



MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT

STATE DEPARTMENT FOR CROP DEVELOPMENT

Overview of Kenyan Agriculture

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STATE DEPARTMENT FOR CROP DEVELOPMENT



Outline

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Country's Background

- ❑ Kenya is a country in East Africa bordered to the North by South Sudan and Ethiopia, to the East by Somalia, to the South by Tanzania, and to the West by Uganda.
- ❑ **Capital City** – Nairobi
- ❑ **Population**-50.2 Million according to 2022 population Projections.
- ❑ **Climate**-varies by location, from mostly cool in the highlands to warm/hot in the lowlands.



Ministry's Mandate/Goals

- ❑ Provision of enabling environment for agricultural development
- ❑ Increase agricultural productivity and outputs
- ❑ Increase farmers' incomes, market access and agro-processing



Food and nutrition security



Sustainable land management and conservation of the environment



Enhance farmers resilience and risk management

Ministry of Agriculture and Livestock Development Guiding Policies

The Ministry's Strategic
Plan

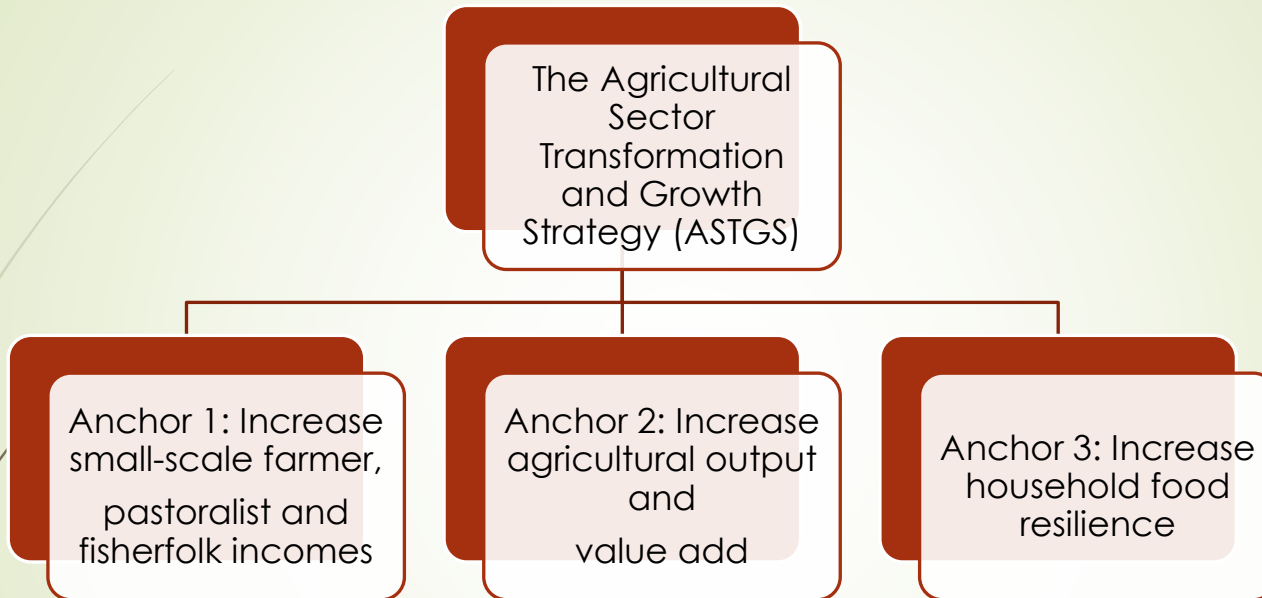
Agriculture Sector
Development Policy

The National Food and
Nutrition Policy (FNSP)

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graph TD; A[The Ministry's Strategic Plan] --- B[Agriculture Sector Development Policy]; B --- C[The National Food and Nutrition Policy (FNSP)]; A --- D[Address key issues associated with chronic, poverty-based food insecurity and malnutrition]; B --- D; C --- D;
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Address key issues associated with chronic, poverty-based food insecurity and malnutrition

...Ministry of Agriculture Guiding Policies



Nine flagships or nine big ideas constitute an entire portfolio of interventions that address the 3 anchors. Farmers in each and every county have the potential to benefit from at least five flagships. Flagship no 8 addresses use of data, ICT and digital systems and innovations

THE KENYAN FARMER

□ 6.4 million agricultural households(2019 KPHC).



