

## REstoring rivers FOR effective catchment Management (11/11-10/15)

Tom Buijse, the Netherlands  
Ian Cowx, UK  
Harm Duel, the Netherlands  
Nikolai Friberg, Denmark  
Angela Gurnell, UK  
Daniel Hering, Germany  
Eleftheria Kampa, Germany  
Erik Mosselman, the Netherlands  
Susanne Muhar, Austria  
Matthew O'Hare, UK  
Tomasz Okruszko, Poland  
Massimo Rinaldi, Italy  
Jan Vermaat, the Netherlands  
Christian Wolter, Germany

2nd All Partners Meeting – Sept 2012

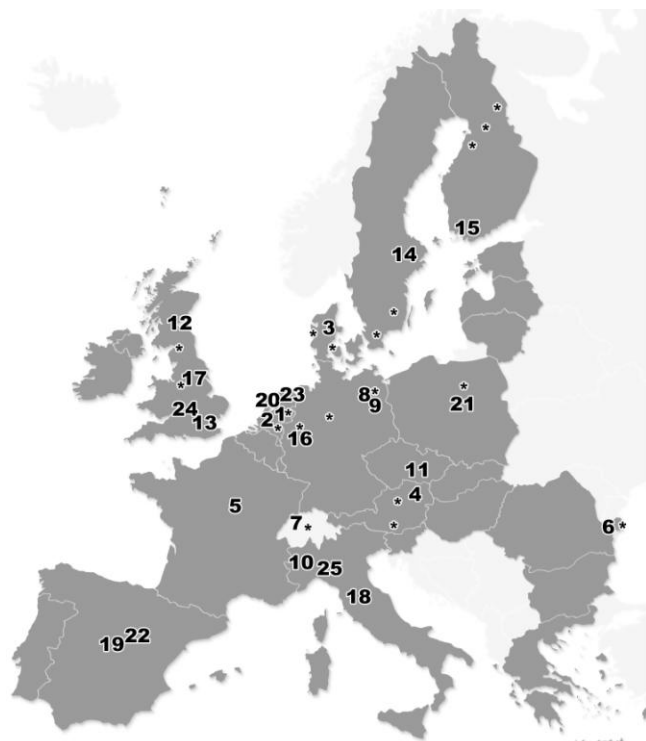


Eleftheria Kampa, Ecologic Institute, WP7 Lead

## Structure of presentation

- Introduction and overview of REFORM project
- REFORM WIKI (open-access web-based knowledge management system)
- Dissemination highlights & Science-Policy Interface of REFORM
- Links between REFORM and BioFresh?

## Partners



**25 partners from 14  
European countries**

No.	Participant organisation name	Short name	Country
1	Stichting Deltares (Coordinator)	Deltares	Netherlands
2	Stichting Dienst Landbouwkundig Onderzoek B.V. – Alterra	Alterra	Netherlands
3	Aarhus University – National Environmental Research Institute	AU-NERI	Denmark
4	Universitaet fuer Bodenkultur Wien	BOKU	Austria
5	French Research Institute for agricultural and environmental engineering	Cemagref	France
6	Danube Delta National Institute for Research & Development	DDNI	Romania
7	Swiss Federal Institute of Aquatic Science and Technology	Eawag	Switzerland
8	Ecologic Institut gGmbH	Ecologic	Germany
9	Leibniz-Institute of Freshwater Ecology and Inland Fisheries	IGB	Germany
10	European Commission Joint Research Centre	JRC	Italy
11	Masaryk University	MU	Czech Republic
12	Natural Environment Research Council – Centre for Ecology & Hydrology	NERC-CEH	UK
13	Queen Mary, University of London	QMUL	UK
14	Swedish University of Agricultural Sciences	SLU	Sweden
15	Finnish Environment Institute	SYKE	Finland
16	University of Duisburg-Essen	UDE	Germany
17	University of Hull	UHULL	UK
18	Università di Firenze	UNIFI	Italy
19	Universidad Politécnica de Madrid	UPM	Spain
20	VU University Amsterdam, Institute of Environmental Studies	VU-IVM	Netherlands
21	Warsaw University of Life Sciences	WULS	Poland
22	Centro de Estudios y Experimentacion de Obras Publicas	CEDEX	Spain
23	Dutch Government Service for Land and Water Management	DLG	Netherlands
24	Environment Agency of England and Wales	EA	UK
25	Istituto Superiore per la Protezione e la Ricerca Ambientale	ISPRA	Italy

