A photograph of a river with white water rapids flowing over large, dark grey rocks. The river is surrounded by lush green trees and foliage. The water is turbulent and white with foam. The rocks are of various sizes and shapes, some partially submerged. The background is a dense forest of green trees.

# Strategic Approaches to put Transboundary Integrated Water Management into practise





# Why river basin wide approaches matter





# The spatial question

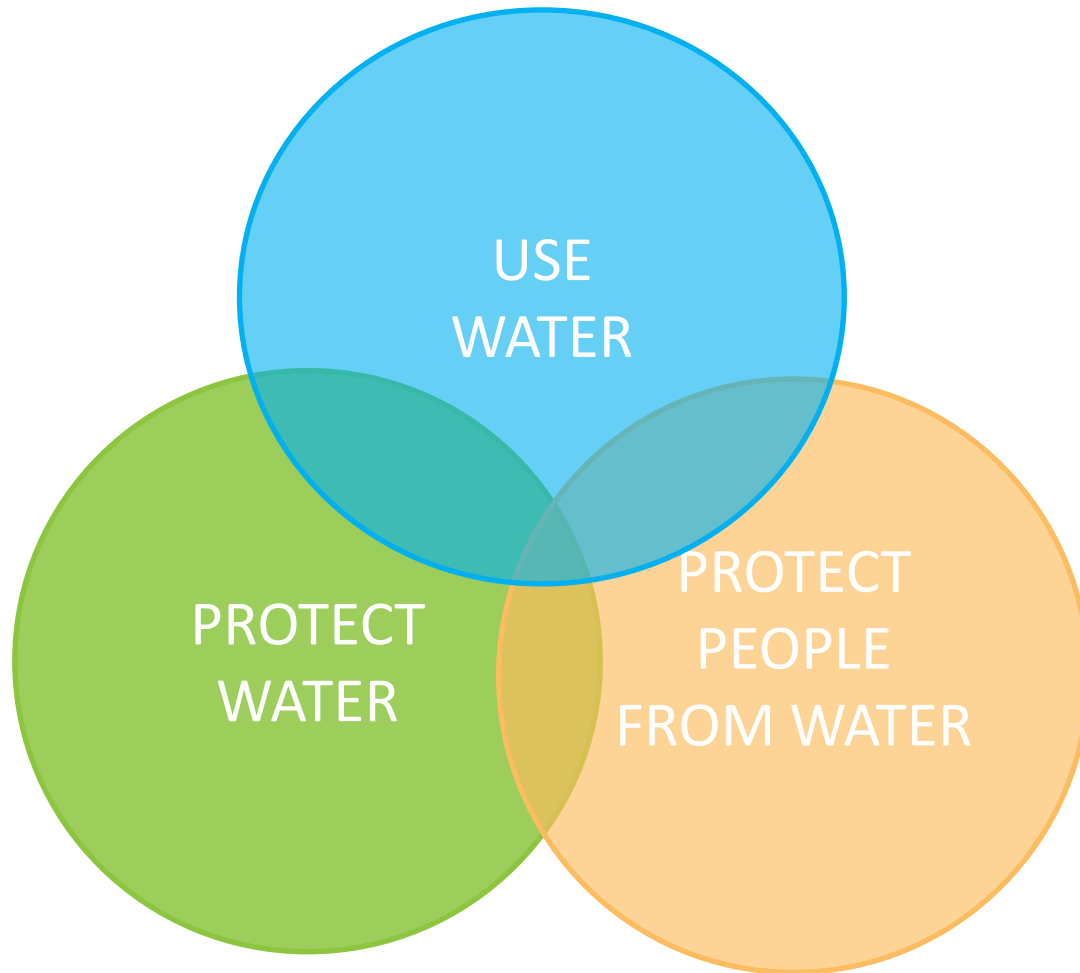
Lack of space is the main problem in mountain valleys

