Problems, pitfalls and opportunities of river restoration project implementation: Ripidurable and Ricover case studies

UE/EU – FEDER/ERDF

SUDOE Interreg IV B

Nord Est SUD Ouest INTERREG IIIC

RIPIDURABLE

RICOVER

Ripidurable and Ricover?

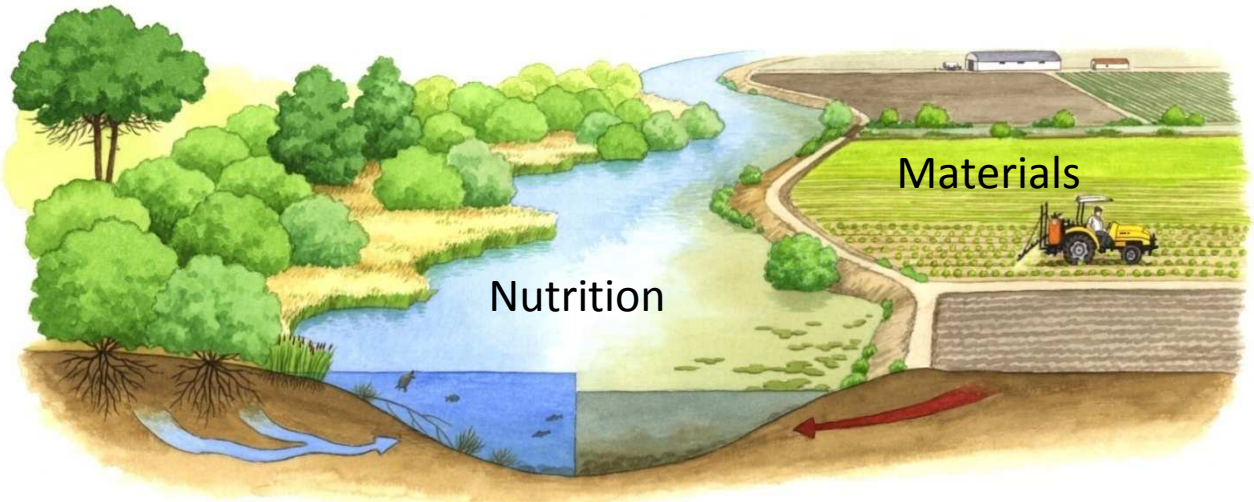
- Cooperation projects funded under the Interreg Initiative through ERDF that engaged partners across Europe to

