# Enhancing the role of wetlands in integrated water resource management for twinned river basins in EU, Africa and South America in support of EU Water Initiatives

**Funded by:** European Commission FP7

**Coordination:** VITUKI (Hungary) & SORESMA (Belgium)

**Date:** November 2008 – October 2011

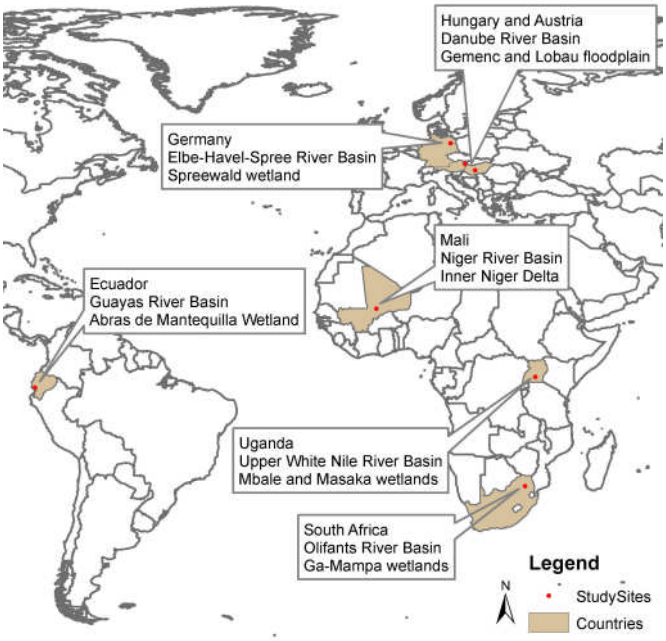
**Countries:** Mali, Uganda, South Africa, Ecuador, Germany, Hungary, Austria

**Partners:** VITUKI (Hungary), SORESMA (Belgium), PIK (Germany), WKL (Austria), UNESCO-IHE (The Netherlands), WI (Mali), NWSC (Uganda), IWMI (South Africa), ESPOL (Ecuador)

**Objectives of the WETwin project:** To enhance the role of wetlands in basin scale integrated water resource management, with the aim of improving the community service functions while conserving good ecological status. WETwin aims to:

- Improve drinking water and sanitation services of wetlands;
- Improve the community services while conserving or improving good ecological health;
- Adapt wetland management to changing environmental conditions;
- Integrate wetlands into river basin management.

*Papyrus Wetland Uganda*




*WETwin case study sites*

**Twinning:** Case study wetlands in three continents are 'twinned'. This means that knowledge and expertise on wetland and river basin management is exchanged. In practice, knowledge interchange is implemented through staff exchange between partners and through actively involving the actual operational case studies' decision-makers in twinning workshops. Locally, stakeholders are actively involved through a series of training and dissemination sessions. Finally, networking with international wetland and river basin platforms also contribute to the global exchange of expertise on wetland management.

**Introduction:** Wetlands provide important services for local communities (food, drinking water, wild products, etc.). Also wetlands play an important role in water regulation, purification and spreading of water-borne diseases. Evidence furthermore exists that wetlands are very sensitive towards changes in water allocation, nutrient loading and land-use and economic developments within the entire river basin.


VITUKI
Kvassay Jenő u. 1.
Budapest H-1095
Tel. +36 (0) 12156140

Soresma nv - haecon
Poortakkerstraat 41
B-9051 Gent
tel. +32 (0)9 261 63 00

Contact: Dr. István Zsuffa - istvan.zsuffa@vituki.hu
Jan Cools - jan.cools@soresma.be
www.wetwin.net



SEVENTH FRAMEWORK PROGRAMME

Moreover, many wetlands are vulnerable to climate change. As a result, wetlands are the best indicator for a successful integrated water management.

Wetlands also play a key role in providing drinking water and adequate sanitation. Yet, at current pace, the Millennium Development Goals for adequate sanitation and drinking water are missed with half a billion people worldwide. It is expected that the increased incidence for droughts, increased water consumption and waste water production only further increase the distance-to-target.

