

Case: innovation in enlarging watercapacity



Evaluation of public support for Room for the River measures

Arjen Buijs

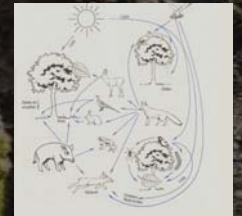
Wageningen University / Alterra

NETHcid2009 Conference 13-10-2009



River restoration projects in the Netherlands

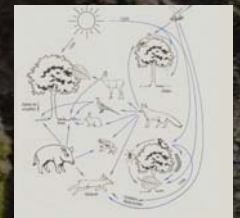
- 1993, 1995 near floodings
 - > 100.000 evacuated
1. Dike enhancements
 2. Individual projects river restoration
 - **Spatial quality:** nature restoration, recreation
 - Safety
 - Extraction (sand, clay)
 3. Room for the River (integral project)
 - **Safety**
 - Spatial quality
 - Extraction



Citizen support?

■ Dike enhancements: major protests

- Loss of spatial identity
- Loss of views
- Lack of public participation



■ River restoration: also protests

- Different views on nature (wilderness vs scenic nature)
- Loss of spatial identity
- Lack of public participation

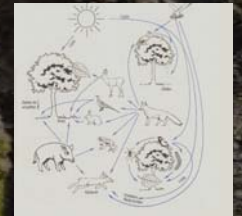


→ Also to improve implementation Room for the River:
Evaluation of effects (citizens)

Design of evaluation study

2 floodplains after restoration
1 floodplain before restoration (reference)

- Comparison
 - Local residents
 - All Dutch
- 2000 Questionnaires
- 2-5 years after implementation



2 projects: Gameren, Sleeuwijk

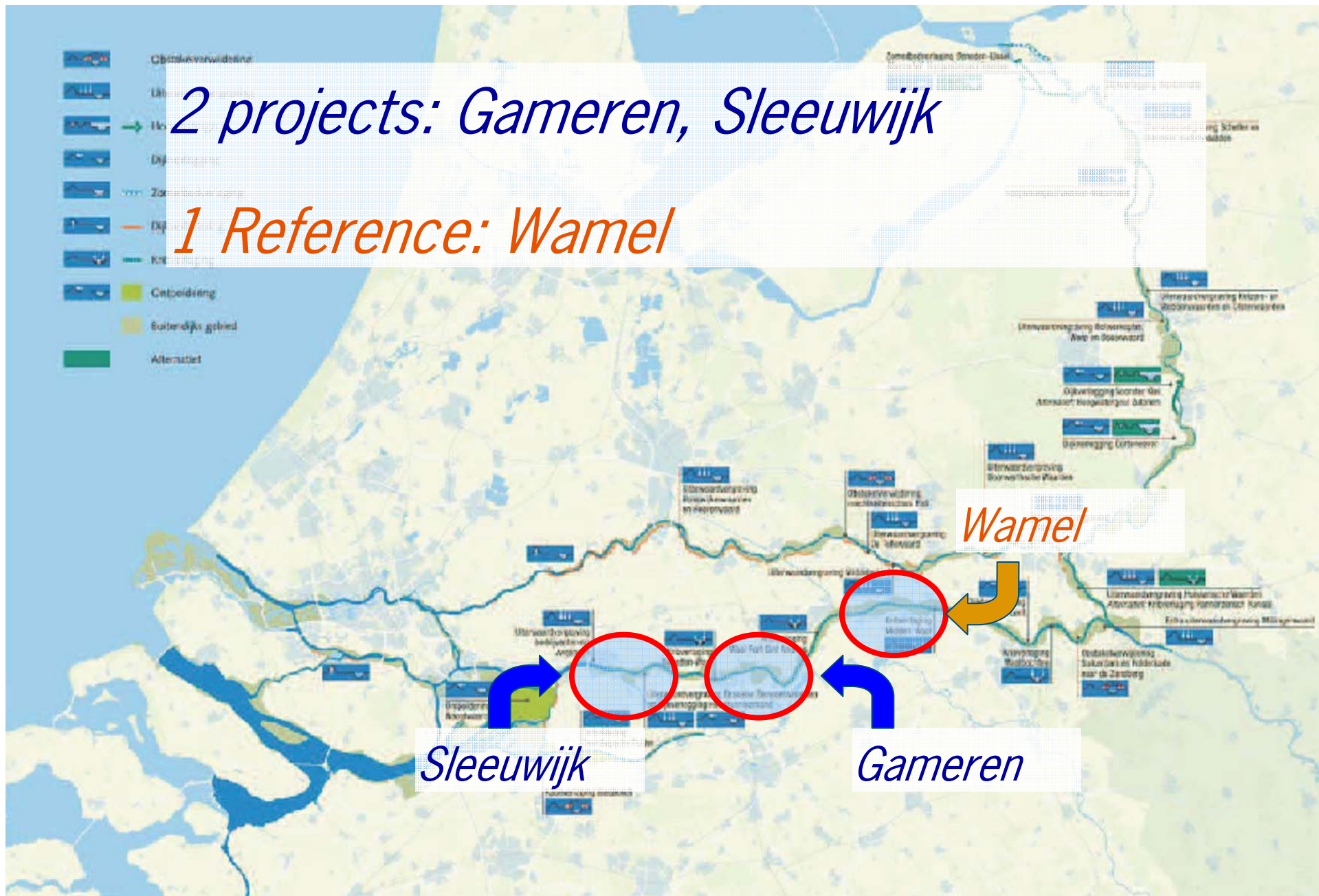
- Obstakelverwijdering
- Uitbreiden
- Uitbreiden
- Dijkverhoging
- Zandbedekking
- Dijkverbetering
- Kribberigging
- Ontpoldering
- Buitendijks gebied
- Alternatief

