AGRICULTURAL SECTOR TRANSFORMATION *and* GROWTH STRATEGY

TOWARDS SUSTAINABLE AGRICULTURAL TRANSFORMATION *and* FOOD SECURITY IN KENYA

2019-2029

Abridged Version

Contents

PREFACE AND ACKNOWLEDGEMENTS

Agriculture is the bedrock of Kenya's development: Message from the Cabinet Secretary

Despite Kenya's impressive advances across the economy, in innovation and entrepreneurship, private sector enterprise, infrastructure, public service delivery and human capabilities, agriculture continues to be the bedrock of the development of our nation and the key to creating equitable and sustainable growth for our people. No large country has ever achieved significant growth without modernizing its agricultural sector. In addition to driving our economic growth, agriculture also creates jobs for our rural communities and is essential to satisfying the nutritional needs of all our people.

The importance of agriculture has been emphasized in Kenya through Vision 2030 and the Medium-Term Plan III, and most recently the President's Big Four priority agenda for 2017-2022, which emphasizes the importance of 100% food and nutrition security for all Kenyans.

We have made progress in modernizing agriculture in Kenya, but we have not yet reached our full potential. To achieve our potential, we must do agriculture in a different way, from how we develop policy at the national level, to how we allocate resources in our farming households. Not only will we adopt new ideas under the mandate we have been given, we will be bold in achieving them.

We have developed nine flagships that serve as the core of our 10-year Agricultural Sector Growth and Transformation Strategy (ASTGS). These flagships draw on the status of our agriculture today, a rigorous and thorough review of data, lessons from global best practices, and our local realities. The actions inherent in these flagships are bold and ambitious. They will help to transform our agriculture sector in Kenya, drive 100% food and nutrition security, and ensure food is affordable, especially for those most in need. The strategy details the flagship projects prioritized for implementation in the first five years. Following a review of their performance, an additional set of projects will be developed for the next five years of the strategy to match the transformation needs at the time.

On behalf of the Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I), I would like to convey profound gratitude to all who participated in the development of this strategy. It was a highly consultative and iterative process that left no one behind. Every institution and individual that shared their time, perspectives and expertise deserves recognition.

A special mention goes to the His Excellency President Uhuru Kenyatta and Deputy President William Ruto for their vision to provide access to affordable and nutritious food to every single Kenyan. My Ministry would like to also thank all of the National Government institutions including other ministries, parastatals, commissions and universities and research institutions for their commitment to transforming agriculture. To the affiliate institutions of County Governments that include the County Executives Committee Members, Members of County Assemblies (MCAs) and regional economic blocs led by the Council of Governors, thank you. The Joint Agriculture Sector Consultation and Cooperation Mechanism (JASCCM) and all its constituent bodies have been invaluable partners in this effort. They worked hand in hand to chart a clear path to implementation that will be led by the counties.

The Ministry wishes to express immense gratitude to our development partners across the Agriculture and Rural Development Donor Group (ARDDG), in particular the Alliance for a Green Revolution in Africa (AGRA), the Food and Agriculture Organization (FAO) of the United Nations (UN), the German Development Corporation (GDC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Japan International Cooperation Agency (JICA), the Swedish Embassy, the United Nations Environmental Program (UNEP), and the United States Agency for International Development (USAID). You have been a reservoir of global best practices for domestication and dissemination of lessons learned. We thank you for the timely financial support extended to this process.

We also acknowledge and appreciate private sector institutions and associations and non-state players, including farmer organizations, civil society and the media whose interests spread across various value chain processes and support, and whose operations will contribute to successful implementation of the ASTGS.

I am 100% committed to driving this agenda and seeing real results. We know what to do – now to the work of doing it.

Hon. Mwangi Kiunjuri, EGH, MGH
Cabinet Secretary, Ministry of Agriculture, Livestock, Fisheries and Irrigation

FOREWARD

Towards implementation with the counties: Message from the Chief Administrative Secretary and Principal Secretaries

We are excited to share the Agricultural Sector Transformation and Growth Strategy (ASTGS) with you, as we seek rapidly to transform this critical sector. Achieving our potential in agriculture will achieve food and nutrition security, improve our farmer and local community incomes, lower the cost of food, and increase employment (particularly for women and youth). These are our absolute priorities.

The strategy is simple. It has nine bold flagships that represent a departure from how we have done things in the past. They draw on extensive national and county-level consultation, global best practices and input from technical experts. They are tailored to our immediate needs. Our focus is on the implementation of this strategy. We have defined clear actions, owners for each action, and budgets to mobilize resources. The Agricultural Transformation Office (ATO) will ultimately report to the Cabinet Secretary for MoAFL&I, and be responsible for coordination of ASTGS activities. The ATO will ensure that we stick to our timetable and address challenges as they arise.

In addition to extensive consultations with relevant stakeholders as we designed the strategy, our engagement will only intensify during implementation. The counties are the bedrock of implementation and will need support from government, industry players, entrepreneurs, development partners and civil society to move forward.

We invite you to join forces with us to make the ASTGS a reality.

For the Ministry of Agriculture, Livestock, Fisheries and Irrigation and Irrigation:

Dr. Andrew Tuimur, *Chief Administrative Secretary*

[TBD], Principal Secretary, *State Department for Crops Development*

Mr. Harry Kimtai, *Principal Secretary, State Department for Livestock*

Prof. Japheth Micheni Ntiba, *Principal Secretary, State Department for Fisheries Acquaculture and Blue Economy*

Prof. Fred Sigor, *Principal Secretary, State Department for Irrigation*

Prof. Hamadi Boga, *Principal Secretary, State Department of Agriculture Research*

EXECUTIVE SUMMARY

"Every person has the right to be free from hunger, and to have adequate food of acceptable quality."

Article 43, Constitution of Kenya (2010)

Agricultural transformation is critical to growing the economy, reducing the cost of food, alleviating poverty and delivering 100% food and nutrition security. Every Kenyan should have access to affordable and nutritious food.

Over 18 million[i] Kenyans earn income from agriculture. The country's economic growth therefore depends on enabling these people to achieve food and nutrition security, and contribute more fully to the economy[1].

i Modelled ILO estimate. Employment is defined as persons of working age, who are engaged in any activity to produce goods or provide services for pay or profit, ~28 million Kenyans are employed by this definition

While food and nutrition security is a national mandate, the counties must be at the centre of its implementation. National and county and governments must work together to create a healthy population and an economy resilient to the risks that threaten the welfare and livelihoods of many Kenyans and destabilize the economy through droughts, pests, disease, and global price shocks.

To transform Kenya's agricultural sector and make it a regional powerhouse, the Government has formulated the Agricultural Sector Transformation and Growth Strategy (ASTGS). The Strategy is based on the belief that food security requires a vibrant, commercial and modern agricultural sector that supports Kenya's economic development sustainably and its commitments to regional and global growth.

The ASTGS has three anchors to drive Kenya's 10-year transformation. Specific target outcomes for the first five years follow:

1. Anchor 1: Increase small-scale farmer, pastoralist and fisherfolk incomes
   - Raise average annual small-scale farmer incomes from KES 465/day to 625/day (~35% increase)[ii].
   - Directly benefit ~3.3 million Kenyan farming households.
2. Anchor 2: Increase agricultural output and value add
   - Expand agricultural GDP from KES2.9 trillion to KES3.9 trillion (6% CAGR).
   - Increase the contribution of agro-processing to GDP by KES130 billion over five years (50% increase over KES261 billion in 2018).
3. Anchor 3: Boost household food resilience
   - Reduce the number of food-insecure Kenyans in the arid and semi-arid lands (ASAL) regions from an average 2.7 million to zero[iii], while reducing the cost of food and improving nutrition.
   - Protect households against environmental and fiscal shocks.

ii Current income is ~KES 400/day (~KES 145k/yr) from FAO Family Farming Data Portrait data. Without a transformation they should grow to 170k (~KES 465/day) by 2023 based on historical trends. Transformation Is estimated to contribute an incremental ~35% to 229k (~KES 625/day)

iii Aspirational case of zero food insecure people assumes 100% coverage of the average food-insecure population (taking % of population that is food-insecure from 2008-2017 and extrapolating to the 2022 population); conservative case is full coverage of chronic food-insecure population in ASALs of ~1.3 million

FIGURE 1: THE NINE ASTGS FLAGSHIPS

9 FLAGSHIPS

DRIVE KENYA'S AGRICULTURAL TRANSFORMATION AND SUPPORT FOOD SECURITY ASPIRATIONS

"A vibrant, commercial and modern agricultural sector that sustainably supports Kenya's development in the context of devolution, short-term national aspirations for 100% food security, and longer-term global CAADP and the SDG commitments"

INCREASE SMALL-SCALE FARMER INCOMES

1

Target 1 million farmers, pastoralists and fisherfolk in an initial 40 zones served by 1000 farmer-facing SMEs *that provide inputs, including equipment for irrigation, processing and post-harvest aggregation*

2

Shift nationwide subsidies *focus* **to register 1.4mn high-needs farming households and empower them to access a range of inputs** *from multiple providers, enabled by an e-voucher delivery system*

INCREASE AGRICULTURAL OUTPUT AND VALUE ADDITION

3

Set-up 6 agro-processing hubs across Kenya using a one-stop-shop rapid PPP process *for local and export markets*

4

Unlock 50 new large-scale private farms (>2,500 acres) with 150,000 acres under sustainable irrigation from existing infrastructure *(e.g., rehabilitate dams, dual-purpose hydro-power), with competitive bidding, and government provided infrastructure (e.g, power, roads)*

