

A prototype platform for water resources monitoring and early recognition of critical droughts in Switzerland

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Abstract In recent years Switzerland has experienced some unprecedented drought situations. At a political level solutions have been requested for early recognition of hydrological droughts. A prototype information platform has been developed to guide water resources management during situations where water resources drop below critical levels. The development was steered by stakeholders from national administrations and different economic sectors. Since June 2013 the platform has presented daily updated real-time information on several drought indicators including precipitation, streamflow, lake levels, groundwater levels, soil moisture deficit, snow resources, dryness in forests and stream temperatures. For three basins, ensemble forecasts of runoff, soil moisture, snowpack and groundwater storage have been provided. Furthermore, a nationwide operational hydrological simulation at 600 × 600 m resolution gives indications on local water resources deficits. Information for each variable has been used to create automatic “awareness maps” for nine large regions. Three levels of information with increasing detail and complexity can be accessed by over 180 registered users. The operators of the platform give interpreted comments on the content of the platform each week-day. The test phase of the platform will last until the end of 2014.

Key words hydrological droughts; communication; early recognition; internet platform