



National Space Research and Development Agency

# ACTIVITIES OF THE UN-SPIDER REGIONAL SUPPORT OFFICE IN NIGERIA

By

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A Presentation to the National Virtual Expert Meeting  
"**Space**-based Solutions for Disaster Risk Management and  
**Emergency Response in Nigeria**"

13 to 15 April 2021



## PRESENTATION OUTLINE

- 🌐 Introduction.
- 🌐 Activities of the Regional Support Office in Nigeria
  - 🌐 West and Central Africa
  - 🌐 Nigeria



# INTRODUCTION

## UN-SPIDER RSO IN NIGERIA

- 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.
- Formal Cooperation Agreement was signed on the 4<sup>th</sup> of June 2009, between the United Nations Office for Outer Space Affairs and NASRDA.
- A dedicated office was setup for hosting the RSO in Nigeria.
- The office is automated with supporting staff and is empowered to use any other staff at our National Center for Remote Sensing should the need arise.





## **Activities in West And Central African Countries**





## Technical Support to West and Central African Countries

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

- ✓ Nigeria
- ✓ Ghana
- ✓ Togo
- ✓ Senegal
- ✓ **Cameroon**

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

➤ Technical Advisory Mission to Cameroon from 5<sup>th</sup> to 10<sup>th</sup> June 2011.







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## Technical Support to West and Central African Countries

- ✓ The RSO participated in UN-SPIDER Technical Advisory Mission to Cape Verde.
- ✓ 28<sup>th</sup> July to 3<sup>rd</sup> August 2012.





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## Technical Support to West and Central African Countries

- UN-SPIDER Institutional Strengthening Mission to Cameroon from 15<sup>th</sup> to 19<sup>th</sup> July 2019.







## Technical Support to West and Central African Countries

- Reactivation of MOU with the Economic Commission for West African States
- High level meeting



