



CATHALAC's Regional Work on Adaptation to Climate Variability and Change

**Emilio Sempris
Director
CATHALAC**

**Latin American Regional Workshop on
Adaptación, Perú. April 18-20, 2006**



City of Knowledge Complex



CATHALAC
801 City of Knowledge,
Clayton, Ancon,
Panama.





Regional Work on Adaptation to Climate Variability and Change

- Capacity Building for State II Adaptation to Climate Change in Central American Mexico and Cuba.
- Regional Visualization and Monitoring System (SERVIR).
- Regional Training Facility



Avance de las Capacidades para la Etapa II de Adaptación al Cambio Climático en Centroamérica, México y Cuba



- Costa Rica
- Cuba
- El Salvador
- Guatemala
- Honduras
- México
- Nicaragua
- Panamá



Capacity Building for Stage II Adaptation to Climate Change in Central America Mexico and Cuba



GEF

- **Participating Countries:** Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama;
- **GEF Funding + Swiss Gov:** 3.2 M USD, (UNFCCC-NAI eligibility for Enabling Activities)
- **Duration:** 3 years
- **Implementing Agency:** UNDP
- **Systems addressed:** Agriculture, Water Resources, Human Health, Forest, Livelihood, and Coastal Zones.





UNFCCC Background

- Initial Guidance from the COP on Adaptation and Governmental Support:
 - Decision 11/CP.1 on Stage II Adaptation: “Measures, including further capacity building which may be taken to prepare for adaptation as envisaged in Article 4.1(e)”;
 - Decision 2/CP.4 “.....to strengthen climate change regional centers of excellence.”
 - UNDP-GEF NCSP Workshops 1999-2002
 - Ministerial endorsement in 2001-2002;
- Builds upon first generation of I,V&A assessments under the UNFCCC-NC process.



GEF





Institutional Arrangement

- **National UNFCCC Focal Points**
 - Cuba: Meteorology Institute of the MSTE
 - Mexico: INE
 - Guatemala: MARN's CCU
 - Honduras: MNRE
 - El Salvador: MARN's CCU
 - Nicaragua: MARN's CCO
 - Costa Rica: National Meteorological Institute
 - Panama: ANAM' CCTU
- **At the Regional & International Level**
 - CATHALAC
 - UNDP-RBLAC & UNDP-GEF NCSU



GEF





Development Objective

- The project aims to strengthen the adaptive capacity of human systems to reduce vulnerability to the impacts of climate change, including climate variability, risks and extreme events for priority systems throughout the Central America, Mexico and Cuba Region.



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Immediate Objectives and Outputs



GEF

- **Immediate Objective 1**

- To strengthen systemic, institutional and individual capacity of stakeholders to further assess vulnerability and adaptation to the impacts of climate change, including climate variability risks and extreme events, in priority systems at the regional, national and local level.

- **Outputs**

- Assessment of vulnerability to current climate variations for priority systems in each country;
- Assessment of vulnerability to future climate for a priority system in each country;
- Improved knowledge of current and future vulnerability shared and disseminated widely.





Immediate Objectives and Outputs

- **Immediate Objective 2**

- To strengthen systemic, institutional and individual capacity of stakeholders to develop strategies and to implement policies and measures to prepare for adaptation at the regional, national and local level.

- **Outputs**

- Adaptation strategy identified, with innovative policies and measures evaluated and prioritized for each priority system;
- National plans with recommendations to incorporate adaptation into development. Improved knowledge of current and future vulnerability shared and disseminated widely;
- Improved knowledge of national plan for adaptation shared and disseminated widely.

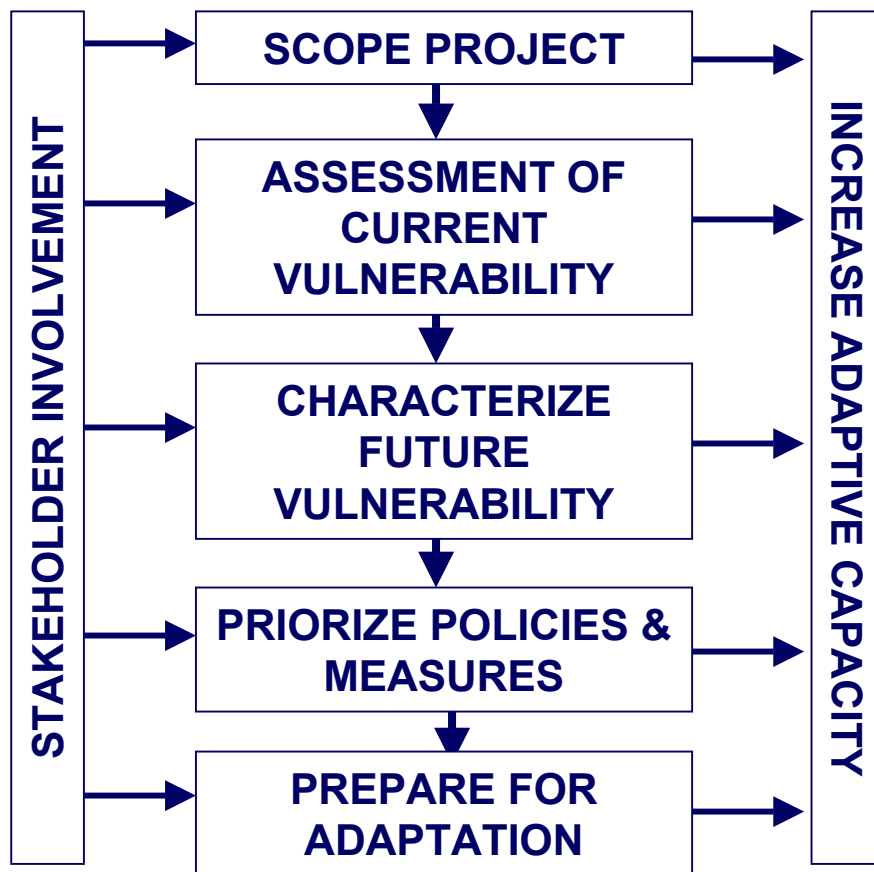


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Project Implementation Strategy





Project Implementation Strategy

APF Technical Resources

- APF project scope and design;
- Stakeholder identification and engagement;
- Vulnerability assessment for climate adaptation;
- Assessing current climate risks;
- Assessing future climate risks;
- Socio-economic conditions and prospects;
- Measuring and enhancing adaptive capacity;
- Formulation of an adaptation strategy;
- Reviewing, monitoring and evaluating adaptation.



