

# Rationales and effects of stakeholder involvement in river management

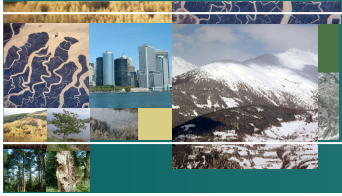
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**Introduction**

Social Relevance

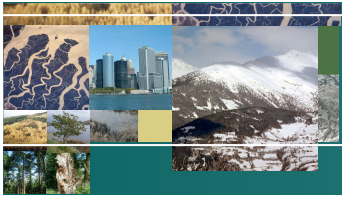
Rationales

Effects

Conclusions

## Content

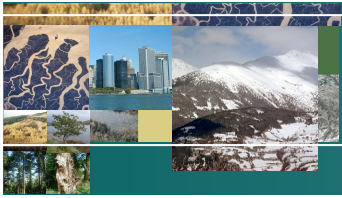
- 1. Introduction**
- 2. Social relevance of river management**
- 3. Rationales of stakeholder involvement**
- 4. Empirical studies for measuring effects**
- 5. Conclusions**



## Little history

- River management for a long time the **domain of engineers**
- Focus on **control** of the rivers
- Since 1991 (Swiss waters law) new paradigm: **more space for rivers**
- **Combination of flood control and ecological enhancement = river revitalization**
- More interests affected: **stakeholder involvement** (Water Directive 2000)
- Purpose and forms not defined



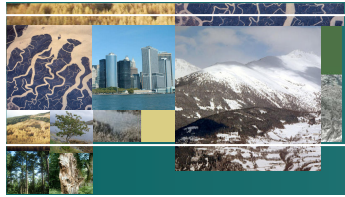


## Open questions

- What are adequate **rationales or purposes** for stakeholder involvement in the context of river revitalizations?
- What **effects** can be expected of stakeholder involvements?



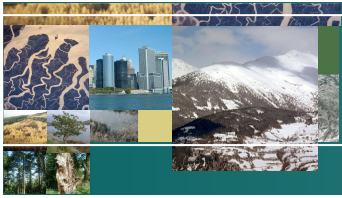




## Rationales for stakeholder involvement

Rationales	Purpose
Normative	Respect the right to be involved
Instrumental	Persuade stakeholders for project
Substantial	Improve project in dialogue

McDaniels et al., 1999



Introduction

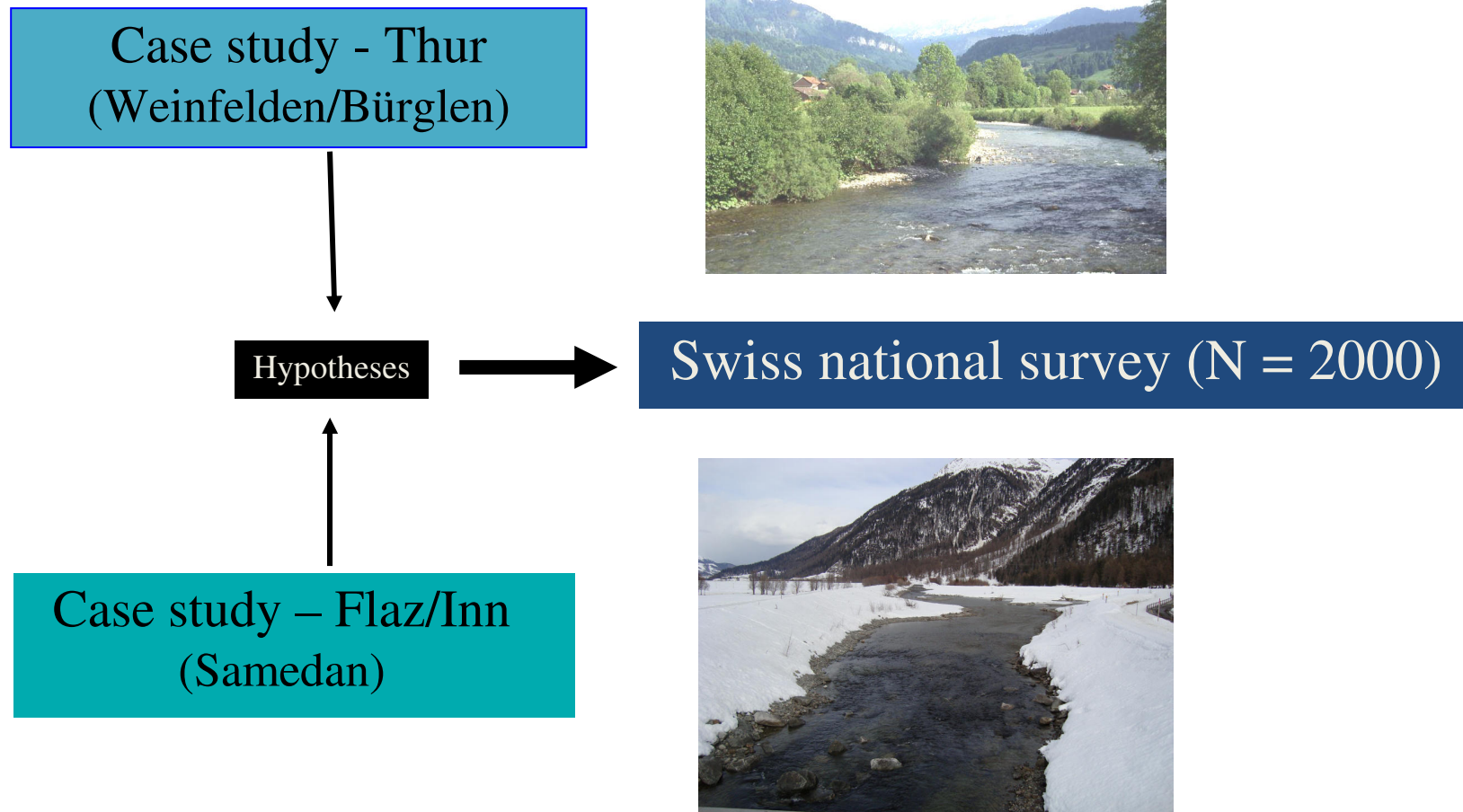
**Social Relevance**

Rationales

Effects

Conclusions

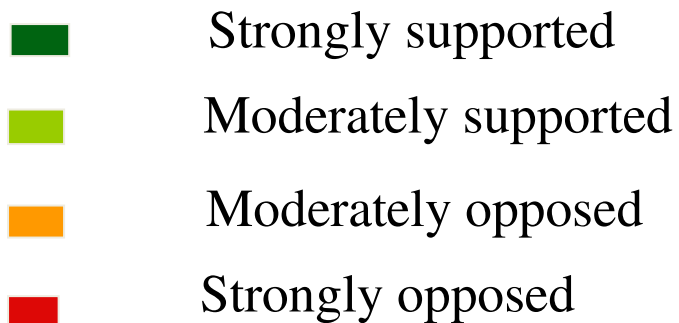
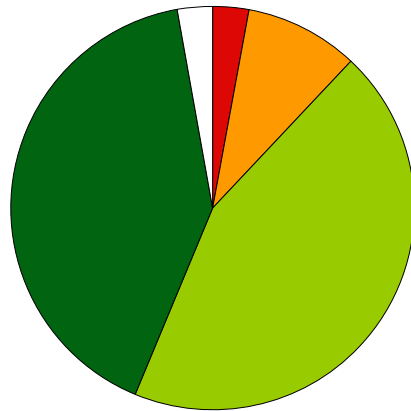
## Social relevance of river revitalizations (PhD thesis Berit Junker)



