



ZIMBABWE AGRICULTURE MONITORING

GOING4GROWTH 2023



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STATE OF THE AGRICULTURE SECTOR

- Developing agriculture remains Zimbabwe's most direct route to reducing poverty, hunger and malnutrition
- The agricultural sector is responsible for feeding the nation and providing livelihoods to 67% of the country's population in rural areas
- breadbasket status, Hence, agriculture is one of the most important sectors for the recovery and growth of the economy
- The agric sector aims to increase food self-sufficiency from the current level of 45% to 100% to less than 10% by 2025.

AGRIC AIMS AND TARGETS BY 2025

- To treble agriculture trade through improved market access and competitiveness of agriculture commodities on the domestic and export markets through quality produce and value addition;
- To raise per capita income for farmers to the upper-middle-income level of **\$4 000 – 12 000**;
- To ensure that the existing agricultural resource base is maintained and improved, including restoration of soil health, and achieve sustainable agricultural intensification.
- The overall goals are informed by the Vision 2030, Malabo Declaration of 2014 and Sustainable Development Goals (SDGs) of 2015

EARLY WARNING IN ZIMBABWE

- To establish an operational national agriculture monitoring system based on sustainable methods, tools, geospatial technology and in situ data.
- The agriculture monitoring system includes a network of wireless sensors.

SECONDARY DATA FROM STAKEHOLDERS

TIMB-contracted area to tobacco
TRB- seed sales (150 000 Ha)
AMA and ZimGold-area under sunflower, soyabean
COTTCO- inputs issued to farmers
Zimbabwe fisheries producers' association &
ZIMPARKS-fisheries data
Crocodiles Farmers Association Zimbabwe
Livestock and Meat Advisory Council (LMAC)
Technoserve
Macadamia Growers Association
Citrus Growers Association
Horticulture Development Council
Coffee Growers Association
Zimbabwe Coffee Mill
Zimbabwe Sugar Association
FEWsNET

PRIMARY SOURCE

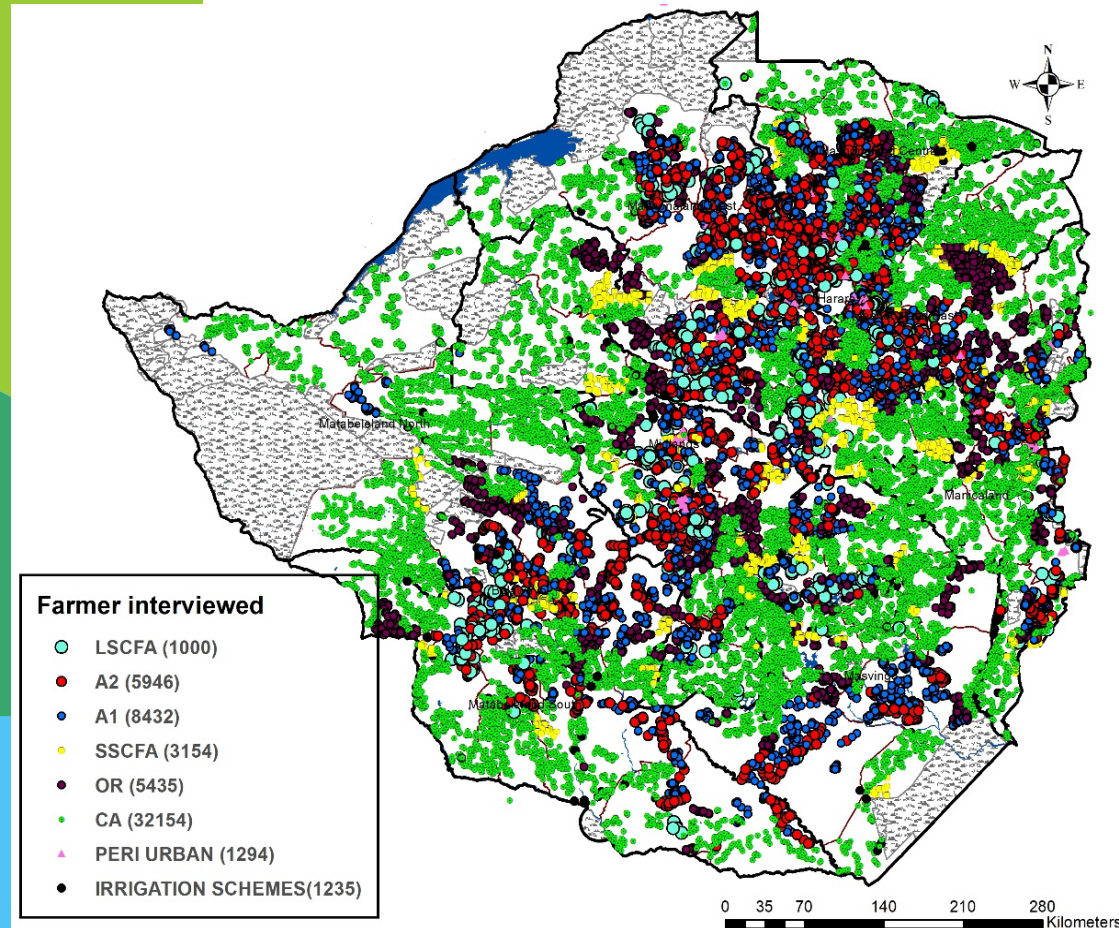
Min of Agric -survey data
Veterinary department-animal
health data
Meteorological Services
Department (MSD)-seasonal
forecast
Zimbabwe Association Of Dairy
Farmers
Zimbabwe Dairy Industry
Trust For Livestock

