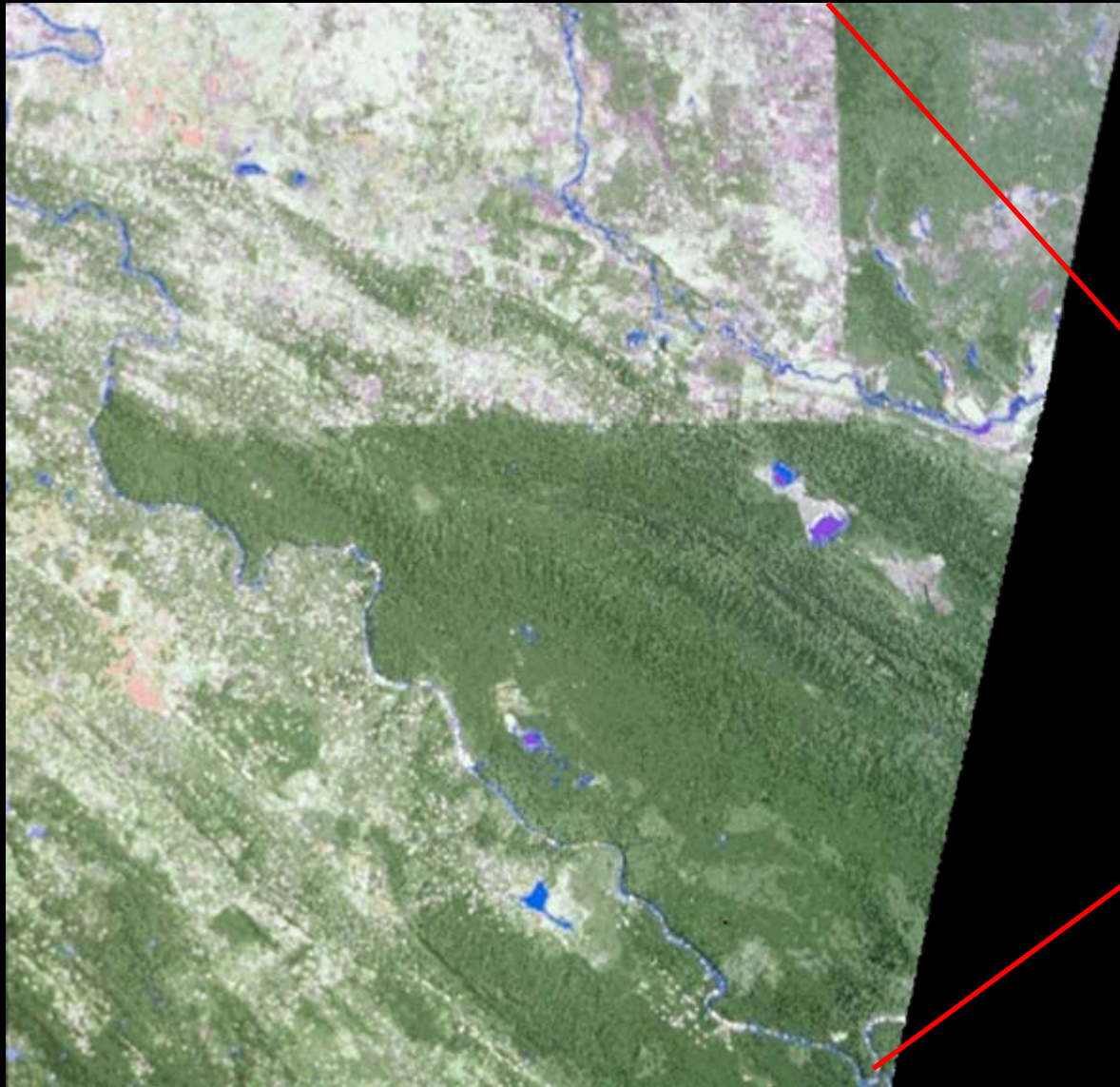




GEOSSS in Action

**SERVIR:
The Mesoamerican
Regional Visualization
and Monitoring System
for Environmental
Management and Disaster
Support**

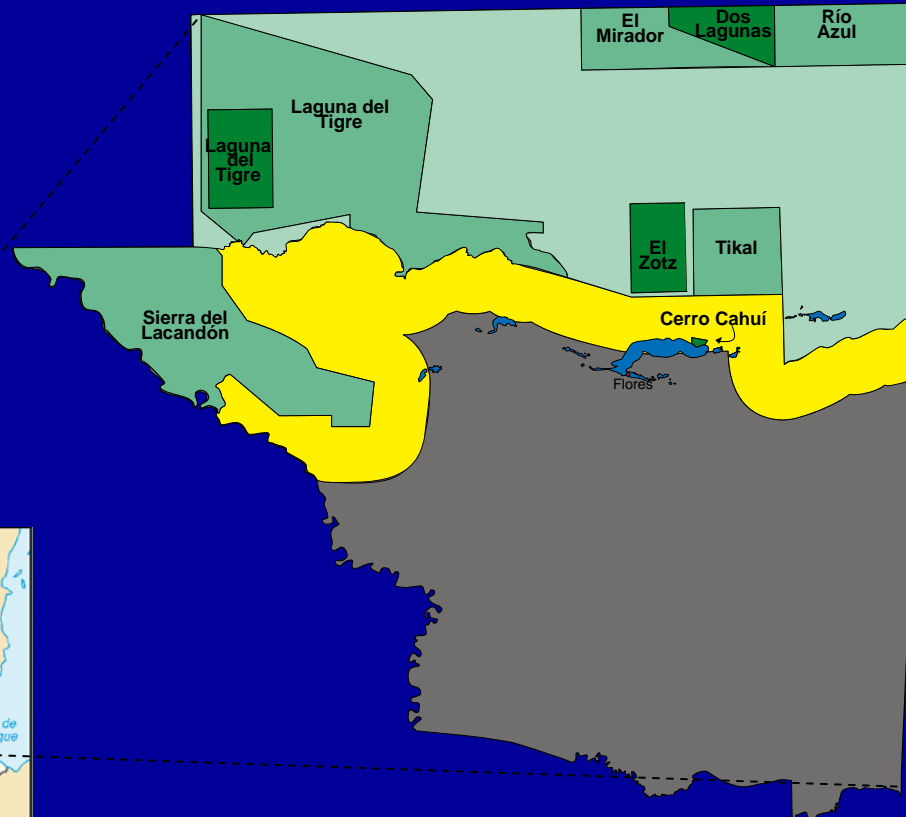








The Maya Biosphere Reserve

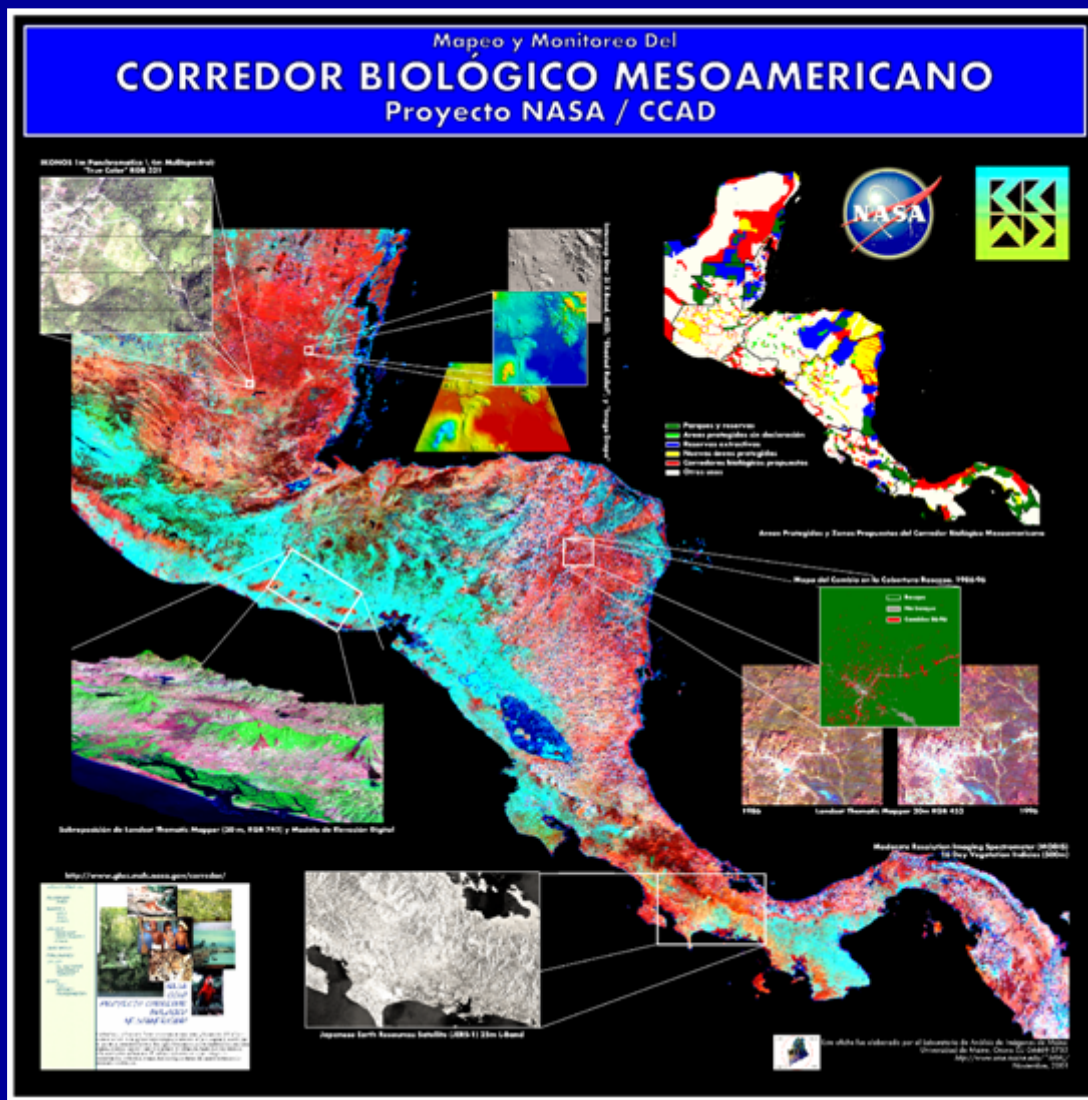


- Parques Nacionales
- Biotopos
- Zona de Usos Múltiples
- Zona de Amortiguamiento