GEF

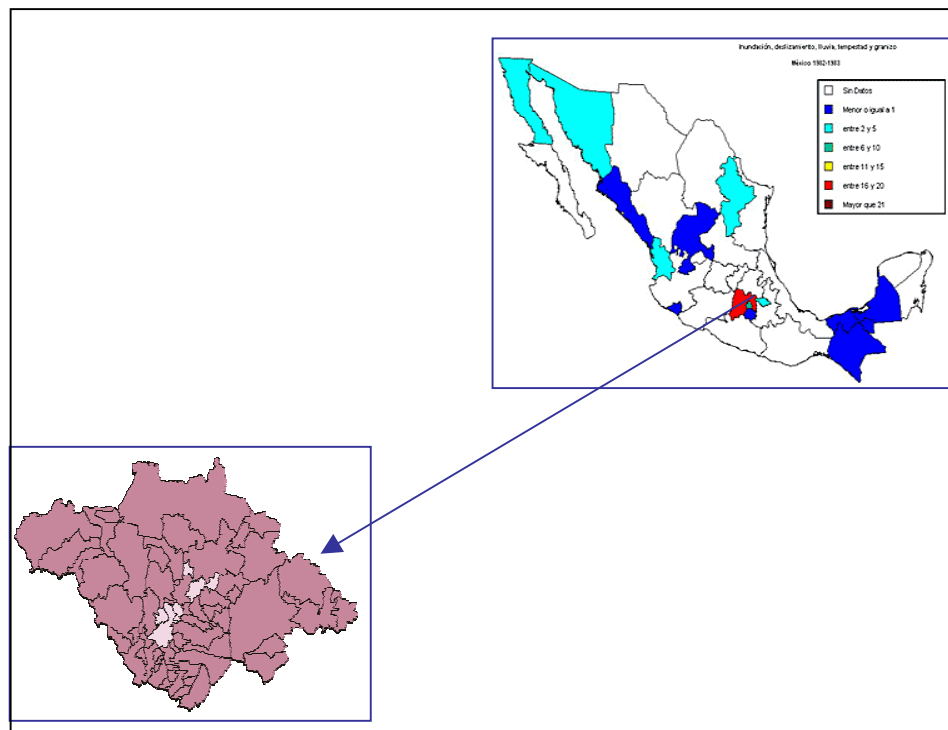




México



Vulnerability to
Climate Change in
the Water,
Agriculture, and
Forest Systems in
Tlaxcala



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Cuba

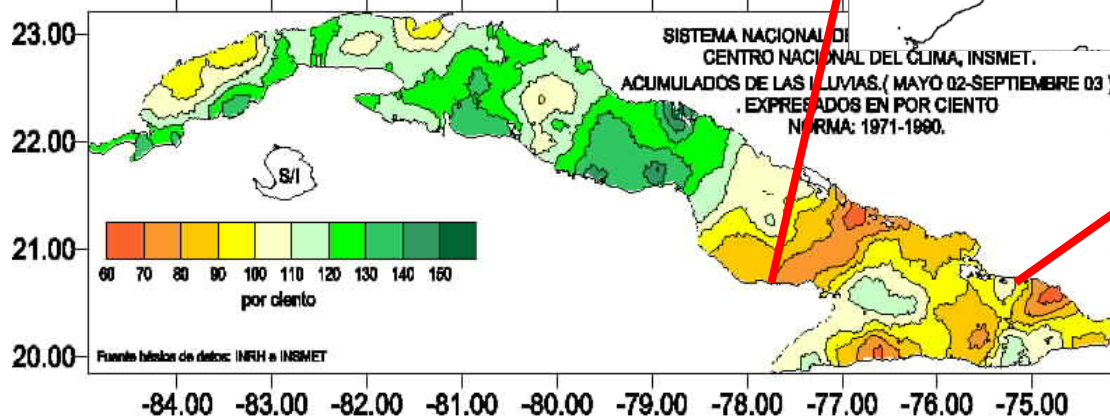
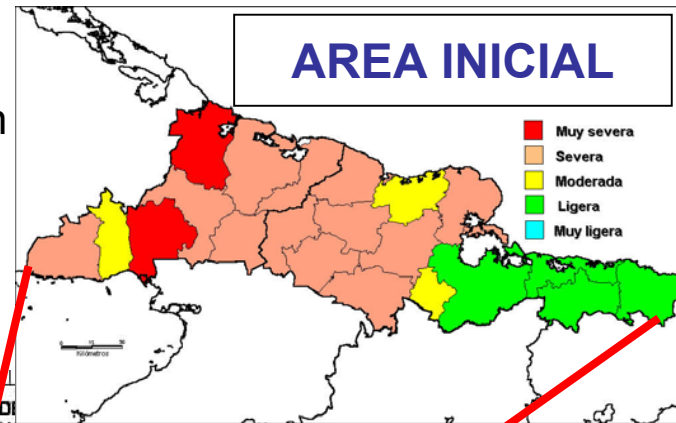


Capacity Building to respond to drought risks in Las Tunas Province, Cuba.

Coordinator: Abel Centella, Cuba

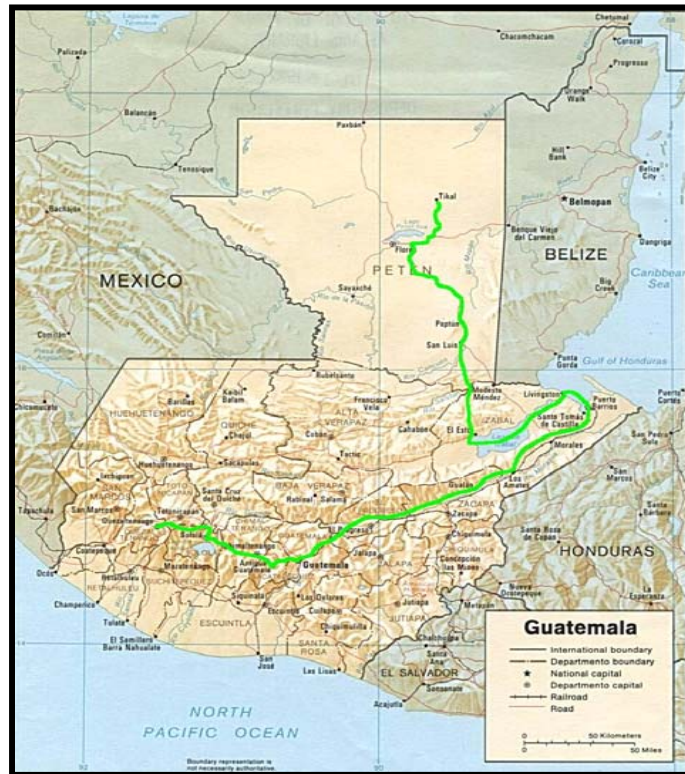


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Guatemala



Vulnerability of the Agriculture and Health Systems to climate change using the water systems as driver in the San Jose and Naranjo Watersheds

