

# **GEOSPATIAL INFORMATION TECHNOLOGIES and USAID**

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**Geospatial Information Technology Advisor**



**USAID**  
FROM THE AMERICAN PEOPLE

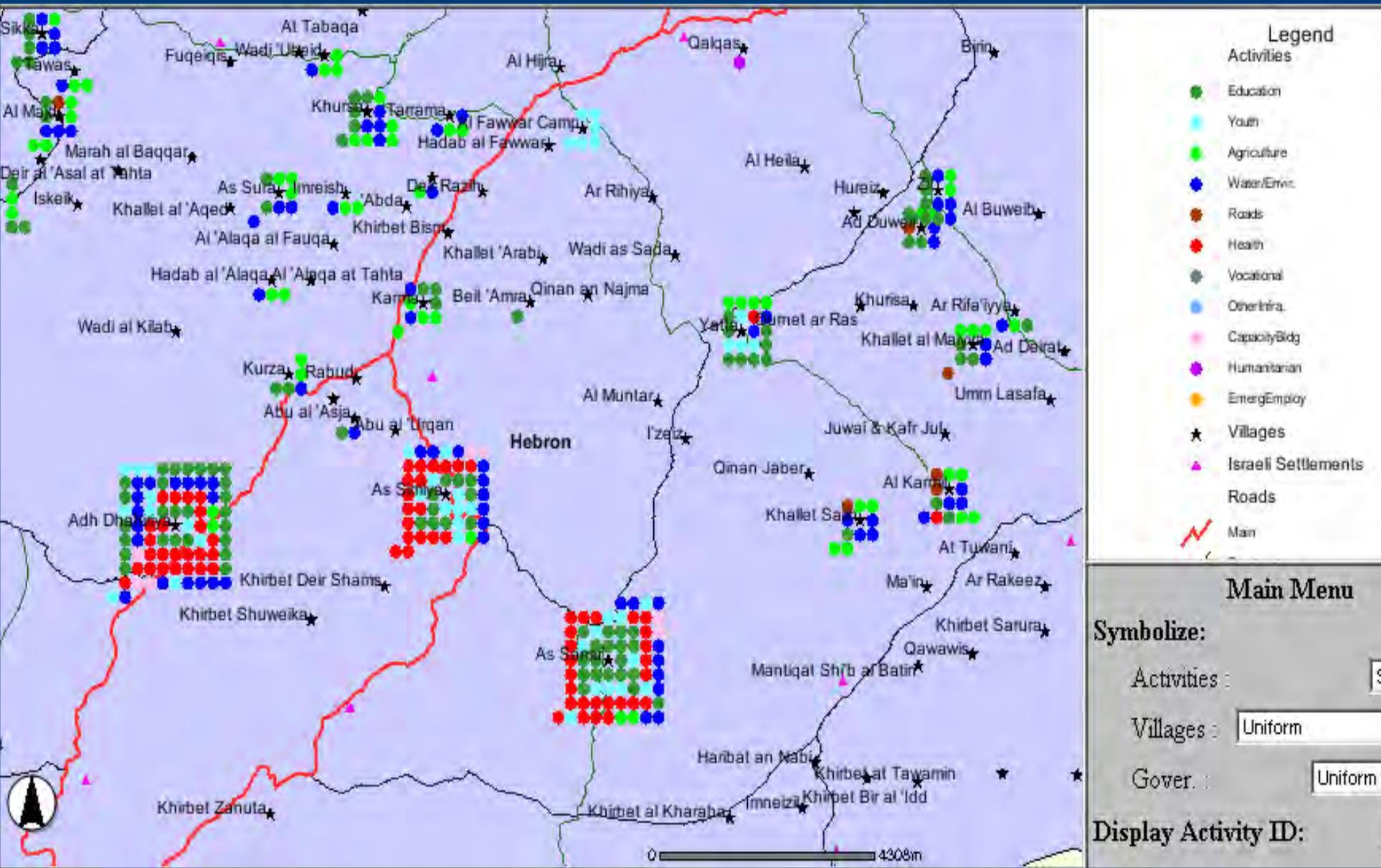
# *USAID*

- Foreign assistance arm of USG
- Assists > 100 countries in 5 regions
- Sectors:
  - Agriculture & trade
  - Conflict mitigation
  - Democracy & governance
  - Disaster assistance
  - Economic growth & urban development
  - Education
  - Environment
  - Health
  - Reconstruction & stabilization

