

Building Resilience using Space Technology - Ghana as a case study

Presented by

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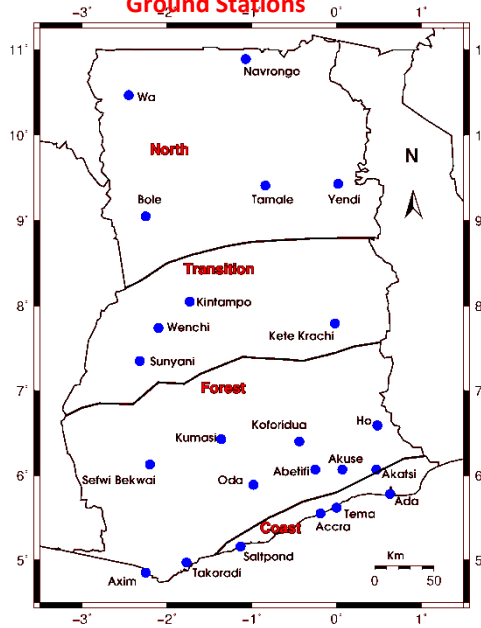
M.Sc. ACDCO

**National Disaster Management Organisation
(NADMO - GHANA)**

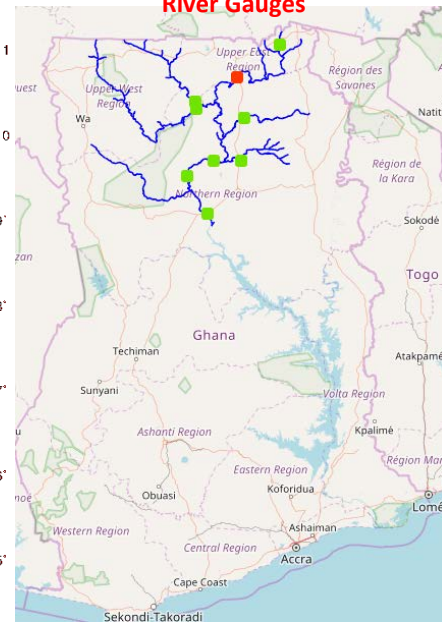
Presentation Overview

- Spatial Catalogue Development
 - Existing situation
 - Insitu data:
- Three-dimensional Modelling and Analysis of development arrangement
 - Existing situation
- Web GIS Application Development
- Satellite Image Processing and Interpretation
- Social Infrastructure Mapping
- GIS, GPS Mapping and Remote Sensing Training

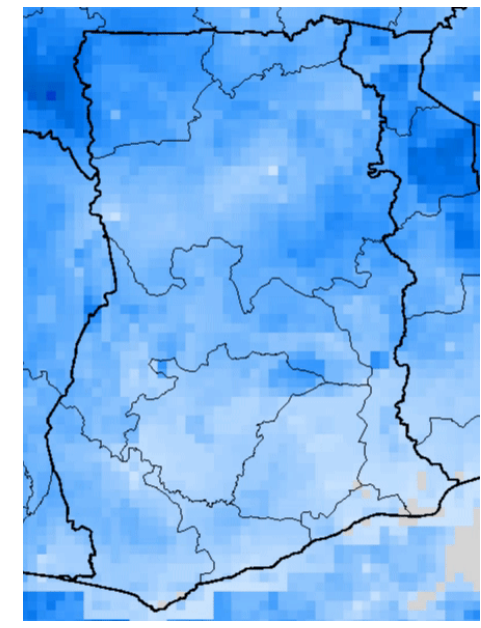
Ghana Meteorological Agency Ground Stations



