

USGS Capacity Building and Dataset Development Activities – 2012/13



Examples of Datasets “Supported” by USGS

- Domestic (US)
 - National Land Cover DB
 - National topography (DEM, LiDAR)
 - NIDIS, VegDRI (drought)
 - Phenology
- International/Global
 - Global Multi-resolution Terrain Elevation Data
 - GeoSur (DEM derivatives)
 - International Charter
 - Landsat Browse products
 - Afghanistan Portal
 - FEWS-NET (famine early warning)
 - LPDAAC (MODIS, ASTER with NASA)
 - Global mangrove database
 - West Africa Landcover
 - Uganda FtF (pending)

“Landsat Look” Viewer - Full Resolution Browse

The screenshot shows the LandsatLook Viewer interface in a Mozilla Firefox browser window. The browser address bar displays <http://landsatlook.usgs.gov/>. The main map area shows a satellite image of Washington, DC, with a prominent river (the Potomac River) and surrounding urban and forested areas. The interface includes a search bar with "Washington, DC" entered, and navigation controls like "Labels", "Basemaps", and "Bookmarks".

USGS LandsatLook Viewer
Contact USGS | Help

Washington, DC

Display: Displaying 3 of 387 images

Select Scenes

Years: 1999 - 2012
Days: All year
Cloud: 20%
Sensors: TM, ETM+, ...

Time
Tue, 01 Nov 2011 (GMT)

25 Jan 1999 — 01 Nov 2011

Only One Current & Older

Enhancements
 None Percent Clip Stretch 3SD

Transparency
off visible

Tools
Metadata Table

Advanced Query

Scale: 1 : 144 K | Lat: 38.90°N Lon: -76.99°W | Format: jpg

POWERED BY esri

<http://landsatlook.usgs.gov>

Landsat - Full Resolution Browse

- 3-band jpeg
- ~5-8 MB for RGB
- World or XML file
- Top of Atmosphere reflectance values
- OLI: 6,5,4
- 5,4,3 for TM & ETM+
- 2,4,1 for MSS
- Thermal (not available for MSS)

Global Mangrove Database Development



Giri et al., 2011

International Charter for Space and Major Disasters

201201_Floods_Brazil	
201202_Cyclone_Giovanna	201208_Hurricane_Isaac
201202_Floods_Algeria	201209_Earthquake_China
201202_Floods_Peru	201209_Fires_Ecuador
201202_Volcano_Semeru	201209_Floods_Cameroon
201203_Cyclone_Irina	201209_Floods_Pakistan
201205_Floods_China	201209_Floods_South_Sudan
201206_Volcano_Guatemala	201209_Landslide_India
201207_Floods_India	201210_Floods_Chad
201207_Floods_Russia	201210_Floods_Nigeria
201208_Fires_Algeria	201210_Hurricane_Sandy
201208_Floods_Niger	201210_Hurricane_Sandy_Haiti
201208_Floods_Nigeria	201211_Earthquake_Guatemala
201208_Floods_Philippines	201211_Floods_UK
	201212_Cyclone_Evan
	201212_Typhoon_Bopha
	201212_Typhoon_Bopha_Philippines

**2012
Disaster
Response**

USGS/EROS

Examples of Capacity Building Components of USGS /EROS Projects

- GOFC-GOLD (GFOI)
- FEWS-NET Food Security Training
- A Geospatial Stream Flow Model (GeoSFM) Hydrologic Modeling Workshop
- GeoSUR (CAF)

FEWS-NET Food Security Training (2012)

(Remote sensing, GIS, and GeoWRSI)