Sleeuwijk

Gameren

2 projects: Gameren, Sleeuwijk

1 Reference: Wamel



Reference: “original” floodplain: Wamel



Floodplain after intervention (1: Sleeuwijk)



Floodplain after intervention (2: Gameren)



River

New side channels

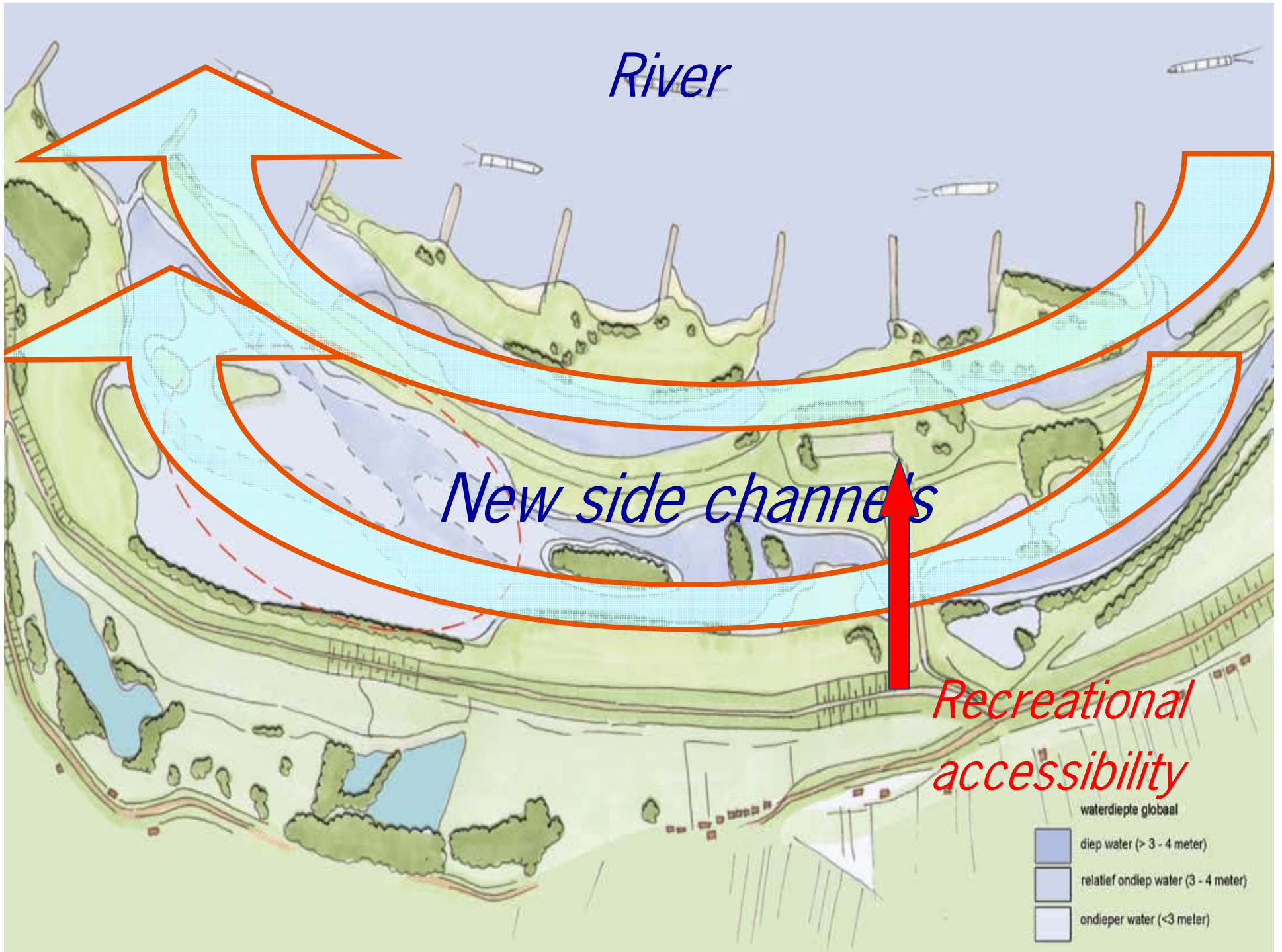
*Recreational
accessibility*

waterdiepte globaal

diep water (> 3 - 4 meter)

relatief ondiep water (3 - 4 meter)

ondieper water (<3 meter)

