

REFOCUSING NIGERIAN SPACE PROGRAM TO BE PEOPLE ORIENTED AND DISASTER MANAGEMENT TOOL

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NIGERIAN SPACE PROGRAM

 May 5th, 1999 – Establishment of NASRDA

 2001 – Space Policy was approved

 2005 – 25 year Roadmap was approved

 27th August 2010 – NASRDA Act was signed

Mandate

- Was established in 1999
- Is mandated to *vigorously pursue the attainment of space capabilities as an essential tool for its socio-economic development and the enhancement of the quality of life of its people.*
- The Agency is to achieve this mandate through:
 - *research ,*
 - *rigorous education,*
 - *engineering development,*
 - *design and manufacture of appropriate hardware and software in space technology.*



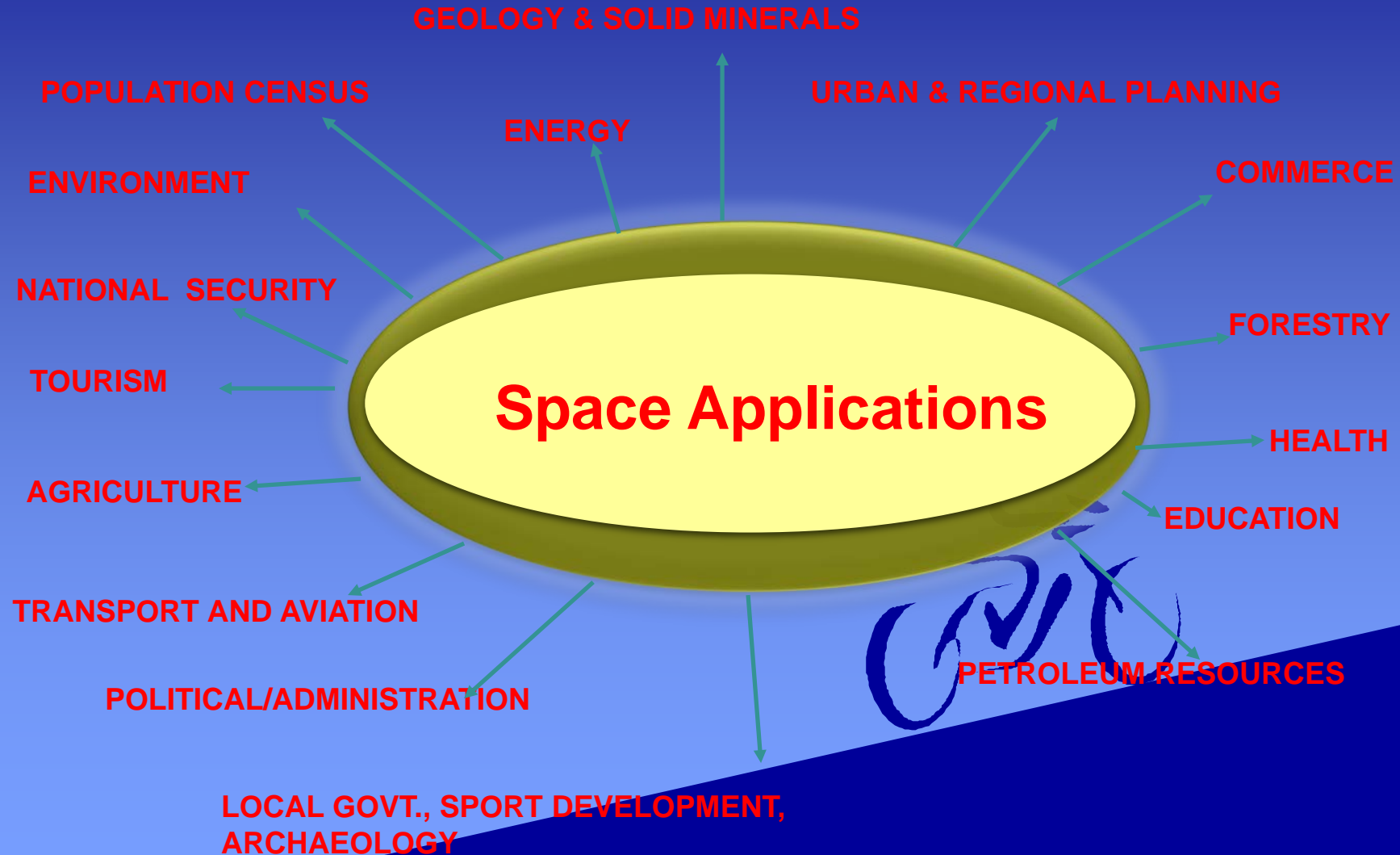
NASRDA CENTRES



LABORATORIES



SECTORAL SPACE TECHNOLOGY APPLICATIONS



CURRENT NIGERIAN SPACE CAPABILITIES

NigeriaSat-1

- Launched September 27, 2003.
- One of seven micro-satellites being part of the Disaster Monitoring Constellation .
- Ground resolution of 32m and 600km swath width.
- Sensors in three spectral bands: green, red and near infrared .
- Life span of 5 years but still working perfectly in orbit Currently in its 9th Year



CURRENT NIGERIAN SPACE TECHNOLOGY(Contd)

Nigeria-Sat 2

- 300 kg Earth Observation satellite.
- 2.5m panchromatic very high resolution, 5M and 32M Multispectral (NIR, Red, Green and Blue).
- The objectives of Nigeria SAT 2 includes
- Replacement of Nigeria SAT-1
- To meet the demand for High resolution Images both locally and internationally.
- Acquisition of Technical Know How on High resolution Images and Manufacture of Satellite.



current Nigerian space technology contd

Nigeria-Sat X (NX)

- Developed to advance the Nigerian space Technology.
- Developed by a team of 25 Nigerian trainee engineers at SSTL
- The NX satellite is based on the SSTL-100 platform
- Features a 22 meter multispectral imaging system with a 600 km swath and it weighs about 100kg.



NIGERIA DISASTER MANAGEMENT PROGRAM

- Is Coordinated by National Emergency Management Agency under the office of the Vice President
- Established same year with the Space Agency
- Has large stakeholders at Federal, State and Local Government Level
- Work with Nigerian Meteorological Agency, Nigerian Hydrological Agency, National Space Research and others

NASRDA (take home from above)

- Has Launched Three EO Satellites and are quite concerned with Disaster Management
 - DMCi
 - DMCii
 - RSO
 - NGDI
- Nigerian Communication Satellites Both 1 & 1R built here in China are also available for disaster communication and military applications

AREAS FOR ACTION (1-4)

- Placing more emphasis on problem solving approach and completing all projects
