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First results of the EGSIEM Near Real-Time Service

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To enable the use of GRACE and GRACE-FO earth observation data for rapid monitoring applications, the Horizon2020 funded EGSIEM (European Gravity Service for Improved Emergency Management) project has established a demonstrator for a near real-time (NRT) gravity field service. The service aims to increase the temporal resolution of mass transport products from one month to one day and to reduce the latency from currently two months to five days. This allows the monitoring of hydrological extreme events as they occur, in contrast to a 'confirmation after occurrence' as is the situation today. The service will be jointly run by GFZ (German Research Centre for Geosciences) and Graz University of Technology, with each analysis center providing an independent solution. On-line validation will be performed by the University of Luxembourg using GNSS loading. A six-month long operational test run of the service starting in April 2017 is planned, in case GRACE Quick-Look data (provided by JPL) is still available. Within this time period, daily gravity field solutions serve as input to the EGSIEM Hydrological Service, which derives flood and drought indicators to be used within DLR's Center for Satellite Based Crisis Information and the Global Flood Awareness System (GloFAS).
This contribution highlights the current status of the NRT service and the results of the preparation phase. The performance of the NRT mass transport products will be shown by comparison with independent GNSS loading and ocean bottom pressure data as well as as catchment aggregated values for hydrological extreme events.