Coordinator: Carlos Mansilla

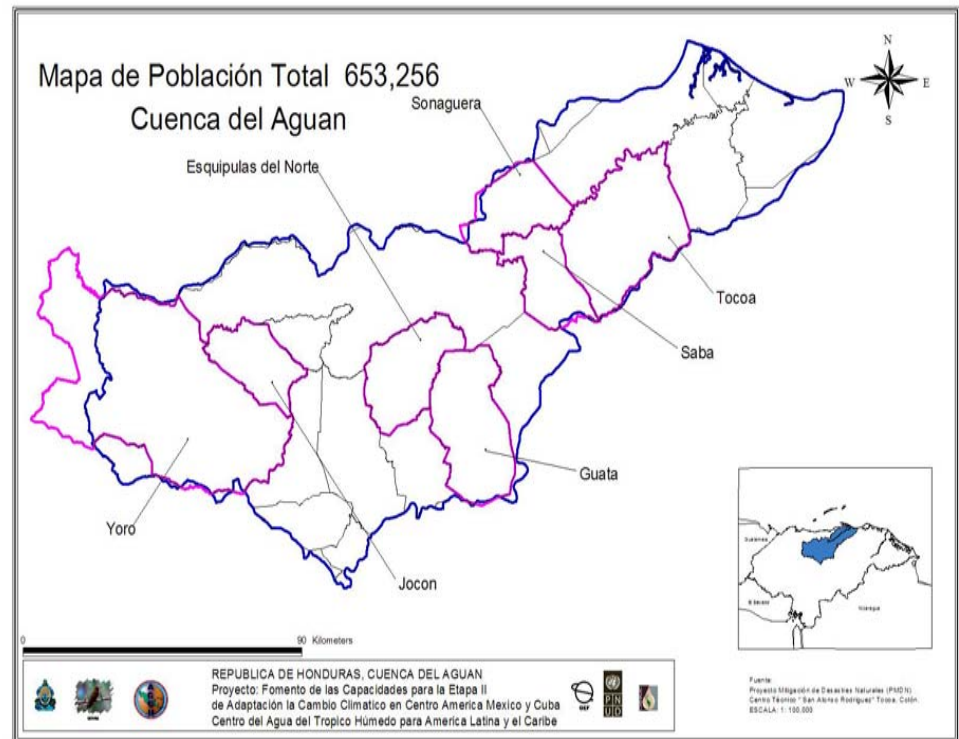


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Honduras



Vulnerability of the Agriculture and Health Systems to climate variability and change in the Upper and Mid Rio Aguan Watershed

Coordinator: Mirza Castro



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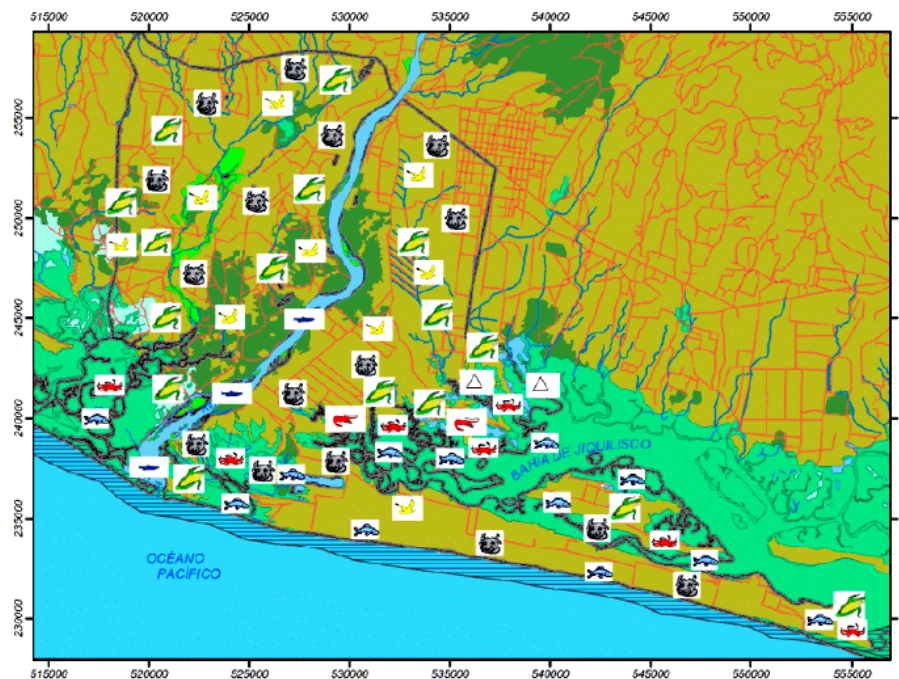




