



ZIMBABWE NATIONAL GEOSPATIAL AND SPACE AGENCY (ZINGSA)

UNISEC Global Country Report Zimbabwe 2022

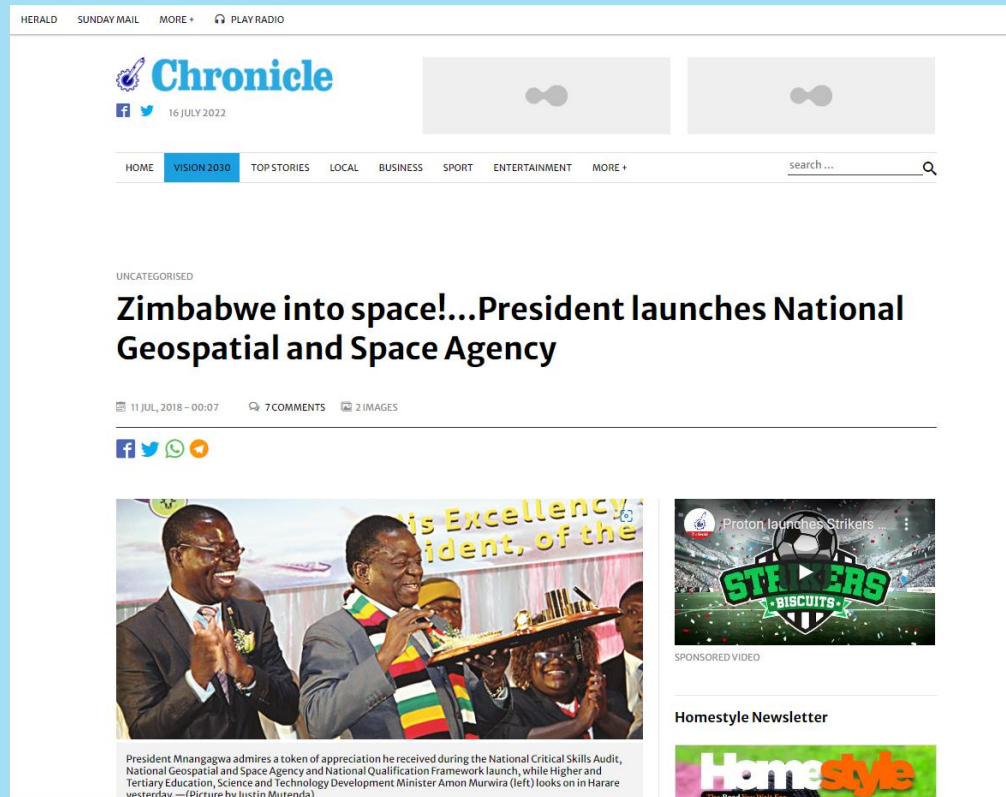
By: T Kuhamba
Zimbabwe UNISEC GLOBAL Point of Contact

ZINGSA OVERVIEW

ZINGSA is a state-sponsored Agency established under the Research Act [Chapter 10:22] for the following purpose:

- Promote the peaceful use of space;
- Support the creation of an environment conducive to industrial development in space technology;
- Foster research in geospatial science and earth observation, space science, space engineering, communications, navigation and space physics;
- Advance scientific engineering and technological competencies and capabilities.
- Foster international cooperation in space-related activities.

ZINGSA



ZINGSA launched on the 10th of July 2018



The Zimbabwe Science Park 1 was officially opened on the 13th of September 2021 by His Excellency, the President of the Republic of Zimbabwe Dr Emmerson Dambudzo Mnangagwa

