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# Recent activities in the Iberoamerican Cooperation of AEMET

Dr. Jorge Tamayo Carmona

## The Iberoamerican cooperation in meteorology of AEMET



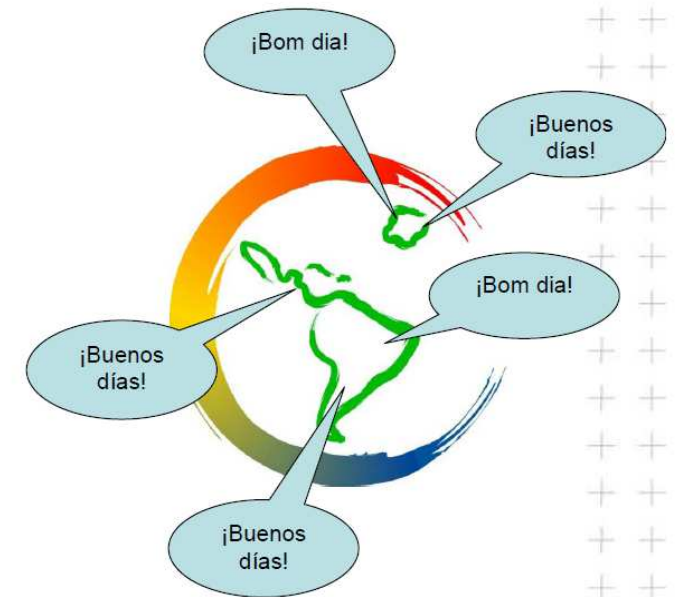
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- AEMET promoted the Iberoamerican Meteorological Cooperation through CIMHET
- Governing body:  
Conference of the Iberoamerican Directors of NMHSs (CIMHET)
- Planning instrument:  
Iberoamerican Meteorological Cooperation Program
- Funding mechanism:  
Trust fund established by Spain in WMO and other resources (AECID...)



- Working and cooperation structure, with annual meetings, aimed to improve institutional and operative capacities and to share experiences
- Reactivated in 2003
- Design, approval and implementation of action plans
- Active role of WMO
- Permanent Secretariat in AEMET
- Open to Associated NMHS
- Access to funding mechanisms
- Cooperation and synergies with regional institutions and similar networks





## • Strategic lines

- Institutional reinforcement and resource mobilisation
- Provision of weather, climate and hydrological services
- Training
  - More than 1.200 students in more than 60 courses with more than 3.000 hours
  - Creation of a WMO TRC in Spain
  - Promotion of horizontal cooperation



II CURSO DE METEOROLOGÍA SATELITAL. CARTAGENA DE INDIAS SEPTIEMBRE 12 - 16 DE 2005

## Environmental Iberoamerican networks



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- Weather and climate



Conference of Iberoamerican Directors of NMHS

[www.cimhet.org](http://www.cimhet.org)

- Water



**CODIA**

Conference of Iberoamerican Directors of Water

[www.codia.info](http://www.codia.info)

- Climate Change



Iberoamerican Network of Climate Change Offices

[www.lariocc.es](http://www.lariocc.es)