Mesoamerican Biological Corridor





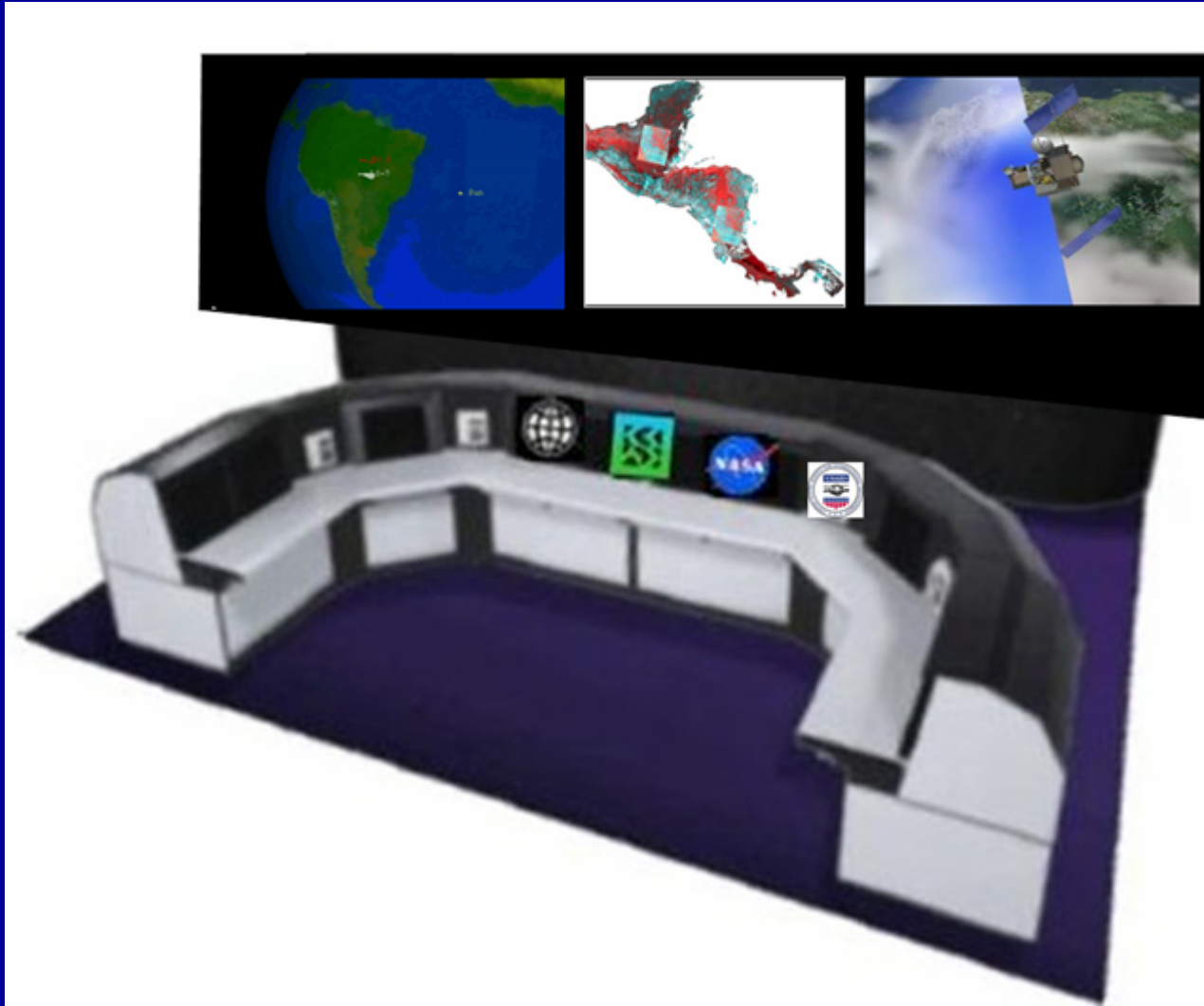
Mesoamerica's Biological Diversity

- **Less than 1% of Earth's landmass, but contains 7-8% of world's plant and animal species**





SERVIR Concept Drawing - 2003

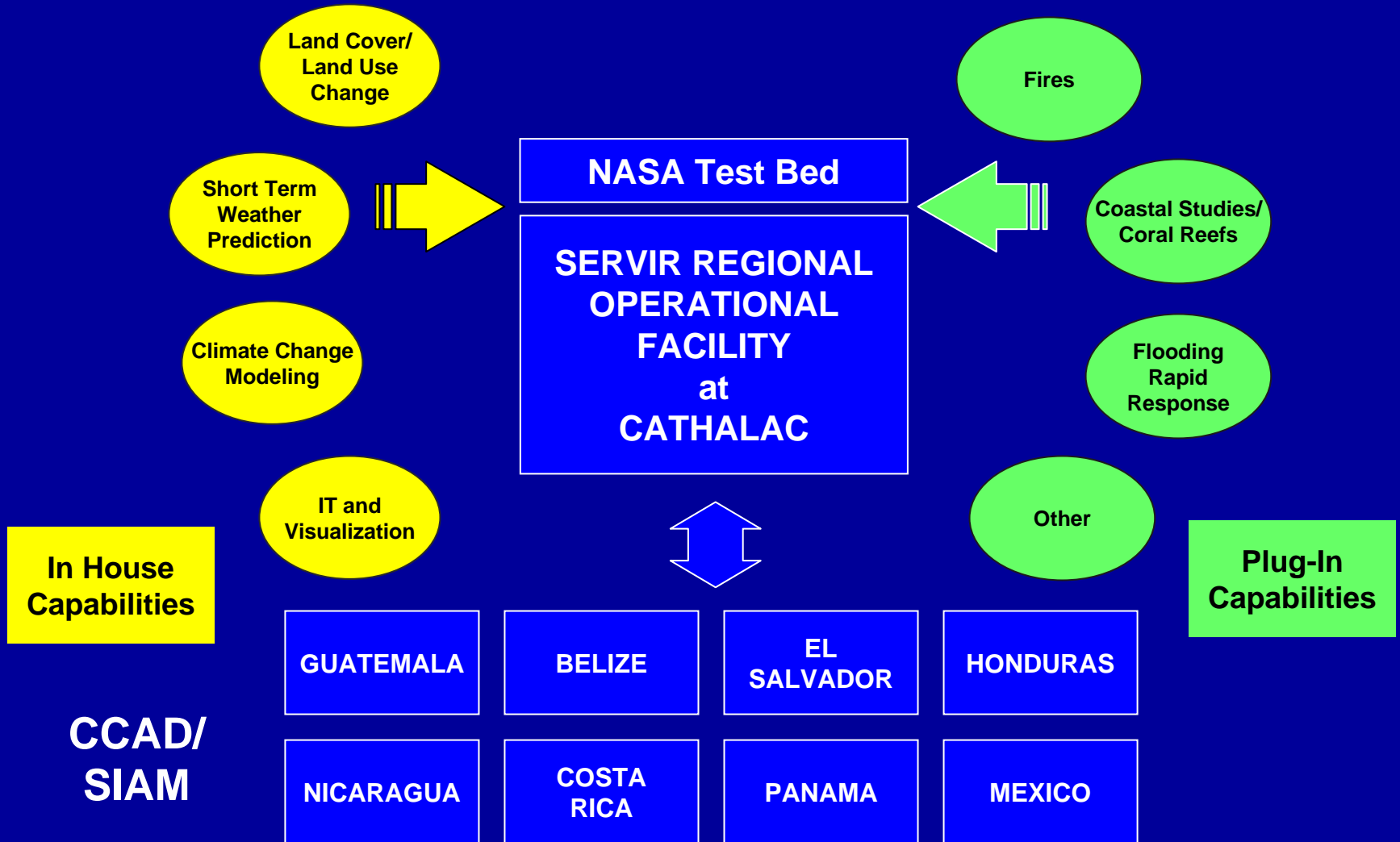


- Fire Detection
- Land Cover/Land Use
- Forest Monitoring
- Red Tides
- Climate Change
- Short Term Weather
- Drought Monitoring
- Inter. Scientific Research
- Carbon Flux
- Hot Spot Monitoring
- Disaster Mitigation
- Urban Studies





SERVIR Framework





SERVIR Test Bed Node – NASA/MSFC in 2004





SERVIR Dedication – February 3, 2005





Located @ CATHALAC in the City of Knowledge, Panama

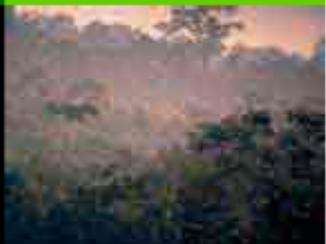


SERVIR

Sistema de Monitoreo y Visualización para Mesoamérica

THURS, JUNE 28, 2007

- Español
- English



[Información Mesoamericana](#) |
 [Mapas en Línea](#) |
 [Apoyo a la Toma de Decisiones](#) |
 [Visualizaciones 3-D](#)

- Inicio
- Manuales de Usuario
- Descargas
- Noticias
- Acerca de SERVIR
- Galerías
- Directorio
- Colaboradores
- Biblioteca
- Contáctenos

Su "Tienda de una sola Parada" para el apoyo en Decisiones y Visualización

- Desastres
- Ecosistemas
- Tiempo
- Clima
- Agua
- Agricultura
- Salud Humana
- Energía

Mesoamerica Hoy, Thursday, June 28, 2007

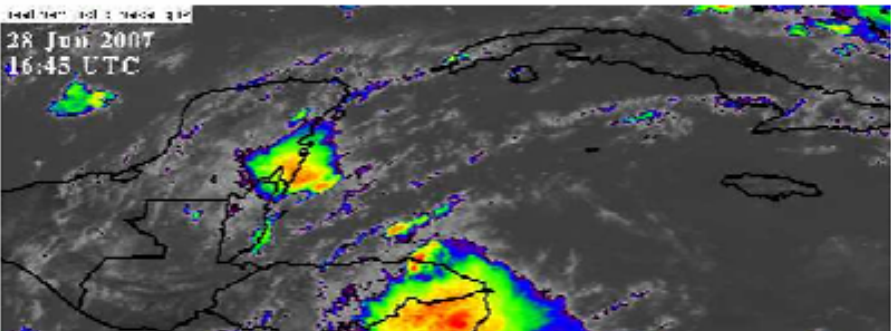
Ir al Visualizador de imágenes GOES
 Visualiza imágenes GOES de un país específico
 Construye tus propias animaciones GOES
 Última imagen GOES

SERVIR >>

Videos de SERVIR

Pulsa sobre la imagen para ver el video.

