)</li> </ul>			
		<b>Implications and Interventions</b> <p>Consumption choices are driven by many other considerations apart from concern about the environment e.g., accessibility, affordability, personal preferences, social and cultural norms.</p> <p>As incomes and urbanization increase, diet preferences tend to shift toward animal products which have highest environmental impact</p> <p>To mitigate anticipated rise in emissions, need to:</p> <ul style="list-style-type: none"> <li>Invest in behavior change communication to increase consumption of eco-friendly ASF e.g., fish from lake Malawi</li> <li>Invest in eco-friendly processing, storage and logistics infrastructure to reduce food loss</li> </ul>			






# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
8. Food waste: Food waste index	Kg/per capita/year	146.0	N/A	121.0	...
<div> <div> <b>Commentary</b>  Malawi wastes more food per capita than global average despite <b>high level of food insecurity</b> which affects ~52% of Malawians </div> <div> <b>Drivers</b> <ul style="list-style-type: none"> <li>Poor home storage practices result in rodents and weevils' infestation and/or rotting leading to food waste<sup>1</sup></li> <li>Prevalence of traditional open-air markets, which produce more waste than modern markets, contributes to food wastage</li> <li>The few large retail outlets in the country have very high levels of food wastage, especially of fruits and vegetables</li> <li>Less amount of food wastage in rural areas than urban areas due to subsistence farming and prevalence of eating own-grown food in rural areas</li> </ul> </div> </div>					
<div> <div> <b>Implications and Interventions</b>  Fresh food waste is a health and urban management problem in Malawi. In some places such as Blantyre<sup>2</sup>, the City Council transports the waste from markets to a composting facility where it is turned into rich, organic compost eventually sold to farmers  To maximize limited available food and improve food security, there is need to reduce food waste by: <ul style="list-style-type: none"> <li>Investing in <b>electricity, processing and other infrastructure and food messaging on how to store and prepare produce</b> to extend their shelf-life at home/in restaurants</li> <li>Investing in standards to require retail institutions to keep food wastage levels low as urbanization increases</li> <li>Invest in <b>safe community food storage</b> facilities and <b>structured markets</b> to limit food contamination, loss and waste</li> <li>Expand programs to convert food waste into organic fertilizer to boost crop production especially of nutrient dense foods</li> </ul> </div> </div>					
9. Food environment: Composite index combining food environment policies	Index(0-14, 14=best)	3	N/A	N/A	...
<div> <div> <b>Commentary</b>  Opportunity to strengthen Malawi's food environment as it currently has few policies that encourage consumption of sustainable and healthy diets </div> <div> <b>Drivers</b> <ul style="list-style-type: none"> <li>Malawi has no marketing restriction on junk and non-alcoholic beverage to children. There is also no policy to reduce consumption of salt/sodium and saturated fatty acids. However, it has provisions guiding the marketing of breastmilk substitutes.</li> </ul> </div> </div>					
<div> <div> <b>Implications</b>  Inadequate regulation to strongly encourage consumption of healthy foods and discourage consumption of non-healthy foods increases the chance of malnutrition, overweight, obesity and other nutrition related NCDs  Interventions could be focused on filling current "gaps" in food environment policies: <ul style="list-style-type: none"> <li>Facilitate processing of diverse, nutrient-rich healthy foods e.g., by reducing tax on healthy foods and increasing tax on unhealthy foods</li> <li>Restrict the promotion of unhealthy foods to children</li> <li>Develop consumer guidance mechanisms to help consumers make informed choices</li> </ul> </div> </div>					






# Malawi| Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
10. Emissions: Green House Gas (GHG) emissions from agriculture	MtCO <sub>2</sub> e	7.5	19.0	30.1	...
<div> <div> <b>Commentary</b>  Malawi's agriculture-related GHG emission is lower than African and World averages but has been rising steadily at since 2000. <b>Agriculture contributes ~40% of GHG emissions<sup>1</sup> in Malawi.</b> </div> <div> <b>Drivers</b> <ul style="list-style-type: none"> <li>Indiscriminate use of fertilizer due to highly subsidized availability of this input increases GHG emissions</li> <li>Limited knowledge/concern among farmers and extension workers, and a practice of farming habits which harm the environment</li> <li>Increase in conventional farming (tillage) which breaks up the soil (a natural carbon sink) and releases carbon into the air</li> </ul> </div> </div> <div> <b>Implications &amp; Interventions</b>  As Malawi shifts towards commercialized agriculture, it must consider the long-term sustainability within the food system as conventional farming practices could reduce the carbon sink thus contributing to more extreme weather events affecting production  To boost efficient, nature positive production, pathways include: <ul style="list-style-type: none"> <li>Invest in production of sustainable ASF e.g., fish farming and fishing in lakes Malawi, Chilwa, etc.</li> <li>Make available the right types of fertilizer, in good time, with messaging on correct usage for each season and region</li> <li>Research and educate farmers on eco-friendly farming practices e.g., zero-tillage and conservation agriculture</li> <li>Research, develop and make widely available low-cost green technologies for agricultural sector and for everyday life</li> <li>to boost crop production especially of nutrient dense foods</li> </ul> </div>					
11. Land: % of forest land being deforested for agriculture use over the past 3 years	Percent	0.55%		0.17%	...
<div> <div> <b>Commentary</b>  <b>Agriculture is the leading cause of deforestation in Malawi</b> - in 2019, ~90%<sup>2</sup> of the deforested land was driven by agriculture. Forest cover of the country reduced from 47% in 1975 to 25%<sup>3</sup> in 2018 making it the highest deforestation rate in the Southern African Development Community region </div> <div> <b>Drivers</b> <ul style="list-style-type: none"> <li>Growing population that is overdependent on agriculture and seeking to expand with limited land &amp; small land holdings</li> <li>Floods and droughts leading to soil depletion drives farmers to clear more land to raise production</li> <li>Lack of understanding of the long-term role of forests</li> </ul> </div> </div> <div> <b>Implications &amp; Interventions</b>  Although Malawi has a Forest Act to guide the proper use of the forest, 95% of the population<sup>3</sup> is unaware of it and the importance of forests and thus continuously engage in deforestation  The next stage is to improve productivity of existing land to reduce the drivers of deforestation: <ul style="list-style-type: none"> <li>Provide farmers resilience and soil management support to increase productivity of available farmland while developing other industries to reduce overdependence on agriculture</li> <li>Increasing awareness about importance of forests and training farmers on conservation agriculture and agroforestry with opportunities to increase income e.g., beekeeping</li> <li>Increase capacity of Ministry of Forestry and Natural Resources to develop and execute/enforce forest conservation initiatives/policies</li> </ul> </div>					






# Malawi| Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
12. Food loss: % food loss across supply chain	Validation ongoing by in-country experts				
	<b>Commentary</b> Food loss is higher than world average, especially cereals, vegetables, fruits and pulses, with farmers losing up to half of their hard-earned yields to rodents <sup>1</sup> , weevils and rotting a few months after harvesting <ul style="list-style-type: none"><li>Farmers struggle to sell produce since their quality and shelf-life are reduced by poor storage. More food loss occurs the longer it takes to sell</li><li>Higher production linked to higher losses, suggesting that farmers may have the capacity and willingness to pay to limit losses <sup>1</sup></li></ul>		<b>Implications and Interventions</b> High level of food loss in Malawi contributes to its high level of food insecurity especially when it isn't harvest season. In addition to discouraging the production of nutrient-rich perishable foods, high food loss lowers dietary diversity. Food loss also puts an unnecessary burden on the environment, as resources are used, and emissions occur to produce foods that never reach consumers		
	<b>Drivers</b> <ul style="list-style-type: none"><li>Poor food storage and handling, limited testing infrastructure resulting in aflatoxins in key foods</li><li>Low electrification rate and poor transportation system; Malawi's agriculture infrastructure index at 31 while the world average is ~53<sup>2</sup></li><li>Climate impacts losses - excess rainfall during harvest/postharvest can directly cause losses, particularly during harvest and processing</li><li>Vulnerability to plant pests e.g., Fall Armyworm (FAW) which has infested all districts with most areas reporting infestation ranging from 20% to over 45% in February 2021<sup>4</sup></li><li>People cook excessive amounts of food during harvest season, and throw away leftovers even if they can be preserved for another day</li></ul>		Possible next step actions: <ul style="list-style-type: none"><li>Sustainably invest in storage, electricity and logistics infrastructure e.g., cold chain vehicles, across value chain</li><li>Better education of farmers, middlemen and processors on loss prevention practices and the conditions in which they should be most concerned about loss prevention is critical to reducing food loss and increasing overall food availability</li><li>Apply lessons learnt from ongoing implementation of integrated pest management of FAW to address other plant pest infestations</li><li>Investing in proper assessment and disposal of fungus and aflatoxin affected crops e.g., as feed for soldier flies</li></ul>		
	Percent	50.7%	57.6%	54.5%	...
13. Regeneration: Biodiversity and habitat index	<b>Commentary</b> Ranked 37 out of 53 African countries		<b>Implications and Interventions</b> While agriculture remains crucial to Malawians, its sustainability and productivity is integrated with the level of biodiversity in the country. Without registering and preserving biodiversity, Malawi risks a reduction in diversity of food and medicinal plants, and an overall less resilient food system		
	<b>Drivers</b> <ul style="list-style-type: none"><li>Deforestation for agriculture (~90%<sup>3</sup> of deforested land)</li><li>Lack of awareness of benefit of diversity in plant/animal life to farmers, with short-term view around consumption and subsistence</li><li>Excessive use of pesticides which kills pollinators e.g., bees</li></ul>		<ul style="list-style-type: none"><li>Need for investments in eco-friendly technologies and articulation and socialization of biodiversity goals</li></ul>		








# Malawi| Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
14. Income: Gini index (specific) based on incomes across the food system ( <i>under development</i> )	Coefficient (0-1, 0 = best)	0.75	N/A	N/A	...
	<b>Commentary</b>	The major determinants of wealth in rural Malawi are agricultural output prices, land area cultivated, amount of labour available, ability to rent more land and cash available to purchase farm inputs <sup>1</sup> Malawi Livelihood Baseline Profiles recognizes 4 income profiles - “very poor”, “poor”, “middle”, and “better off”. 64% of rural Malawians are found in the bottom two wealth groups <sup>1</sup> .			<b>Implications &amp; Interventions</b> High poverty rates (~50-70% living under the national poverty line), rapid population growth and reliance on subsistence agriculture increase Malawian's food insecurity. Potential interventions that need to be assessed to provide farmers with more income security include:
	<b>Drivers</b>	<ul style="list-style-type: none"> <li>Low-productivity and limited value-added agriculture (due to crude agricultural techniques and limited use of improved inputs) is main income source for majority of population</li> <li>Lack of income-generating opportunities outside farming in rural areas - 93% of households engage in agriculture vs 44% in urban areas<sup>1</sup></li> </ul>			<ul style="list-style-type: none"> <li>Provide more credit &amp; insurance to protect smallholder farmers against extreme weather and pest infestations</li> <li>Invest in agriculture commercialization and extension, electrification, infrastructure and training to increase productivity and value-addition along agriculture value chain</li> <li>Improve effectiveness of anchor farming programs and farming cooperatives via training and financial empowerment</li> <li>Improve marketing/behavioural change communication to increase demand for non-staple but nutritious foods</li> <li>Accelerate creating of jobs in other sectors, allowing people to graduate from subsistence farming</li> </ul>
15. Income: Gap between farmgate price and retail price	Percent	68%	124%	N/A	...
	<b>Commentary</b>	Limited differences in prices between farmgate and retail - price difference in Malawi is ~45% less than in other African countries			<b>Implications &amp; Interventions</b> Maize price volatility is still a challenge in Malawi despite government intervention. This causes fluctuations in level of food insecurity based on maize season
	<b>Drivers</b>	<ul style="list-style-type: none"> <li>Government intervention<sup>2</sup> - setting price floor for farmgate maize and price ceiling for retailing - has limited differences in prices between farmgate and retail. Although ADMARC (the national maize aggregator) works to maintain this price floors and ceilings, private sector activities - buying maize from ADMARC and reselling at a markup in markets - often leads to price ceilings being exceeded</li> <li>Rural Malawians primarily eat own-grown food and rely on local markets as a secondary food source</li> </ul>			Potential intervention: <ul style="list-style-type: none"> <li>Deploy maize market interventions at the optimum time and frequency - ensure ADMARC purchases maize earlier in the season (April-Jun) to counteract seasonal price declines and sells maize mainly during the lean season (January-March) when reduced maize availability increases price</li> </ul>






# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
16. Gender equity: Women empowerment in agriculture index	Index (0-1, 1= Best)	0.84	N/A	N/A	...
<div> <div> <b>Commentary</b>            57%<sup>1</sup> of Malawian women are agricultural landowners:           <ul style="list-style-type: none"> <li>Although a slightly higher % of female-led households (89%) are engaged in agriculture than male-led households (83%), the % of households with livestock is higher among male-led households (46%) than female-led households (38%)<sup>1</sup> signifying that <b>male-led households are wealthier than female-led households</b> - livestock is typically owned by wealthier households</li> <li>Slightly <b>higher % of female-led households receive more FISP subsidies than male-led households</b> (54% vs 49%)<sup>1</sup> due to their lower economic status</li> <li>Fewer % of female-led households than male-led households operate a non-farm enterprise (31% vs 42%)<sup>1</sup> which is typically more lucrative than farming</li> </ul> </div> <div> <b>Drivers</b> <ul style="list-style-type: none"> <li><b>Women-managed farms are ~40% smaller</b> than men managed farms (0.9 vs 1.5 acres<sup>1</sup>), which limits production</li> <li><b>Low levels of financial inclusion</b>, with low access to macro and micro credit - only 12% of women engaged in agriculture have access</li> <li><b>Economic burden on adults is higher in female-led households</b> than in male-led households: dependency ratio of 1.6 vs 1.1 respectively<sup>1</sup></li> <li>Although women have equal property ownership and inheritance rights, they have <b>limited control over resources and decision making</b> in households and communities, especially in rural areas</li> </ul> </div> </div>					
<div> <div> <b>Implications &amp; Interventions</b>  <b>Inclusion and empowerment of women in agriculture</b> and all sectors should be a priority for all stakeholders and backed by high levels of political will and progressive policies. It has the potential to increase agricultural production and lift a significant number of Malawians out of poverty<sup>1</sup>             To do this, there is need to strengthen the capacity across institutions to mainstream gender-responsiveness by:           <ul style="list-style-type: none"> <li>Ensuring <b>inclusive and adequate budgeting</b> levels for gender mainstreaming across key agriculture policies and institutions</li> <li>Directing local community leaders to <b>allocate farmlands more equitably</b> among female and male led households</li> <li>Developing <b>gender-responsive reporting and accountability</b> mechanisms, especially around levels of representation in agriculture value chains</li> <li>Developing a deeper understanding of gender issues among practitioners followed by commitments to action</li> <li>Sponsoring <b>behaviour change communication</b> and other initiatives to increase Malawians' appreciation of the various important roles women and men play in food systems</li> </ul> </div> </div>					






# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
<b>17. Economic:</b> Household Resilience Capacity Index	Index	0.26	N/A	N/A	...
	<b>Commentary</b> Household resilience to shocks is low especially in rural areas where access to basic services and infrastructure is limited  <b>Drivers</b> <ul style="list-style-type: none"> <li>High poverty rate and inadequate high-quality livelihood and employment support services for the poorest households<sup>1</sup></li> <li>Overreliance on cash crops (e.g., tobacco) and drought and flood-sensitive maize cultivation reduces resilience particularly for farmers who make up majority of the population</li> </ul>			<b>Implications &amp; Interventions</b> Frequent occurrence of floods and droughts often leads to food crises with millions of people requiring aid to prevent malnutrition and potentially death. Potential interventions to improve households' resilience include: <ul style="list-style-type: none"> <li>Providing more credit &amp; insurance to protect smallholder farmers against extreme weather and pest infestations</li> <li>Ensuring the National Food Reserve Agency always has adequate stock and proactively analyses and manages food crisis risk</li> <li>Providing infrastructure (e.g., roads, telecommunications, hospitals, etc.) that help build household resilience</li> </ul>	
<b>18. Financial:</b> Proportion of men and women engaged in agriculture with access to macro and micro credit financial services	Percent	12%	33%	...	...
	<b>Commentary</b> Low financial inclusion rate persists among men and women <ul style="list-style-type: none"> <li>% of agriculture sector employees with access to macro and micro credit is 64% less in Malawi than in average African country</li> <li>Relatives and neighbors make up ~30% of loan sources<sup>1</sup></li> <li>It is easier for tobacco farmers to get access to credit<sup>2</sup> for their farms than for other farmers as they make more money and are thus able to afford high credit costs</li> <li>Savings group such as VSLAs and ROSCAs are bridging the credit gap</li> </ul> <b>Drivers</b> <ul style="list-style-type: none"> <li>High interest rates and inadequate collateral hinder access to credit particularly in rural areas</li> <li>~20% of Malawians don't apply for loans due to the difficult process of obtaining one<sup>1</sup></li> <li>Low levels of financial literacy with limited access to information</li> </ul>			<b>Implications &amp; Interventions</b> Increased access to affordable credit, insurance and other financial services improves Malawians' resilience and enables them invest more in increasing farm productivity Potential interventions to improve financial access include: <ul style="list-style-type: none"> <li>Invest in derisking initiatives to facilitate private sector creation of tailored credit and insurance products for smallholder farmers particularly women e.g., invest in agriculture-tailored credit scoring algorithm to aid risk assessment which could reduce credit cost</li> <li>Strengthen existing savings groups to expand reach/services</li> <li>Encourage banks to streamline loan application and approval process to encourage adoption</li> <li>Reserve Bank of Malawi should invest in financial literacy programs to educate people on credit process requirements and benefits to build trust and increase demand for loans</li> </ul>	






# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
<b>19. Social:</b> Government social security budget as a % of total requirements to cover vulnerable social groups	Percent	87%	N/A	N/A	...
<p><b>Commentary</b> Social welfare was allocated a total of MK65 billion in FY2019/20, up from a revised estimate of MK43 billion in 2018/19<sup>1</sup>. However, it is still insufficient to cover the entire vulnerable population. Digitization of Government Social Cash Transfers (locally known as Mtukula Pakhomo) has been introduced to reduce delays and operational cost.</p> <p><b>Drivers</b></p> <ul style="list-style-type: none"> <li>Increase in social welfare budget is <b>largely driven by influx of donor funds</b> e.g., \$59M World Bank funds for the Social Cash Transfer Program (SCTP) and the \$60M 'Investing in Early Years' project<sup>2</sup></li> <li>High population growth is significantly over-stretching social service delivery</li> </ul> <p><b>Implications &amp; Interventions</b> High population growth rate and limited paths out of poverty are putting pressure on limited social welfare budget thus leaving an increasing number of vulnerable people uncatered for. This could worsen rate of malnutrition and food insecurity. Potential interventions to improve effectiveness of social welfare include:</p> <ul style="list-style-type: none"> <li>Increase accessibility of AIP and other interventions to reach the most vulnerable population</li> <li>Updating benefit amounts to <b>manage impact of seasonal food price volatility</b></li> <li>SCTP beneficiaries should be <b>linked to other programs</b>, such as the AIP, to maximize synergies and empower them to be more economically productive and less reliant on social welfare payments</li> </ul>					
<b>20. Environmental:</b> ND-GAIN (Notre Dame Global Adaptation Initiative) Country Index5 (summarizes a country's climate change vulnerability and its readiness to improve resilience)	Index(0-100, 100=Best)	35.2	39.0	49.0	...
<p><b>Commentary</b> Malawi has <b>high vulnerability</b> (ranked 23<sup>rd</sup> most vulnerable<sup>3</sup>) &amp; a <b>low change readiness score</b> (ranked 23<sup>rd</sup> least ready<sup>3</sup>) out of 181 countries. Needs for adaptation are also great, given the dependency on agriculture for livelihoods and economic growth</p> <p><b>Drivers</b></p> <ul style="list-style-type: none"> <li>Poverty and prevalence of <b>crude farming techniques</b> reduces capacity to acquire and deploy agriculture technology<sup>3</sup></li> <li>Over-reliance on flood and drought-sensitive maize combined with increasing risk of floods and droughts</li> <li>Southern region's high population and population density contributes to <b>higher level of deforestation for agricultural purposes</b> which ultimately increases <b>risk of and vulnerability to floods</b> relative to other regions</li> </ul> <p><b>Implications &amp; Interventions</b> Possible change in timing of agricultural seasons. Agricultural intensification needs to be implemented and monitored in conjunction with strategies to reduce climate change vulnerability and build adaptive capacity in food systems. Mitigation approaches could focus on:</p> <ul style="list-style-type: none"> <li>Improving <b>monitoring, forecasting and risk assessment capacities</b> along with timely risk information sharing</li> <li>Further researching and educating farmers on <b>modern eco-friendly farming techniques</b></li> <li><b>Invest in affordable and sustainable energy sources (e.g., solar), market linkages and infrastructure</b> to facilitate processing, storage, local trade and consumption of nutrient-rich foods especially perishable fruits and vegetables</li> </ul>					








# Malawi | Initial View of Malawi's performance on supra indicators

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
21. Production diversity: % production from top 5 crops	Percent	75%	N/A	N/A	...
<p><b>Commentary</b> Top 5 produced crops in the country in 2019 were maize, sweet potatoes, cassava, sugarcane and mangoes, with ~70% of Malawians cultivating maize<sup>1</sup>. Maize-based farming was an integral part of Malawi's agricultural development. This still influences agricultural interventions and Malawians' perception of maize as the key food item</p> <p><b>Drivers</b></p> <ul style="list-style-type: none"> <li>Government intervention - ~80% subsidy on maize seeds, limited support for other crops - makes it cheaper to grow maize<sup>2</sup></li> <li>Higher yield (metric tons/ha) of maize, sweet potatoes, cassava, etc. than other foods e.g., vegetables, beans, etc.</li> <li>Division of the country into agricultural development zones with guidelines on standard crops for production e.g., maize, tobacco, reduces on-farm production diversity</li> </ul> <p><b>Implications &amp; Interventions</b> High dependency on limited set of crops for a large share of the food consumed in the country can be risky in the face of extreme weather conditions (e.g., floods and droughts) and pest infestation.</p> <p>Potential interventions include</p> <ul style="list-style-type: none"> <li>Encourage <b>farming of wide range of nutritious, biofortified and/or drought resistant crops</b> e.g., via AIP, tax credits, etc. to increase supply/availability and affordability</li> <li>Sponsor behaviour change communication to: <ul style="list-style-type: none"> <li>Encourage increased production and consumption of various nutritious food</li> <li>Create awareness that diverse intercropping patterns contribute to higher yields and income while improving soil fertility and pest management</li> </ul> </li> </ul>					



## Governance

Supra-indicator	Unit	Malawi 	Africa 	World 	Country Ambition
22. Governance: Presence of food systems related governance bodies and mechanisms	Index (0-14)	3	N/A	N/A	...
<p><b>Commentary</b> Willingness to look at food systems in a holistic way but governance structures still need to be put into place</p> <p><b>Drivers</b></p> <ul style="list-style-type: none"> <li>No explicit long-term goals and framework to look into food systems' transformation</li> <li>No permanent supra-ministerial body for food systems' transformation with strong mandate and dedicated resources with required capabilities</li> <li>Support at the highest government level for food systems' transformation</li> </ul> <p><b>Implications &amp; Interventions</b></p> <ul style="list-style-type: none"> <li>Set up a formalized process to engage and include stakeholders in policy making and implementation.</li> <li>Dedicate a minimum of 10% of public expenditure on agriculture (as committed in the Malabo declaration)</li> <li>Define long-term goals on food systems' transformation and a framework to achieve them</li> <li>Setting-up a supra-ministerial body for food systems' transformation with adequate resources and inclusive stakeholder participation</li> </ul>					



Executive Summary

Approach and key insights from  
diagnostic and landscaping analysis

Detailed diagnostic analysis

> Detailed stakeholder and policy landscaping analysis

Next Steps : From Diagnostic to Action

Appendix

# The Policy and stakeholder landscaping focuses on the most important strategies, potential opportunities, trade-offs and implications

## What is covered in this policy and stakeholder landscape

- ✓ Most relevant declarations, policies & strategies and stakeholders related to food systems
- ✓ Most important gaps and trade-offs in policies based on qualitative diagnostic
- ✓ Most important stakeholders related to food systems

## What is not covered in this policy and stakeholder landscape

- ✗ An **exhaustive analysis** of all policy, strategy and stakeholders' documents
- ✗ **Exhaustive analysis** of all challenges and gaps in food systems policies
- ✗ **All key stakeholders** across the food system

# Policy mapping conducted using framework sub-components...

**External drivers** - Environment & Climate, minerals, water, bio-diversity, land and soils; globalization and trade; income growth and distribution; urbanization, demographic shift; leadership and governance; socio-cultural context; finance; energy; science technology and innovation

**Food supply chains** - Input supply, food production systems, storage and distribution, processing and packaging and retail and marketing