# *How GIS is Used at USAID*

- Geo-Management Information Systems (MIS)
- Program Applications (by Sector)
  - Ag Research: CGIAR + CRSPs
  - Disasters: FEWS-NET, SERVIR, crisis mapping
  - Ed: Schools mapping
  - Env: SERVIR, CARPE, Land tenure/property rights work
  - Health: HIV Mapper, Health GIS Toolkit, SALB
  - R&S: AIMS, Urban development mapping, Iraq infrastructure
  - Trade: Transit Efficiency Mapping
- Building Capacity
  - GEOSS
  - Trainings / Conferences
  - Partnerships (USG, NGO's, Foundations, Industry, Universities, UN)

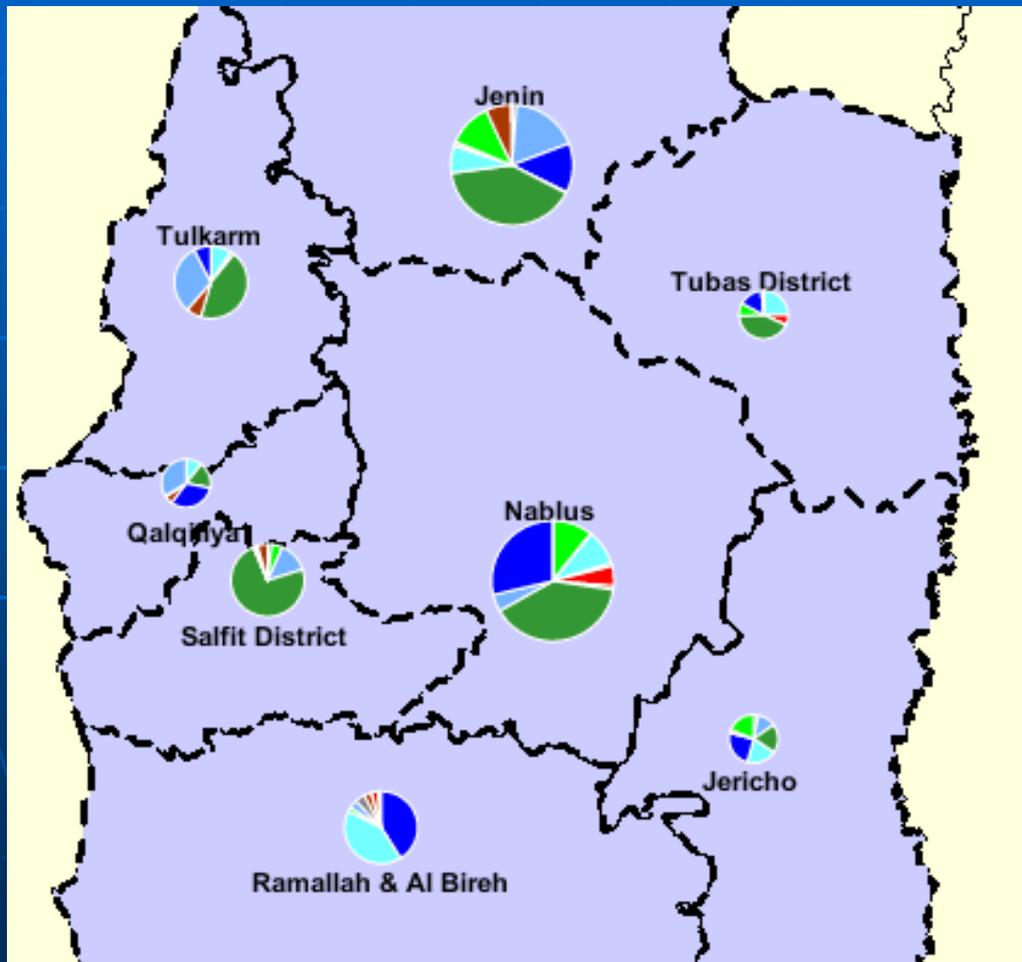
# Geo-MIS: Mapping USAID Projects by Sector



