

SPACE-BASED RESOURCES FOR DISASTER MANAGEMENT IN AFRICA

Godstime James

**UN-SPIDER Regional Support Office In Nigeria
National Space Research and Development
Agency, Abuja-Nigeria**

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Africa in Context

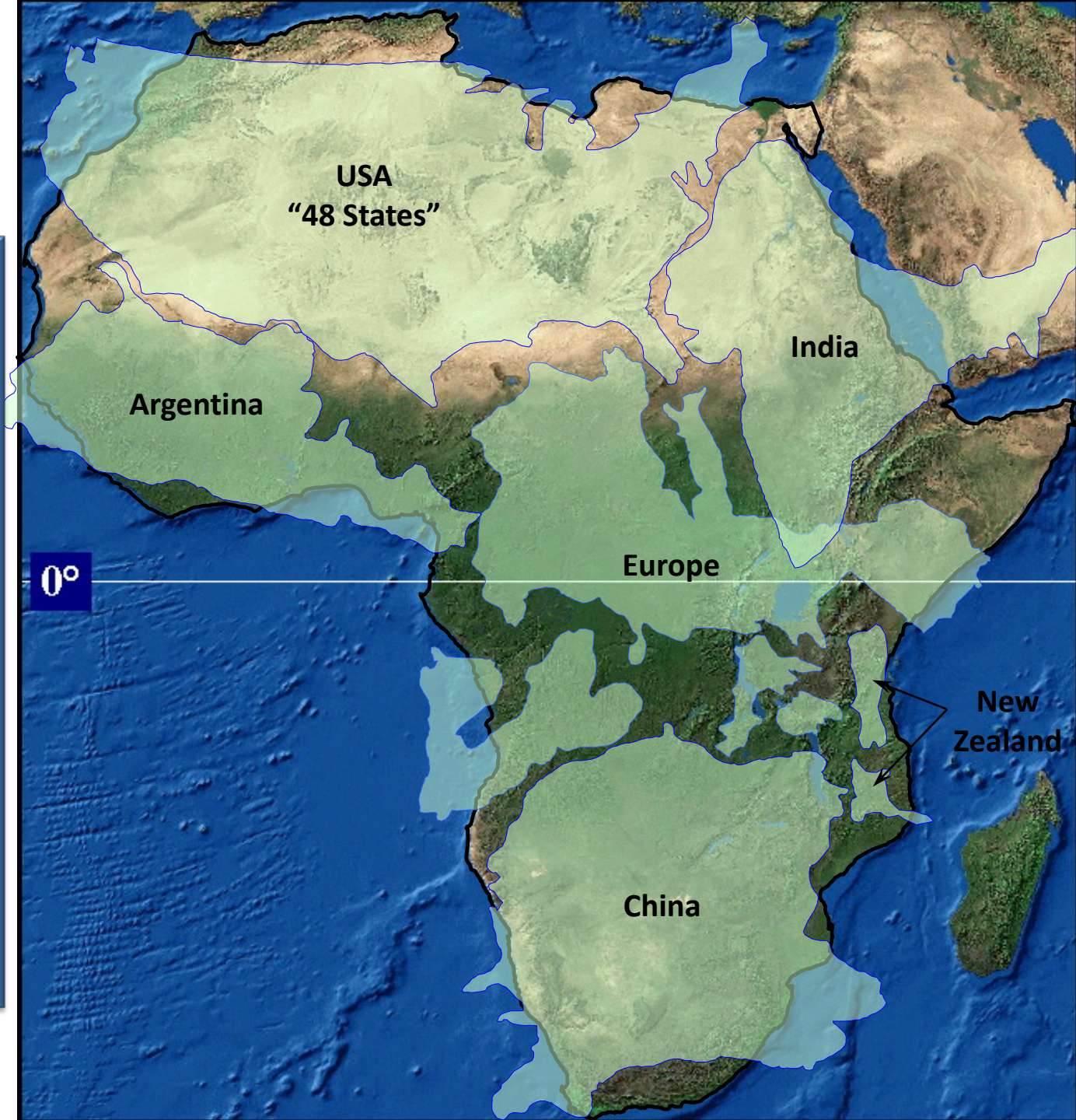
The Size of Africa

Africa covers 20% of Earth's land surface

China	9,596,960 Km ²
USA	9,363,071 Km ²
India	3,287,590 Km ²
Europe	4,936,973 Km ²
Argentina	2,766,890 Km ²
New Zealand	268,680 Km ²
TOTAL :	30,220,164 km ²

Area of Africa: 30,318,830 km²

Source: World Factbook, 2004



SPACE BASED INITIATIVES

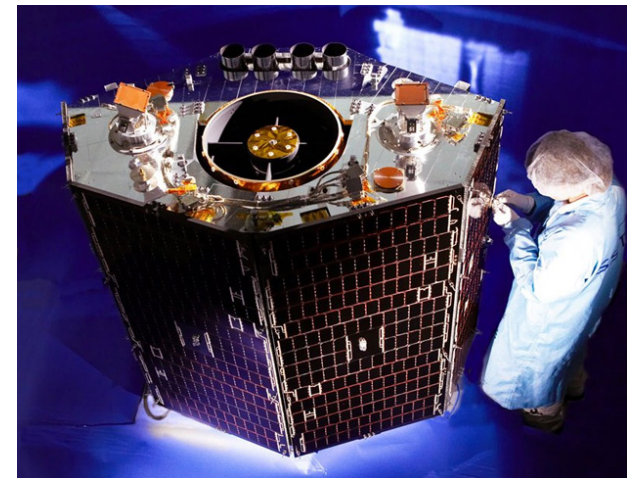
African Resource Monitoring Satellite Constellation

African Resource Monitoring Satellite Constellation: Algeria, Nigeria, South Africa, Kenya, Egypt, Ghana.