"work or act together for a common purpose or benefit" for

Sustainable management of Rivers

Provide: provisioning, regulating and cultural services

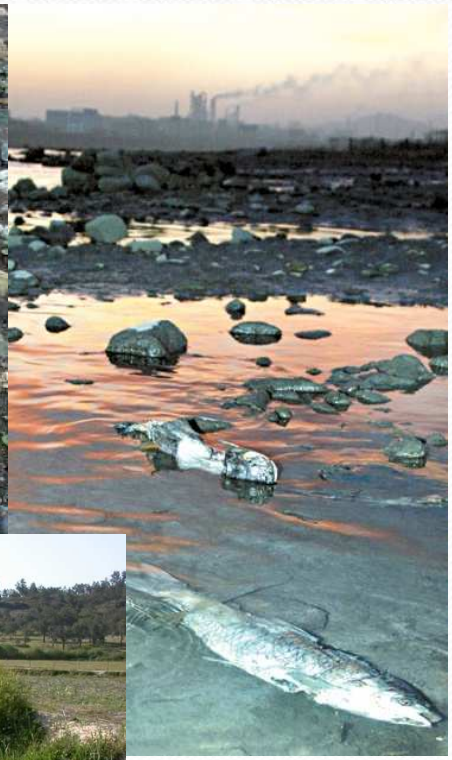
Symbolic, intellectual and experimental



Regulation of physical and biotic environment and wastes

Flow regulation
Erosion control

Major negative impacts on rivers services



From an idea a project was born…

With the help of

Nord Est SUD Ouest
INTERREG IIIC

RIPIDURABLE

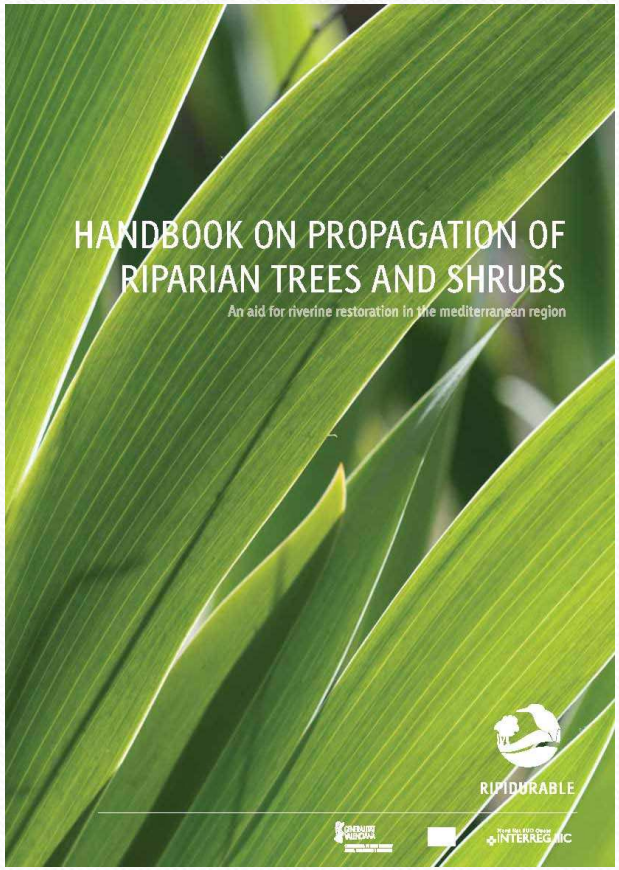
10 Partners (5 countries)

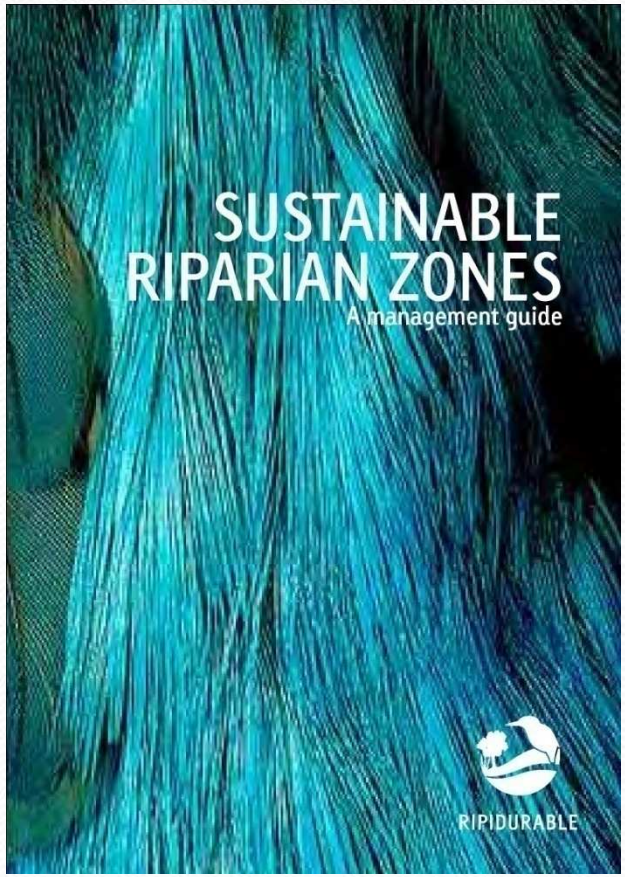
Funding: 1 616 989€

- Alpiarça Municipality (PT)
- Montemor-o-novo Municipality (PT)
- Institute of Agricultural Sciences (PT)
- Évora University (PT)
- Seed Bank of the Valencian Generalitat (SP)
- CNRS – Montpellier (FR)
- Burgundy University (FR)
- Inland Water institute (GR)
- Ioaninna University (GR)
- Amvrakikos Developmental Agency (GR)

Development of good practice management model and its diffusion

- **Scientific articles**
- **River restoration projects**
- **Books**
- **Seminars**
- **Participation in congresses across Europe**
- **Leaflets**
- **Courses (propagation material and Bio-engineering)**
- **Stands at fairs**
- **Web-site**
- **Field visits**
- **TV spots**