# Geo-MIS: Mapping USAID Projects by Partner

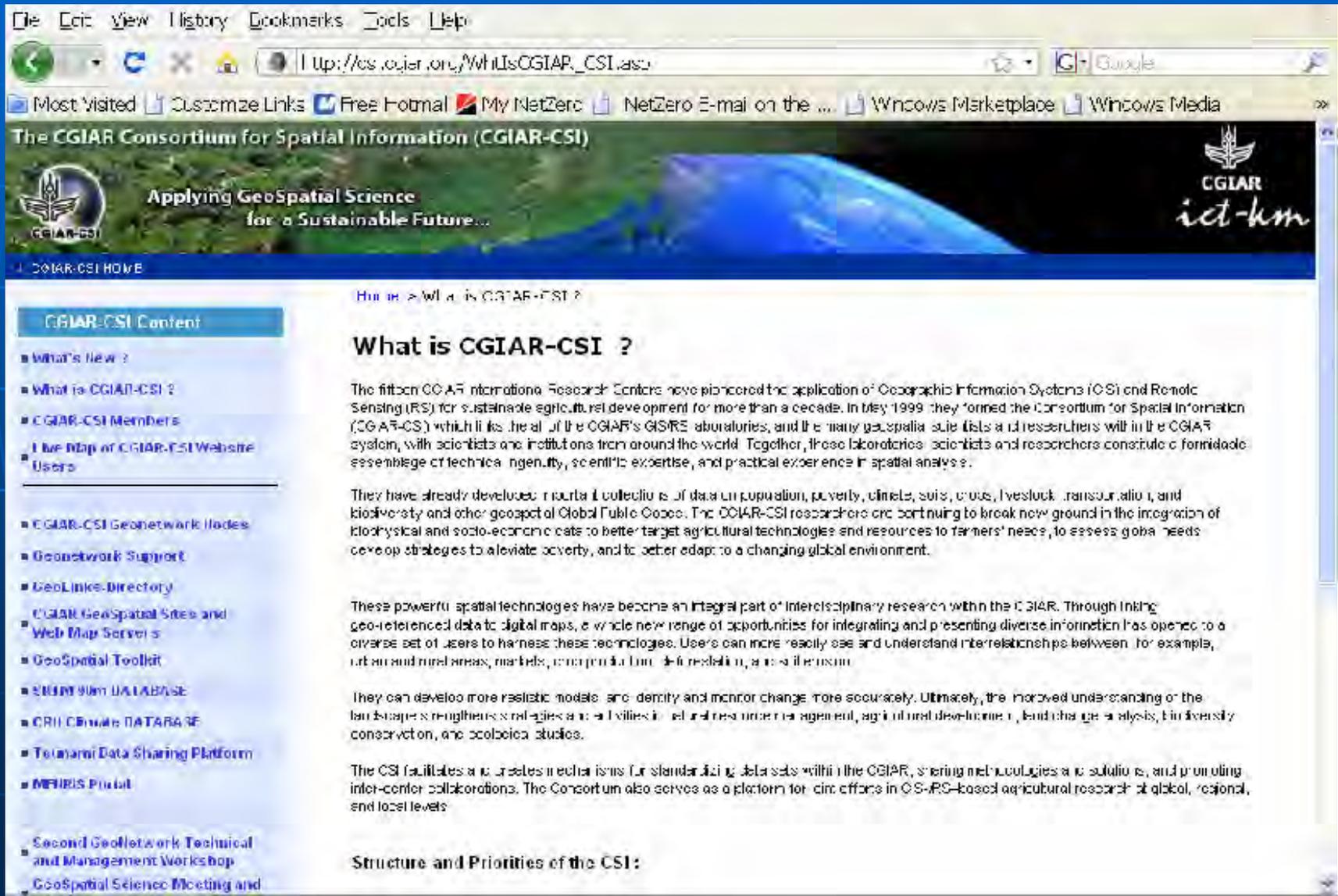


# Geo-MIS: Mapping USAID Funding by Governorate & Sector



In Tulkarm, Jenin, Nablus and Tubas education (dark green sector) is 40-60% of total; in Ramallah it is 2% and Salfit 70%.