## **Hydromorphological pressures in European surface waters**

- 127 000 surface water bodies
  - 82% rivers
  - 15% lakes
  - 3% coastal and transitional waters
- HYMO pressures affecting ..
  - 40% river and transitional waters
  - 30% lakes
- Causes
  - Hydropower
  - Navigation
  - Agriculture
  - Flood protection
  - Urban development

Source: EEA report 8/2012 European waters – assessment of status and pressures

## Protection of Europe's aquatic ecosystems and their services

- Balancing protection and sustainable use
- Water & Nature protection
  - Not enough coordination between WFD and Natura 2000
- Protection of small water bodies
- Restoring & preserving aquatic ecosystems
  - Multiple benefits for WFD and BHDs
  - Making room for the rivers, Strategy on Green Infrastructure (EC, 2010) ...

Source: EEA report 8/2012 European waters – assessment of status and pressures

- EC Blueprint to safeguard Europe's water resources, reformed CAP, Biodiv Strategy 2020

**Natural  
processes**

**Degradation**

**Restoration &  
Mitigation**

**WP 1 Meta-analysis**

Review existing information on river degradation and restoration

Understand how disturbed sediment dynamics and multiple stress constrain restoration

**WP 2**  
Hydromorphological and ecological processes and interactions

**WP 3**  
Effects of hydromorphological changes on rivers and floodplain ecosystems

**WP 4**  
Effects of river restoration

Assess the importance of scaling and catchment conditions on the effectiveness of restoration

Develop a process-based and ecologically relevant hydromorphological framework

Restoration potential and strategy

- \* Translate science to practice
- \* Select indicators for cost-effective monitoring
- \* Improve tools and guidelines for restoration

**WP 6 Applications and**

Develop instruments for benchmarking, targets, risk and benefit analysis to support successful restoration

Enlarge appreciation for the benefits of restoration

**WP 8 Consortium coordination and management**

**WP 7 Knowledge dissemination and stakeholders participation**



## Cooperation with ...



make use of earlier research projects  
(e.g. REBECCA, WISER,  
FORECASTER)



RESTORE (LIFE+ Information &  
Communication)



European Centre for River Restoration  
(ECRR)



WFD Implementation: ECOSTAT  
common implementation strategy  
(CIS)

Gary Brierley, Johan Kling, Margaret Palmer,  
Hervé Piégay, Peter Pollard,  
Ursula Schmedtje, Bas van der Wal

Advisory Board of REFORM

## Knowledge sharing

- Wiki: web-based knowledge management system
  - open access
  - web-based translation facilities
  - link between science and practice
- Populating of wiki with content
  - interim results in March-April to support 2nd RBMPs
  - All REFORM deliverables organized in wiki (reports, papers, tools)
- Development in interaction with end users
  - CEDEX, ISPRA, EA, DLG
- Care for post-project hosting