Lusaka, Zambia: Tamuka Magadzire

Managua, Nicaragua: Mario Rodriguez

Harare, Zimbabwe: Tamuka Magadzire

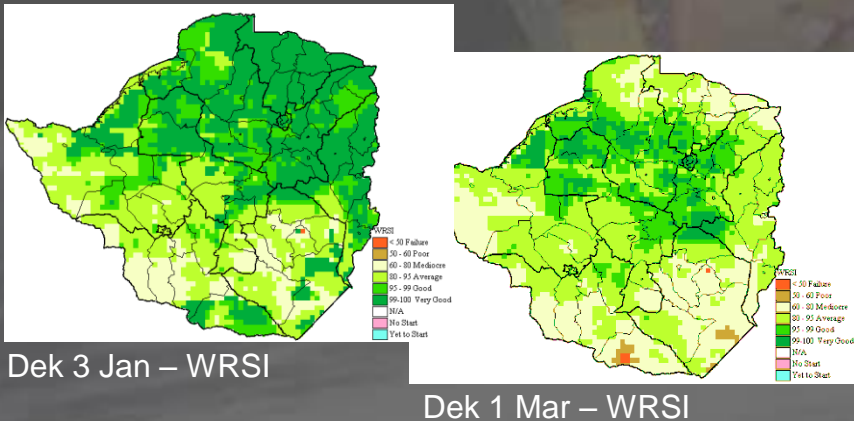
San Salvador, El Salvador: Mario Rodriguez

San Jose, Costa Rica: Mario Rodriguez

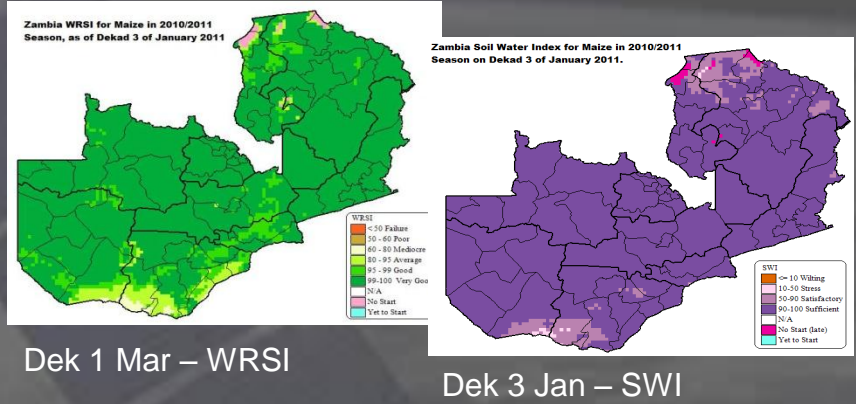
Port-au-Prince, Haiti: Jim Rowland, Michael Budde

FEWS-NET Food Security Workshop Products

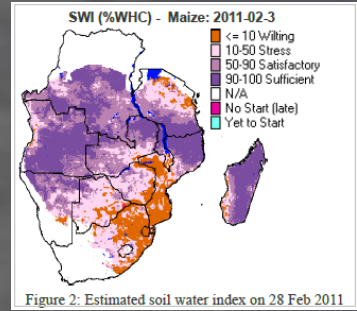
Zimbabwe
Meteorological Services Department (MSD)
 Weather, Climate and Agriculture
Dry Spell Analysis February 2011 and its effect on crops.



Zambia
 REPUBLIC OF ZAMBIA
 MINISTRY OF COMMUNICATIONS AND TRANSPORT
 Period: 21 to 31 January, 2011. Issue No. 9 Season: 2010/2011
CROP WEATHER BULLETIN



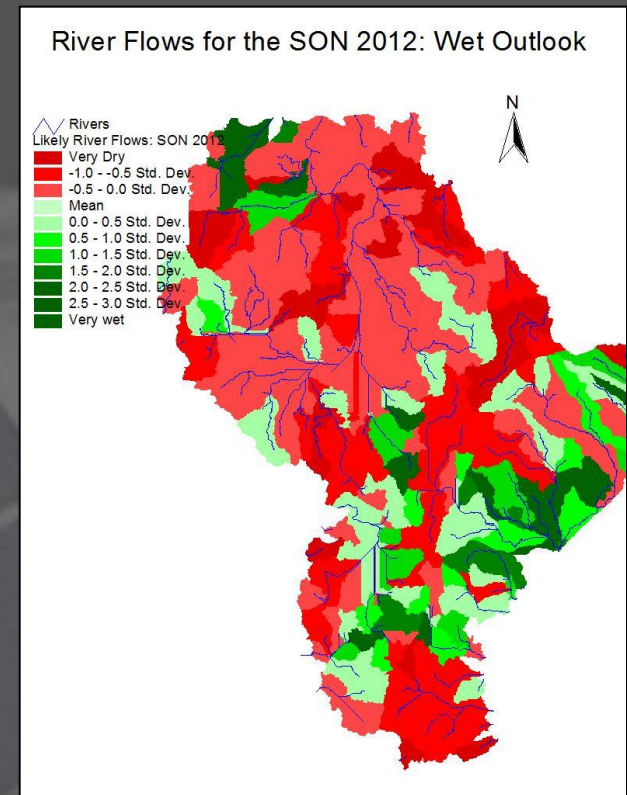
Food Security Early Warning System
Agromet Update
 2010/2011 Agricultural Season
 Issue 06 Month: February Season: 2010-2011 Release date: 17-03-2011