# Consultative Group on International Agricultural Research (CGIAR)



The screenshot shows a web browser window with the address bar displaying `http://cs.cgiar.org/WhatIsCGIAR_CSI.asp`. The browser's address bar also shows a search engine icon for Google. Below the address bar, there are several tabs: "Most Visited", "Customize Links", "Free Formal", "My NetZero", "NetZero E-mail on the ...", "Windows Marketplace", and "Windows Media".

The main content area of the browser shows the CGIAR-CSI website. The header features the CGIAR-CSI logo on the left, the text "The CGIAR Consortium for Spatial Information (CGIAR-CSI)", and the slogan "Applying GeoSpatial Science for a Sustainable Future...". On the right side of the header, there is the CGIAR logo and the text "ict-hm".

The main content area is titled "What is CGIAR-CSI ?". The text below the title reads:

The fifteen CGIAR International Research Centers have pioneered the application of Geographic Information Systems (GIS) and Remote Sensing (RS) for sustainable agricultural development for more than a decade. In May 1999, they formed the Consortium for Spatial Information (CGIAR-CSI) which links the staff of the CGIAR's GIS/RS laboratories, and the many geospatial scientists and researchers within the CGIAR system, with scientists and institutions from around the world. Together, these laboratories, scientists and researchers constitute a formidable assemblage of technical ingenuity, scientific expertise, and practical experience in spatial analysis.

They have already developed a wealth of data on population, poverty, climate, soils, crops, livestock, transportation, and biodiversity and other aspects of Global Public Goods. The CGIAR-CSI researchers are continuing to break new ground in the integration of biophysical and socio-economic data to better target agricultural technologies and resources to farmers' needs, to assess global needs, develop strategies to alleviate poverty, and to better adapt to a changing global environment.

These powerful spatial technologies have become an integral part of interdisciplinary research within the CGIAR. Through linking geo-referenced data to digital maps, a whole new range of opportunities for integrating and presenting diverse information has opened to a diverse set of users to harness these technologies. Users can more readily see and understand interrelationships between, for example, urban and rural areas, markets, transportation, health care, and other issues.

They can develop more realistic models and identify and monitor change more accurately. Ultimately, the improved understanding of the landscape's complexities and policies and activities in natural resource management, agricultural development, land change analysis, biodiversity conservation, and ecological studies.

The CSI facilitates and creates mechanisms for standardizing datasets within the CGIAR, sharing technologies and solutions, and promoting inter-center collaborations. The Consortium also serves as a platform for joint efforts in GIS/RS-based agricultural research at global, regional, and local levels.

Structure and Priorities of the CSI:

**CGIAR-CSI Content**

- What's New ?
- What is CGIAR-CSI ?
- CGIAR-CSI Members
- The Map of CGIAR-CSI Website Users

**CGIAR-CSI Geonetwork Pages**

- Geonetwork Support
- GeoLinks Directory
- CGIAR GeoSpatial Sites and Web Map Servers
- GeoSpatial Toolkit
- SIERRA DATA DATABASE
- CRH Climate DATABASE
- Tsunami Data Sharing Platform
- MEFIS Portal