Remote Sensing and GIS

Zimbabwe National
Geospatial and Space
Agency (ZINGSA) provided
area planted with maize.
ZINGSA is still working on
models of other crops.

**AGRICULTURE
STATISTICS
AND REPORT**

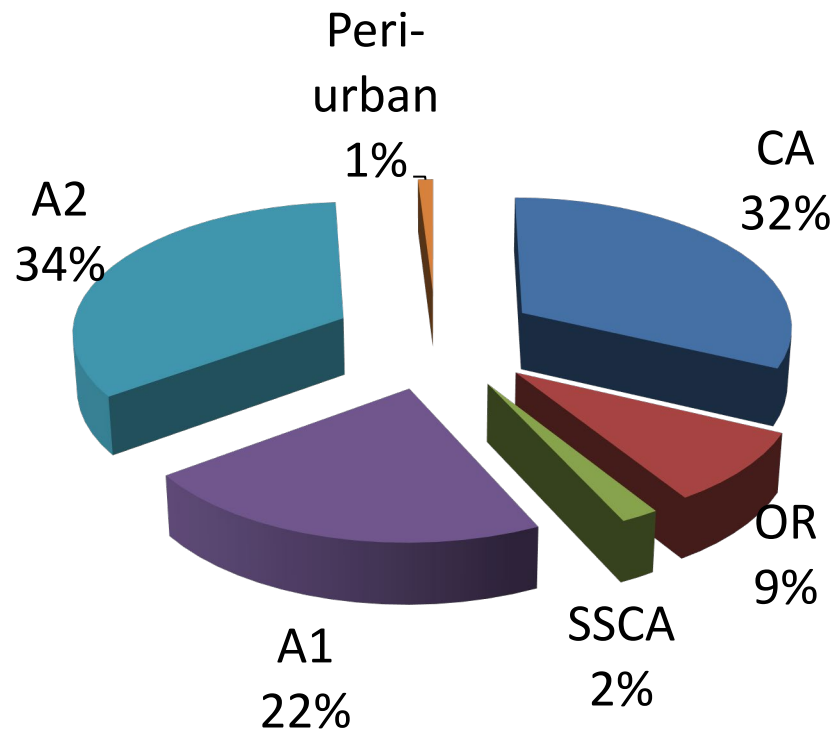
METHODS



The following methods were used:

- Traditional survey method
- Satellite data using remote sensing tools
- Stakeholder reports and consultations

MAIZE PRODUCTION BY SECTOR



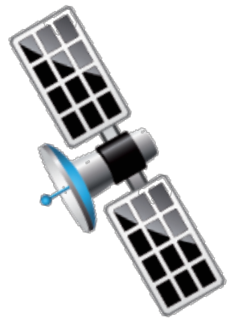
- National maize production is dominated by the A2 sector contributing 34%.
- The communal area farming sector that normally contributes the highest maize production over the years was hard hit by the prolonged dry spells



