



SERVIR: A Platform for the Support of Regional Ecosystem Services for Sustainability

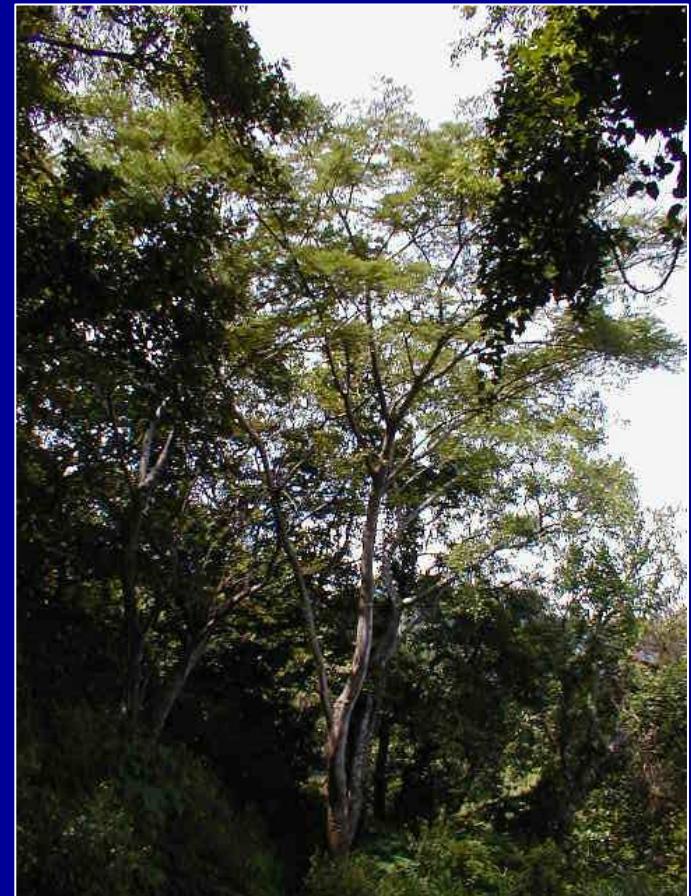
Woody Turner - NASA
The National Academies'
First Federal
Sustainability R&D Forum
October 17, 2007
(Slides by Dan Irwin)





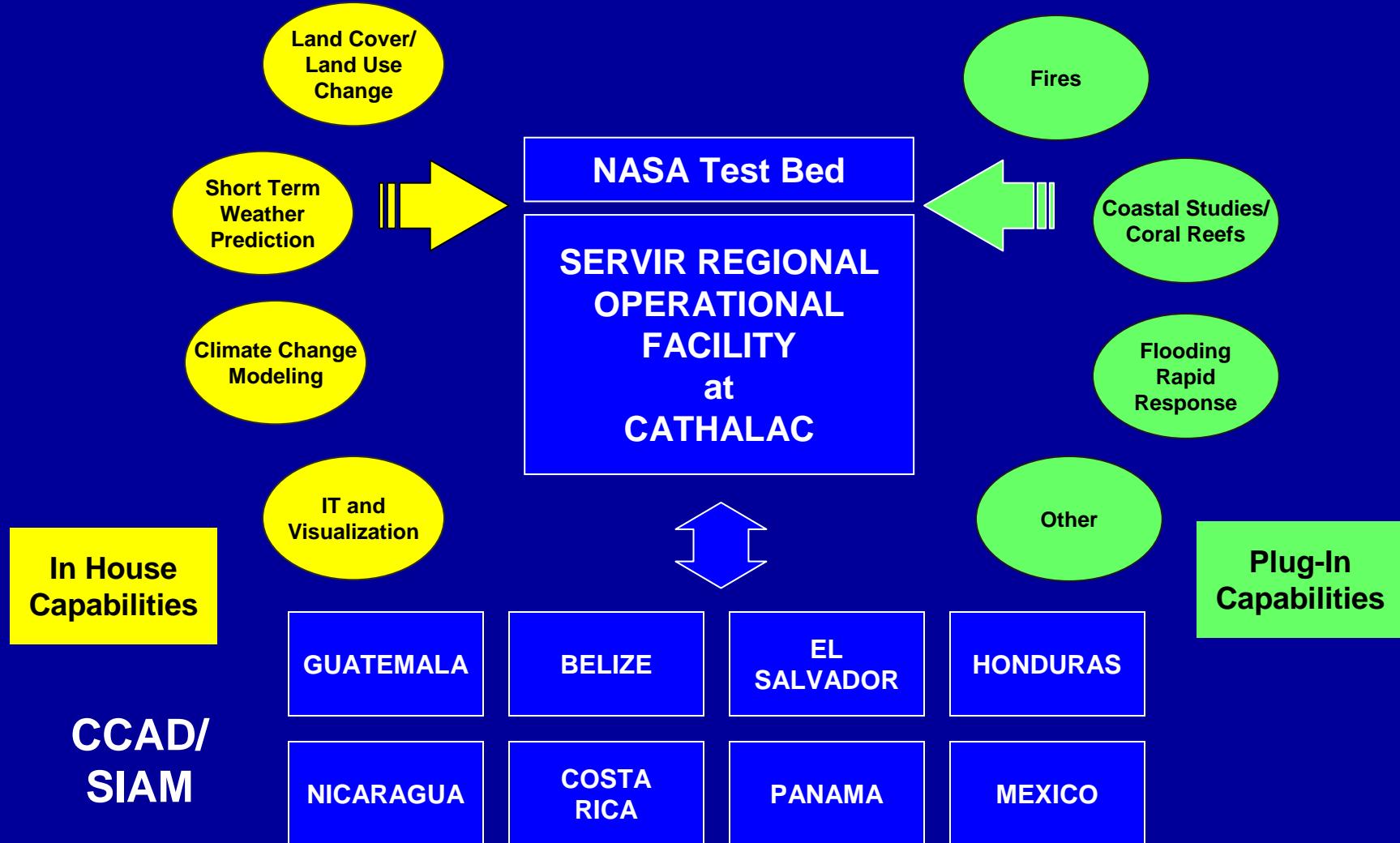
Mesoamerica's Biological Diversity

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





SERVIR Framework





SERVIR Dedication – February 3, 2005





Located @ CATHALAC in the City of Knowledge, Panama





SERVIR Network

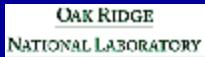
Implementing Agencies



Environmental Ministries



US Government



NGOs/Non-Profits



Universities Institutes Associations



Business/Industry



Other:

Disaster Charter (CONAE), CENAT, etc.





