



Creating a Network of Knowledge for  
biodiversity and ecosystem services  
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# **Biodiversity effects of multifunctional floodplain management: A 'BiodiversityKnowledge'-demonstration case**

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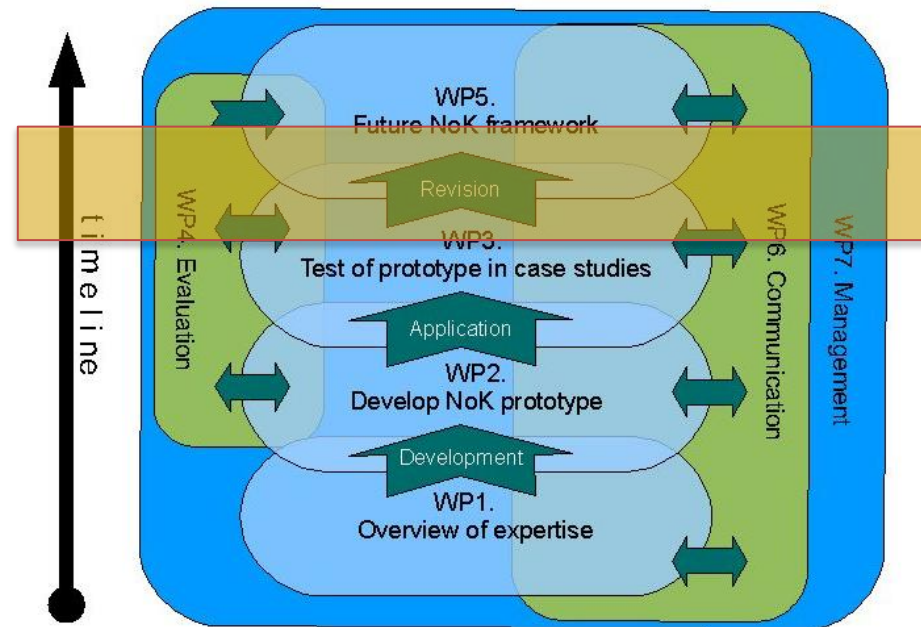
**BiodiversityKnowledge  
2<sup>nd</sup> Expert-Workshop "conservation-case", November 7-9, 2012**



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To develop a Network of Knowledge to support decision making on biodiversity and ecosystem services in Europe