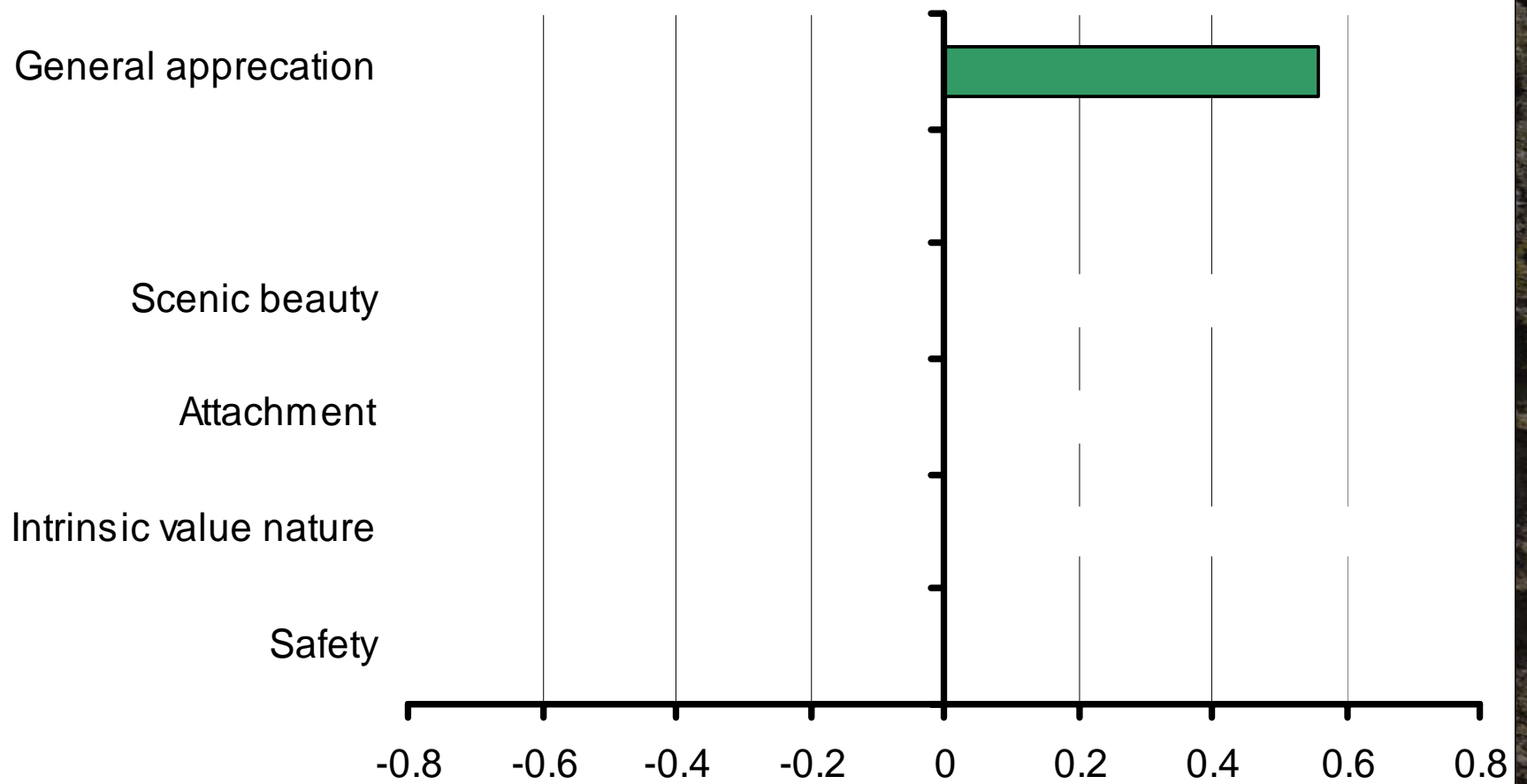


Effects of implementation

- Ecological: ++ (Jans, 2004)
- Safety: +
- Spatial quality / Public perception
 - 1) All Dutch
 - 2) Local residents

