

PILOT APPLICATIONS

Liguria Pilot Sites

The Liguria pilot area for *Soil Consumption* scenario is the Tigullio. This is a highly urbanized area with coastal management problems.

The pilot area for *Landslides* scenario is the "Cinque Terre" in the municipalities of Monterosso and Vernazza. In October 2011 the area was affected by extreme rainfalls which triggered debris flow and landslides.



Toscana Pilot Sites

Toscana pilots, for both the scenarios of *Landslides* and *Soil Consumption*, are in the areas known as Lunigiana, Versilia and Garfagnana. In these zones the connection between landslides and meteorological events is due to territory characteristics. This part of the region is also affected by significant land cover changes.



USE CASES

The LIFE+IMAGINE web services infrastructure can be used for:

- informing citizens about landslide hazards
- assessing the impacts of landslides on transport network, cultural heritage and agriculture
- calculating soil consumption indicators and landscape metrics at national and municipal level
- reporting about land cover changes
- assessing the impact of landslides and soil consumption on coastal sediments budget

Partnership



Beneficiary Coordinator: GISIG

Geographical Information Systems International Group (Genova, Italy)



ISPRA

Istituto Superiore per la Protezione e la Ricerca Ambientale (Italy)



Regione Toscana

Regione Toscana (Italy)



Consorzio LAMMA (Firenze, Italy)



EPSILON ITALIA (Cosenza, Italy)



Fondazione Graphitech (Trento, Italy)

Contacts

GISIG-Geographical Information Systems International Group
Via Piacenza, 54 - 16138 Genova, Italy
Tel: +39 010 835 55 88
E-mail: gisig@gisig.it
Web site: www.gisig.it

Project Coordinator
Giorgio Saio: g.saio@gisig.it

Project Management
Milva Carbonaro: m.carbonaro@gisig.it
Alessandra Marchese: a.marchese@gisig.it

www.life-imagine.eu



LIFE+IMAGINE

Integrated Coastal Area Management Application Implementing Copernicus, INSPIRE and SEIS Data Policies



Project N° LIFE12/ENV/IT/001054

LIFE+IMAGINE is a project of the LIFE+ Call 2012, co-funded by the LIFE+ Programme Environmental Policy and Governance, objective "Strategic Approaches"

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LIFE+IMAGINE deals with the Integrated Coastal Zone Management (ICZM). The project supports the enforcement of the knowledge base on environmental and data policies in the specific sector of coastal management, as well as their implementation and application at National and Regional level.

LIFE+IMAGINE, through methodologies for environmental analysis, provides standardized and hands-on information to support governance, planning, decision making and reporting in coastal zones.

To this aim, **LIFE+IMAGINE** implements an infrastructure based on web services for environmental analysis, integrating the specifications from the INSPIRE Directive, the data from the Copernicus Programme and the guidelines for a shared environmental information system at EU level.

LIFE+IMAGINE focuses on coastal areas, zones composed of multiple interacting systems. The project focus is on two environmental scenarios, **soil consumption** and **landslides**, which are representative of major problems affecting the Mediterranean coasts. In the last years, in fact, the combination of two main factors, such as the anthropogenic soil sealing due to wild urbanization and the intense rainfall events, deeply modified the territory and strongly increased the occurrence of floods and landslides in populated areas.

The application of **LIFE+IMAGINE** to the Integrated Coastal Zone Management makes available new, usable and accessible environmental information that, along the time, allows to:

- better assess the impacts of landslides and soil consumption, by calculating in which measure the investigated zones are affected by these problems
- mitigate the impacts through the prevision and the monitoring of these problems
- improve and, in a longer term, reshape the planning processes, by proposing interventions aimed at removing the impacts



MAIN OUTCOMES



Standard methodologies for analysis of impacts by landslides and soil consumption in coastal areas

The development of these standard methods of analysis allows to evaluate the impacts by extreme meteorological events and urbanization phenomena in coastal areas, and helps the definition and the monitoring of indicators to assess present and future planning and to support decision making processes



Methodologies and tools for data harmonisation and validation, in accordance with INSPIRE

In order to support the implementation of the INSPIRE Directive, LIFE+IMAGINE develops methodologies and tools to carry out the data harmonization process, with reference to the Geology, Natural Risk Zones, Land Cover, Statistical Units, Population Distribution and Demography INSPIRE data themes



Infrastructure of interoperable data and services, with a 3D client

LIFE+IMAGINE develops a technological infrastructure that supports the harmonization, the processing and the 3D visualization of multi-sources data. Open and standard protocols guarantee the interoperability of systems, services and data and hence the reusability of the infrastructure



Web Processing Services for environmental applications

LIFE+IMAGINE infrastructure offers a cluster of innovative value-added services allowing different users to discover, access, use and reuse spatial data from local to European level



Training Framework

A dedicated on-line infrastructure allows to access the project training offer, integrating web demonstrations and applications, e-learning tools, training modules and training material. It is accessible upon registration on the LIFE+IMAGINE web site (www.life-imagine.eu)

