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COLUMBIA GLOBAL CENTERS | LATIN AMERICA
SANTIAGO



Organización de las Naciones
Unidas para la Alimentación
y la Agricultura

Santiago Declaration on Drought Management Tools

On December 19 of the year 2014, a Community of Practice (CoP) on Drought Management Tools was established in the City of Santiago de Chile, embedded in the international and regional networks of Áridas-LAC, the Center for Natural Resources and Development (CNRD) and the UNESCO Global Network for Water and Development Information for Arid Lands (G-WADI), in close collaboration with the Columbia University Global Centers and the Food and Agricultural Organization (FAO).

The meeting brought together more than 130 experts from 22 different countries, to discuss the current state of the art in drought management as well as research+action demand, with a special focus on the region of Latin America and the Caribbean. Throughout five different sessions aspects of drought monitoring, early warning, decision support systems, catchment indicator based drought management and drought policy were addressed.

Based on the outcomes of the different sessions and group works, the Community of Practice **concludes** that:

1. Plenty of drought indices are currently available, but none of them is effective to identify all types of drought (meteorological, hydrological and agricultural) under different climatic and geographical conditions, requiring a multi-parameter approach in drought monitoring.
2. The impact of drought on the agricultural sector and its socio-economic impacts are not well understood so far and requires additional research and monitoring efforts; further methods to quantify drought vulnerability need to be developed;
3. Significant work has been done to improve drought early warning and seasonal forecasting capabilities in the region, but given that this information is highly relevant to migrate from reactive to pro-active drought management and to support the decision making process of multiple stakeholders, further efforts are needed to implement tailored local early warning solutions in the region, drawing upon successful examples by standardizing the different approaches;
4. Decision support tools are made available in the region, ranging from regional drought observatories to integrated national drought management portals and local-scale support systems for pilot watersheds, but integration of these information flows remains a challenge;
5. Drought management at the river basin scale requires more local tailoring than the global drought management tools currently provide, due to local spatial, climatic and hydro-geological variability;
6. The impact of climate change has been identified as a driver of already observed multi-annual droughts, while projections indicate a further increase in the frequency of these long-term droughts, requiring adequate adaptation strategies to be implemented in vulnerable areas;

7. There is a need to connect the drought monitoring and early warning systems with the development of drought management policy and the implementation of pro-active drought response plans, especially at the local scale;
8. Effective drought management requires a stronger interaction between the research community, decision makers and the local stakeholders, in order to bring the drought management tools in line with local needs and demands.;
9. Awareness raising and education on drought hazards and methods for reducing vulnerability to drought are key to make the livelihoods more resilient to current and future droughts.

Based on this regional analysis, the Community of Practice on drought management tools:

- **identifies** the lack of effective agricultural drought monitoring indicators in current drought monitoring tools;
- **establishes** that drought related information should be made available with sufficient detail, equally considering spatially and temporally well distributed hydro-meteorological data and the local water demand/abstractions as an integral component of drought management;
- **recognizes** that in catchments of steep topography and/or snow, groundwater and reservoir storage, these indicators need to be considered in drought assessment and management;
- **identifies** a knowledge gap in currently available socio-economic indicators for drought monitoring, which are essential to establish a clear evaluation of long term drought impacts and to allow assessing the cost of inaction;
- **acknowledges** that drought impacts communities depending on their vulnerability to a greater or lesser extent, and identifies the need to identify vulnerability of communities as an integral part of national drought management;
- **proposes** a shift from reactive drought *crisis* management towards proactive drought *risk* management and **identifies** a central role of drought monitoring and early warning systems to trigger proactive responses;
- **welcomes** the introduction of regional and global drought monitoring and early warning tools, and **indicates** the need for local calibration and validation of these products to support drought management at the watershed level.

Read the [Final Meeting Report](#) | Review the [Programme and Presentations](#)

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