The Agricultural Transformation Office (ATO) will report to the Chief Administrative Secretary (CAS) at MoALF&I and will help deliver the transformation via inter-ministerial coordination, performance management. and mutual accountability. They will share best practices and lessons learned across key transformation stakeholders, and escalate issues to the Cabinet Secretary at MoALF&I as necessary

BOOST HOUSEHOLD FOOD RESILIENCE

5

Restructure the Strategic Food Reserve (SFR) to better serve 4mn high-needs Kenyans *through competitive digital reserve stock and cost management with private sector, and price stability managed through the Ministry of Finance*

6

Boost food resilience of 1.3mn farming, pastoralist, and fishing ASAL households through community driven design of interventions, *and more active coordination of development partners and private sector resources through regional economic blocs*

ENABLED *by*

7 KNOWLEDGE AND SKILLS

Launch 3 knowledge and skills building programs focused on technical and management skills in the field *for 200 national and county government transformation leaders, 1000 farmer-facing SMEs, and 3000 extension agents*

8 RESEARCH, INNOVATION AND DATA

Strengthen research and innovation, and launch priority digital and data use cases for better decision making and performance management *(i.e., first wave to include digital subsidy registration amd delivery, farmer and SME performance, automated SFR buy / sell needs)*

9 SUSTAINABILITY AND CRISIS MANAGEMENT

Actively monitor 2 key food system risks: i. sustainable and climate smart natural resource management *including sustainable irrigation and water basin health, soil quality and land use; and* **ii. crisis management for pests, diseases, climate and global price shocks**

SOURCE: Team Analysis

As Figure 1 shows, each of the anchors is supported by two flagships – strategic projects with a lifetime of five years that detail how to achieve the target outcomes. This set of core flagships is supported by three enablers – for a total of nine flagships. The nine flagships constitute a portfolio of interventions that cover the entire country in five years. While some flagships are less applicable to certain parts of the country given agro-ecological and other considerations, farmers in every county have the potential to benefit from at least five flagships: flagship 2. the new subsidy programme; flagship 5. the national strategic food reserve; and the three enablers of flagship 7. knowledge and skills, flagship 8. research and analytics, and flagship 9. sustainability and climate change. Furthermore, the flagships are designed to ensure the inclusion of women, youth, and people with disabilities (PWDs).

The strategy details the flagship projects to be implemented in its first five years. The performance of these projects will be reviewed before an additional set of projects is developed for the subsequent five years.

Delivery at the highest levels will be a collaborative effort between the Cabinet Secretary of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I), the Council of Governors (CoG), and the other associated national sector ministries including Devolution and ASAL areas; Environment and Forestry; Industry, Trade and Cooperatives; Lands and Physical Planning; Transport, Infrastructure, Housing and Urban Development; Water and Sanitation; and the National Treasury. The Agricultural Transformation Office (ATO) will serve as the national secretariat coordinating transformation efforts across the sector.

The MoALF&I will formulate, implement and monitor agricultural policy and regulation, while developing and coordinating programmes to support crop development, livestock, fisheries, irrigation and research that is critical to delivering the ASTGS. The MoALF&I Cabinet Secretary will be responsible for delivering the sector targets.

As the national secretariat coordinating efforts for the ASTGS, the ATO will be responsible for inter-ministerial coordination, performance management and mutual accountability. The ATO Director will work closely with the MoALF&I Chief Administrative Secretary on his/her transformation mandate. The ATO will also collaborate closely with the CoG, and the Joint Agricultural Sector Steering Committee (JASSCOM), which will help the counties to domesticate the ASTGS. This domestication is critical not only for on-going County Integrated Development Plans (CIDPs) but also as the counties draft their own 10-year Agriculture Sector Development Plans (ASDPs).

Early estimates indicate that the strategy could improve the lives of 3.3 million small-scale farming households (approximately 15 million Kenyans), and contribute additional agricultural GDP of up to KES170 billion p.a. in five years (up to KES440 billion over five years). It will also have a knock-on effect on other sectors (e.g., construction and manufacturing), boosting their contribution to total GDP by up to KES230 billion p.a.

The ASTGS will cost an estimated KES440 billion over five years: KES230 billion in agriculture-specific costs, and KES210 billion in supportive spend, e.g., power and roads. With the right approach, up to 80% of costs could be financed through public private partnerships (PPPs) in the agro-processing and arable land flagships. The Government of Kenya (GoK) and its development partners would need to finance the remaining 20%, including subsidies, extension and the enablers. The GoK therefore needs to raise an additional KES8-10 billion per year, approximately 30% more than its current disbursed budgets.

"We are all farmers. Even if we do not work the land, our parents did – and this is what has paid for our education and development."

H.E. President Uhuru Kenyatta, Africa Green Revolution Forum, 2016

01

THE NINE FLAGSHIPS

To drive Kenya's transformation over the next 10 years, the ASTGS is anchored in three outcomes: increasing small-scale farmer incomes, increasing agricultural output and value-addition, and boosting household food resilience. To achieve these outcomes, the strategy outlines nine flagships -- six flagships sit under anchors; the remaining three are enablers. This strategy details the flagship projects to be implemented in the first five years. The performance of these projects will be reviewed before an additional set of projects is developed for the subsequent five years. Any new projects will align with the anchors that set the trajectory of Kenya's transformation.

A farmer is defined as a person who works on, or operates an agricultural enterprise that cultivates crops or raises animals including livestock and fish. For simplicity, when the Strategy use "farmer" it applies to all mixed farmers, pastoralists and fisherfolk unless stated otherwise.

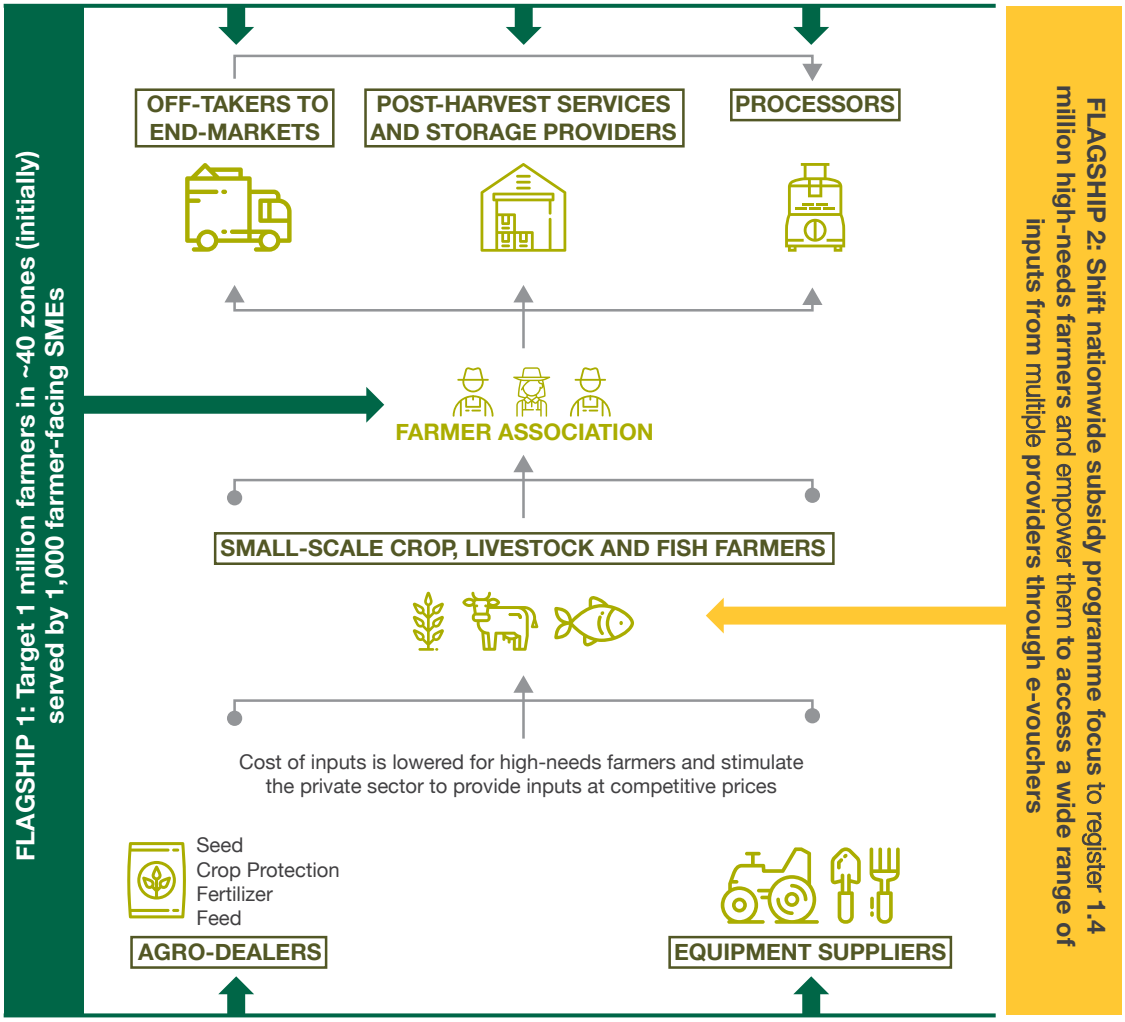
ANCHOR 1 - INCREASE SMALL-SCALE FARMER, PASTORALIST AND FISHERFOLK INCOMES

Successful agricultural transformations have focused on the farming household, providing opportunities for farmers to earn a better income[2]. Growth in those farmers' incomes is fundamental to their ability to reinvest in their farms, to the sustainable supple of food for all. and ultimate to the economic and social development of Kenya.

