

InterRisk

Interoperable GMES Services for Environmental Risk Management in Marine and Coastal Areas of Europe

Coordinated by

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Motivation

- Environmental safety in marine and coastal areas is matter of national, international and EU concern and there is **growing need to integrate all types of environmental data** across national and institutional boundaries
- In marine and coastal monitoring, users in several countries and organizations often need **access to the same data**, including observations, derived parameters and model predictions of future conditions, and **systems to retrieve, compare and analyze different types of data.**

State-of-the-art

- Many **national monitoring and forecasting services** are well developed, but they are customised to their country's territorial waters, and often based on proprietary or non-standard solutions preventing smooth data exchange.
- New **observing systems** (in situ and remote sensing sensor technology), **data fusion methods, numerical modelling, ontologies and web services**, are developed and provide useful tools to improve existing services.
- The **lack of a pan-European infrastructure** for uniform access and distribution of environmental data is a severe problem in all types of risk and crisis management.

Challenges

- The main challenge is to bring marine monitoring tools (observations, models) together on European (and global) level to **provide integrated monitoring services**.
- EU policies and research encourage development of a **Single Information Space in Europe for the Environment (SISE)** and to build best practices of European Member States in the implementation of the Shared Environmental Information System (SEIS).

Objectives of InterRisk

- To develop a pilot system for interoperable monitoring and forecasting services marine and coastal areas in different test areas in Europe.
- The system will demonstrate use of satellite & aircraft data, in situ observations and numerical models needed to monitor and forecast marine environmental crisis events, with focus on oil spills and harmful algal blooms

What is data interoperability ?

.... the ability for data users **to work with (view, access, analyze, process, compare, etc.) data** from different observing systems or models, without reformatting the data, write special tools or extract the data, or rely on specific proprietary software (Lynnes et al., 2008)

InterRisk develops an **open system architecture based on established GIS and web services protocols**, and implemented in a network of for several European regional seas.

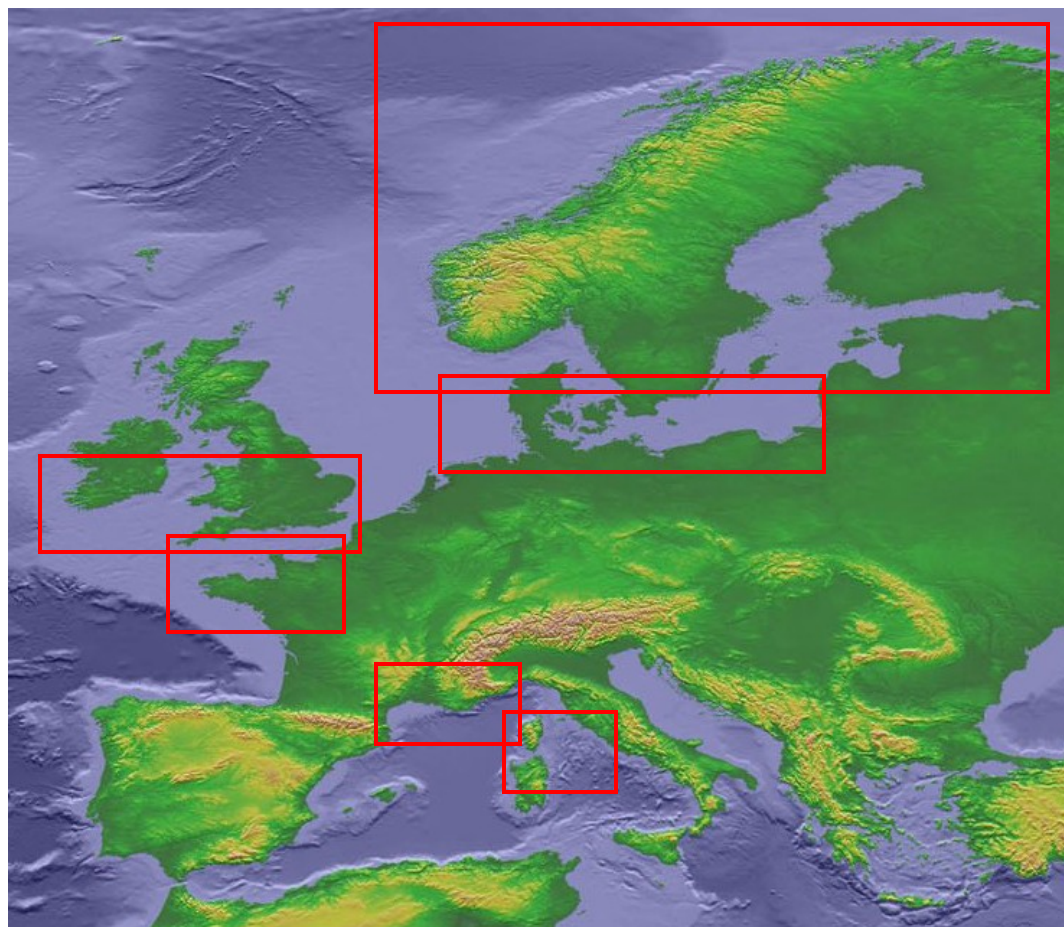
InterRisk study areas

- **Target areas:**

- Norwegian waters
- UK and Irish waters
- French waters
- German and Polish waters
- Italian waters

All the areas are exposed to marine pollution caused by

- Oil spills
- HAB
- Eutrophication
- Environmental degradation



Service Concept