➔ not only expansion of buildings, but also transport routes



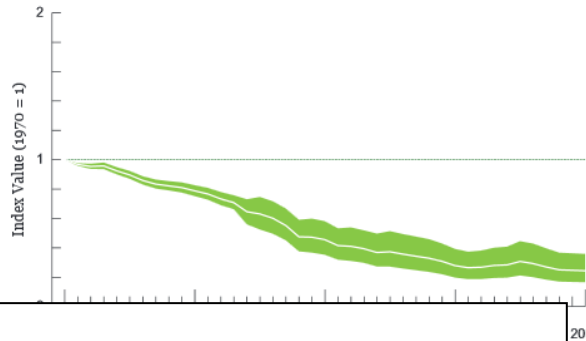


# Conflicting interests

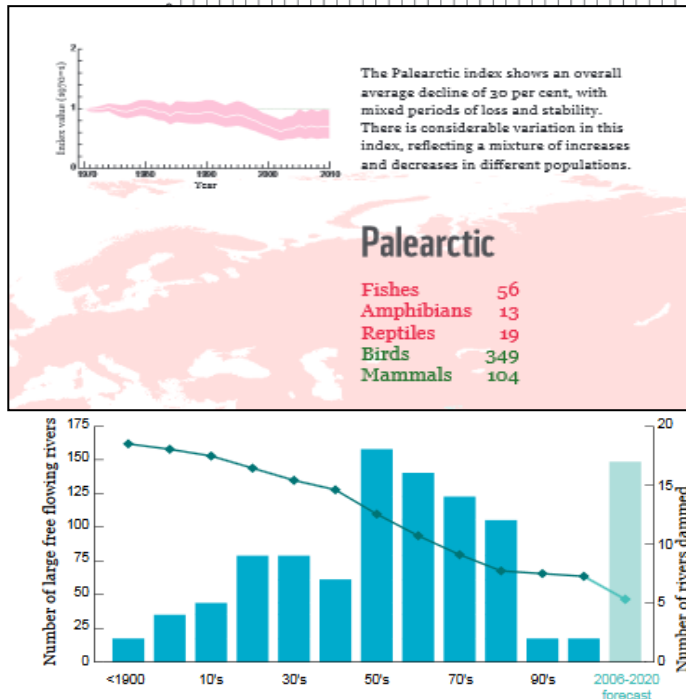




# Fragmentation is the main cause for the decline of freshwater species

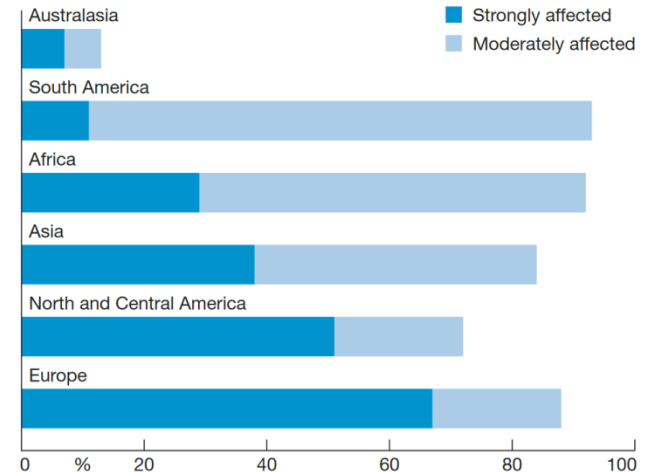


**Figure 13: The freshwater LPI shows a decline of 76 per cent between 1970 and 2010**  
This is based on trends in 3,066 populations of 757 mammal, bird, reptile, amphibian and fish species (WWF, ZSL, 2014).



**Figure 50: Trends in number of global free-flowing rivers greater than 1,000km in length**  
Trends from pre-1900 to the present day and estimated to 2020 (line), in comparison with the number of rivers dammed over time (bars) (WWF, 2006a).