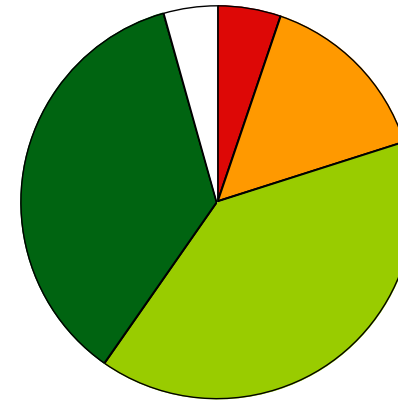


## Swiss population's attitudes towards river revitalizations

River revitalizations  
in Switzerland

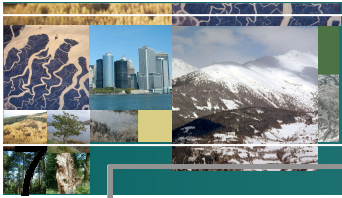


River revitalizations  
in own region

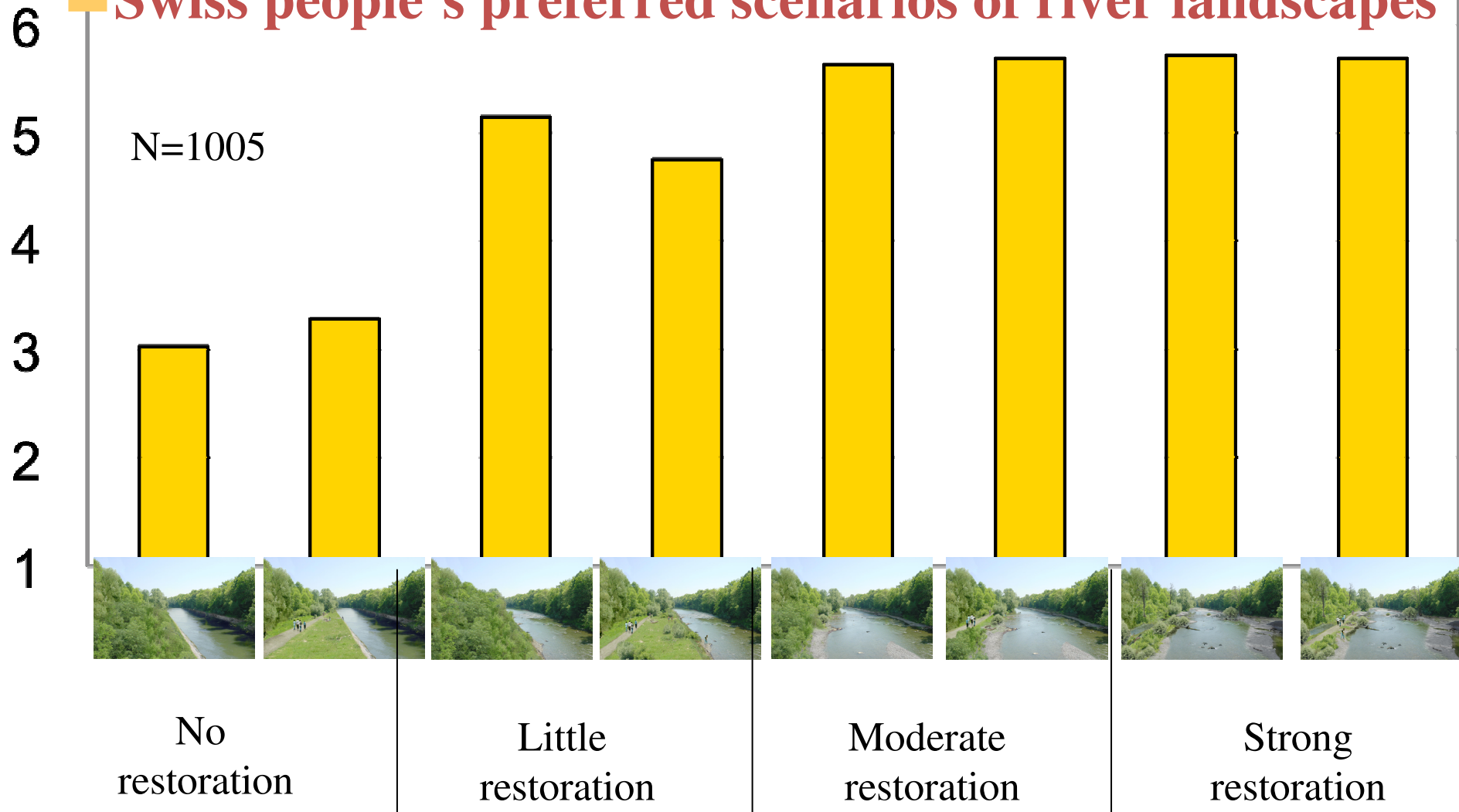


N = 1005

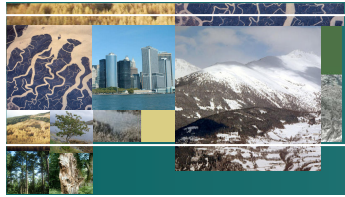




## Swiss people's preferred scenarios of river landscapes







## Actor groups' expectations for river projects

Perceived need for change	Local Residents N=124	Involved Stakeholders N=46	Projekt-team N=6
Naturalness	3.78	2.85	
Agriculture	2.27	3.12	
Recreation	3.51	2.89	
Forestry	2.98	2.12	
Flood protection	3.15	2.96	
Water quality	3.78	4.20	
Groundwater quality	4.06	4.22	



