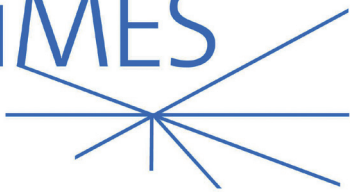


# LIMES



## LIMES

Land and Sea Integrated Monitoring  
for Environment and Security

### DEVELOPING SERVICES IN SUPPORT OF SECURITY APPLICATIONS

The LIMES project supports the Global Monitoring for Environment and Security initiative by providing expertise and developing services for security applications, applying innovative solutions based on Earth observation technology and on its integration with satellite telecommunication and navigation capacities where relevant.

The applications mainly concern maritime surveillance, land border management, surveillance of critical infrastructure, Non Proliferation Treaty monitoring and support to humanitarian missions. The LIMES project has the following main objectives:

- Define, develop and validate a pre-operational set of services to support security management at EU scale adding value to the present information chains in the field of security. The services will exploit the full capabilities of satellite and in-situ technologies.
- Close the research gaps in terms of information tools to improve the use of Earth observation and other space technologies for security applications, by enabling decision support tools and developing a platform for the provision of the services.
- Set up a framework for cooperation between Member States and EU bodies, in order to develop common operational procedures to improve access, archiving, exchange and processing of information according to secure access policies.

Developments are in progress and demonstrations of pre-operational services are foreseen in the following three clusters.



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### MARITIME SURVEILLANCE

Services are developed in collaboration with coast guards, customs and FRONTEX for:

- Coastal and open-water surveillance, including surveillance of maritime border and over the Exclusive Economic Zone of the EU. The test areas are: North and Baltic seas, Atlantic approaches to the EU and the Mediterranean Sea.
- Sensitive cargo surveillance (e.g. cargoes containing hazardous material, fuel, weapons, precious goods, etc.) at EU level. Services will be tested in the Mediterranean Sea.
- Area surveillance outside the EU including non-EU coasts and sensitive hot spots.

### LAND AND INFRASTRUCTURE SURVEILLANCE

- For land border management, services are developed in collaboration with FRONTEX and relevant border guards. The test areas are situated along the Eastern EU land borders.
- For critical infrastructure surveillance, a set of services is being developed in Spain for gasification plants and pipeline in collaboration with ENAGAS, future developments include port security. Services are also supporting event planning (Zaragoza expo).
- In support of Non Proliferation Treaty (NPT) monitoring, the objective is to improve information products to respond to the needs of users such as the International Atomic Energy Agency.

### HUMANITARIAN RELIEF AND RECONSTRUCTION SUPPORT

In this domain, the main users are civil protection agencies, NGOs active in the humanitarian aid sector, the Red Cross family and UN Agencies.

- The information services support aid planning, resource allocation (food, water, infrastructure, etc) and population monitoring. Information products will be provided for actions in Yemen, Nigeria and Darfur.
- For emergencies and crisis management, the fast provision of updated geospatial information is foreseen combined with the appropriate use of emergency satellite communication and navigation mobile systems.

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## LIST OF PARTNERS

- Telespazio S.p.A., Italy
- Joint Research Centre, International Organisation
- Deutsches Zentrum für Luft- und Raumfahrt e.V., Germany
- Thales Alenia Space Italy, Italy
- Thales Alenia Space France, France
- GMV S.A., Spain
- QinetiQ Ltd, UK
- Astrium SAS, France
- Istituto Affari Internazionali, Italy
- Kongsberg Satellite Service AS, Norway
- THALES Communication SA, France
- D'Appolonia, Italy
- Definiens, Germany
- GAF AG, Germany
- Infoterra Ltd, UK
- Norwegian Defence Research Establishment, Norway
- Joanneum Research Forschungsgesellschaft m.b.H., Austria
- Paris Lodron Universität Salzburg ZGIS, Austria
- Université Louis Pasteur Strasbourg I, France
- Space Research Centre, Poland
- Société Wallonne de Photogrammétrie, Belgium
- United Nations Office for Project Services, International Organisation
- National Observatory of Athens, Greece
- Italian Civil Protection – DPC, Italy
- Centro Italiano Ricerche Aerospaziali, Italy
- Space Engineering, Italy
- Fondation pour la Recherche Stratégique, France
- 4C Technologies, Belgium
- GEOAPIKONISIS Ltd, Greece
- Università degli Studi di Pisa, Italy
- Institute for Electromagnetic Sensing of the Environment – CNR, Italy
- University of Rome “La Sapienza”, Italy
- European Union Satellite Centre, International Organisation
- Università degli Studi di Trento, Italy
- Universitat Politècnica de Catalunya, Spain
- Hellenic Coast Guard, Greece
- Centre for Research & Technology - Hellenic Institute of Transport, Greece
- Spot Image S.A., France
- Coastal and Marine Resource Centre, University College Cork, Ireland
- Ingeniería y Servicios Aeroespaciales S.A, Spain
- ATOS Origin Sociedad Anónima Española, Spain
- Technische Universität Bergakademie Freiberg, Germany
- Flyby Srl, Italy
- Institut de Recherche pour le Développement, France
- Italian Red Cross, Italy
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## PROJECT INFORMATION

LIMES: Land and Sea Integrated Monitoring  
for European Security  
Integrated Project  
Contract no: SIP5-CT-2006-031046  
Starting date: 01/12/2006  
Duration: 42 months  
EU Contribution: € 11.980.000  
Estimated total cost: € 21.248.000