**Food environment** - Food availability, food affordability, food messaging, consumer characteristics

**Consumer behaviour** - food acquisition, preparation, meal practices and storage

**Cross-cutting themes** - Gender, youth, human rights

## **Outcomes**

- Nutrition, diet and health
- Livelihoods
- Environment

... which is assessed by corresponding component coverage



Sub-component adequately covered and as expected



Sub-component only partially addressed



Substantial part of sub-component not addressed



# Hierarchy of policies in Malawi

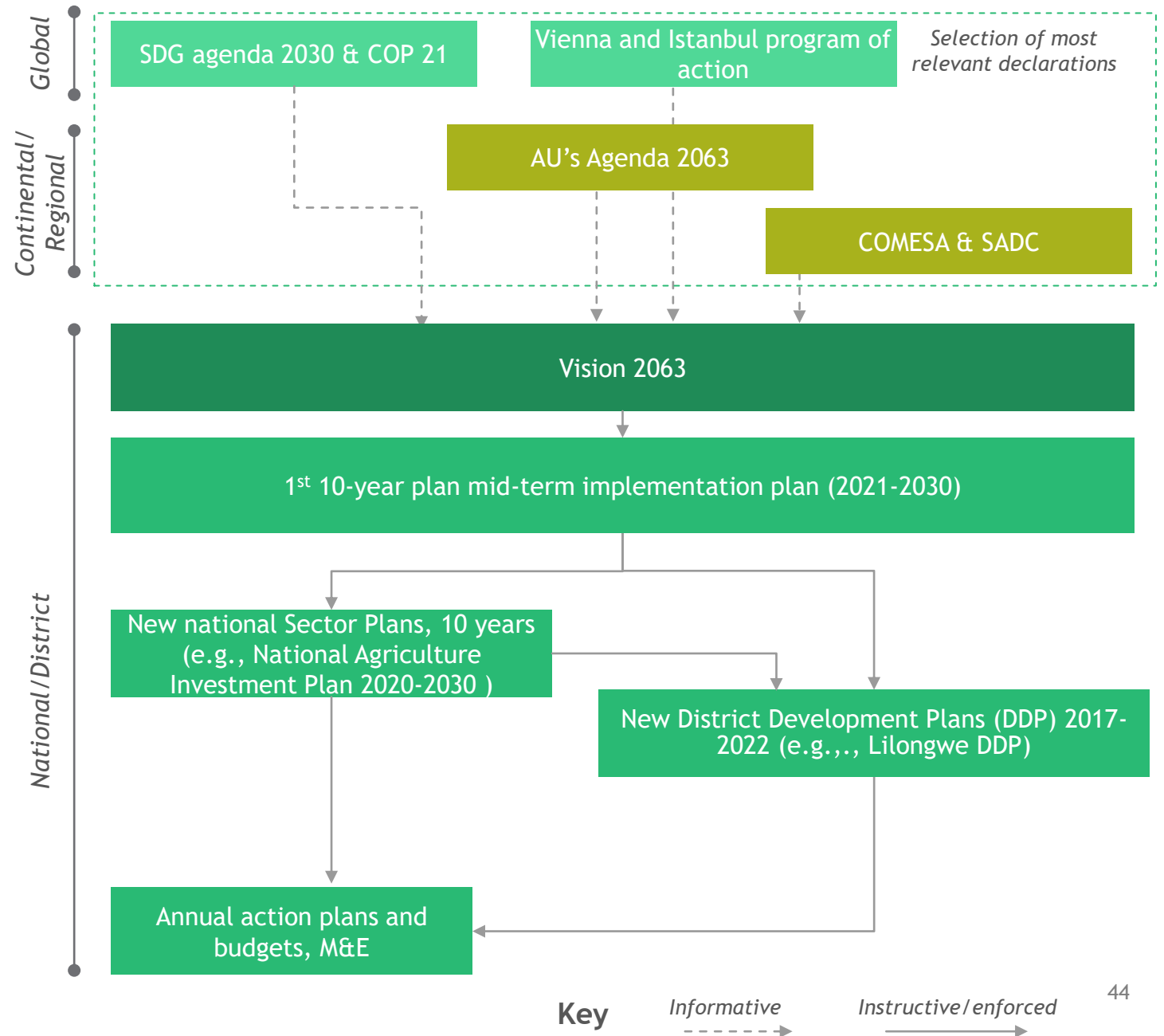
Malawi's Vision 2063, "an inclusive wealth and reliant nation" was developed in 2020 to guide the long-term development of Malawi.

Given the relatively low income of Malawi and its landlocked status the Vienna and Istanbul program of action also guide the formation of long-term development plans.

The long-term aspirations are translated into 10-year national development strategies (previously 5-years), the latest is, Malawi Growth and Development Strategy (MGDS III), which will be implemented from 2017-2022, and will be followed by a new 10-year implementation plan

The national strategy and relevant policies are operationalized by 10 and 5-year sector and investment plans e.g., Health Sector plan and Health sector investment plan. These plans include both the strategy, and implementation plan for the sector.

Policy implementation is mostly decentralized at district level. District development plans and annual plans are developed and aligned with the national vision, the mid-term implementation plan and sector plans and adapted to the districts context.



# Global and regional declarations touch upon many parts of the food system, but three main gaps exist

		Food supply chain	Food environment	Consumer behavior	Nutrition, diet and health	Environment	Livelihoods	External factors <sup>6</sup>	Cross-cutting themes <sup>7</sup>
Global	SDG <sup>1</sup> Agenda 2030	✓	✓	✓	✓	✓	✓	✓	✓
	COP <sup>2</sup> 21 - Paris agreement	1	Informal food system not addressed <sup>8</sup>			✓		✓	✓
	Vienna Programme of Action	✓			✓		✓	✓	
	Istanbul Programme of Action	✓	✓	✓	✓	✓	✓	✓	
Continental/Regional	Malabo decln. and CAADP	✓	✓	!	✓	✓	✓	!	✓
	Africa Nutrition Strategy	2	Declarations do not address influence of consumer behavior on food systems		✓				
	AfCFTA <sup>3</sup>							✓	
	COMESA <sup>4</sup> Vision 2050	✓	✓	!	✓	✓	✓	!	✓
	SADC <sup>5</sup> Industrialization Strategy and Roadmap	✓	✓	!	✓	✓	✓	✓	✓
	Africa Growth & Opportunity Act							✓	
	Common Agriculture Policy							✓	
								3	
								Leveraging innovation, science and technology in food systems generally not addressed	

✓

Component adequately covered

✓

Elements of component partially/not covered

!

Component missing; expected to be addressed by declaration

1. Sustainable Development Goals 2. Conference of Parties ; 3. African Continental Free Trade Area; 4. Common Markets of East and Central Africa; 5. South African Development Community 6. External factors based on qualitative framework developed. 7. Includes gender, human rights and youth. 8: Includes pop-up stalls, informal markets and traders etc.

# National plans broadly cover all components of food system with some elements around food supply chain and environment not addressed

		Food supply chain	Food environment	Consumer behaviour	Nutrition, diet and health	Environment	Livelihoods	External factors	Cross-cutting themes
Cross-sectoral national	Vision 2063	✓	✓	!	✓	✓	✓	✓	✓
	10-year implementation plan	✓	✓	!	✓	✓	✓	✓	✓
	Agriculture (NAIP)	✓	✓	!	✓	✓	✓	✓	✓
National Sector (investment) plans	Health	1 Elements around investments in retail and marketing, cold storage not clearly addressed, subsidies focused on few crops limiting diversity	✓	!	✓			4 Energy infrastructure and socio-cultural context around diversifying away from maize consumption not comprehensively addressed	✓
	Finance		2 Achieving higher food affordability of diverse and nutrient rich foods not clearly addressed	3 Policies do not address consumers' behavior on FS	Finance policies/sector plans not accessible at time of analysis				
	Trade Policy						✓	✓	✓
	Energy Policy	✓				✓		✓	
	Climate change lng. & forest restrn.					✓		✓	
	Gender, Children and Social Protection				✓		✓		✓
	National Biodiversity					✓	✓	✓	
	Education	✓			✓				✓

✓

Component adequately covered

✓

Elements of component partially/not covered

!

Component missing; expected to be addressed by declaration

# Probable changes required in national policies and strategies when implementing potential game changing solutions

<b>Diet quality and nutrition security</b> <i>Majority of Malawians food insecure with low consumption of healthy foods</i>	<b>Livelihoods equity</b> <i>Majority live below poverty line, female households worse off, resulting in consumption of cheaper less nutritious meals</i>	<b>Environmental resilience</b> <i>Frequent climate shocks and over-reliance on drought sensitive crops resulting in food insecurity</i>	<b>Infrastructure capacity</b> <i>Fragmented infrastructure from farm to fork driving high food loss and waste especially of nutrient rich fruits and vegetables</i>	<b>Agricultural productivity</b> <i>~20% of potential yield realized due to reliance on rain-fed agriculture and simple farming techniques</i>
<b>Agriculture</b> <ul style="list-style-type: none"> <li>Tailor input subsidies to increase healthy food production</li> </ul>	<b>Agriculture</b> <ul style="list-style-type: none"> <li>Invest in agricultural commercialization and extension services</li> <li>Improve effectiveness of anchor farming programs</li> </ul>	<b>Agriculture</b> <ul style="list-style-type: none"> <li>Invest in irrigation &amp; storage to reduce water &amp; food waste</li> <li>Prioritize drought and flood resistant crop varieties</li> </ul>	<b>Energy</b> <ul style="list-style-type: none"> <li>Invest in rural grid electrification including use of sustainable energy sources (solar) for storage</li> </ul>	<b>Agriculture</b> <ul style="list-style-type: none"> <li>Increase commercial farming and anchor farming programs</li> <li>Invest in programs to reduce crop disease vulnerability</li> <li>Increase effectiveness and scale of extension services</li> <li>Avail right types of fertilizer, with messaging on correct usage per season and region</li> </ul>
<b>Trade and Industry</b> <ul style="list-style-type: none"> <li>Strengthen market linkages including cold chain</li> <li>Promote nutrition sensitive</li> </ul>	<b>Trade and Industry</b> <ul style="list-style-type: none"> <li>Ensure access to market for output either through ADMARC, district processing or agro-processing businesses</li> </ul>	<b>Trade and Industry</b> <ul style="list-style-type: none"> <li>Expand role of the ADMARC and ensure sufficient food reserves across more food types</li> </ul>	<b>Trade and Industry</b> <ul style="list-style-type: none"> <li>Strengthen market linkages and infrastructure to facilitate better storage and local trade</li> </ul>	
<b>Health</b> <ul style="list-style-type: none"> <li>Ramp up behavior change and nutrition sensitive communication</li> </ul>				
<b>Finance</b> <ul style="list-style-type: none"> <li>Subsidize production and cost of nutritious foods &amp; tax unhealth foods</li> </ul>	<b>Finance</b> <ul style="list-style-type: none"> <li>Extend credit and insurances including de-risking particularly for small holder farmers and women</li> </ul>	<b>Land and natural resources</b> <ul style="list-style-type: none"> <li>Increase awareness of importance of forests &amp; train farmers on conservation agriculture</li> </ul>	<b>Finance</b> <ul style="list-style-type: none"> <li>Increase PPPs to invest in infrastructural development</li> <li>Incentivize credit extension for infrastructure</li> </ul>	<b>Trade/Industry</b> <ul style="list-style-type: none"> <li>Invest in community food storage and food markets to provide off-shoots and reduce food waste</li> <li>Provide inputs in timely manner</li> </ul>
<b>Trade vs. Agric./Fin./Health</b> <ul style="list-style-type: none"> <li>ASF consumption increases GHG</li> <li>Increased local avail. of nutrient rich foods vs. export income from Tobacco</li> </ul>	<b>Agric. vs. Finance</b> <ul style="list-style-type: none"> <li>Income growth could lead to inflation which makes food more costly for poor population</li> </ul>	<b>Land/Energy vs. Agriculture</b> <ul style="list-style-type: none"> <li>Increasing irrigation could reduce hydropower capacity</li> <li>Conservation and eco-friendly farming can impact production</li> </ul>	<b>Trade and Industry vs. Agric.</b> <ul style="list-style-type: none"> <li>Need to prioritize investment in capital intensive infrastructure vs. extension services/irrigation</li> </ul>	<b>Land. vs Agric./Health</b> <ul style="list-style-type: none"> <li>Large scale production increases yield but could lower food diversity</li> <li>Commercial agric. increases vulnerability to crop infestation</li> </ul>

# Linking potential gaps and overlapping policies to the key challenges of Malawi's food system yields several issues and opportunities (I/II)