Introduction

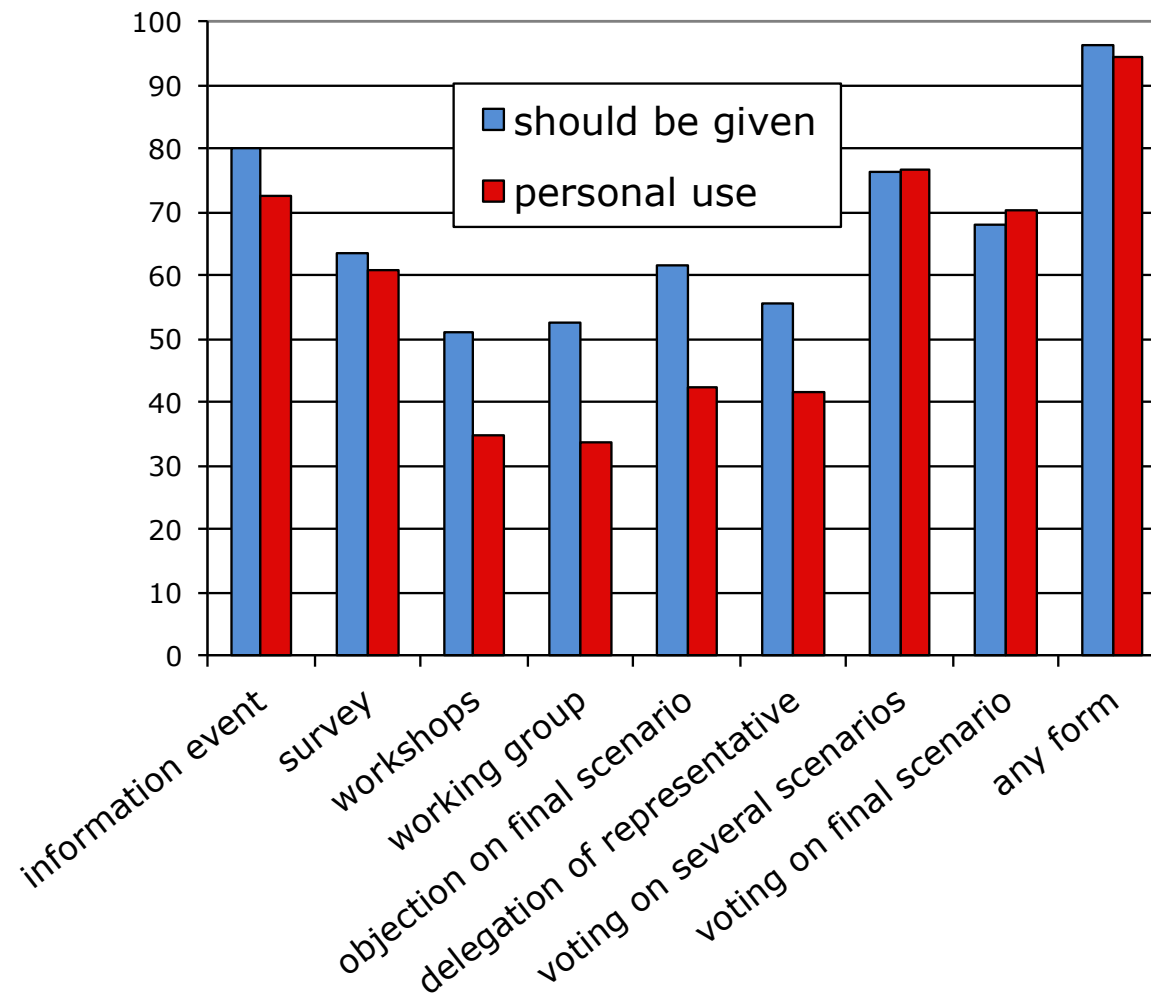
**Social Relevance**

Rationales

Effects

Conclusions

## Swiss people's expectations to be involved in river projects

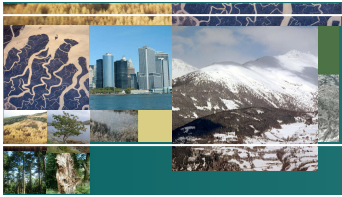


N=2016



## Rationales for stakeholder involvement

Rationales	Purpose	Success
Normative	Respect right to be involved	Involvement
Instrumental	<b>Today's main practice</b> Persuade stakeholders for acceptance project	
Substantial	<b>Suggested by research literature</b> In-depth dialogue, Social learning, Deliberative consensus	



## Social learning

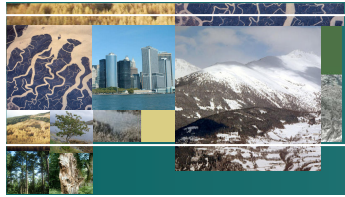
... means **learning to manage a problem together**.

It includes:

- Mutual learning about the problem and possible solutions
- Learning how to find a consensus
- Enhancing social relations (trust, mutual understanding)
- Establishing ownership and a sense of responsibility
- Improving collaboration

**Expected benefit:** more efficient and adaptive management

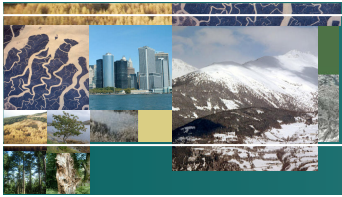
**Requirement:** dialogic involvement process



## Effects of stakeholder involvement on social learning

- **Theoretical literature** about expected social effects (Innes and Booher, 1999) and social learning (Pahl-Wostl et al., 2008)
  - **Little empirical evincence**; mainly descriptive studies
  - **Methodological challenges:**
    - Many (external) disturbing external factors
    - Often only few actors involved (statistics)
    - Biases of subjective measurement
  - **Recent studies at WSL:** Three approaches of measuring social effects of stakeholder involvement tested
- Present and compare results; specific strengths and limitations

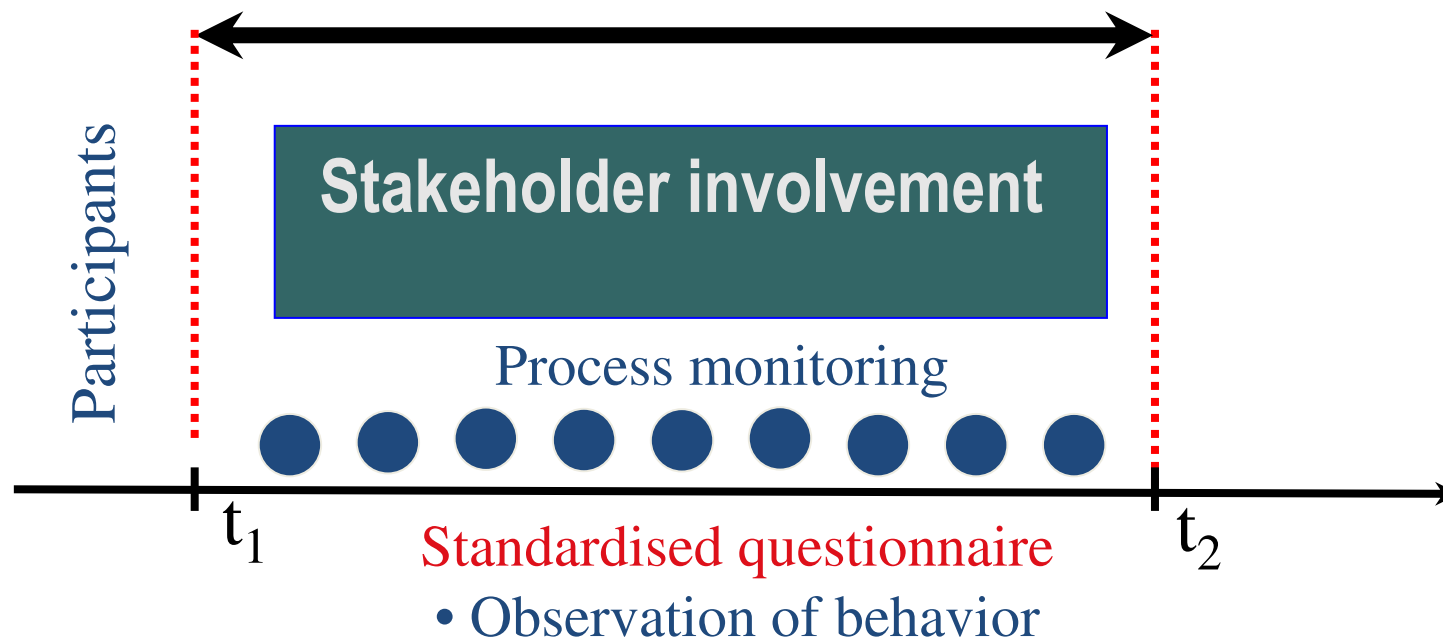




# 1. Approach: Quasi experimental measurement of effects

## Method

- Based on procedure of intervention research
- Change of attitudes under controlled conditions by repeated measurement