**Second Geonetwork Technical and Management Workshop**

**GeoSpatial Science Meeting and**

# GIS for Famine Early Warning: FEWS NET

Español | Français | Português

Home | About | E-mail Updates | Contact Us

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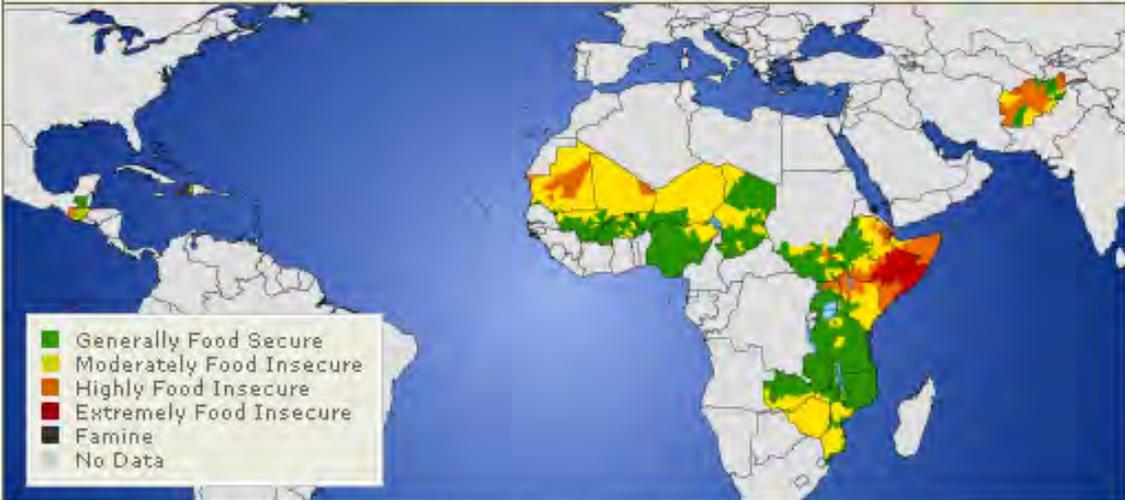
**FEWS NET**  
FAMINE EARLY WARNING SYSTEMS NETWORK

Region & Country Centers | Maps, Data & Imagery | Markets & Trade | Livelihoods | Product Catalogue

**Latest Headlines:** [Above-average prices threaten food security in West Africa](#)

Current Status | Outlook | Weather Hazards | Satellite Imagery

Estimated food security conditions, 4th Quarter 2008 (October-December) [Enlarge](#)



**Legend:**

- Generally Food Secure
- Moderately Food Insecure
- Highly Food Insecure
- Extremely Food Insecure
- Famine
- No Data

Geographic data are partly derived from the UN/FAO GAUL system. [Read Disclaimer](#)

**West Africa** | **East Africa**

**Weather & Crop Monitoring**

   
science for a changing world

**Price Watch** [Archive](#) ?

Most Recent: [01/30/2009](#)  
Previous: [01/05/2009](#)  
[More Markets and Trade products](#)

**Exec Overview Brief** [Archive](#) ?

Most Recent: [12/31/2008](#)  
Previous: [11/25/2008](#)

**Most Recent Alerts** [Archive](#) ?

**West Africa** [02/17/2009](#)  
[Above-average prices threaten food security](#)

**Somalia** [02/04/2009](#)

# SERVIR

SERVIR.net - Select Region | Seleccionar Región - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://www.servir.net/index.php?lang=en



## SERVIR

English

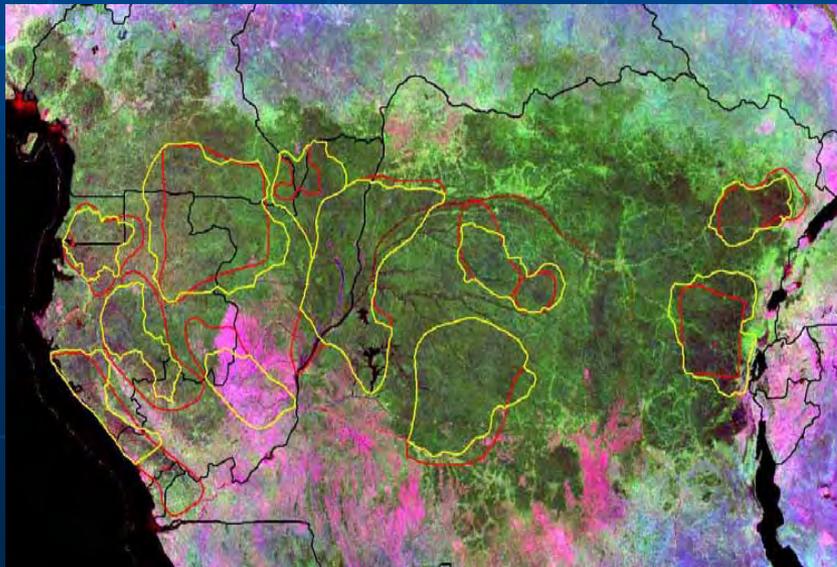
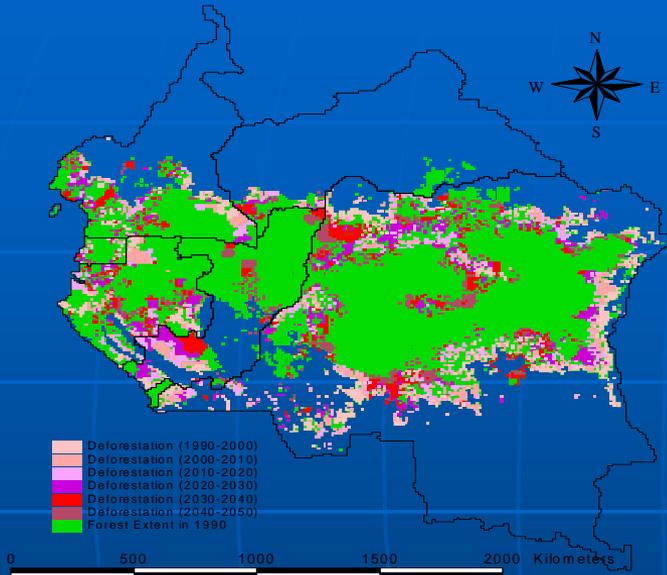


