

CIMA RESEARCH FOUNDATION DROUGHT ACTIVITIES/INICIATIVES

www.cimafoundation.org



ROROTEC CIMA TECHNOLOGY F O U N D A T I O N



1) Support to the development of the EC's European Drought Observatory for Resilience and Adaptation (EDORA)

2) Drought Monitoring and Early Warning System in developing countries (e.g. Bolivia)+ Institutional support

3) Drought risk profiles in Sub-Saharan Africa (16 Countries + Volta Basin) + Capacity building

4) Operational hydrological tools at the Italian scale: S3M-Italy, drought indices in Italy - and DRYES development.

5) Development of a operational tool for combined drought indicator for agricultural applications in Italy.

6) Research activities

- (i) Disentangling the role of subsurface storage in the propagation of drought through the hydrological cycle
- (ii) Evapotranspiration enhancement drives the water-budget deficit during multi-year droughts.
- (iii) Technical and scientific reports for decision makers (e.g. 2019-2022 severe drought in La Plata Basin).



EDORA: EUROPEAN DROUGHT OBSERVATORY FOR RESILIENCE AND ADAPTATION EUROPEAN COMMISSION PROJECT, (DG ENV AND JRC)

Who: Support to the EC, Consortium: CIMA, Freiburg University, IVM-Amsterdam University, United Nations University and CzechGlobe.

What:

- Development and implementation of a drought impact database,
- Development and implementation of a drought risk assessment methodology
- Development of drought risk atlas at the continental scale

Why: to support EC adaptation activities, enhancing drought-related risk and management capabilities.

www.cimafoundation.org







Bolivian Drought Monitor: Around 20 operational indices based on satellite observations and measuring stations

+ combined indices to identify the degree of drought severity

http://monitorsequias.senamhi.gob.bo/

Meteorological Drought

- Standardised Precipitation Index (SPI)
- Standardised Precipitation and Evaporation Index (SPEI)
- Aridity Index (AI)
- Effective Drought Index (EDI)
- Precipitation Anomaly (APA, MPA)
- Temperature Anomaly (ATA, MTA)



Hydrological Drought

- Low Flow Index (LFI)
- Standardised Soil Moisture Index (SSMI)
- Soil Water Deficit Index (SWDI)
- Palmer Drought Severity Index (PDSI)
- Reservoir Drought Index (RDI)
- Standardised Snow Cover Index (SSCI)



Agricultural Drought

- Evaporative Stress Index (ESI)
- Vegetation Health Index (VHI)
- Crop Water Requirement Index (FAO-CWR)
- FAPAR Anomaly Index





www.riskprofileundrr.org

Scientific modelling for probabilistic risk assessment

Bringing risk information to the attention of decision-makers and technicians

UNDRR-CIMA

Within the framework of the Programme: Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities

In cooperation with the Wageningen University & Research and IVM-VU Amsterdam





www.cimafoundation.org



Thank you! gustavo.naumann@cimafoundation.org



info@cimafoundation.org www.cimafoundation.org