First 21 Named Storms of 2005 Atlantic Hurricane Season

 A satellite image of a hurricane with a distinct eye and spiral cloud bands.


Una visión del futuro (18.2 MB).

 A banner for the Earth Observations Summit featuring various satellite and Earth science imagery.

NASA Earth Science Applications





Decision Support: Fires

TRAZADOR DE INCENDIOS DE LA RED



ALERTAS POR CORREO ELECTRÓNICO



INFORMACIÓN DE INCENDIOS ACTIVOS



ALERTA DE INCENDIOS EN MESOAMÉRICA

SERVIR

Sistema de Monitoreo y Visualización para Mesoamérica

SERVIR WEB FIRE MAPPER

Correo Electrónico generado: 4/23/2006 1:28:14 AM



19.425	-98.502	2/7.5	-1.3	1.0	2005-04-22	-020	A	0
--------	---------	-------	------	-----	------------	------	---	---

El número de incendios activos detectados/procesados en su área de interés es: 84

Región de Interés:

DT= Temperatura de brillo(Kelvin)
 Date= Fecha de adquisición de MODIS
 Sat= Satélite(Aqua and Terra)
 Conf= Confianza
 Scat= Recorrido
 Trch= Rizo

Para ver información de incendios activos con otros coberturas SIG o para consultar la base de datos completa visite [Centro-América-Web Fire Mapper](#)

Para mayor información vaya a [preguntas frecuentes](#) o [Contáctenos](#)

Por favor tenga presente que las nubes pueden afectar la detección de incendios activos. Para poder consultar incendios activos en otras regiones vaya a [Web Fire Mapper](#)

Por favor tenga en cuenta que el archivo jpg adjunto es un documento de Word que contiene información de georreferenciación para la imagen (jpg). Para ver la imagen (jpg) en un SIG local, grave el archivo jpg y (jpg) con el mismo nombre (e.g. AlertsIncendio.jpg y AlertsIncendio.jpg) a un folder común.

Descargo: Conservación Internacional (CI) y la Universidad de Maryland (UMD) no garantizan que los datos, la base de datos o cualquier información generada usando estos datos o la base de datos estén exentos de errores. Los datos se suministran "como están" y ni CI ni UMD hacen declaraciones que expresen o impliquen garantías de ninguna clase, incluyendo ninguna que se limita a cualquier garantía implícita en la comerciabilidad o aptitud de los datos para un propósito particular. La intención receptora constante es no proporcionar ningún tipo de garantía referente a los datos o a bases de datos a terceros en nombre de CI o UMD.











Fires (continued)

The screenshot shows the Google Earth interface with a map of Central America. A popup window titled "59" displays the following information:

Detected Hot Spot Information

Date: 17-JUN-2007
Satellite: TERRA
Latitude: 17.124
Longitude: -90.024
Confidence: 99
Brightness: 319
Start: 1.3
Track: 1.4

For more information, please visit [GEOVIA](#).

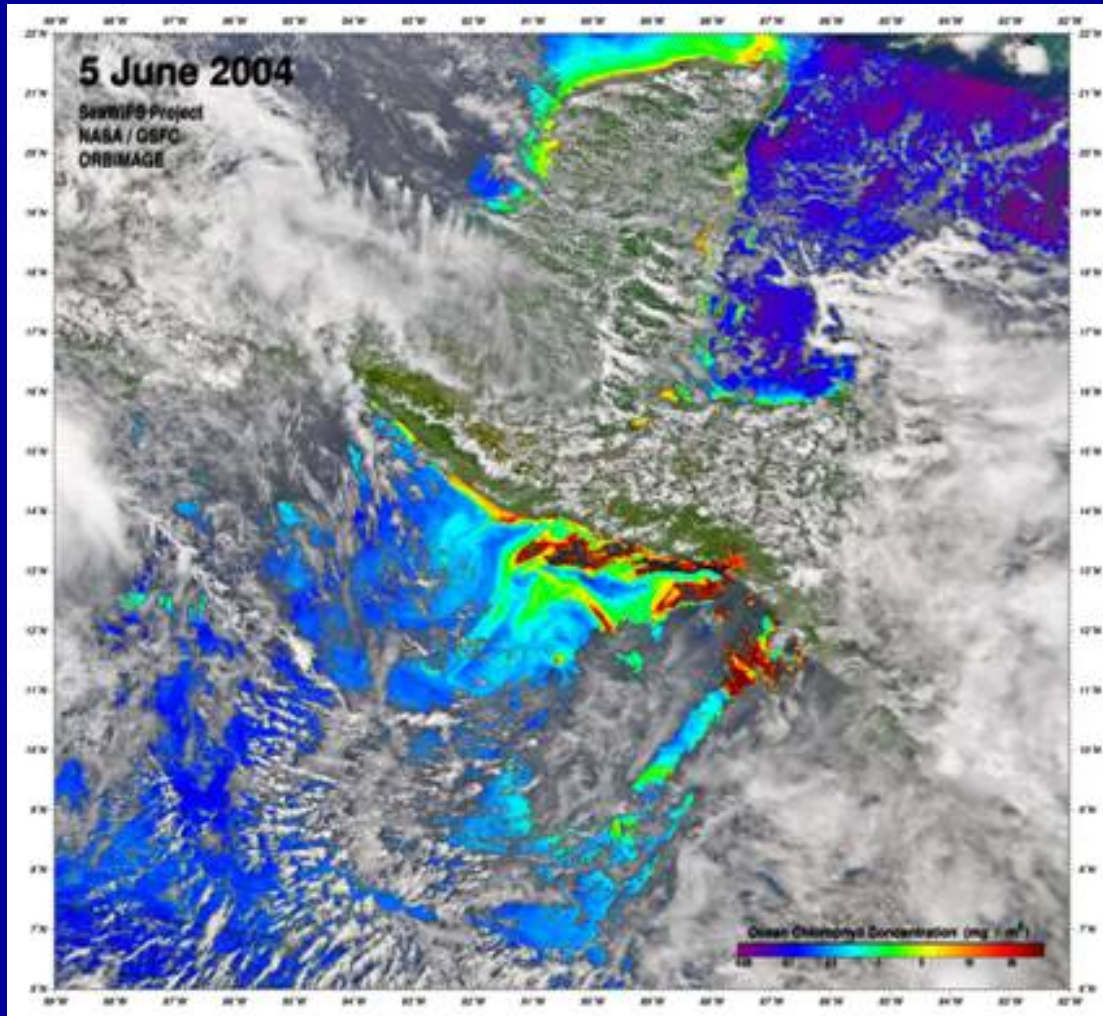
Directions: [To here](#) - [From here](#)

The map shows various hot spots across Central America, with numbers indicating their values. A scale bar at the bottom indicates 401 miles. The status bar at the bottom shows the pointer coordinates as 17°36'57.21" N, 90°50'12.09" W, and the streaming status as 100%.



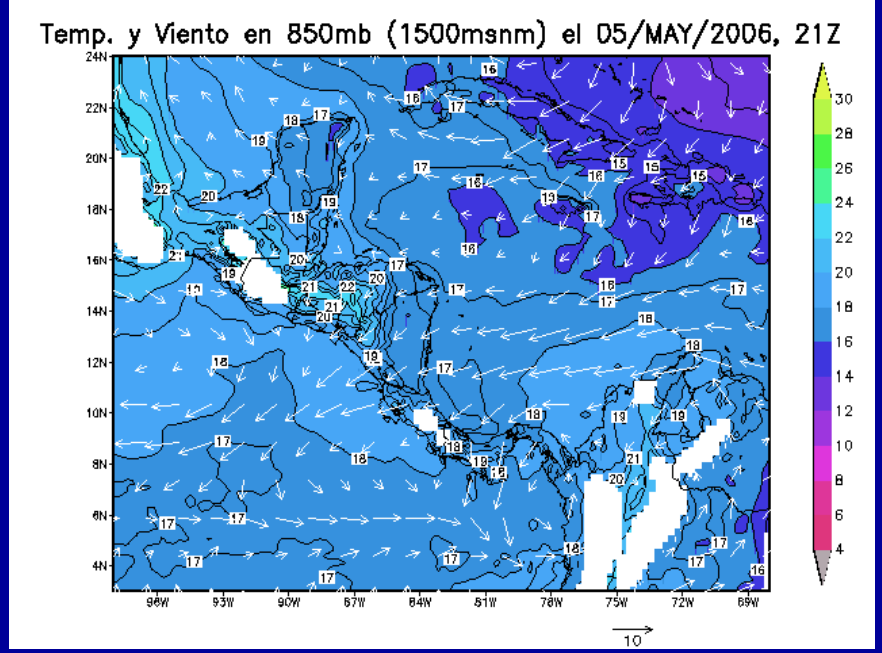
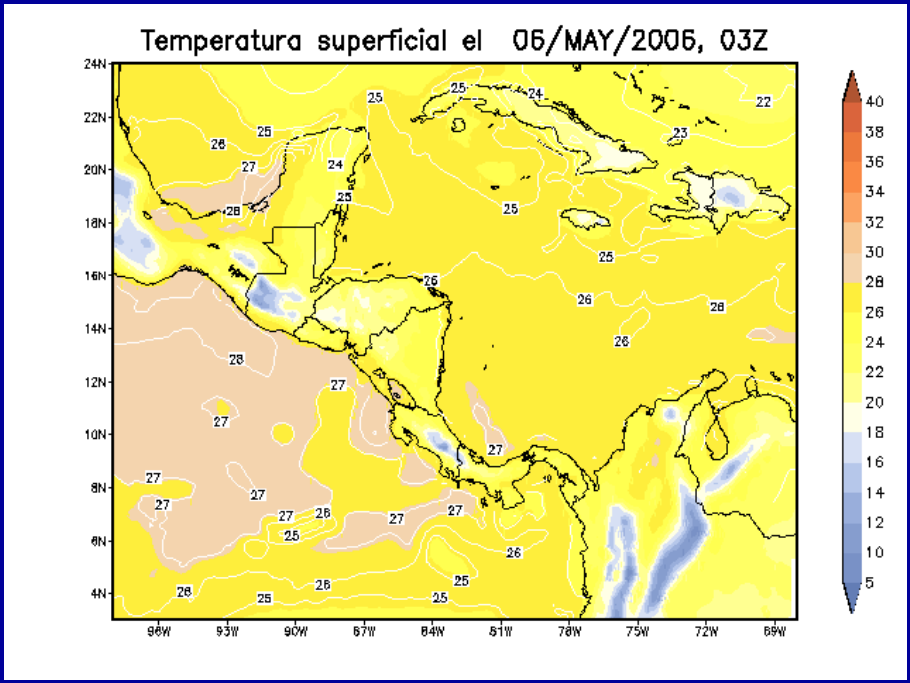