Today, there are ~4.5 million small-scale farmers in Kenya, including 3.5 million crop farmers, 600,000 pastoralists and 130,000 fisherfolk[3, 4, 5]. Collectively, their output accounts for at least 60% of national produce, on approximately 90% of Kenya's land under agriculture[6,7]. The two flagships in this anchor as detailed in Figure 2 will support small-scale farmers, pastoralists and fisherfolk to transition from highly diversified subsistence production to more specialized and market-oriented output in higher-yield value chains.

FIGURE 2: ILLUSTRATION OF ANCHOR 1 FLAGSHIPS

Farmer-facing SMEs are supported to grow and expand, creating more opportunities for farmers to access good quality, affordable inputs, as well as improve quality and sell higher value crops, at competitive prices



SOURCE: Team Analysis

FLAGSHIP 1: Target 1 million farmers in ~40 zones (initially) served by 1,000 farmer-facing SMEs

There are approximately 4.5 million small-scale farming households in Kenya, including 3.5 million crop farmers, 600,000 pastoralists and 130,000 fisherfolk[8,9,10]. Collectively, they produce more than 60% of Kenya's food on almost 90% of the country's agricultural land[11,12]. However, three main factors prevent millions of these small-scale farmers from increasing their incomes. They have limited access to affordable, high-quality inputs, mechanisation and new technologies such as improved seed, irrigation and artificial insemination. The varying quality and quantity of produce can lead to large post-harvest losses, leaving some farmers with yields up to five times lower than their potential, and far below the global average[13,14]. And finally, access to markets is limited. While farmer-facing SMEs provide many small-scale farmers with access, 70% of small and medium enterprises (SMEs) still lack access to finance, business advice and training opportunities, and struggle to recruit quality staff[15].

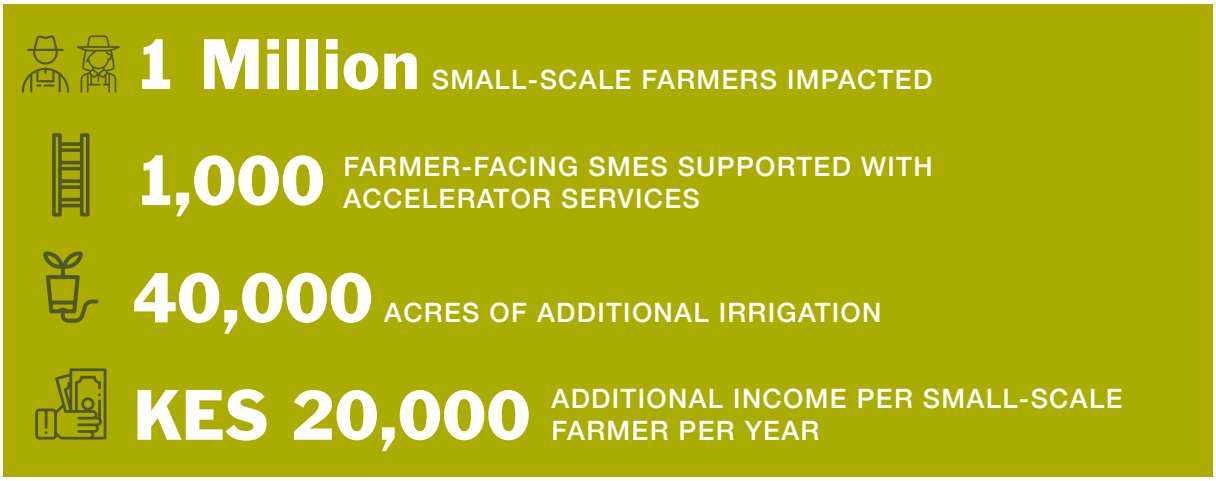
Transformation approach

To increase small-scale farmer incomes, this flagship will:

- **Focus** initially on ~1 million farmers in 40 high-productivity zones in 34 counties that have existing demand, and supply and road access close to primary and secondary urban centres where SMEs can best serve them.
- **Develop and enable 1,000 farmer-facing SMEs** to provide more farmers with better access to affordable, appropriate inputs, irrigation equipment, improved post-harvest handling and aggregation, and access to markets.
- **Support SMEs and farmer associations** that provide the ~1 million farmers with business expansion, management training, access to finance, sustainable value chain development, and other skills intrinsic to results-oriented business accelerators, i.e., for-profit and not-for-profit companies that select, train, mentor, scale and performance manage the SMEs. The MoALF&I will jointly select these accelerators with the counties.
- **Monitor the impact that accelerators and SMEs deliver** to farmers in helping them produce commodities that present the best opportunities to increase incomes and provide food and nutrition security.
- **Ensure minimum participation of 33% women and 30% youth** in SMEs benefitting from this programme.
- **Offer guidelines for investments in food quality and safety:** flagship 1 supports storage and warehousing for SMEs; flagship 2 includes provisions to subsidize post-harvest storage; flagship 3 outlines clear food safety standards that all agro-processing facilities must meetto pass the feasibility stage (and finally, the use of hermetic bags, bulking and moisuretesting is recommended as appropriate foboth flagship 3 and flagship 5 in the Strategic Food Reserve (SFR).

Impact on the lives of Kenyans

Within the first five years, flagship 1 will:



If this flagship meets the initial set of targets over the first five years, additional projects will be identified for the next five years to, e.g., increase the number of target SMEs, farmers, and value chains, or focus on different agro-ecological zones.

FLAGSHIP 2: Shift the nationwide subsidy programme focus to register 1.4 million high-needs farmers and empower them to access a wide range of inputs from multiple providers through e-vouchers

Significant investment is required to improve the ability of small-scale farmers to invest in superior inputs that will increase yields and, ultimately, incomes. The Government allocation of KES5 billion a year in subsidies goes mainly to increase maize production through the purchase of fertilizer and maize seed subsidies that are distributed to 180 NCPB depots around the country for collection by eligible small-scale farmers[16]. Challenges in the system include:

- Declining average maize yields (that remain well below their potential) despite increased uptake of fertilizer and improved seeds[17].
- Increasing soil acidity as a result of overusing incorrect subsidized fertilizers; this is the greatest limitation on crop production and affects 19 million acres of agricultural land, largely in the Nyanza, Rift Valley and Western provinces[18].
- Lack of awareness about soil needs; most farmers in the above areas have not conducted soil tests.
- Inability of the private sector to compete with the subsidized fertilizer prices, which leads to low investment in retail outlets and drives up commercial fertilizer prices[19].
- Leakage of approximately one-third[iv] of subsidized fertilizer to non-target farmers; cartels purchase subsidized fertilizer in bulk and sell it at market rates, thus depriving small-scale farmers of the intended benefits[20,21,22].
- National subsidies do not benefit everyone, as livestock farmers and fisherfolk do not require fertilizer and maize seed.
- Long distances (farmers often have to travel over 40km) to NCPB depots.

iv Average across Kenya, Zambia and Malawi

Transformation approach

To overcome these challenges, flagship 2 sets out to:

- **Register and screen all farmers** for subsidy eligibility. Registration will be free of charge and done via a mobile phone survey that captures name, ID number, size of farm, commodities farmed and annual income. Extension agents will verify every registered farm over the first three years.
- **Reallocate the Government's KES5 billion** from procurement of fertilizer and maize seed to a digital e-voucher system that sends vouchers directly to eligible farmers' mobile phones.
- **Allow farmers to use the voucher** to purchase a range of inputs, including seed for high value crops, animal feed and health
- **Integrate mandatory extension services** to explain what fertilizer to use based on soil needs (according to national soil testing results), with compulsory lime vouchers for farmers with acidic soils, and proper post-harvest handling of produce where the risk of aflatoxin is high.
- **Allow the private sector to provide inputs,** including through registered agro-dealers, to give farmers the option to spend their e-voucher in their local village.
- **Ensure that input suppliers (e.g., agro-dealers) are paid immediately** for items purchased via e-voucher so that they are not "out of pocket" and therefore discouraged from participating in the e-voucher programme.

Impact on the lives of Kenyans

By the end of the first five years, this flagship will:

1.4 Million SMALL-SCALE FARMING HOUSEHOLDS IMPACTED

KES 5,000 IN SUBSIDIES PER YEAR, ELIGIBLE OVER THREE YEARS

40% INCREASE IN INCOME PER SMALL-SCALE FARMER FROM IMPROVED PRODUCTIVITY AND EXTENSION SUPPORT

If this flagship meets the initial set of targets, projects for the second five years of the transformation could include those that increase the subsidy amount and/or the number of households covered, or focus on a different set of value chain inputs and/or outputs.

ANCHOR 2 - INCREASE AGRICULTURAL OUTPUT AND VALUE ADDITION

Kenya's agriculture sector has grown by 4.8% annually since 2012 – below its 6% CAADP target – with its share of GDP at ~33% as of 2016[23,24]. At the same time, while Kenya's food deficit has decreased, it remains higher than the sub-Saharan Africa and world averages[25]. To competitively grow agriculture's contribution to GDP and ensure greater food availability, Kenya should address two key opportunities: first, the untapped potential for agriculture value addition to serve domestic, regional and international export markets. Second, making full use of Kenya's intrinsic production potential. Conservative estimates indicate more than 2.5 million acres of unutilized, arable land lies dormant in Kenya[26]. What is more, the areas already under cultivation produce lower yields than Kenya's regional and international peers. The two flagships in this anchor as detailed in Figure 3 will boost agriculture's contribution to GDP and help close Kenya's food deficit[27].