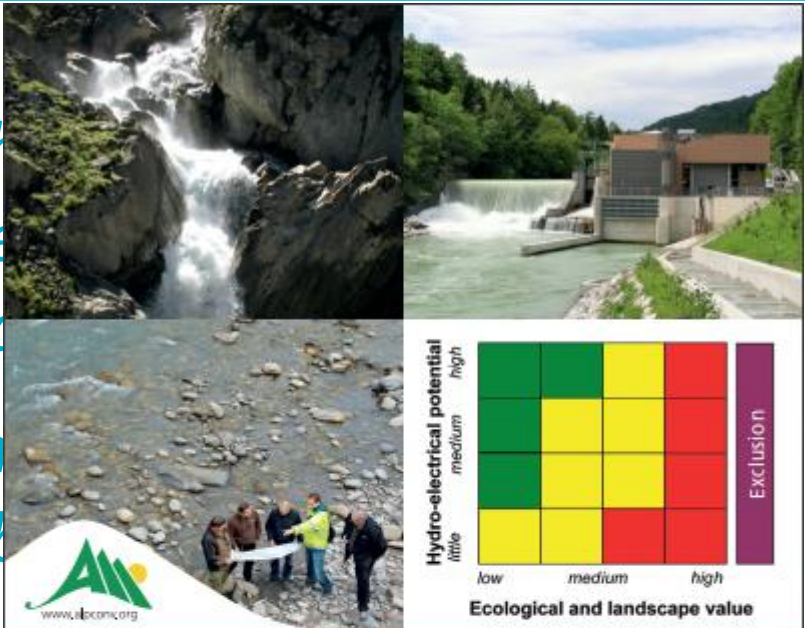
**Fig. 15: FRAGMENTATION AND FLOW REGULATION OF LARGE RIVER SYSTEMS, BY REGION**



(source: Living Planet Reports 2006 - 2014)

# Key aspects for RBM I

- If fragmentation is the cause of the decline of freshwater connectivity must be (partially) restored
- Longitudinal, lateral and vertical connectivity are also important to stakeholders and local household
- some water stretches are of high ecological and landscape value and require transversal and longitudinal connectivity



**Hydro-electrical potential**

high	green	yellow	red	Exclusion
medium	green	yellow	red	
low	green	yellow	red	
little	yellow	yellow	red	
	low	medium	high	

**Ecological and landscape value**

Alpine Convention  
Platform water management in the Alps

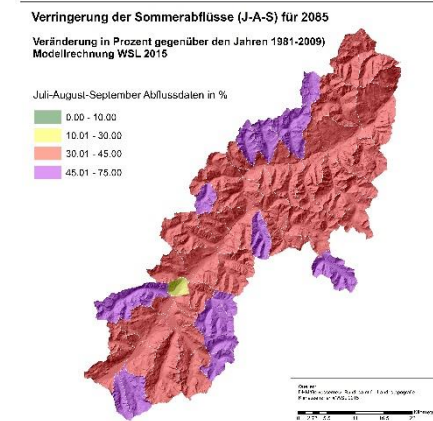
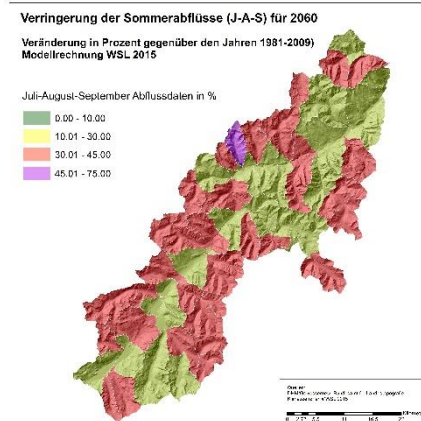
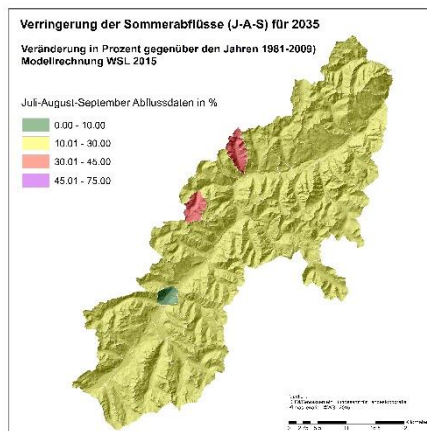
**ALPINE SIGNALS FOCUS 1**

**COMMON GUIDELINES  
FOR THE USE OF SMALL HYDROPOWER  
IN THE ALPINE REGION**



# Key aspects for RBM II

➔ *In times of climate crisis, not only Cross-sectoral coordination, but also upstream-downstream coordination for water use and flood management gains even more importance*