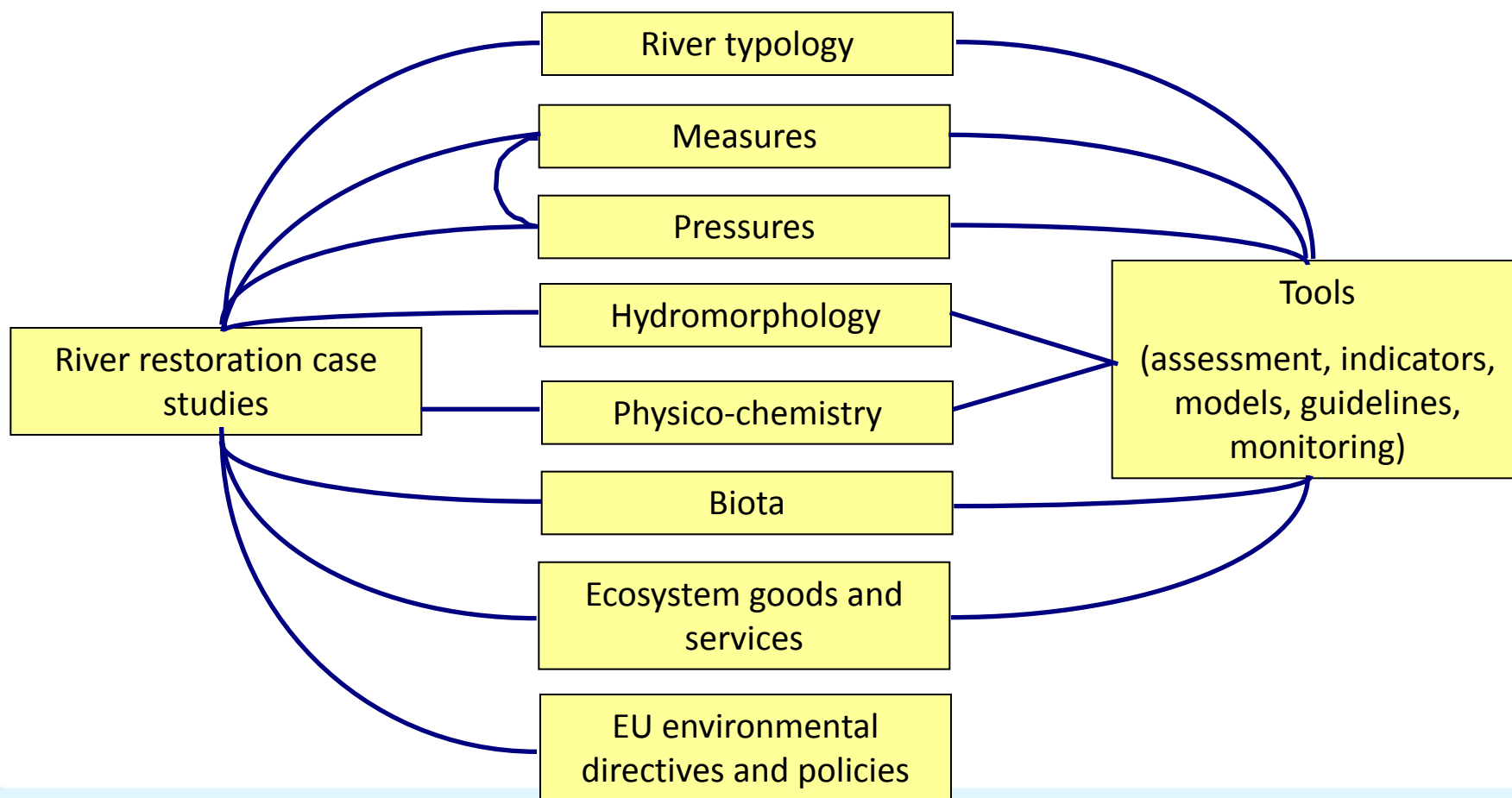


## Structure: live links in REFORM wiki (<http://wiki.reformrivers.eu>)

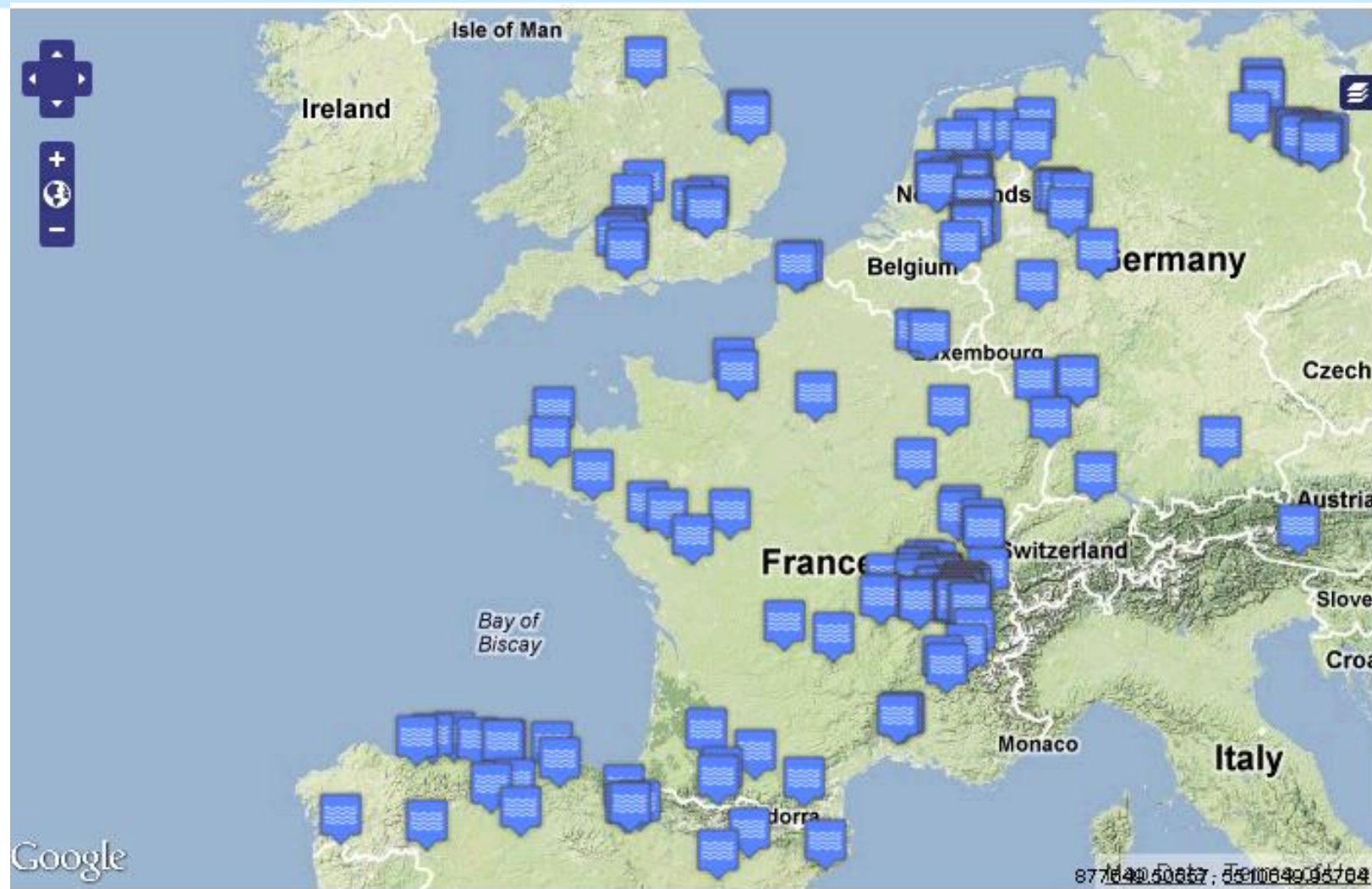
### Know-how

### Knowledge

### Evaluation



## Case studies



## Case studies

### Filter options:

Pressures

Channelisation / cross section alteration

Measures

Reconnect backwaters and wetlands

Evaluation

Select/Unselect Evaluation

Hydo-morphological QE

Select/Unselect Hydo-morphological QE

Biological QE

Select/Unselect Biological QE

Ecosystem Services

Select/Unselect Ecosystem Services

EU directives and policies

Select/Unselect directives and policies

## Case studies

### Key features of the case study

#### Site description



View on side channel set of Floodplain "Gameren", downstream direction. Photo: Rijkswaterstaat (NL)

Under the authority of the Ministry of Transport, Public Works and Water Management (Eastern Netherlands division), the Institute for Inland Water Management and Waste Water Treatment RIZA executed a monitoring program on secondary channels in the Gamerensche Waard. During

the period 1996-2002 a broad and complete program was executed with three main objectives: 1) evaluation of the desired effects, 2) assessment of the undesirable side-effects (risks) and 3) increase of the knowledge about secondary channels.