Despite the international protection of the Ramsar Convention (Global) and Natura2000 (European Union), many wetlands lack sustainable management and are being threatened. Several guidelines exist on sustainable wetland management. Yet, these are insufficiently implemented.

As a conclusion, the wise management of riparian wetlands is crucial to maintain its ecosystem services. As wetlands are key elements of a river basin, wetland management affects river basin services as well. Hence, a need exists to integrate wetlands into river basin management.

**Activities:** Activities are grouped under thematic work packages (WP). The work plan departs from the initial characterisation of the selected case studies, inspired on the EU Water Framework Directive Approach and the RAMSAR 'critical path' approach. Hence, the natural and socio-economic status is assessed in WP3, as well as management practices & institutional settings (WP4) and existing stakeholder structures (WP2). Based on a comparative analysis, data gaps are filled. The developed database is made available afterwards to wetland and/or river basin management authorities (WP6).

In WP7, a modular and flexible decision-support toolbox is developed, based on locally available tools, which allows:

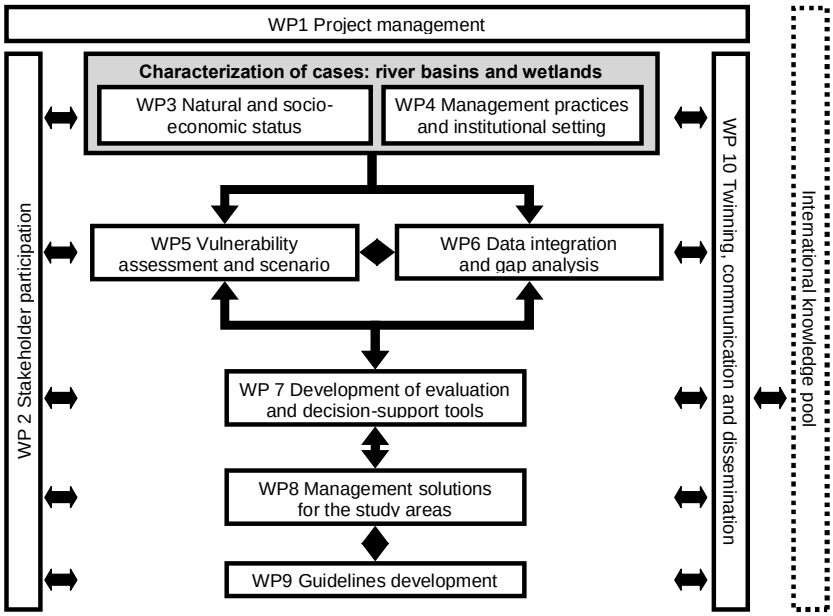
- To quantify wetland functions and services (WP7);
- To assess the wetlands' vulnerability towards climate change, demographic growth, agricultural production and changes in water demand (WP5);
- To quantify the impact of management options on the targeted wetland functions and services (WP8).

Given the wide diversity of case studies, the toolbox consists of instruments at different levels of complexity ranging from qualitative expert judgment-based systems over GIS-based system to complex numerical models. In order to support decision-makers on wetland and river basin management, the toolbox outputs are translated into 'policy-tailored' performance indicators and thresholds values. Finally, case-specific best-compromise solutions are worked out for the case study wetlands with emphasis on the trade-off between drinking water and sanitation services, ecological health and livelihood services.

The management solutions go beyond the classical technological options and include also socio-economic options targeting livelihood and options to improve the institutional capacity. To cope with the vulnerability to future changes, sustainable adaptation strategies are designed as well, with active engagement of stakeholders.

Conclusions are summarized in a generic guideline, which is aimed to be compatible with RAMSAR, the EU Water Framework Directive, the Millennium Development Goals and the Millennium Ecosystem Assessment.

*Rice cultivation – Inner Niger Delta*




*Work package flow scheme*

Win the wetland and you win the river basin! WETwin