Covering all  
Iberoamerica

Complementary  
activities

Great potential for  
common  
strategies and  
joint activities

# Common activities



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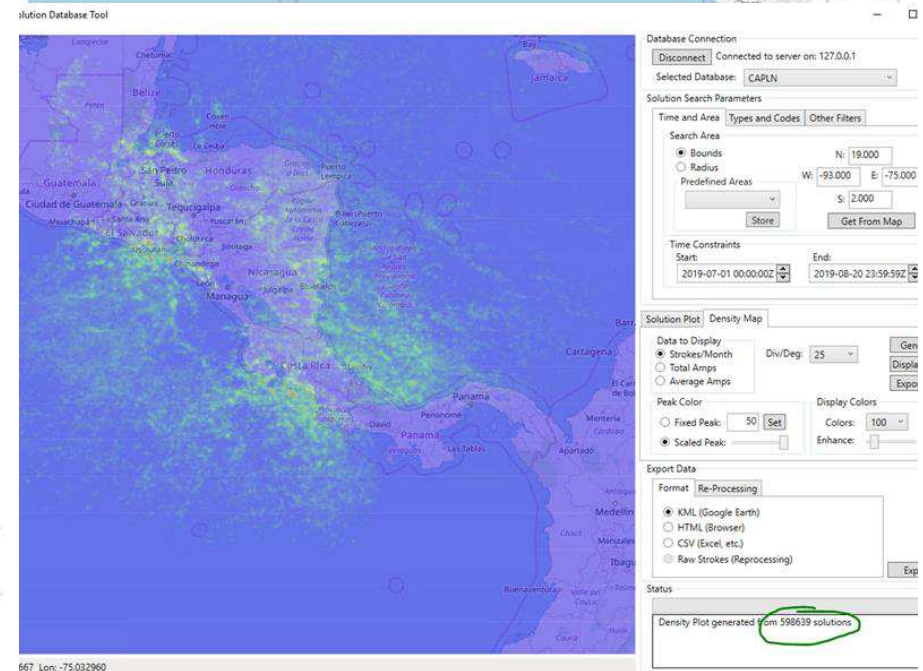
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- **Joint Workshops CIMHET-CODIA-RIOCC**
  - Central America-Hispanic Caribbean (December 2016)
  - South America (December 2018)
  - WMO participation
  - International institutions participation (CAZALAC, ISDR, CEPREDENAC, PNUD, CIIFEN, CRRH, PHI)
- **Proposed activities on:**
  - Promoting Virtual Regional Forecasting Centers, comprehensively addressed. Virtual Regional 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 (currently, in development in INAMHI-Ecuador)



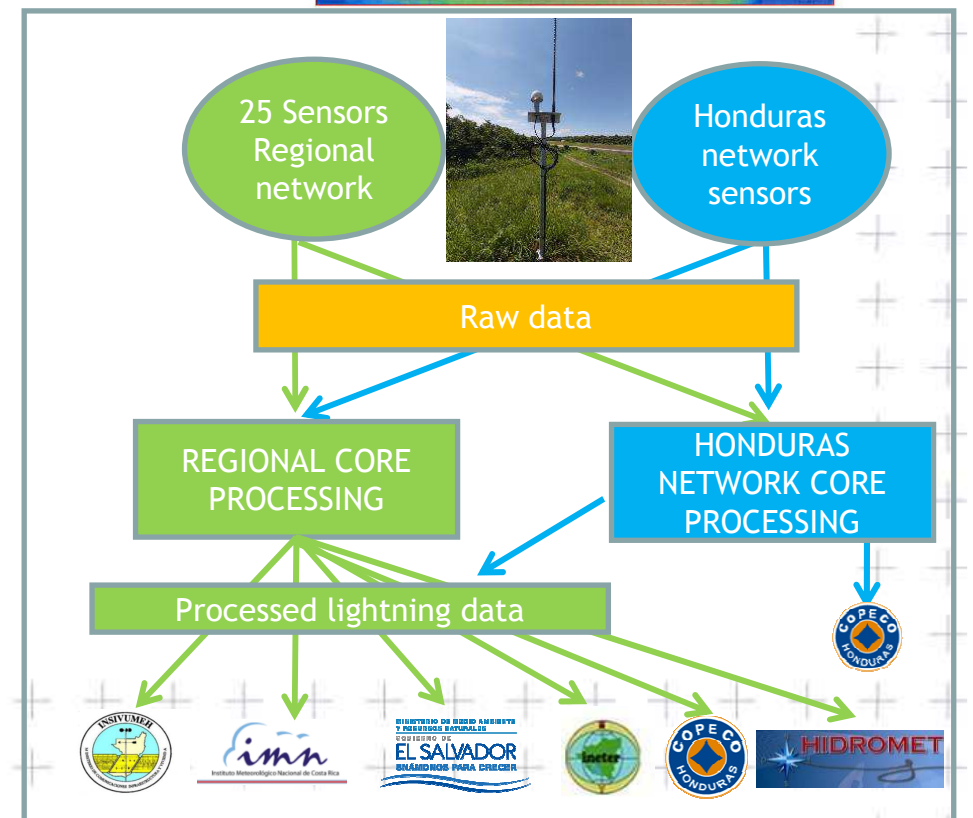
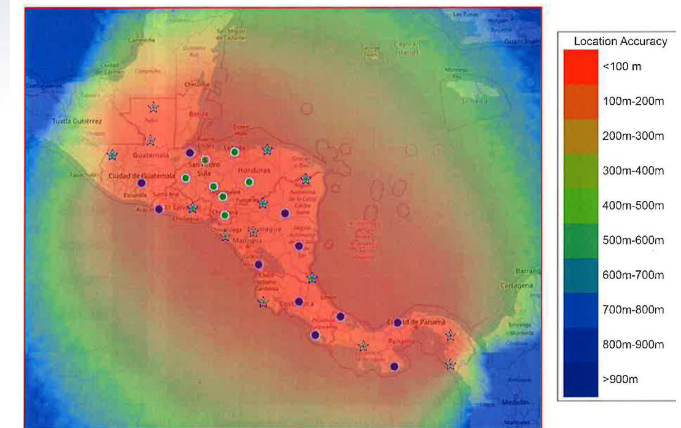
# Central America Lightning Detection Network