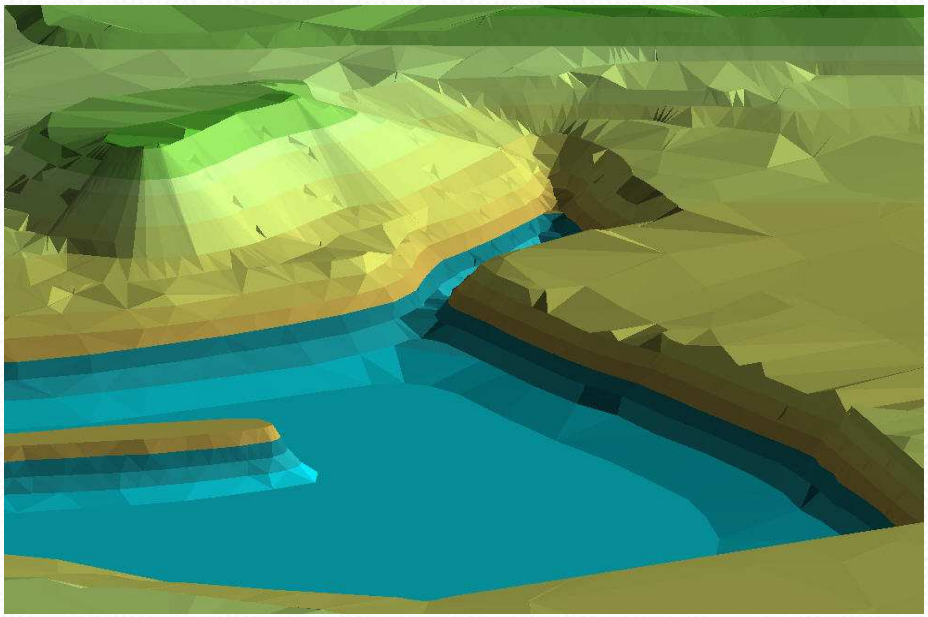


Available at www.ripidurable.eu

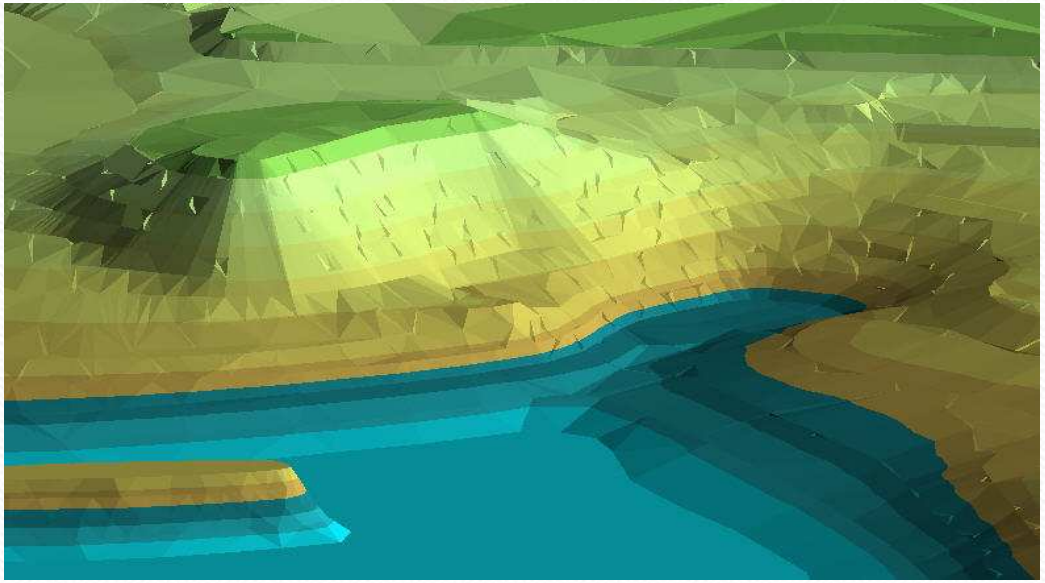
Objectives

- Scenic recover
- Restore the feeding, nesting and resting area for birds
- Trigger the natural vegetation recovery process
- Develop environmental education

Project – General plan



Initial view

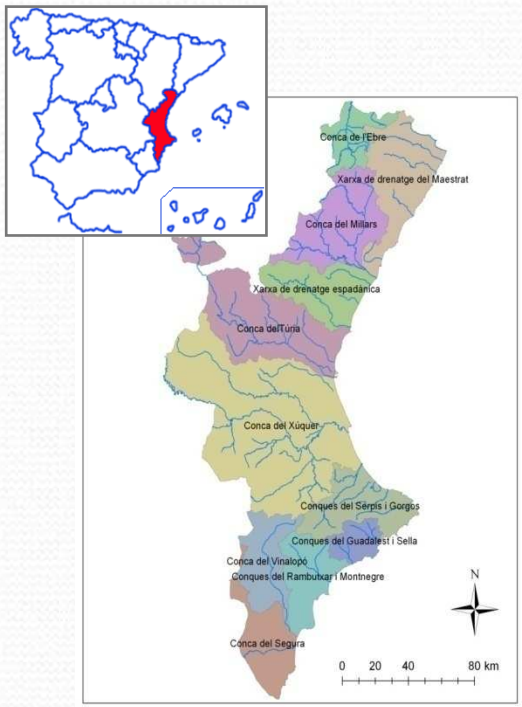


Projected view

Developed activities

Native Plant Propagation

The lack of suitable plant material from the same geographic region for pilot restoration projects was addressed



Cost:


February 2008

1992- 2002


September 2014

River Ecosystem Services Valuation?