### About SERVIR

SERVIR is a Regional Visualization and Monitoring System that integrates earth observations and forecast models together with in situ data and knowledge for timely decision-making to benefit society.

- About SERVIR
  - SERVIR Brochure
  - SERVIR Presentations
  - SERVIR Video
  - SERVIR Team
  - SERVIR Highlights

# GIS for Forest Monitoring: CARPE



## CARPE Data Explorer

**SEARCH** **BROWSE**

- 1 Draw search area  :  
  
Tools:
- 2 Choose content type:  
Live Data and Maps   
Choose content theme:  
<All Content Themes>   
Optional Keyword (e.g. roads):

**START SEARCH**

Search NSDI Clearinghouse

### Content Found by Search

#### Live Data and Maps

**Publisher:** CARPE, University of  
**Publication Date:** 2005  
**Content Title:** Dja-Odzala-Mink  
**Coverage Area:** Dja-Minkebe-

**Publisher:** CARPE, University of  
**Publication Date:** 2005  
**Content Title:** Lope-Chaillu-Lo  
**Coverage Area:** Lope-Chaillu-

# West Africa Land Cover Analysis

Land Cover Applications and Global Change - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://lca.usgs.gov/lca/africalulc/index.php

Most Visited Customize Links Free Hotmail My NetZero NetZero E-mail on the ... Windows Marketplace Windows Media

### West Africa Land Use and Land Cover Trends Project

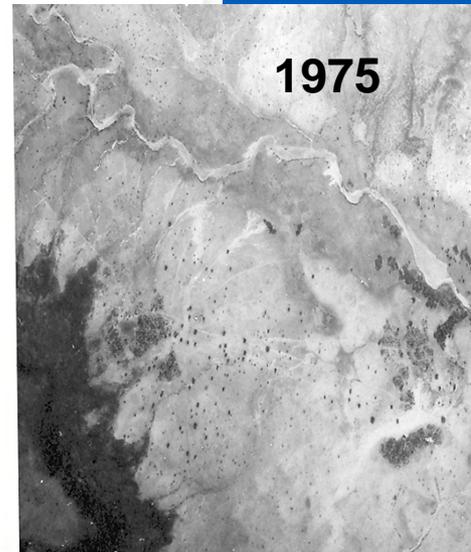
#### Overview

The countries of West Africa are experiencing change at many levels – climatic, agricultural, demographic, political, and socioeconomic. They are endowed with a diverse, yet fragile environment. For centuries, overall human impact on this region was negligible due to low population, but this changed dramatically in the 20th century, particularly in the last 50 years. In the 21st century, environmental changes are predicted to accelerate, with unknown and potentially serious implications for both the people and environment of West Africa. The West Africa Land Use and Land Cover Trends Project represents an effort to document and quantify the impacts, detailed in both time and space, of the environmental and land resource trends that are sweeping across West Africa. The project is being carried out through the AGRHYMET Regional Center in Niamey, Niger, with partners from 12 participating countries (figure 1), the Sahel Institute (INSAH), the U.S. Geological Survey (USGS) Earth Resources Observation and Science (EROS), and with major support from the U.S. Agency for International Development (USAID) West Africa Regional Program. USGS EROS provided AGRHYMET and participating countries satellite image coverage (from the Corona and Landsat satellite systems) of most of West Africa at four periods in time: the 1960s, 1970s, 1980s, and 2000s. The project trained environmental scientists from 12 West African countries in the analysis of this rich image archive, enabling them to map and quantify land use and land cover (LULC) changes that have occurred across the region. The results provide a much better understanding of the LULC patterns and trends in each participating country.