Prof. S. O. Mohammed and Dr. Hamidou Boly

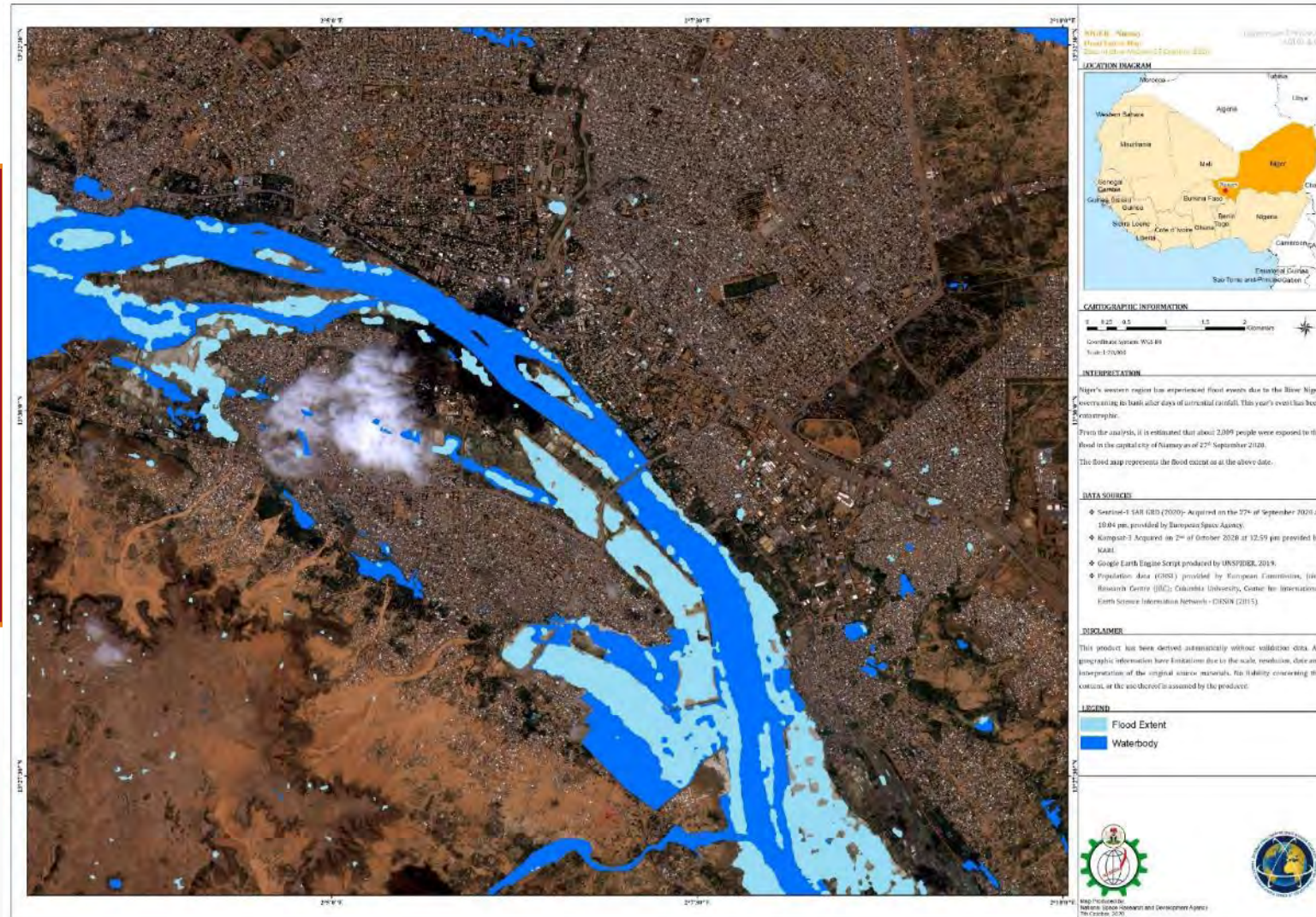




## Technical Support to West and Central African Countries

### Niamey

Value Addition for  
Call 779, Niger  
Floods:  
International  
Charter: Space and  
Major Disasters.  
September-October  
2020