## Case study of experimental measurement

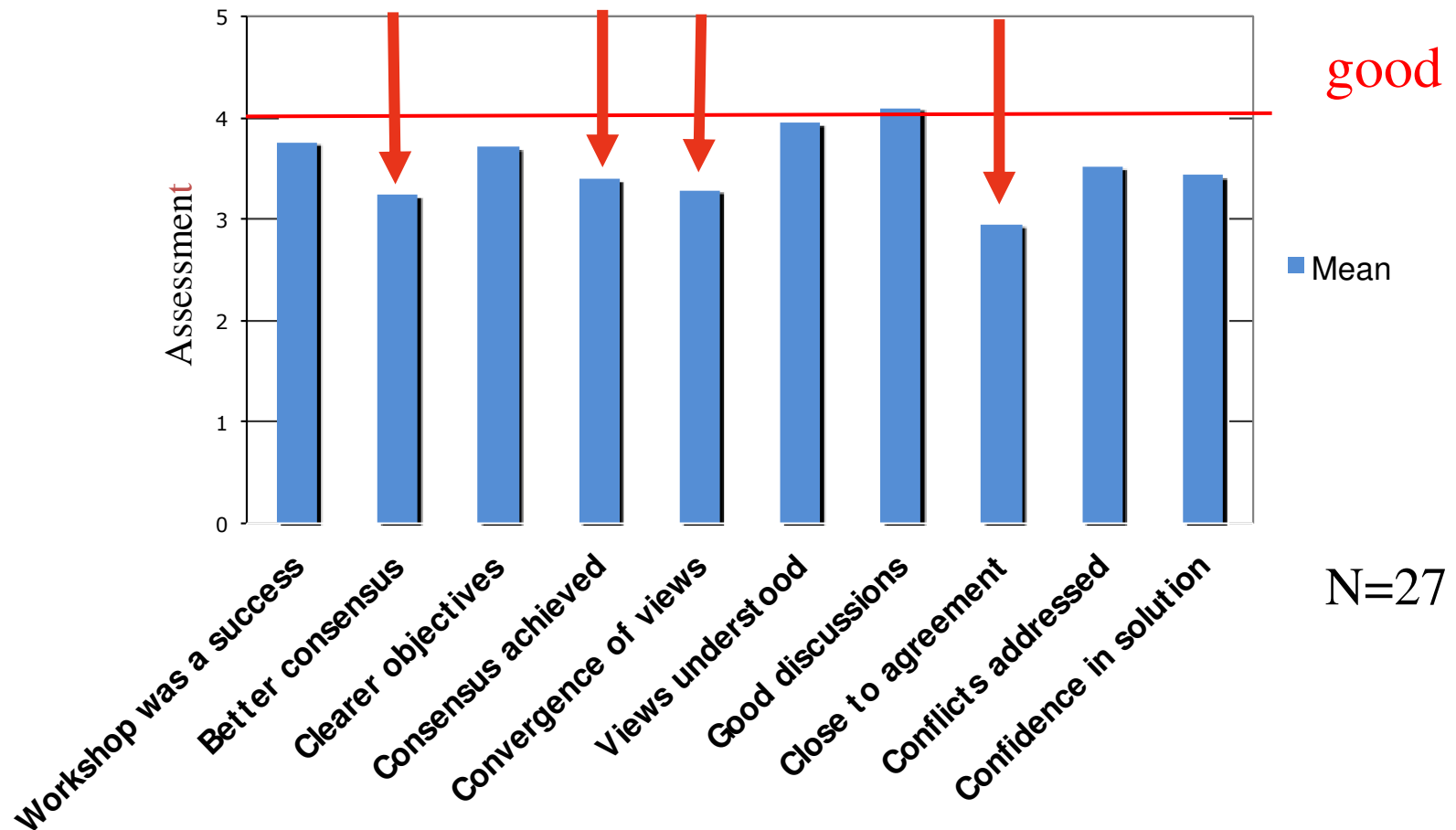
Revitalization project of the Thur (Weinfelden-Bürglen)

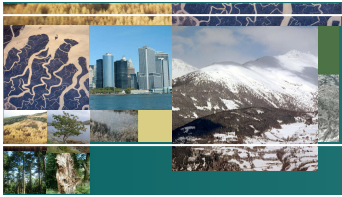
- **Involvement process:** 5 meetings of the consultative regional working group (15 months)
- **Participants:** 17 members of regional interest groups and the project team
- **Measurement:** two nearly identical structured questionnaires with items on:
  - Meaning of the river
  - River revitalization projects
  - Governance of river management
  - Accordance with other groups
  - Assessment of the process (only post measurement)