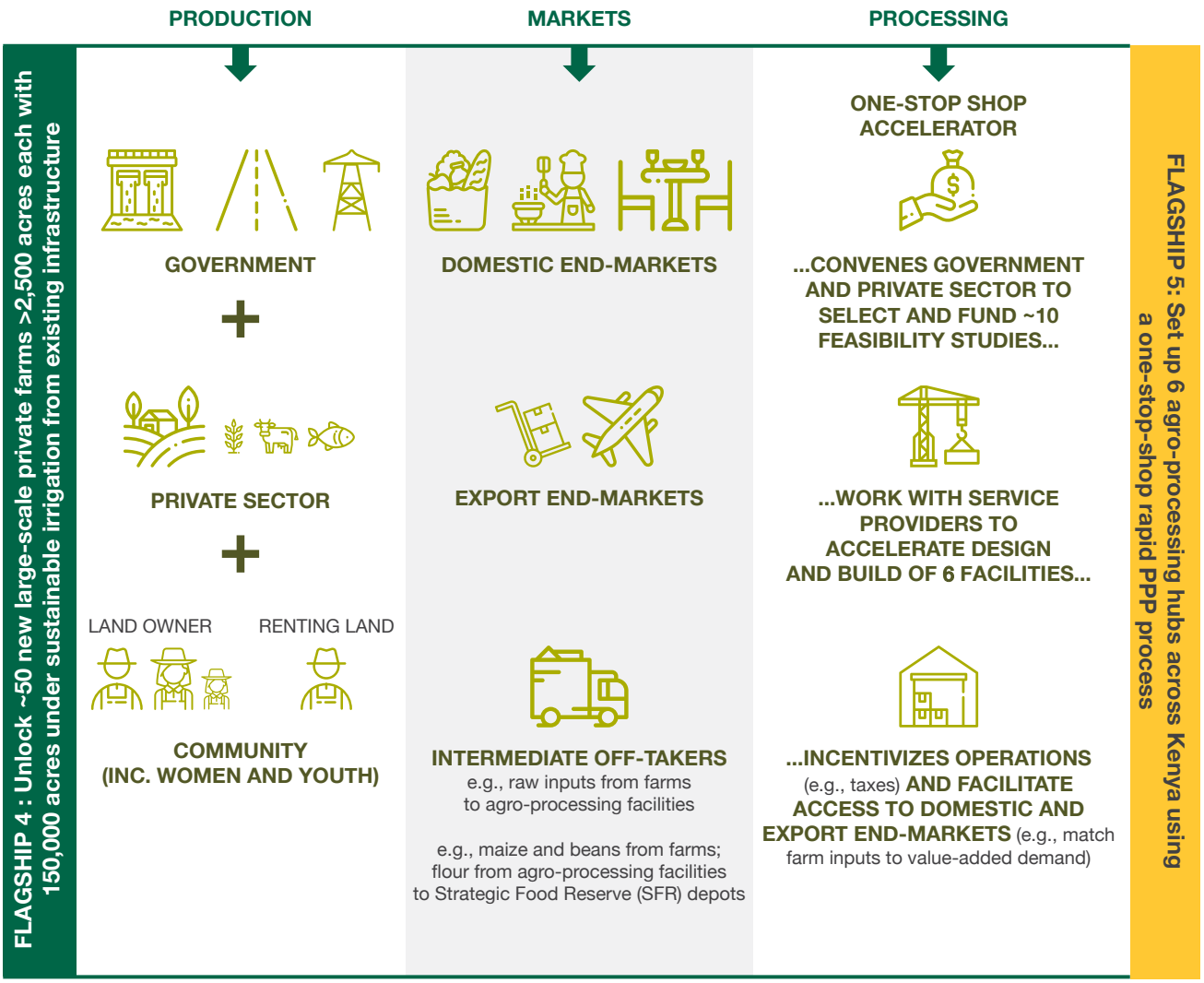
The two flagships in this anchor as detailed in Figure 3 will boost agriculture's contribution to GDP and help close Kenya's food deficit.

FLAGSHIP 3: Establish 6 large-scale agro-processing hubs through a one-stop shop for agro-processors

Kenya has an enormous opportunity to expand into a variety of agro-processing and value-addition activities. Currently, agro-processing accounts for 3.2% of GDP, 2.4% of employment and 8.5% of exports[28]. Approximately 16% of Kenya's raw agricultural produce is processed. However, agro-processing levels remain lower than those of Kenya's regional and international peers, e.g., Egypt (19%) despite Kenya's broad access to raw materials. Although the opportunity is compelling, many high-impact projects in the national pipeline do not materialize because they typically encounter one or more of five challenges: lack of early-stage funding to complete international standard feasibility studies; limited inter-ministerial and county-level coordination; sub-optimal procurement processes with complex requirements; lack of critical infrastructure like roads, power and waterat potential sites; and lack of incentives, e.g., transport and tax breaks to commercialize new facilities.

The Agro-Processing Delivery Team (APDT) within the Agricultural Transformation Office (ATO) aims to address these constraints, and replicate the efforts of early pioneers, who endured long development periods and multiple funding rounds before establishing processing facilities.

FIGURE 3: ILLUSTRATION OF ANCHOR 2 FLAGSHIPS



SOURCE: Team Analysis

Transformation approach

The APDT will identify Kenya's highest-potential projects and implement six agro-processing hubs – one in each economic bloc – with combined capital value of up to KES 100 billion that is largely financed by the private sector. To do this, it will:

- **Convene a leadership group** of key stakeholders including the MoALF&I and Ministry of Industry, county leaders and infrastructure players, such as Kenya Power. The group will help identify high-impact projects and find resources to fund completion of up to 10 feasibility studies.
- **Assemble approved service providers,** including facility designers, construction contractors, and bid evaluators to build and operate the hubs, using appropriate standard agreements and contracts.
- **Develop tools,** including a feasibility study grant programme and standardised power off-take agreements. These tools will help to address infrastructure challenges and unlock incentives (e.g., transport, taxation) for operators seeking market access.

Impact on the lives of Kenyans

Within its first year, the APDT will identify and fund the completion of up to 10 feasibility studies. This will lay the foundation for its efforts after the first five years:

6 NEW AGRO-PROCESSING HUBS ESTABLISHED ACROSS THE COUNTRY PRODUCING >5 CROP, LIVESTOCK AND FISHERIES VALUE CHAINS

KES 18 Billion PER YEAR IN GDP

KES 100 Billion CAPITAL EXPENDITURE VALUE THAT CREATES CONSTRUCTION AND MANUFACTURING JOBS

If this flagship meets the initial set of targets, projects for the second five years of the transformation could include increasing the number of processing hubs and/or value chains covered, or focusing on a different market, e.g., increasing production for exports.

FLAGSHIP 4: Unlock 50 new large-scale private farms (bigger than 2,500 acres) and sustainable water supply for more than 150,000 acres of irrigation from existing infrastructure

More than 15% of Kenya's land mass (21 million acres) is classified as high-potential agriculture zones. Of this, 18 million acres are under agricultural production, mostly by small-scale farmers with plots of 1.2 acres or less. Less than 14% of total agricultural land is farmed by commercial growers who have plots of 250 acres or more. A further 20% is classified as medium-potential zones that can sustainably farm livestock and drought-tolerant crops. Finally ~65% of Kenya's total land mass is classified as marginal agriculture-potential zones that are largely suitable for ranching and pastoralism where land is available.

In 1990-2014, Kenya's food production grew 2.8% annually. Since 2015, production has declined to 0.6% per annum. Kenya's regional peers are capturing an ever greater share of East Africa's production increases, with some like Ethiopia and Tanzania growing as fast as 8.9% annually[29]. Combined with a growing population, this slow-down in production growth means that Kenya will need to increase:

- **Maize supply.** In 2016-2023, supply must grow by 27% to satisfy 2023 domestic needs[30]. Given the decreasing maize yields, Kenya's staples deficit will likely grow unless it transforms and expands agriculture production on available, arable land through large-scale commercial farming.
- **Production in other value chains.** Rising incomes and changing dietary preferences will require a shift away from cereals to meat, dairy and higher value horticulture.
- **Land under sustainable irrigation.** Less than 1% of Kenya's land mass is irrigated. The availability and reliability of water supply is of critical importance to Kenya's future ambitions to expand land use for agricultural purposes[31].

Transformation approach

To unlock available, arable land for agriculture, the flagship 4 design has:

- **Learned from early, pioneering projects,** particularly the need to get it right before scaling up by conducting world-class feasibility studies, and ensuring that local communities are invested in owning projects.
- **Optimised alternative water supply options,** given the significant time (more than five years) and costs (more than KES500 billion) required to build new dams, Kenya needs alternative ways to meet its irrigation needs, e.g., complete new dams already under construction; fast-track rehabilitation of existing, under-performing dams – making them fit for aquaculture, captured fisheries and marine activities as relevant; where feasible, convert hydro-electric dams to dual-purpose dams.
- **Understood commercial grower preferences.** Private-sector growers continue to showinterest in expanding production in Kenya on land that may be made available, but are constrained from doing so because of short land tenures, rigid cropping plans, lack ofsecurity, and off-take uncertainty.

Over the next five years, the MoALF&I will:

- **Competitively procure** up to 50 new large-scale farm concessions (of 2,500 acres or more) to unlock up to 500,000 acres of new farm production. While much of the land will be state-owned, the new farm enterprises will be predominantly funded, owned and operated by the private sector.
- **Award contracts** via gazetted procurement processes, standard contracts and competitive tenders. A request for proposal (RfP) pack will be released announcing minimum eligibility criteria, bid evaluation criteria (including 5-10% shareholding for communities that recognise women, youth and minorities), and standard concession agreements.
- **Encourage greater involvement** from leading private financing institutions in the capital investments required through simple, clear processes and contracts.
- **Focus Government efforts** on providing land, security, and power and water supplies.