In the period 1995-1999 three secondary channels were excavated in the Gamerensche Waard along the river Waal (the main side branch of the river Rhine). Regarding the dimensions, these channels are unique for Dutch rivers. These channels are dugged out partly from former agricultural grassland and partly they exist of connected former sand

#### Factsheet: Gameren

##### General

Country	NL
River Name	Waal
Site Name	Gameren

##### River Characterisation

##### River typology

Location (Lat Lon)	51.8062000807445, 5.20940780639648
Altitude	lowland: < 200 m
Catchment area	very large: > 10000 km <sup>2</sup>
Geology	Calcareous
National code/ River type name	R7

##### Hydromorphological quality elements

- [River depth and width variation](#)
- [Structure of the riparian zone](#)

##### Biological quality elements

- [Phytoplankton](#)
- [Macrophytes and phytobenthos](#)

## Tools

Category

Discussion

Read

View source

View history

Go

Search

### Reform

- [Homepage](#)
- [REFORM](#)
- [River Characterisation](#)
- [Pressures](#)
- [Measures](#)
- [Tools](#)
- [Case studies](#)
- [Biological Quality](#)
- [HYMO Quality](#)
- [Ecosystem Services](#)
- [EU Directives](#)
- [Database](#)
- [Related Sites](#)
- [Contact Information](#)

### Toolbox

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Printable version](#)
- [Permanent link](#)

## Category:Tools

General tools page.