*Bernhard, L. et al (2015), Auswirkungen des Klimawandels auf den Wasserhaushalt des Engadiner Inns und seiner Teileinzugsgebiete, Eidgenössische Forschungsanstalt für Wald, Schnee und Landschaft (WSL)*



# Transboundary Management: Theory & Practise today





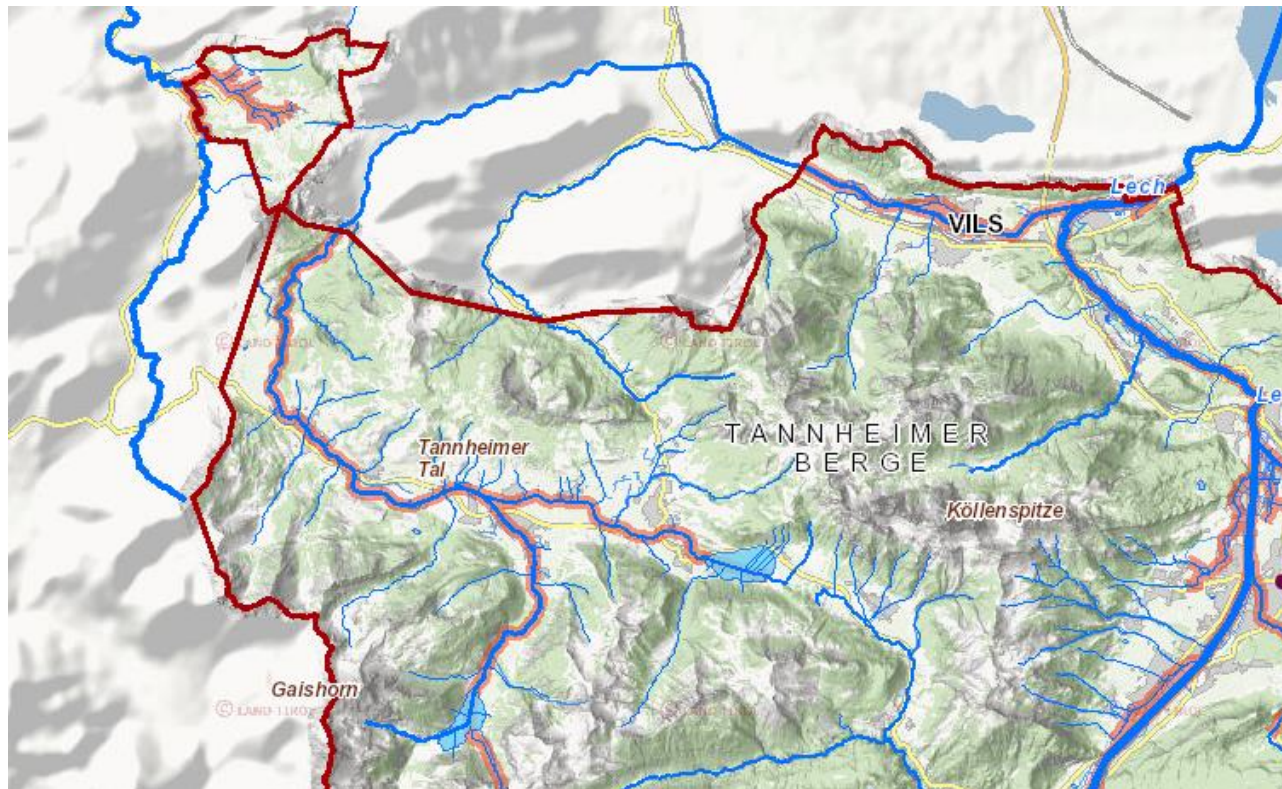
# The Theory: e.g. EU Water framework directive

- (35) Within a river basin where use of water may have transboundary effects, the requirements for the achievement of the environmental objectives established under this Directive, and in particular all programmes of measures, should be coordinated for the whole of the river basin district. For river basins extending beyond the boundaries of the Community, Member States should endeavour to ensure the appropriate coordination with the relevant non-member States. This Directive is to contribute to the implementation of Community obligations under international conventions on water protection and management, notably the United Nations Convention on the protection and use of transboundary water courses and international lakes, approved by Council Decision 95/308/EC<sup>(1)</sup> and any succeeding agreements on its application.