SERVIR Web Page: SERVIR.net

SERVIR Sistema de Monitoreo y Visualización para Mesoamérica

THURS, JUNE 28, 2007

Español English

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Su "Tienda de una sola Parada"
Apoyo en Decisiones y Visualización

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Mesoamerica Hoy, Thursday, June 28, 2007

[Ir al Visualizador de imágenes](#)
Visualiza imágenes GOES de un país específico
Construye tus propias animaciones GOES
Última imagen GOES

07

[SERVIR >>](#)

Videos de SERVIR
Pulsa sobre la imagen para ver el video.

First 21 Named Storms of 2005 Atlantic Hurricane Season

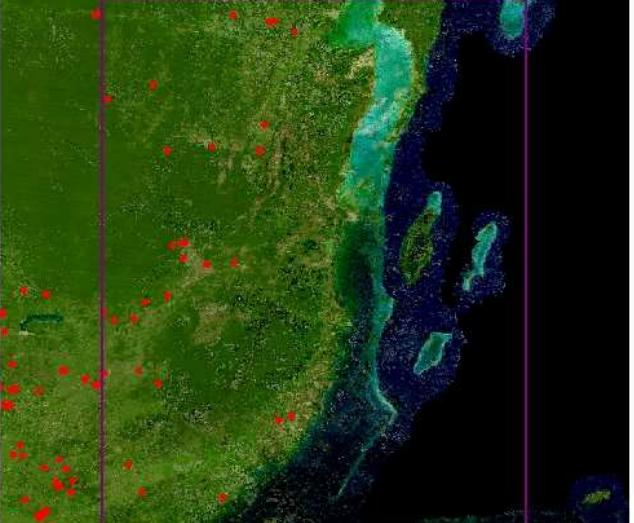


Decision Support: Fires



ALERTA DE INCENDIOS EN MESOAMÉRICA
SERVIR
Sistema de Monitoreo y Visualización para Mesoamérica

SERVIR WEB FIRE MAPPER
Correo Electrónico generado 4/23/2006 1:23:41 AM



18.425 -88.502 317.6 1.3 1.8 2006-04-22 1936 A 0

El número de incendios activos detectados/procesados en su área de interés es: 34
Región de Interés:
BT= Temperatura de brillo(Kelvin)
Date= Fecha de adquisición de MODIS
Sat= Satélite(Aqua and Terra)
Conf= Confianza
Scan= Recorrido
Track= Pista

Para ver información de incendios activos con otras coberturas SIG o para consultar la base de datos completa visite [Central-America- 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 jgw adjunto es un documento de World que contiene información de georeferenciación para la imagen jpeg. Para ver la imagen jpeg en un SIG local, grabe el archivo jgw y jpeg con el mismo nombre (e.g., AlertaIncendio.jpg y AlertaIncendio.jgw) a un folder común.

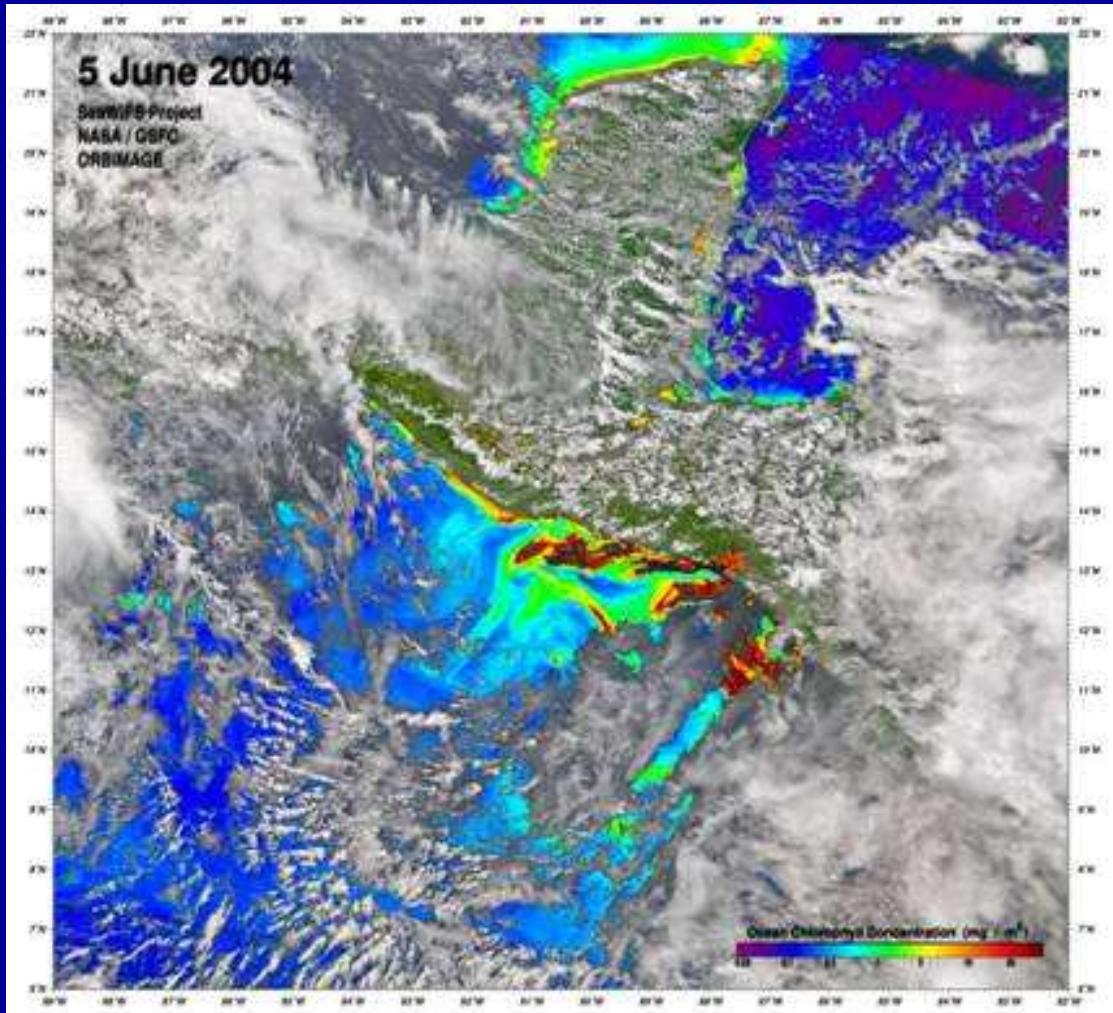
Descargo: Conservación Internacional (CI) y la Universidad de Maryland (UMD) no garantizan que los datos, la base de datos o cualquier información generada usando estos datos o la base de datos estén exentos de error. Los datos se suministran 'como están' y ni CI ni UMD hacen declaraciones que expresen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

