

# Activities of the UN-SPIDER Regional Support Office in Nigeria For 2009/2010

By

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# ➢ Introduction.

- National Space Research and Development Agency, Nigeria.
- ► UN-SPIDER RSO in Nigeria.
- Activities of RSO in Nigeria for 2009.
- Activities of RSO in Nigeria for 2010.
- Conclusion.

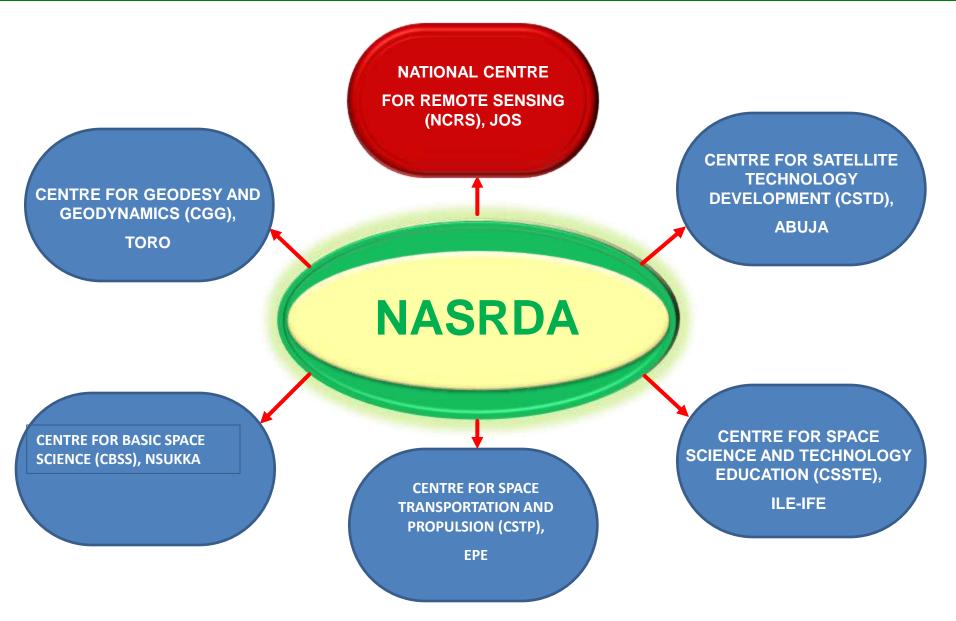
# INTRODUCTION

- The UN-SPIDER regional support offices constitute one of the organizational frameworks for the implementation of UN-SPIDER activities.
- One of the reasons for adopting regional organizational framework is to harness regional strengths in space based disaster management and emergency response.
- According to the guidelines, a UN-SPIDER Regional Support Office can only be set up within an existing entity (i.e. an existing organization) by a member State or group of member States that has put forward an offer to set it up.
- Nigeria through the National Space Research and Development Agency is the host of the UN-SPIDER Regional Support Office in Nigeria.

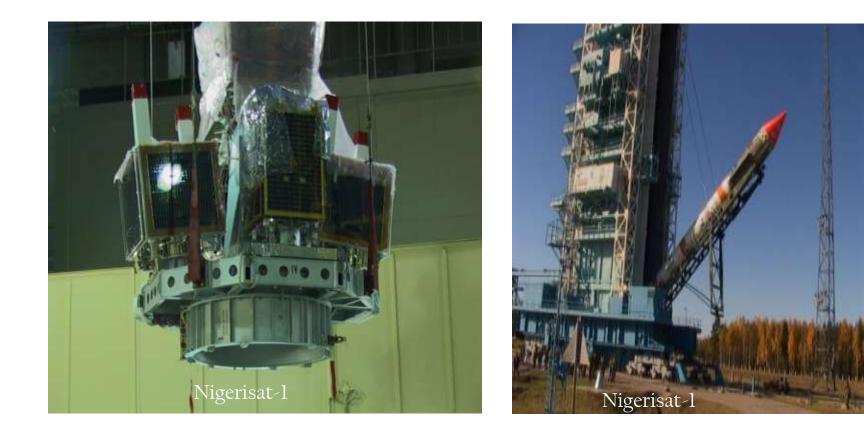
# In 1999 the National Space Research and Development Agency (NASRDA) was established.



#### NASRDA OPERATIONAL CENTERS OF EXCELLECNE



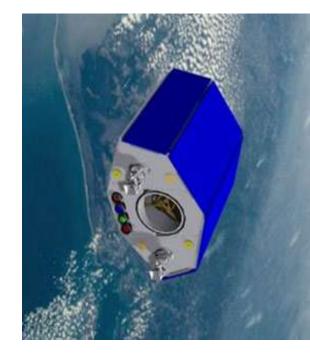
On 26<sup>th</sup> September 2003 Nigeria launched its first medium resolution (32m) earth observation satellite NigeriaSat-1 in Plestek, Russia.



