

GMES Requirements Study for Bavaria

Study completed regarding the potential future use of GMES data and services in the public sector in the State of Bavaria

The company GAF AG, together with ESRI Deutschland and con terra, have carried out a study looking at the potential use of GMES* data and services in the public sector for the Bavarian State Ministry for Economic Affairs, Infrastructure, Transport and Technology. The primary aim of the study was to identify and specify methods that could be implemented to highlight the potential benefits of using satellite information, focusing on already established or soon to be available GMES services. Particular attention was given in this respect to data from the new Sentinel satellites.

The study explains the added value of GMES* data and services when compared to traditional methods and demonstrates that the results can be used to increase efficiency. It thus identifies and specifies GMES services that could be integrated into the operational routines within the Bavarian state authorities in the short-term and mid-term. In cooperation with the Ministry for Economic Affairs, Infrastructure, Transport and Technology, the Ministry for the Environment and Health, the Ministry for Food, Agriculture and Forestry, the Ministry for Finance, and the Ministry of the Interior, concrete governmental tasks were identified that could make use of satellite services in order to optimise existing procedures, or that would in fact only now be possible to implement with the help of such services.

As a result, the following four potential pilot projects were identified. They all have great potential in terms of optimising routines, and can also be implemented in a highly efficient manner:

1. Land subsidence in areas with abandoned mines: In old mining areas, subsidence can occur often and unpredictably. It has only recently become possible to record and evaluate such earth movements automatically using radar data across large areas of over 100 square kilometres – this can ease workloads considerably and increase efficiency in the relevant authorities.
2. Forage yield assessments: The drive to utilise alternative sources of energy and the “Protein initiative” (drive to increase the amount of protein produced) in Bavaria require accurate knowledge regarding the achieved yields of green fodder. A method can therefore be developed that uses radar satellite data to detect the best harvesting dates for meadows to the nearest day and which also determines the growth between two harvests using established models.
3. Vitality changes in forests: Until now, the recording of forest conditions and health has been carried out using spot checks in a well-established procedure. There is, however, currently no established method for the comprehensive identification of vitality changes in forests. Now though, infrared satellite sensors can be used to detect vitality changes in a forest within just a few days.
4. Feed security: The entry of pollutants and toxins into farmland and green spaces caused by smoke and flooding can have a considerable effect on the quality of feedstuffs. The aim is therefore to develop a method based on the use of satellite data that could rapidly detect such hazards and combine this information with meteorological data in order to quickly identify areas at risk.

Dr. Stefan Saradeth, GAF COO, refers in this context to the longstanding and extensive experience of GAF in GMES projects: "Over the past 10 years, GAF has successfully worked on and implemented services in more than 20 GMES projects, and has particular experience in this regard relating to monitoring of land and renewable resources, monitoring of the atmosphere and also in the field of catastrophe and crisis management. In addition, GAF is already successfully making use of its GMES experience in order to provide services outside Europe."

The client is convinced that the study will help promote the use of GMES services for carrying out tasks in the public sector. Permanent Secretary Dietmar Schneyer from the Bavarian Ministry for Economic Affairs, Infrastructure, Transport and Technology highlights the already leading position of Bavaria with regard to the use of satellite services for public administration: "The strategic benefits achieved in Bavaria due to the early adoption of satellite information are obvious – the importance of the use of satellite services in the Bavarian state administration as an additional, innovative operational instrument for the fulfilment of tasks, thereby enhancing the value and timeliness of in-situ data considerably, has already been acknowledged as a result of pilot projects. The State of Bavaria is therefore in an excellent position to implement and adopt operative routines involving innovative Earth observation procedures and satellite services in the public sector."

*Global Monitoring for Environment and Security (GMES)

About GAF AG

GAF was founded in Munich 27 years ago and was the first German company dedicated to the applied use of remote sensing data and technology. Today, GAF is one of Europe's largest providers of geo-information services with a focus on Earth observation. Of particular note are the company's position as one of the largest distributors of commercial Earth observation data in the German-speaking countries and indeed in Europe, its longstanding and wide-ranging thematic and technical experience in the use of remote sensing data, and its extensive domestic and international experience with regard to project implementation and provision of services. The company has an excellent standing with many domestic customers, as well as with organisations such as the EU, ESA and the World Bank. GAF has experience from international activities and projects in more than 100 countries in Europe, Africa, Asia and South America, and with its 170 members of staff it offers a comprehensive portfolio of data products and services, including Earth observation and other geo-data products, data analyses, GIS and database implementation, information production, and capacity building projects in the fields of natural resources, environment, critical infrastructure and security. GAF is a member of the Telespazio Group, a subsidiary of Finmeccanica and Thales.

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The study can be obtained from the

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