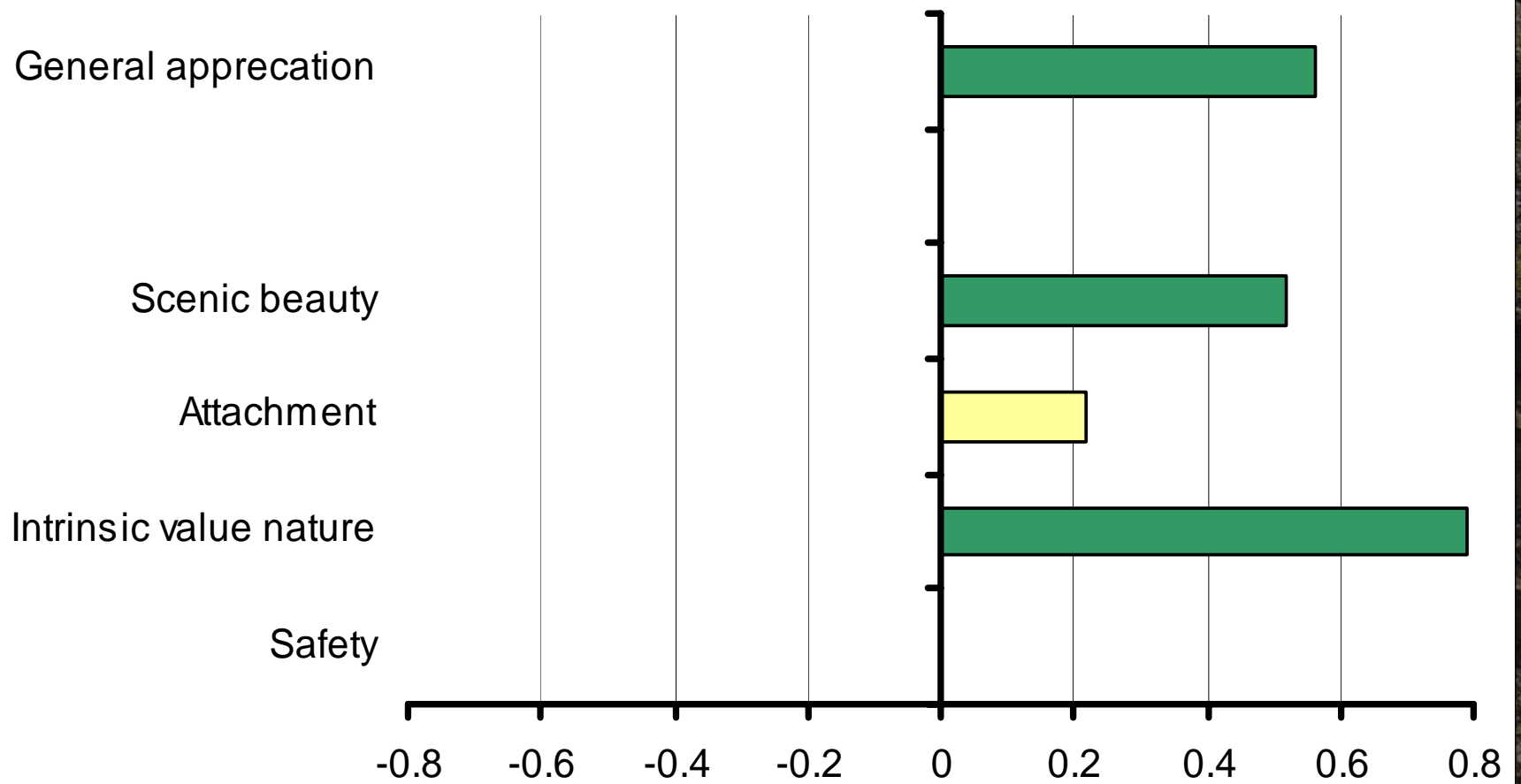
Review of effects (all Dutch)