El Salvador



Climate
Vulnerability of
the Livelihood
Strategies in the
Bajo Lempa



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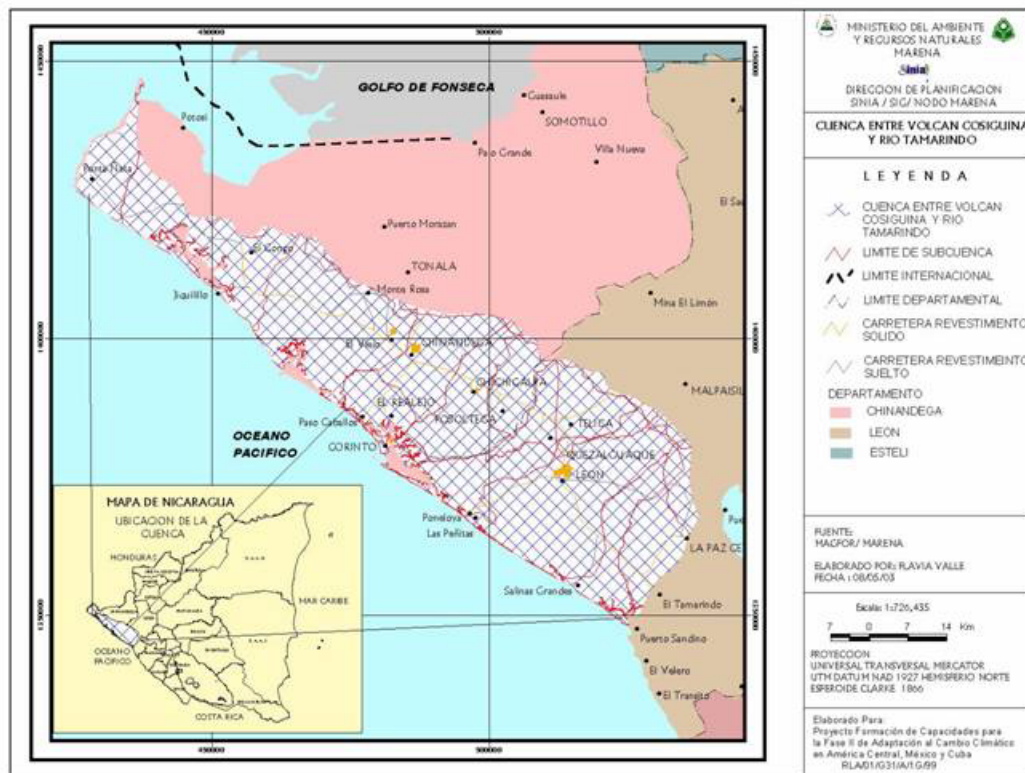




Nicaragua



Vulnerability of the Water and Agricultura Systems of Watershed No. 64 in the the Pacific of Nicaragua



GEF



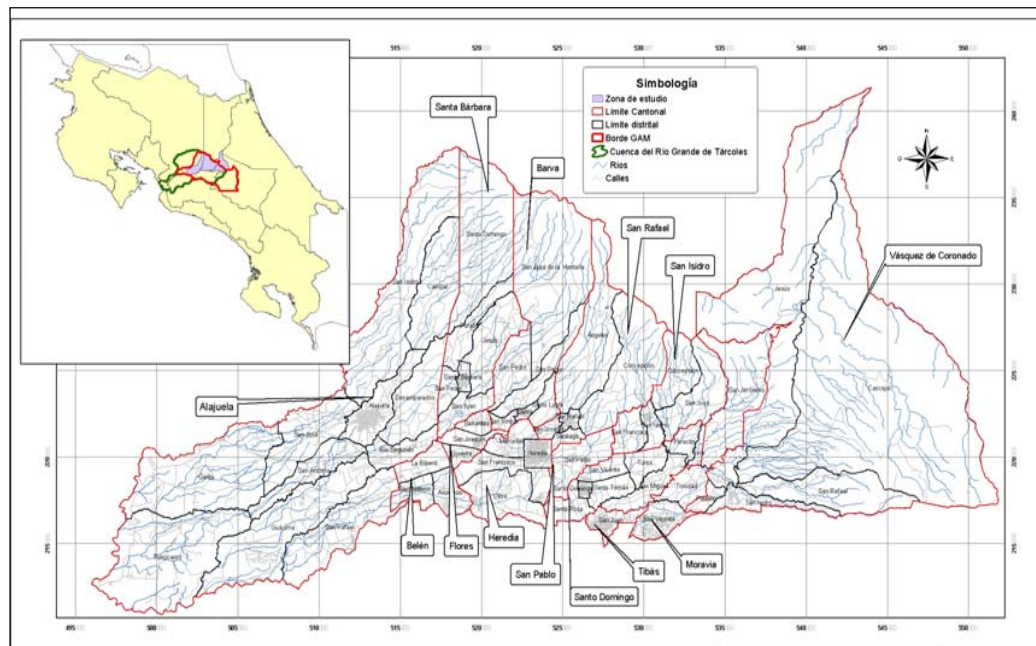


Costa Rica



Vulnerability of the Water System of the North Western zone of the Costa Rican Central Valley

Coordinator:
Roberto Villalobos

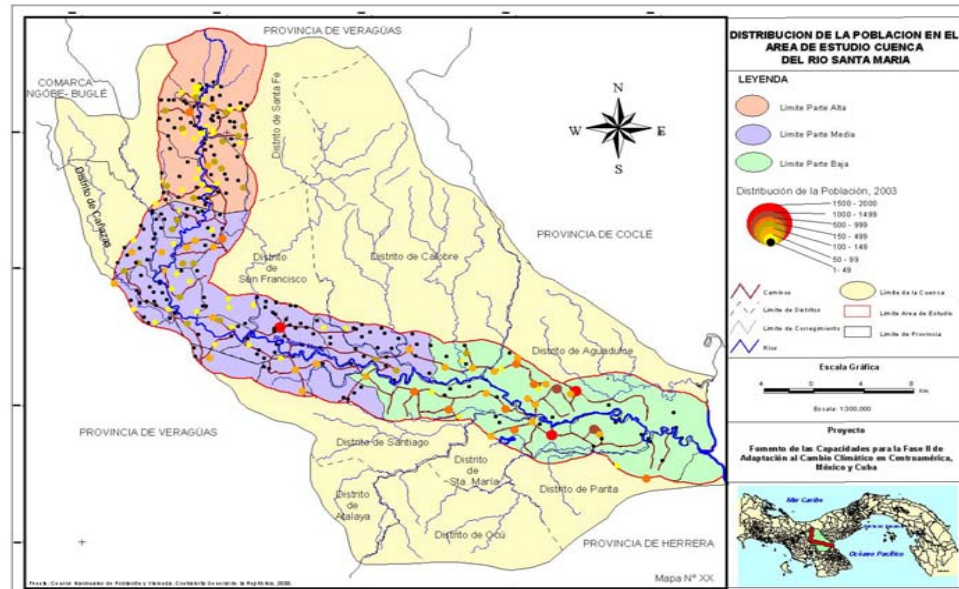




Panama



Adaptation to Climate Change in the Upper, Mid, and Lower Santa Maria River
 Coordinator: Rene Lopez



