



Widespread introduction of constructed wetlands  
for a wastewater treatment of Agro Pontino

LIFE+08 ENV/IT/000406

## CONSORTIUM FOR THE LAND RECLAMATION OF THE "AGRO PONTINO"

ACTION **6.4**

**GEODATABASE OF THE CBAP**

Partner:



## GEODATABASE OF THE CBAP

<sup>1</sup>This methodological report summarises the methods that have been adopted and the activities that will be carried out in order to implement the geodatabase of the hydrographical network of the Pontine Plain and the mapping of waterways, classified according to their suitability to the interventions experimented through the pilot projects.

The methodology wants to achieve the expected results through the following three steps:

1. Implementation of the structure of the geodatabase, and deployment of data;
2. Data analysis, elaboration of queries and realisation of a decision support system (DSS) for the identification of the river branches where the creation of buffer strips is possible and convenient, on the basis of the information resulting from the pilot projects;
3. Execution of analyses and in-depth studies in order to check the suitability of the branches selected in step.

The geographical database uses an *OpenSource PostgreSQL* environment with the *Postgis* geographical extension. The environment is therefore composed of the *PostgreSQL RDBMS* and the *PostGIS* spatial module. The use of *PostgreSQL* allows to modify/complete the semantic part (attributes) through SQL, while *Postgis* manages the “spatial” part.

The creation of the spatial database envisages:

- The definition of a logic *PostgreSQL/PostGis* scheme, according to the project needs.
- The import of the Consortium’s spatial data into *PostGIS*.
- The link of a GIS system with the *PostGIS* database, in order to use and modify the spatial data.

The necessary topics, listed below, are implemented in the geodatabase after undergoing a process of homogenisation of formats and of the geographic reference system:

a) the Consortium’s topological hydrographical network, with indication of water flow direction, and the following attributes:

1. use classification
2. typology

---

<sup>1</sup> This document is a summary of the italian version.

3. denomination
4. typology of the typical section
5. synthesis of the maintenance activities implemented

b) location of hydraulic and irrigation works, with related informative form comprising:

1. possible denomination
2. typology
3. function
4. period of use
5. sector responsible for the maintenance/management
6. photographic or design material, possibly available in digital format
7. state of efficiency/functionality

c) channel banks, with the following attributes:

1. typology
2. reliability assessment
3. description of possible problems
4. height from the crowning plane

d) road crossings, with the following attributes:

1. competent authority
2. land registry (raster and vector);
3. topographic cartography (IGM 1:100.000, IGM 1:25.000, CTR 1:10.000, NCTR 1:5.000, 1:5.000 map drawn before the drainage of the 1930s, orthophotograph);
4. land cover on a 100-metre buffer along the channel network;
5. constraints of interest (SCIs, SPAs, Natural Monuments, Parks, regional constraints, public waters, Hydrogeological Risk Plan, etc.).

All layers introduced in the geodatabase are provided with metadata, as provided for by the Directive 2007/2/CE.



Widespread introduction of constructed wetlands  
for a wastewater treatment of Agro Pontino

[www.REWETLAND.EU](http://www.REWETLAND.EU)