## Work flow

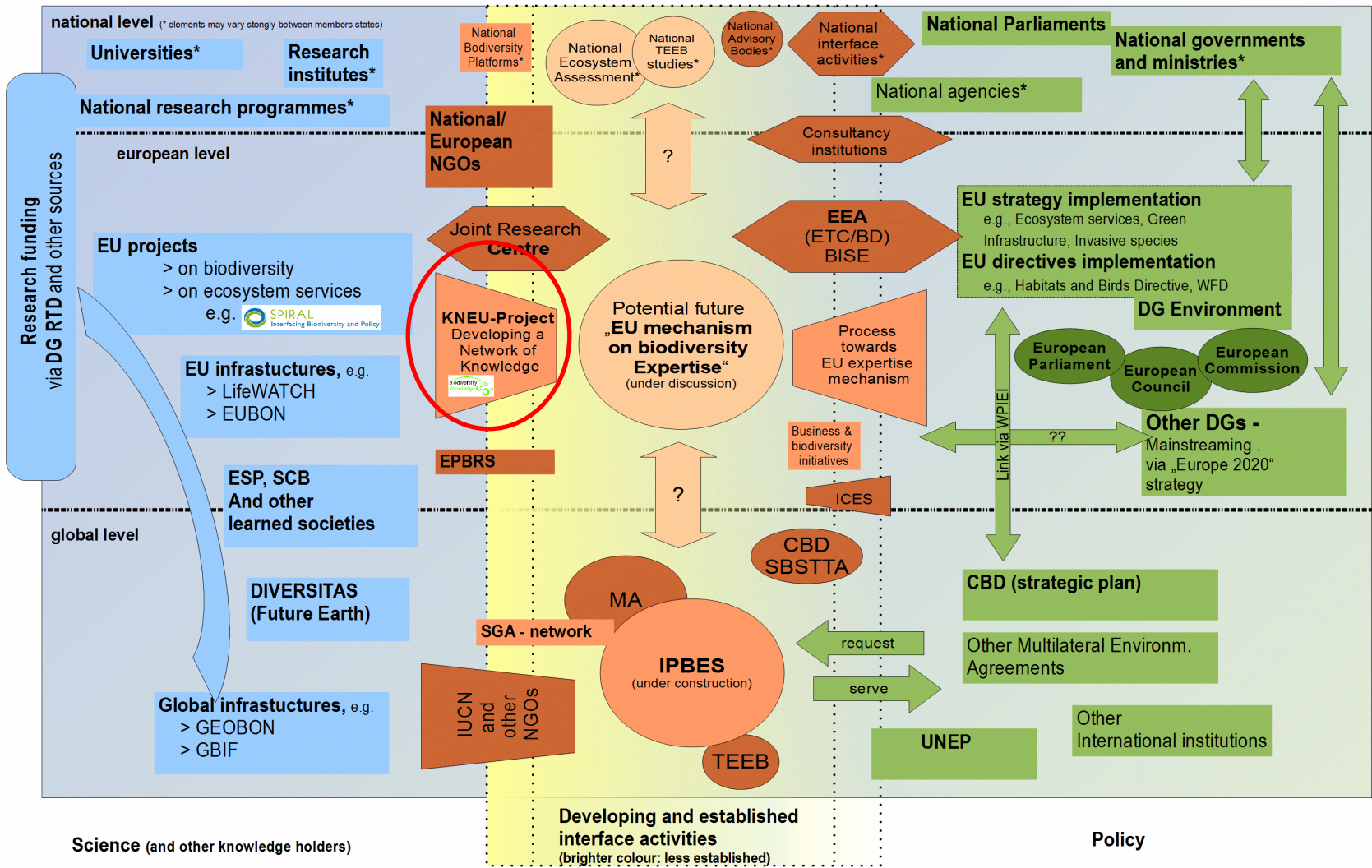


# 1- Objectives

# 2- Progress

# 3- Main results

# 4-Next steps?



Drafted by UFZ Science-Policy Expert Group, 2<sup>nd</sup> revision, 1.8.2012

## *testing the prototype: the demonstration cases*

### **Objectives**

perform three policy-relevant demonstration cases to:

- test the NoK prototype in practise
- produce policy relevant output in the topics of the demonstration cases

### **Case areas:**

should cover different sectors and test the NoK prototype in a broad variation of different situations/environments:

*„Marine case“; „Agricultural case“; „Conservation case“;*





## *Methodological approaches for the demonstration cases*

### **Systematic Review**

evidence synthesis using an objective, transparent, replicable and updatable methodology

### **Collaborative Adaptive Management**

collaborative design of a continuous process improvement to natural resource management; learning via monitoring of provisional strategies; continuous adjustments in the light of new information

### **Expert Consultation**

can be used in general on all questions and circumstances, using different levels of involvement such as feedback loops via review



## *Comparison across demonstration cases:*

### **Marine:**

What are the current trends in kelp forests in Europe and what is the evidence that these trends will affect the ecosystem's biodiversity and the provision of ecosystem services?

### **Agriculture:**

Which habitat/landscape management interventions can effectively maintain or enhance populations of natural predators

### **Conservation:**

What is the impact of multi-functional floodplain management on biodiversity?



## *Comparison across demonstration cases:*

### **Selected by:**

Marine: driven by scientific community

Agriculture: driven by several requesters at EU- and MS-level

Conservation: driven by one requester at EU-level

### **Approaches:**

Marine: expert consultation & systematic review

Agriculture: systematic review (combined with a synopsis of evidence)

Conservation: systematic review (inkl. grey literature in ‘non-english’)

*[adaptive management would be very interesting and promising, but too few time for iterations and “learning via monitoring of provisional strategies”]*



## Timing

	Feb 12	Mar 12	Apr 12	May 12	Jun 12	Jul 12	Aug 12	Sep 12	Oct 12	Nov 12	Dec 12	Jan 13	Feb '13	Mar '13
T3.1 Involvement of clients in question setting	Blue													
	Yellow	Yellow	Yellow	Yellow	Yellow									
	Green	Green	Green	Green										
T3.2 Identify knowledge assessment approaches	Blue													
	Yellow													
	Green	Green	Green											
T3.3 Implement knowledge assessment process		Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
				Red Star									Red ?	
					Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
								x	x	x	x	x	x	
				Red Star	Green	Green	Green	Green	Green	Green	Green	Green	Green	
										Red Star				
T3.4 Finalize case study results														Blue
														Yellow
														Green

- ★ stakeholder/expert workshop
- x series of little meetings on specific topics



## *Progress in the implementation phase:*

### **Marine:**

Expert consultation: almost finished. 30 experts reported on European kelp trends.

Systematic review (SR): Protocol to be submitted to Env Evidence these days

Workshops (WS): not sure yet, if needed

### **Agriculture:**

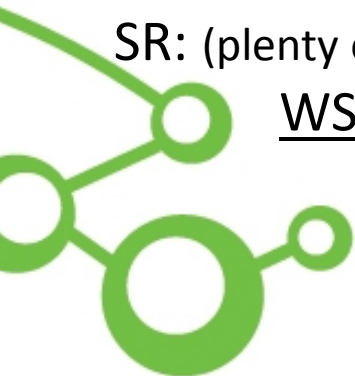
SR: Protocol recently submitted; very huge workload (> 30 000 papers), but University of Cambridge does big share of work

WS: series of small work-meetings on specific topics

### **Conservation:**

SR: (plenty of) comments on SR-protocol received from Env Evidence-referees at 8 Oct

WS 7-9 Nov!!