Logos: CATHALAC, NASA, MODIS, USAID, UNIVERSITY OF MARYLAND





Decision Support: Algal Blooms

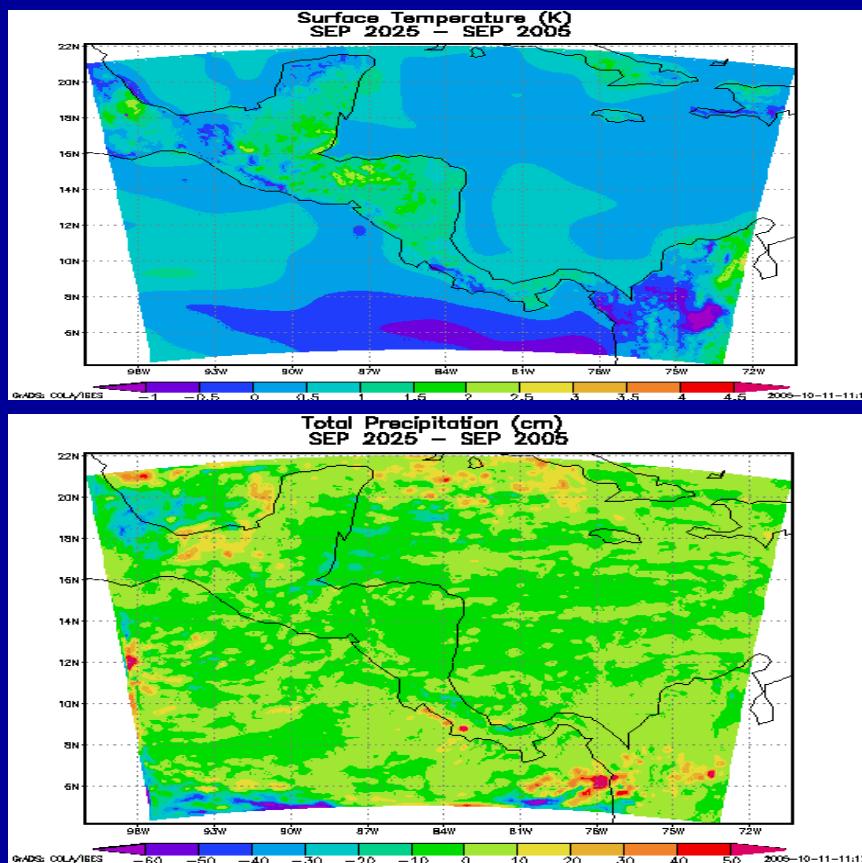




Decision Support: Climate Change Scenarios

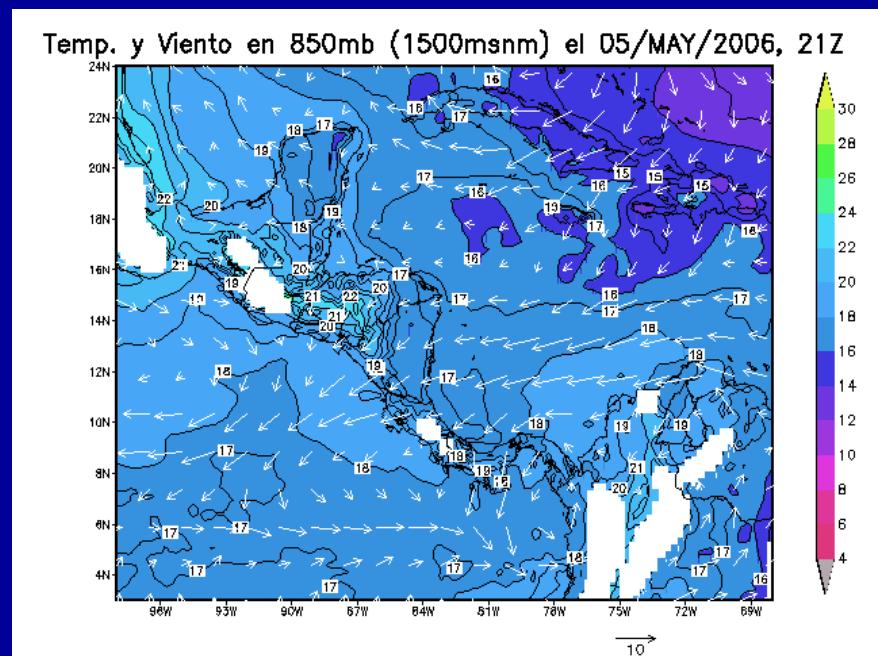
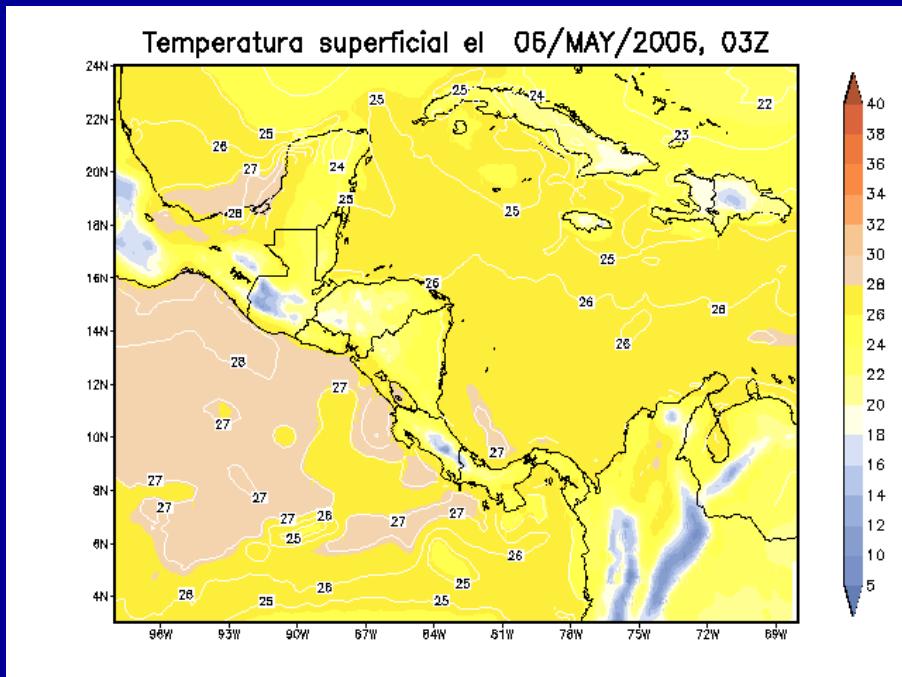
Evaluation of the effects of climate change on Central America