- Nomenclature by REFORM – REstoring rivers FOR effective catchment Management, which include sand, gravel as provisioning services
- Aquamoney project - individuals' loss of welfare owing to resource depletion or quality decline. Environment cost?

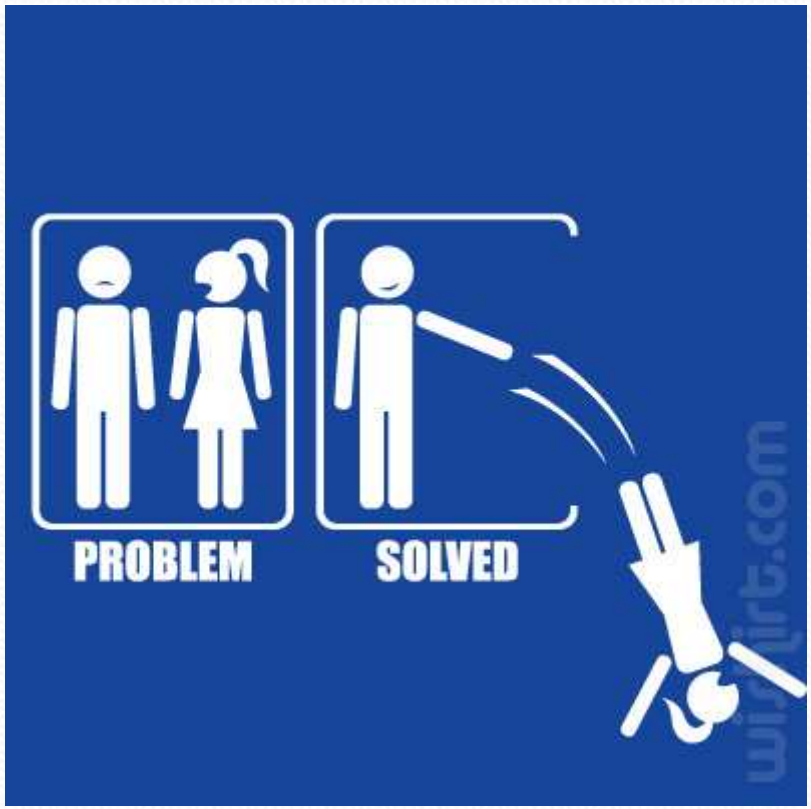
- Benefits forgone (=losses) can be quantified in terms of money put to restore them to as close as possible, so that they provide sufficient benefits to human wellbeing (parallel to losses in terms of water volumes not received)

Problems

- The decision to "restore" was essentially due to cultural services, in this case, landscape services, that could have impact on future commercial interests in the wetland landscape value.

- The population of Alpiarça didn't like the after extraction landscape but was not willing to pay for it. Willing to pay would give values close to zero. (number of habitants=7702; 44893€/7702hab=5.8€/hab; mean wage 892€)

- This decision had impacts on the implementation of the project. When the greatest visual impact was diminished, the municipality became less involved in the project.