Impact on the lives of Kenyans

By the end of the first five years, this flagship will:

50 NEW PRIVATE FARMS COVERING ~200,000 HECTARES OF NEW PRODUCTIVE LAND

150,000 ACRES OF ADDITIONAL IRRIGATION

KES 65 Billion ADDITIONAL OUTPUT FROM >5 VALUE CHAINS, INCLUDING A >50% REDUCTION IN STAPLE DEFICIT

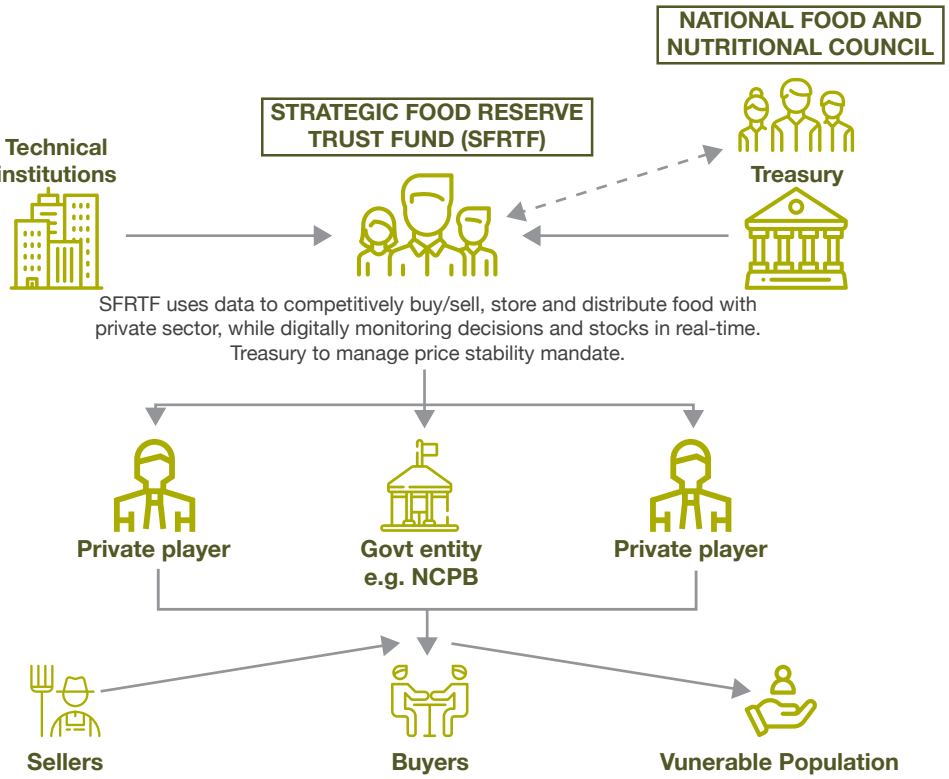
If this flagship meets the initial set of targets, projects for the subsequent five years could include increasing the number of farms by expanding to privately owned land and/or value chains covered, or adjusting the ownership requirements between stakeholders.

ANCHOR 3 - BOOST HOUSEHOLD FOOD RESILIENCE

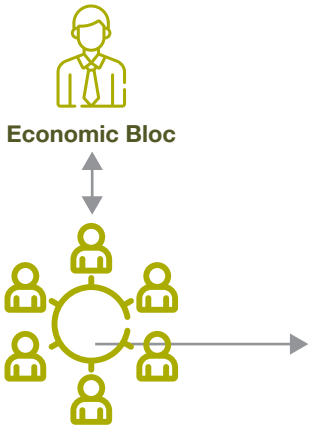
Kenya's constitution 2010 Article 43 (c) grants all citizens the right to be free from hunger and have adequate food of acceptable quality. While the first two anchors of the strategy focus on increasing production to provide adequate food and acceptable quality, this anchor focuses on the ability of households to deal with shocks to household consumption. It is firm in the belief that while national government can and must provide emergency relief for its people, it also has a role to play in increasing household food resilience all year round.

FIGURE 4: ILLUSTRATION OF ANCHOR 3 FLAGSHIPS

FLAGSHIP 5: Restructure Strategic Food Reserve (SFR) to better serve 4mn high needs Kenyans



FLAGSHIP 6: Boost food resilience for 1.3mn ASAL households via community driven intervention design, and economic bloc coordination



SAMPLE MENU OF INTERVENTIONS TAILORED BY THE COMMUNITY

Menu of interventions	Proportion of communities with demand for intervention	Priority	Current status
drought-tolerant varieties – production to market Establish sorghum growing on 12,000 acres at location A	HIGH	High	Planned
Establish drought resistant varieties of indigenous fruits on 10,000 acres at location B	LOW	Medium	Ongoing
Identify a self-help group to re-establish cow peas on 5,000 acres at C	LOW	Low	Fix current project
Livestock and fisheries – production to market Educate local community on herd management for maximum productivity and optimal use of resources	LOW	Low	Ongoing
Develop communal grazeland management on 10,000 acres – including reseeding	HIGH	High	Ongoing
Establish 100 aquaculture ponds and provide 5 tonnes of fish feed p.a. and fingerlings in area A	LOW	Medium	Ongoing
Create feed reserve for each community with a capacity of 9 months' supply to cover for maximum drought months	HIGH	Medium	Failed
Set up 5 feedlots to supply the abattoirs with a total annual capacity of 500,000 heads of cattle	LOW	Medium	Failed
Provide fishing boats and monitoring to support security	HIGH	High	Not started
Natural resource management and water availability Establish 20 boreholes with human consumption-quality water required in allocated area A	LOW	High	Ongoing
Develop 2 major rain/surface water harvesting projects with Israel technology support	HIGH	High	Not started
Establish 16 water pans required for livestock in village center	LOW	Medium	Failed
Soil rehabilitation of 2,500 acres in A county	HIGH	High	Not started
Build youth capability to construct farm ponds	HIGH	High	Not started

HIGH
LOW

SOURCE: Team Analysis

FLAGSHIP 5: Restructure governance and operations of the Strategic Food Reserve (SFR) to better serve 4 million vulnerable Kenyans

Kenya's strategic food reserve system is run by the Strategic Food Reserve Trust Fund (SFRTF) oversight board, with logistics primarily handled by the National Cereals and Produce Board (NCPB). The SFRTF's target of 3 million 90-kg bags (and a proposed target of 8 million bags[v]) aims to provide food relief in stocks or cash for the entire population in an emergency, and to stabilize food prices as per its mandate[32].

However, the food reserve system faces several challenges. The SFRTF's has a limited budget for its dual mandate, and most of the money is spent buying stocks to cover the entire population for a period of up to one month, leaving very little in cash reserves. Without a mandate and tools for evidence-based decision-making, the Reserve's actions often create uncertainty in the market, leading to price volatility. Price stability is an important tool to reduce the cost of food, but using buffer stocks through national food reserves is a very costly method of stabilizing food prices, e.g., in 2018-2019, stabilization of maize cost 6-9 billion[vi].

More than 95% of the stock purchased is maize, even though the SFRTF has six other commodities in its mandate; this puts pressure on maize and non-nutritious diets for emergency food[33]. Most high-performing SFRs – including those of Ethiopia, Rwanda and many Asian countries – store two or three commodities at most at a national level. Inefficient storage and food safety concerns are high, with reports of maize rotting and aflatoxin in the stores.

Today, 1.3 million Kenyans remain chronically food insecure in the ASAL regions. During times of emergency, this number rises to approximately 4 million.

Transformation approach

This flagship has four key recommendations:

- **Focus the Reserve on providing food during emergencies** to the most vulnerable Kenyans, and move the price stability mandate to the National Treasury, which more methods and instruments to manage prices effectively.
- **Focus on two or three commodities** including maize, an additional 70,000-85,000 tonnes of legumes, and rice to improve the nutrition of relief food.
- **Have the SFRTF publish** explicit, predictable buy-sell policy guidelines and emergency release criteria, and reduce the lead time to obtain additional emergency funds to make its actions more predictable and reduce volatility in the market.
- **Introduce competitive bidding** to allow the private sector to obtain storage allocations, mandating stricter food safety standards, and real-time digital stock monitoring.

v 4 million 90kg equivalent bags in physical stock and 4 million bags as a cash equivalent

vi KES6-9 billion is ~equivalent to 20-30% of total MOALF development spend, given ~KES65 billion total allocation for 2016/2017, of which ~KES40 billion was development spend. In 2017/2018, MOALF took on a one-time price stabilisation effort to maintain KES 90 for a 2kg packet of maize, by buying maize at KES3,600 per bag and selling to the millers at KES2,300. Total cost of this programme in phase 1 was KES6.7 billion as reported by the Supplementary Appropriation (No. 3 Act, 2017) . But interviews within MOALF&I and NCPB suggest that an additional KES3.2 billion was spent in cost overruns. Future costs of stabilisation have not been estimated and require modelling with Treasury for broader food needs, not just maize

Impact on the lives of Kenyans

By the end of the first five years, this flagship will:

4 Million FOOD INSECURE KENYAN SUPPORTED DURING EMERGENCIES

2-3 ACTIVELY MANAGED COMMODITIES

100% OF STOCKS MONITORED DIGITALLY AND IN REAL TIME

If this flagship meets the initial set of targets, additional projects for the next five years of the transformation could increase the number of commodities managed at a national and even regional level, and digitize more processes.

FLAGSHIP 6: Boost the food resilience of 1.3 million farming and pastoralist households in arid and semi-arid lands (ASALs) through community-driven intervention design

ASAL regions cover more than 80% of Kenya's land area and are home to more than 35% of the population (17 million Kenyans)[34]. Despite the multiple government bodies and development partners that focus on these areas, the ASALs lag behind on multiple social and economic development indicators: 60% of the population lives below the poverty line, yields are 50% lower than in the rest of the country, and women's empowerment is low with women farming crops while men manage the livestock[35]. 1.3 million ASAL households (8 million people[vii]) remain chronically food-insecure and highly vulnerable to drought[viii].