2005
2010
2020
2025
2050
2100





Decision Support: Short Term Weather Prediction

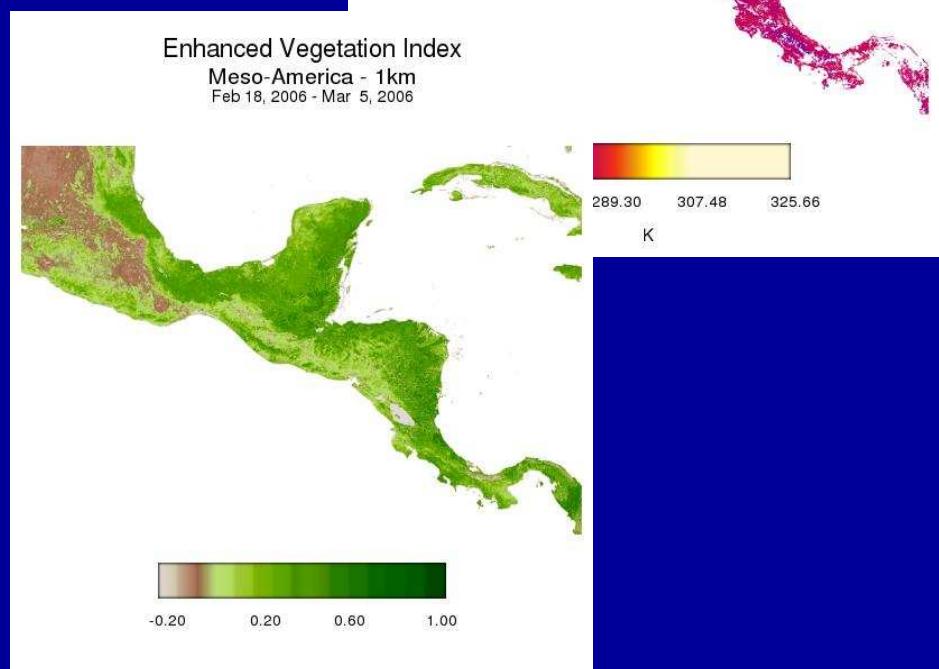
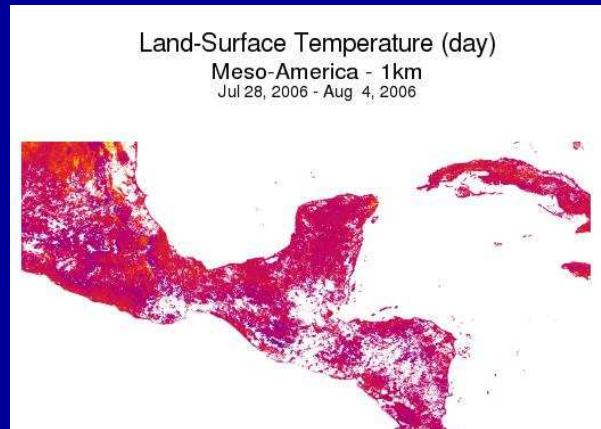