- Focus states approach and proper problem indexing to allow data integration
- Engaging universities in a systematic approach that will make the relationship functional than research funding
- Strengthening international cooperation for capacity development, data gap filling, strategic partnerships etc

AREAS FOR ACTION (5-9)

- Monitoring of the state of the environment of Nigeria through modelling and automation of data processing for almost real-time information
- Monitoring the water resources of the country and also the parameters that leads to flood on the continuous basis
- Turning of the laboratories into Centres of excellence and working with International Actors to bring space to humanity if various areas
- Restructuring all the centers to coordinate the program of the Agency
- Addressing Sustainable Development Goals and linking it to NGDI

AREAS FOR ACTION (10-13)

- Go beyond the charter and establish a special service support mechanism that engage in continuous activities of disaster management during both cold and hot period
- Reinvigorate the NGDI and move beyond policy dogma
- Build capacity of stakeholders for crowd-sourcing, use of open source and development of clouds for quick image processing
- Pay attention on monitoring, early warning and real time information sharing

AREAS FOR ACTION (14-17)

- Building and strengthening better means of communication between all the major stakeholders with a clear and specific role for key players
- Support for SDG and supporting six Universities with Disaster Risk Management program
- Making ARMC work so we can go beyond providing data to Nigeria
- Expanding the scope of African Regional Centre for Space Science and Technology Education IFE, Nigeria to also help in capacity building and data sharing

AREAS FOR ACTION (18-22)

- Expanding access to space infrastructure beyond Nigeria and string presence on the web for data sharing
- Focusing its drone program of detailed information about the hotspot areas of disaster to help prevention, mitigation, response and all aspect of planning
- Helping in baseline information that can help in resilience to disasters
- Vigorous pursuit of the CubeSat program with Beihang University
- Pursuing the use and integration of GNSS for location base services to all citizens in UBER, Disaster management, security

CONCLUSION

- The 20 years of the space Agency is rewarding but the dividends are not far reaching in a concerted and can be better coordinated
- Strategies, policies and implementation strategies need to be restructured and coordinated towards human development and centred on open access and increased participation.
- Nigerian Space Policy Approved 2001 requires revision to fit into current and emerging needs