Key challenges in FS	Current policies related to challenge	Potential gaps or conflicting policies	Potential Implications
<b>Diet quality and nutrition security</b> Limited consumption of nutrient rich foods such as legumes, fruits, vegetables and animal sourced foods resulting in high rate of undernourishment	<ul style="list-style-type: none"> <li>• <b>NAIP:</b> Input subsidies focused on maize and vegetable seeds</li> <li>• <b>NAIP and Energy:</b> Investment in cold-chain for nutrient rich foods</li> <li>• <b>Nutrition and NAIP:</b> Nutrition sensitive interventions, promoting dietary diversity, micronutrient supplementation</li> <li>• <b>National export strategy :</b> Export of nutrient rich fruits &amp; vegetables</li> <li>• <b>Education :</b> Promotion of school feeding</li> <li>• <b>Trade:</b> Promotion of commercial agriculture for export of food</li> </ul>	<ul style="list-style-type: none"> <li>• Subsidies with focus on maize enable continuity of current system dynamics</li> <li>• Limited prioritization of investments resulting in incomplete implementation of programs, despite NAIP, covers many solutions to resolve food diversity</li> <li>• Limited consumer behavior change limiting local consumption and increasing focus on exports</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to tailor input subsidy programs to increase diversity and availability of nutrient-rich foods</li> <li>• Prioritize investments based on return on investment</li> <li>• Ramp up sensitization of nutrition sensitive consumption and trade</li> <li>• Explore means to reduce cost of nutritious diet and create markets for nutrient rich foods</li> <li>• Increase value added processing of nutrient rich foods (local demand)</li> </ul>
<b>Livelihood equity</b> Majority of population living below poverty line, women-led households typically worse off resulting in high undernourishment rate and consumption of cheaper, less nutritious meals	<ul style="list-style-type: none"> <li>• <b>Resilience:</b> <ul style="list-style-type: none"> <li>- Cash transfer programs for lowest income category</li> <li>- Training, employment and land ownership for women and youth</li> </ul> </li> <li>• <b>Gender, social welf.:</b> Access to microfinance</li> <li>• <b>NAIP:</b> Access to for market price information</li> </ul>	<ul style="list-style-type: none"> <li>• Blanket cash transfer program</li> <li>• Limited systems approach to improve livelihoods, e.g., input subsidies and training have limited effect without access to market</li> <li>• Funding shortages often mean social assistance programs are not implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Target cash transfer program to those that most need it</li> <li>• Scale up programs such as school feeding to cover entire population</li> <li>• Re-functionalize existing co-ops and enable development of market linkages, financing access etc.,</li> </ul>



# Linking potential gaps and overlapping policies to the key challenges of Malawi's food system yields several issues and opportunities (I/II)



Key challenges in FS	Current policies related to challenge	Potential gaps or conflicting policies	Potential Implications
<b>Environmental resilience</b> Frequent exposure to droughts and reliance on maize, a highly drought susceptible crops, resulting in high levels of food insecurity	<ul style="list-style-type: none"> <li><b>Resilience:</b> <ul style="list-style-type: none"> <li>Encourage crop diversification,</li> <li>Sustainable irrigation development &amp; water supply systems</li> <li>Early warning and response systems</li> </ul> </li> <li><b>Climate change learning:</b> Ensure forest cover of 10% on 80% of cropland</li> <li><b>Gender, social welf.</b> - School feeding program</li> </ul>	<ul style="list-style-type: none"> <li>Providing input subsidies without access to water (storage infrastructure) during drought period</li> <li>Increased input utilization may risk ability to ensure sustainable production</li> </ul>	<ul style="list-style-type: none"> <li>Investment in drought and flood resistant varieties &amp; crops</li> <li>Adopt predictive modelling &amp; early warning system to prepare long-term</li> <li>Explore cloud seeding to reduce rainfall extremities</li> <li>Explore adoption of agro-forestry</li> <li>Construct check dams, gully plugs, ecoterracing to avoid run-off</li> </ul>
<b>Infrastructure capacity</b> Under-developed supply chain infrastructure with limited private sector investment, particularly for nutrient rich foods, driving high food loss and waste	<ul style="list-style-type: none"> <li><b>NAIP:</b> Improve domestic infrastructure including feeder roads</li> <li><b>NAIP:</b> Rural cold storage facilities</li> <li><b>Energy:</b> Rural electrification</li> <li><b>NAIP:</b> Post harvest management</li> <li><b>Trade:</b> Improve market linkages</li> </ul>	<ul style="list-style-type: none"> <li>Facilitating private sector investment/PPPs not addressed</li> <li>Limited rural grid electricity development</li> <li>Focus on external markets linkages over more local supply chains may impact local availability</li> </ul>	<ul style="list-style-type: none"> <li>Explore reduction in (non-)tariff barriers, PPPs &amp; credit extension</li> <li>Explore development of (renewable energy) mini-grids for post-harvest mgmt., cold-chain</li> <li>Opportunity to leverage existing skills to build out agro-business</li> </ul>
<b>Agricultural productivity</b> Relatively low yield of crops, due to reliance on rain-fed agriculture, simple farming techniques on small-holder plots and limited access to credit and insurance	<ul style="list-style-type: none"> <li><b>NAIP:</b> Provision of subsidized inputs (e.g.,, fertilizer)</li> <li><b>NAIP:</b> Irrigated agriculture and water storage investment, mechanization</li> <li><b>Reforestation strategy:</b> Ensure forest cover of 10% on 80% of cropland</li> </ul>	<ul style="list-style-type: none"> <li>Provision of subsidies without training on application of inputs and local conditions may not improve yields</li> <li>Limited punitive measures to ensure quality of inputs</li> <li>Timely supply of inputs to ensure successful harvest not addressed</li> </ul>	<ul style="list-style-type: none"> <li>Provide localized understanding of soil, seasonal &amp; climatic conditions</li> <li>Explore farmer education on input application</li> <li>Focus subsidies and investment on most productive farmers</li> <li>Explore opportunity to provide consistent water supply to farms</li> </ul>

## NPC plans to streamline policy development...

### Ensure strong alignment of sector and district plans to policies and national plans

- Synchronize planning phase for sector and districts and share planning guidelines that MDAs will adhere to
- Outdated policies still address existing problems, but these are not addressed in superseding policies

### Develop consolidated policies that avoids overlaps or siloes

- Strengthen human capacity, coordination and capital available to create the enabling structure

## ...by addressing the following current challenges

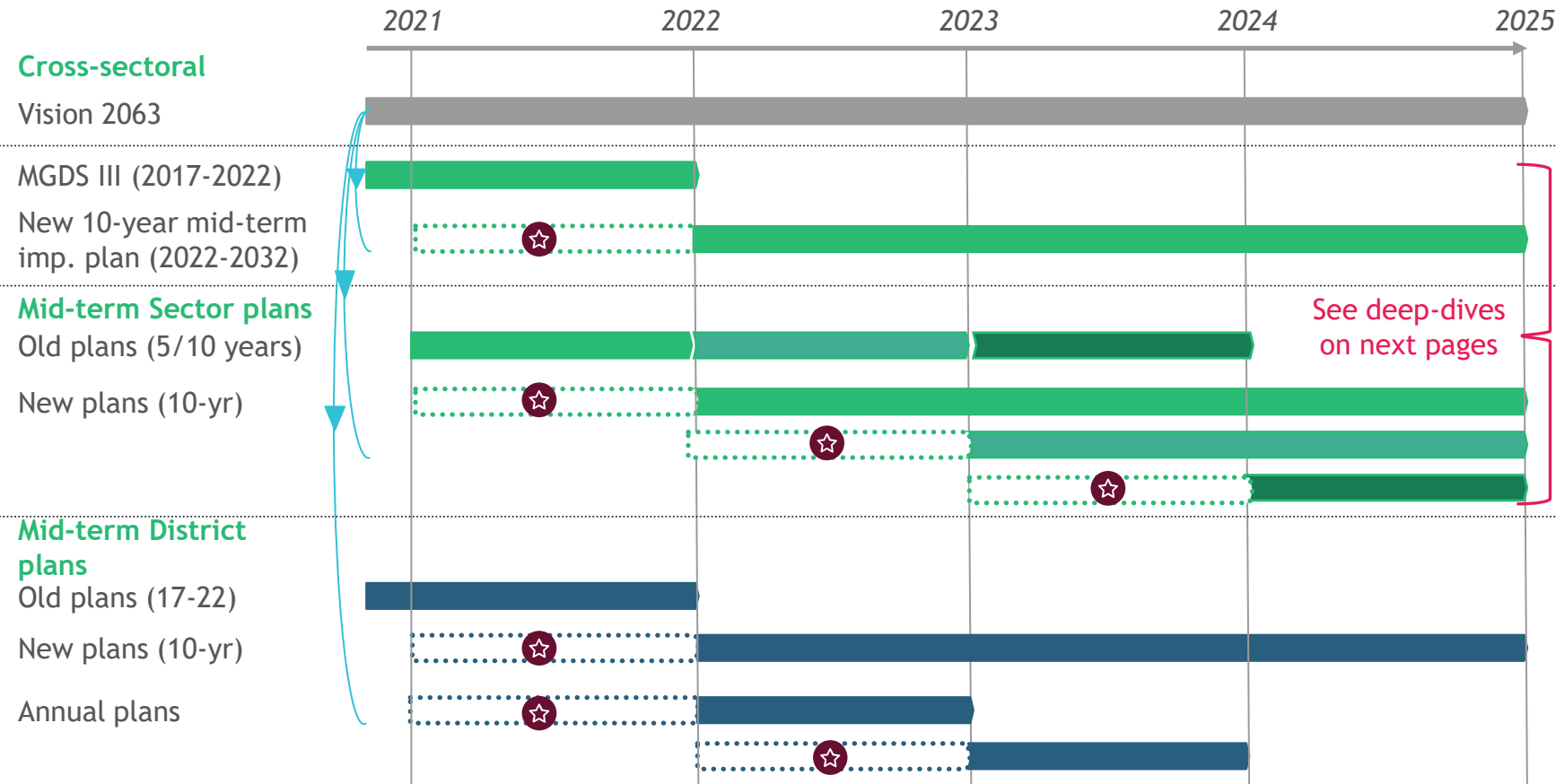
### Misalignment in translation of policies to plans

- Misalignment between the sector plans and relevant policies, impacting effective implementation e.g., seed, diversification and commercialization policies not well aligned with the agriculture sector plan

### Overlaps and siloes between policies

- Some policies address the same challenge in an un-coordinated manner
- Some policies designed to address issues in siloes e.g., increasing mining activity without clearly addressing impact on agriculture sector/environment
- Outdated policies still address existing problems, but at times not included in superseding policies

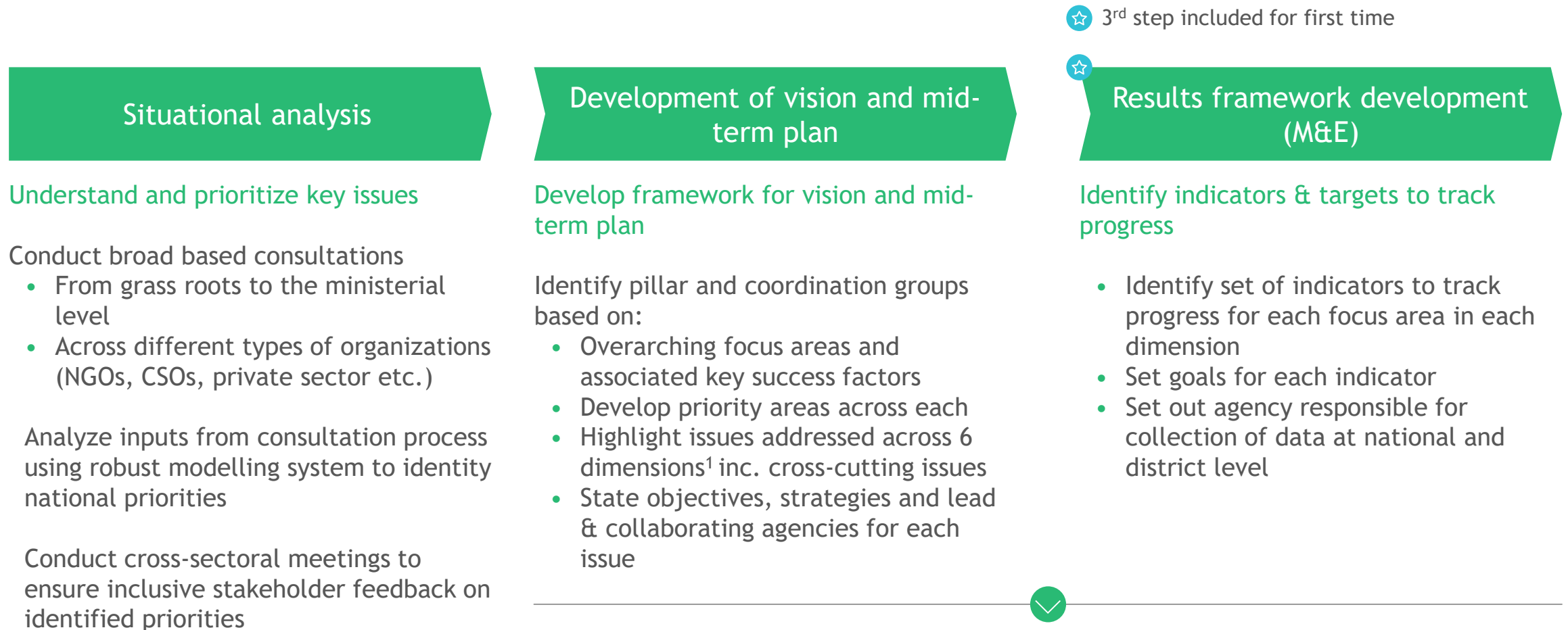
# Development of new plans and strategies ongoing at different levels of government



