

Naturgenopretning - muligheder for fremadrettede forbedringer i restaureringsproceduren

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Lad os ikke fortælle om fejltagelser og
undgå den bitre smag af nederlag



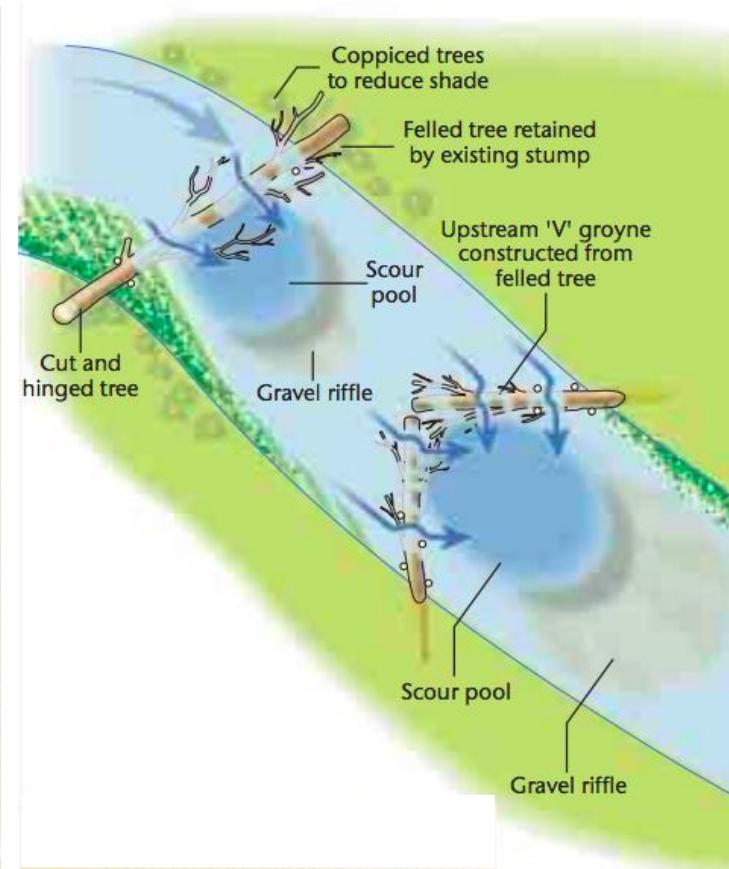
Vores naturopfattelse styrer hvad der genskabes



Antagelse: Vi bygger – de kommer



Hjernekirurgi i middelalderen og vandløbsrestaurering har en del til fælles.....



En dråbe i havet?



Geo-forurening eller restaurering?