Stakeholder consultation reveals two factors critical to identifying, developing and implementing ASAL interventions: community involvement in the design and implementation of interventions, and coordination of all national, county and development partner activities, suggesting an opportunity to enhance coordination at the economic bloc level.

Transformation approach

This flagship proposes a five-step process for all ASAL interventions in 16 of the most arid counties:

1. Create detailed profiles of communities living ASAL areas.
2. Involve the community in co-creating food resilience interventions by including opinion leaders, women, youth, PWDs, self-help groups and co-operatives, and technical input from development partners.
3. Prioritise interventions and develop county-level operational plans that include food and feed resilience issues relevant to the communities.
4. Set up a coordination and governance mechanisms for selected projects.
5. Build local community capabilities to drive existing and new interventions sustainably.

This process will be rolled out in two phases: 1) to four counties; 2) to a further 12 counties.

vii The rest of this report uses an average of 4.5 people per household as per KIHBS 2015/2016 report. However average in ASALs based on Wajir, Mandera and Garissa is 6.2

viii People are chronically food-insecure when unable to meet their minimum food requirements for a sustained period due to extended poverty, lack of assets and inadequate access to productive and financial resources - An Introduction to the Basic Concepts of Food Security FAO

Impact on the lives of Kenyans

By the end of the first five years, this flagship will:

1.3 Million HOUSEHOLDS IMPACTED (~8 MILLION KENYANS)

6 MAJOR STAKEHOLDER EFFORTS COORDINATED INCLUDING COMMUNIITES, COUNTIES, REGIONAL ECONOMIC BLOCS, NATIONAL GOVERNMENT, DEVELOPMENT PARTNERS AND THE PRIVATE SECTOR

220 Million USD ALREADY COMMITTED BY DEVELOPMENT PARTNERS UNTIL 2025

If this flagship meets the initial set of targets, future projects could increase the geographic scope, stakeholders and value chains involved.

ENABLERS

An additional set of initiatives required to transform Kenya's agricultural sector cut across all flagships and provide the conditions required to implement them. Three in particular are important for the ASTGS: building knowledge and skills for those at the forefront of the transformation; investing in research and data platforms; and monitoring food system risks in sustainability, climate-resilient and crises management (i.e. for pests, diseases, climate and global price shocks). All enablers directly support the needs of the anchor flagships. They are centred on a preliminary list of "use cases" that should be reviewed and updated as the needs of the anchors evolve and they begin to deliver the desired results.

FLAGSHIP 7: Launch three skill programmes for 200 government leaders, flagship implementers and 3,000 youth-led and digitally-enabled extension agents

According to the 2016 Capacity Assessment and Rationalisation of the Public Service (CARPS) and the 2017 Institutional Architecture Assessment (IAA), the MoALF&I and, notably, county-level agriculture departments require capability-building[36,37]. There are several reasons for this.

First, both technical skills (e.g., fact-based policy analysis and monitoring and evaluation) and non-technical skills (e.g., incorporating public participation and national-county consultation into policy design and implementation) are lacking. Second, the retirement of Ministry officials is widening the capability gap and succession planning is limited. Half of the MoALF&I staff are over 50 years old and due to retire over the next 10 years – during implementation of the ASTGS. Third, the 1,000 frontline SMEs and other implementers (e.g., SFR depot operators) lack the business and delivery skills, e.g., accounting and inventory optimisation, required to execute their mandate. And finally, the success of the transformation relies largely on the skills of the extension workers in the counties—e.g., communication and area-specific agricultural

best practices—to raise the productivity of small-scale farmers, pastoralists and fisherfolk.

Transformation approach

This flagship has three components:

- **Develop a field-and-forum training programme** to increase the knowledge of the 200 national and county government agriculture leaders who will be the key decision makers for the transformation[ix], including a:
  - **Development journey assignment** (e.g., accountability for all flagship KPIs) to provide a real-world context (the "field") in which participants can apply the learning from the training (the "forum"). The Agricultural Transformation Office (ATO), the transformation's key delivery unit, will track the flagship scorecards.
  - **Formal training curriculum** developed with expert global faculty under direction of the MoALF&I, in conjunction with experienced domestic educational institutions such as the Kenya School of Government, the Kenya School of Agriculture, and the Centre for Training and Integrated Research in ASAL Development.
  - **Cross-sector, international peer network of leaders** who lead or have successfully led agricultural transformations around the world and are available to share feedback on ideas, lessons learned and in person problem-solving.
- **Give access to formal digital and in-field leadership training modules** to the frontline implementers including the 1,000 SMEs[x].
- **Revitalize extension services in the counties** by hiring 3,000 digitally-skilled youth extension workers and recruiting them through national television and radio extension programmes. Because agriculture is a constitutionally devolved function, the Government will not mandate county governments to implement this programme. Rather, the MoALF&I will provide a blueprint for the programme, including recommendations for training existing extension officers; funding for county support from national agricultural research organisations (e.g. KALRO); and supplements to county budgets to support the implementation costs of the programme for the counties that choose to adopt it.

ix Including but not limited to Principle Secretaries and their direct reports in the MoALF&I, heads of key government agencies delivering transformation (e.g., PPP Unit, Regional Development Authorities), and county agriculture leaders including the Council of Governors Agriculture Committee, and county agriculture officers, finance officers, and County Assembly agriculture leaders

x Includes but is not limited to: ATO officers, ~1000 change agent SMEs, data officers, planning officers, PPP officers, project coordinators, strategic food reserve inventory personnel

Impact on the lives of Kenyans

At the end of the first five years, this flagship will:

200 NATIONAL AND COUNTY TRANSFORMATION LEADERS TRAINED

3,000 YOUTH EXTENSION WORKERS HIRED, TRAINED AND DELIVERING RESEARCH AND DATA DRIVEN IT-ENABLED SERVICES

1:600 EXTENSION WORKER TO FARMS RATIO

If this flagship meets the initial set of targets, additional projects for the second five years of the transformation could include training the entire extension force in IT skills, tailoring and replicating national-level training at the county level, and coaching those trained in the first five years to train others.

FLAGSHIP 8: Strengthen research and innovation as launch priority digital and data use cases to drive better decision-making and performance management

The ASTGS flagships must overcome three big challenges ensure the right research, innovation and data is available to guide decision-making: low investment in research and innovation space in agriculture, including big data and advanced analytics (AA); poor access to useable and shareable data; and insufficient demand for quality analyses to support evidence-based decisions on performance management, M&E, research and policy.

Addressing these three challenges would enable real-time operational and strategic improvements to the flagships. For example, identifying the farmers, SMEs or regions that are increasing yields would indicate their eligibility for future participation in the flagships.

Transformation approach

A more targeted approach to research and innovation will improve data collection and analysis and informed decision making. Ultimately, it will create more links between research and activity on the frontline. The main activities to achieve this are:

- **Digitise the existing data, research and other performance information** held by the MoALF&I and associated agencies.
- **Create an enabling environment for research and innovation** with clear linkages between data, research and innovation (e.g., feedback loops from the field enabled by digital real-time data collection). This will accelerate the development of diversified, demand-driven agricultural technologies, apply them as appropriate, and improve current agricultural methods based on stronger research-extension links (e.g., irrigation systems).
- **Define data laws** and set up open data platforms for agricultural data at national and county levels to accelerate the launch of the research and data flagship. Allow the data to be plugged fully into KODI when the infrastructure is ready.
- **Launch data use cases** for ASTGS flagship implementation. The three priority cases for immediate launch focus on: tracking the performance of the SME accelerators to determine which ones should continue to operate and potentially receive additional geographies to cover; tracking the performance of subsidies awarded for renewal to farmers or re-certification of vendors; and automating SFR buy/sell decisions during emergencies.

Impact on the lives of Kenyans

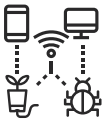
By the end of the first five years, this flagship will:

>3.3 Million SMALL-SCALE FARMERS REGISTERED FOR MORE EFFICIENT SERVICE DELIVERY (E.G., SUBSIDIES, EXTENSION)

1,000 FARMER-FACING SMES ON-BOARDED TO DIGITAL PLATFORMS TO PROVIDE SERVICES TO FARMERS, INFORMED BY THE LATEST RESEARCH AND DATA

1 AGRICULTURE OPEN DATA POLICY OPERATIONAL, SETTING STANDARD FOR AFRICA AND ALLOWING ON-DEMAND ACCESS TO DATA FOR ALL

If this flagship meets the initial set of targets, additional projects for the second five years of the transformation will likely include expanding the use cases to match the projects identified across the transformation better.



FLAGSHIP 9: Monitor two key food system risks – those addressing sustainability and climate, and a second category for crisis management for pests, diseases and global price shocks

Managing its natural resources is at the heart of Kenya's ability to respond to the big risks that threaten its ability to achieve 100% food and nutrition security. Kenya faces five key challenges to sustainability in the food system including: insufficient water basin management and poor irrigation practices characterized by uncontrolled abstraction of water and under exploitation of ground, storm, waste and saline waters. Declining soil fertility because of poor nutrient management and farming practices reduces potential land output. There is limited support for climate-smart agriculture to increase agricultural productivity and incomes, adapt and build resilience to climate change, and reduce and/or remove greenhouse gas emissions, where possible[38]. Poor stewardship of fishing grounds lowers the productivity of capture fisheries and aquaculture, while poor conservation of genetic resources reduces biodiversity. And finally, disaster management is insufficient to plan for emergencies affecting farmers, pastoralists and fisherfolk.

