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Assessing the add value of ensemble forecast in a drought early warning

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The EU-FP7 project EUPORIAS is developing a prototype climate service to enhance the existing food security drought early warning system in Ethiopia. The Livelihoods, Early Assessment and Protection (LEAP) system is the Government of Ethiopia's national food security early warning system, established with the support of WFP and the World Bank in 2008. LEAP was designed to increase the predictability and timeliness of response to drought-related food crises in Ethiopia. It combines early warning with contingency planning and contingency funding, to allow the government, WFP and other partners to provide early assistance in anticipation of an impending catastrophes.

Currently, LEAP uses satellite based rainfall estimates to monitor drought conditions and to compute needs. The main aim of the prototype is to use seasonal hindcast data to assess the added value of using ensemble climate rainfall forecasts to estimate the cost of assistance of population hit by major droughts.

We outline the decision making process that is informed by the prototype climate service, and we discuss the analysis of the expected and skill of the available rainfall forecast data over Ethiopia. One critical outcome of this analysis is the strong dependence of the expected skill on the observational estimate assumed as reference.

A preliminary evaluation of the full prototype products (drought indices and needs estimated) using hindcasts data will also be presented.