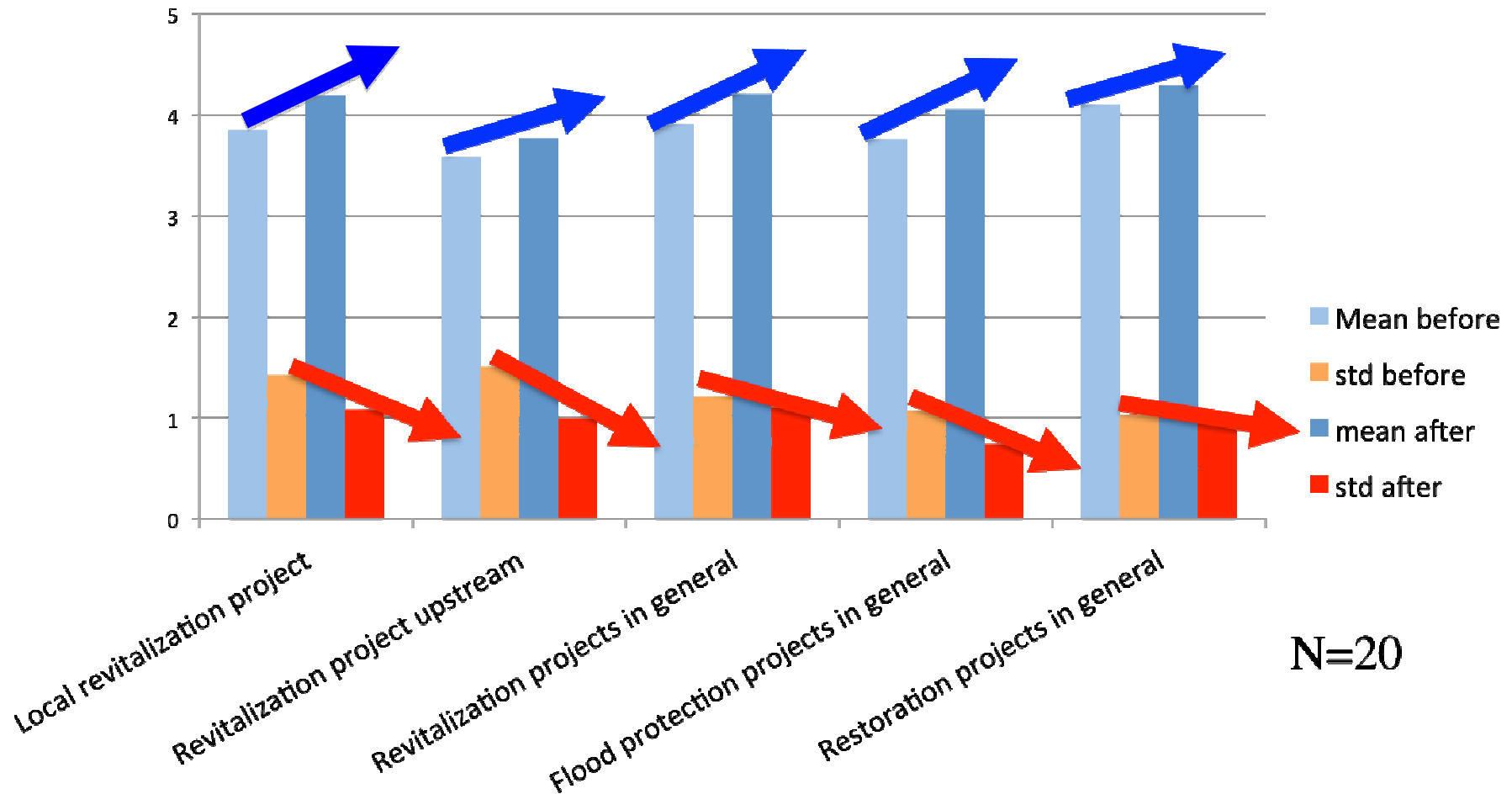


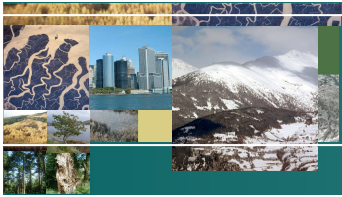
## Participants' post-assessment of the negotiation process



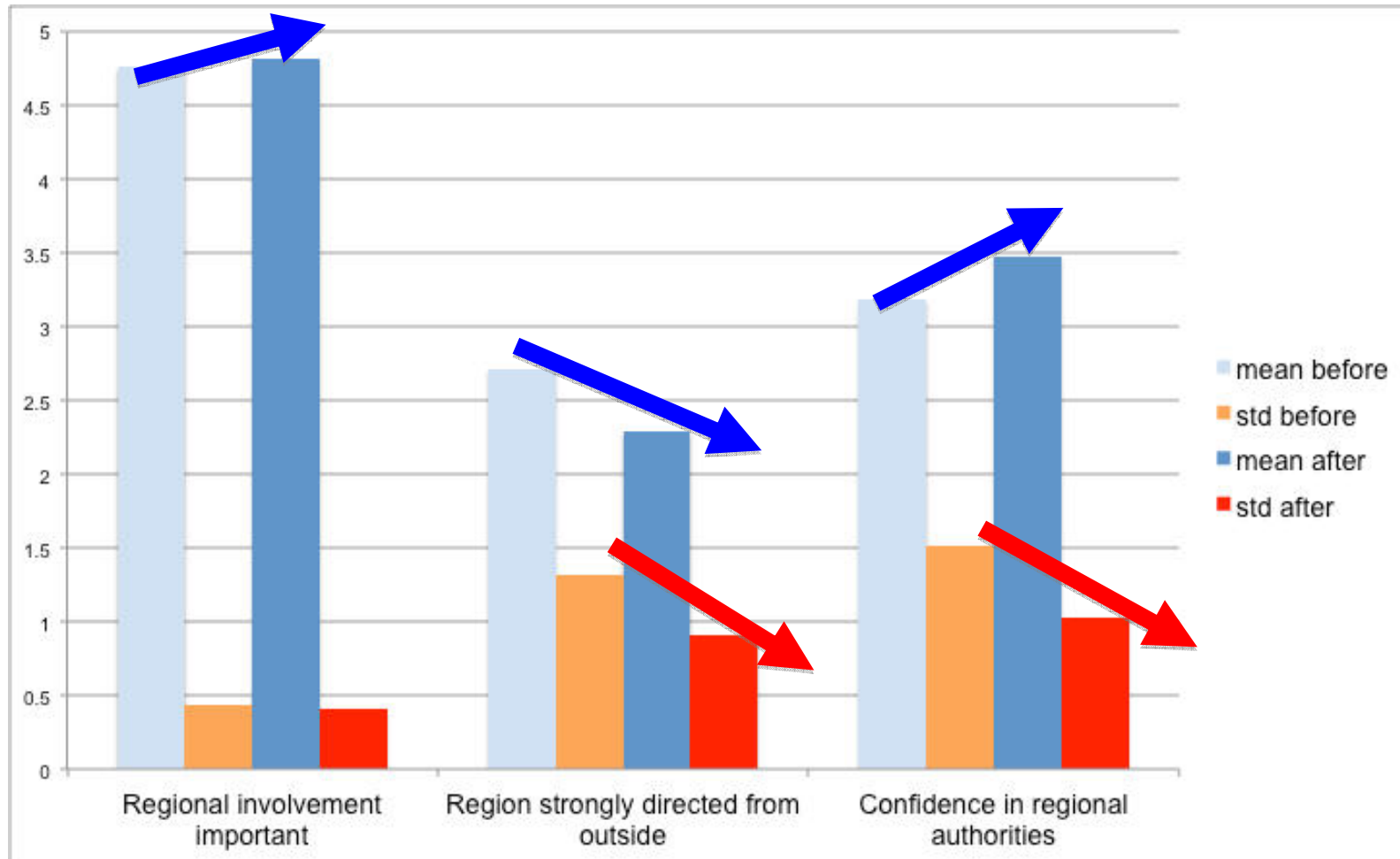


## Participants' change of attitudes towards revitalization

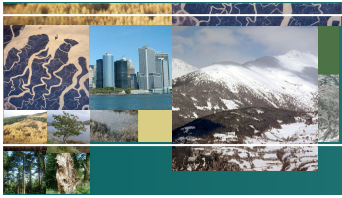




## Participants's change of attitudes towards governance







## Interpretation

### **Strength:**

Experimental design provided systematic evidence: change of participants' attitudes towards river revitalization and confidence in regional authorities

### **Limitations:**

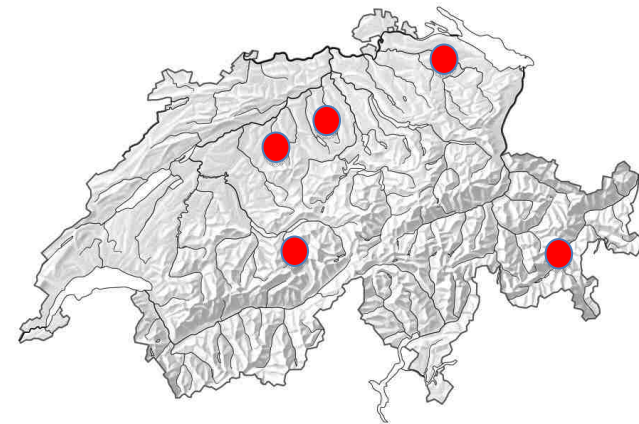
- The number of participants is too small for statistical tests
- It is not certain that these changes will be stable beyond the involvement process