## Progress in detail:

Scoping

Set up of working groups

Workshop 1

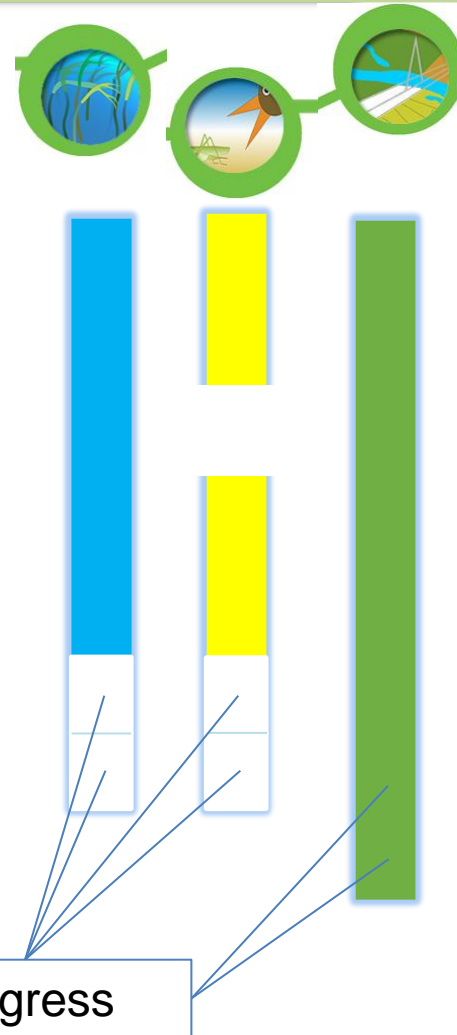
Set up of work protocol

Internal revision of work protocol

External revision of work protocol

Processing knowledge

Workshop 2



## *Open issues (general WP3 – not case-study specific):*

### **Timing:**

Reviewing should be finished end of February 2013.

Case study report must be finished in April 2013.

Should then already be reviewed (at least internally)



# Biodiversity Knowledge



## *Conservation case: GREEN INFRASTRUCTURE*

### Research question

**“What is the impact of multi-functional floodplain management on biodiversity ?”**



## *Involve requesters in question setting*

### 1.) Two science-policy conferences

- June 2011: Meeting of the European Nature Directors in Hungary, Balatonfüred
- November 2011: „Planning for biodiversity“ Conference of the Polish Presidency, Warsaw

### 2.) Contact with potential requesters

- **Marco Fritz (DG ENV, B2 – Biodiversity)**
- François Wakenhut (DG ENV, head of B2 – Biodiversity)
- Szylvia Bősze (DG ENV, B2 – Biodiversity)
- Stefan Leiner DID (DG ENV, head of B3 – Nature)
- Gabriele Obermayr (BMLFUW, Federal Ministry Austria)



## Conservation case: **GREEN INFRASTRUCTURE**

→ Topic “**Green Infrastructure**”: because most suitable for the “conservation case” of the six targets of the EU BD Strategy 2020

### **EU Biodiversity Strategy 2020:**

*“By 2020, ecosystems and their services are maintained and enhanced by establishing **Green Infrastructure** and restoring at least 15% of degraded ecosystems”*



## ***Conservation case: GREEN INFRASTRUCTURE resulting subtopics***

- 1) Existing networks of protected sites and to what extent they can be seen/used as Green Infrastructure?**
- 2) To which respect does technical infrastructure meet the requirements of nature conservation?**
- 3) How does Green Infrastructure contribute to multifunctional land-use and well balanced delivery of ecosystem services?**





## *Conservation case: GREEN INFRASTRUCTURE*

### *policy context*

- **DG Environment / Marco Fritz** involved in the decision on the topic
- **EU Biodiversity Strategy 2020**  
**Habitats Directive, Water Framework Directive, Nitrates Directive, Floods Directive, Ramsar Convention**



## Systematic review:

- ) internal review of draft protocol: *July 2012*  
experts, requesters, KNEU-partners
- ) external review of draft protocol (*Env Evidence*): *13 Aug – 8 Oct 2012*
- ) performing the systematic review: *Oct 2012 – Feb 2013*  
search, data extraction, analysis
- ) 2<sup>nd</sup> workshop: *7 - 9 Nov 2012*
- ) report writing and internal reviewing: *Mar 2013 – Apr 2013*



## Systematic Review – protocol

31 Oct 2012; currently comments of referees are included for resubmission

### **Title (= main questions):**

Impact of multifunctional floodplain management on biodiversity in temperate regions

### **Secondary questions [might still be adapted]:**

- a) Does the level of multifunctionality in floodplain management affect its impact on biodiversity?
- b) Which kind of floodplain management measures are the most beneficial for biodiversity?
- c) Is there a difference in the biodiversity impact of floodplain management within the geographic scope of the study, for instance among old and new EU-member states?