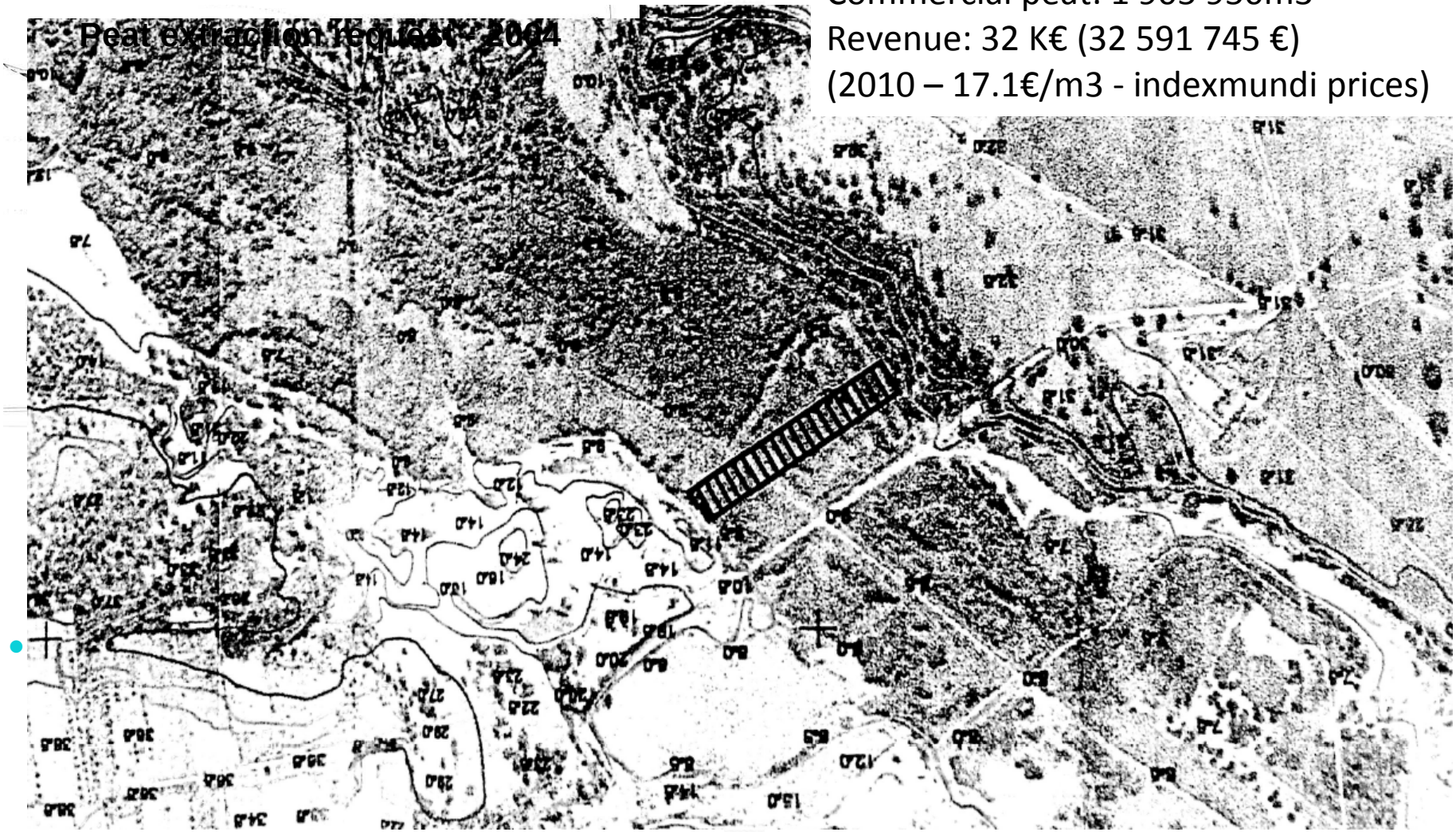
- Ecosystem services are anthropocentric and economic oriented

But

Ethic Value – "Something's degree of importance" – it deals with right conduct and good life

Pitfalls

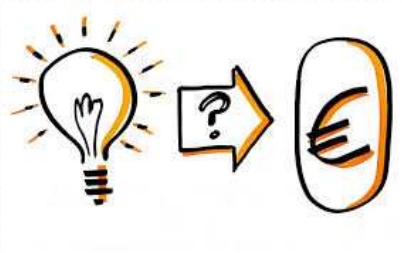
Total peat: 3 176 580m3
Commercial peat: 1 905 950m3
Revenue: 32 K€ (32 591 745 €)
(2010 – 17.1€/m3 - indexmundi prices)



The importance of Environment Education programs

Challenges

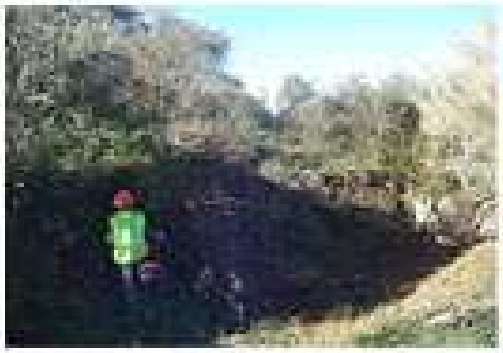
- Anthropocentric and economic oriented ecosystem services perspective – Danger regarding political options
- Integration of the Cultural values/ethic values (value per se)
- Natural capital
- Use and development of a environmental scale of ethic values
- Incorporation of Intergenerational perspective
- Inclusion of restoration costs in valuation analysis