GEF



Avance de las Capacidades para la Etapa II de Adaptación al Cambio Climático en Centroamérica, México y Cuba



-  Costa Rica
-  Cuba
-  El Salvador
-  Guatemala
-  Honduras
-  México
-  Nicaragua
-  Panamá

SERVIR

Un Sistema Regional de Apoyo a las Decisiones de Siglo XXI





SERVIR's Political Background

- The Presidents of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the USA, and the Prime Minister of Belize, met at San Salvador on March 24, 2002 to announce the continuation and expansion of the Joint Central America-United States Declaration (CONCAUSA)
- The CONCAUSA Plan of Action includes:
 - To strengthen Central America's ability to prevent and manage disasters;
 - To strengthen the Central American countries' capacity to adapt to climate change and to mitigate greenhouse gas emissions;
 - To achieve greater harmonization of environmental legislation, enforcement and compliance.....
 - To attain adequate levels of biodiversity conservation by consolidating the land and maritime components of the Middle American Biological Corridor.....





Inauguración de SERVIR (03/02/05)



Herramientas y SAD's de GEOSS para MESOAMERICA

**Balance
Hídrico y
Energético**

**Clima y
Tiempo**

**Gestión de
Desastres**

Agriculture

Biodiversity

**Monitoreo
Ecosistemas**

Salud Publica

**Usos de la
Tierra**

Incendios





Infraestructura de SERVIR

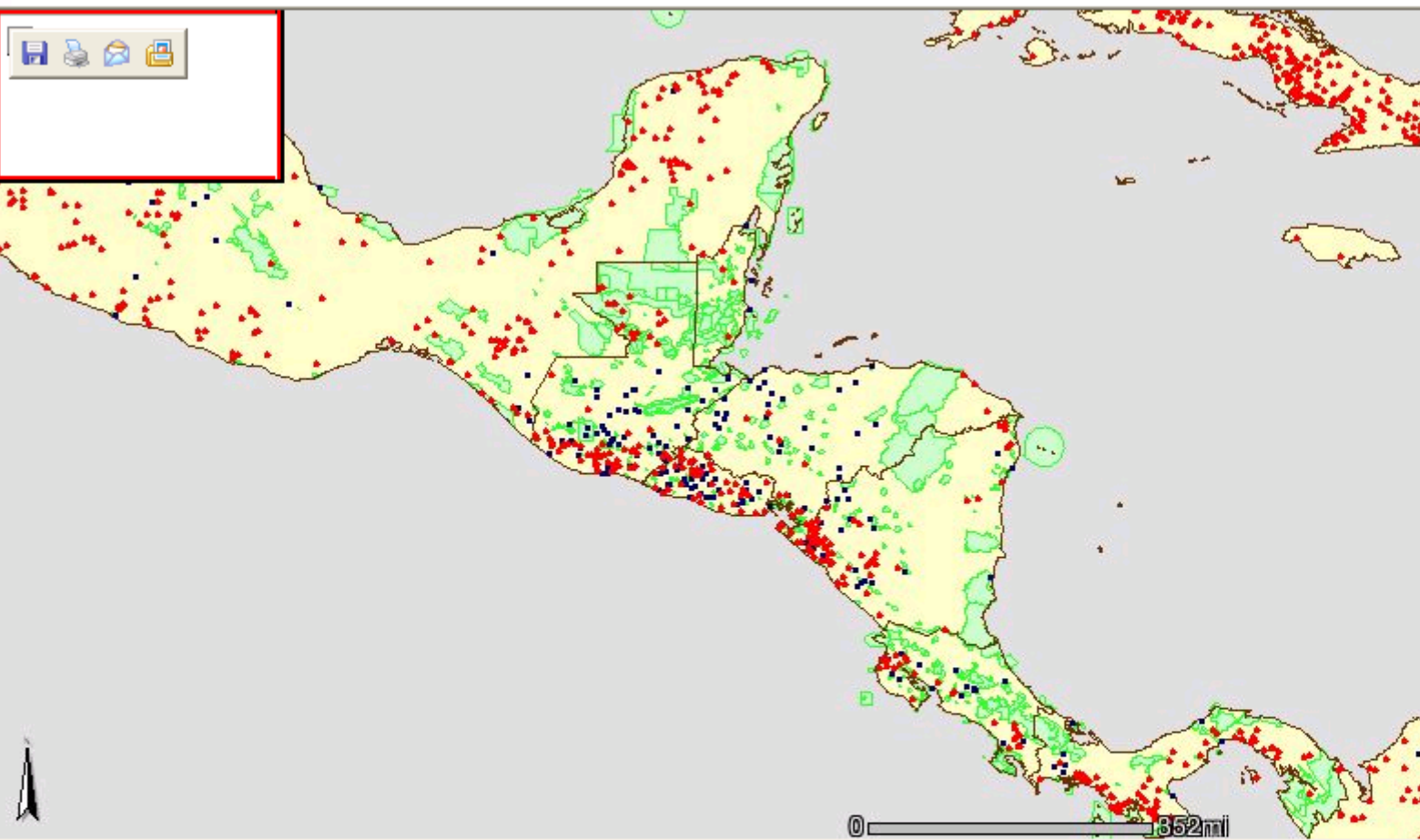
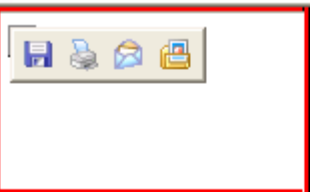
@ NASA/MSFC



@ CATHALAC →



Web Fire Maps: CENTRAL AMERICA



Layers

Visible Active

- Fires Last 7
- Fires Last 4
- MODIS Active Detections
- Cities
- Countries (outline)
- Protected Areas
- Administrative Boundaries
- MODIS Surface Reflectance composite
- Elevation and Rivers
- Countries