Addressing these challenges will not only increase agricultural production sustainably and put food on the table; it will also ensure that future generations of Kenyans continue to benefit from agriculture.

Transformation approach

The interventions necessary to achieve sustainability will require coordination of several government ministries by the ATO. Five high-impact initiatives have been prioritized for immediate implementation:

- **Ensure sustainable irrigation and water basin management** whereby the Government will ensure that efficient technologies are available and affordable and that water is accessible. Water resource authorities will have to monitor and regulate water abstraction to maintain a defined minimum water level.
- **Map soil** to ensure farmers use the appropriate inputs to support production.
- **Offer incentives** such as tax breaks on climate-smart technologies.
- **Increase monitoring** and define capture fishery laws to help repopulate capture fishery areas and boost fish volumes.
- **Establish a coordination mechanism** to forecast, oversee and prepare for all disaster management efforts with clear standard operating procedures (SOPs).

Impact on the lives of Kenyans

Achieving sustainability will increase productivity and reduce the vulnerability of the population to climate change and environmental risks. In its first five years, flagship 9 will:

11% OF SMALL-SCALE FARMERS AND PASTORALISTS WITH ACCESS TO IRRIGATION (FROM ~5%)

1 RAPID RESPONSE TEAM COORDINATING EARLY WARNING FOR FOOD SYSTEM RISKS (E.G., PESTS, DISEASE, CLIMATE AND GLOBAL PRICE-SHOCKS)

100% SOIL TESTING FOR ALL FARMERS RECEIVING SUBSIDIES

If this flagship meets the initial set of targets, future projects will likely include adjusting sustainability efforts to match the core flagship projects (e.g., food system risks) better.

02

TRANSFORMING THE COUNTIES

The nine big ideas discussed above constitute a portfolio of interventions that cover the entire country in five years While some flagships are less applicable to certain parts of the country given agro-ecological and other considerations, farmers in every county have the potential to benefit from at least five flagships: 2. the new subsidy programme; 5. the national strategic food reserve; and the three enablers of 7. knowledge and skills, 8. research and analytics, and 9. sustainability and climate change.

The counties are the bedrock of the ASTGS. While the strategy is national, the counties will implement it in line with the Constitution's provision that agriculture is a largely devolved function. The county governments will domesticate the strategy and conduct all planning, funding and implementation in alignment with their own priorities, as outlined in sector plans and County Integrated Development Plans (CIDPs).

Working closely with the MoALF&I through the ATO, the Joint Agricultural Sector Coordination Committee (JASSCOM) will support the counties and county economic blocs. They will address critical capability-building needs to enable the counties to domesticate the Strategy, link their development plans and longer-term agriculture strategies to national priorities and outcomes, and develop the policies required to support county-level implementation (e.g., greening).

A toolkit has been developed to help the county governments domesticate the Strategy and develop their own agricultural implementation plans (see Chapter 5 of the full ASTGS). The key steps are to:

- **Map county agricultural sector priorities and value chains** aligned to existing CIDPs, ASTGS flagships and any other relevant country strategy documents, such as regional economic blue prints,
- **Rank the priorities** by impact and feasibility;
- **Create an implementation plan** aligned with the CIDPs;
- **Estimate funding requirements and resources** to support the implementation plan for the multi-year strategy and annual CIDPs;
- **Execute and rigorously monitor** implementation performance.

FIGURE 5: RECOMMENDED COUNTY FLAGSHIPS AND VALUE CHAINS (1/2)

COUNTIES *are the* BEDROCK *of* IMPLEMENTATION

		FLAGSHIP 1	FLAGSHIP 2	FLAGSHIP 3	FLAGSHIP 4	FLAGSHIP 5	FLAGSHIP 6	TRANSFORMATION PRIORITIES	TOP 3 ADDITIONAL OPPORTUNITIES IDENTIFIED BY THE COUNTIES
NORTHERN REGION ECONOMIC BLOCK (NOREB)	Baringo	●	NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE			NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE			
	Elgeyo Marakwet				●				
	Nandi	●		●					
	Samburu						●		
	Trans Nzoia	●		●	●				
	Turkana	●			●		●		
	Uasin Gishu	●		●					
	West Pokot	●			●		●		
LAKE REGION ECONOMIC BLOCK (LREB)	Bomet	●	NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE	●		NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE			
	Bungoma	●							
	Busia	●		●	●				
	Homa Bay	●		●			●		
	Kakamega	●			●				
	Kericho	●							
	Kisii	●		●			●		
	Kisumu	●		●	●				
	Migori	●							
	Nyamira	●			●				
	Siaya	●		●	●				
	Vihiga			●					
MT. KENYA AND ABERDARES ECONOMIC BLOCK	Embu	●	NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE	●		NATIONAL PROGRAMME, ALL COUNTIES ELIGIBLE	●		
	Kiambu	●		●					
	Kirinyaga								
	Laikipia	●					●		
	Meru	●		●					
	Murang'a	●							
	Nakuru	●		●	●				
	Nyandarua	●		●					
	Nyeri	●		●					
	Tharaka-Nithi	●		●					

FIGURE 5: RECOMMENDED COUNTY FLAGSHIPS AND VALUE CHAINS (2/2)

COUNTIES *are the* BEDROCK *of* IMPLEMENTATION

		FLAGSHIP 1	FLAGSHIP 2	FLAGSHIP 3	FLAGSHIP 4	FLAGSHIP 5	FLAGSHIP 6	TRANSFORMATION PRIORITIES	TOP 3 ADDITIONAL OPPORTUNITIES IDENTIFIED BY THE COUNTIES
FRONTIER COUNTIES DEVELOPMENT COUNCIL (FCDC)	Garissa	●	NATIONAL PROGRAMME; ALL COUNTIES ELIGIBLE			NATIONAL PROGRAMME; ALL COUNTIES ELIGIBLE	●	Beef, Horticulture	Camel milk, Chevon
	Isiolo	●					●	Beef, Horticulture	Camel milk, Chevon
	Mandera						●	Fish, Horticulture	Camel milk, Chevon, Tomato
	Marsabit						●	Beef, Fish, Horticulture	Camel milk, Chevon, Vegetables
	Wajir	●					●	Beef, Horticulture	Camel milk, Poultry, Water melons
SOUTH EAST KENYA ECONOMIC BLOCK (SEKEB)	Kitui	●					●	Cotton, Green grams, Horticulture	Poultry, Sorghum
	Machakos	●					●	Cotton, Dairy, Green grams, Horticulture, Poultry	Mango
	Makueni	●		●			●	Cotton, Green grams, Horticulture	Green grams, Mango, Poultry
JUMUIYA YA KAUNTI ZA PWANI (JKP)	Kilifi	●	NATIONAL PROGRAMME; ALL COUNTIES ELIGIBLE	●		NATIONAL PROGRAMME; ALL COUNTIES ELIGIBLE	●	Fish, Horticulture, Poultry	Cassava, Chilli
	Kwale						●	Fish	Chilli, Vegetables, Poultry
	Lamu	●		●	●		●	Fish, Horticulture, Poultry	Fisheries, Fish, Poultry
	Mombasa	●		●				Fish, Horticulture, Coconut, Poultry, Rice	Vegetables
	T. Taveta	●			●		●	Beef, Dairy, Horticulture, Poultry	Bananas, Poultry
	Tana River			●	●		●	Honey, Maize, Rice	Beef, Fish, Mango
UNASSIGNED	Nairobi	●		●				Dairy, Horticulture, Poultry	Vegetables
	Kajiado						●	Beef	Dairy, Tomato
	Narok	●						Beef, Dairy, Maize	Honey

Conversations with key county executives and stakeholders, an analysis of agro-ecology, transformation readiness, and the end-term ASDSP evaluation informed this initial flagship and value chain recommendations. These recommendations are subject to change during implementation, as counties (re)prioritize to best meet their objectives

Bananas, Beans, Beef, Camel milk, Cashew nuts, Cassava, Chevon, Chilli, Citrus, Coffee, Cotton, Cow pea, Dairy, Fish, Fisheries, French beans, Green grams, Groundnut, Goat meat, Honey, Horticulture, Maize, Mango, Palm oil, Passion fruit, Potato, Poultry, Pyrethrum, Rice, Snow Peas, Sorghum, Sugar, Sukuma wiki, Sweet potato, Tea, Tomato, Vegetables, Water melons, Wheat

SOURCE: Interactions with County CECs of Agriculture, CO's Agriculture and Directors Finance between Feb - Mar 2018

03

DELIVERING THE STRATEGY

Each county should consider the recommended priority flagships and value chains when implementing the ASTGS (Figure 5). These recommendations are based on county-level consultations and analysis of agro-ecology, transformation readiness (e.g., share of budget allocated to agriculture) and the 2016 end-term evaluation of the Agricultural Sector Development Support Programme (ASDSP). Counties should engage critically with these recommendations as implementation begins, adjusting them to meet county-level objectives in line with the national aspiration to transform the agriculture sector. Execution and delivery are critical to the success of the transformation. The delivery unit – the ATO – is a government entity managed by the Chief Administrative Secretary (CAS) who reports to the Cabinet Secretary of the MoALF&I. The ATO will help the CAS to drive flagship results with the Government, the private sector and development partners. The ATO's mandate is to:

- **Support inter-ministerial implementation** by working with sector ministries to track and monitor performance, take corrective actions to address poor performance, and remove bottlenecks.
- **Enable performance management** and rapid decision-making by cutting through Government bureaucracy.
- **Create transparency and mutual accountability** for delivery by consolidating accurate and timely data and communicating fact-based, non-politicised outcomes to key decision makers.