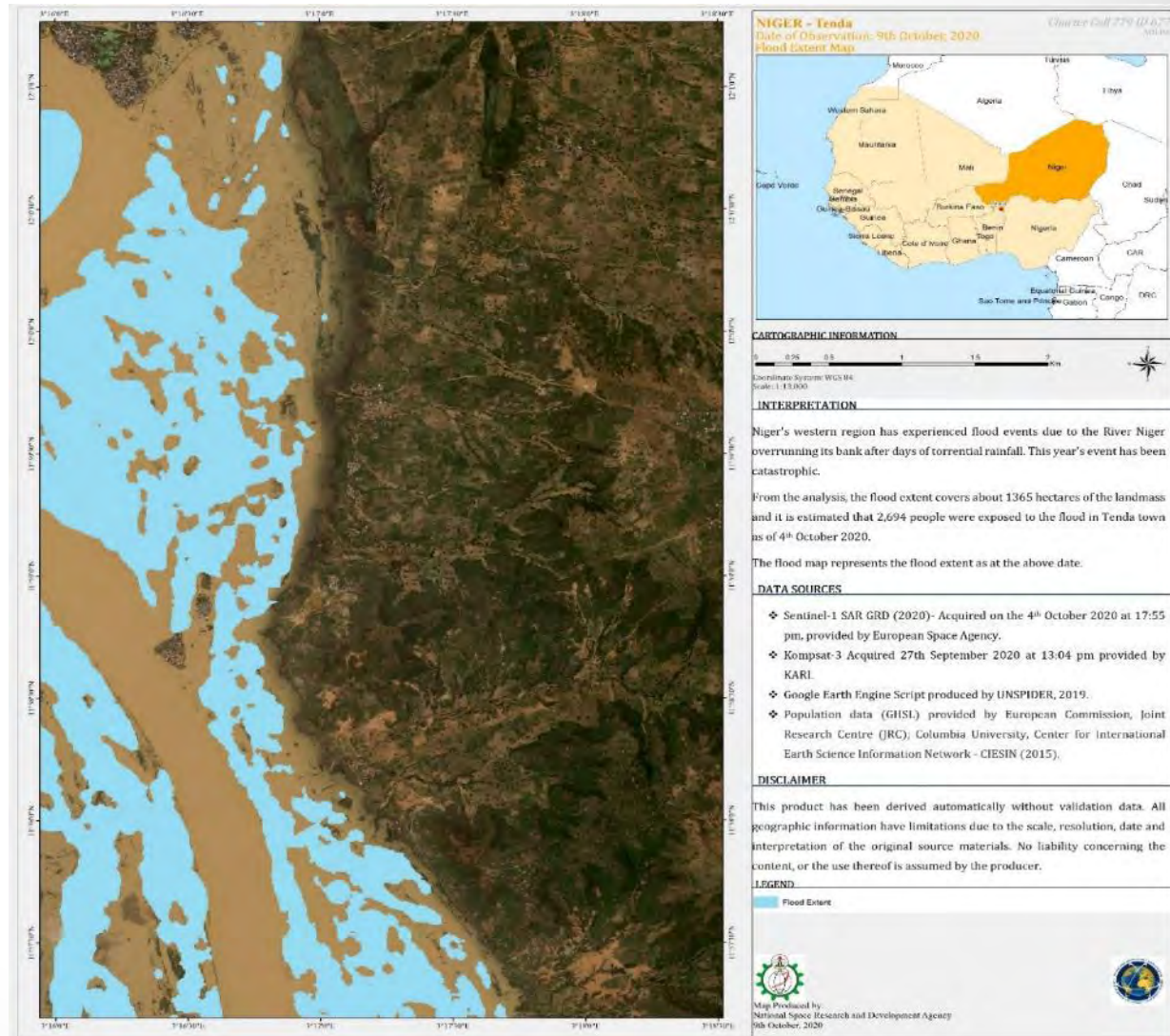




## Technical Support to West and Central African Countries

Tenda

Value Addition for  
Call 779, Niger Floods:  
International Charter:  
Space and Major  
Disasters. September-  
October 2020





## Activities in Nigeria







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## Technical Advisory Mission

Mission was conducted from 13-17 June 2011 in Abuja

- The mission team consisted of the following experts:
- David Stevens, Jörg Szarzynski, Michael Leitgab (UN-SPIDER);
- Isi Ikhuoria, Seyi Fabiyi, Gabriel Yusuf (RECTAS)
- Ishiaku Muhammed (WMO, Nigeria)
- Alhassan Nuhu and Justine ..... (NEMA/UN-SPIDER NFP)
- Godstime James ( NASRDA/UN-SPIDER RSO)





## Follow-Up Activities

- Increase awareness of decision-makers through special events.
- Map existing capacities and opportunities and define capacity-building needs.
- Develop clear data policy regarding NigeriaSat-2 – Ensure access to DRM activities in Nigeria and globally.
- Ensure the complete implementation of the National Geospatial Data Information Committee (NGDI).
- Establish cooperating partnerships including South-South cooperation.
- Develop MOUs with neighboring countries for COSPAS-SARSAT and play proactive role at regional forums.
- Identify areas for hotspot mapping and leverage on existing opportunities (SAFER).



## Response to Floods in Sokoto 2010

- The RSO Collaborated with the Nigerian National Emergency Management Agency (NEMA) during disaster response activities in Sokoto State in 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
    - ⚙ Processed and interpreted the Radar imagery
    - ⚙ Further Image interpretation was done by RECTAS (the PM).