Refresh Map

Legend/Layers

Date Query Help

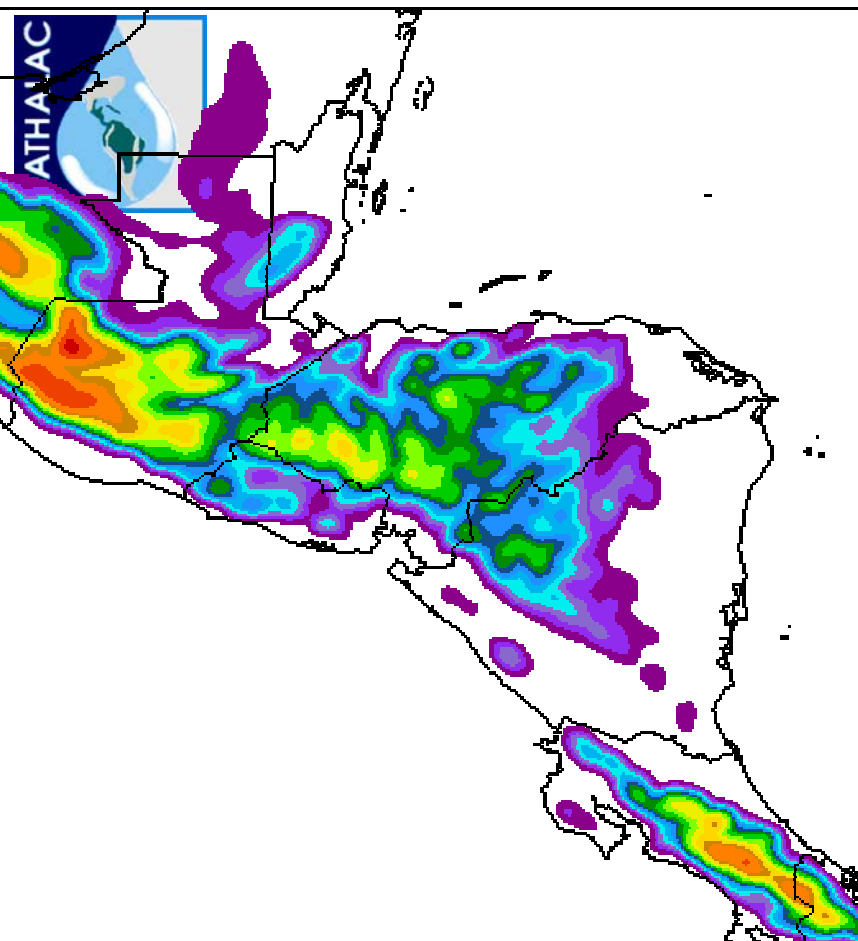
Enter the dates in YYYY-MM-DD form.

Start Date

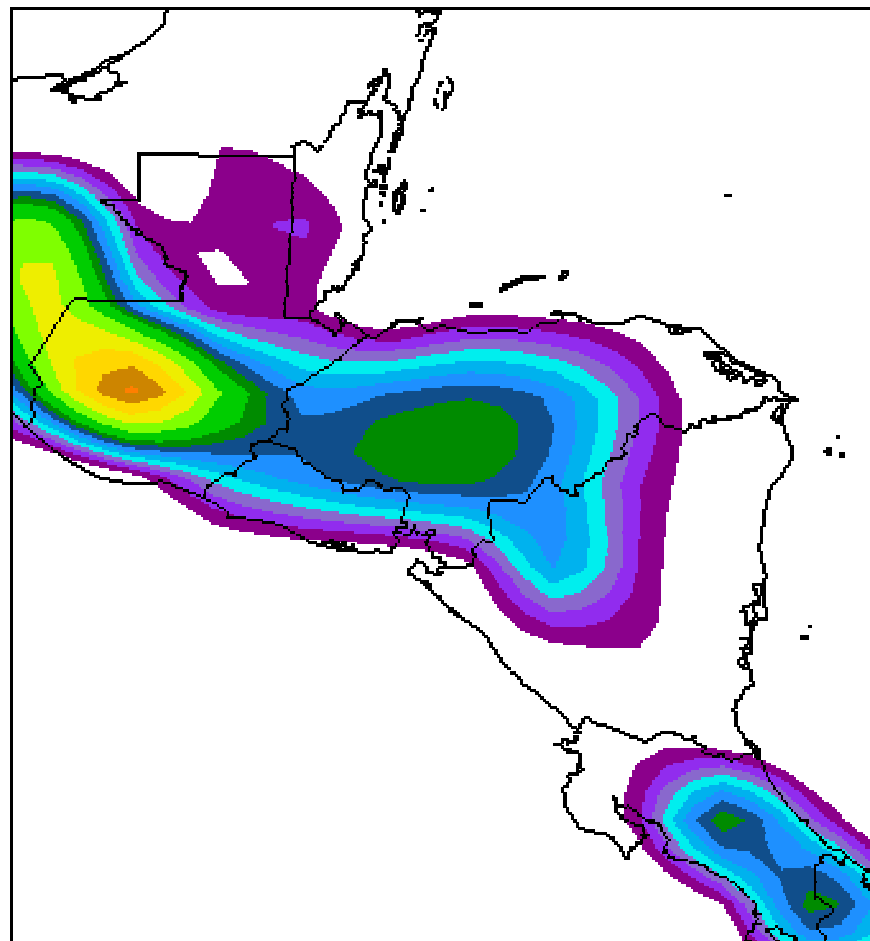
End Date

NOTE: MODIS Fire detections are NOT available for the following dates: 6/16/2001 to 7/3/2001, 3/20/2002 to 3/28/2002, 4/15/2002.