The global best practices suggest that functional delivery mechanisms can greatly increase the chances of delivering a successful large-scale transformation. The ASTGS therefore proposes four principles for the design of the ATO:

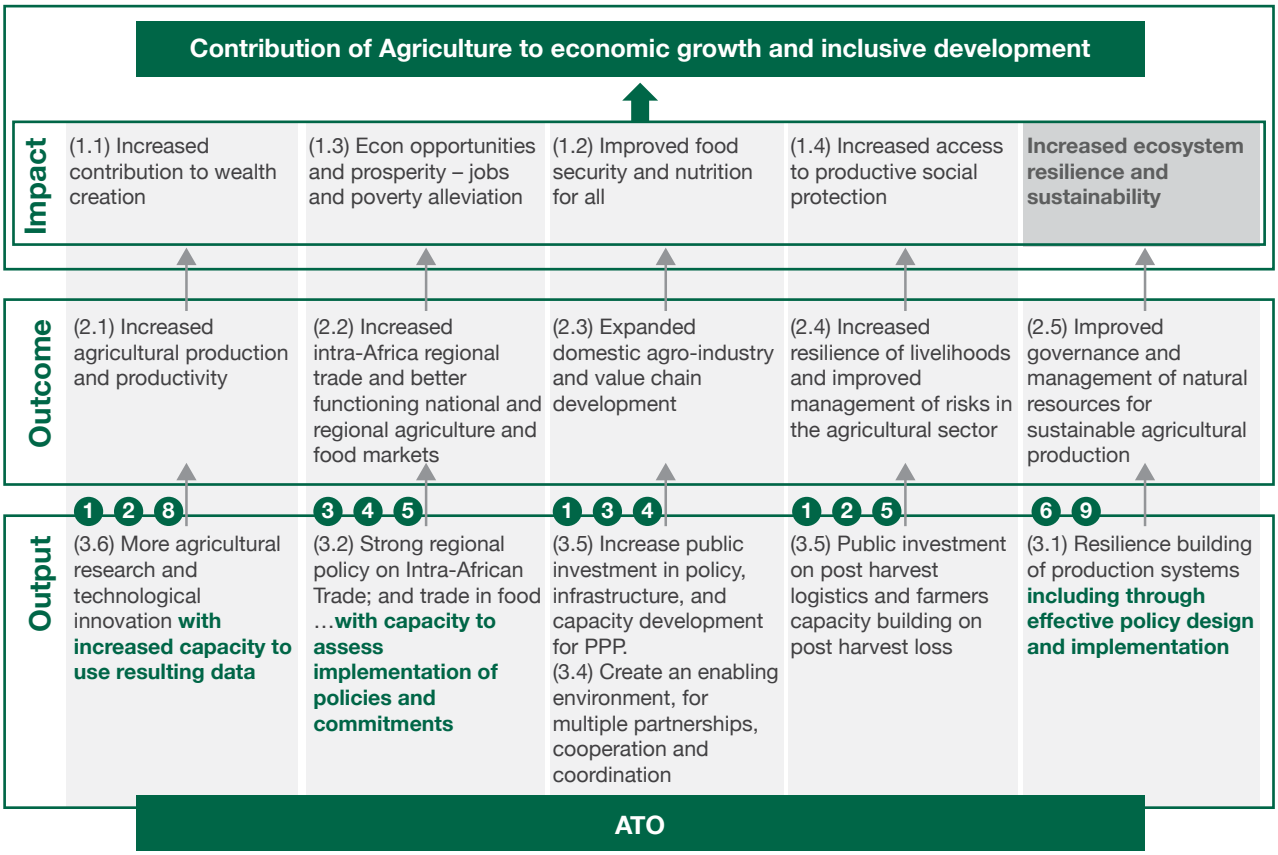
- **Flexible design and approach** to adapt quickly and easily to the changing needs of the Strategy.
- **Sourcing the best talent** for successful implementation of its mandate.
- **A successful launch** and early quick wins to create credibility and generate momentum.
- **A focus on the outputs and impact** generated by the activities.

MoALF&I CS will continue to be responsible for delivering the agriculture sector KPIs for the country, and JASSCOM will continue to build the capabilities to drive coordination between the national and county level governments. As delivery gets more embedded at the counties, the role and scope of the ATO should be re-evaluated.

MONITORING AND EVALUATION

Monitoring and evaluation (M&E) is critical to accountability and learning. The key outcomes of the Strategy – increasing small-scale farmer, pastoralist and fisherfolk incomes, agricultural output and value addition, and household food resilience – are aligned with Kenya's Agricultural Sector Results Framework (Figure 6). This framework identifies the key outputs and impact the sector is committing to, keeping in mind devolution, regional, national and global agreements including the United Nations Sustainable Development Goals (SDGs), and the outcomes of the Comprehensive Africa Agriculture Development Programme (CAADP). The ATO will help national and county-level implementers to track and monitor top-line metrics digitally on a quarterly basis, and work with them to improve these metrics. Third-party validation of the performance results by research and academic institutions will be built into the process to ensure mutual accountability and share best practices. The ATO will also help the implementers design, define, track and monitor the operational-level input and output metrics for individual flagships on a more regular basis.

FIGURE 6: KENYA'S AGRICULTURAL SECTOR RESULTS FRAMEWORK



(X) CAADP INDICATOR

Green Bold PROPOSED ADDITION FROM ASTGS

FLAGSHIP

INDIRECTLY MEASURED

04

TRANSFORMATION ROADMAP AND BUDGET

Over the next 10 years, this transformation will create a vibrant, commercial and modern agricultural sector that contributes to the country's sustainable economic development. It will support Kenya's short-term aspirations for 100% food and nutrition security, as well as the longer-term continental and global commitments to CAADP, the United Nations Sustainable Development Goals (SDGs), and others.

Year 1 is designed to deliver quick wins and begin the structural transformation (Figure 7). Several legislative processes must be launched to support future initiatives, e.g., separate the price stability mandate from the emergency stocks maintained by the SFR.

Years 2-4 focus on embedding the structural transformation and delivery in the counties, building knowledge and skills as required.

FIGURE 7: YEAR 1 MILESTONES FOR DELIVERY ACROSS THE TRANSFORMATION

YEAR 1 TRANSFORMATION MILESTONES

2019

MARCH
FLAGSHIP **8**

Launch open data policy for the agricultural sector, and pilot first data use case on small-scale farmer production forecasts

JUNE
FLAGSHIP **5**

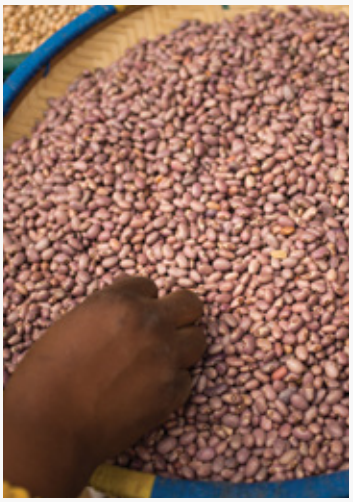
Register the 1,000,000th farmer from joint registration effort between Ministry of Agriculture, the Counties, and private sector partners. Begin pilot for new digital e-voucher subsidy scheme

OCTOBER
FLAGSHIP **6**

Host development partner summit focused on transformation and coordination of ASAL household food resilience efforts. Development partners to demonstrate results from their work to date

APRIL
FLAGSHIP **4**

Start first fully funded agro-processing hub feasibility study and launch roadshow with global and local investors



NOVEMBER
FLAGSHIP **4**

First produce available **from one of the proposed 50 new farms under irrigation.** Showcase real-time data on water use on this farm, and how it is supporting sustainable water use through the national digital water basin management system

JUNE
FLAGSHIP **1**

Target ~180,000 farmers, pastoralists and fisherfolk as well as ~150 farmer-facing SMEs with launch of first wave of high productivity zones. Zones will be operated by business accelerators who will be jointly selected with the Counties

AUGUST

Procure first batch of ~70,000 tonnes of beans to better focus Strategic Food Reserve (SFR) stocks on ~4 million most in-need Kenyans

DECEMBER
FLAGSHIP **2**

Launch new nationwide e-voucher subsidy programme to target ~1.4 million small-scale farmers, pastoralists and fisherfolk over five years. New programme gives farmers choice of a range of inputs from a variety of private and public providers

SOURCE: Team Analysis

Year 5 reflects on lessons learned and designs innovative interventions for the next five years. The first five years of the transformation are expected to cost an estimated KES440 billion:

- **Agriculture costs – KES230 billion.** Flagship 3 (agro-processing hubs) is expected to account for 45% of costs (~KES103 billion), largely because of the factory capex that we anticipate will be financed by the private sector. The new private farms account for up to 30% (KES75 billion), including programme design and land clearing. Of the remaining 25% (KES60 billion), we assume that existing subsidies of KES5 billion per year and extension worker wages of KES3 billion per year are already part of the current government budget; increases of at least KES30 billion will be required over the five years to cover the SMEs, SFR and ASAL flagships

  Up to 80% of costs (KES 200 billion) could be financed through public private partnerships (PPPs) in the agro-processing and arable land flagships The Government and its development partners would therefore need to finance just 20%, including subsidies, extensions and the enablers. To meet this obligation, the Government needs to raise an additional KES 8-10 billion per year, which represents a 30% increase in current disbursed budgets.

- **Support costs – KES210 billion.** We assume that KES170 billion is required for roads, KES5 billion for grid extensions (both for new farms[xi]). The remaining KES35 billion will be used for price stabilization based on the historical costs articulated in flagship 5.

xi Of the 50 farms, assume that: half need ~25 km of new roads at KES 270 million/km (historical Ministry of Transport cost of building a road), and half need 10 km of grid expansion at KES20 million/km (historical KETRACO grid extension cost)

05

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See full version of the ASTGS for a complete set of references

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