- Observation component of Central America Virtual Center
- Agreement by all NMHS concerned
- Funded by EU LAIF, managed by AECID (674.000 EUR)
- Operational from August 2019



# Central America lightning detection network

- A single processing system, in Hidromet-ETESA (Panama)
- Detectors (25) distributed by all countries
  - Location accuracy < 100 m in mostly of the area
  - Detection efficiency higher 90%
- Operating systems (6) in each NMHS
- Include current systems (Honduras network)





# Regional Downscaling Climate Change Scenarios



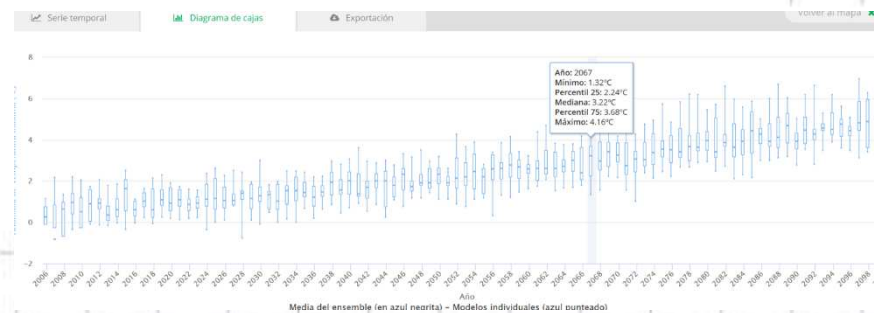
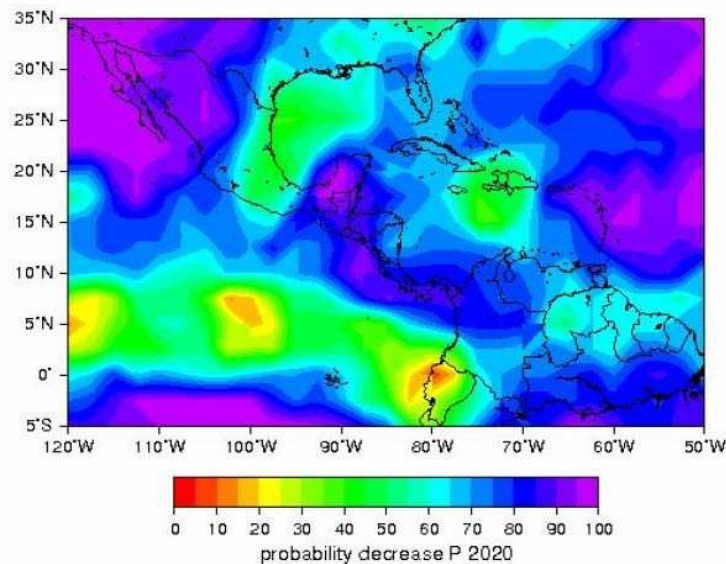
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- Reference to develop specific impact studies assessing vulnerability and adaptation needs of different sectors
- Proposed in the CIMHET-CODIA-RIOCC workshops
  - Developing in Central America
  - Proposed for South America
- Strengthening the role of NMHSs in climate change



# Regionalized climatic change scenarios for Central America



- Regional project
- Institutions
  - INSIVUMEH-Guatemala
  - IMN-Costa Rica
  - COPECO-Honduras
  - SNET-El Salvador
  - INETER-Nicaragua
  - Hidromet ETESA-Panamá
  - AEMET-Spain (Coordination)
  - CRRH-SICA (Host results)
- Estimated completion: November 2019
- Funded by EUROCLIMA+ (200.000 EUR)