## 2. Approach: Qualitative ex-post measurement

### Method

- **Case studies:** five successfully implemented river revitalization projects (> 5 years): Kander, Flaz, Wyna, Langte and Thur
- **Sample:** 5 involved stakeholders (project leader and representatives of main interest groups)
- **Guideline:** Focus on remembered characteristics of involvement process and on perceived effects .
- **Effects:** open and focussed questions



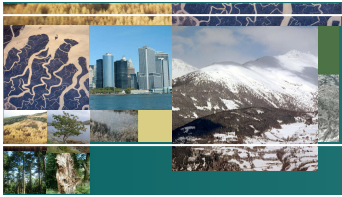


## Findings of qualitative interview analysis

- **Learning most relevant:** Most stakeholders stated to have **changed their mind** about the new paradigm. Some also learned about how to find a consensus.
- Many stakeholders were proud of the project and expressed **ownership**.
- **Relational effects** (better trust or better mutual understanding only mentioned by municipal authorities)
- The most important benefit is seen in the fact that in the end there was **no loser** and no (lasting) conflict: **trust maintained**

### Limitations:

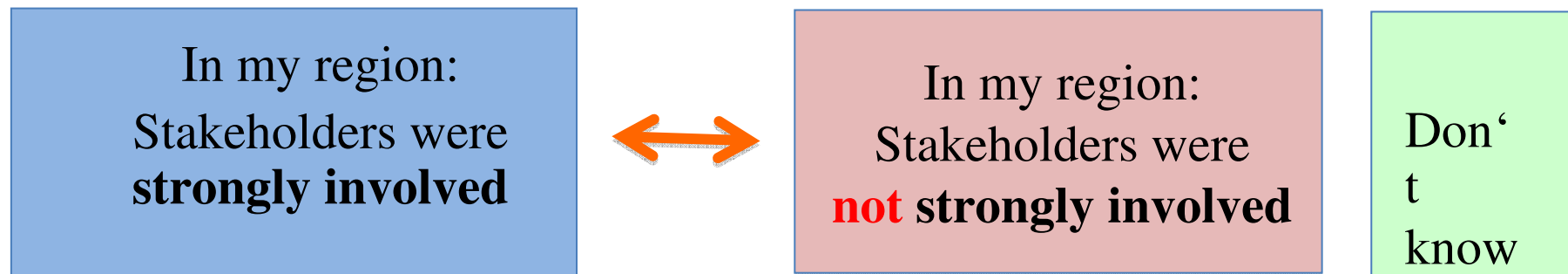
- Only successful cases considered
- Strategic argumentations of stakeholders
- No evidence about effect beyond involved persons

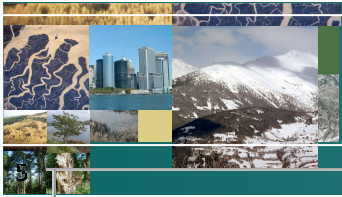


### 3. Approach: Comparative analysis of national survey data

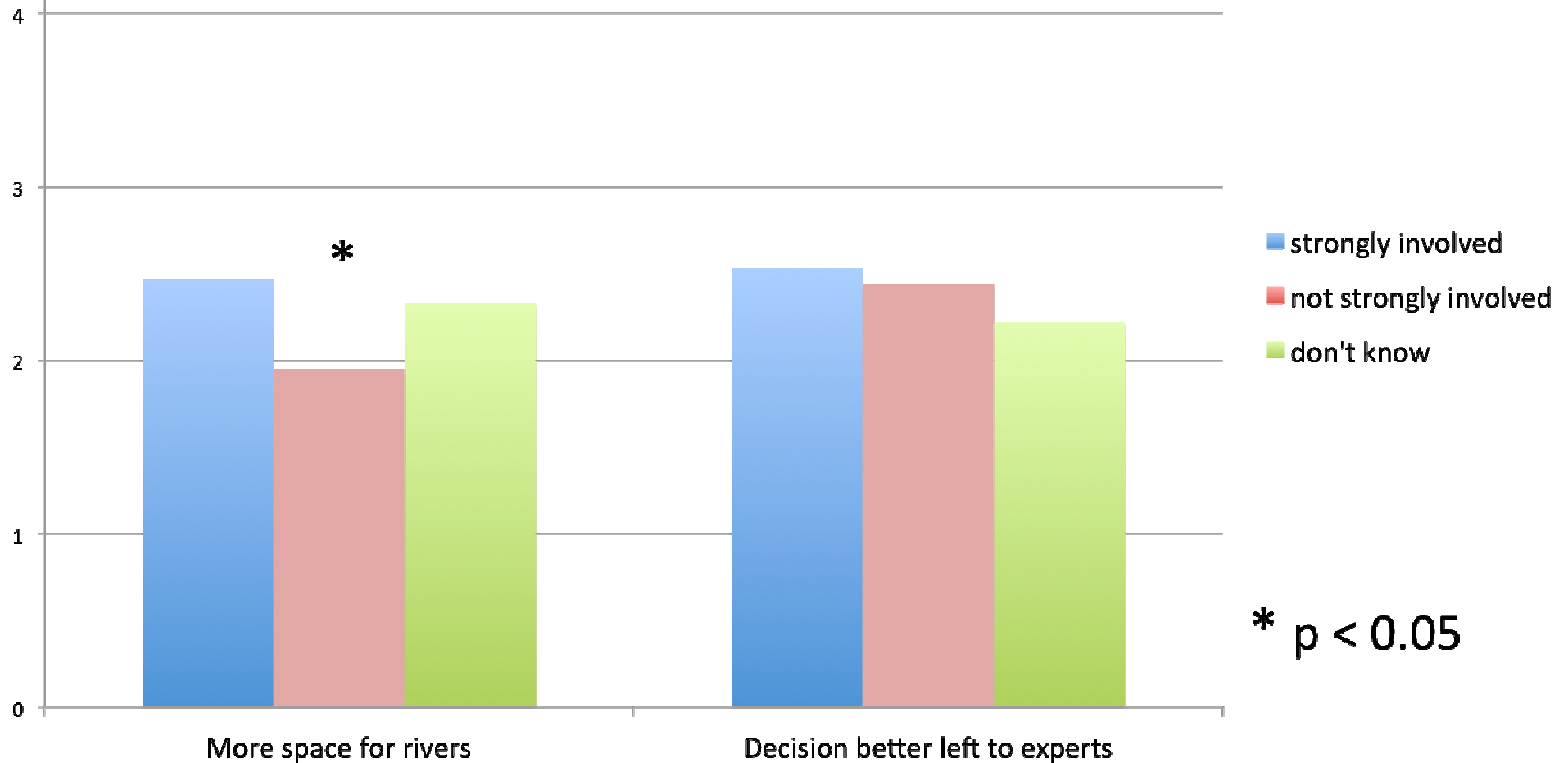
#### Method:

- Random sample of Swiss population ( $N = 2800$ )
- Return rate 15.3 %
- Questionnaire: Items on regional river revitalization projects, stakeholder involvement and assessments of effect-indicators
- Analysis: Comparison of means (Anova)