All Dutch



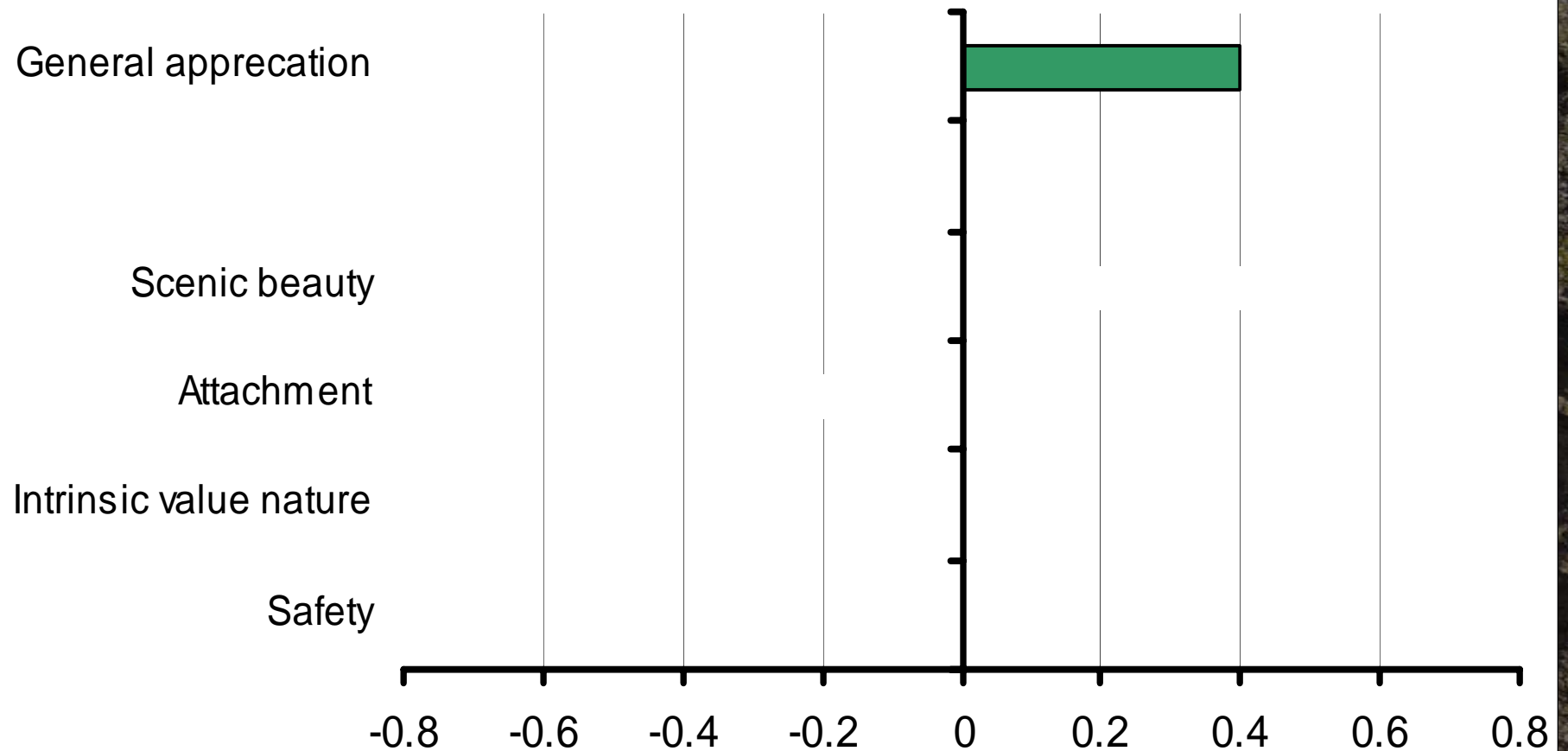
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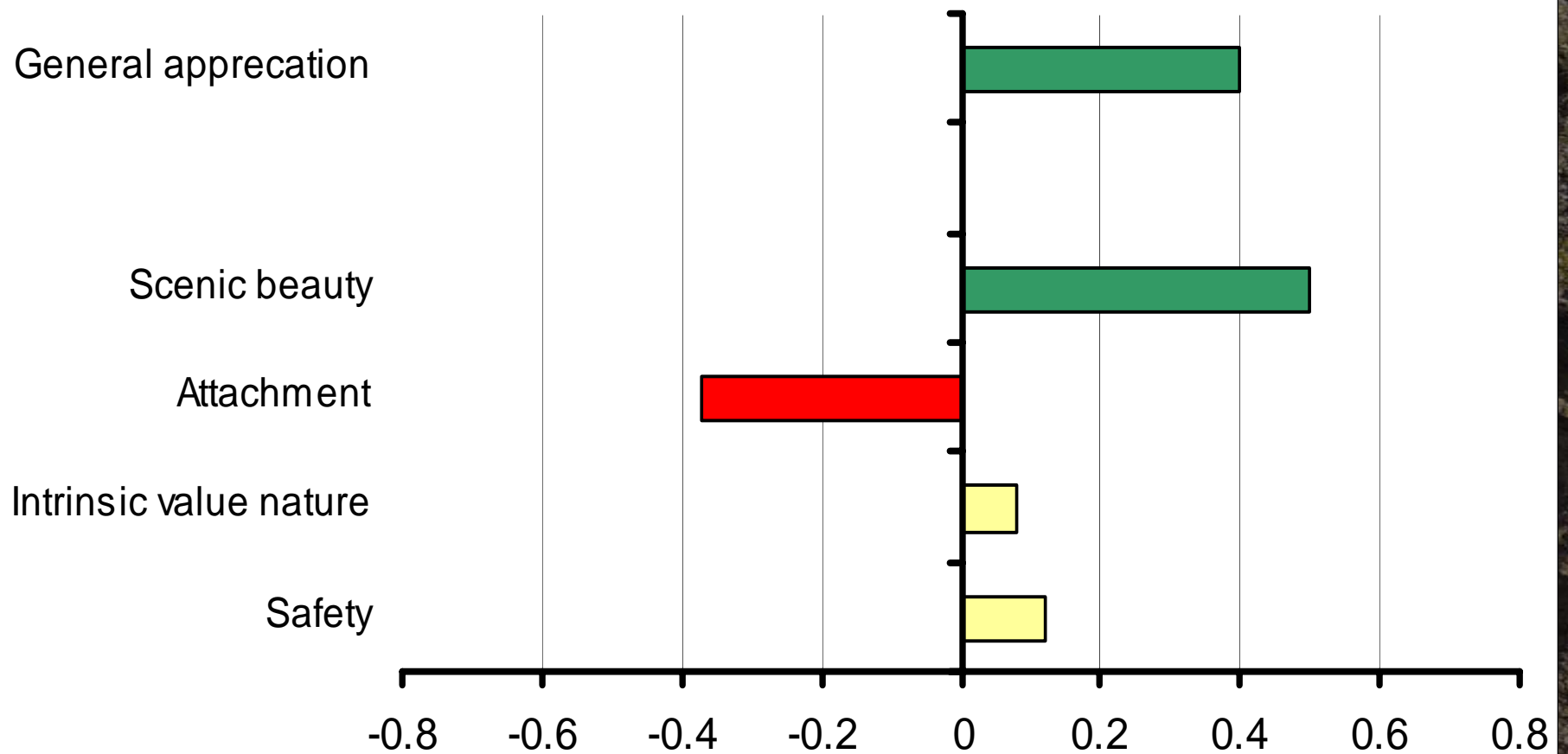
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Local Residents

