



PROGRAMME OF
THE EUROPEAN UNION

ZERO HUNGER

SUSTAINABLE DEVELOPMENT GOAL

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SUSTAINABLE
DEVELOPMENT
GOALS

The European Union is committed to implement the 2030 Agenda for Sustainable Development, both in its internal and external policies. Discover how the European satellite navigation and Earth Observation systems can contribute and support each SDG.

Smart farming is emerging as a concept with huge potential of making agriculture more productive and sustainable. Using EU space services for precision agriculture can mean a considerable reduction in the use of fertilizers, fuel and pesticides. The result is healthier food and a reduced environmental impact which is for the benefit of millions of people worldwide.

Galileo and EGNOS link data to specific geographical coordinates and provide geolocation, tracking and positioning. Copernicus generates valuable space data that when combined together with modern technologies are providing innovative solutions for smarter farming.



EU SPACE FOR SUSTAINABLE FARMING PRACTICES

EU Space applications provide solutions to boost productivity and optimize crops and imply an increase on the quantity and quality of products and reduced farming costs. Thanks to EGNOS, low-cost and affordable precision farming applications are now available for all farmers, be it for smaller or large-scale farms. It is estimated that a 30% reduction of labour can be achieved for organic farming when using Galileo and EGNOS services. Copernicus data help farmers to adapt to the effects of climate change and protect crop yields from extreme weather and droughts.

- South African farmers using Copernicus data to monitor vineyards and orchards increased their water use efficiency by between 10% and 30%.



LIVESTOCK MANAGEMENT

EU space applications are there to help livestock farmers meet the growing demand for protein and meat and assure the welfare of their animals. Galileo and EGNOS applications using satellite navigation tracking technology, can for instance remotely monitor the condition of cattle and their pastures and can be helpful tools for understanding animal behavior. All you need is a smart phone or hand-held device.

- Copernicus services can provide livestock farmers with **projections about raining season** that help them taking timely management action and avoid animal losses and grassland degradation.
- Farmers in Namibia use a service that allows them to **monitor the greenness of the vegetation and better manage their livestock**.

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IMPROVED NUTRITION AND HEALTHIER FOOD

Today, agriculture uses around 70 percent of all freshwater worldwide. EU space applications are looking at innovative solutions to support farmers with precious information needed to apply smart farming sustainable practices and affordable high-tech equipment. Copernicus data can be used by farmers to improve their irrigation systems and reduce their water consumption. Using Galileo and EGNOS, it is now possible to produce soil moisture content maps and maps of waterlogging. Farmers can save water and make more efficient decisions on where and when to irrigate which in turn leads to improved water, land and soil use.

Copernicus can help farmers producing healthier food supporting their assessment on the right level of pesticides and fertilizers. Galileo will offer the required precision to match the needs of modern high-tech equipment for farmers enabling autonomous driving and lead to increased efficiency and right-on-time harvesting.

- In Greece, the use of Copernicus has led to a **19% decrease in the consumption of water, fertilisers and pesticides** among farmers, along with a 10% increase in production.



ABOUT EU SPACE PROGRAMME

Space applications play key roles in our daily life activities. The EU space programme enables solutions to tackle global challenges such as sustainability and climate change, safety and security, emergencies and mobility. The EU's flagship space programmes foster innovative services that meet the needs of users worldwide.

COPERNICUS is the EU's Earth Observation system: free, full and open access satellite data used to provide services in six areas: land monitoring, marine environment monitoring, atmosphere monitoring, climate change, emergency management and security.

GALILEO is the EU's global navigation satellite system, providing accurate positioning and reliable timing information. Galileo services are widely used by people and businesses, for example in transport, agriculture, health, finance and energy networks, search and rescue and emergency response.

EGNOS is the EU's regional navigation system. EGNOS services are used in safety-critical applications in aviation, maritime and land-based uses in most of Europe.



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#EUSpace #CopernicusEU #UseGalileo #EGNOS