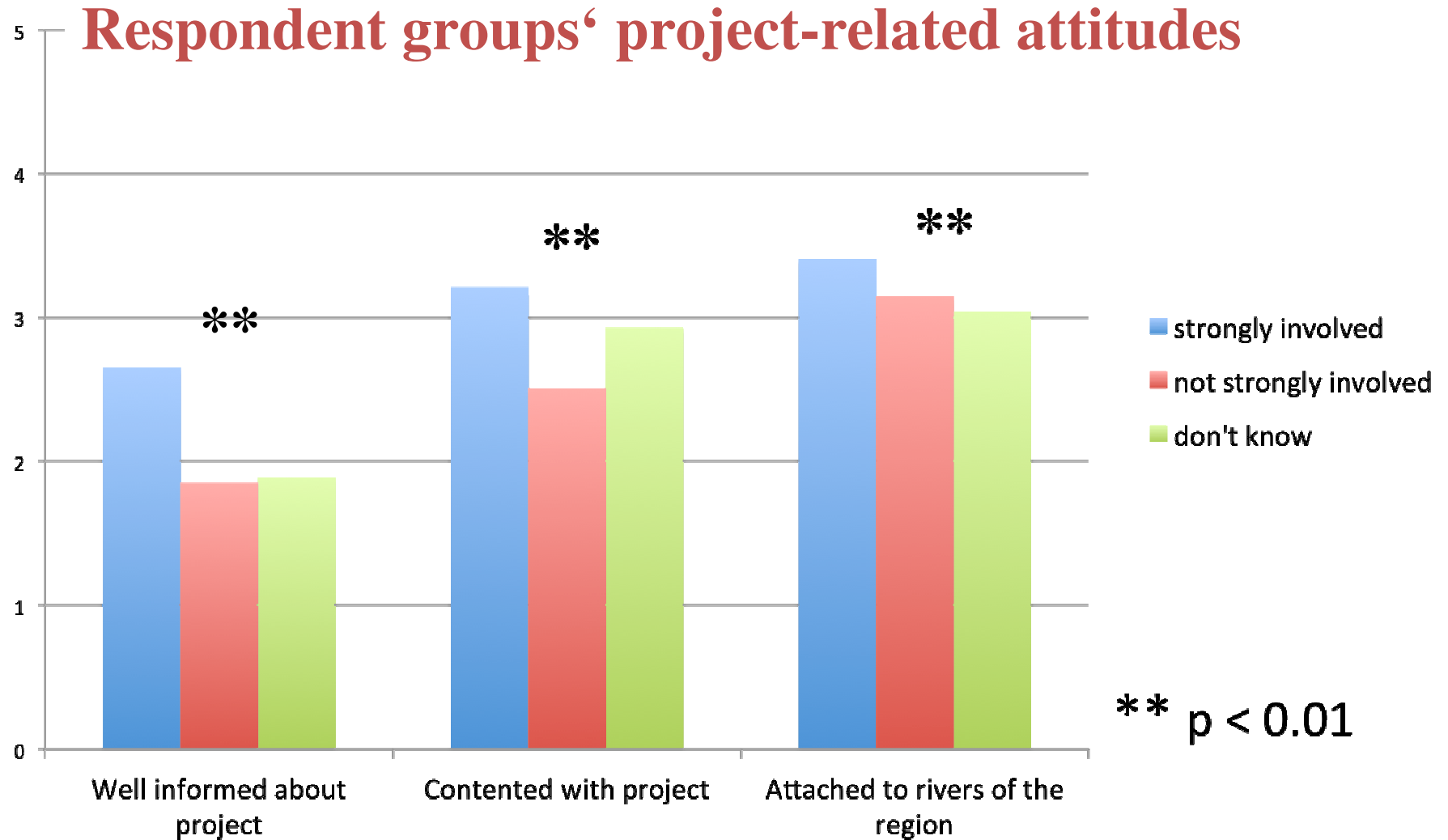
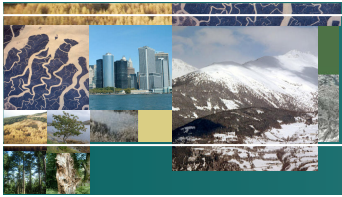




## Respondent groups' attitudes towards river revitalization

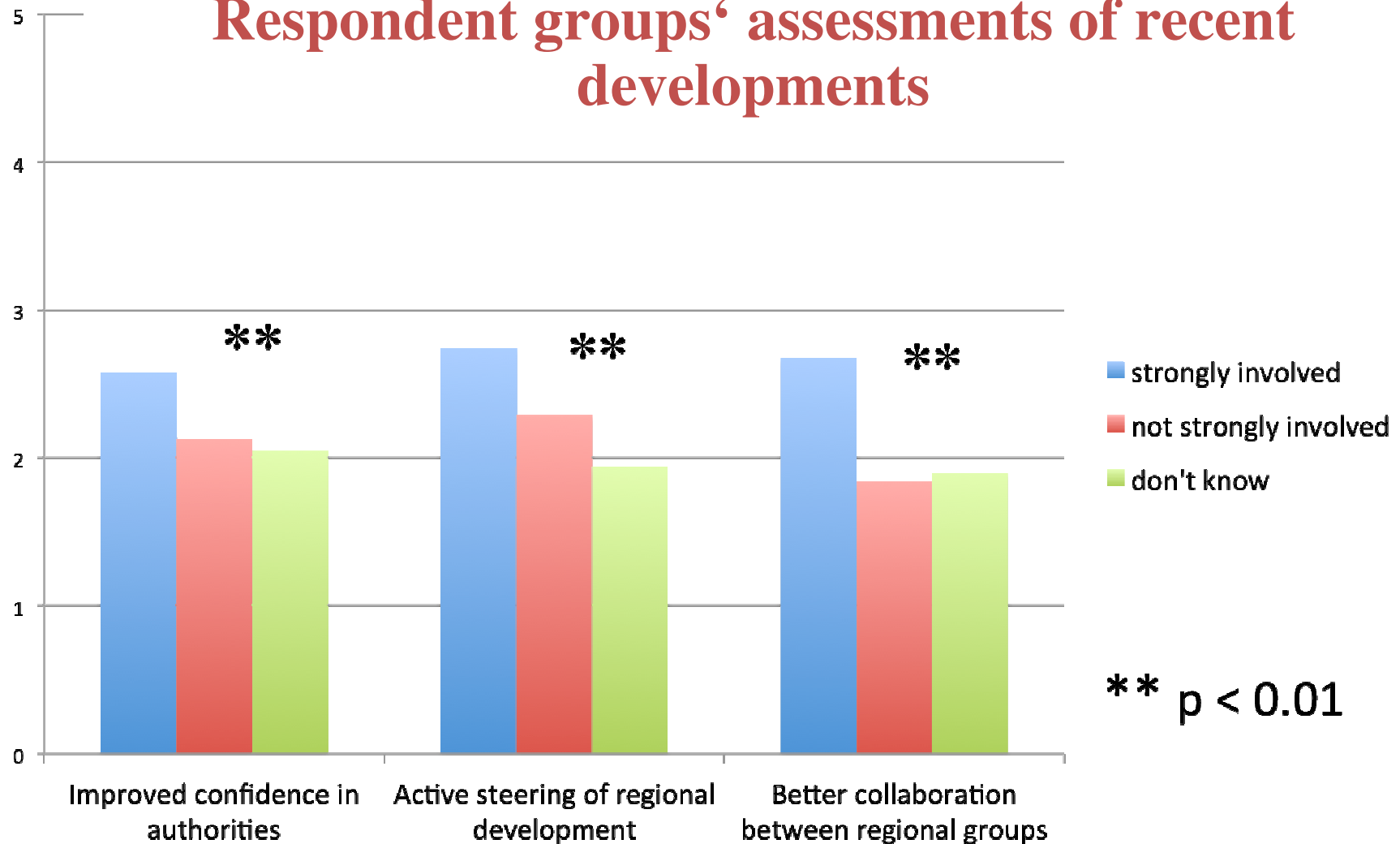








## Respondent groups' assessments of recent developments





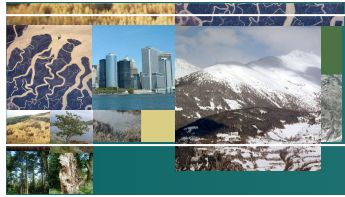
## Interpretation

### Strengths:

- Statistically valid evidence that public's perceived regional stakeholder involvement is connected with positive attitudes towards:
- the new paradigm of river management
- the project and the regional river
- the local authorities and regional development