- Vision developed last year, operationalized Jan 2021
- 10-year implementation plan developed based on vision
- 1<sup>st</sup> draft developed, awaiting cabinet approval
- Existing sector plans have different timelines and durations
- New sector plans developed in a cascaded manner as old ones expire aligned to vision
- District and annual planning will also align to new vision and 10-year implementation plan

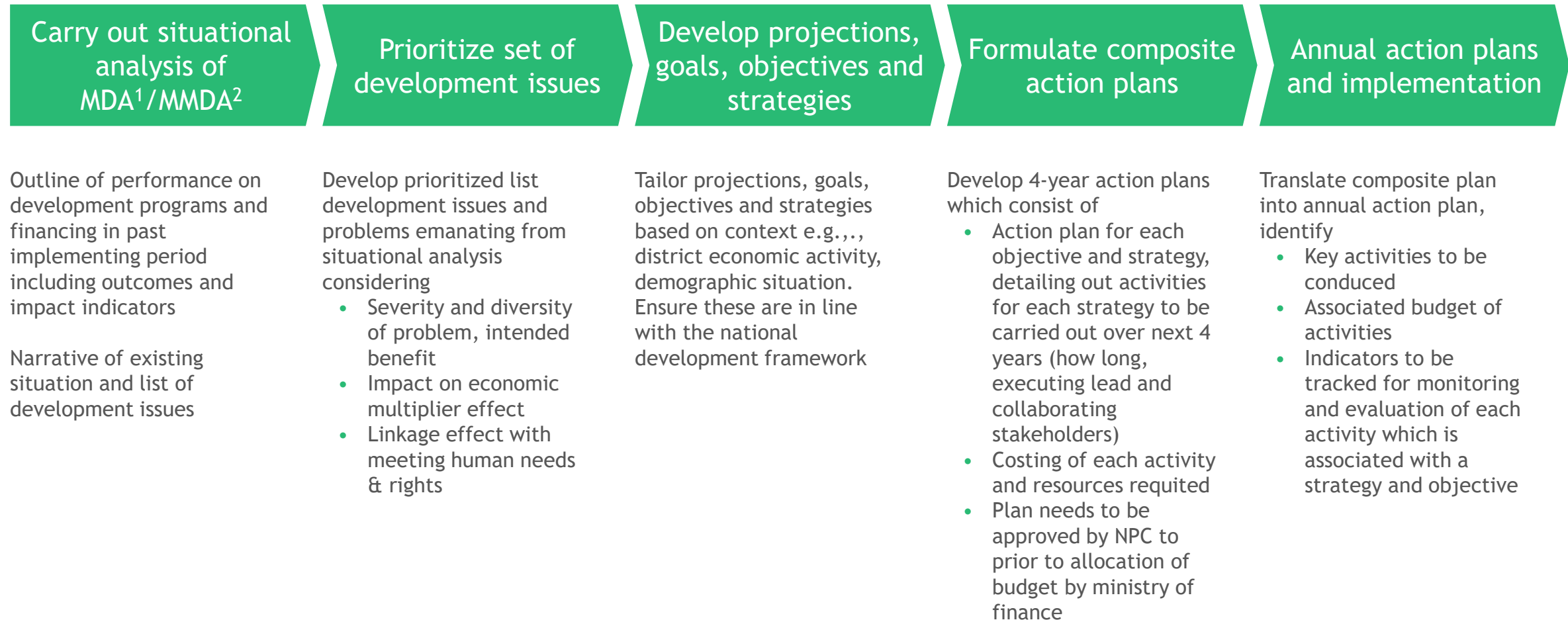
+ Policies will be reviewed to remove overlaps and silos

# National vision and mid-term implementation plan | Designed through a 3-step process, informing the sector and district level plans



*Shared with sectors and districts for development of plans*

# Sector and District plans| Formulation of sector and district plans is guided by the Vision 2063- and ten-year implementation plan





# Opportunities to translate aspirations in vision to plans and policies...

## Ensure priorities of stakeholders are aligned with the national vision

- Ensure political manifestoes and policies are aligned to the vision and deviation from national vision is limited

## Optimize use of available financing

- Adopt systems approach to development projects prioritizing projects with highest ROI
- Ensure alignment of priorities between development partners and those in the Vision. e.g., approving implementation of projects that are in line with priorities
- Explore opportunity to build an internal resilience fund or work with international community

# ... and ensure effective implementation

## Build human capacity and coordination at district level

- Ensure sufficient resources are available for the implementation of plans
- Train personnel to ensure plans are aligned with overall priorities and funds channeled effectively
- Build relevant coordination mechanisms between implementing bodies to avoid duplication, and exploit identified synergies

## Build effective M&E as part of implementation to ensure

# Overview of key stakeholders in Malawi's food systems (I/II)

Public sector	Intl community and dev org.	Private sector	Civil society and other	Academia	Media
Min. of Agriculture and Food security	AGRA	National Bank of Malawi	CISANET (civil society agriculture network)	MwAPATA Institute	Alliance Media Malawi
Min. of Health	FAO	Presscane	Farmers union of Malawi	Lilongwe University of Agriculture and Natural Resources	Digital Marketing
Min. of Finance	GIZ	Agricultural Trading Company Limited	National Smallholder Farmer's Association of Malawi	Malawi University of Science and Technology	
Min. of Education, Science and Technology	FCDO	Mughona Enterprises Limited	CSONA	CIRAD	
Min. of Forestry and Natural Resources	IMF	Mzuzu Coffee Planters Cooperative Union Ltd	Mpoto Farmer Dairy Association		
Ministry of Gender, Community Development and Social Welfare	AfDB	Mzuzu Dairy			
Min. of Lands	World Bank	NBS Bank			
Office of the Vice President	USAID	Life Sciences Consulting			
National Planning Commission	WFP	Standard Bank of Malawi Limited			
Min. of Energy	International Fund For Agricultural Development	Malawi Congress of Trade Unions			
	DCAFS	Marji Agro-Chemicals			
	U.S. Department Of Agriculture	mHub			

# Overview of key stakeholders in Malawi's food systems (II/II)

Public sector	Intl community and dev org.	Private sector	Civil society and other	Academia	Media
Min. of Mining	JICA	Angle Dimension			
Min. of Industry	EU Delegation in Malawi	Bakhresa Malawi Ltd			
Min; of lands, housing and urban development	DCAFS	Britam			
Min. of civic education and unity		CEVA Logistics			
Min. of lands housing and urban development		Dairy Farmer and Veterinary Shop			
Min. of Youth and Sports		ECU Worldwide			
Malawi Bureau of Standards		Export Trading Group			
Min. of lands		Flexible Packaging Industries			
Department of Nutrition, HIV and AIDS		iMoSyS			
Office of the Vice President					
Department of Nutrition, HIV and AIDS					

# Main stakeholders relevant to main food systems challenges (I/II)

Key challenges in FS	Relevant supra-indicators related to FS challenge	Stakeholders <sup>1</sup> more actively involved	Key decision maker(s) <sup>2</sup>	Stakeholders that could be more actively involved
<b>Diet quality and nutrition security</b> Limited diversity in production to meet nutritional needs of population given production focus on maize	1 Diet Quality 2 Nutrient supply 4 Undernourishment 6 Affordability 21 Production diversity	<ul style="list-style-type: none"> <li>Min. of Agriculture</li> <li>Min. of Trade and Industry</li> <li>Min. of Health</li> <li>Min. of local govt. and rural development</li> <li>Min. of Gender, Children and Social Protection</li> </ul>	L. Lowe - Minister Min. Agriculture S. Gwengwe - Minister Min. Trade F. Phiri - Director. Nutrition G. Gondwe - Minister Min. Local govt. & Rural dev.	<ul style="list-style-type: none"> <li>ADMARC</li> <li>Consumer Association of Malawi</li> <li>Donor group in Nutrition Security</li> </ul>
<b>Livelihoods equity</b> Majority of population living below poverty line, women-led households typically worse off resulting in high undernourishment rate and consumption of cheaper, less nutritious meals	6 Affordability 14 Income 15 Income 16 Gender equity 17 Economic 19 Risk Distribution	<ul style="list-style-type: none"> <li>Min. of Agriculture</li> <li>Min. of Trade and Industry</li> <li>Min. of Health</li> <li>Min. of local govt. and rural development</li> <li>Min. of Gender, Children and Social Protection</li> <li>Min. of finance</li> <li>NASFAM<sup>1</sup></li> </ul>	L. Lowe - Minister Min. Agriculture S. Gwengwe - Minister Min. Trade G. Gondwe - Minister Min. Local govt. & Rural dev P. Kaliati - Minister Min. Gender, Childn and Social Prot. F. Phiri - Director. Nutrition	

# Main stakeholders relevant to main food systems challenges (II/II)

Key challenges in FS	Relevant supra-indicators related to FS challenge	Stakeholders <sup>1</sup> more actively involved	Key decision maker(s) <sup>2</sup>	Stakeholders that could be more actively involved
<b>Environmental resilience</b> Frequent exposure to droughts and reliance on maize, a highly drought susceptible crops, resulting in high levels of food insecurity	10 Emissions 11 Land 8 Food Loss 13 Regeneration 8 Food waste 18 Risk distribution 20 Environmental : ND-Gain	<ul style="list-style-type: none"> <li>Min. of land and natural resources</li> <li>Min. of Environment, Science Innovation and Technology</li> <li>Min. of Agriculture</li> <li>Min. of Trade and Industry</li> <li>Min. of local govt. and rural development</li> <li>NFRA</li> </ul>	L. Lowe - Minister Min. Agriculture N. Tembo - Minister Min. Environment S. Gwengwe - Minister Min. Trade G. Gondwe - Minister Min. Local govt. & Rural dev.	<ul style="list-style-type: none"> <li>Climate change and environment group</li> <li>ADMARC</li> </ul>
<b>Infrastructure capacity</b> Under-developed supply chain infrastructure with limited private sector investment, particularly for nutrient rich foods, driving high food loss and waste	5 Food safety 6 Affordability 8 Food loss 12 Food waste	<ul style="list-style-type: none"> <li>Min. of Trade and Industry</li> <li>Min. of Finance</li> <li>Min. of Business development</li> <li>Min. of Agriculture</li> <li>Min. of local govt. and rural development</li> </ul>	L. Lowe - Minister Min. Agriculture S. Gwengwe - Minister Min. Trade G. Gondwe - Minister Min. Local govt. & Rural dev.	<ul style="list-style-type: none"> <li>Donor group in Nutrition Security</li> <li>Private sector group</li> </ul>
<b>Agricultural Productivity</b> Relatively low yield of crops, due to reliance on rain-fed agriculture, simple farming techniques on small-holder plots and limited access to credit and insurance	11 Diet quality 13 Regeneration 17 Economic 18 Risk distribution 19 Social 20 Environmental 21 Production diversity	<ul style="list-style-type: none"> <li>Min. of Agriculture</li> <li>Min. of Trade and Industry</li> <li>Min. of Finance</li> <li>Min. of local govt. and rural development</li> </ul>	L. Lowe - Minister Min. Agriculture S. Gwengwe - Minister Min. Trade G. Gondwe - Minister Min. Local govt. & Rural dev	<ul style="list-style-type: none"> <li>Donor group in Nutrition Security</li> </ul>





