

A Global Drought Observatory for Emergency Response

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Droughts are occurring on all continents and across all climates. While in developed countries they cause significant economic and environmental damages, in less developed countries they may cause major humanitarian catastrophes. The magnitude of the problem and the expected increase in drought frequency, extent and severity in many, often highly vulnerable regions of the world demand a change from the current reactive, crisis-management approach towards a more pro-active, risk management approach. Such approach needs adequate and timely information from global to local scales as well as adequate drought management plans.

Drought information systems are important for continuous monitoring and forecasting of the situation in order to provide timely information on developing drought events and their potential impacts. Against this background, the Joint Research Centre (JRC) is developing a Global Drought Observatory (GDO) for the European Commission's humanitarian services, providing up-to-date information on droughts world-wide and their potential impacts. Drought monitoring is achieved by a combination of meteorological and biophysical indicators, while the societal vulnerability to droughts is assessed through the targeted analysis of a series of social, economic and infrastructural indicators. The combination of the information on the occurrence and severity of a drought, on the assets at risk and on the societal vulnerability in the drought affected areas results in a likelihood of impact, which is expressed by a Likelihood of Drought Impact (LDI) indicator. The location, extent and magnitude of the LDI is then further analyzed against the number of people and land use/land cover types affected in order to provide the decision bodies with information on the potential humanitarian and economic bearings in the affected countries or regions. All information is presented through web-mapping interfaces based on OGC standards and customized reports can be drawn by the user.

The system will be further developed by increasing the number of sectorial impact indicators and validated against known and documented cases around the world. The poster will provide an overview on the system, the LDI and first analysis results.