We are here



Departments

- **Space Science**

- Space Physics
- Astrophysics
- Space Weather
- Planetary Science



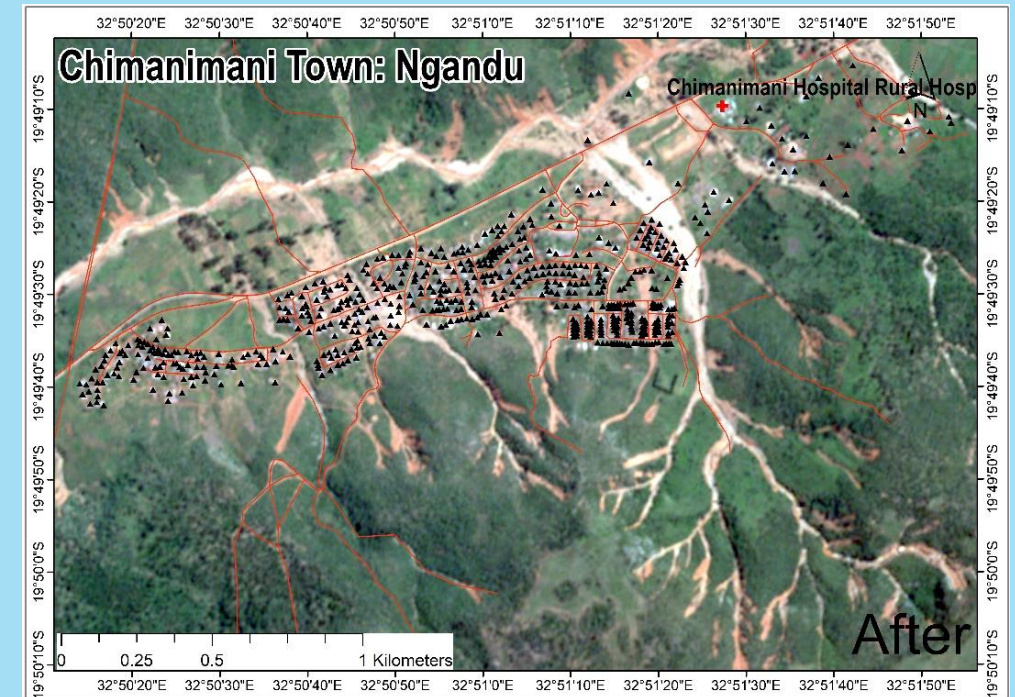
- **Space Engineering**

- Manufacturing of
 - Earth observation satellites
 - Navigation equipment
 - Unmanned aerial vehicles
 - Mechanical ground support equipment



Departments

- **Space Operations and launch services**
 - Ground control operations
- **Geospatial and Earth Observation**
 - Mining and mineral exploration
 - Disaster management
 - Weather
 - Geospatial intelligence
 - Agriculture and ecosystems
- **Administration**
 - Management
 - Administrative support



Ground station installations

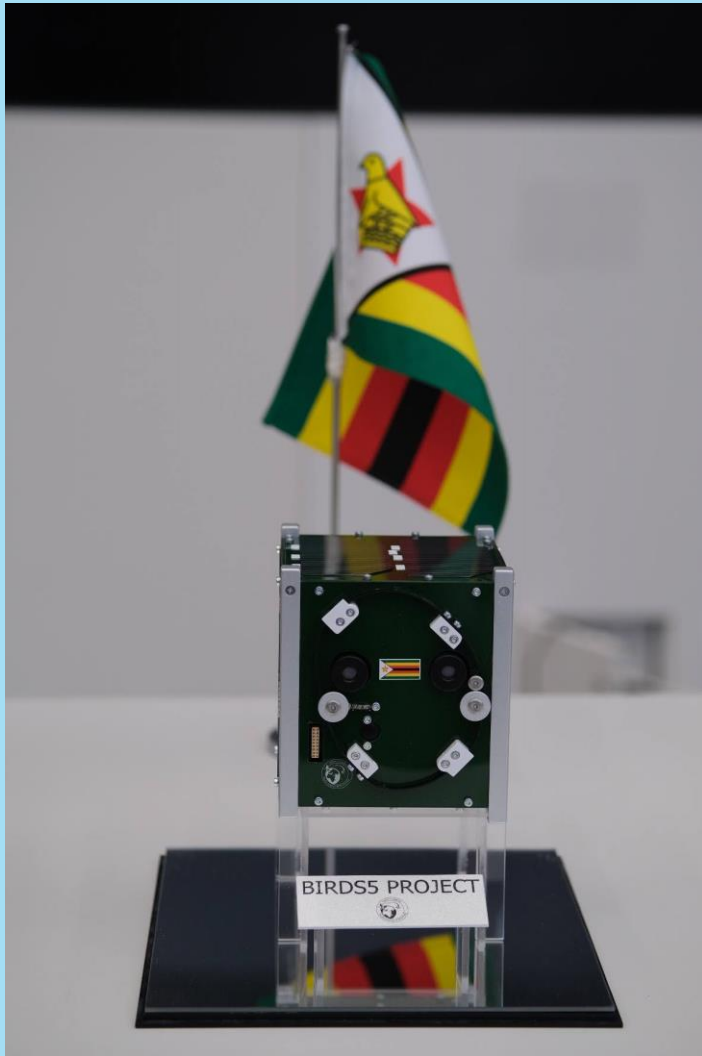


Ground station control room



Engineers installing ground station antenna

2021-22 FLAGSHIP PROJECT-ZIMSAT1



Model of ZIMSAT-1

- ZIMSAT-1 is a standard 1U nanosatellite (CubeSat) being developed by Zimbabwe for its first Earth Observation mission.
- The satellite will operate within the Amateur-Satellite Service Frequency Bands in accordance with the Zimbabwe National Frequency Allocation Plan.
- Development of both CubeSat and Ground Control Station at an advanced stage.
- Launch: 2022