Dek 3 Feb – SWI

GeoSFM hydrologic modeling workshop - GHA

- IGAD Climate Prediction Center (ICPAC) in Nairobi, Kenya.
- Produce seasonal hydrologic forecast for the Greater Horn of Africa region using the GeoSFM forced with seasonal weather forecasts.
- USAID/Office of Foreign Disaster Assistance funded



GeoSUR: Development of a Geospatial Information Network for South America

GeoSUR La Red Geoespacial de América Latina y el Caribe

CAF

Tools

- Home
- Search
- Launch Map Viewer
- Register

GeoSUR Program

- About the Program
- Technical Assistance
- Implementation
- OGC Web Map Services (WMS)

Resources

- Technical Documents
- Frequently Asked Questions
- Feedback

Home

Basic Search

By area, date, subject or keyword

Open Viewer:
Select the Map Viewer

Interactive Map

To view maps and regional maps of participating institutions

Corporacion Andina de Fomento (Andean Development Bank)

Topographic Processing Service (TPS)

Enhancing South America's SDI through dynamic SRTM 30-m Web processing

NASA and the National Geospatial-Intelligence Agency (NGA) released the Shuttle Radar Topography Mission (SRTM) 3-arc-second (90-m) global digital elevation model (DEM) free to the public (NASA 2005a) in 2003. The change from 1,000-m resolution elevation data to 90-m allowed more countries to use the data for more detailed applications or additional uses.

To provide even more access to the SRTM data, the [U.S. Geological Survey \(USGS\)](#) and Corporación Andina de Fomento (aka Andean Development Bank = CAF) [GeoSUR program](#) released a new tool. The Topographic Processing Service (TPS) expands access to this DEM for South America. Scientists can use the TPS to derive products from the SRTM Level-2 1-arc-second (30-m) resolution DEM. These source data are not freely available because they are of restricted distribution. The TPS allows users to derive products from this restricted data without seeing the data. The security requirements defined by the NGA are maintained.

Users can request selected products from the restricted distribution data through a Web-enabled geo-processing service. This allows users to develop higher resolution products to extract more detailed information to better help them with natural disaster prevention and mitigation, natural resource management, and local and international infrastructure development.

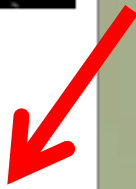


Figure 1. Composite image of TPS's available DEM derivative products

Interactive Access to SRTM2 (30m) Topographic Derivatives



- Overview
- Objectives
- Approach
- Workshops
- Presentations
- Data Products
- Map Services
- Partners
- Links
- Contact Us



Map Services



[Integración de la Infraestructura Regional Suramericana \(IIRSA\)](#)



[Argentina - Instituto Geográfico Militar](#)



[Brasil - Instituto Brasileiro de Geografia y Estadística \(IBGE\)](#)



[Brasil - Ministerio del Medio Ambiente](#)



[Chile - Comisión Nacional del Medio Ambiente \(CONAMA\)](#)



[Colombia - Instituto Geográfico Agustín Codazzi \(IGAC\)](#)



[Colombia - Instituto de Investigación de Recursos Biológicos Alexander von Humbolt](#)



[Uruguay - Servicio Geográfico Militar](#)



[Ecuador - Instituto de Servicio Geográfico Militar del Ecuador](#)

USGS continues to contribute to remote sensing training, dataset, and tool development for underserved communities through its general remote sensing programs and project activities.

Questions?