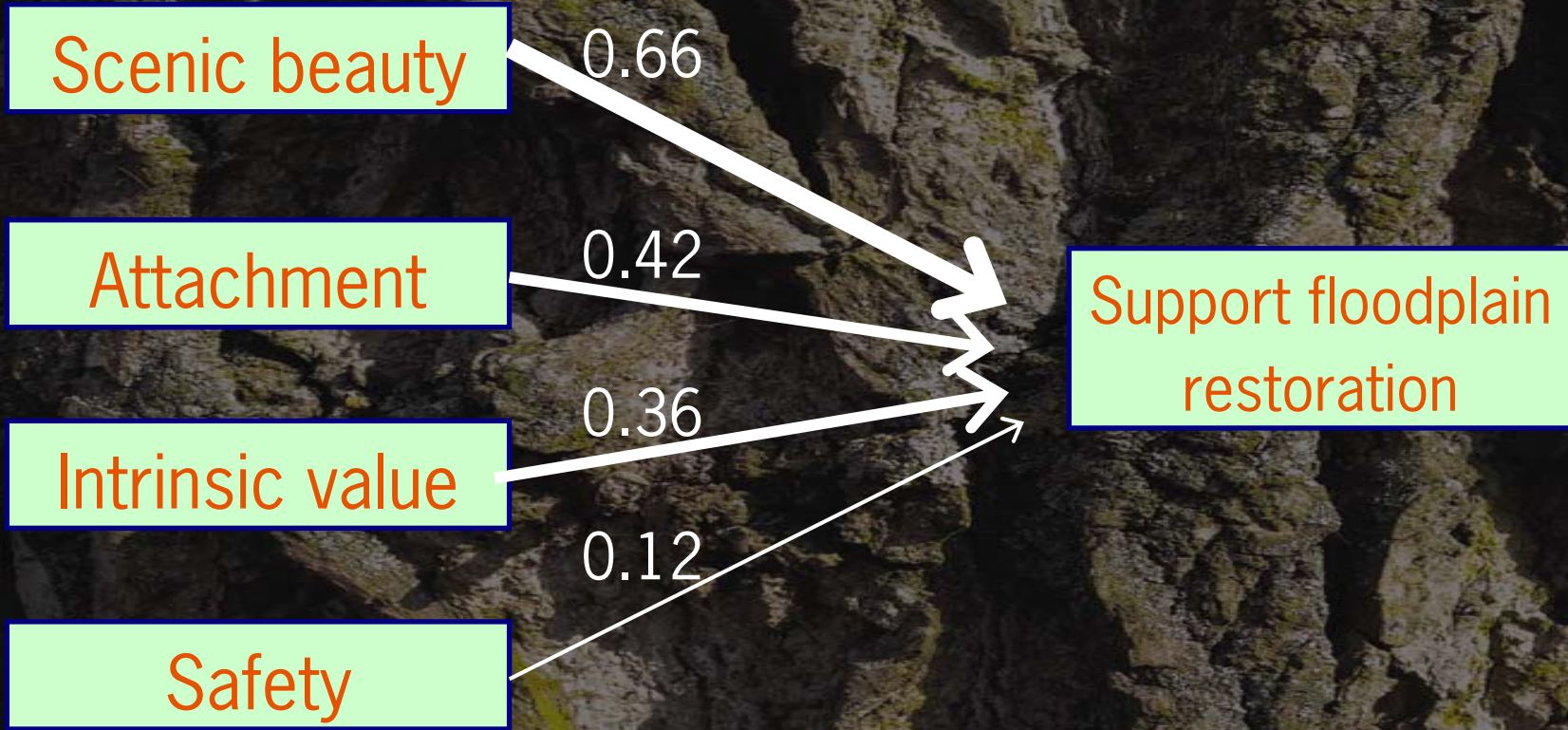


Review of effects (all Dutch)