Decision Support: Ecological Forecasting

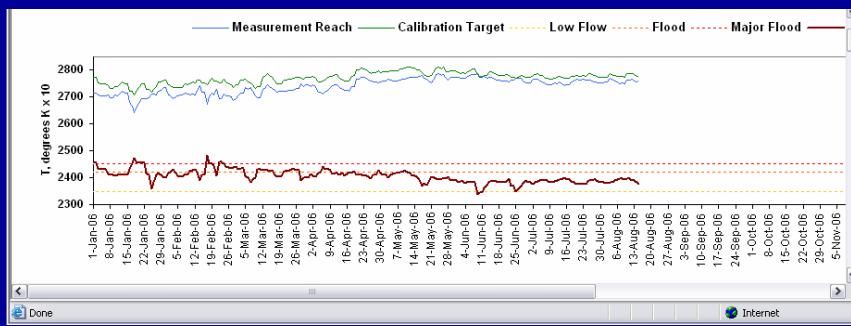
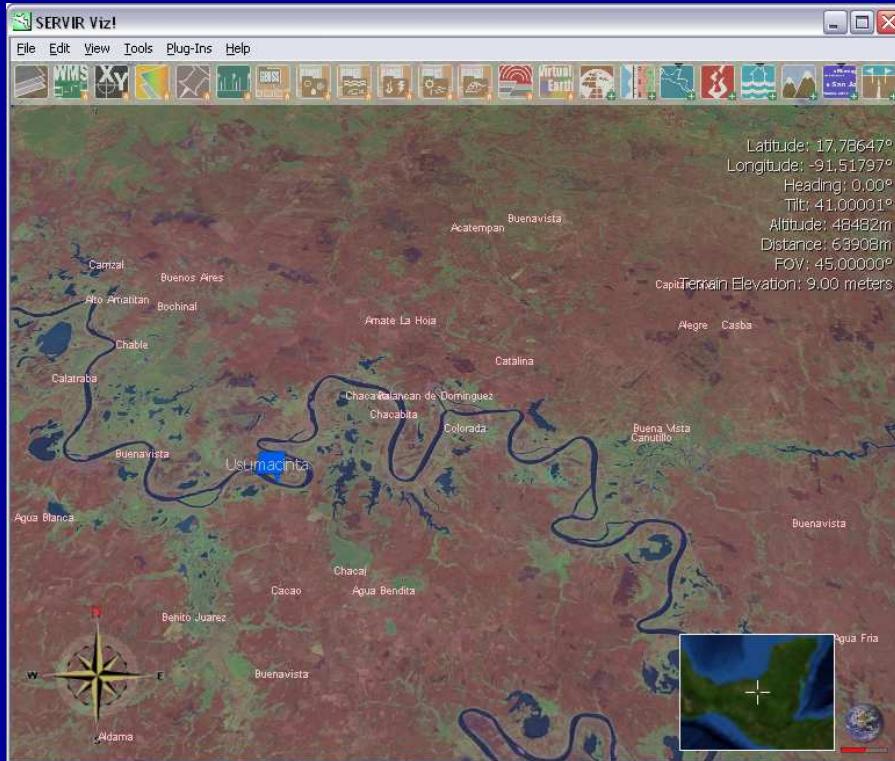
Terrestrial Observation & Prediction