Done

start Boston My Pictures Land Cover Appl... Copy of Malindi... Desktop 12:40 AM



# GIS for HIV/AIDS: HIV Mapper

## Get Started

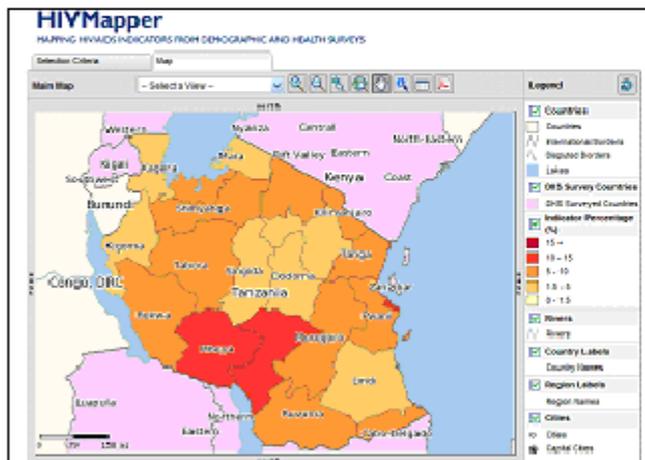
[Create a map with HIVmapper](#)

[Access the HIV/AIDS Survey Indicators Database](#)

## Featured Maps

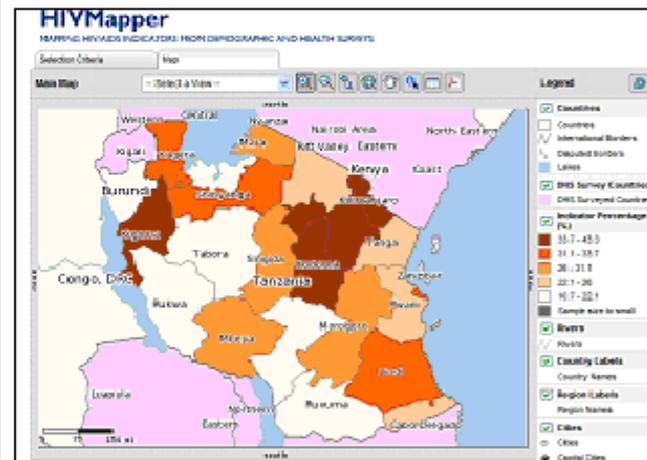
Use maps to tell stories and explain trends. For example, maps can help to describe the HIV situation in Tanzania. Below are four maps that describe HIV prevalence in Tanzania and in the region. Click on thumbnail images to see maps in HIVmapper.

### Tanzania: HIV Prevalence Among Population Ages 15-49



**Description:** In Tanzania, 7.7% of women and 6.3% of men are infected with HIV. The highest HIV prevalence, from 10% to 16%, occur in Mbeya, Iringa, and Dar es Salaam. The lowest is in Manyara and Kigoma, where HIV prevalence is around 2%. In general, the prevalence of HIV among women is higher than among men, except in Dodoma where prevalence is slightly higher among men.

### Tanzania: Accepting Attitudes Towards People Living with HIV/AIDS



**Description:** The level of acceptance towards people living with HIV/AIDS is low. Less than 50% of Tanzanians have accepting attitudes towards people living with HIV/AIDS. Acceptance is lowest in Kigoma, Shinyanga and Tabora. Acceptance is consistently lower among women than among men. The highest percentages of women who express accepting attitudes are found in Dar es Salaam and Mtwara.