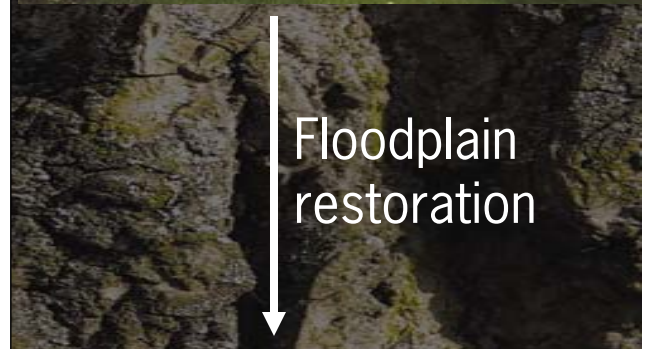
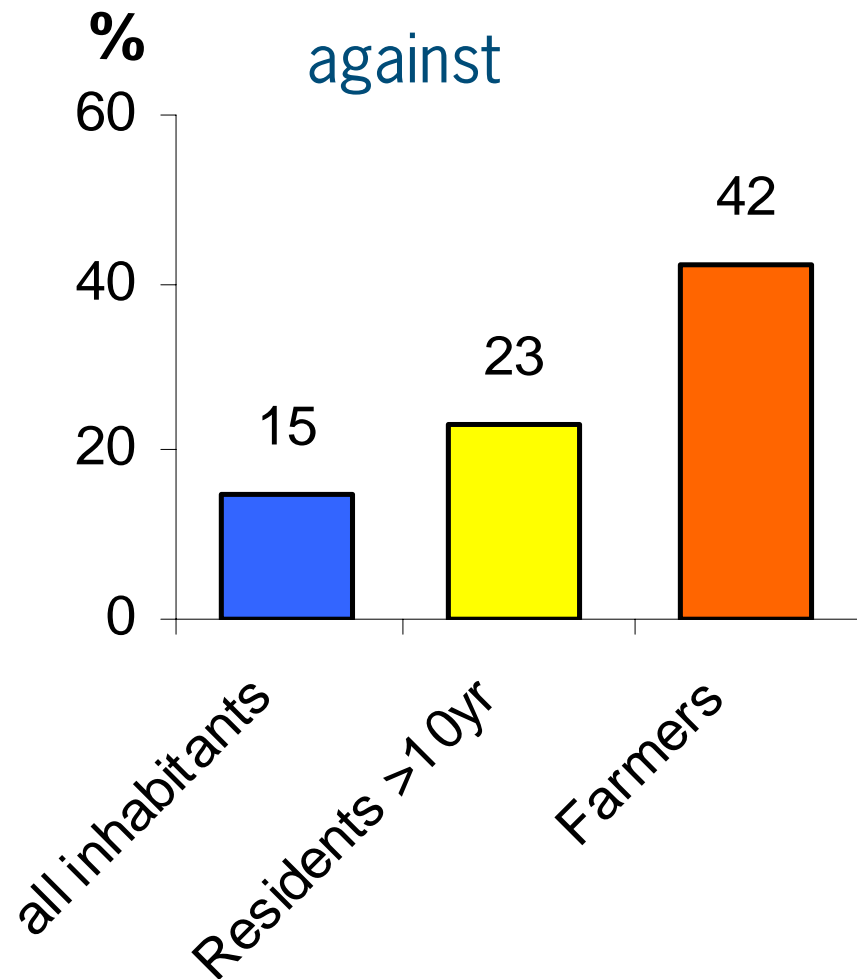
Local Residents