Decision Support: Algal Blooms





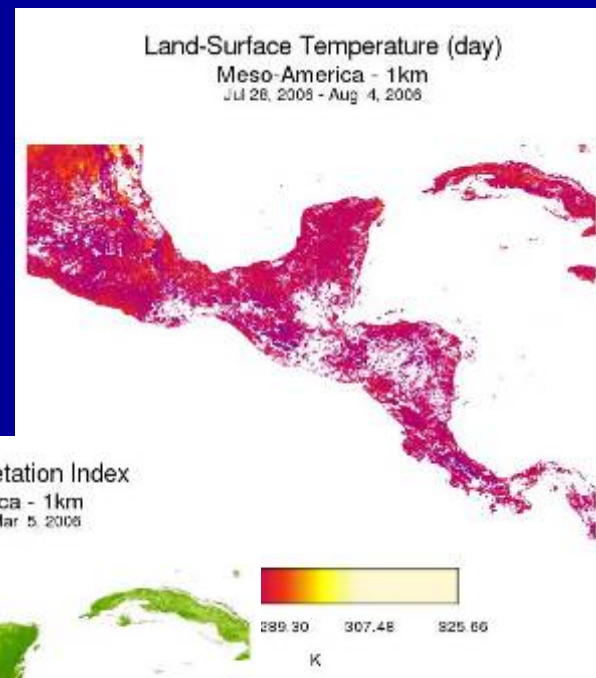
Decision Support: Short Term Weather Prediction





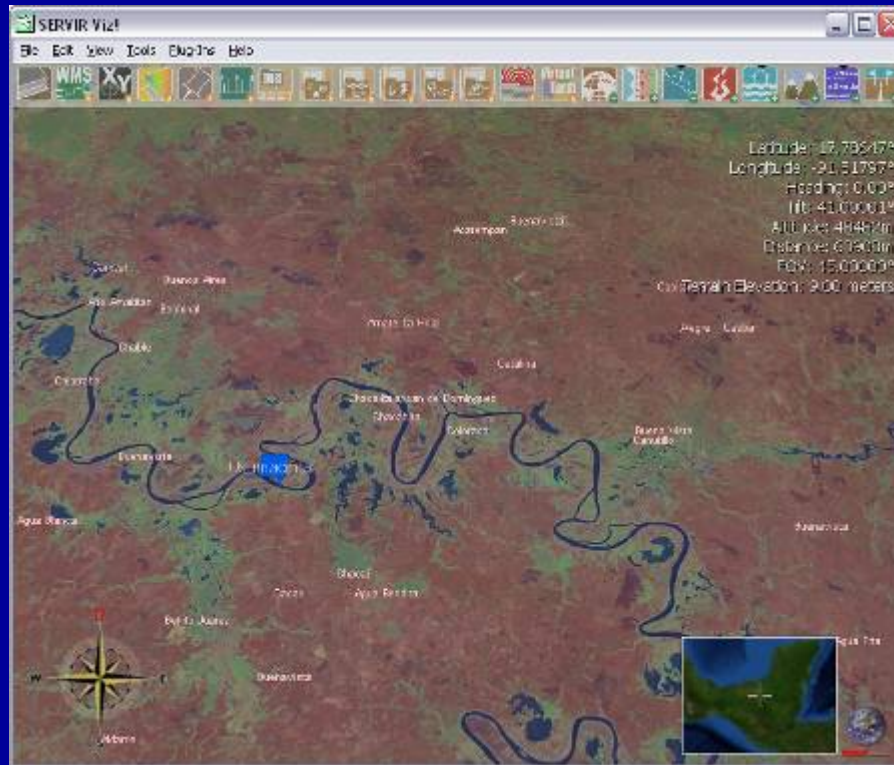
Terrestrial Observation & Prediction

- Enhanced Vegetation Index
- Gross Primary Productivity
- Land Surface Temperature
- Leaf Area Index
- Net Primary Productivity

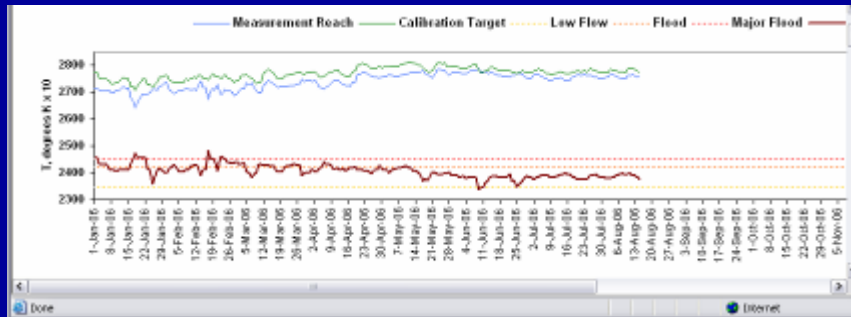




Decision Support: Flood Observatory



Dartmouth Flood Observatory

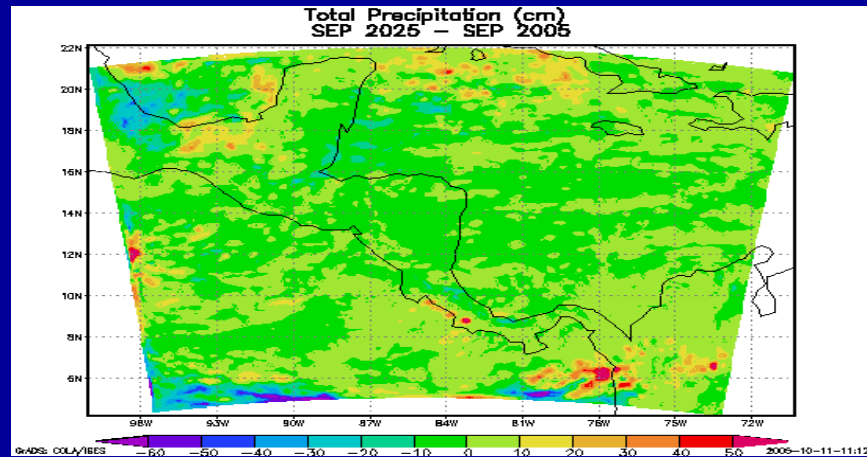
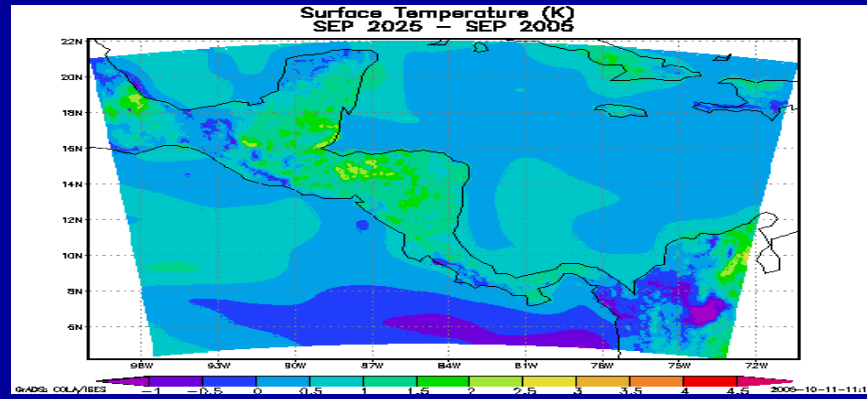




Decision Support: Climate Change Scenarios

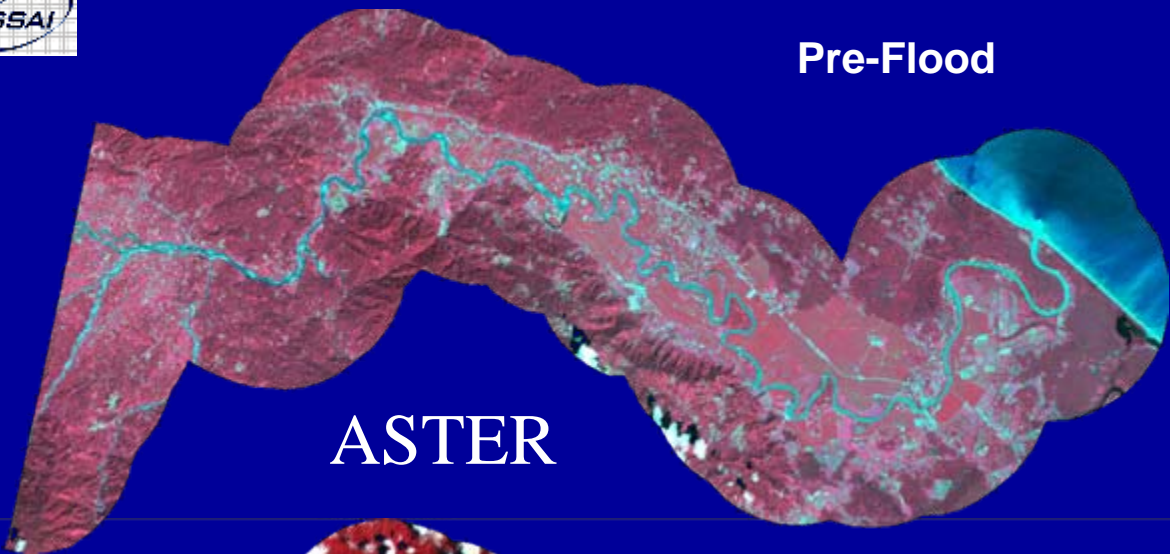
Evaluation of the relative roles on climate change for Central America of effects such as global warming due to greenhouse gas emissions and continuing land use changes.