Will contain links to database tool categories, such as:

- [Hydraulical models](#)
- [Hydromorphological assessment methods](#)

### Subcategories

This category has the following 2 subcategories, out of 2 total.

#### H

- [Hydromorphological assessment methods](#)
- [Hydromorphological models](#)

### Pages in category "Tools"

The following 8 pages are in this category, out of 8 total.

#### E

- [European methods for WFD](#)

#### F

- [Fish longitudinal continuity assessment](#)

#### H

- [Hydrological regime assessment](#)

#### M

- [Morphological assessment](#)

#### P

- [Physical habitat assessment](#)

#### R

- [Riparian habitat assessment](#)

#### T

- [Test model](#)
- [Main Page](#)

## Interaction with end-users

Communication & Dissemination Strategy (March 2012)

End-user groups: policy makers, practitioners, scientists

### Standard

- Website, Newsletters (2/yr), Policy Briefs (3)

### Advanced

- WIKI linking theory to practice
- Stakeholder Workshop (Feb 2013)
- Interaction with WFD WG ECOSTAT

### Events

- Stakeholder workshop (Feb 2013)
- Local workshops in CS catchments (tbd)
- Summer school (2015)
- Final conference (2015)





## Specific Task on Policy integration

- Target groups
  - Policy makers (water, biodiversity, navigation, flood control, agriculture, renewable energy)
  - Practitioners
- Key contacts: WFD CIS-Groups
- Secure REFORM's tie to WFD implementation EU-wide
- REFORM partners & Advisory Board in WG ECOSTAT
- Meetings with CIS-Groups
  - WG on Floods, 4/2012
  - ECOSTAT WS on HyMo, 6/2012, 2/2013
  - 3rd EWC & Blueprint Conf.
- Policy briefs (3)–launch 4/2013
- Policy discussion papers (3)

## REFORM Stakeholder Workshop, 26-27 Feb 2013 BRX

- **Aim:** Consultation and exchange between REFORM scientists, European technical experts on RR and members of WG ECOSTAT
  - Mid-term results of REFORM presented to stakeholders
  - Stakeholder feedback on tools developed by REFORM & setting priorities for future work programme
  - Reflect on relevant activities in MS & other countries
- **110 participants:** ECOSTAT (MS), Flood WG, NGOs, RR networks, user stakeholders, EC, REFORM partners
- **13 speakers:** REFORM partners, ECOSTAT, EEA, DG ENV, CIS SPI activity, Life+ RESTORE project, WISER

## Workshop focus on stakeholder interaction

- **Online forum**
  - Stakeholders invited to submit key issues on river restoration in RBMPs (Nov 2012)
  - Little used though. Is it useful?
- **Discussion Paper**
  - Progress update on REFORM and proposed topics for discussion (Feb 2013)
- **Interactive workshop sessions**
  - Inventory of issues, pyramidal learning, silent discussion, prioritisation
- **Summary Report**
  - Results of discussion & feedback on how suggestions will be considered (April 2013)
- **Website**
  - [reformrivers.eu/events/stakeholder-workshop](http://reformrivers.eu/events/stakeholder-workshop)
- **Feedback**
  - Workshop format was good 2-way communication
  - Model for close cooperation between EU R&D project and WFD CIS

## Links between REFORM & BioFresh

- **Common partners** (IGB, UDE, JRC,...)
- BioFresh coordinator – scientific reviewer of REFORM
- Feedback to Biofresh **data portal** can be given once REFORM colleagues become familiar with portal
  - Specific **WIKI** reference to Data portal possible
- **Themes for 2014 symposium:** REFORM emphasis on impacts of pressures and the benefits of measures in river and floodplain ecosystems.

## Thank you for your attention



**-Stay informed –**

**Register to our  
newsletter on the website**



**Our project website is our display window**  
**[www.reformrivers.eu](http://www.reformrivers.eu)**



COLLABORATIVE PROJECT  
LARGE SCALE INTEGRATING PROJECT

ENV.2011.2.1.2-1  
HYDROMORPHOLOGY AND ECOLOGICAL OBJECTIVES OF WFD

GRANT NO. 282656