Financiado por la Unión Europea

# Project characteristics



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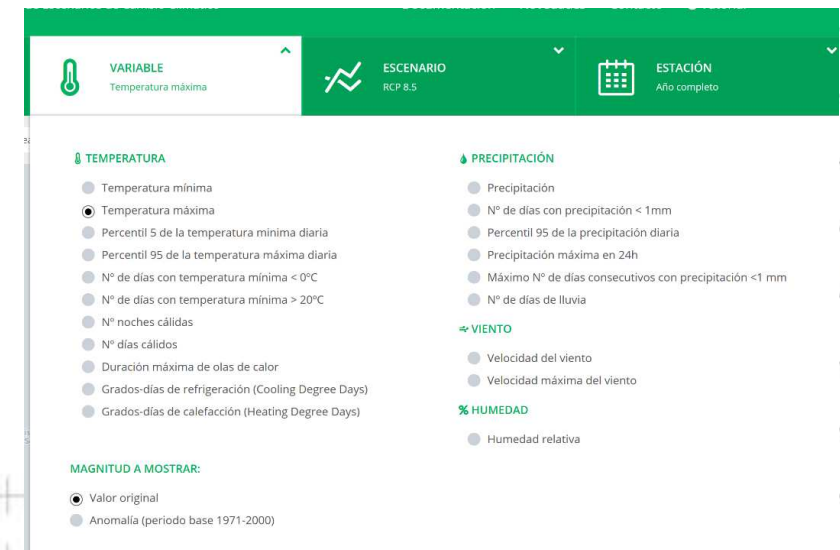
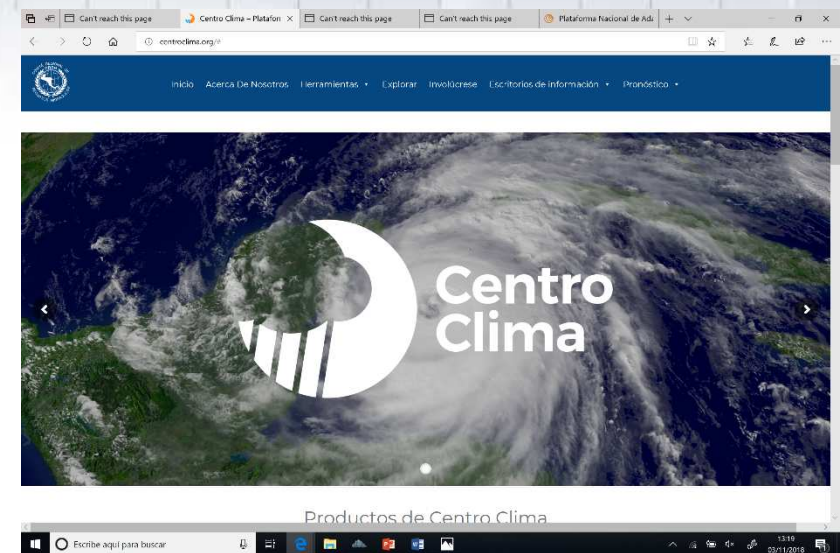
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- Data rescue
  - Digitization (where necessary) of daily Tx, Tm, Precipitation. Hiring of personnel
- Users involvement
  - National users workshops carried out in all involved countries
- Training
  - Course on CORDEX (February)
  - Course on Climatic Services (June)
  - Course on Statistic Regionalization (October)
- Scenarios generation
  - Expert hired for calculations
  - Regional working group with NMHS experts
  - Common methodology
  - Dynamic and Statistical methods
  - Emphasis on uncertainties