2005
2010
2020
2025
2050
2100



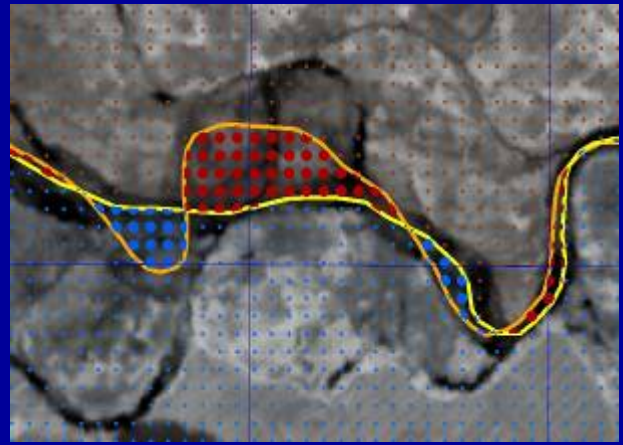


Decision Support: Change and Int'l Boundaries

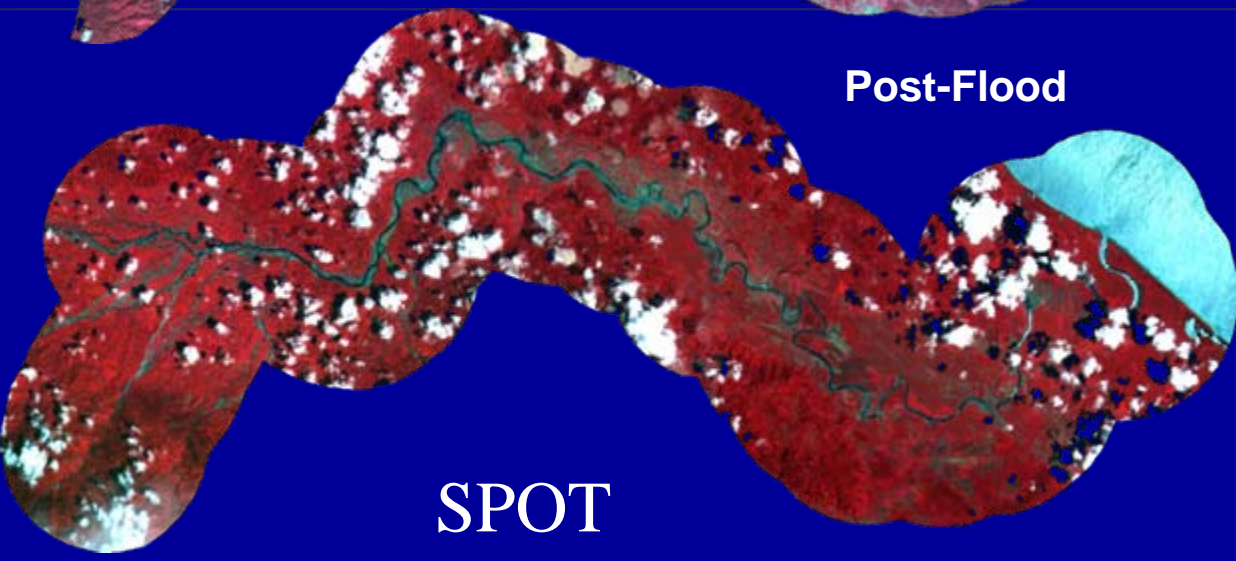


Pre-Flood

ASTER



**Red - Panamanian Land
Now on Costa Rican Side
of the Channel**
**Blue - Costa Rican Land
Now on Panamanian Side
of the Channel**



Post-Flood

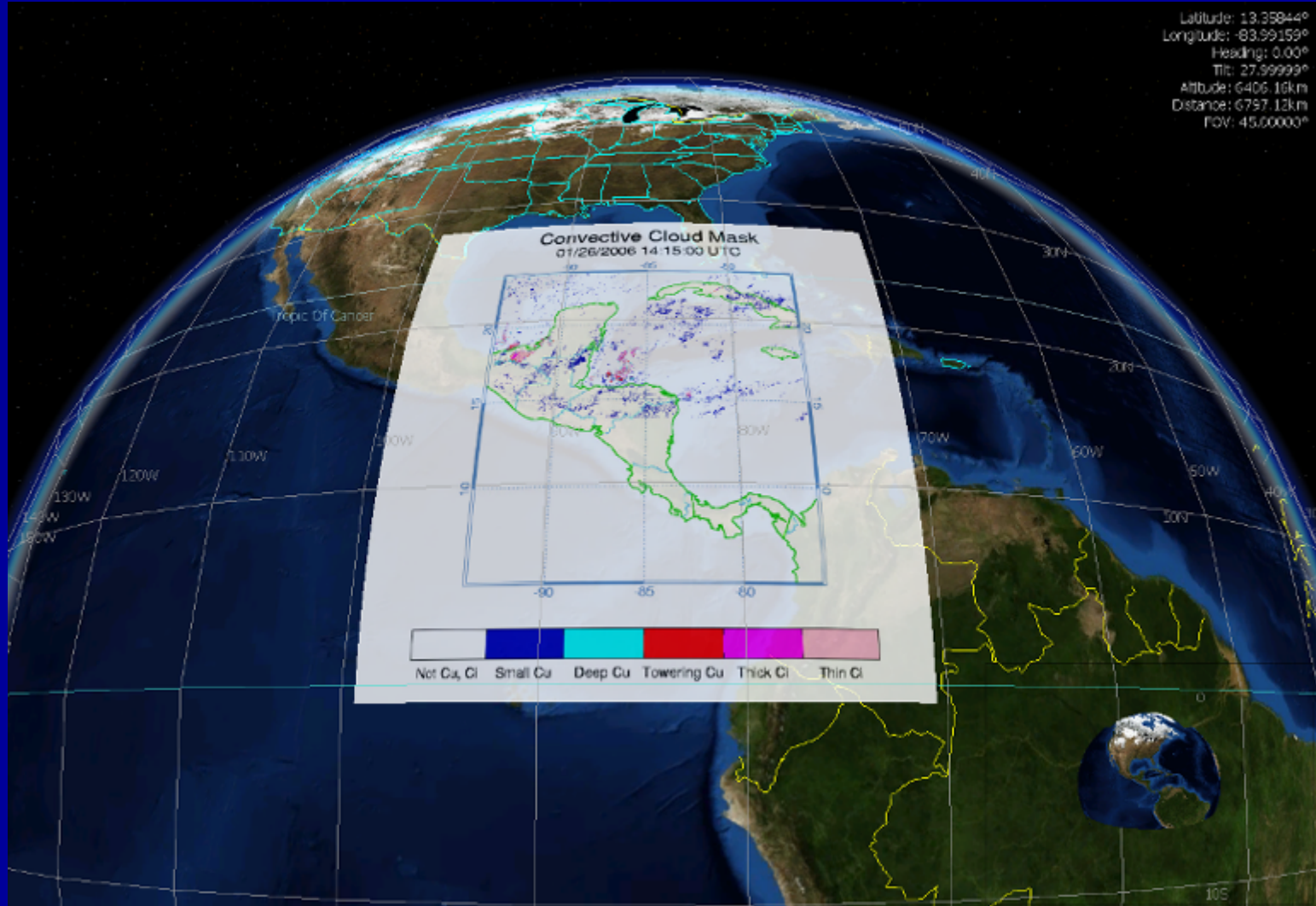
SPOT





Decision Support: Nowcasting

Latitude: 13.35844°
Longitude: -83.99159°
Heading: 0.00°
Tilt: 27.99999°
Altitude: 6406.16km
Distance: 6757.12km
FOV: 45.60000°





Decision Support: Cultural Patrimony



Courtesy:
San Bartolo Project

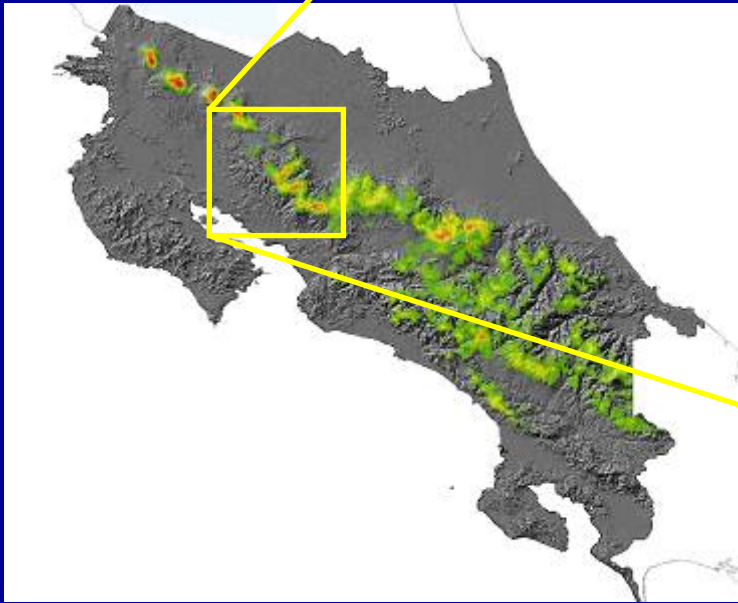
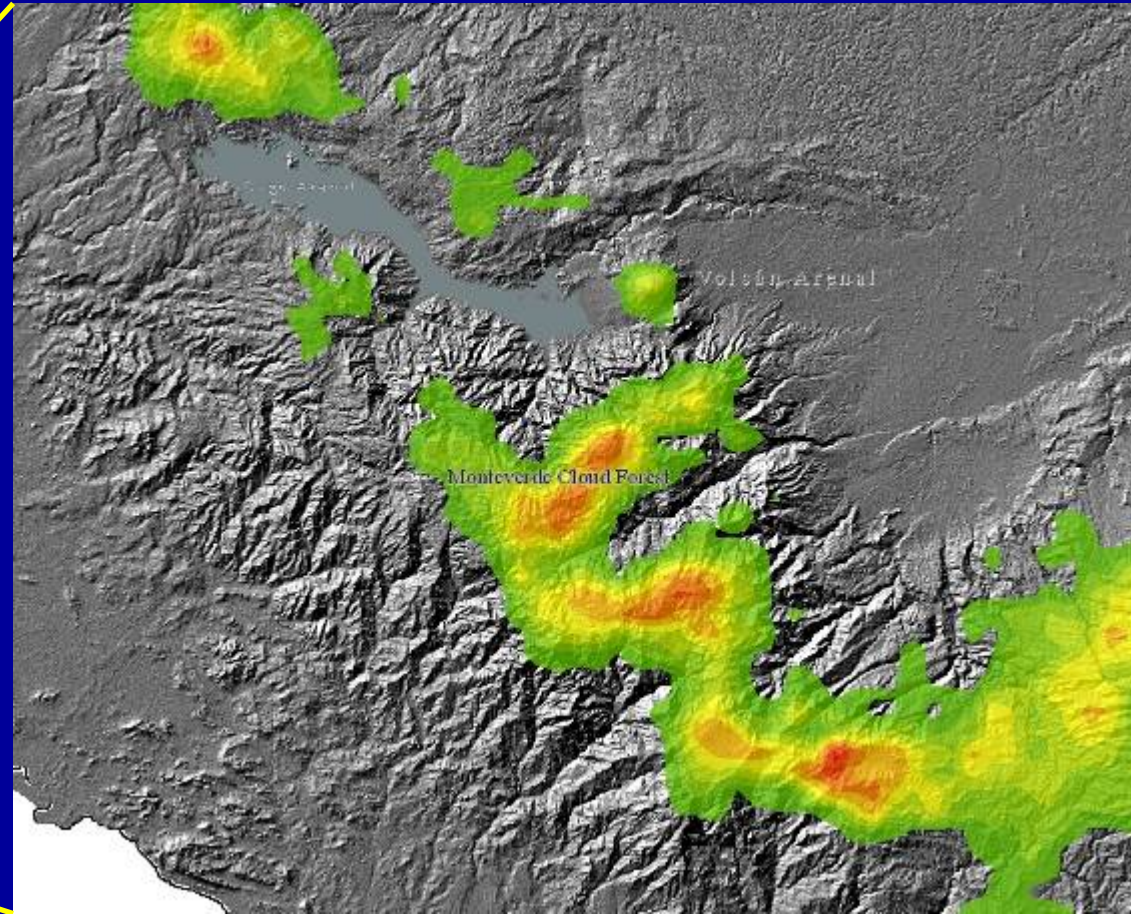




