



# The experience of Iberoamerican Meteorological Cooperation in the improvement of the provision of Weather and Climate Services

EGU2020-7476

<https://doi.org/10.5194/egusphere-egu2020-7476>

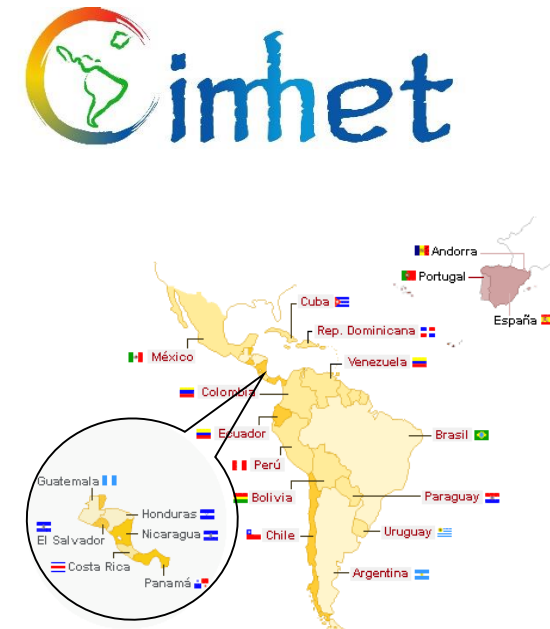
EGU General Assembly 2020

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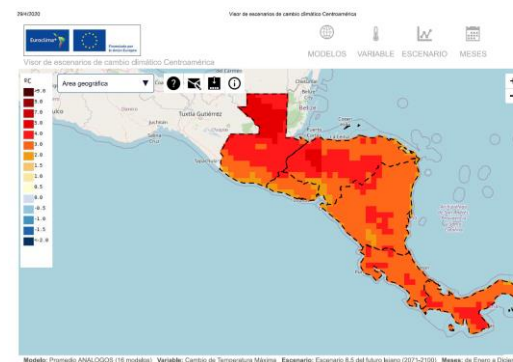
# Iberoamerican Meteorological Cooperation

- National Meteorological and Hydrological Services (NMHS) cooperation: a key element for the provision of services to society.
- Iberoamerican NMHS cooperation
  - Advantages: common language and cultural heritage
  - Based on Conference of Iberoamerican NMHS Directors (CIMHET)
- CIMHET
  - Working and cooperation structure, with annual meetings, aimed to improve institutional and operative capacities and to share experiences
  - Action plan approved in annual meetings
    - Institutional strengthening and resources mobilization
    - Provision of Weather, Climate and Hydrologic services
    - Education and training
  - Participation of all Iberoamerican NMHS, including Spain and Portugal
  - Permanent Secretary in AEMET



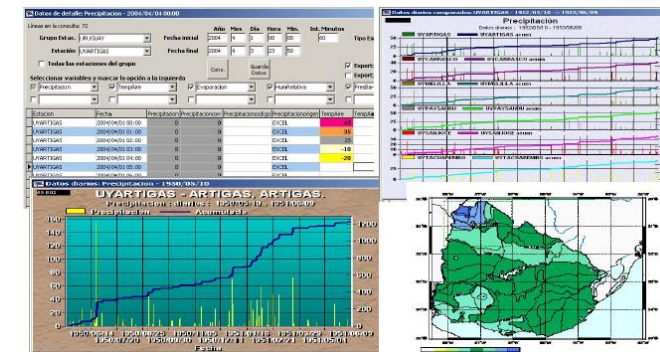
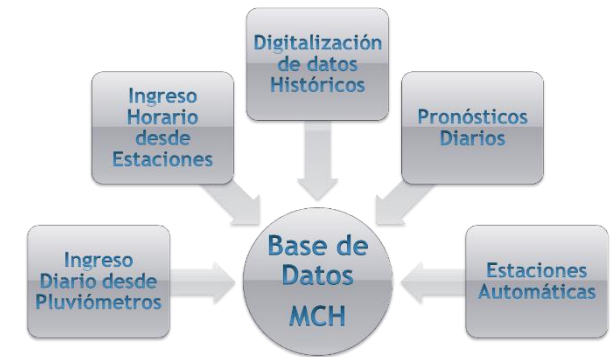
# Recent activities in support for WCS provision

- Development of free Database Management System (MCH)
- Implementation of a Central America Lightning Detection Network
- Development of Downscaling Climate Change Scenarios for Central America
- NMHSs Staff Training
- Coordination with other Iberoamerican Networks