EARLY WARNING IN ZIMBABABWE

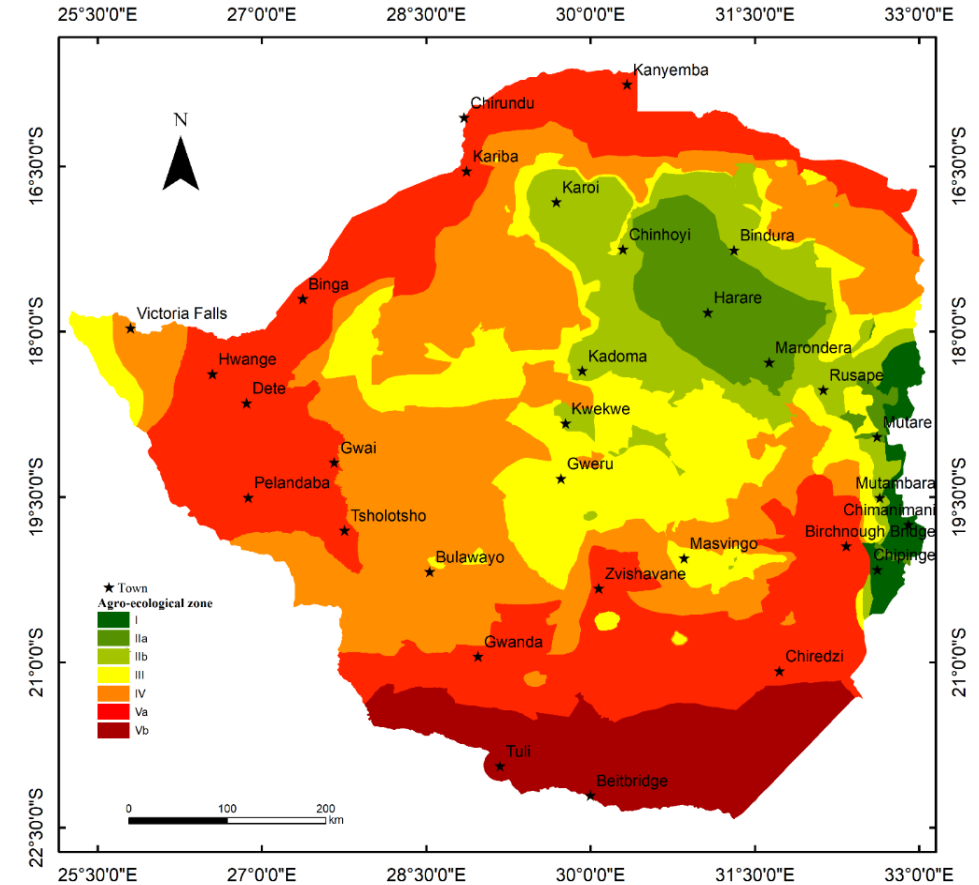


- The early warning hub aims to establish an operational national agricultural monitoring system based on sustainable methods, tools, geospatial technology and in situ data.
- The agriculture monitoring system includes a network of wireless sensors.



AGRIC IN ZIM

- Major cereals, Maize Sorghum, Millets
- Cash crops, Tobacco, Cotton Soya bean
- Horticulture eg Cabbage, Irish potato.
- Winter crops, Wheat, Barley and Horticulture
- Livestock and aquaculture