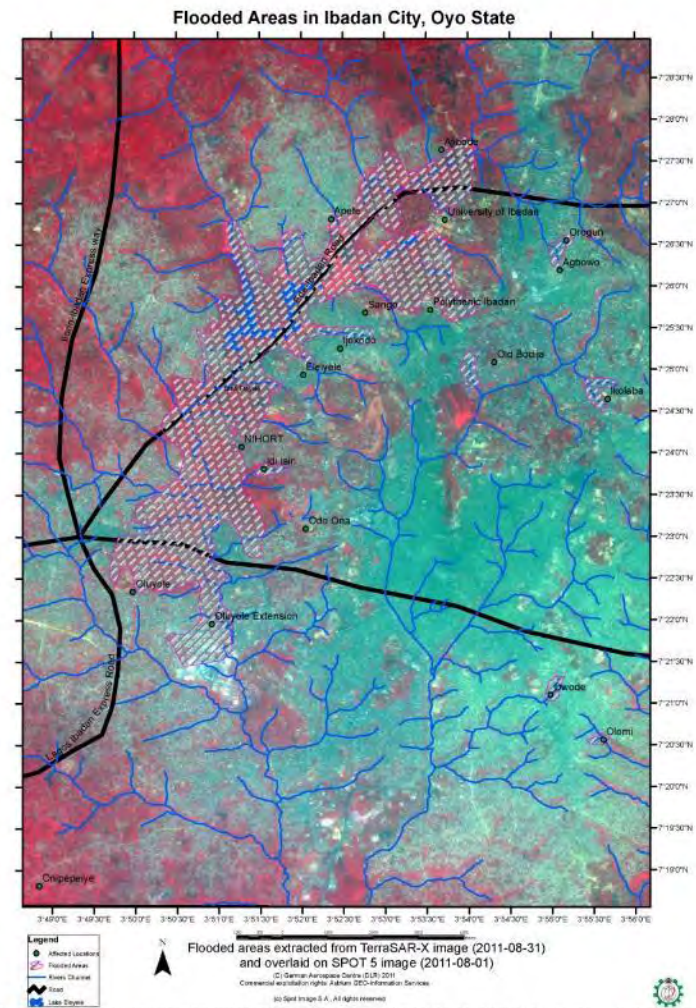






## Response to Flood in Ibadan 2011

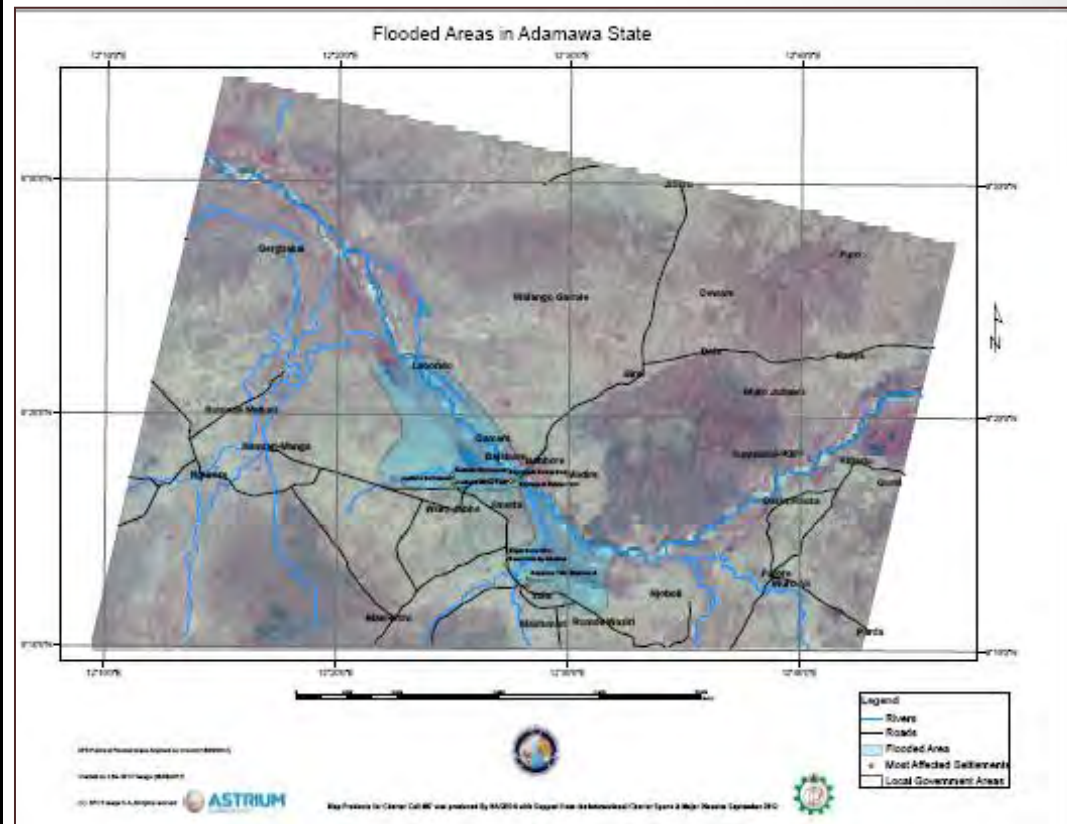
- NEMA activated the International Charter Space and Major Disaster on the 29<sup>th</sup> of August 2011. (Charter Call 370 ).
- A project manager was appointed from the NASRDA to process the images that were received.
- Data supplied by the Charter
  - ✓ TerraSAR – 2011/08/31
  - ✓ RadarSat – 1 & 2 - 2003/12/28 and 2011/08/31
  - ✓ Spot Image – 2011/08/01 and 2011/07/19
  - ✓ Envisat - 2005/01/04, 2009/09/02, 2010/06/09, 2010/05/21 and 2010/09/22.
