U.S. National Weather Service's Role in the Flash Flood Guidance Initiative

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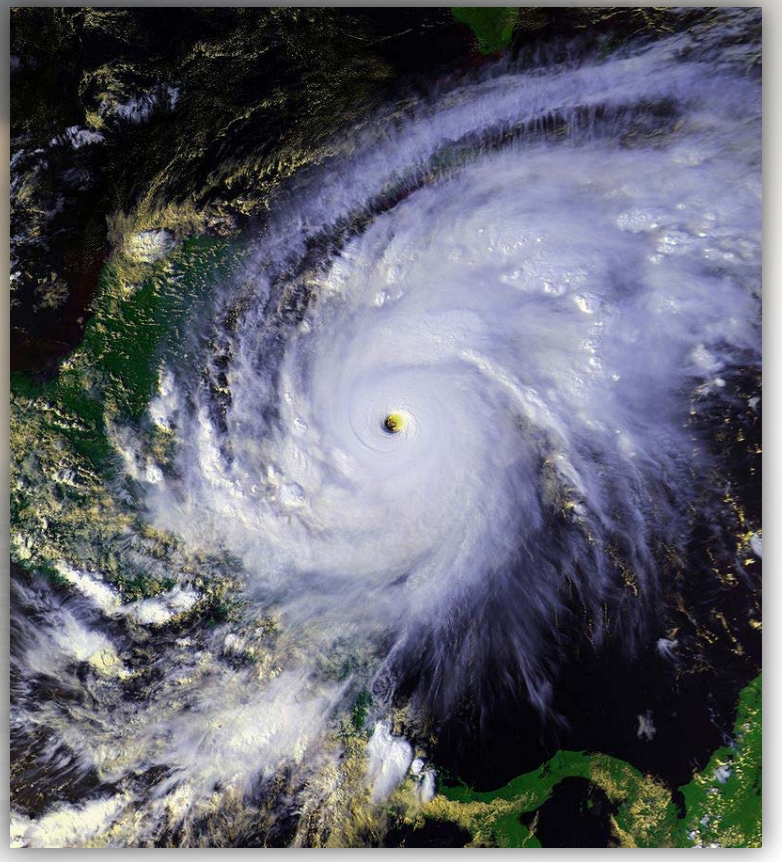
Global Flash Flood Guidance Initiative

- The implementation of Flash Flood Guidance systems globally is an initiative to provide a tool for National Meteorological and Hydrological Services to develop flash flood warnings.

- Addresses the need to provide early warnings for flash floods using cooperative regional approaches.

The beginning ….



Hurricane Mitch
October 1998

- Approximately 7,000 people were killed, 11,000 were missing and approximately 20% of Honduras' population lost their homes. (Source: Rosario Alfaro)

- As a result of this catastrophic event, a **Pilot** project to design and implement a regional system for flash flood guidance was developed for Central America
  - collaboration between NOAA/**NWS & CPO**, **USAID** (US Agency for International Development) and **HRC** (Hydrologic Research Center)

The Central America's FFGS

- First regional FFG system developed

- In 2004, this system began operating on a server located in San José, Costa Rica, providing products to support flash flood warnings for all 7 Central America Countries (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama)

NWS advancing the science and technology to support the application of early warning systems for flash floods.

Establishing a cooperative initiative for the flash flood guidance system with global coverage project

- In February 2009, a memorandum of understanding was signed among Hydrologic Research Center (HRC), World Meteorological Organization (WMO), **NOAA/National Weather Service** (NWS), and United States Agency for International Development (USAID)

To work together under a cooperative initiative to implement the FFG system worldwide

HYDROLOGIC RESEARCH CENTER
A Nonprofit Research Corporation

WORLD METEOROLOGICAL ORGANIZATION

NOAA

USAID
FROM THE AMERICAN PEOPLE

NOAA/NWS Role within the MOU

- NWS is a technical partner and responsible for the following activities:
  - Provide technical advice for the design, development and operation of the Global FFG
  - Make available satellite and in-situ rainfall data through the National Weather Service Telecommunication Gateway

Note: All NWS activities are subject to the availability of appropriated funds and personnel, and must be in accordance with applicable U.S. laws and regulations.

NWS Role:
Data Provider & Technical Expertise

Variable	Product	NOAA/NWS Office
Operational Quantitative satellite-derived Precipitation Estimates (QPE)	Global Hydro-Estimator [GHE]	NESDIS/Office of Satellite and Product Operations [OSPO]
Operational QPE	CMORPH - very high spatial and temporal resolution estimates from low orbiter satellite microwave observations	Climate Prediction Center [CPC]
Operational Snow Areal Extent	Interactive Multisensor Snow and Ice Mapping System [IMS]	National Ice Center [NIC]
Operational Surface Air Temperature	Global Forecast System (GFS)	National Centers for Environmental Prediction [NCEP]
Historical Gauge Rainfall Data [Data are used for the systems development and calibration]		National Centers for Environnemental Information (NCEI)

NWS Role:
Regional Funding Support

- In 2011, NWS provided resources to HRC to:
  - Update portions of Central America FFGS
  - Conduct regional training to build long term capacity in the region
  - Implement an initial FFGS for Pakistan
  - Conduct an operations workshop in Islamabad

- **FYI: Outside MOU activity**
  - Most recently, NWS submitted a proposal to USAID for a project to expand and refine early warning systems in Central America and to initiate a Weather-Ready Nations (IDSS) initiative.

Thank You!

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