Executive Summary

Approach and key insights from  
diagnostic and landscaping analysis

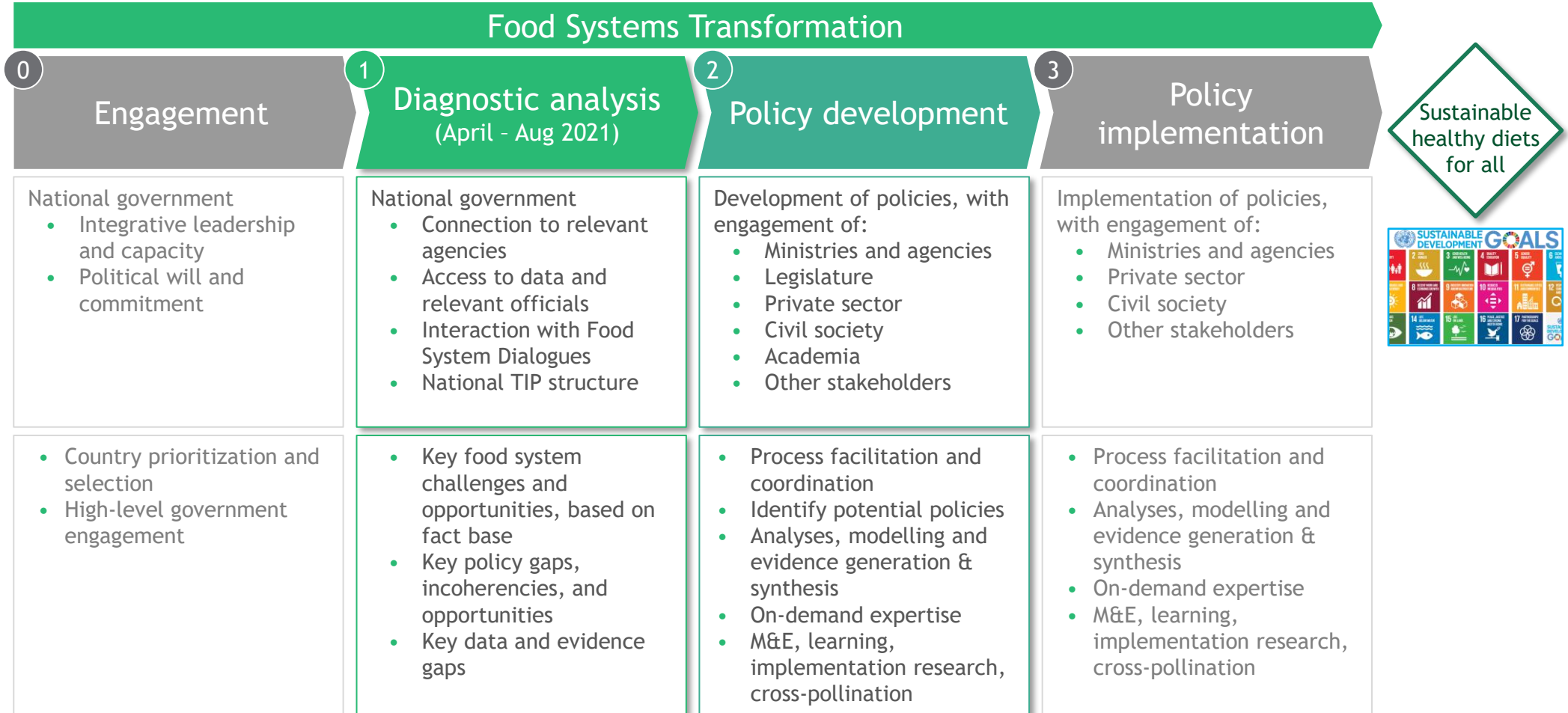
Detailed diagnostic analysis

Detailed stakeholder and policy landscaping analysis

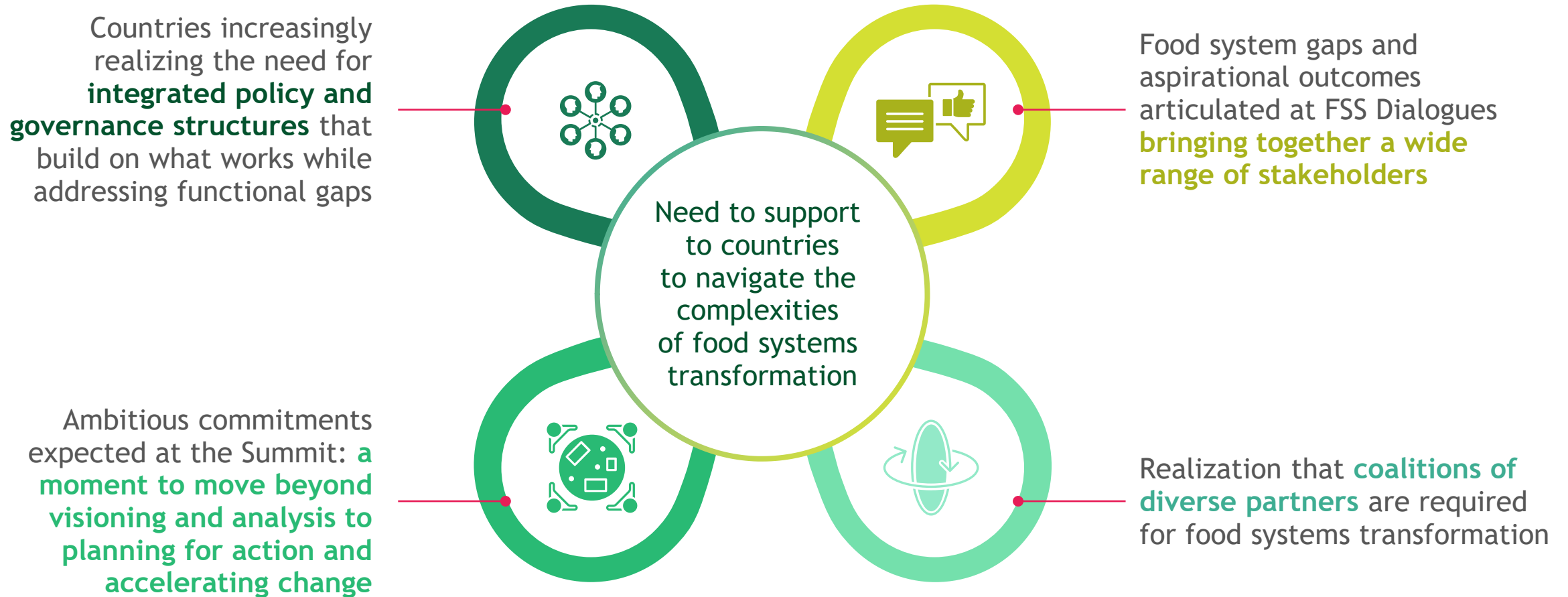
> Next Steps : From Diagnostic to Action

Appendix

# With the Diagnostic and Landscaping analysis completed, it is time to think about "what comes next"



# We believe that it is the time to harness the momentum of the UN Food Systems Summit towards accelerated food systems transformation



# To enable locally-led transformative and integrated action in the food system, there is a need for an integrator, facilitator and curator to provide support

Wide range of initiatives, resources and complexities coming at countries

Need for an integrator, facilitator and curator to help turn this complexity into transformative and integrated action

**Publications and reports**  
(academic publications, private and public sector reports, etc.)



**Frameworks** (CAADP, Food Systems Dashboard, FSS action tracks, HPLE, etc.)



**Data sources** (FAO, UN, World Bank, WHO, FS Dashboard, ReSAKSS, WFP, etc.)



**Targets and policies**  
(SDGs, WHO 2025, Malabo Declaration, national strategies, etc.)



*Food systems complexity*

## Phase 1: Diagnostic & landscaping analysis

- Created a diagnostic tailored to the country's context and focused on implementation
- Identified existing data gaps & approaches to fill
- Brought together quantitative data analysis and qualitative policy & stakeholder mapping
- Built the foundation for local prioritization and ambition setting
- Created buy-in through our co-creative and iterative approach

## Phase 2: Transformative and integrated policies

- Support local leadership to **integrate existing initiatives and resources** into a coherent and prioritized approach
- Facilitate country **ambition setting & prioritization**
- **Convene stakeholders** for an inclusive & integrated approach
- **Build local analytical capacity**

*FS-TIP can help navigate complexity*

Support governments to accelerate towards the vision of **sustainable healthy diets for all** starting with evidence-based policy design and implementation



Ministries of Agriculture, Health, Environment, Trade, Local Government, etc.

# Need to align objectives and policies across ministries to accelerate food systems transformation

**Equitable livelihoods that deliver sustainable healthy diets for all**

## Ministry of Agriculture

- Enhanced smallholder incomes
- Quality farmer extension training
- Increased productivity
- Access to inputs

## Ministry of Health

- Healthy citizens; extended lifespans
- Non-communicable disease cost avoidance
- Reduction in stunting and wasting

## Ministries of Industry and Trade

- Increased value addition activities
- Development of a “good food” processing sector
- Linkages across the value chain

## Ministry of Nat. Resources, Energy & Mining

- Protection & restoration of natural resources
- Management of water & land resources
- Building resilience against climate change and shocks

**Presidential Initiative with FS-TIP support integrating, aligning, coordinating**

**Enablers: Investment & innovation**



**Diet quality and nutrition security**



**Livelihoods equity**



**Environmental resilience**



**Infrastructure capacity**

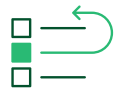


**Agricultural productivity**

Harnessing the Food Systems Summit Dialogues & FS-TIP diagnostic analysis to prioritize challenges & policies



# Three key actions to move from diagnostic to actions to realize country-owned food systems transformation



**Prioritize set of food system challenges:** Align stakeholders on the most urgent and important challenges and identify how they align with existing strategies and policies

123

**Set ambition and formulate policy to address priority challenges:**

Convene the public, private, development, academic, and social sectors, as well as civil society and the media, to develop a national ambition and priorities for action

Formulate the relevant policies, addressing interdependencies, synergies and trade-offs with robust analysis and evidence

Outline the funding, programs, processes, and monitoring and evaluation mechanisms to address challenges



**Design governance, coordination and delivery models for locally-led food system transformation:**

functions, processes, funding, capacity building and use of technology to drive efficiency and effectiveness

# Required conditions in country for successful food systems transformation



## Government support at the highest level

President or Prime Minister to support a national agenda for food systems transformation and empower the governance structure with the necessary mandate



## Highly capable, independent and respected leadership

Champion(s) that can lead planning and delivery efforts, make tough decisions, face vested interests, and inspire others to set bold ambitions and realize them



## Strong multidisciplinary local teams that can "over-deliver"

- Strong local team(s), with technical expertise to build capacity over time
- Accelerated delivery of programs at scale
- Leveraging digital technology to make and measure impact
- Ability to scale up and scale down required capabilities in an agile way



## Governance, coordination and delivery models for a high-performance culture

- Well designed set of performance indicators and evaluation mechanisms, leveraging the FS-TIP 'scorecard/dashboard' as the baseline
- Structures that can adapt to changing realities and evolving insights



## Sufficient and sustainable funding for intergenerational effort

Blend of public, development and private sector finance and investment to realize ambition over a 10+ year period

# The in-country governance structure to drive food systems transformation should follow five design principles



## **Bold transformative agenda with a clear review process**

Able to set bold ambitions for true food system transformation, with equally ambitious local capacity-building goals; accountable to national government via a formal review process



## **Integrate all components of the food system**

Must work across all components of the food system to enable prioritization, coordination and integration of policies, leverage synergies and manage trade-offs



## **Connect stakeholders from local to regional to global levels**

Ensures all voices are heard, siloes are broken and coordination takes place between stakeholders; brings subnational, national, regional, and global stakeholders together in an inclusive and meaningful way enriched by feedback to the stakeholders and public



## **Long-term commitment and strong, clear mandate to deliver**

Needs long-term focus (10+ years); must have sufficient mandate to make tough decisions and deliver on ambition within its timeframe; must be able to survive government transitions



## **Able to attract funding and investment for implementation**

Should attract funding and investment into food systems from public and private sector, locally and from abroad; will align interests behind shared priorities

# From Diagnostic to Action| Four functions to realize food systems transformation

## Executive function



- Coordinates and ensures delivery across different Ministries and Government agencies that are part of the FS policy environment
- Sets the priorities and ambitions for transformation
- Conducts analysis, designs policies and programs and supports implementation to realize ambitions
- Ensures development of capacities of local teams

## Data custodian and progress reviewing function



- Provides the data-foundation for ambition setting and prioritization of actions, based on FS-TIP scorecard of supra- and key indicators
- Tracks progress towards the ambitions
- Enables performance comparisons across countries (in Africa) through the CAADP biennial review

## Inclusive participation function



- Brings together voices of all food system stakeholders
- Breaks down siloes between actors and components of the food system
- Acts as a “checks and balances” mechanism to ensure policies are relevant and implementable
- Has an advisory, consultative or participatory role in decision-making

## Thinking and advisory function



- Brings together academics, development partners and other stakeholders with expertise in food systems, that are not direct actors
- Develops evidence to inform policy design and implementation
- Continuously develops capacities of local teams

## Coordination & budget function

- Ensures coordination between the different functions
- Develops budget for different functions
- Conducts fundraising and mobilizes resources (together with the executive function)

*TBD if separate function or part of one of the other functions*

# Illustrative set of options for each function

	Build on existing structure(s)	<i>transition over time possible</i>	Develop new structure(s)
Executive function	Select ministries in charge, coordinating sector cluster	'Presidential Initiative' with technical and steering committees	New Food Systems Transformation Agency
Data custodian and progress reviewing function	NSO and ministerial PPME informing CAADP indicators and biennial review, expanded to include all FS elements	NSO and ministerial PPME informing CAADP indicators and biennial review, expanded to include FS-TIP scorecard elements	NSO and ministerial PPME informing CAADP indicators & biennial review, with local version of the Food Systems Dashboard to
Inclusive participation function	SUN Civil Society Network & SUN Business Network expanded to full food system view	Food Systems Summit Dialogues as transformed into a permanent forum	New network of food systems consultation "hubs"
Thinking and advisory function	National Technical Working Group	Academic institutes connected into food systems platform	New Food systems Think Tank



There are different options for the exact set-up...

