

SOLUTIONS

Topographic Mapping

Achieve efficient topographic mapping at 1:25,000 to 1:50,000 scale, even in difficult to map areas.

National Security

Obtain detailed terrain and hydrology data for surveillance, reconnaissance, and mission planning in remote and densely forested areas.

Oil and Gas

Evaluate potential exploration blocks through analysis of surface geology; perform infrastructure/logistics planning for upstream and midstream activities.

Water Resources

Perform hydrology studies for accurate watershed delineations and flood risk mapping over entire regions; create 3D visualizations for scenario planning and evacuation routing.

Agriculture

Identify and monitor crops over large areas using automated classification routines; execute run-off analysis and irrigation planning.

Forestry

Complete inventory counts and estimate tree heights/crown diameter for harvest management; create fuel maps and fire modeling.



7320 Executive Way
Frederick, MD 21704, USA
1.301.948.8550

For more than 50 years, Fugro EarthData has crafted mapping and GIS solutions for natural resources management, urban planning, defense, and engineering customers, among others. Our acquisition-to-production resources and continual technology investments enable us to efficiently deliver high quality, end-to-end solutions to meet our customers' geospatial needs. As a member of the international Fugro group of companies, we also have the unique ability to combine our core offerings with an expanded range of onshore and offshore surveying services. Working with customers across the globe, Fugro EarthData is turning spatial data into knowledge....the knowledge you need to make the right decisions.

GeoSAR

Mapping the Impossible

Fugro EarthData's Global
Radar Mapping System



www.geosar.com

The GeoSAR Advantage

Acquiring high resolution geospatial data over large and remote areas with unprecedented speed and accuracy, Fugro EarthData's GeoSAR airborne radar mapping system solves the age-old problem of imaging and modeling geographic regions obscured by clouds or dense vegetation.

Unique Technology

GeoSAR uses a sophisticated technology known as dual-band interferometric synthetic aperture radar (InSAR). With each pass of the aircraft, GeoSAR simultaneously maps both surface features (X-band) and bare-earth terrain (P-band).

Robust Data Deliverables

GeoSAR X- and P-band orthorectified imagery and digital elevation models contain all the information needed to produce regional topographic and thematic mapping at standard 1:25,000 and 1:50,000 map scale. Additional deliverables include slope maps, contours, and hydrology feature extraction, and land-use/land-cover.

Multiple Data Applications

Each GeoSAR mission supports a wide range of end-user needs, from base topographic mapping for national or regional GIS, to the more specialized geospatial needs of the defense, engineering, and scientific communities.

GeoSAR is owned and operated exclusively by Fugro.

Penetrating clouds and foliage to provide geospatial knowledge anywhere in the world.

Foliage Penetration

Mapping beneath the canopy for bare-earth elevation data. GeoSAR's P-band system penetrates both clouds and foliage to deliver detailed terrain elevation, enabling surface feature extraction in forested areas. The potential uses for this information are many, ranging from water resource management and flood risk assessment to structural modeling and seismic mission planning.

Science

Developing value-added datasets that benefit customers and society. Employing a team of data experts, Fugro EarthData's research and development group not only operate a system, but continually explore the development of value-added GeoSAR datasets.

Partnership

Building partnerships with regional academic, institutional, and governmental partners to ensure successful programs and technology transfer.

Working with Fugro offers users a greater range of geospatial technologies for complete national framework datasets.

Data Ownership

Delivering unlicensed mapping products with no restriction on use or dissemination. With full data ownership customers benefit from unlimited use of their data across multiple sectors and organizations.

The Power of P-Band

GeoSAR's P-band radar has the ability to penetrate even triple-canopy forests, making it possible to map otherwise hidden water and geology features with a high degree of accuracy. Fugro EarthData's team of scientists continues to realize P-band's capabilities, expanding the range of applications that can be supported by GeoSAR data including:

- Enhanced radargrammetry
- Automated feature extraction
- Forest carbon accounting
- Enhanced land cover classification
- Detection of man-made features