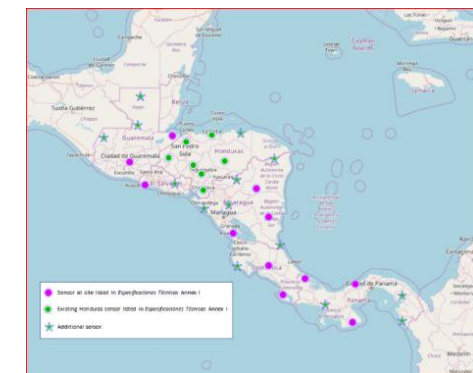
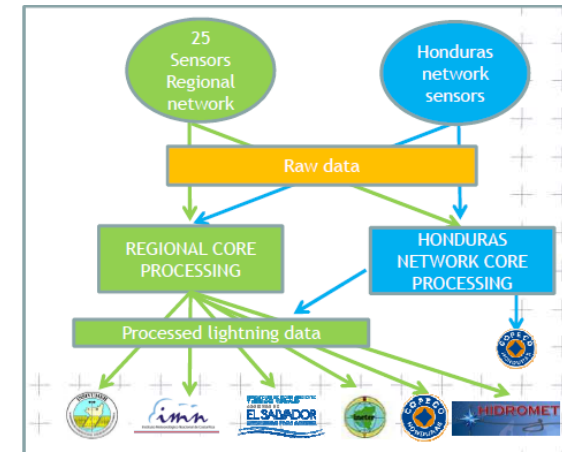
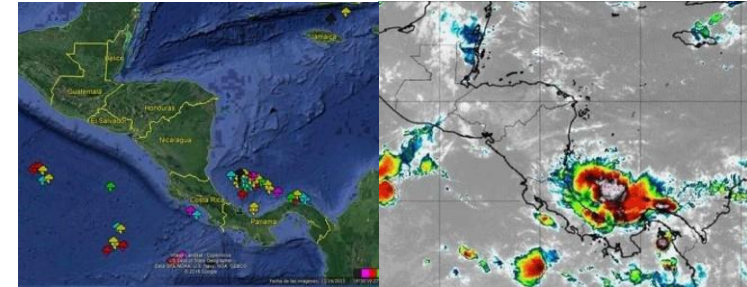


- Information system for Meteorological, Climatological and Hydrological data
- Products generation
- No huge hardware infrastructure requirements
- Open Software
- Transferred to WMO by CIMHET
  - Installed in several SMHN of Iberoamerica, Europe and Asia
  - Users Community. Continuous evolution of the system



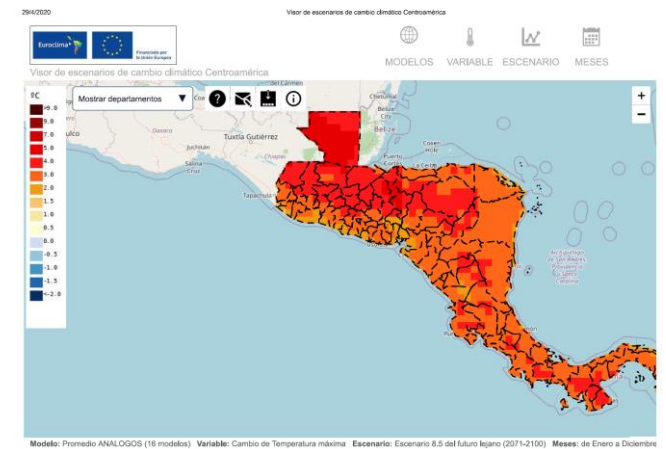
# Central America Lightning Detection Network

- Early Warning System component
- Regional Network
  - Agreement between all NMHS involved
  - 25 sensor distributed in all countries
  - A single Processing System in Hidromet-ETESA (Panamá)
  - Operating systems (6) in each NMHS
- Incorporates currently existing systems in the region (Honduras network)
- Operational since September 2019
- Funded by EU LAIF Project



# Central America Downscaling Climatic Change Scenarios

- Regional Project
  - All NMHS of the region involved
  - Common methodology
  - Around 45 different projections for each parameter
  - Regional working group with NMHS experts
  - Visor web with results hosted by CRRH
- Reference to develop specific impact evaluation and adaptation needs on different sectors
- Users involvement
  - Users workshops in all countries
  - Parameters defined on workshops
- Completed in March 2020
- Funded by EU EUROCLIMA+ Project





- Support for professional training
- Support from AECID facilities and Intercoonecta Training Program
- From 2003, more than 60 courses, mainly on-site, with more than 1.000 students (senior and junior NMHS Staff)
  - Technical training on weather forecast, remote sensing, climatology, climate change, droughts, marine meteorology, equipment maintenance, air quality
  - Management of the INMHSs
  - Promotion of horizontal cooperation. Expert networks



# Coordination between Iberoamerican Networks

- Iberoamerican networks

- Weather and Climate 

Conference of Iberoamerican Directors of NMHS

- Water  CODIA

Conference of Iberoamerican Directors of Water

- Climate Change 

Iberoamerican Network of Climate Change Offices

- Joint workshops

- Proposed activities on:

- Promoting Virtual Regional Forecasting Centers
- Generation of downscaling climatic change scenarios and its application to determine the future impacts on water resources and extreme events.
- Recovering data
- Economic evaluation of extreme hydrometeorological events
- Projects for NMHS strengthening





- Importance of cooperation and coordination activities to improve NMHSs provision of Weather and Climate Services
- CIMHET became an ideal forum:
  - Regional focus
  - Dialogue with users. Projects oriented to users needs
  - All Ibero American NMHS included in CIMHET
  - Agile and proven solution for cooperation
  - Ability to implement or be part of projects
  - Allows interrelation with other networks and organizations
  - WMO involvement
  - Strategic alliances with International Cooperation Agencies, mainly the Spanish Agencies AECID and FIIAPP
  - Possibility of access to EU programs or other sources of funding



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