Decision Support: Cloud Forest Mapping

Cloud Base Heights/MODIS

- Cloud mask
- Cloud top temperature
- Cloud optical thickness
- Cloud effective droplet radii

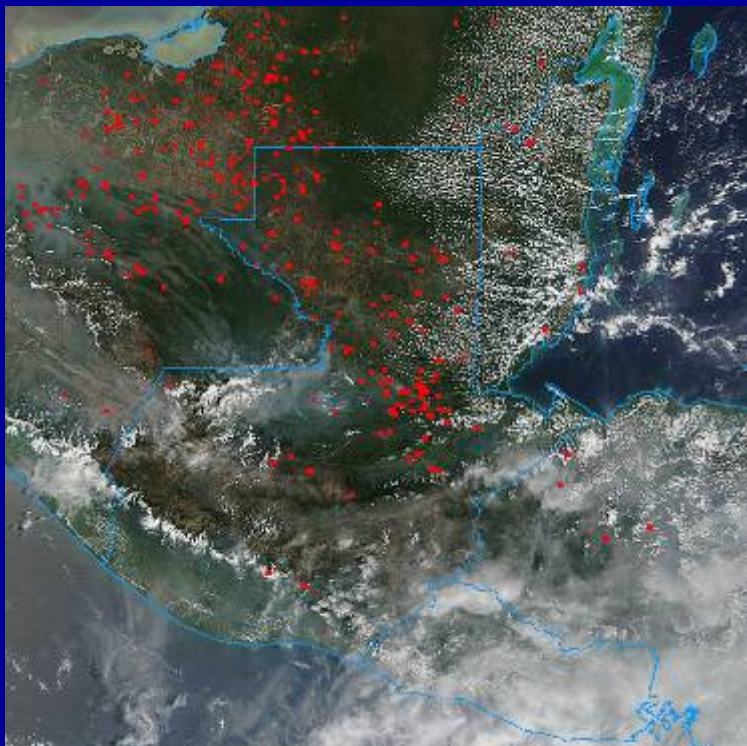




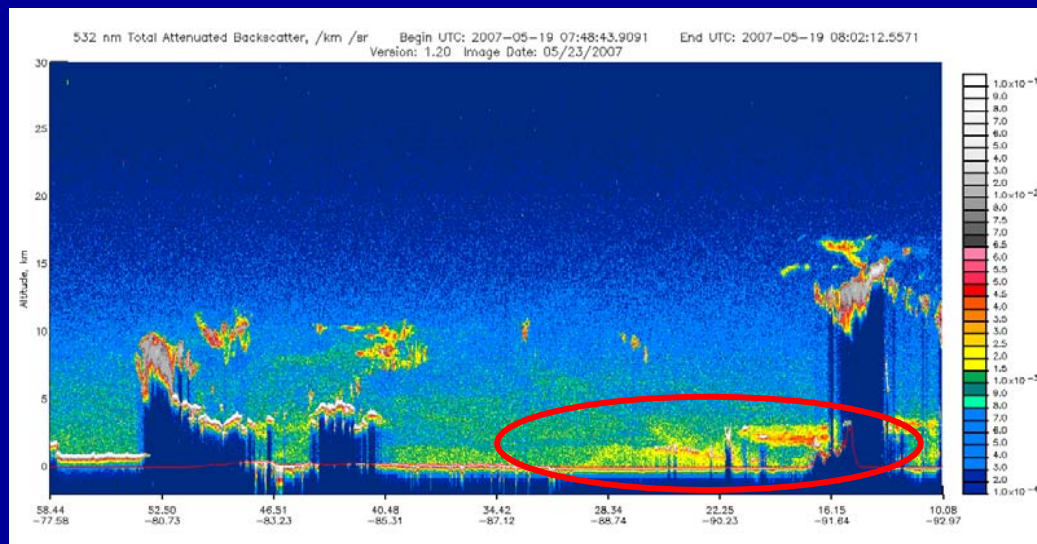
Decision Support: Smoke or Dust

May 21, 2007

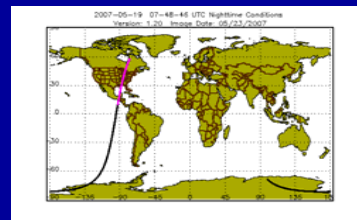
**Concern of a Toxic Cloud from Africa.
SERVIR Analysis Determined it was local
smoke from biomass burning**



**MODIS image - Guatemala
May 18, 2007**

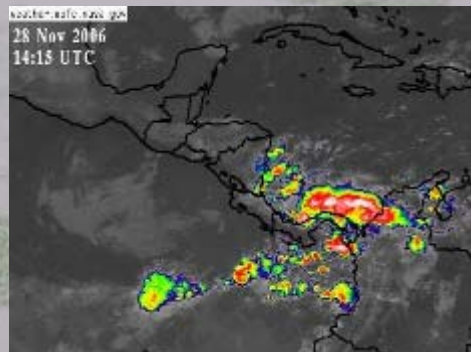
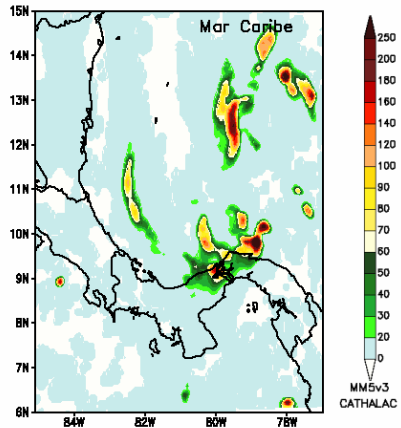


**CALIPSO image from May 18 over
Costa Rica and Nicaragua**



SERVIR Response to Flooding in Panama, November 2006

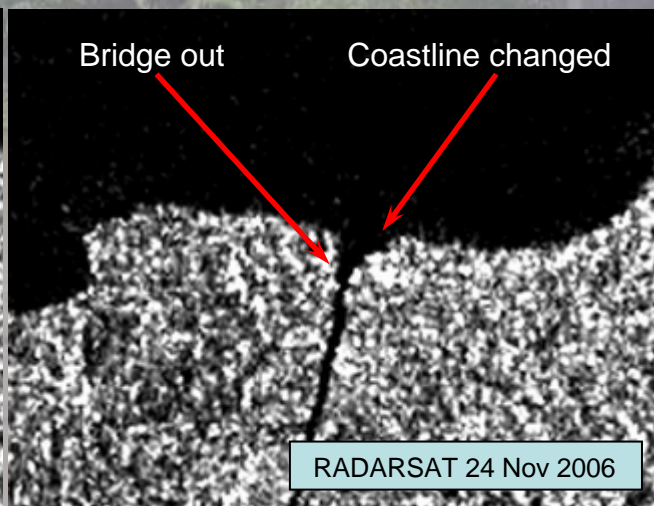
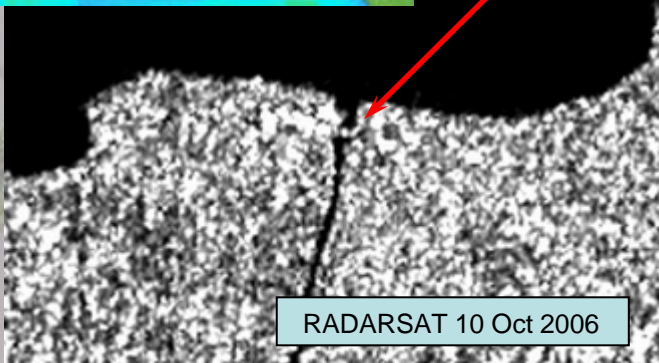
3-hour Peak Rainfall
23 Nov 2006 08UTC



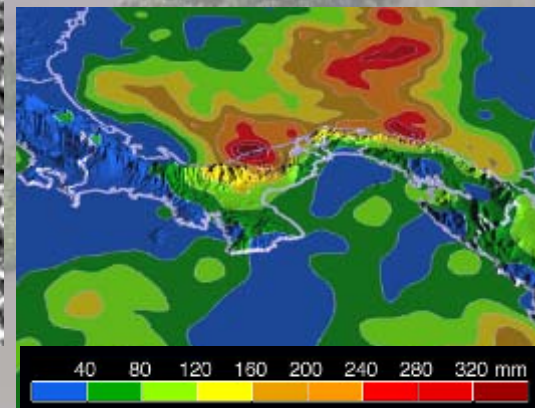
Met products such as MM5 (left), WRF, and SPoRT model outputs, along with GOES imagery (above), provide a continuous support mechanism for decision makers.



Panamanian President Martin Torrijos (left) consults with meteorologist Annette Quinn and Director of CATHALAC Emilio Sempres at the SERVIR facility in the City of Knowledge, Panama.



TRMM data (below) are used to show total rainfall accumulation over the period November 20-28, 2006.