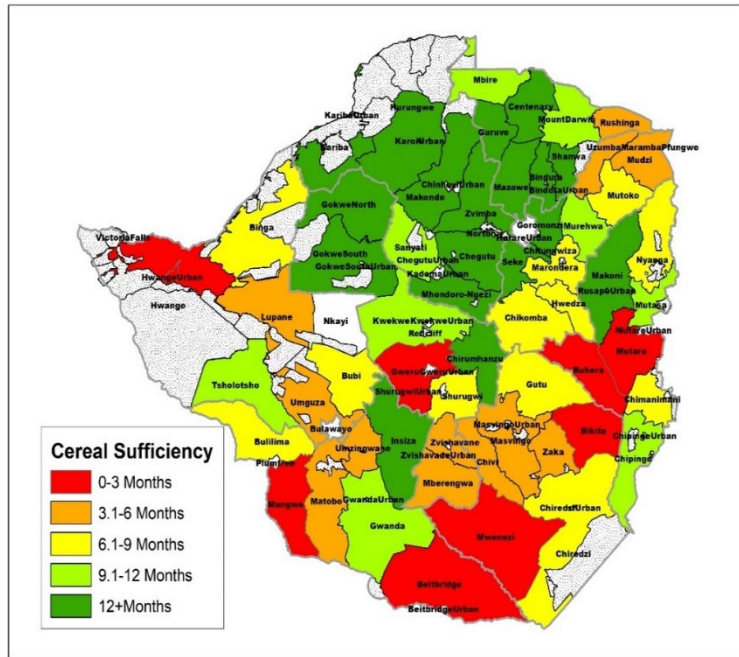


IRRIGATION IN ZIMBABABWE

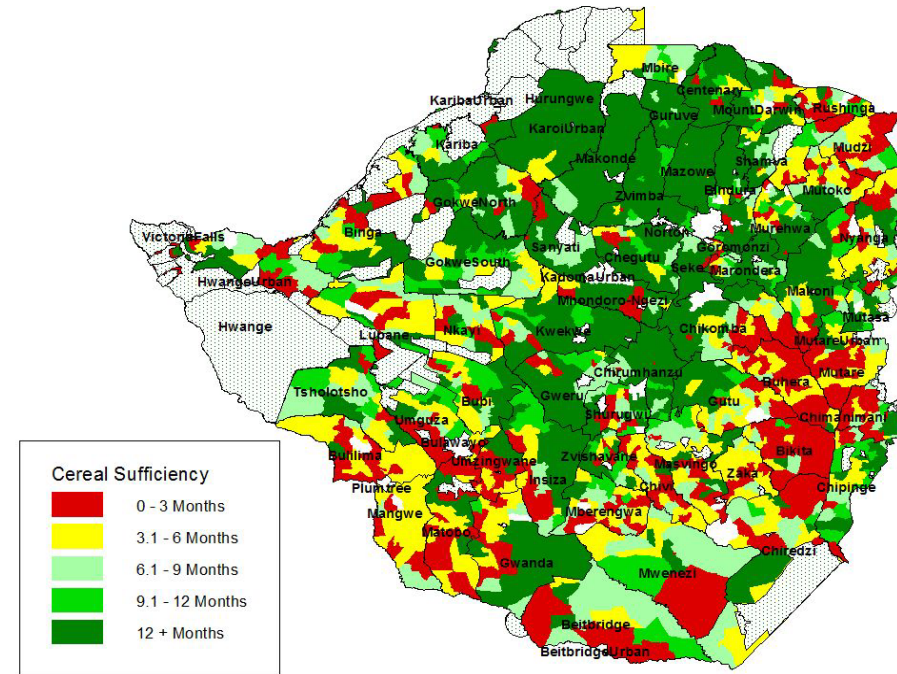


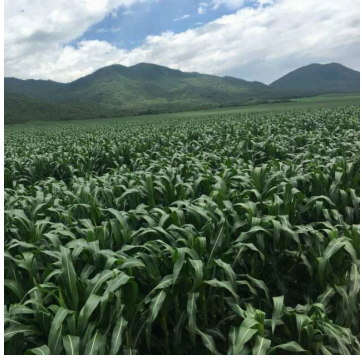
CEREAL (MAIZE AND TRADITIONAL GRAINS) SUFFICIENCY

BY DISTRICT



BY WARD





CHALLENGES



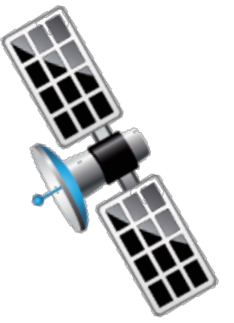
- MIXED CROPPING
- WE need more human capacity in Artificial Intelligent
- Unreliable data sources from free images providers
- Hardware, e.g. servers and laptops