Gadum and Almansor stream


- **Length: 1700m**
- **Many land owners in a rural area (14 out of 17)**
- **Direct cost= 46 195,82€, pop=11 001; 4,2€/hab**
- **28,8€/m to restore**
- **Excluded cots: pig farm control costs of basin management + plant propagation costs**



In the end…

From the desire to apply learned knowledge…

Technologic Centre of Catalonia (SP)

Institute of Agricultural Sciences (PT)

General Direction of Evaluation and Environmental Quality of Extremadura (SP)

Waters of Algarve, S.A. (PT)

Regional Water Administration of Algarve (PT)

RICOVER

With the help of

Funding: 1 798 182,64€

SUDOE
Interreg IV B

Outputs

- Identification of degradated reaches in each region
- Studies on identification and control of exotic species (best techniques to apply)
- Propagation of native tree and shrub species
- Monitor fluvial biodiversity prior and post recovery actions (Flora, macro invertebrates, fish and birds)

Outputs

- Joint definition of the best techniques and methodologies for river restoration on river ecosystems in the SUDOE region
- **River Restoration Projects**:

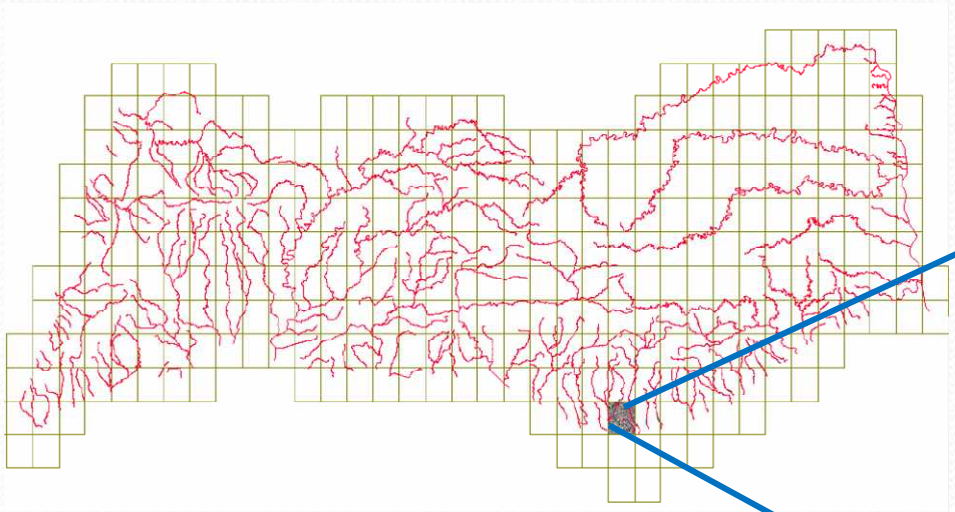
  PT – 3,5km in Odelouca Basin Algarve; SP – 19,3 km in the Catalonia region and 3 km in Extremadura region
- Best practice guide
- Report on the adequate machinery for river restoration
- Multidisciplinary courses for technicians (including e-learning module and in field practice)