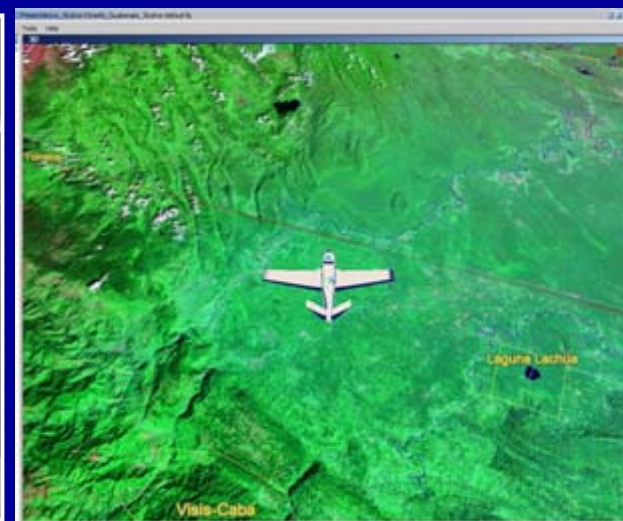


Change detection analysis (above) based on RADARSAT data near Rio Indio, Panama. These images help the Panamanian disaster response agency to focus their efforts in the areas of the flood's greatest impact.



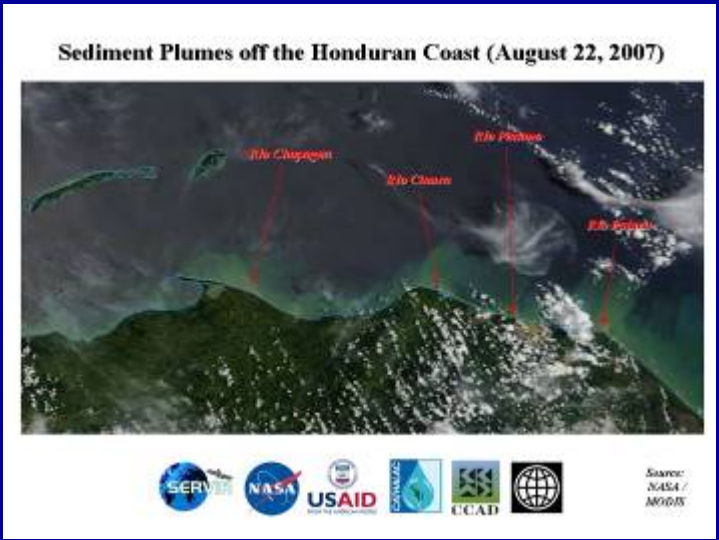
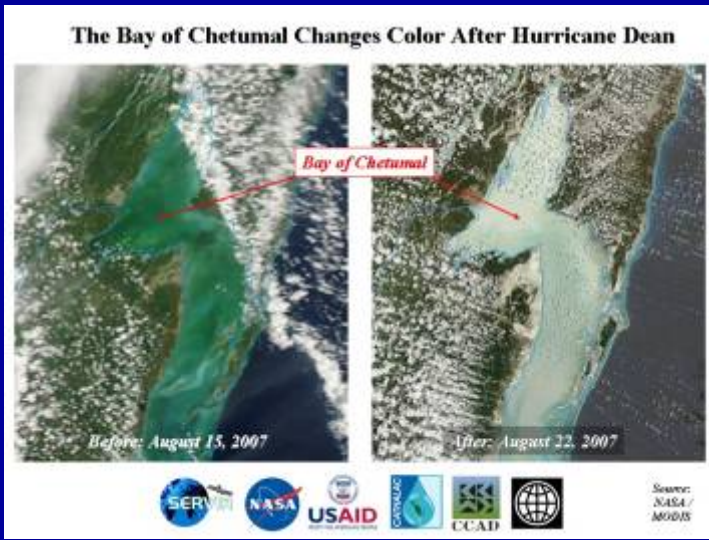
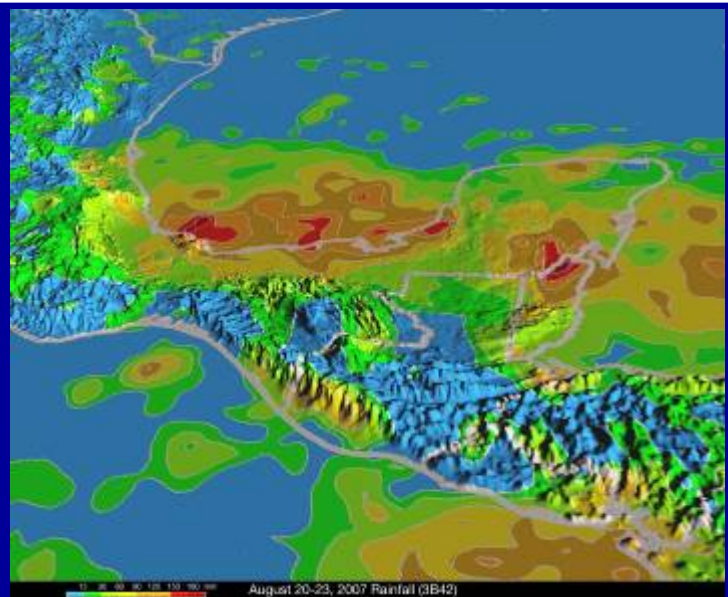
Visualization Tools for Decision Support

- **NASA and Commercial**
 - **SERVIR-Viz / NASA World Wind**
 - **Google Earth**
 - **Skyline**
- **Users**
 - **Decision Makers**
 - **Media**
 - **Educators**
 - **Students**



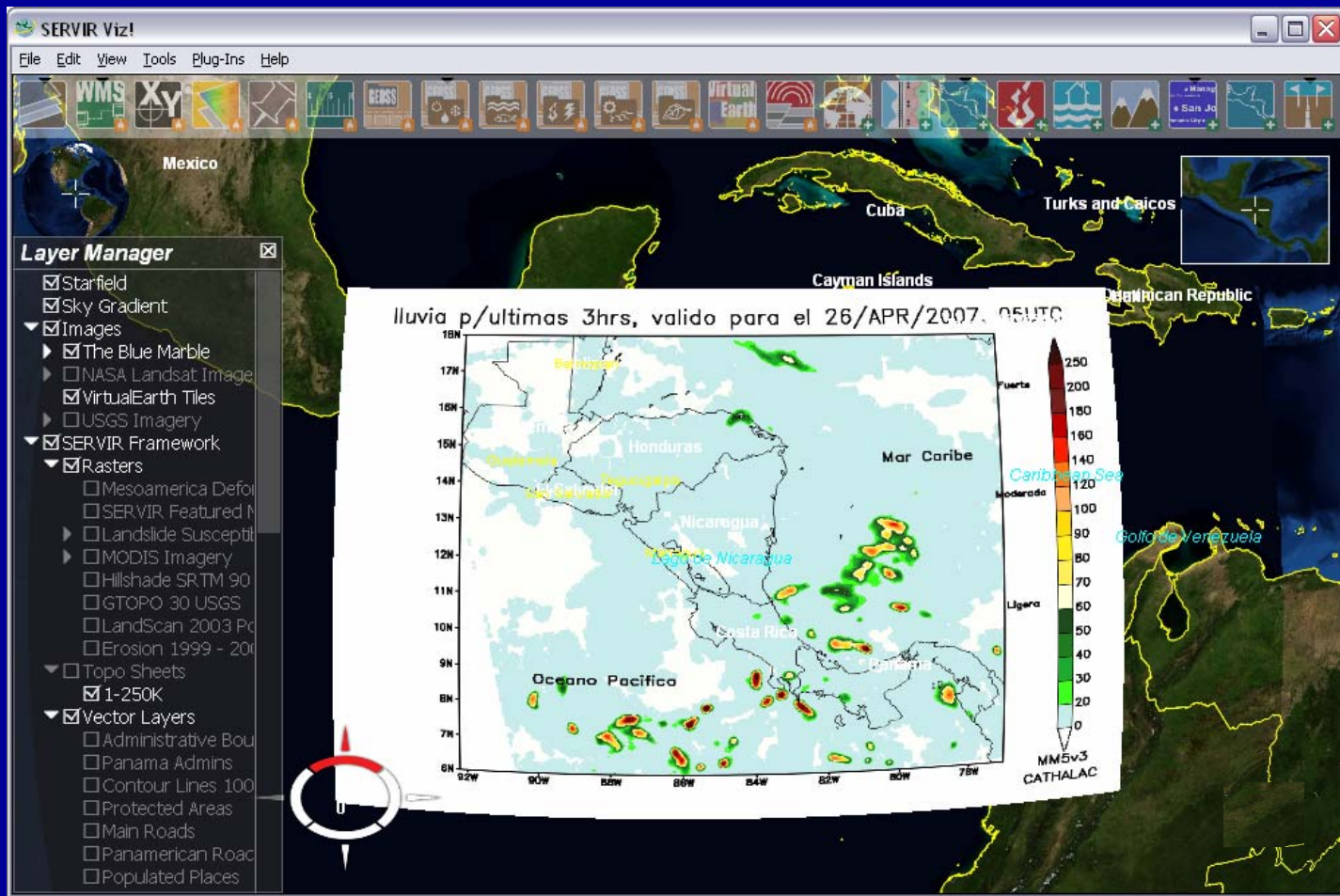


Hurricane Dean





SERVIR-Viz



Winner of the “First International Digital Globe Grand Challenge”