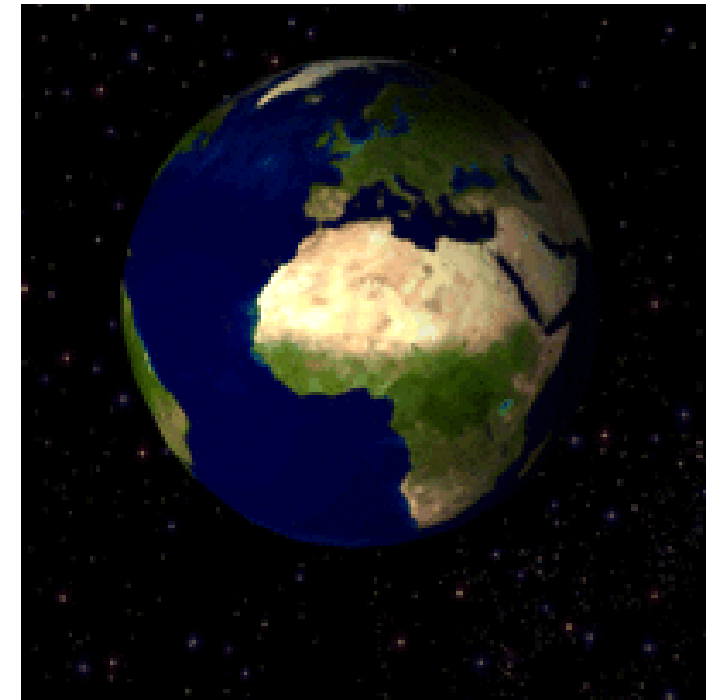
TECHNOLOGY IN AGRICULTURE

- Emerging agriculture trends mark a shift towards smart farming and efficient utilization of time and resources while reducing crop losses.
- Smart farming is an upcoming concept that deploys technologies like the Internet of Things (IoT), computer vision, and artificial intelligence (AI) for farming. Robots and drones accelerate farm automation by replacing manual farm operations such as picking fruits, killing weeds, or spraying.
- Combined with Global Positioning System (GPS), imagery from drones and satellites provides a high-resolution and location-specific view of the field



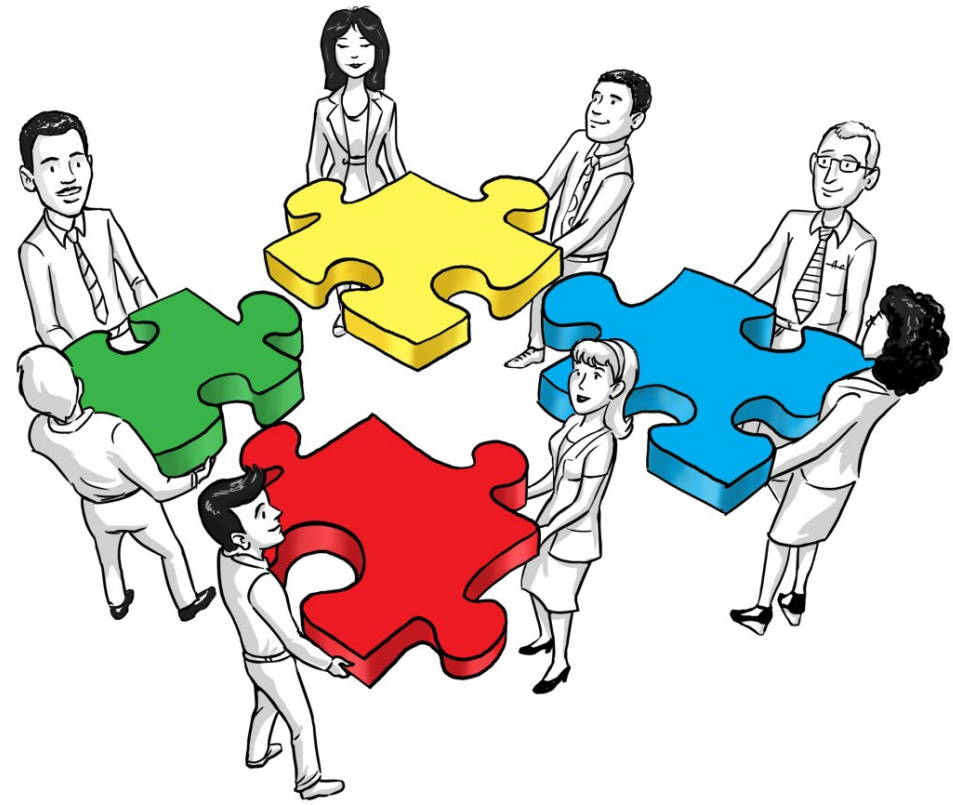
WAY-FORWARD

- The rise of digital agriculture and its related technologies has opened a wealth of new data opportunities.
- The ministry is working with various stakeholders to embrace EO information, ZINGSA, ARC, FAO, UNDP
- Remote sensors, satellites, and UAVs can gather information 24 hours daily over an entire field.
- These can monitor plant health, soil condition, temperature, humidity, etc.
- The amount of data these sensors can generate is overwhelming, and the significance of the numbers is hidden in the avalanche of that data.



SUMMARY e.g CropWatch

- INNOVATIONS, eg use of remote sensing, more android phones etc
- COLLOBORATIONS WITH STAKEHOLDERS



#G4G GOING FOR GROWTH

THANKS

Crop Watch is YES YES YES