Functions can be built upon existing structures or might require new structures

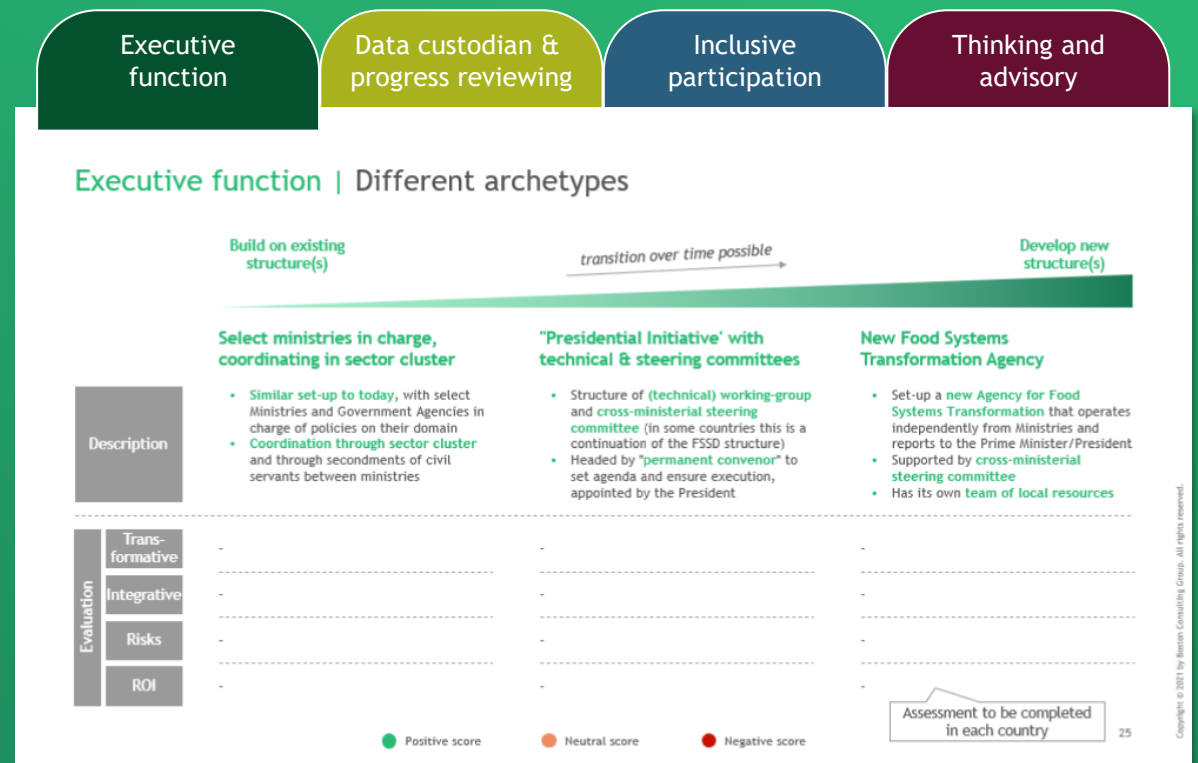
- Existing structures to consider: SUN network, National Technical Working Groups, CAADP and Biennial Review, UN FSS Dialogues, etc.
- New structures can take inspiration from ATA, ATO, etc.

Two or more functions may be combined into a single organizational structure

Each set-up will be developed in-country against a set of criteria

- Ability to be transformative
- Ability to develop and implement integrated policies and programs
- Level of risk associated
- Return on investment
- Others

...which should be defined for each function by the country





Executive Summary

Approach and key insights from  
diagnostic and landscaping analysis

Detailed diagnostic analysis

Detailed stakeholder and policy landscaping analysis

Next Steps : From Diagnostic to Action




Appendix

We want to thank the following people and organizations for their contributions and feedback (I/II)



 Name	 Title	 Organization	 Role in FS-TIP
John Ulimwengu	Senior Researcher	IFPRI / AKADEMIYA2063	Country Manager
Greenwell Matchaya	Director	AKADEMIYA2063	Country Manager
Sophie Chitedze	Country Manager	AGRA (Malawi)	Country Expert, on the ground-lead
Kennedy Lweya	Advisor	TBI	TBI Advisor
Levison Chiwaula	Associate Professor	University of Malawi	Country Expert
Mariam Kadzamira	Consultant/Researcher	CABI	Country Expert
Laura Trijsburg	Researcher	Wageningen University and research	Country Expert
Julius Mangisoni	Professor	LUANAR	Country Expert
Jolien Paalman	Project Leader	BCG	Country team member
Suraj Shah	Consultant	BCG	Country team member
Oluwapelumi Bamgbala	Consultant	BCG	Country team member

## We want to thank the following people and organizations for their contributions and feedback (II/II)

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Jef Leroy	Senior researcher fellow	IFPRI	International Expert Panel
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Claudia Ringler	Deputy Program Director	IFPRI	
Danielle Resnick	Senior researcher fellow	IFPRI	
Jemimah Njuki	Senior researcher fellow	IFPRI	
Namukolo Kovic	Senior researcher fellow	IFPRI	
David Spielman	Senior researcher fellow	IFPRI	
Mutinta Hambayi	Advisor	World Food Programme	
Daniel Njiwa	Head of Regional Food Trade & Resilience	AGRA	
Sheryl Hendriks	Associate Professor	University of Pretoria	
Robynne Anderson	Consultant/Researcher	Emerging Ag inc.	Project Management Committee
Amos Laar	Professor	University of Ghana	
Jeroen Candel	Professor	Wageningen University of research	
Peiman Milani	Consultant	The Rockefeller foundation	
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Lloyd Le Page	Senior Advisor	TBI	
Chris Mitchell, Jolien Paalman, Suraj Shah, Shirley Mujera	Various	BCG	
Elizabeth Kimani	Senior Research Scientist	APHRC	
Katrin Glatzel	Director	AKADEMIYA2063	

# Non-exhaustive list of stakeholders consulted during the diagnostic

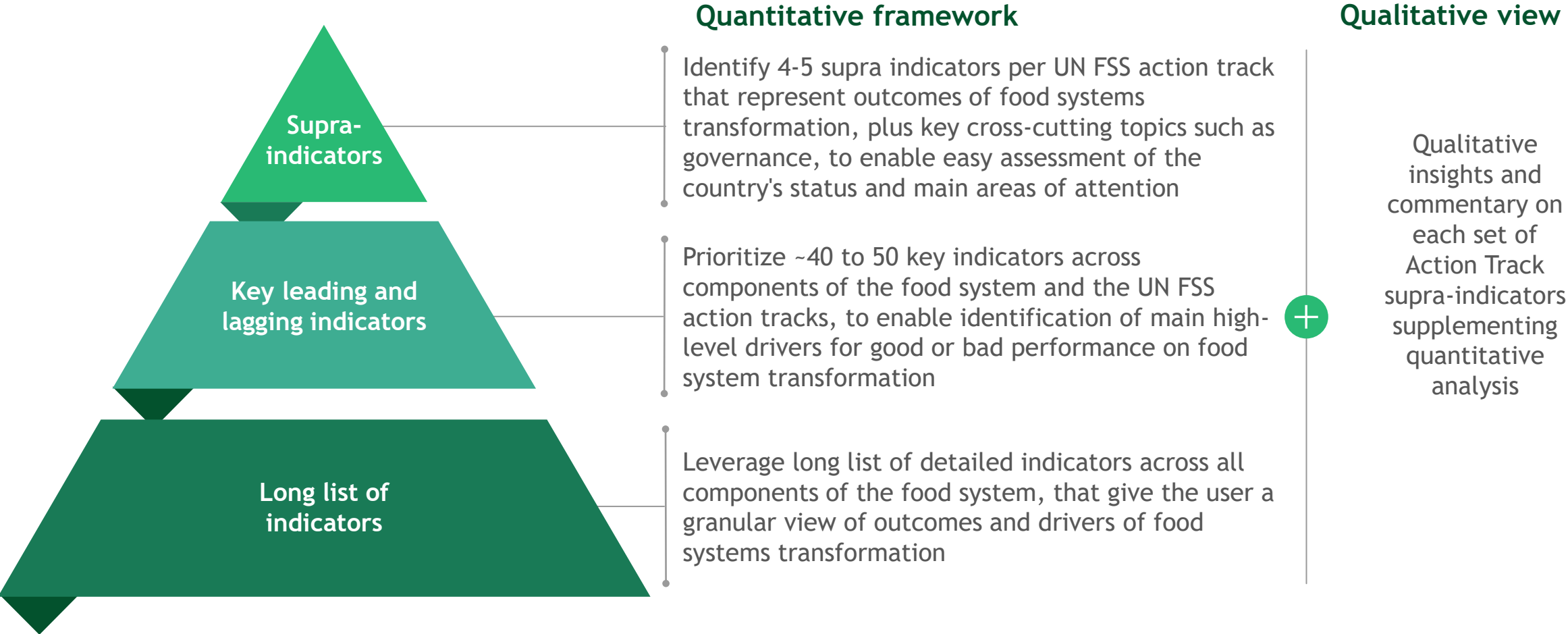
Not exhaustive

 Institutions	 Roles within the Institution
Ministry of Agriculture	Directors and Deputy Directors
Local Government Services	Deputy Directors
Ministry of Finance	Senior Government Officials in Pensions and Financial Sector Policy
Ministry of Health	Senior Government Officials in the Department of Nutrition
Ministry of Trade	Pensions and Financial Sector Policy
Ministry of Economic Planning and Development	Senior Government Officials
Ministry of Natural Resources, Energy and Mining	Senior Government Official in the Environmental Affairs Department
Ministry of Local Government and Rural Government	Senior Government Officials
National Planning Commission	Leadership
Donor Committee on Agriculture and Food Security (DCAFS)	Leadership
Farmers Union of Malawi (FUM)	Leadership
International Food Policy Research Institute (IFPRI)	Leadership
Alliance for a Green Revolution in Africa (AGRA)	Leadership

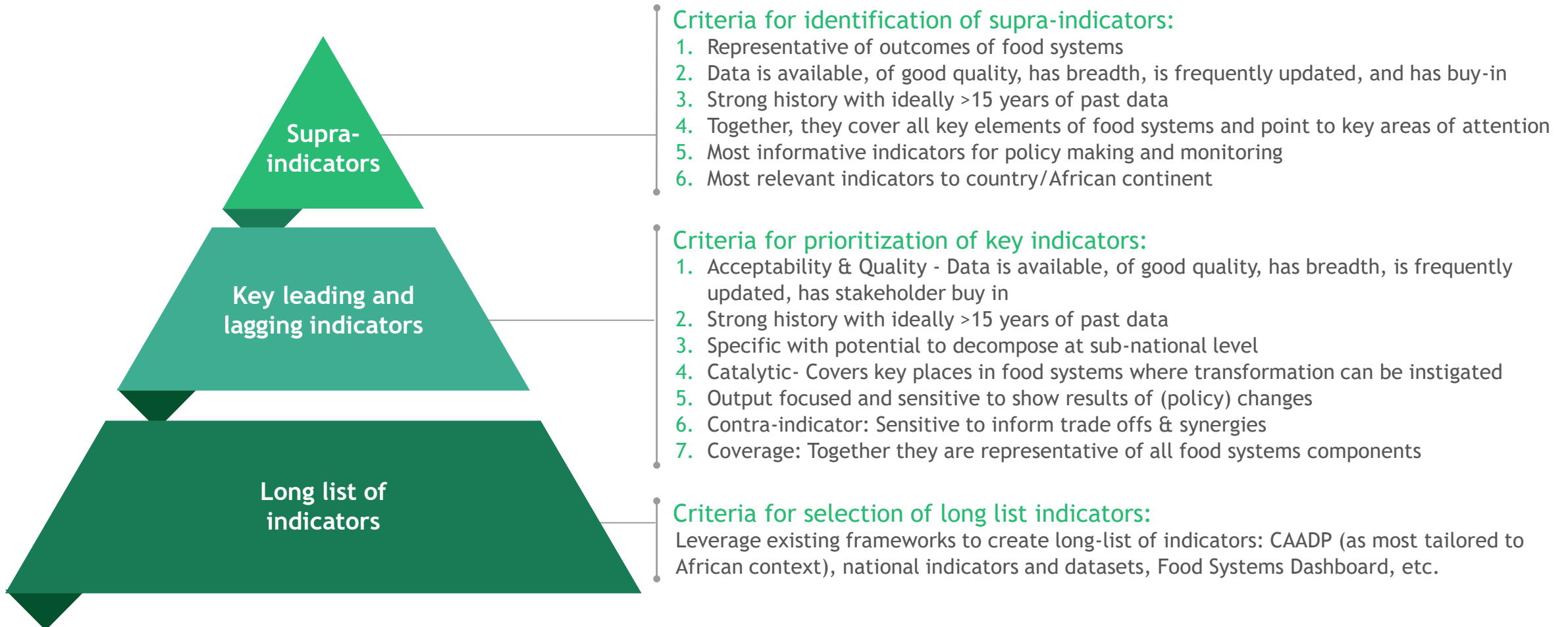
Please reach out to [authors](#) of this document for a detailed list of experts and stakeholders