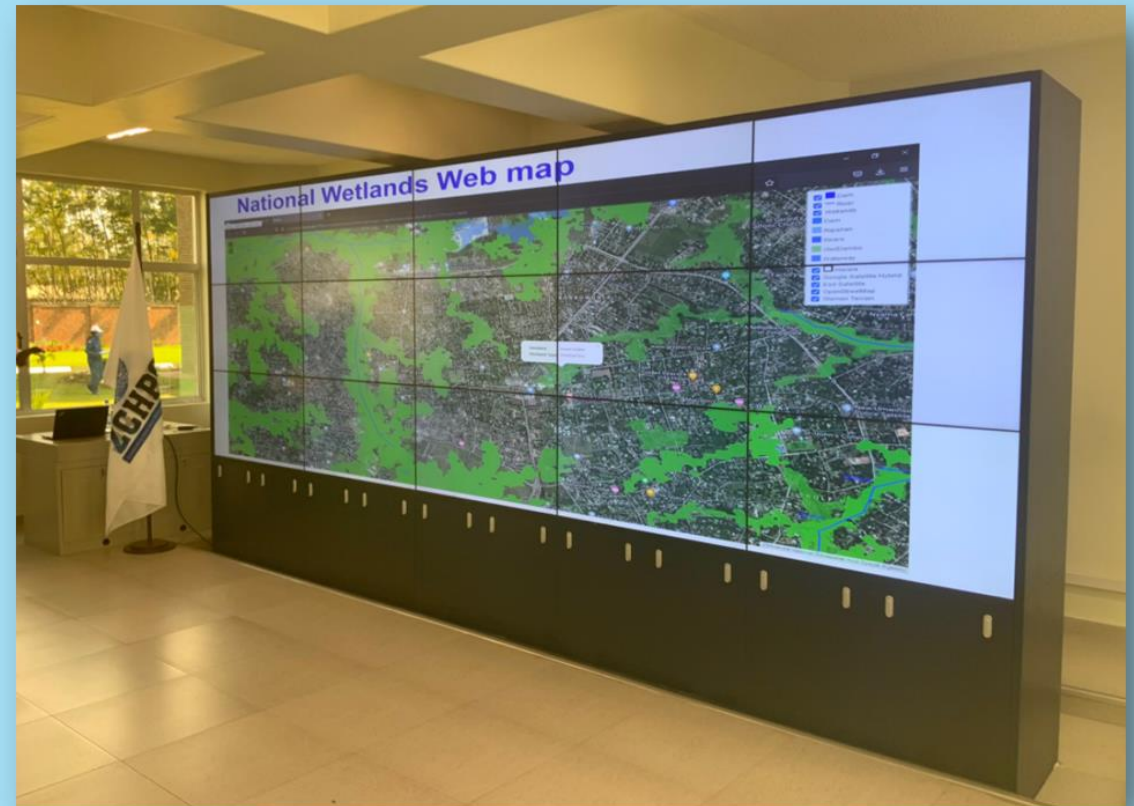
Missions:

1. Land Use and Cover
2. Water Quality Assessment
3. Soil Fertility Analysis

Geospatial and Earth Observation Projects



Caledonia Phase 2 project



National Wetlands Project

BUDGETARY ALLOCATION AND MANAGEMENT

- ZINGSA is 100% owned and funded by the Government.
- Money has been injected into the various projects
- Prioritization of projects and service delivery is based on National demand
 - **City planning**
 - Aerial Surveys using UAVs
 - **Geospatial data**
 - Acquisition, Storage, Security, and Management
 - **Ground-based Measurements**
 - Ground penetrating radars
 - GNSS total stations
 - Grounds Sensor Terminals
 - **Technology Advancements**
 - Laboratories
 - Satellite Manufacturing,