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



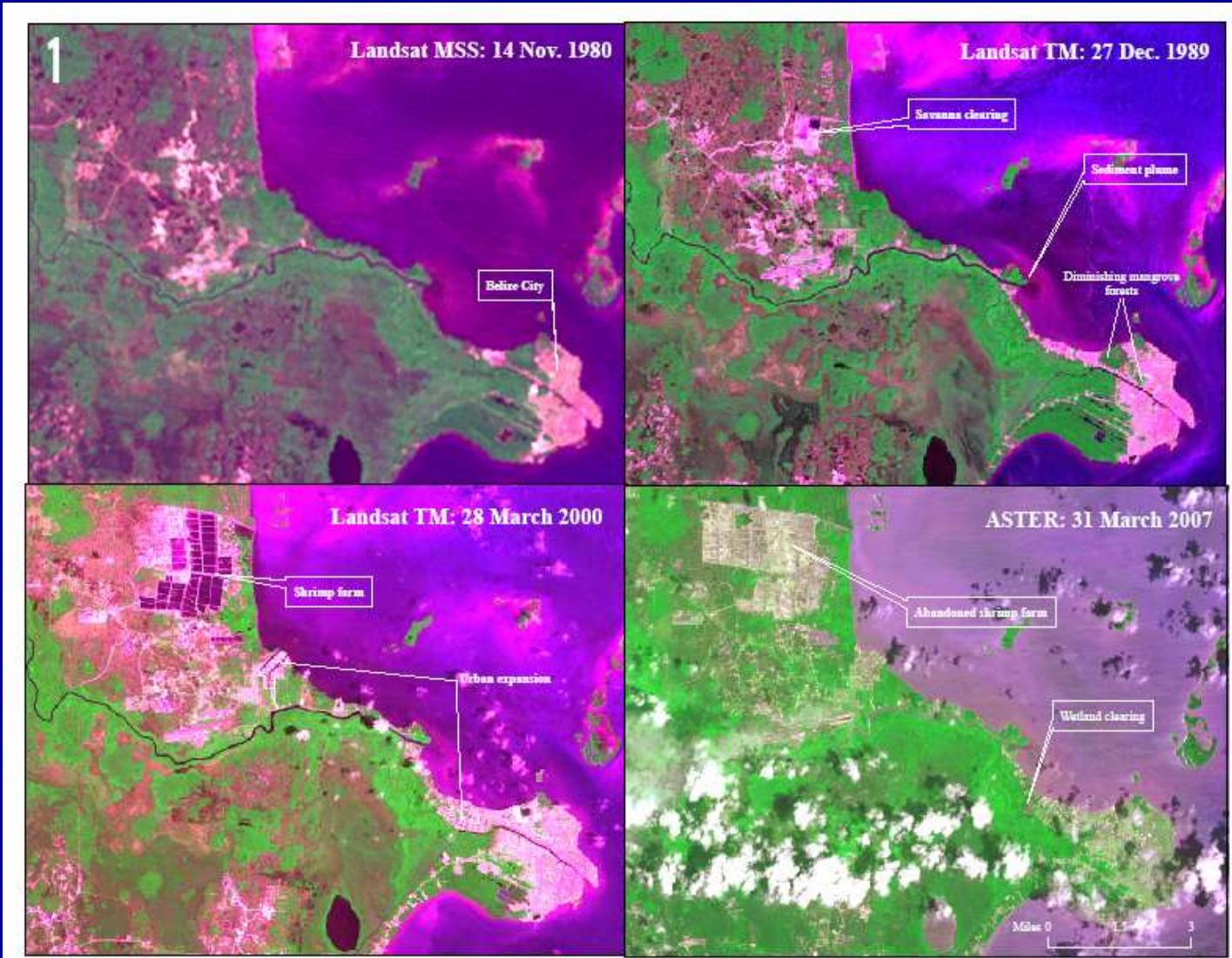


Decision Support: Flood Observatory





Decision Support: Land Cover Change





Decision Support: Cultural Patrimony



Courtesy:
San Bartolo Project

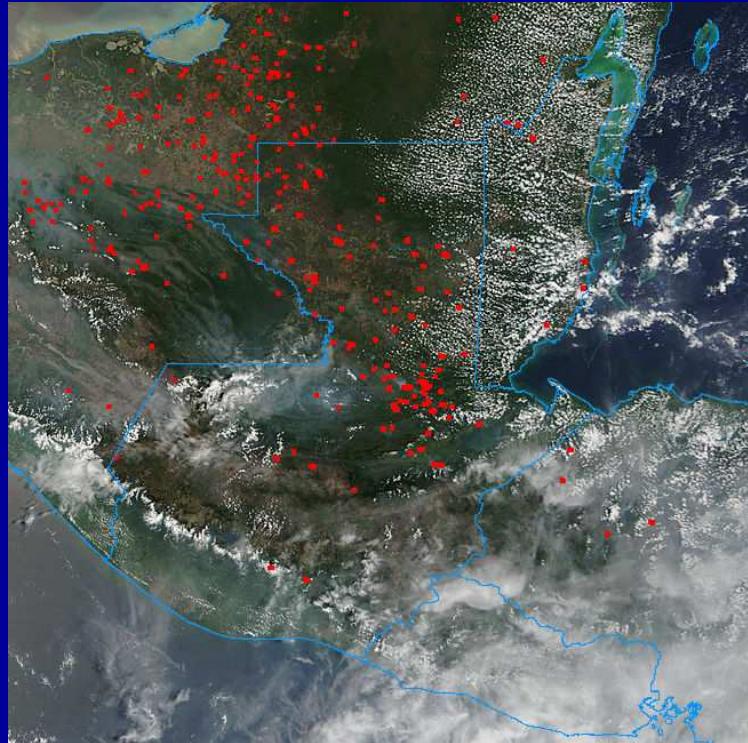




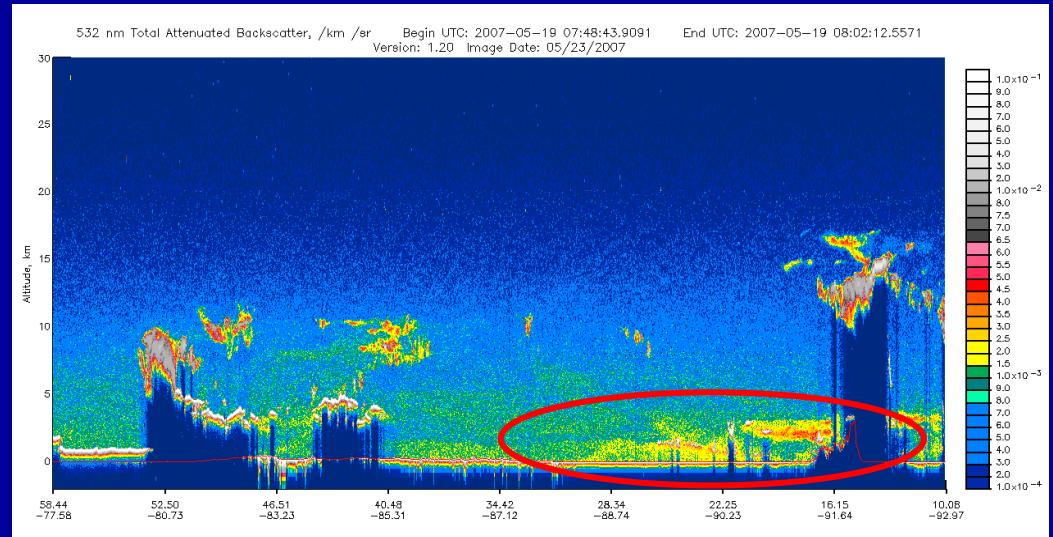
Decision Support: Smoke or Dust

May 21, 2007

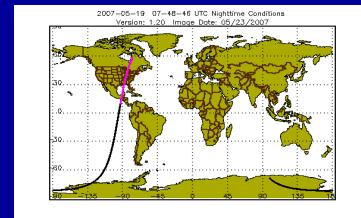
Concern of a Toxic Cloud from Africa.
SERVIR Analysis Determined it was local
smoke from biomass burning



MODIS image - Guatemala
May 18, 2007

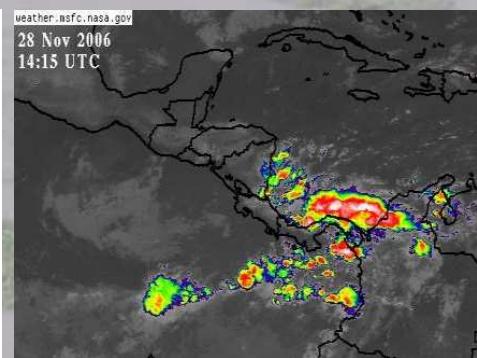
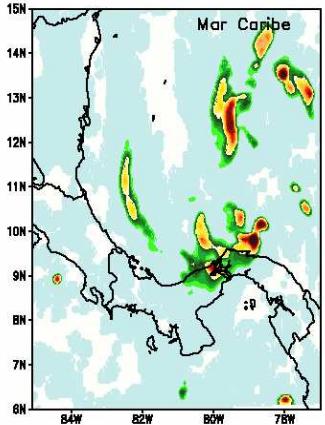