Herramientas para Toma de Decisiones
Terrain Height (meters)



NASA SPoRT/SERVIR WRF

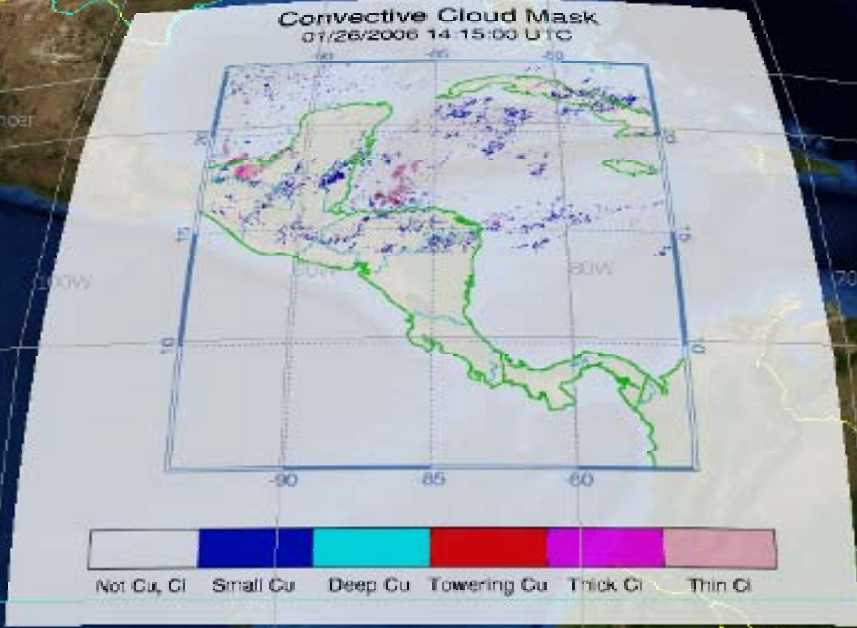
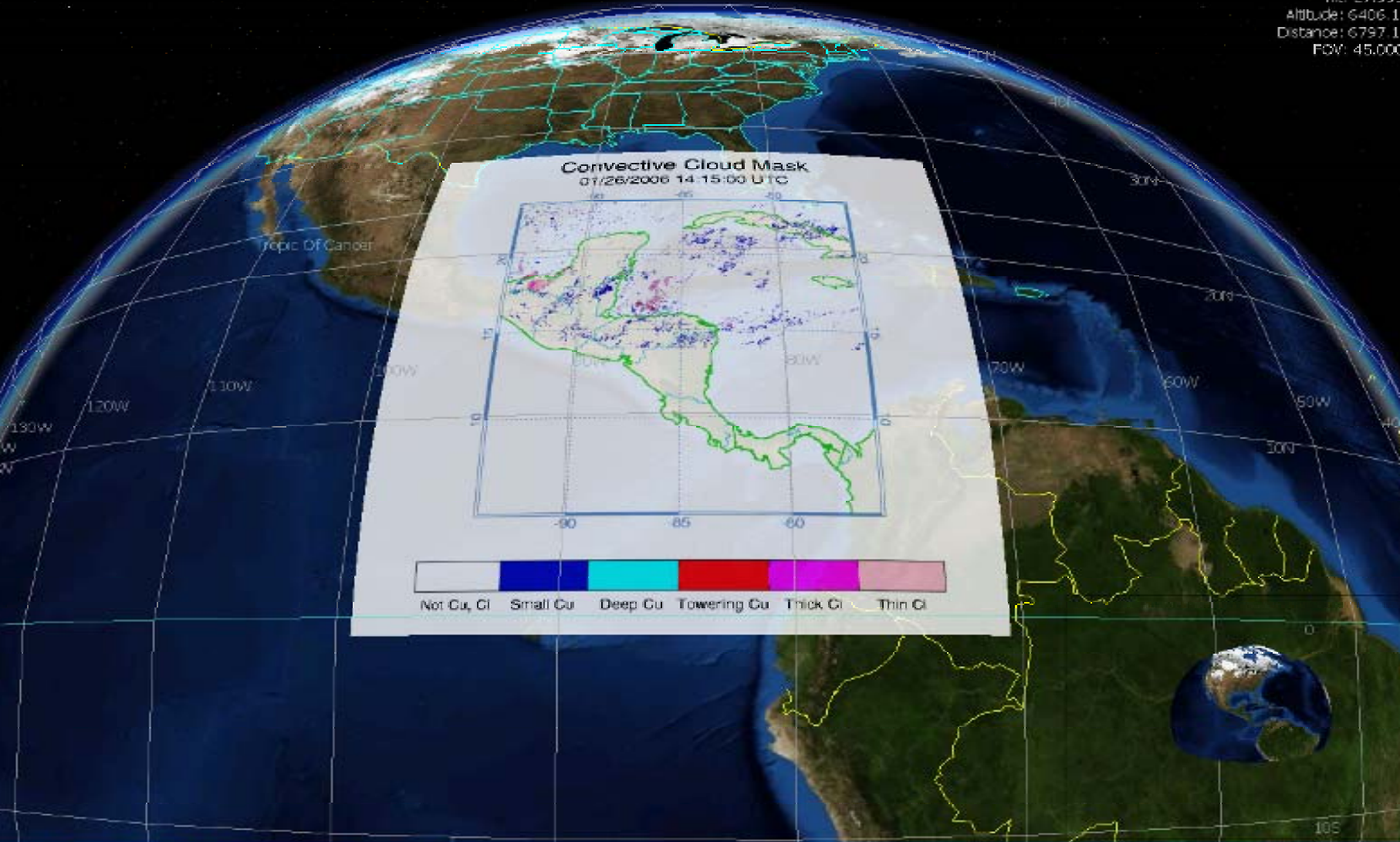


NCEP GFS



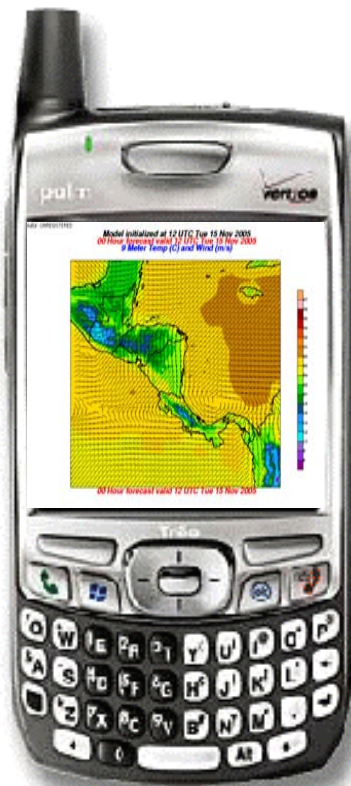


Latitude: 13.358
Longitude: -83.993
Heading: 0
Tilt: 27.999
Altitude: 6406.1
Distance: 6797.1
FOV: 45.000





Aplicaciones en Desarrollo



SERVIR *The Mesoamerican Monitoring and Visualization System*

TUES, MAR. 1, 2005

Español

English



[Mesoamerican Data](#) | [Interactive Maps](#) | [Decision Support](#) | [Visualizations](#)