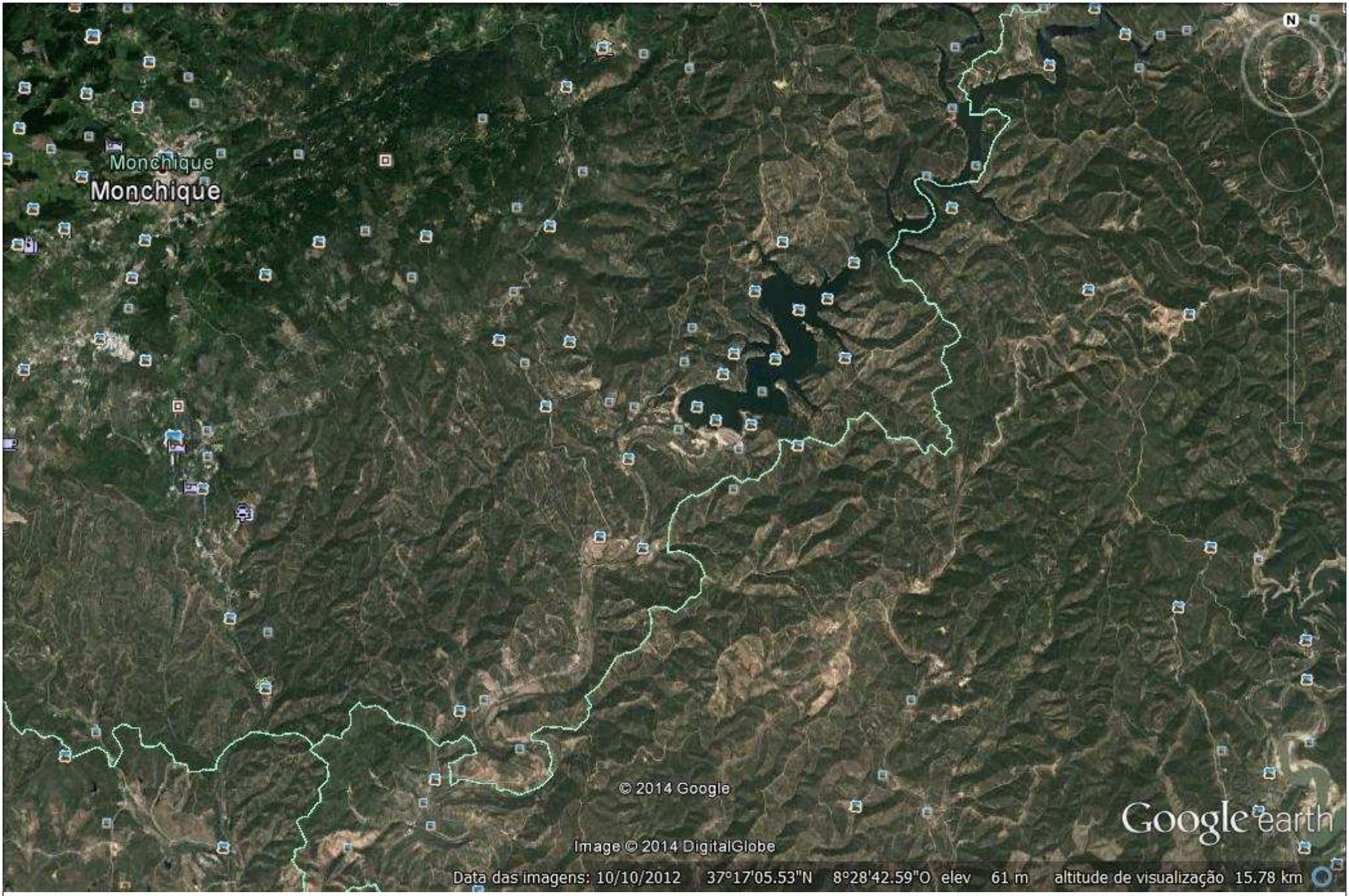
Outputs

- Technical Seminars about: River management, Exotic species control, Bio-indicators of good ecological status, GIS applied to river management
- Public sessions for result diffusion, including recover technique application
- Leaflets about exotic and native species, regional plans of river recovery and pilot projects developed
- Web-site development – **www.ricover.eu**
- Study trips

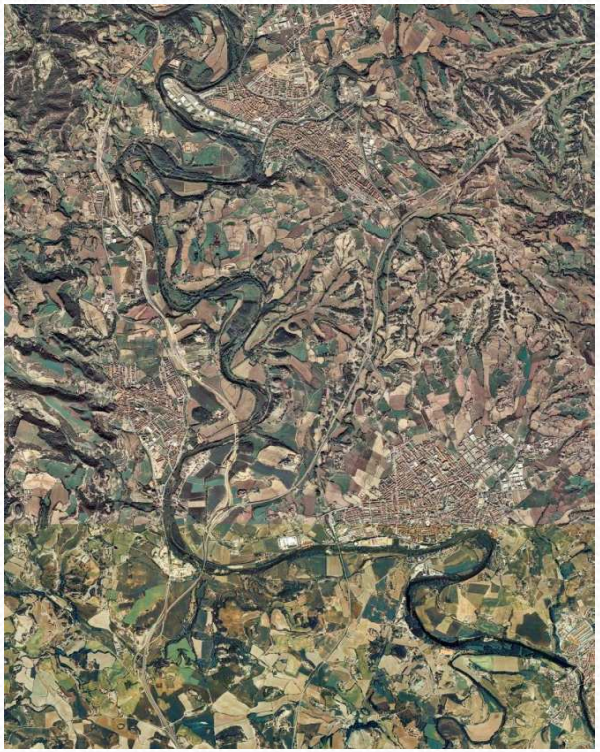
Invasive species valuation?