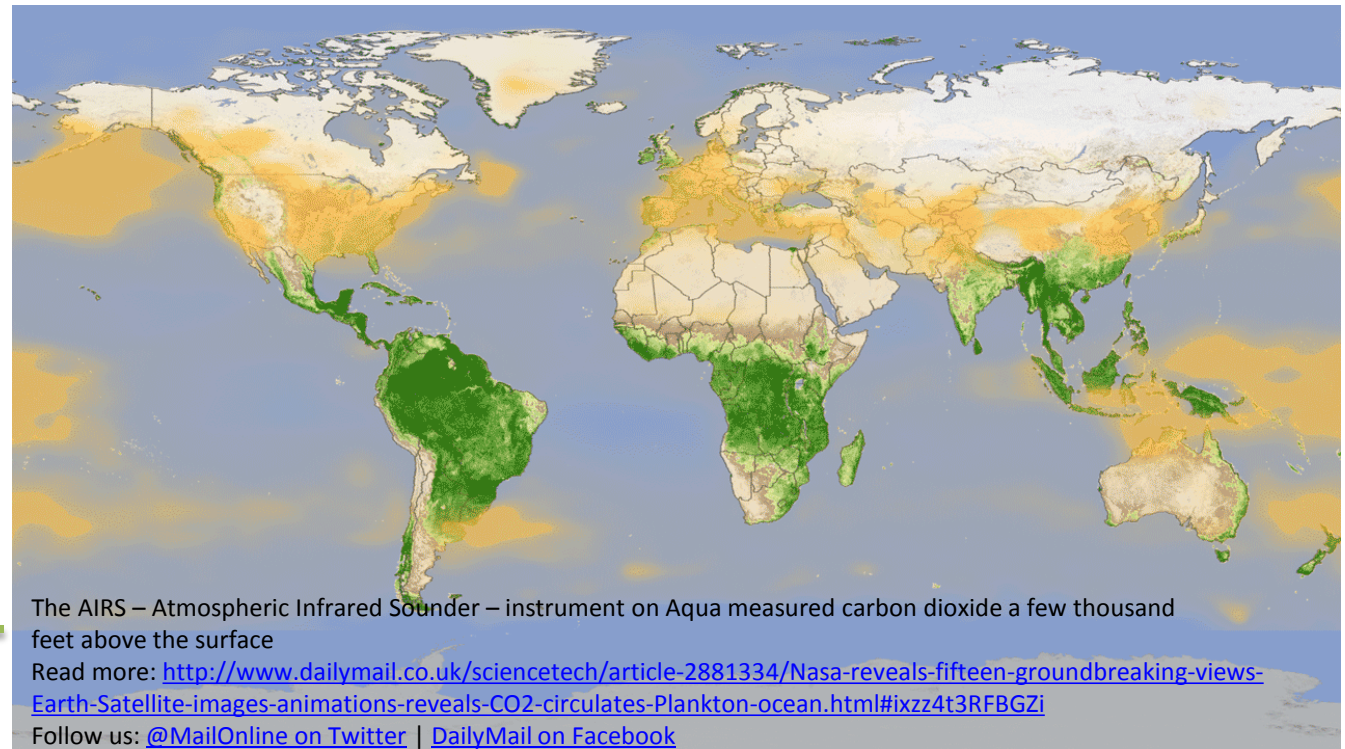
Hydrological Services Department River Gauges



Satellite-based rainfall information



Integration of Space & In-Situ Data for Disaster Risk Reduction



The AIRS – Atmospheric Infrared Sounder – instrument on Aqua measured carbon dioxide a few thousand feet above the surface
Read more: <http://www.dailymail.co.uk/sciencetech/article-2881334/Nasa-reveals-fifteen-groundbreaking-views-Earth-Satellite-images-animations-reveals-CO2-circulates-Plankton-ocean.html#ixzz4t3RFBGZi>
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Spatial Catalogue Development

- Established Long Term Collaboration and Partnerships for the Development and Agreement of Geospatial Services
- Development of Infrastructure for Geo-spatial Service Delivery of utility services
- Institutional Capacity Enhancement and Diversification of Geo-spatial Products
- Safeguard Operational Sustainability

Three - Dimensional Modelling Short Video

Model Analysis Of Development Arrangement

Centre for Remote Sensing and Geographic Information Services (CERSGIS)



Integrated Applications



National Disaster Management Organization (NADMO)

Legislation

Policy

Decision Making

Training

Resilience



Mechanism of the Integrated Applications

- ❑ Stakeholder engagement to enhance the agreement of geospatial data and services
- ❑ Capacity development for planners / engineers

Relief and Reconstruction Provisioning of Infrastructural Facilities

Foundation of revenues

- ❖ Agricultural production reserves.
- ❖ Community provision in public works
- ❖ Traditional Authorities livelihood

Academia

- ❖ Universities/ Research Institutions

Regulation

- ❖ Improved legislative empowerment

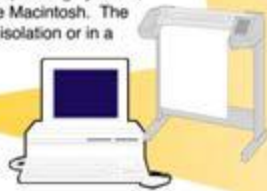
Web GIS Application Development



Satellite

The hardware is the computer and peripherals on which the GIS operates. Today, this could be a centralized computer server running the UNIX or Windows NT operating systems, a desktop PC, or an Apple Macintosh. The computer may operate in isolation or in a networked configuration.

- Computers
- Networks
- Peripheral Devices
 - Printers
 - Plotters
 - Digitizers



In-situ data

SOFTWARE

GIS software provides the functions and tools users need to store, analyze, and display geographical information. The key software components are

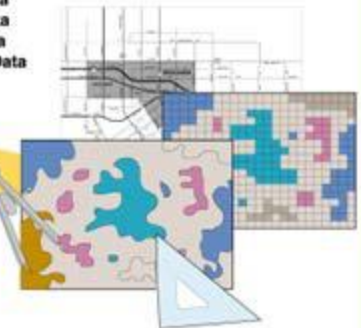
- GIS Software
- Database Software
- OS Software
- Network Software



DATA BANK, WORKSHOPS

One of the most important component of GIS is the data. It is absolutely essential that data be accurate. The following are different data types:

- Vector Data
- Raster Data
- Image Data
- Attribute Data



GIS

END USERS

GIS technology is clearly of limited value without people to manage the system and to develop plans for applying it. Users of GIS range from highly qualified technical specialists to planners, foresters, and market analysts who use GIS to help with their everyday work.

- Administrators
- Managers
- GIS Technicians
- Application Experts
- End Users
- Consumers



ACADEMIA & REGULATIONS

Methods are well designed plans and application-specific business rules describing how technology is applied. This includes the following:

- Guidelines
- Specifications
- Standards
- Procedures



Posterity will require nothing less than resilient communities, and we cannot afford to fail them.



THANK YOU

WELCOME TO NADMO-GHANA