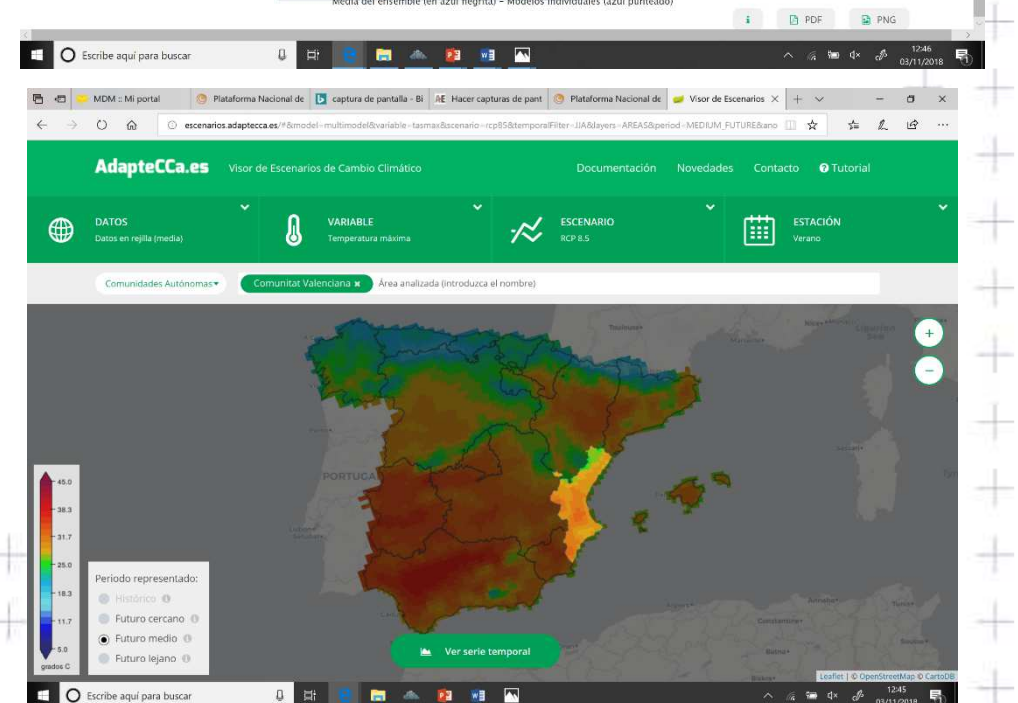
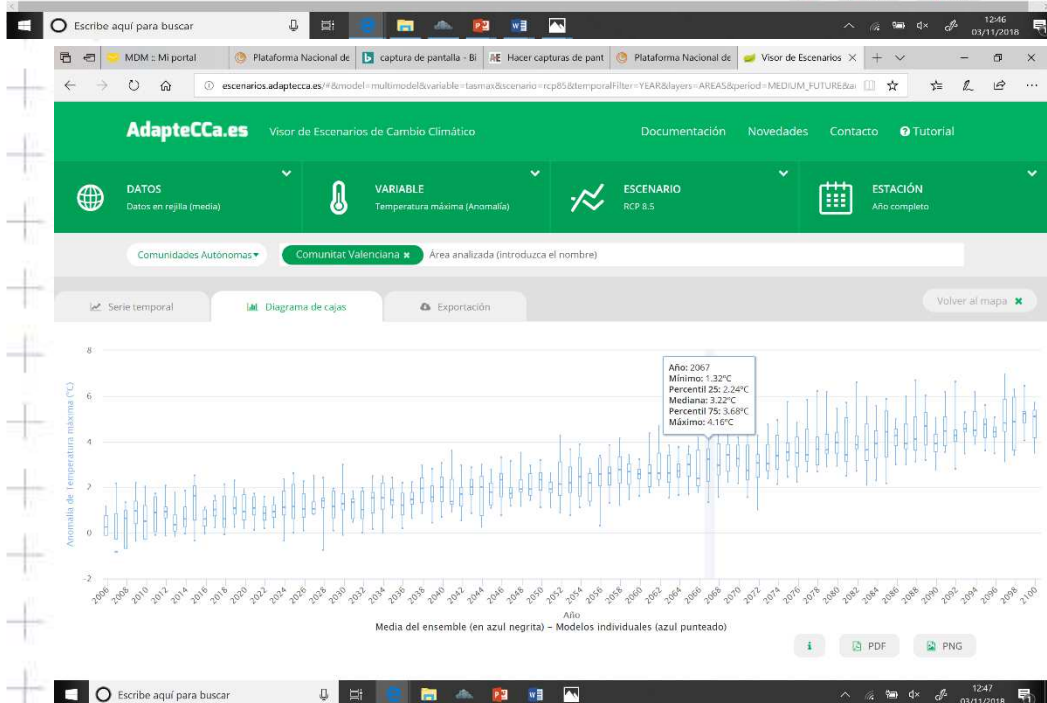
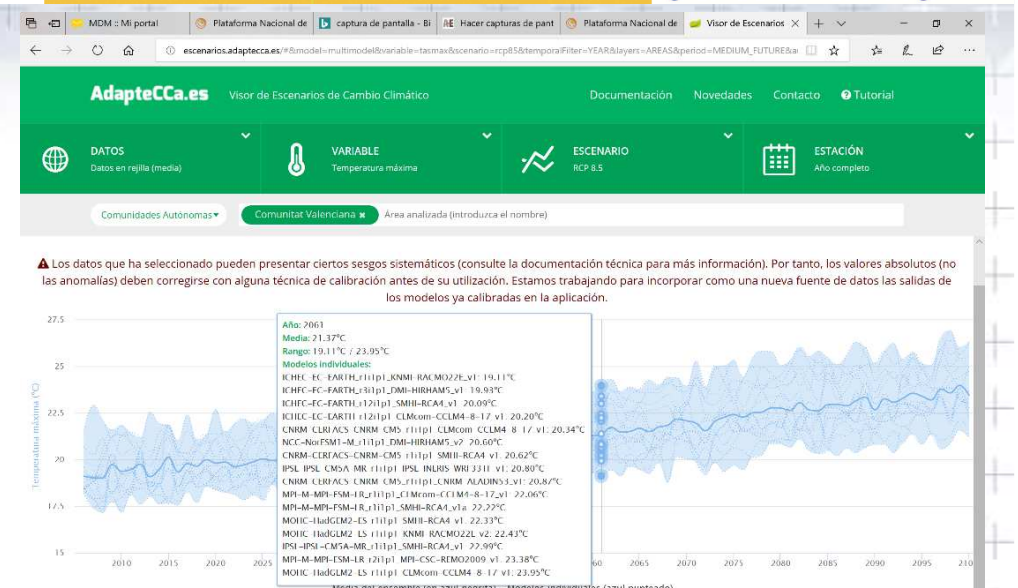
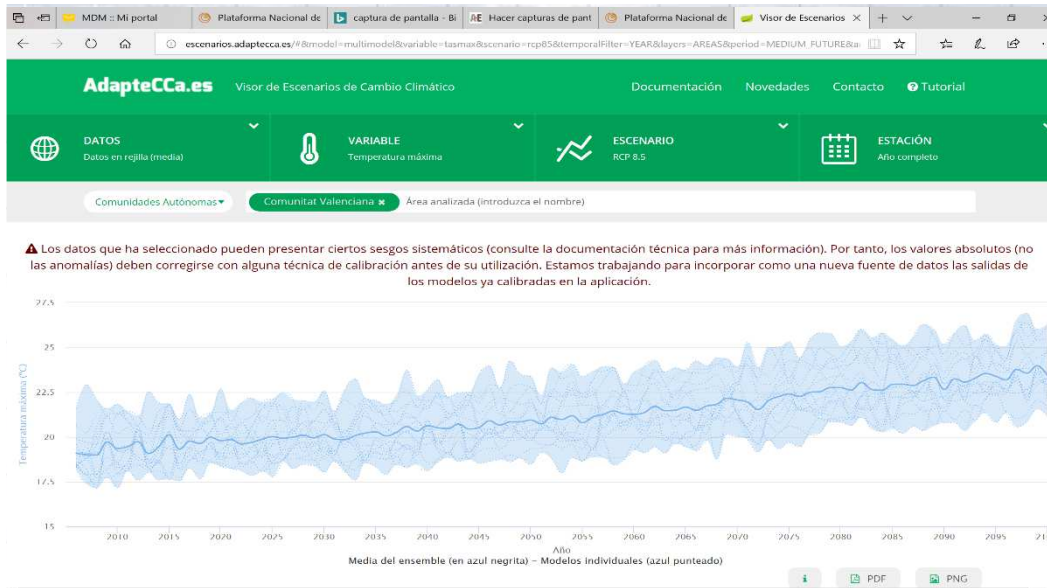


# Results

- Visor web with results hosted by CRRH-SICA on Centro Clima
- Web expert hired for development
- From local to regional scale
- Maps, graphics and capacity for data download
- Parameters defined on users workshops
- Format based on Spanish visor web (adaptecca.es)
- New possible projects
  - Scenarios for Andean region
  - Data rescue



# Examples of Visor Web (Adaptecca.es)



# Cooperation Agencies Collaboration



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- Close relationship with Spanish Cooperation Agencies (AECID, FIIAPP)
  - Training: AECID Training Centers in Iberoamerica
  - EUROCLIMA + Project on DRR: droughts and floods. Support to three projects approved on Andean region, Central America, S South America
  - Projects with Climatic Governance of EUROCLIMA+
  - Movilization of EU funds



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**MUCHAS GRACIAS POR SU  
ATENCIÓN**

**THANKS FOR YOUR ATTENTION**