HUMAN CAPITAL DEVELOPMENT AND COLLABORATIONS

- **Institution of Higher Learning, locally and abroad**
 - Training
 - Research
 - Outreach
- **Primary data consumers**
 - City Councils
 - Ministry of Agriculture
 - Ministry of Mines
 - Meteorological Department
- **Other Space Agencies**
 - Technology transfer
 - Infrastructure sharing

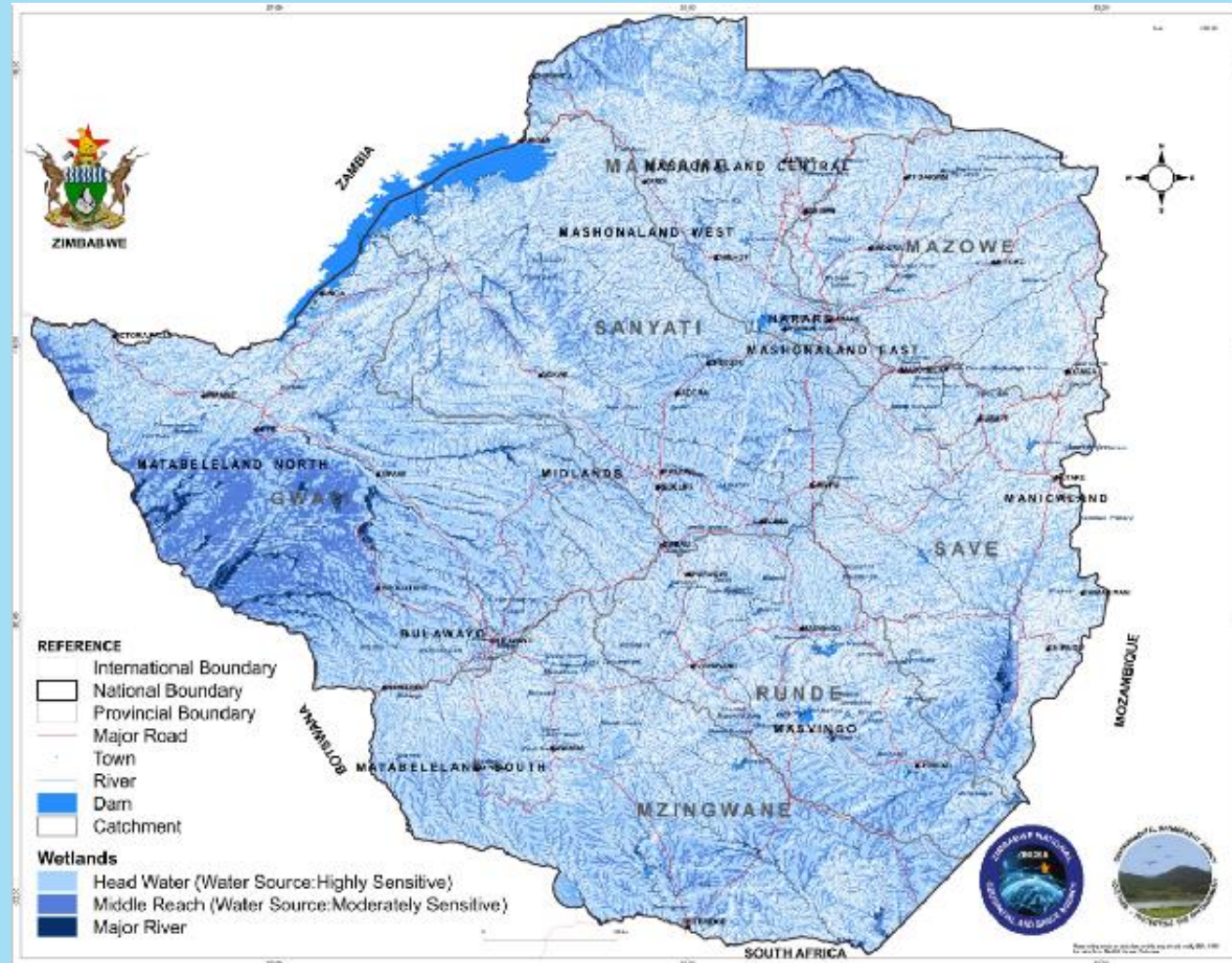
PRIORITIES

- **SHORT TERM**

- Advanced space exploration missions
- Space policy development and implementation
- Ground station and control infrastructure
- Ground sensor terminals
- Data warehousing
- Maps update

- **LONG TERM**

- Satellite development and assembling infrastructure
- More collaboration in all areas
- Integrate with local commercial partners





THANK YOU!!!