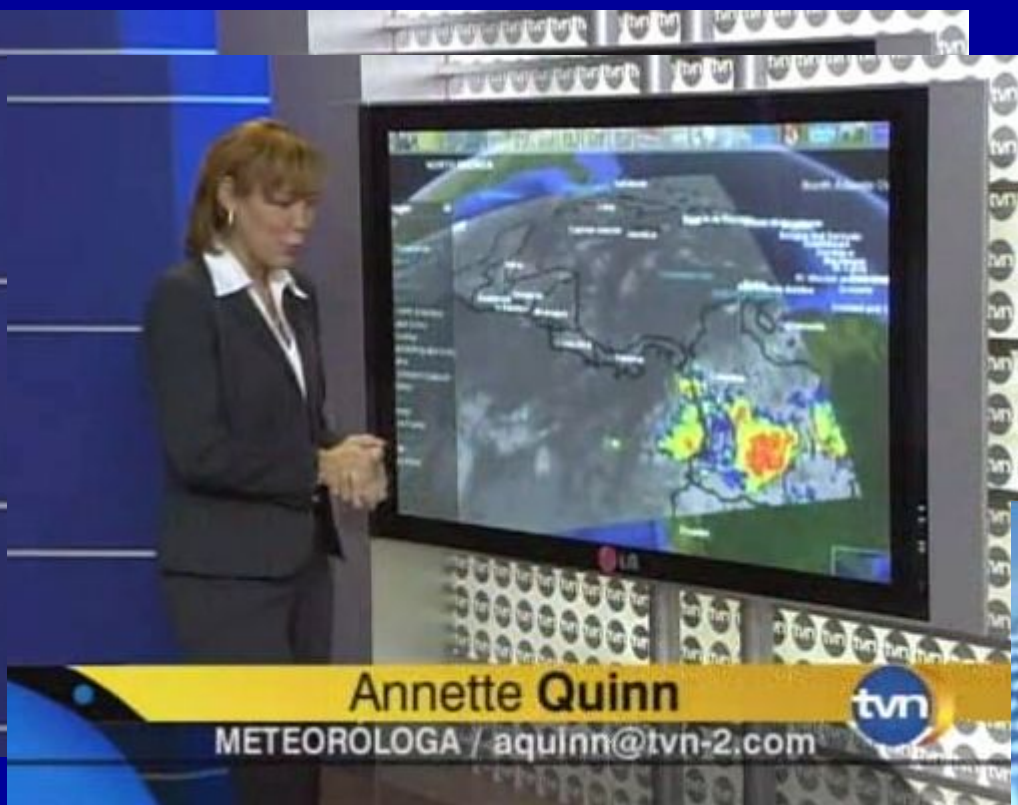


Workshops & Conferences



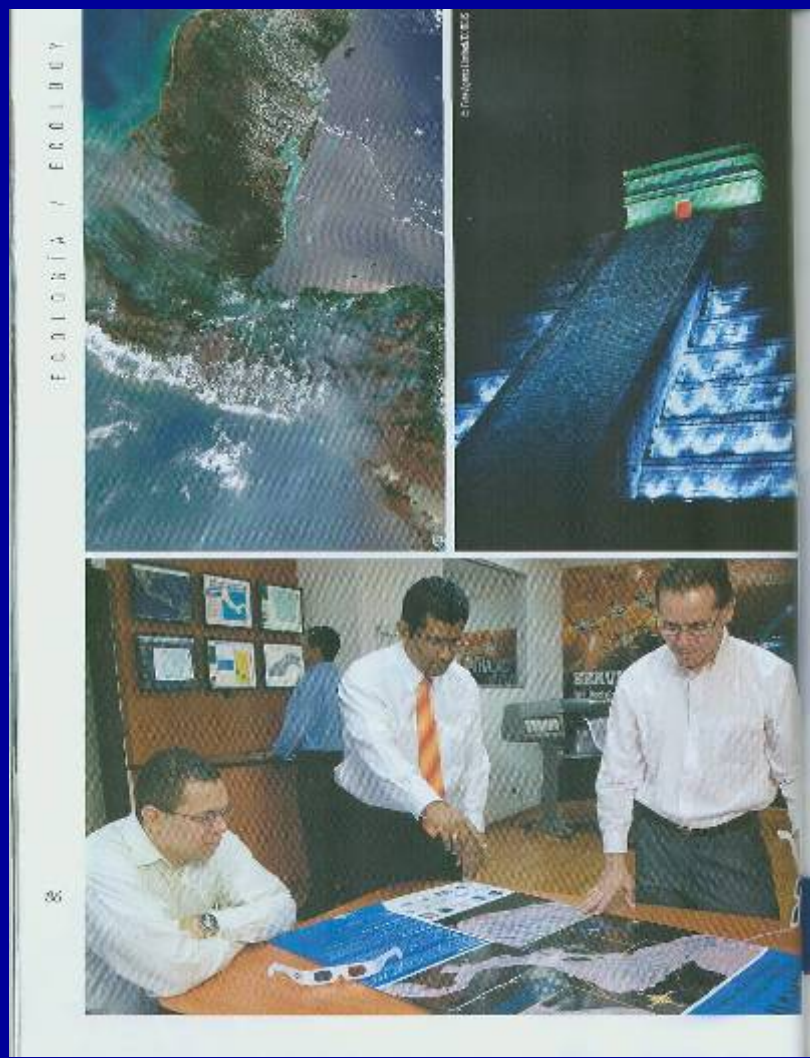
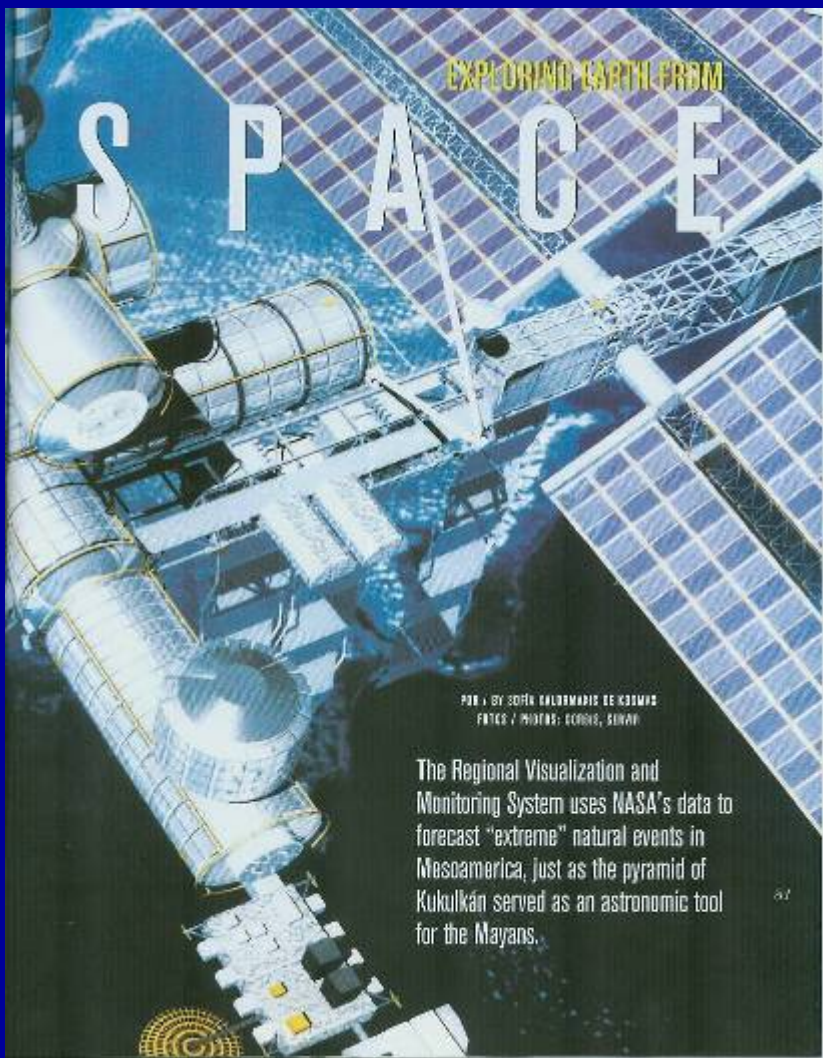


SERVIR Product Dissemination





Copa Airlines Magazine - August 2007





Earth Simulator "CA-05" at InBio Park, Costa Rica

LA NACIÓN
 San José, Costa Rica
SÁBADO
 1 de octubre del 2005
 \$200
 www.nacion.com

HOY EN EL EDITORIAL
 Perjuicio para el país
 Las ideas de modernización del aeropuerto Juan Sanamarta llevan un año de retraso. El Poder Ejecutivo ya está estudiando los planes de construcción de la obra.

Deportes: Beckenbauer vendría al país si Selección se clasifica

Desde el aire 10:15 a.m. **UNO CAMILO** SANTA FE DE ANTIOQUIA, COLOMBIA

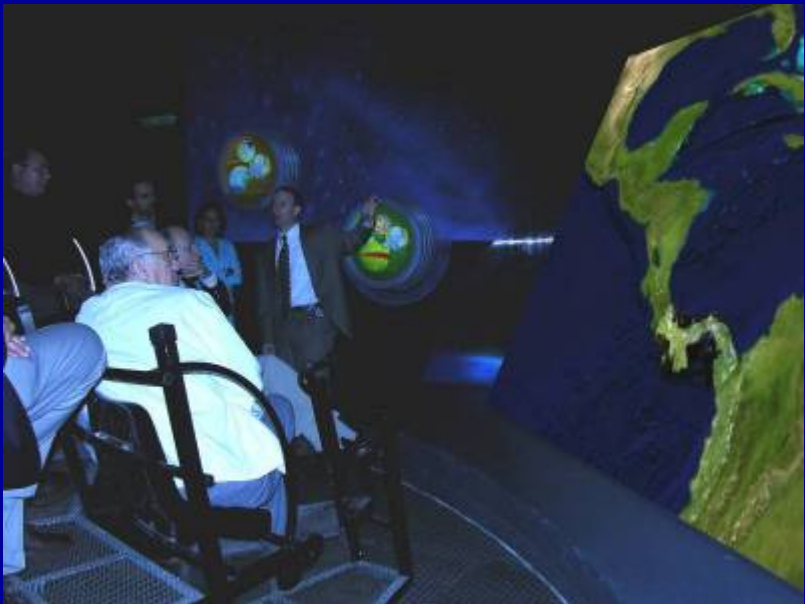


EL PAÍS P. 12
Vecinos deben unos €30.500 millones a municipios
 Guácimo con la mayor morosidad; Flores con la menor

viva:

Manzanero quiere grabar con Editus
Aquí. Compositor mexicano vendrá a hacer producción

Nuevo salón en el INBiotparque
 Alisson Hernández, María Laura Henríquez y Yordani Cuervo son orden en el al, de la escuela Vicerrectora Moya de Hojacha, Casacaca, y se acompañan a los miembros del primer equipo en realizar un subterráneo. En agosto de este año, se inaugurará desde la Base CA-05 del INBiotparque. Así se pensó de mostrar, desde las alturas, la belleza de nuestro tierra y despertar la necesidad por conservar.





GEOSS: Global Earth Observation System of Systems

SERVIR is a GEOSS Early Achievement





SERVIR Network

Implementing Agencies



Environmental Ministries



US Government



NGOs/Non-Profits



Universities

Institutes Associations



Business/Industry



Other:

Disaster Charter (CONAE), CENAT, etc.





SERVIR Expansion and the Road Ahead

- **SERVIR expansion is based on the request of countries.**
 - **Caribbean**
 - **South American Countries**
 - **Eastern Africa**
- **Working at the political level in South America and Caribbean and have obtained ministerial decision for SERVIR expansion**
- **Mainstreaming SERVIR in other sectors (e.g. agriculture)**
- **Highlight at November GEO Ministerial Meeting in South Africa**



Vice President of
El Salvador





NOAA and SERVIR

GEOS Partnership Leveraging Federal Expertise for Global Excellence