76.0 %-Subsistence farming
23.3% Commercial farming

□ Average holding size



□ 1.5 acres especially for the key food crops

□ Age of head of the farming households



- 32.2% -the elderly (age 55 years and above)
- 23.2 % (35- 44 yrs)
- 20.1% (25 - 34 yrs)-youth
- 19.6% (45-55 yrs)

Government policies are geared towards supporting these farmers(small scale), either to expand and become commercially oriented, or address recurrent challenges

Kenyan Farming

- 60.9 % of the 6.4 million households, practice mixed farming(2019).
- The proportion growing crops only stood at 26.7% and those rearing livestock was 12.0%
- Kenya's main food crops are classified into:
 - Cereals (maize, wheat, sorghum, rice, millets);
 - Pulses (beans, pigeon peas, cow peas, green grams);
 - Roots and tubers (Irish potatoes, sweet potatoes, cassava, arrow roots and yams
- Maize is the main staple food followed by beans, potato and rice.
- Most of the crops are grown as intercrop (one main crop eg maize planted with a second crop eg beans).
- Kenya has two main growing seasons: Long rains season from March to May; and Short rains from October to November.

Use of Earth Observation for Agriculture and Food Security Monitoring

Crop conditions monitoring for Food Security management- GEOGLAM and Crop Monitor

Monitoring of pests and diseases (Locust invasion of 2020)

Climate/Weather monitoring; early warning on drought (NDMA using NDVI & VCI), floods, (2020) etc

Crop type mapping and crop mask- Cop4GEOGLAM ongoing- funded by EU

Enabling crop analytics at scale, Kenya (ECAAS) just starting- NASA harvest & Tetrattech (UMD)

Crop Insurance Program that uses GIS software to develop satellite maps, sample farms for data collection and loss assessment

Challenges to Kenyan agriculture

- ❑ Most of the cropping is rainfed
- ❑ Pests and diseases-some emerging eg FAW and MLND
- ❑ Declining productivity
- ❑ High cost of inputs
- ❑ Low capacity of extension workers-Few and with inadequate skills and necessary infrastructure
- ❑ Frequent Droughts
- ❑ Low investments and funds allocation to agricultural activities
- ❑ Soil fertility and land degradation: Adoption of sustainable land management practices is low, and land degradation increasing.
- Poor infrastructure in rural areas which means that farmers are forced to sell their crops at low prices, leading to reduced incomes and less investment in agriculture
- Poor access to credit
- Land and population pressures: Average farm size is falling and land distribution is becoming more concentrated, leading to significant constraints on production, particularly for smallholders
- Low use of technology in agriculture
- Climate change: Changes in temperature and in the variability of rainfall have significant effects on agricultural production, but impacts may be different for different crops
- ETC

Opportunities and other interventions

- Fertilizer subsidy programme to reduce cost of production and increase productivity
- Farmer services: Government support to Index insurance to mitigate against natural hazards for crop and livestock
- Investment in water harvesting for small scale crop production-waterpans, irrigation schemes
- Extension programmes supporting priority value chains at the county level by government and development partners
 - Kenya Climate Smart Agriculture Project
 - National Value Chain Support Programme
 - Agriculture Sector Development Support Programme etc
- Increase investments in Agriculture through allocation of more funds to the sector.
- Promotion of use tolerant varieties and other climate smart technologies in agriculture



EXPECTATIONS

- Expecting to learn more on crop watch and how the technology can be applied in crop mapping and crop monitoring
- Exchange Country Experiences



CONCLUSION

- Kenya is open to work with partners to **continue to develop capacity** to improve forecasting, management of agricultural data and food security monitoring using EO tools-EO tools constantly evolving
- There is huge and **growing potential in use of EO tools to improve decision making**, management of food security and farmers' incomes

Thank you/Ahsante sana

