

## **HUMBOLDT Application Scenario Transboundary Catchment**

### **– Factsheet –**

#### **Global perspective:**

*Cross-border data harmonisation to support trans-boundary catchment management*

#### **Benefit:**

*Two-level implementation: practical demonstration level and conceptual/descriptive level. The objective of the implementation story covers: a) modeling with non-harmonised data, b) modeling with harmonised data and subsequent comparison of both results with discussion of advantages, disadvantages, conditions for application etc.*

#### **Relation to GMES/INSPIRE:**

*Integration of different INSPIRE Data Themes for trans-boundary management in accordance with the Water Framework Directive*

#### **Particularities:**

*The partners' previous experience provides and permits the exploitation of fundamental knowledge in trans-boundary water management Decision Support Systems including understanding of many user problems in the field of cross-border data harmonization and the Water Framework Directive*

*Development of rainfall-runoff (RR) model of Italian/French trans-boundary catchment (Roia/Roya River) for two purposes: runoff prediction (estimation of peak discharge etc.) and subsequent flood risk evaluation*

#### **Use case:**

*Data harmonisation needs in the creation of a hydrological model for a transboundary catchments area*

#### **Target audience:**

- |                                                                                      |                                                              |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> PACA Region                                                 | <input type="checkbox"/> Mercantour – Argentera Natural Parc |
| <input type="checkbox"/> Conseil Général des Alpes<br>Maritimes - Technical services | <input type="checkbox"/> Regione Liguria                     |
|                                                                                      | <input type="checkbox"/> Regional Parks (Liguria, Piedmont)  |

### Stakeholders involved:

- Regional and local Administrations
- Catchment management authorities
- National and European agencies for reporting
- Water distribution companies
- Field specialists in Water Resources/Researchers
- NGOs and citizens

### Data involved:

*The work is focused on selecting minimum features required to create a working context for the management of the trans-boundary catchment, e.g. DEM (or its source data), river network and water bodies, catchment area, Land Use and Land Cover, Soil Type, Precipitation and River discharge Measurement Stations, Time series of Precipitation data, Time series of River discharge data*

### Spatial coverage:

*The scenario will be developed by exploiting available datasets/web services for a pilot transboundary case (Roia/Roya River Italy-France,)*

### Major harmonisation issues:

*The following data harmonisation requirements and corresponding HUMBOLDT components are anticipated: Multilinguality, Edge Matching, Conceptual Schema Translation, Coordinate Transformation, Scale Transformation*

### System architecture:

#### *Existing software components:*

*Open source desktop GIS software (Pre- and Post-processing of datasets used for hydrological modelling)*

*Open source webGIS and frontends*

*Hydrological modelling software*

#### *HUMBOLDT components (expected):*

*HUMBOLDT Alignment Editor (HALE)*

*Coordinate Transformation Service*

*Conceptual Schema Transformer*

*Edge Matching Service*

*Language Transformer*

### Scenario Demonstrator will be available:

*End of June 2010*

**For more information please visit our Project Website [www.esdi-humboldt.eu](http://www.esdi-humboldt.eu)  
and our Community Website <http://community.esdi-humboldt.eu>.**

#### **Scenario Contact:**

Giorgio Saio  
g.saio@gisig.it

#### **HUMBOLDT Project Office:**

zeitform Internet Dienste  
Fraunhoferstrasse 5  
64283 Darmstadt  
Germany

Phone: +49 6151 155 637  
Fax: + 49 6151 155 634  
Email: [po@esdi-humboldt.eu](mailto:po@esdi-humboldt.eu)  
<http://www.esdi-humboldt.eu>