# The „practise”: Integrated management of the Vils river

- Vils = river on the Austrian/German Border, approx. 35 km long, (1/6 in Germany, 5/6 in Austria)







Transboundary Management:  
better practise for tomorrow



- ➔ *Transboundary and cross-sector work is a challenge, but the added value justifies the effort*
- ➔ *Take all sectors, interests and issues into account, even do you might to do it in separate “packages” in the beginning*
- ➔ *allow for enough time and resources for communication on all levels (and in all “languages”)*





# The vision I: MDD basin



**AMAZON  
OF EUROPE  
MURA-DRAVA-DANUBE**



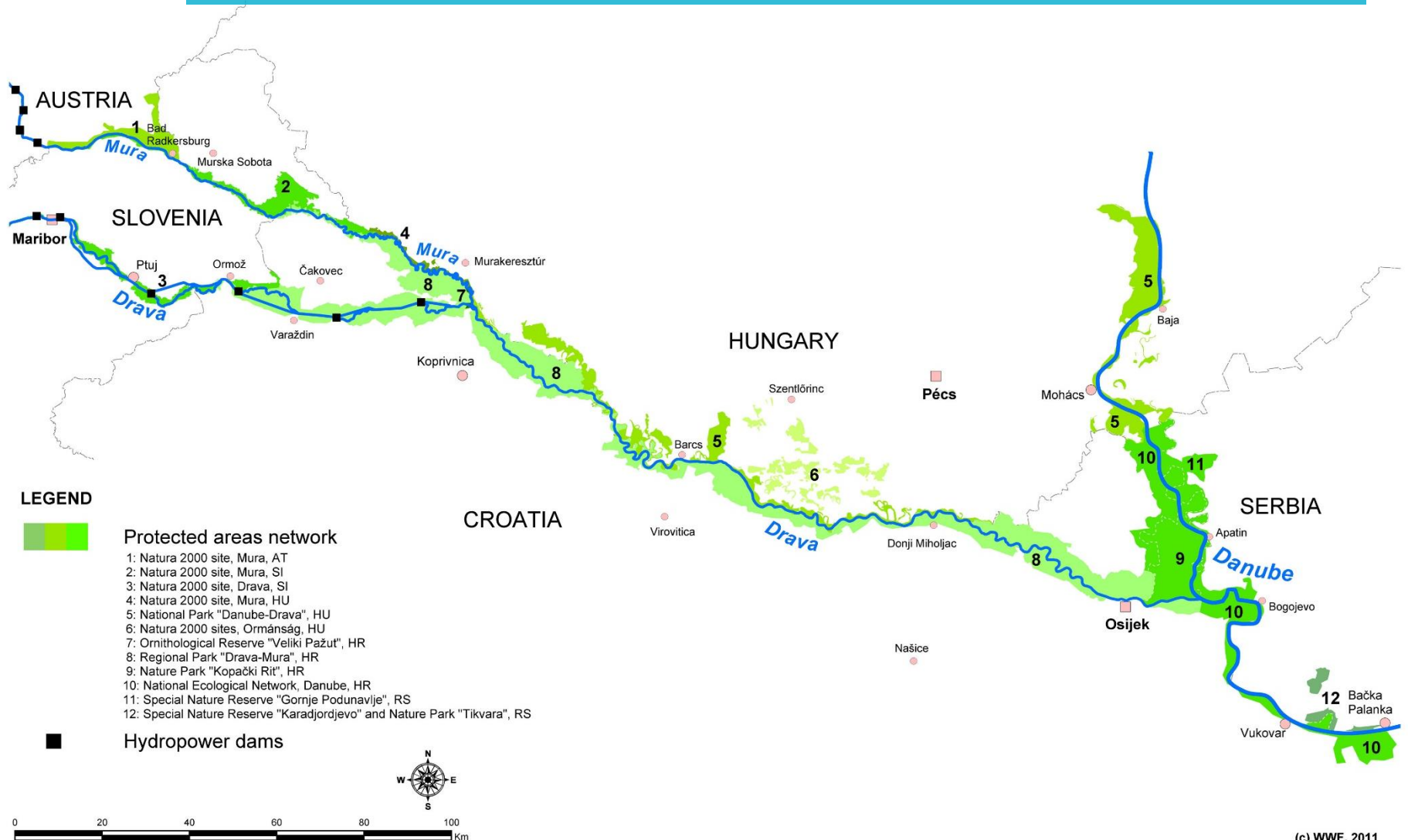
3 free-flowing river stretches without dams,  
connecting five countries (AT, SI, HR, HU,RS)  
in the Heart of Europe!