# Health GIS Toolkit

# Afghanistan Information Management System

The screenshot shows a Mozilla Firefox browser window displaying the AIMS website. The address bar shows the URL <http://www.aims.org.af/root.aspx?seckeyz=39>. The website header features the AIMS logo with the tagline "Building Information Management Capacity" and "Afghanistan Information Management Services". A navigation menu includes links for Home, About AIMS, Services, Maps, and Afghanistan, along with a search bar. The main content area is titled "Maps" and contains a paragraph explaining that most AIMS maps are based on various sources like the United State Defense Mapping Agency, Soviet maps, satellite imagery, and survey data. It also mentions that maps are checked for errors and distributed through a customer service section. To the right of this text is a circular graphic with a red map of Afghanistan inside. Below the main text are sections for "Sub Sections" with links for "Standard Maps" (noting 564 documents) and "Regional Maps". On the right side of the page, there are two sidebar sections: "Site New Updates" with links for "Web / Database Programmer V.A", "Cashier V.A", and "AIMS Monthly Update for April 2009"; and "GeoBase" which describes it as a mission-critical system for activity tracking and management. At the bottom of the sidebar is a section for "GIS Users Community" (GUC) in Afghanistan, describing it as a group focused on GIS-related matters to promote data sharing.

Maps - Mozilla Firefox

File Edit View History Bookmarks Tools Help

na <http://www.aims.org.af/root.aspx?seckeyz=39> Google

Most Visited Customize Links Free Hotmail My NetZero NetZero E-mail on the ... Windows Marketplace Windows Media

**AIMS**  
Building Information Management Capacity  
Afghanistan Information Management Services

Home | About AIMS | Services | Maps | Afghanistan Search

## Maps

Most AIMS maps are based on sources such as the United State Defense Mapping Agency 1958 1:100,000, Soviet 1990 1:50,000, recent satellite imagery of varying resolutions or current survey data provided by different organizations. Additional layers may be created by using GPS data, surveys and assessments, client specific data or remotely sensed information. All maps are checked in-house for errors, and printed and distributed through our customer service section.



**Sub Sections**

▼ [Standard Maps](#)  
[564 Documents]  
Standard maps are maps distributed by AIMS for the general public. Although they have a variety of uses they are not intended for any specific purpose or client. Standard maps typically represent physical features and/or administrative boundaries.

▼ [Regional Maps](#)

**Site New Updates**

- ▼ [Web / Database Programmer V.A](#)
- ▼ [Cashier V.A](#)
- ▼ [AIMS Monthly Update for April 2009](#)

**GeoBase** GeoBase is a mission critical system, which is developed and Maintained by AIMS. The objective of the GeoBase is to establish an activity tracking database or management information system .... [more...](#)

**GIS Users Community** GIS Users Community (GUC) in Afghanistan consists of a group of people who focus more on GIS related matters. The GUC is formed to promote data discovering, sharing...

Done

start 2 Microsoft O... RemSensWkshp... Maps - Mozilla Fi... Copy of Malindi... Desktop 1:01 AM

# Building Geospatial Capacity Within USAID

Address  <http://inside.usaid.gov/EGAT/gis/>

[USAID Intranet](#) [Privacy](#) [Bureaus](#) [Sectors](#) [Regions](#) [Missions](#) [Search](#)

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version 1.0

## Geospatial Information for Sustainable Development

### Welcome to USAID's Geospatial Information Technology Web Site

This site provides information on how the Agency is using geospatial information for sustainable development. It provides basic background on what geospatial information is, why it matters for the work we do, and who in USAID is using it.

We look forward to receiving your input to ensure that this site addresses your needs and becomes USAID's one-stop shop for geospatial information. Contact us at [geospatial@usaid.gov](mailto:geospatial@usaid.gov).



**WHAT**  
is geospatial information?

Basic principles of geospatial information and GIS technologies including glossaries and FAQs



**HOW**  
can I use GIS technology?

Locating resources, USAID GIS mechanisms and procurement requirements



**WHO**  
in USAID is using GIS?

USAID GIS programs and staff working on them

## ***Geospatial Priorities for USAID***

- Coordination internally / externally
- Improving data collection & data sharing
- Promoting standards
- Increasing GIS literacy / awareness
- Increasing affordability / access to tools