CALIPSO image from May 18 over
Costa Rica and Nicaragua

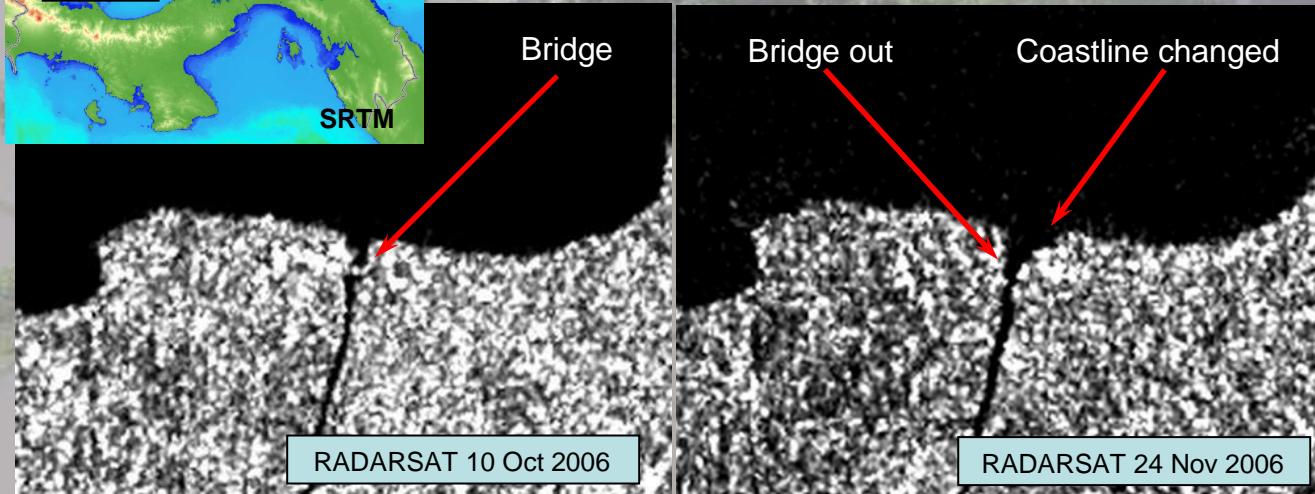
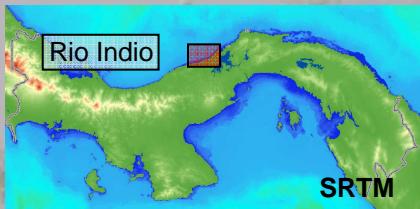


SERVIR Response to Flooding in Panama, November 2006

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.

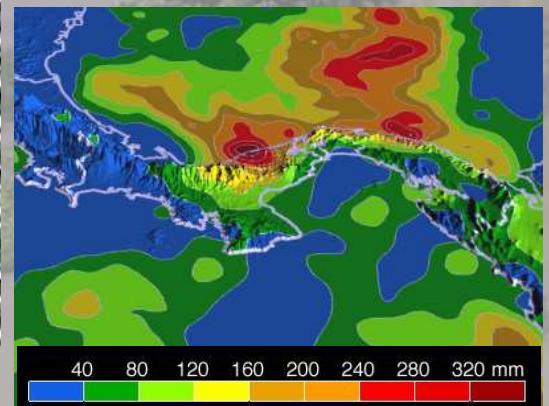


Change detection analysis (above) based on RADARSAT data near Rio Indio, Panama. These images help the Panamanian disaster response agency to focus their efforts in the areas of the flood's greatest impact.



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

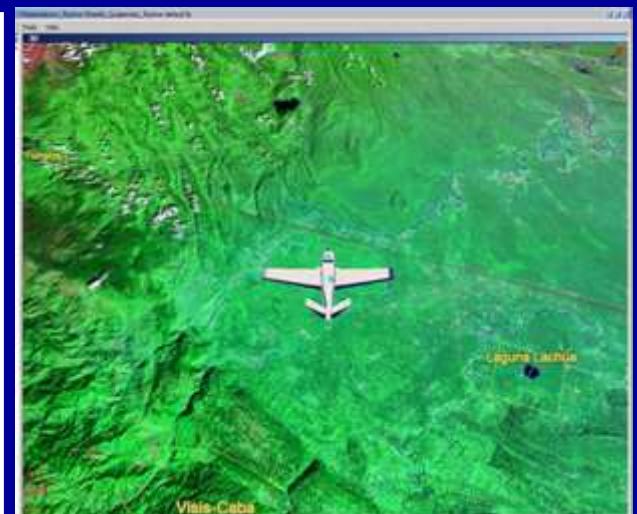
TRMM data (below) are used to show total rainfall accumulation over the period November 20-28, 2006.