# Building up a chain of 12 protected areas 1996-2011





# WWF Programme – a mosaic of actions

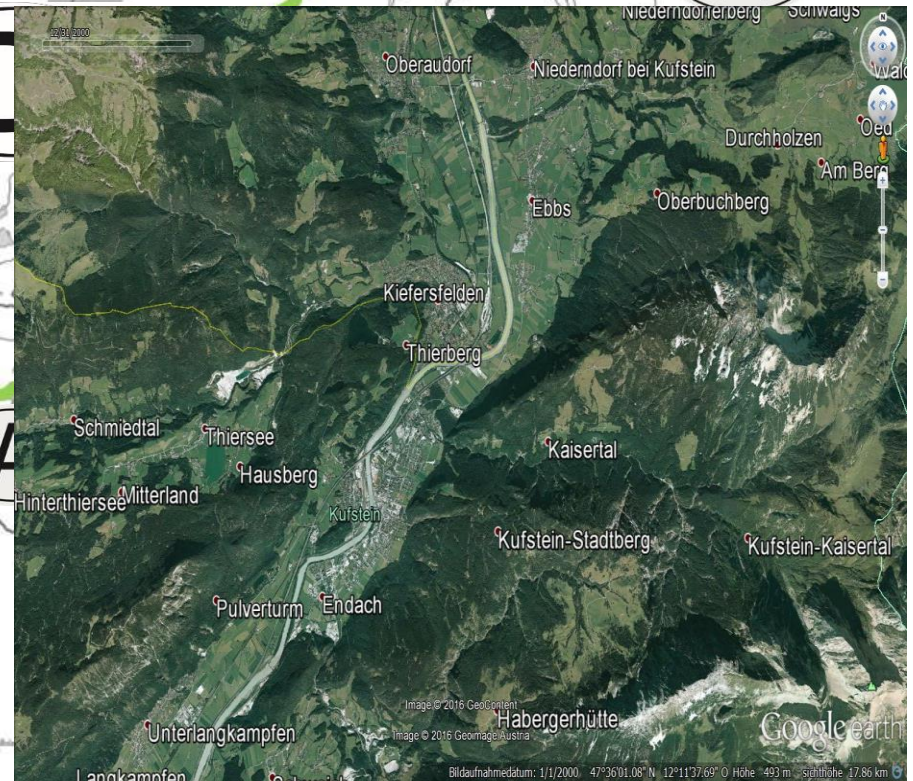
- **P1: 5-Country UNESCO designation**
- **P2: Transboundary harmonized management of protected areas**
- **P3: Species protection**
- **P4: River and wetland restoration**
- **P5: Campaigns against threats**
- **P6: Sustainable regional development**



# The vision II: 3 countries for the Inn



**Kufstein 1816 (Kriegsarchiv)**



**Kufstein 2016 (Google Earth)**



# „River dialogue Inn“ 2017 - networking as a first step



International Scientific Committee  
on Research in the Alps



Gefördert von





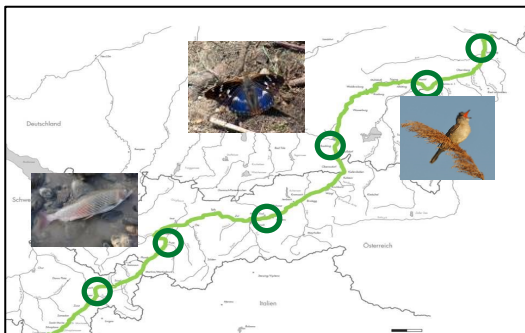
# Interreg



## Österreich – Bayern 2014–2020

Europäische Union – Europäischer Fonds für Regionale Entwicklung

# inn sieme



universität  
innsbruck

# Verbund



LAND  
OBERÖSTERREICH



Thank you!