- Images were processed and results sent to NEMA.





## Response to Flooding in Adamawa 2012

- ✓ The RSO participated in the development of maps from satellite imagery during the 2012 flood season in Nigeria.
- ✓ Archival Landsat data was used as baseline dataset while the International Charter: Space and Major disasters provided the assessment datasets.
- ✓ NEMA was very supportive in the fieldwork routine.







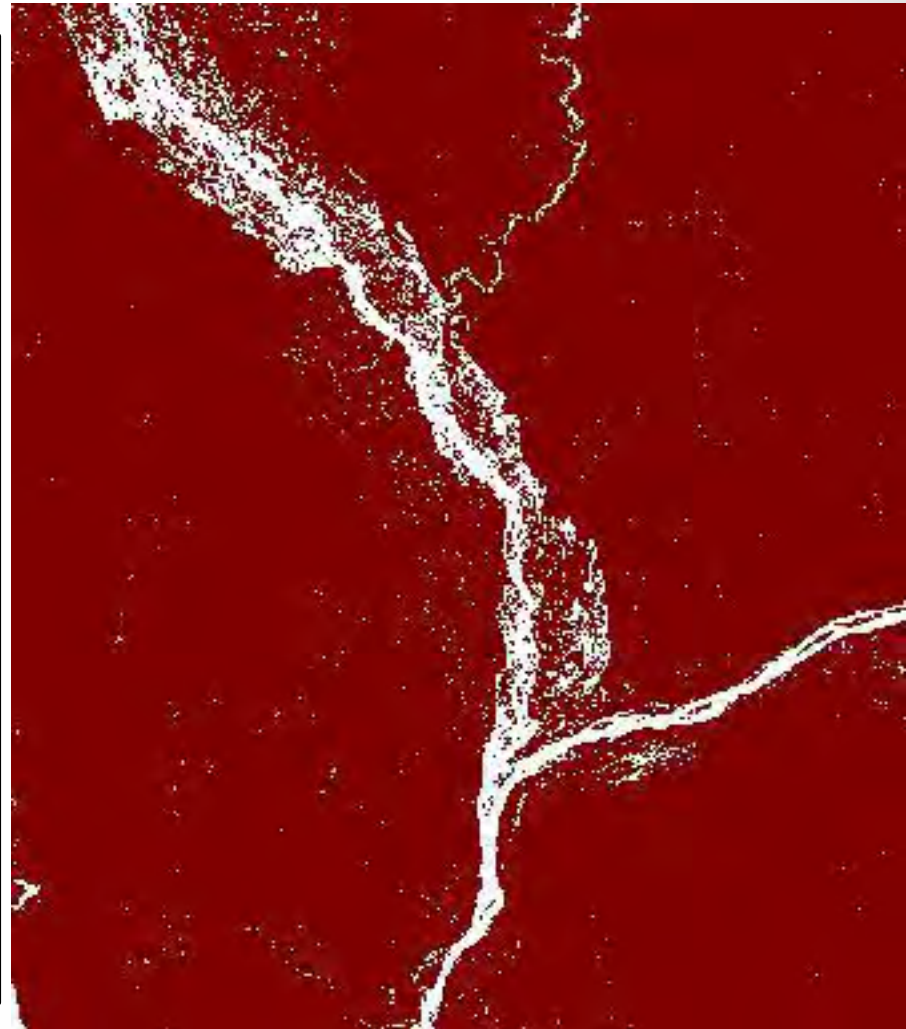
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## Response to Flood in 2018