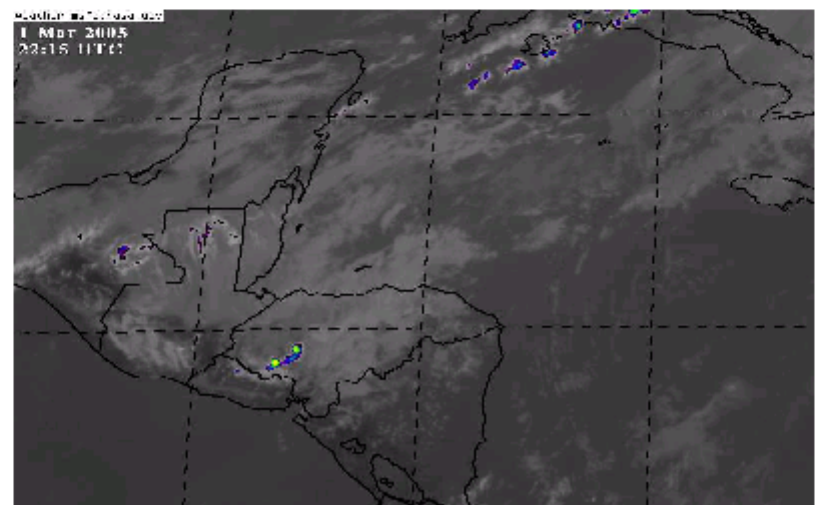
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- Forums
- Gallery
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Your "One Stop Shop" for Regional Data, Dynamic Maps, Decision Support, and Interactive Visualizations

Now Online MesoStor, Interactive

Mesoamerica Today, Tuesday, Mar. 1, 2005

Latest GOES image. [Click here](#) for more GOES images.



NASA Earth Science Applications

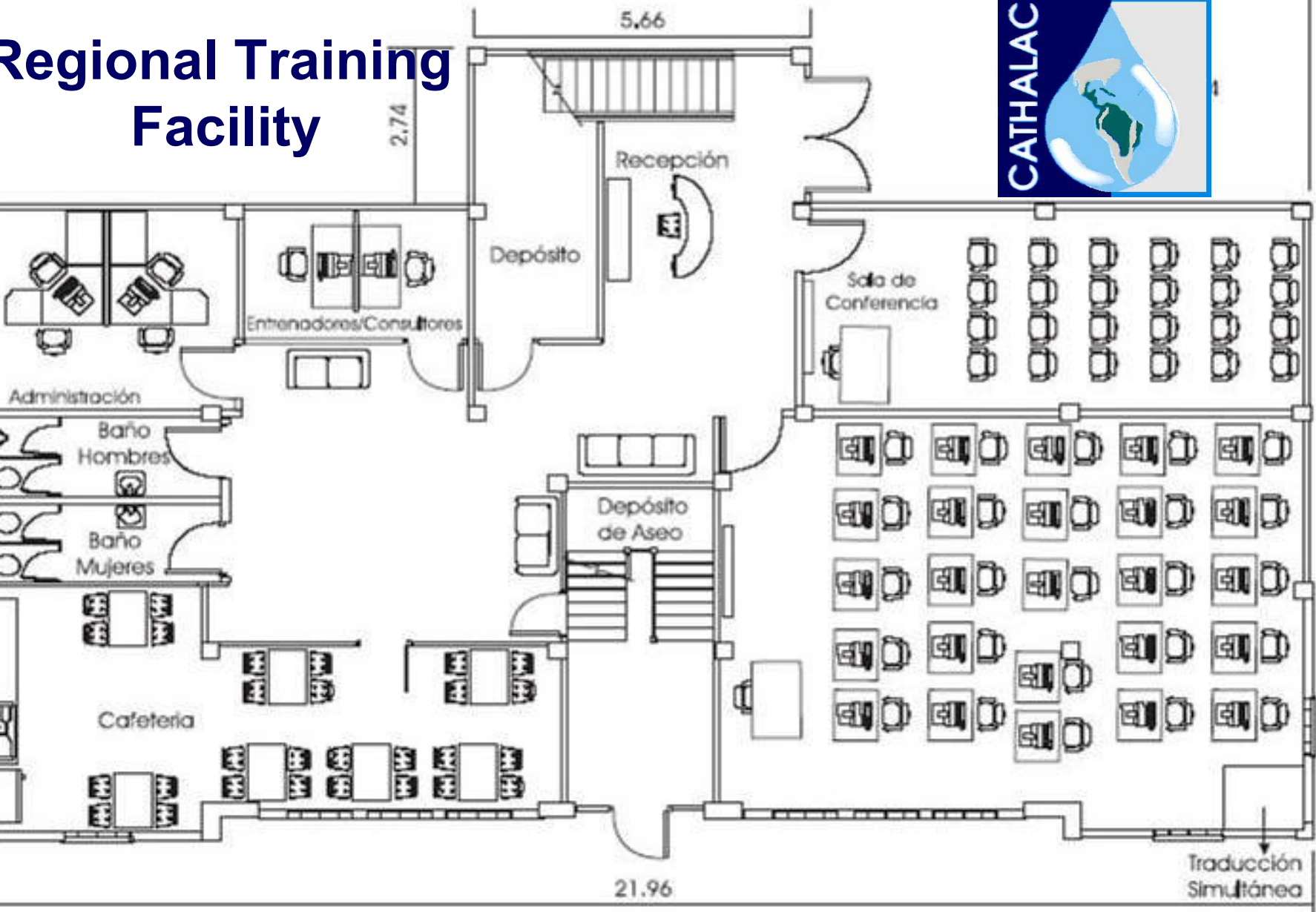
What's New!
Click here to visit the "What's New" page to read SERVIR news articles, and to see new products and features being added to this Web site.

SERVIR Movies
Time Lapse of Fires (MPEG 17.89 MB). Click image to view movie.



Fade from Day to Night (20 KB). Click image to view movie.

Regional Training Facility





Capacitaciones 2005-2008

- **Modelación de Clima y Tiempo Meteorológico**
- **Evaluación de Impactos, Vulnerabilidad y Adaptación**
- **Gestión de Desastres**
- **SOT, SIG**
- **Planificación Territorial Ambiental**
- **Programación de Aplicaciones Integrales**
- **Visualizaciones 3-D**
- **GIRH/GIZC**





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