Most important criteria



Differentiation in local support




Floodplain restoration

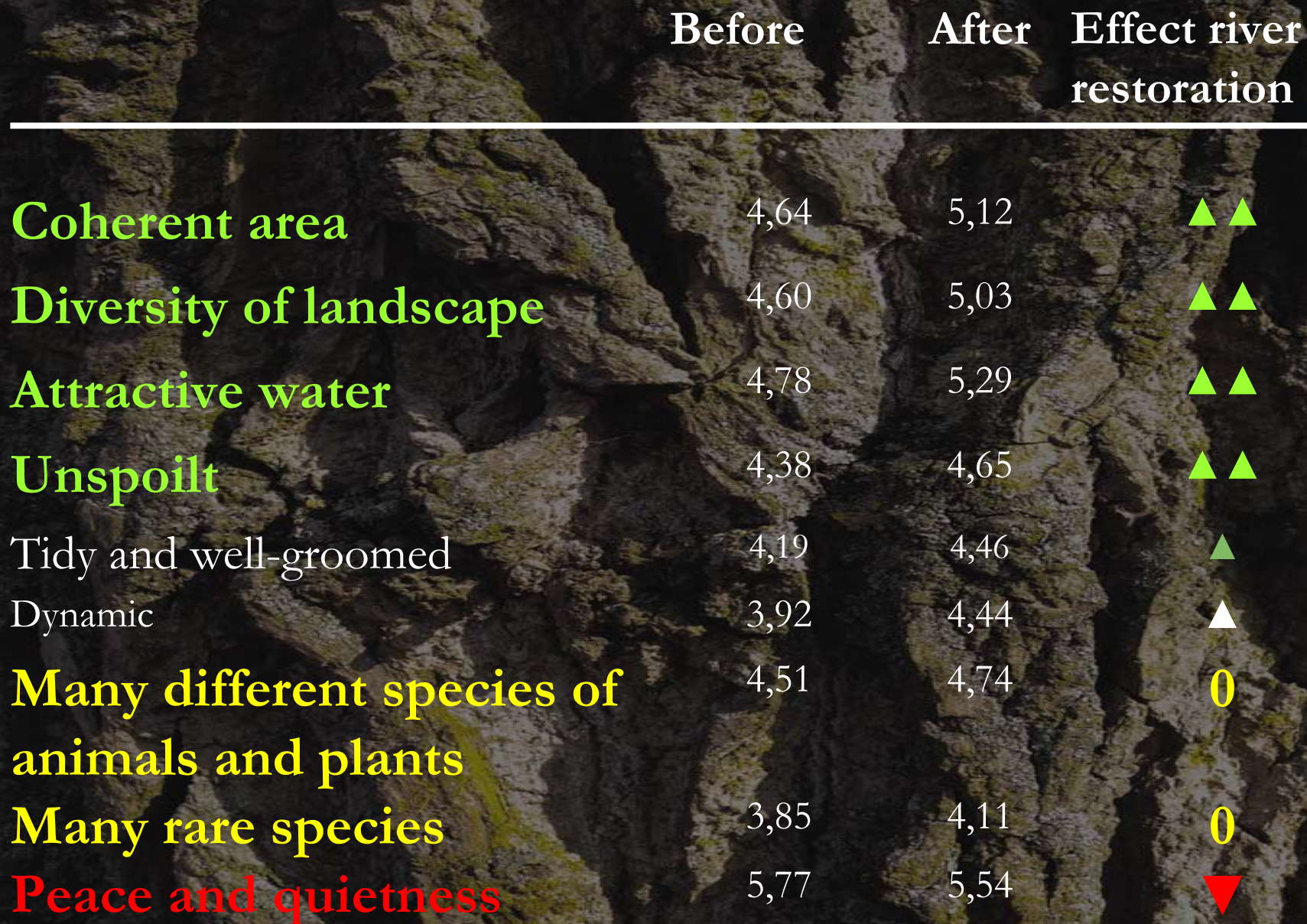


Effect on scenic beauty

	Before	After	Effect river restoration
Coherent area	4,64	5,12	▲▲
Diversity of landscape	4,60	5,03	▲▲
Attractive water	4,78	5,29	▲▲
Unspoilt	4,38	4,65	▲▲
Impressive	4,11	4,55	▲
Tidy and well-groomed	4,19	4,46	▲
Dynamic	3,92	4,44	▲
Visibility of river	5,51	5,77	0
Many different species of animals and plants	4,51	4,74	0
Grand views	5,36	5,41	0
Vegetation	4,72	4,86	0
Seasonal variation	4,75	4,80	0
Many rare species	3,85	4,11	0
Peace and quietness	5,77	5,54	▼



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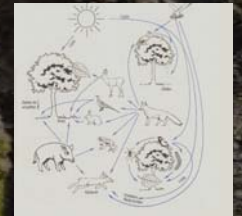


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Conclusions

Room for the river has impact

- Scenic value
- Attachment
- (accessibility)
- ? Perception nature value
- ? Safety perception
- Impact → public support
- Design of restoration influences impact&support

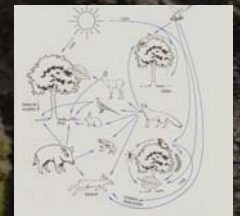


Consequences (1)

■ RvR has impact → Public participation



■ EU: WFD



■ Lack of participation?

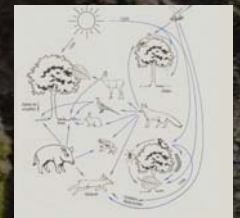
- Democracy
- Protests
- Quality



Consequences (2)

Design: “with people in mind” (Kaplan, 1998)

- Improve positive impacts
 - Coherence, landscape diversity, visibility water, dynamics, ...
- Mitigate negative impacts
 - Protect sense of place: Investigate landmarks (as experienced !): memories, stories
 - “Typical Dutch landscape”
- Choices
 - Wild/managed, ecological/agricultural function

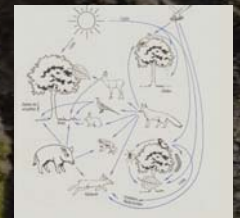


Consequences (3)

- In general: support:
→ Mobilize support

- But:
Support based on improved scenic quality
safety

- More focus on safety?



The End

More information:

Arjen.buijs@wur.nl

Buijs, A. E. (2009). "Public support for river restoration. A mixed-method study into local residents' support for and framing of river management and ecological restoration in the Dutch floodplains." *Journal of Environmental Management* **90**(8): 2680-2689.