Small Micro Satellites ranging from High to Medium Resolution.

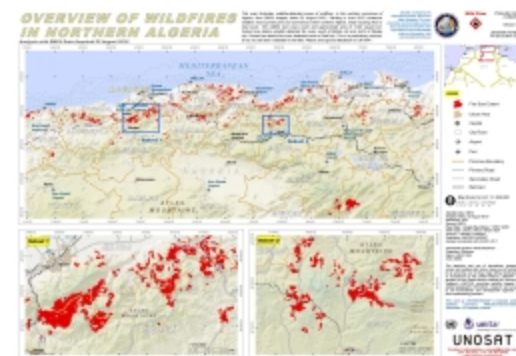
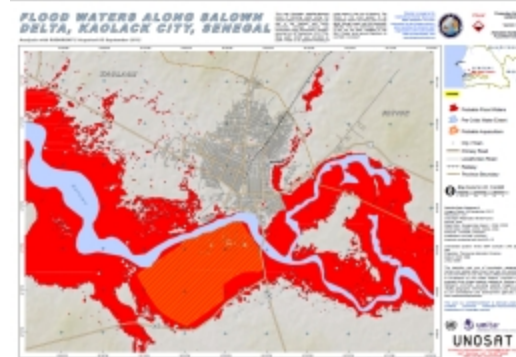
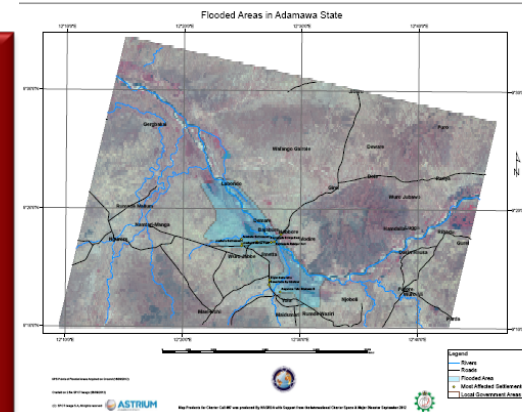
NigeriaSat-2 is the first satellite in the constellation (2.5m, 5m, 32m).

5% data capacity is dedicated for disaster management in the Africa region.



International Charter “Space and Major Disaster”

- Made-up of 14 space agencies and organizations.
- Charter Provides for priority imaging of a disaster area of interest once the Charter is activated by an authorized user.
- In the past year, the Charter has been activated for the following African Countries: Chad, Nigeria, South Sudan, Cameroon, Niger, Senegal, Algeria and Madagascar.
- <http://www.disasterscharter.org/home>



Agriculture, Hydrology, Meteorology Research Center (AGRHYMET) Niamey, Niger

- Created in 1974.
- AGRHYMET is a specialized agency of the 'Permanent Inter-State Fight against Drought in the Sahel' (CILSS).
- Composed of nine member states: Niger, Burkina Faso, Mali, Mauritania, Senegal, Chad, Guinea Bissau, Cape Verde, and Gambia.
- AGRHYMET's main objectives is to contribute to food security and increased agricultural production in the CILSS member countries.
- This programme supports the monitoring of Climate Change in Africa Drought in particular .
- <http://www.agrhymet.ne/eng/index.html>

EUMETSAT (Meteosat)

European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)

- Meteorological Satellites for weather prediction and analysis.
- Relevant for monitoring climate change and global warming.
- Useful to the Meteorological organisations in Africa.
- <http://www.eumetsat.int/Home/index.htm>



AFRICAN REFERENCE GEODETIC NETWORK (AFREF) PROGRAMME

- Africa Geodetic System is meant to provide a unified geodetic framework for African Countries similar to WGS84.
- When fully implemented, it will consist of a network of continuous permanent GPS stations such that a user anywhere in Africa would have free access to GPS data and products and would be at most 1000 km from such stations.
- This will form a Geodetic Framework for the Africa Geospatial Data Infrastructure.
- <http://geoinfo.uneca.org/afref/>



CBERS PROGRAMME

- Joint Collaboration between China and Brazil to develop earth observation satellites for use by Africa and other Countries.
- Launched CBERS-1 and 2 are identical satellites. They have three remote sensing multispectral cameras: 260m spatial resolution and 890 km of ground swath.;): 20m spatial resolution and 120 km of ground swath; 80m spatial resolution and 120 m in the thermal infrared band

CBERS-2B

- Resolution Panchromatic Camera (HRC): 2.7m spatial resolution, 27 km width.
- There are plans to launch more CBERS series (CBERS 3, 4 and 4B)
- Basic Requirement for Access is the establishment of a ground receiving station with the appropriate Antenna.
- Such a station is currently being developed in Gabon.
- www.dgi.inpe.br/CDSR

SERVIR AFRICA

- SERVIR integrates satellite observations and predictive models with other geographic information (sensor and field-based) to monitor and forecast ecological changes and respond to natural disasters.
- Regional Center for Mapping of Resources for Development (RCMRD) based in Nairobi, Kenya, and together they began setting up SERVIR's East Africa node.
- Disasters: flood potential mapping, flood forecasting, and post-event flood mapping.
- Biodiversity: impacts of climate change on biodiversity and coral reef monitoring.
- http://www.servir.net/africa/index.php?option=com_frontpage&Itemid=1

FEWSNET

- FEWSNET is a USAID programme with focus on strengthening early warning and food security networks.
- Activities in this area include developing capacity, building and strengthening networks, developing policy-useful information, and building consensus around food security problems and solutions.
- <http://www.fews.net/Pages/default.aspx>

Thank You

godstime@presidency.com