➤ In 2018, Floods ravaged the country along the Rivers Niger and Benue Tributaries.

➤ The RSO in collaboration with UN-SPIDER Bonn office provided the names of communities that were vulnerable to the flood incidence in:

- Anambra
- Edo
- Kebbi
- Kogi
- Kwara
- Niger State



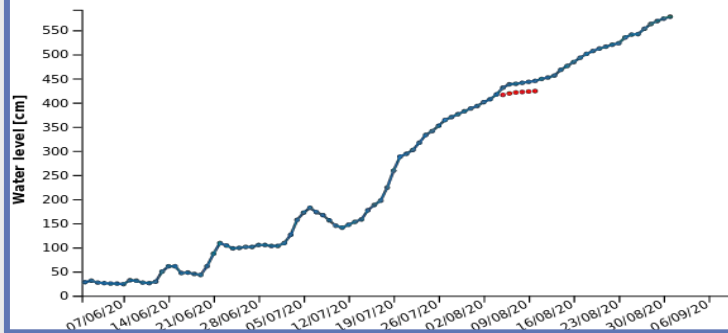




## Flood Map along River Niger

Nigeria experienced cross-border flooding in 2020, given it is downstream along the Niger River basin.

Station: Jidere Bode







## Assessment of Environmental Sensitivity to Desertification 2016

- The RSO is implementing a project with focus on the assessment of environmental sensitivity to desertification in a Northern Nigeria state called Katsina.
- The Goal is to identify areas that are prone to desertification so that early warnings efforts as well as adequate Government policy can be developed.
- The is contributing to achieving the Sustainable Development Goal (SDG) 15(target 15.3)





## Land Degradation Neutrality Target Setting Programme 2017

- The RSO participated in the working group for Setting Land Degradation Neutrality Target as well as the development of methodology for conducting assessment of Land degradation in Nigeria.
- The hotspots for degradation have been identified using space technology.
- The programme is supported by the Global Support Programme through the UNCCD
- This effort contributes to achieving the Sustainable Development Goal (SDG) 15(target 15.3).







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# 2021 Activities



## 2021 Activities

- Drought Monitoring using the drought recommended practice.
- Capacity Building for the National Emergency Management Agency on the use of dynamic maps for disaster management.
- Flood monitoring in West Africa using the recommended practice.
- Contribute to Sendai Framework disaster risk reduction programme through support to the implementation of reporting framework.





# Thank you