## Systematic Review – protocol (12 Oct 2012)

### PICO-Structure of proposed question

- Population: floodplains and rivers, as well as any other natural and artificial ecosystem that is linked to the hydrological dynamics of the river.  
Geographical limitation to temperate areas
- Intervention: multifunctional floodplain management (“all kinds”)
- Comparator: ~~(i) no comparator~~, (ii) “no intervention” or (iii) “floodplain management with different level of multifunctionality”
- Outcome: change in biodiversity indicators  
(applied indicators: species richness, species diversity, but also abundance of specific indicator species)





## Workshop Hainburg/Donau: 9-11 November 2012

- Hands-on 1: data extraction for the systematic review (next ppt)
- Hands-on 2: developing a matrix relating floodplain management measures to ESS
- Organization of the working process in the case study (who wants to participate it which tasks and which amount?)



## Workshop Hainburg/Donau: 9-11 November 2012

### **Assessment of multifunctionality:**

I) Compilation of a list of the most relevant floodplain management measures;

II) Compilation of a list of the most relevant ESS;

III) Compilation of a capacity matrix: each selected floodplain management measure gets a value (-/0/+) defining its impact on each of the selected ESS.

If there are more “+” than “-”, then the measure increases multifunctionality!



*Work programme for “participating experts”  
after the workshop:*

- ) reviewing and data extraction of at least 3 ISI-papers;
- ) translation of search-terms into non-english mother tongue and search for grey literature
- ) some of the (German-speaking?) experts might support us with the reviewing of the ISI-papers or with specific tasks

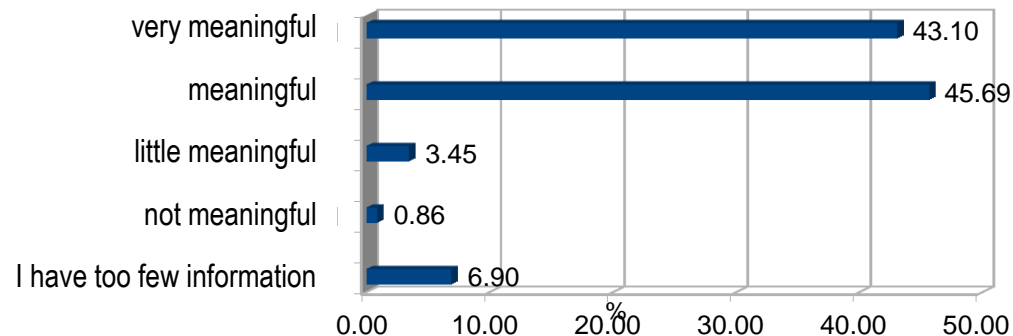


## Expert consultation:

Online survey about Green Infrastructure – Austrian Biodiversity experts only:

part of our teaching activities – “Conservation Related Methodologies of Social, Cultural and Economic Sciences”: 2 examples out of 20 questions

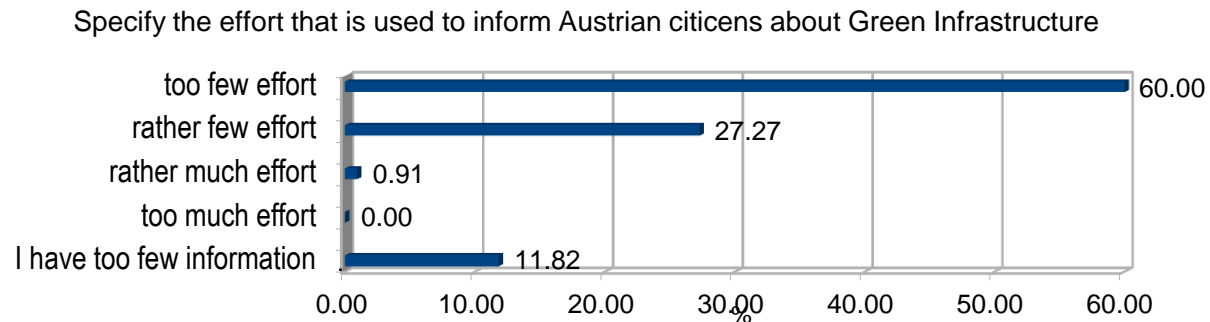
How meaningful, do you think is „Green Infrastructure“ as instrument for supporting native plant and animal species in their dispersion and migration?



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*Thank you for your attention*