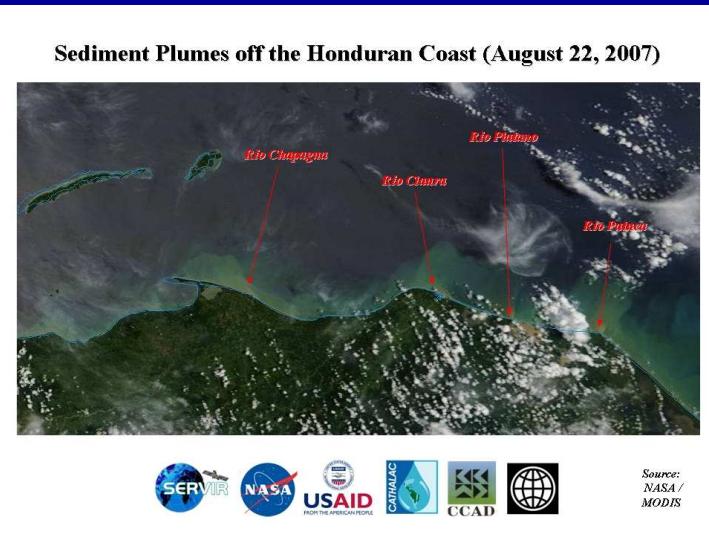
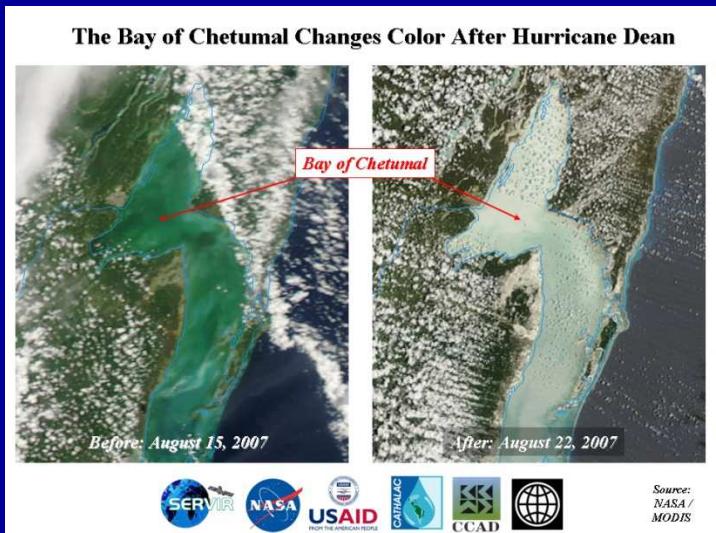
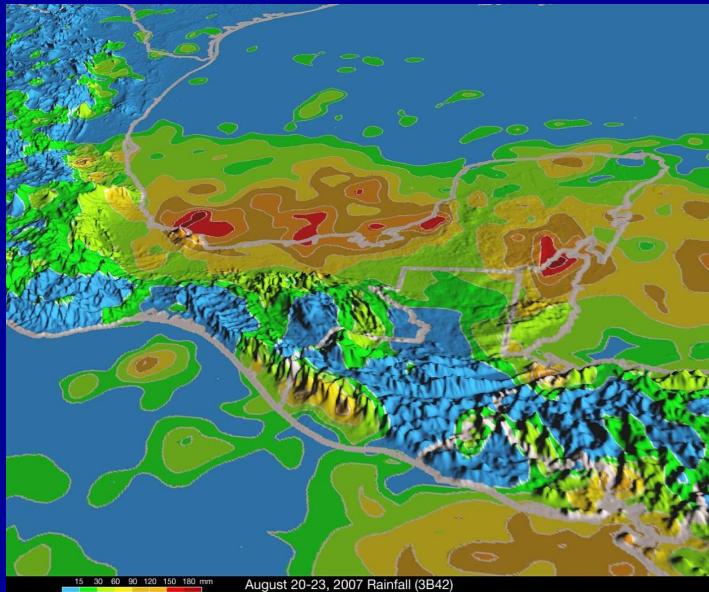
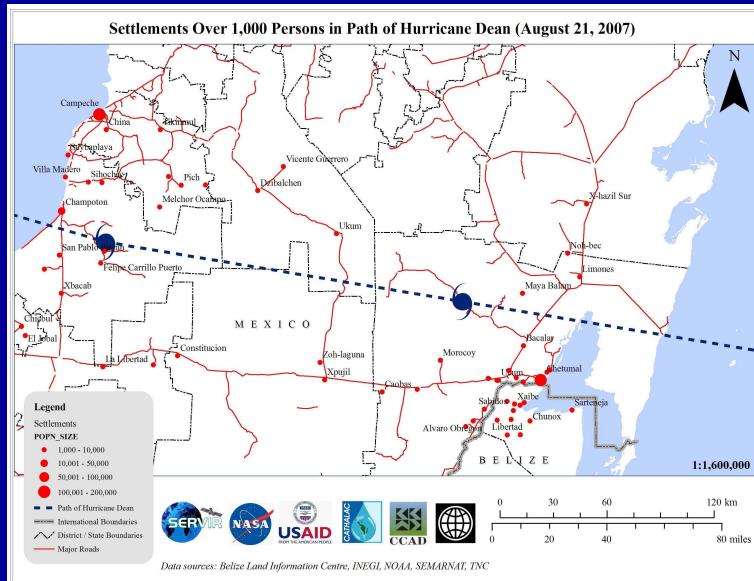
Visualization Tools for Decision Support

- **NASA and Commercial**
 - SERVIR-Viz / NASA World Wind
 - Winner of the “First International Digital Globe Grand Challenge”
 - Google Earth
 - Skyline
- **Users**
 - Decision Makers
 - Media
 - Educators
 - Students





Hurricane Dean



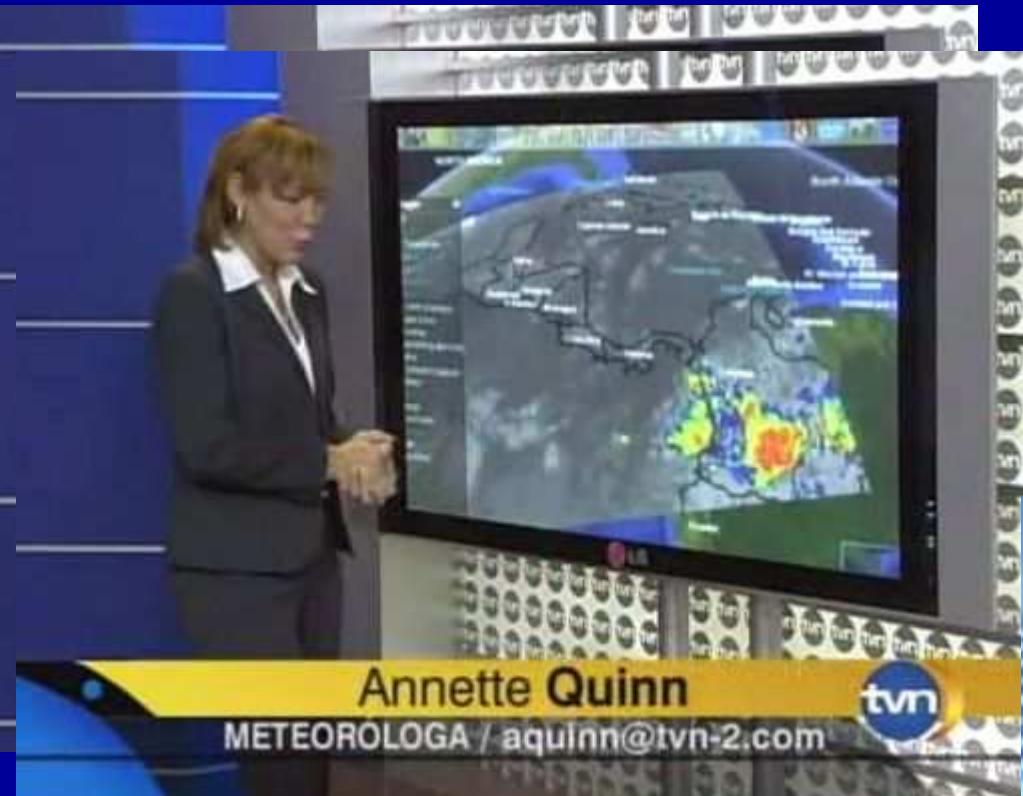


Workshops & Conferences





SERVIR Product Dissemination





GEOSS: Global Earth Observation System of Systems

SERVIR is a GEOSS Early Achievement





SERVIR Expansion and the Road Ahead

- SERVIR expansion
 - 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





Gracias

