

European Satellite Based Services for Land and Water Management

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SUMMARY

The European GNSS Agency (GSA), on behalf of the European Commission, manages Europe's GNSS (EGNSS) programmes: EGNOS and Galileo. EGNSS brings multiple benefits in a multi-constellation environment, such as improved position accuracy and authentication services that improve usability and robustness of the satellite navigation service. On the other hand, the EU's Earth Observation Programme Copernicus is looking at our planet and its environment offering information services based on satellite Earth Observation and in situ (non-space) data. Vast amounts of global data from satellites and from ground-based, airborne and seaborne measurement systems are being used to provide information and help service providers, public authorities and other international organisations improve the quality of life for the citizens of Europe. Both EGNSS and Copernicus accessible services are provided freely and openly to its users.

Space-based technologies are already essential tools for the land and water management. However, it is through synergies and complementarity that their true capabilities and potential are fully exploited. One of the examples is GSA's H2020 GIM project that builds an advanced low-cost system based on EGNSS, Copernicus SAR and other in-situ sensors for the purpose of monitoring ground deformations with a focus on landslides and subsidence.