# Diagnostic framework| Quantitative assessment structured along 3 levels and linked to the UN Food Systems Summit Action Tracks



# Diagnostic framework | Selection criteria to prioritize comprehensive and high-quality indicators



# Supra-indicators | Data sources for supra-indicators data in Malawi

Action Tracks	Supra-indicators	Source	As at
Ensure access to safe and nutritious food for all	1 <b>Diet quality:</b> Food Consumption Score (FCS) in Rwanda and Malawi Diet Quality (GDR+) in Ghana	WFP CFSVA	May 2021
	2 <b>Nutrient supply:</b> Net supply in country of key macro and micro nutrients as a share of total consumption requirements for a healthy diet	National Survey	2020
	3 <b>Undernourishment:</b> Percent of population undernourished (%)	World Bank	2018
	4 <b>Overweight &amp; obesity:</b> Percent of population overweight or obese (%)	WHO	2016
	5 <b>Food safety:</b> Africa Food Safety Index	WHO	2017
Shift to sustainable consumption patterns	6 <b>Affordability:</b> Cost of a healthy diet as a percent of household food expenditure (%)	FAO-SOFI	2020
	7 <b>Sustainability of diets:</b> Per capita GHG emissions of food consumption (Kg CO2eq./person)	WWF	2010
	8 <b>Food waste:</b> Food waste index	UNEP	2021
	9 <b>Food environment:</b> Composite index combining food environment policies	WHO NCD Monitor	2021
Boost nature-positive production	10 <b>Emissions:</b> Green House Gas (GHG) emissions from agriculture (MtCO2e)	Climate Watch	2018
	11 <b>Land:</b> Average forest land being deforested in hectares for agriculture use over the past 3 years (%)	World Bank, Forest Watch	2019
	12 <b>Food loss:</b> Percent food loss across supply chain (%)	National sources	TBD
	13 <b>Regeneration:</b> Biodiversity and habitat index	EPI	2019
Advance equitable livelihoods	14 <b>Income:</b> Gini coefficient (specific) based on incomes across the food system	National survey	2021
	15 <b>Income:</b> Gap between farmgate price and wholesale price (%)	CAADP Biennial Review	2018
	16 <b>Gender equity:</b> Women empowerment in agriculture index	IFPRI	2014
Build resilience to vulnerabilities, shocks and stress	17 <b>Economic:</b> Household Resilience Capacity Index	National survey	2021
	18 <b>Risk distribution:</b> Proportion of men and women engaged in agriculture with access to finance	CAADP Biennial Review	2018
	19 <b>Social:</b> Government social security budget as a % of total requirements to cover vulnerable group (%)	CAADP Biennial Review	2018
	20 <b>Environmental:</b> ND-GAIN (Notre Dame Global Adaptation Initiative) Country Index	ND-GAIN	2018
	21 <b>Production diversity:</b> Percent of kilograms from top 5 crops produced (%)	FAO	2019
Governance	22 <b>Governance:</b> Food Systems Transformation Governance Index	National policies	2021

# Supra-indicators | Ideal scores defined for the supra-indicators (I/II)

Action Tracks	Supra-indicators	Definition of supra-indicators	High	Low
Ensure access to safe and nutritious food for all	<b>Diet quality:</b> Food Consumption Score (FCS) in Rwanda and Malawi Diet Quality (GDR+) in Ghana	<ul style="list-style-type: none"> <li>Aggregates household-level data on the diversity and frequency of food groups consumed, weighting food groups according to the relative nutritional value</li> </ul>	100 30	0 0
	<b>Nutrient supply:</b> Net supply in country of key macro and micro nutrients as a share of total consumption requirements for a healthy diet	<ul style="list-style-type: none"> <li>Net supply in country of key macro and micronutrients as a share of total consumption requirements for healthy diet</li> </ul>	Varies by country	
	<b>Undernourishment:</b> Percent of population undernourished (%)	<ul style="list-style-type: none"> <li>Percentage of the population whose food intake is insufficient to meet dietary energy requirements</li> </ul>	0	100
	<b>Overweight &amp; obesity:</b> Percent of population overweight or obese (%)	<ul style="list-style-type: none"> <li>Abnormal or excessive fat accumulation that presents a risk to health</li> </ul>	0	100
	<b>Food safety:</b> Africa Food Safety Index	<ul style="list-style-type: none"> <li>Combines three food safety indices; Food Safety Systems Index, Food Safety Health Index and Food Safety Trade Index</li> </ul>	100	0
Shift to sustainable consumption patterns	<b>Affordability:</b> Cost of a healthy diet as a percent of household food expenditure (%)	<ul style="list-style-type: none"> <li>It is the cost of acquiring a healthy diet as a share of total household expenditure being spent on food</li> </ul>	<50	>50
	<b>Sustainability of diets:</b> Per capita GHG emissions of food consumption (Kg CO <sub>2</sub> eq./person)	<ul style="list-style-type: none"> <li>Total of emissions arising along the entire food value chain from agricultural production to the end consumer</li> </ul>	N/A	N/A
	<b>Food waste:</b> Food waste index	<ul style="list-style-type: none"> <li>Food that completes the food supply chain up to a final product but still doesn't get consumed because it is discarded, spoilt or expires. At retail and consumption stages</li> </ul>	N/A	N/A
	<b>Food environment:</b> Composite index combining food environment policies	<ul style="list-style-type: none"> <li>Food environment policies that encourage consumption of sustainable and healthy diets</li> </ul>	14	0
Boost nature-positive production	<b>Emissions:</b> Green House Gas (GHG) emissions from agriculture (MtCO <sub>2</sub> e)	<ul style="list-style-type: none"> <li>These are all emissions and removals occurring on 'managed land' and that are associated with the use of land for agriculture</li> </ul>	N/A	N/A
	<b>Land:</b> Average forest land being deforested in hectares for agriculture use over the past 3 years (%)	<ul style="list-style-type: none"> <li>Implies permanent loss of forest cover from transformation into agricultural use.</li> </ul>	0	100
	<b>Food loss:</b> Percent food loss across supply chain (%)	<ul style="list-style-type: none"> <li>Refers to food that gets spilled, spoilt or lost, or reduces in quality and value during supply chain before reaching final product. From production to distribution</li> </ul>	0	100
	<b>Regeneration:</b> Biodiversity and habitat index	<ul style="list-style-type: none"> <li>Assesses countries' actions toward retaining natural ecosystems and protecting the full range of biodiversity</li> </ul>	100	0

## Supra-indicators | Ideal scores defined for the supra-indicators (II/II)

Action Tracks	Supra-indicators	Definition of supra-indicators	High	Low
Advance equitable livelihoods	<b>Income:</b> Gini coefficient (specific) based on incomes across the food system (under development)	<ul style="list-style-type: none"> <li>Highlight's income distribution among various players in the food systems. Zero indicates a perfectly equal distribution of income within the FS while 100 represents a perfect inequality when one person in a population receives all the income, while other people earn nothing</li> </ul>	Varies by country	
	<b>Income:</b> Gap between farmgate price and wholesale price (%)	<ul style="list-style-type: none"> <li>Highlights the gap between farmgate price and retail price. Compares income to farmers vs prices paid by consumers. Better if narrow</li> </ul>	0	TBD
	<b>Gender equity:</b> Women empowerment in agriculture index	<ul style="list-style-type: none"> <li>shows the degree to which women are empowered in their households and communities and the degree of inequality between women and men (who are married or in some other form of partnership) within the same household. Measures the empowerment, agency, and inclusion of women in the agriculture sector</li> </ul>	1	0
Build resilience to vulnerabilities, shocks and stress	<b>Economic:</b> Household Resilience Capacity Index	<ul style="list-style-type: none"> <li>Estimates household resilience to food insecurity with a quantitative approach to establish a cause effect relationship between resilience and its critical determinants</li> </ul>	TBD	TBD
	<b>Risk distribution:</b> Proportion of men and women engaged in agriculture with access to finance	<ul style="list-style-type: none"> <li>Access of micro and macro credit by people involved in the agriculture sector</li> </ul>	100	0
	<b>Social:</b> Government social security budget as a % of total requirements to cover vulnerable group (%)	<ul style="list-style-type: none"> <li>The amount of money that the country allocates for preventive, protective, promotive or transformative assistance to farm individuals, households or communities</li> </ul>	100	0
	<b>Environmental:</b> ND-GAIN (Notre Dame Global Adaptation Initiative) Country Index	<ul style="list-style-type: none"> <li>Summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience</li> </ul>	100	0
Governance	<b>Production diversity:</b> Percent of kilograms from top 5 crops produced (%)	<ul style="list-style-type: none"> <li>The proportion of production occupied by the key foods produced in the country</li> </ul>	<50	>50
	<b>Governance:</b> Food Systems Transformation Governance Index	<ul style="list-style-type: none"> <li>Combines key components such as vision, ambition which are essential for food systems transformation</li> </ul>	14	0



# Summary list of sources

Note: Number bubbles specify the supra-indicators whose slides are being referenced. e.g., Diet quality is supra-indicator 1

- 1/2 1. Food Systems Dashboard 2. FAO
- 3/4 1. Global Nutrition Report 2. UNICEF 3. Integrated Household Survey (IHS5) 2020 4. US National Library of Medicine, National Institutes of Health 5. Mwapata Institute
- 5 1. MDPI - Achieving an Integrated Approach to Food Safety and Hygiene—Meeting the Sustainable Development Goals in Sub-Saharan Africa
- 6/7 1. FAO 2. Malawi IHS 2019\_20 3. United States Department of Agriculture 4. USAID
- 8/9 1. UN - Stop food waste 2. The conversation - Connecting food waste and sanitation services can help African farmers
- 10/11 1. Food Systems Dashboard 2. Global Forest Watch 3. MDPI - An Analysis of the Causes of Deforestation in Malawi: A Case of Mwazisi
- 12/13 1. UN 2. Food Systems Dashboard 3. Global Forest Watch 4. FAO - Global Action for Fall Armyworm Control
- 14/15 1. Malawi Livelihood Baseline Profiles 2. International Food Policy Research Institute - Post Harvest Losses
- 16 1. Integrated Household Survey (IHS5) 2020
- 17/18 1. Integrated Household Survey (IHS5) 2020 2. The Borgen Project - Efforts to Improve Credit Access in Malawi
- 19/20 1. UNICEF - Malawi 2019/20 Social Welfare Budget Brief 2. World Bank 3. ND-GAIN
- 21/22 1. Malawi Livelihood Baseline Profiles 2. International Food Policy Research Institute - Evidence and Options for Improving the Input Subsidy Programs

# Glossary

## List of abbreviations

AGRA	Alliance for Green Revolution in Africa
APHRC	African Population & Health Research Centre
AU	African Union
AUC	African Union Commission
BCG	Boston Consulting Group
CAADP	Comprehensive Africa Agriculture Development Programme
EAC	East Africa Community
FAO	Food and Agriculture Organization of the United Nations
FCS	Food Consumption Score
FSS	Food Systems Summit
FS-TIP	Food System Transformative Integrated Policy
GDP	Gross Domestic Product
GHG	Green House Gas
HLPE	High Level Panel of Experts on Food Security and Nutrition
IDRC	International Development Research Centre
IFPRI	International Food Policy Research Institute
NCD	Non-Communicable Diseases
ND-GAIN	Notre Dame Global Adaptation Initiative
SDGs	Sustainable Development Goals
UN	United Nations
WFP	World Food Programme
WHO	World Health Organization

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