#### **NIGERIASAT-2 SATELLITE**

#### **Physical Configuration**

- NigeriaSat-2 is an Earth-Observation Satellite.
- 2.5m panchromatic (very high resolution).
- 5m Multi spectral (High resolution) NIR, RED, GREEN
  & BLUE.
- 7.2m Dish.
- Design life span 7years.



#### **NIGERIASAT-X SATELLITE**

### **Physical Configuration**

- NigeriaSat-2 Training Model Built to Flight Specification.
- ➤ To be launched with Nigeriasat-2.
- Being Built by Nigerian Engineers.
- > 22m multi-spectral (RGB, NIR) imagery.
- Max swath 600km @ 8bits.
- ➢ High rate X-band downlink set to 20MBps.
- ► Low rate S-Band 8MBps.
- > 2 x 2Gbyte data recorders.



➢The RSO in Nigeria was established in 2008 through an understanding between NASRDA (Nigeria) and the United Nations' Office for Outer Space Affairs (UNOOSA), Vienna.

>On the 4<sup>th</sup> of June 2009, during the 52nd Session of the Committee on the Peaceful Uses of Outer Space (COPUOS), the United Nations Office for Outer Space Affairs signed cooperation agreements to establish UN-SPIDER regional support office in Nigeria, the Islamic Republic of Iran, Romania, and the Asian Disaster Reduction Center.

>A dedicated office has been created for hosting the RSO in Nigeria.

➤ The office is automated with supporting staff and is empowered to use any other staff at NCRS should the need arise.

#### **ACTIVITIES OF RSO IN NIGERIA 2009**

Work plan approved by the UN General Assembly for the biennium 2008-2009 include the following activities (A/AC.105/929):

## 1. Creation of awareness

ECOWAS disaster risk reduction working group organized by the ECOWAS commission in Abuja from March 18<sup>th</sup> to 19<sup>th</sup> 2009.

➤3<sup>rd</sup> African Regional Conference of the International Academy of Astronautics (IAA) held in Abuja from 24<sup>th</sup> - 26<sup>th</sup> of November, 2009.

► IAA Regional Conference Organized in Cameroon featured UNSPIDER for awareness



#### ACTIVITIES OF RSO IN NIGERIA 2008-2009

# 2. Outreach Activities.

- ► Development of MOU with ECOWAS.
- ➢Participation in UN-SPIDER workshops and Meetings.
- Participation in NASRDA/NEMA West African Regional Workshop on UN-SPIDER and the Role of the International Charter in Disaster Management.
- Participation in the International Charter: Space and Major Disasters Authorised User Training.
- ≻Signing of MOU with UNOOSA.





# 3. Support to National and International Activities

Encouraged West African countries to signify interest in establishing NFP in their country:

- ✓ Nigeria
- ✓Ghana
- ✓Togo
- ✓ Senegal

#### **ACTIVITIES OF RSO IN NIGERIA 2008-2009**

#### 4. Support for the Establishment of National Disaster Management Planning and Policies

#### Technical Advisory Mission to Togo from 13<sup>th</sup> to 17<sup>th</sup> July 2009

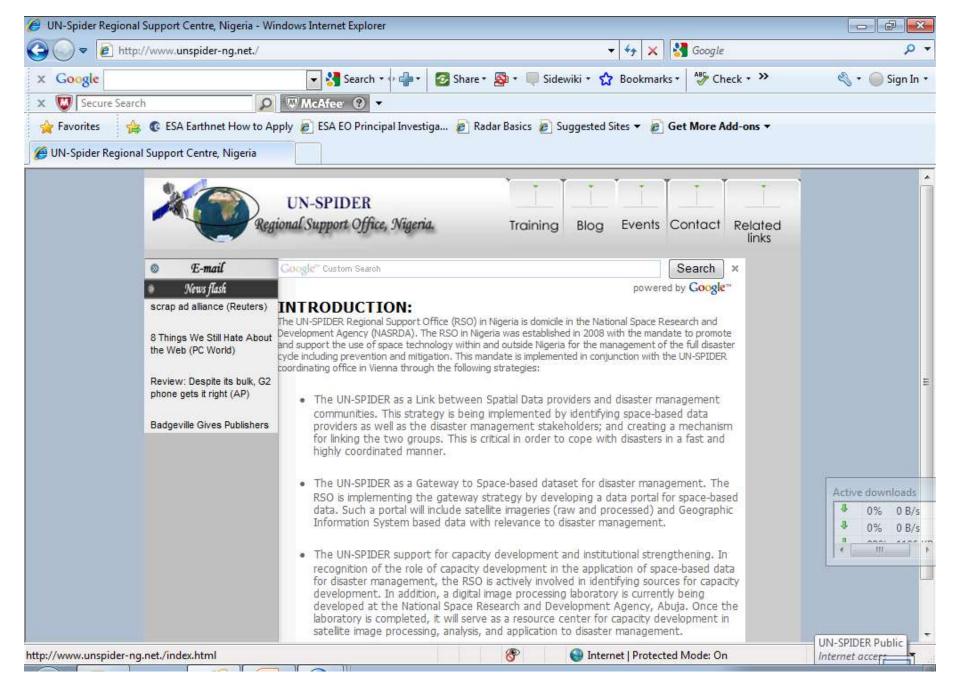


A/AC.105/937 - United Nations Platform for Space-based Information for Disaster Management and Emergency Response - (UN-SPIDER): Work Plan for the biennium 2010-2011 :

#### **1. Raising of Awareness**

RSO Website: http://www.unspider-ng.net.

- Conferences and Meetings e.g. 8<sup>th</sup> Session of the African Association for Remote Sensing of the Environment in Addis Ababa from October 25<sup>th</sup> to 29<sup>th</sup> 2010.
- Introduction of UNSPIDER and Space Technology contribution to disaster to the audience of NEMA disaster management Summit 2010 in Port Harcourt March 2010



#### **ACTIVITIES OF RSO IN NIGERIA 2010**

#### 2. Outreach Activities

- Participation in UN-SPIDER meetings in Vienna on 9-12 February 2010, and 9-11 June 2010 parallel to the Scientific and Technical Subcommittee of COPUOS.
- Participation in regional workshops such: Regional Workshop "Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa, Addis Ababa, Ethiopia, 6 - 9 July 2010.
- Fourth United Nations International UN-SPIDER Bonn Workshop on Disaster Management and Space Technology: "The 4C – Challenge: Communication – Coordination – Cooperation – Capacity Development". Bonn, Germany, 12 – 14 October 2010.

#### **3. Capacity Development**

- Participated in Project Management Training Course for International Charter: Space and Major Disasters in collaboration with the Nigerian National Emergency Management Agency ; Facilitated by DMCii and USGS. 9<sup>th</sup> -11<sup>th</sup> February 2010.
- Participated in Mock Activation Exercise for International Charter: Space and Major Disasters. 19<sup>th</sup> May 2010.

#### **3. Capacity Development**

Participated in SARTrix High and Medium Resolution TerraSAR-X Imagery Analysis Course from June 7-18, 2010; Organized by NASRDA and Facilitated by Terra SAR X Services and Infoterra (An EADS Astrium Company).



To be more effective in processing SAR data, the RSO desk officer is coming to Germany for another training, Thanks to EADS Astrium Two staff from the Unit just got trained by RECTAS and ARCSTSE in for better response



#### **ACTIVITIES OF RSO IN NIGERIA 2010** 4. Platform for Ensuring Cooperation

- Collaborate with the Nigerian National Emergency Management Agency (NEMA) during disaster response activities in Nigeria.
  - Severe Flooding in the Northern Part of Nigeria in September 2010
  - The International Charter was activated by NEMA (AU)
  - 4 Radar Imageries were provided by CSA from RADARSAT-2 through the Charter
  - UN-SPIDER RSO
    - Visited the flood location and collected GPS data
    - Currently Processing and interpreting the Radar imagery
    - In continues contact with NEMA, DMC and the RECTAS (the PM)
- Collaborated with the General Directorate of Nature Conservation, Burkina Faso during the recent flood events.
- Scheduling a meeting with the Authorized User and other stakeholders in November to discuss the activation- successes and challenges

#### **ACTIVITIES OF RSO IN NIGERIA 2010**

#### 5. Support at the National Level

#### Supported the National Emergency Management Agency in

-Participated in the review of the draft Nigerian National Disaster Management Framework (Recommended the inclusion of Space-based Approach). -Review of methods for Flood Mapping (Kubwa-Abuja).

- Currently developing a set of methods for managing flood disasters using satellite remote sensing method in West and Central Africa.
- Made commitments to support NEMA with the baseline data acquired for areas likely to be affected in case Lake Nyos is flooded.
- Making plans to carry out full study of the Sokoto flood with Usman Dan Fodio University Sokoto for better management
- Any Other assistance as would be needed by NEMA for baseline information Development
- Supporting Directorate of International Technical Cooperation in Climate change conference in Ghana and Lake Chad studies in Njemena

#### CONCLUSION

Space-Based Approach to Disaster Management remains a sustainable approach to disaster management and emergency response.

➢Within the short time of establishing the UN-SPIDER programme, a lot has been achieved.

➢Given the sustainable strategies that have been employed so far, it is obvious that the RSO in Nigeria has come to stay.

# Thank you