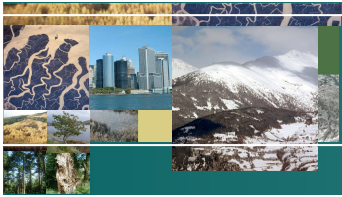
### Limitations:

- Key criterion „involved“ was subjectively assessed:  
Group selection may be informed by „optimist“-bias
- Stakeholder involvement may covary with context variables



## Comparison of measured effects of stakeholder involvement

Effects	Measurement approaches		
	Experiment	Ex-post interviews	Comparative analysis
Acceptance	✓	✓	✓
Ownership	?	✓	✓
Learning	✓✓	✓✓	✓
Relational effects	✓	no loss	✓



Introduction

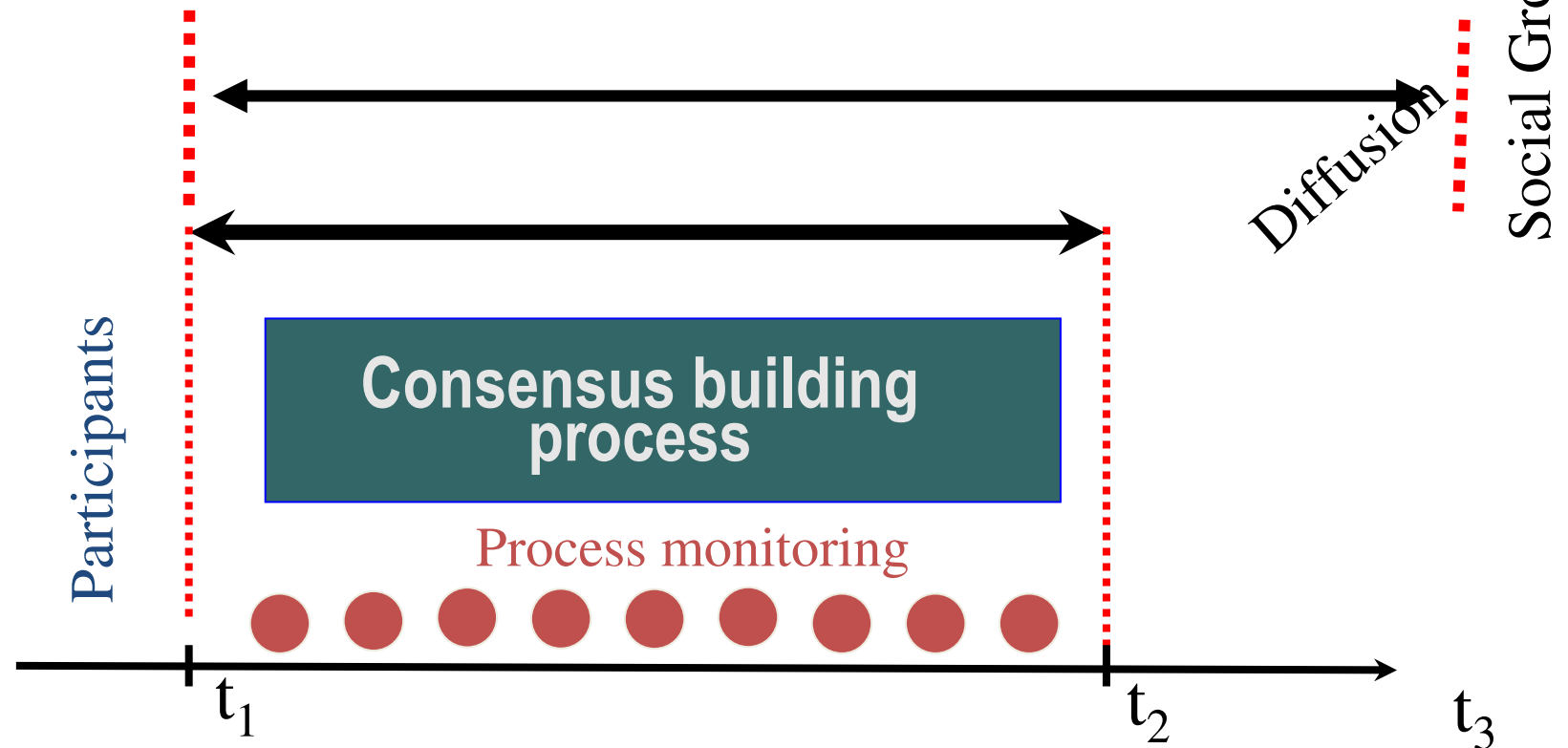
Social Relevance

Rationales

Effects

Conclusions

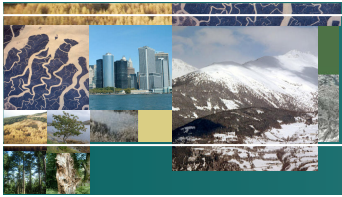
## Ideal (long-term) effect measurement approach



Methods:

- Standardised questionnaire
- Observation of behavior





## Pragmatic effect measurement approach

- Qualitative **ex-post measurement** design.
- Include projects that were **not successful** or failed.
- Extended measurement: by sending **standardised questionnaires** to members of involved stakeholder groups ( $n > 200$ ).
- Include **all dimensions** of social learning, social capital and sense of ownership.



## Conclusions

- For river management practice achieving a **high acceptance** of projects is still the main goal of stakeholder involvement
- Recent research literature, however, recommends to strive for **social learning**
- Providing robust evidence that stakeholder involvement can contribute to social learning faces **methodological challenges**
- Our comparison of three evaluation methods corroborated that stakeholder involvements promotes **mutual learning**
- Relational effects are also confirmed, but they are rather limited respectively should be mainly seen as **reproductive effects**.



Introduction

Social Relevance

Rationales

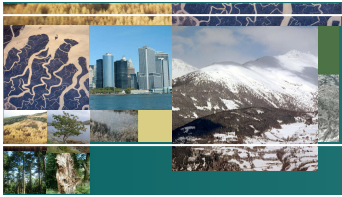
Effects

**Conclusions**



Thank you for your attention!

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## Meanings of river space

### Items

N=2016

**Space for economical use**



**Product of technology**



**Source of danger**



**Channel do drainage the water**



**Something that belongs to me**



**Part of my living space**



**Source of life**



**Part of my home**



**Place of silence and contemplation**



**Nature experience**



**Recreation area**



**Valuable ecological place**

