



UNITED NATIONS  
Office for Outer Space Affairs



# DI-09-02B

## Regional End-to-End Demonstrations

STC Update  
March 2010

Guy Seguin (CEOS Disaster SBA Team Chair, DI-09-02B Lead and PoC)

Sub-projects

Namibian Flood and Health Pilot – Lead: NASA

Caribbean Satellite Disaster Pilot – Lead: NASA

# Objectives of DI-09-02B Pilots

- To demonstrate the effectiveness of satellite imagery to strengthen regional, national and community level capacity for mitigation, management and coordinated response to natural hazards
- To identify specific satellite-based products that can be used for disaster mitigation and response on a regional level
- To identify capacity building activities that will increase the ability of the region to integrate satellite-based information into disaster management initiatives

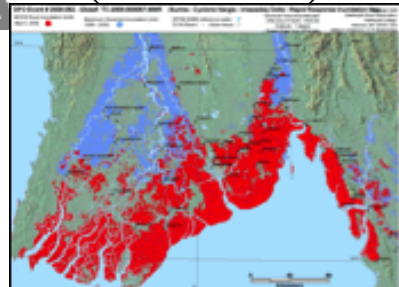
# “Sensor Web” – Real-time Satellite Situational Awareness

1. Global and regional flood prediction models detect risk (DEMs + TRMM, MODIS)

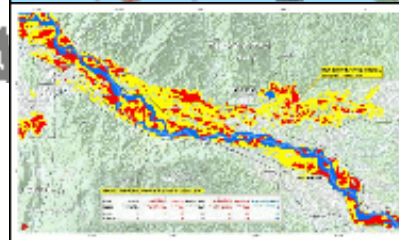


2. Automated broad area satellite data acquisitions as event unfolds

Daily Flood Map (MODIS 250m)



2-3 day Radar Flood Map (100m RSAT, Envisat, with MODIS Global Flood Mask)



3. Targeted high-res image acquisitions during/after event for most affected areas (optical or hi-res SAR)



30m

2.5m



10m



.61m

4. Integrated information managed with multi-sensor campaign manager



mitigation

warning

response

response

response

recovery

# **Project Milestones (CSDP – similar milestones for Namibian Pilot)**

- **February 2009:** creation of CSDP Steering Committee – regular program planning teleconferences
- **July 2009:** selection of national partners and establishment of national teams
- **July and August 2009:** national partner kick-off meetings
- **October 2009:** initial review meeting to develop project list
- **December 2009:** development of 2010 workplan and project milestones
- **May 2010:** project team interim reports submitted to steering committee
- **June 2010:** mid-term review of Phase I projects
- **December 2010:** Hurricane Season report and design review for Phase I projects
- **February 2011:** presentations to donor agencies
- **March 2011:** Phase I report and recommendations for next steps
- **June 2011:** Phase II kick-off

# CSDP Sub-Projects

- **Project 1: Sensor Web Satellite-based Flood Prediction and Warning** – Caribbean-wide  
Project leads: NASA and CIMH
- **Project 2: Coastal Erosion Monitoring and Coastal Decision Support Tool**  
Project leads: Grenada and CSA
- **Project 3: Urban Flood Mitigation** (focus on high resolution issues in urban context)  
Project leads: BVI and Italy (TBC)
- **Project 4: Flood Vulnerability Mapping** (with risk assessment focus)  
Project leads: Jamaica and ESA
- **Project 5: Ecosystem Monitoring** for Flooding and Landslides (focus on **sensitive areas** and landslide prediction)  
Project leads: Barbados and NASA/CATHALAC
- **Project 6: Integration of Satellite Data into Local Operational Flood Warning and Response Systems**  
Project leads: CDEMA and NASA

# Partnership Commitments

- Phase 1 National Partners: Barbados, Virgin Islands, Grenada, Jamaica, Saint-Lucia (in-kind resources and national data sets)
- Other local users: Caribbean Disaster and Emergency Management Agency, Caribbean Institute for Meteorology and Hydrology; *other Caribbean and Central American countries invited to join in project teams*
- Satellite Data providers: ASI (Italian Space Agency), CSA (Canadian Space Agency), ESA (European Space Agency), NASA, USGS, DLR, and NSPO/Taiwan, others still joining...
- Value-added and related contributions: CATHALAC/SERVIR, ESA (through value-added industry), University of the West Indies (UWI), Ukrainian Space Agency, CSA (through value-added industry)