- Alien species map (*Arundo donax*)
- Techniques for control




Monchique
Monchique
© 2014 Google
Image © 2014 DigitalGlobe
Google earth
Data das imagens: 10/10/2012 37°17'05.53"N 8°28'42.59"O elev 61 m altitude de visualização 15.78 km

Ter River – Osona (Catalonia Spain)



Length: 5 000m in 19.3 km; 34.2hectares

Direct costs: 159 182€

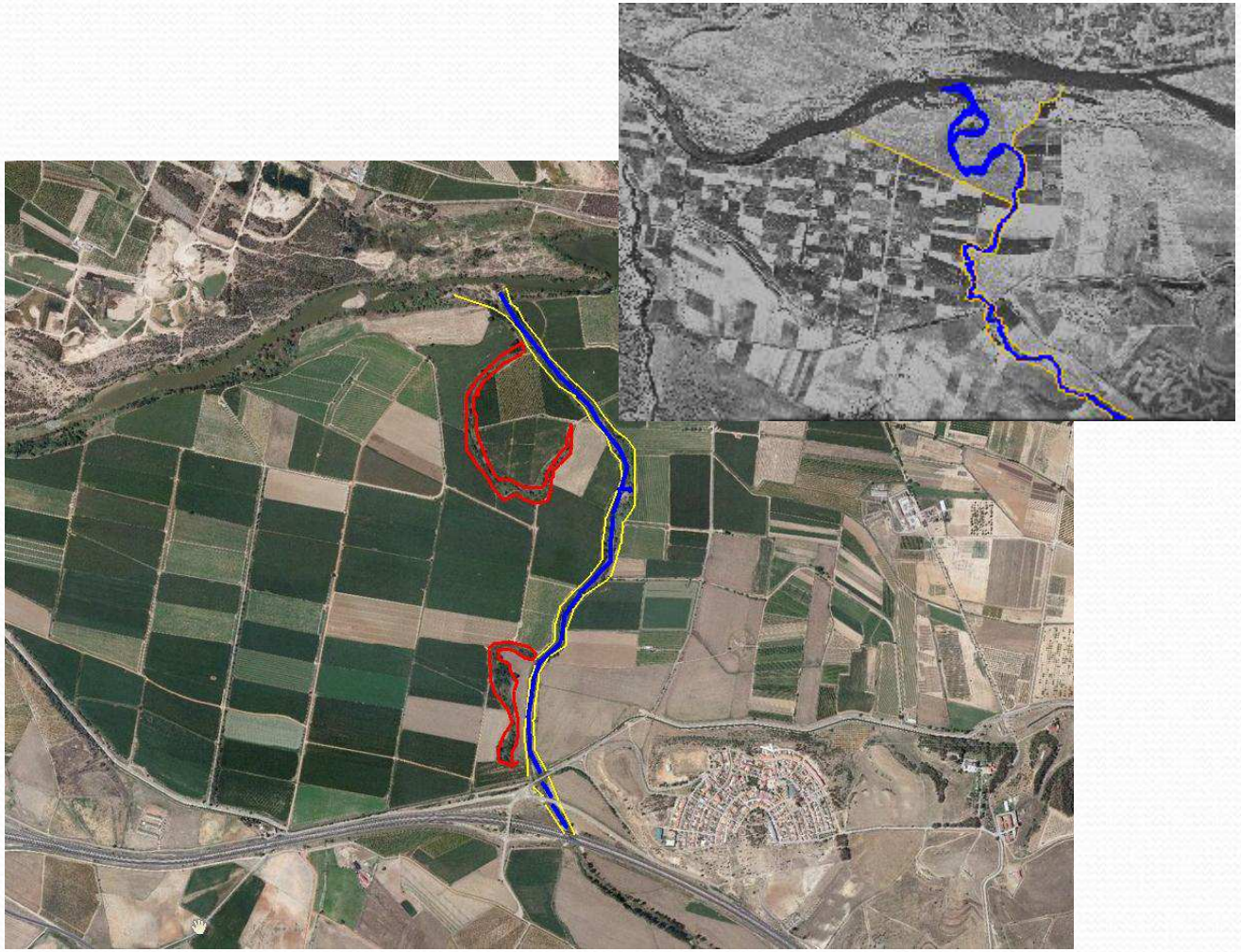
Habitants: 155 069hab.

1,0€/hab

32€/m -

Gadajira Region – Spain - Extremadura (SP)

- Direct cost: 98 191€
- 2850m
- 34,4€/m
- Habitants: 148 334
- 0,7€/hab



Thank you for your attention!

For further info please contact:

aimendes@uevora.pt

UE/EU – FEDER/ERDF

SUDOE Interreg IV B

RIPIDURABLE

RICOVER