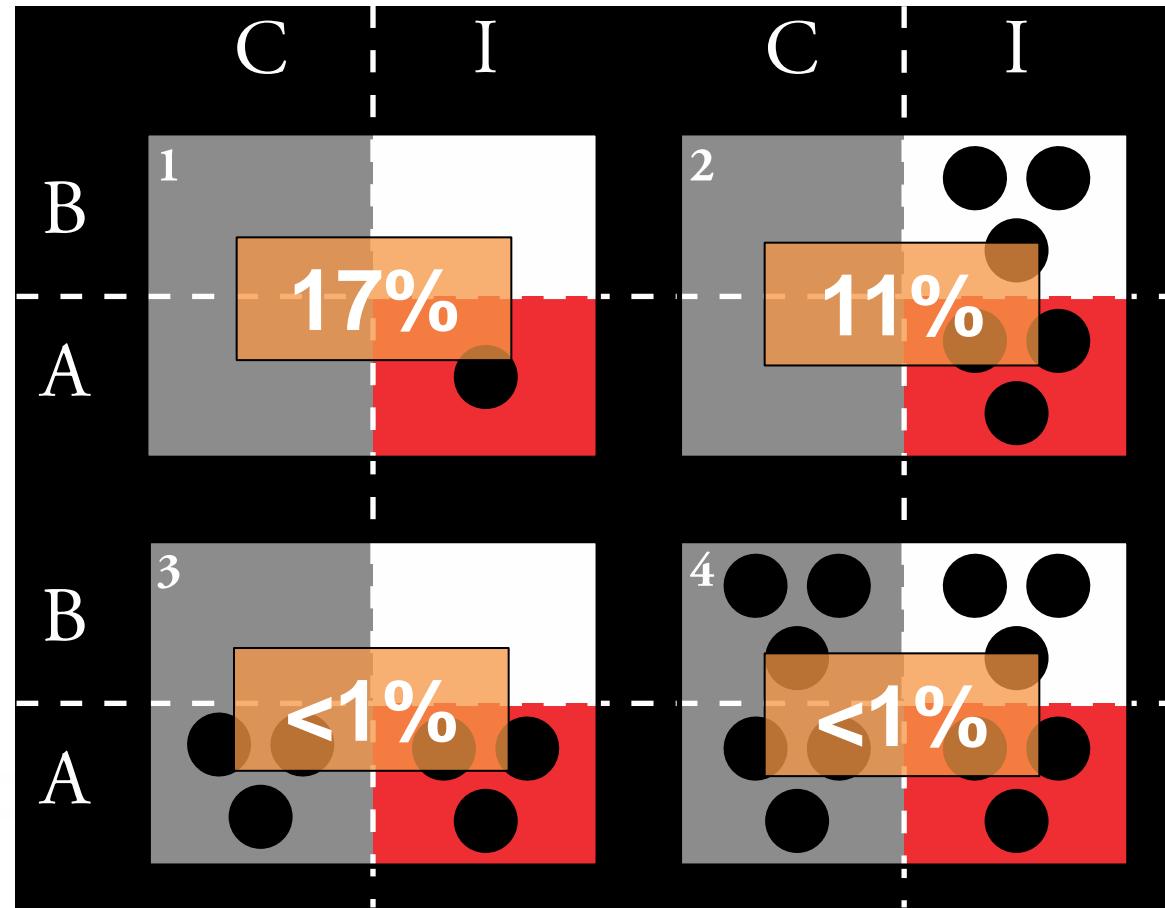


Find 5 fejl



Hvad er vores evidens? >600 studier

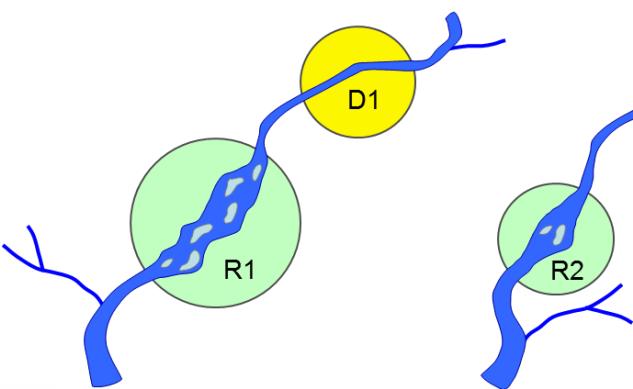
72% - ingen
info!



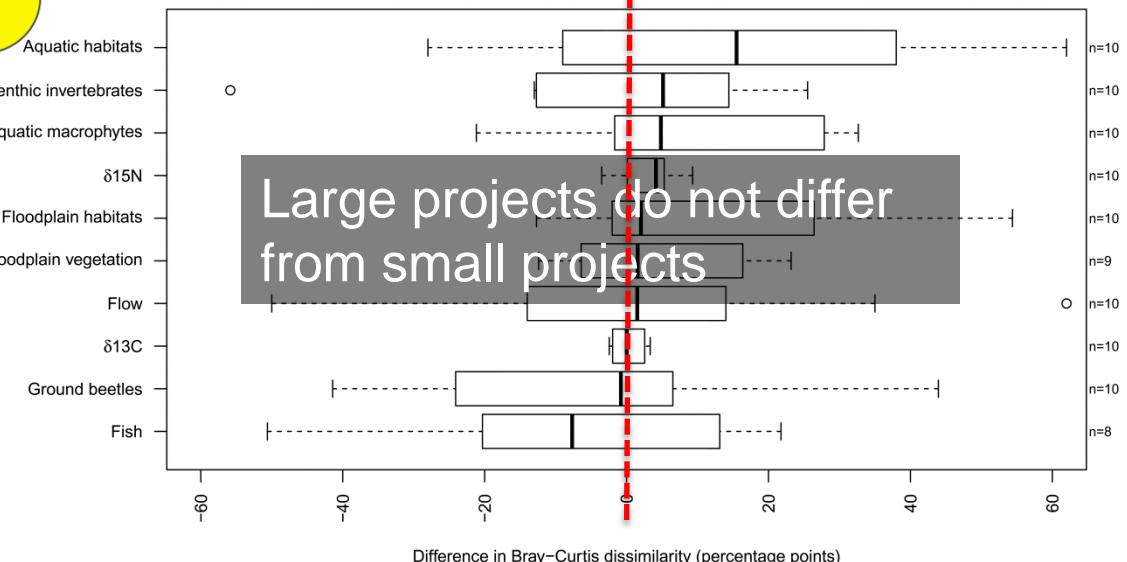
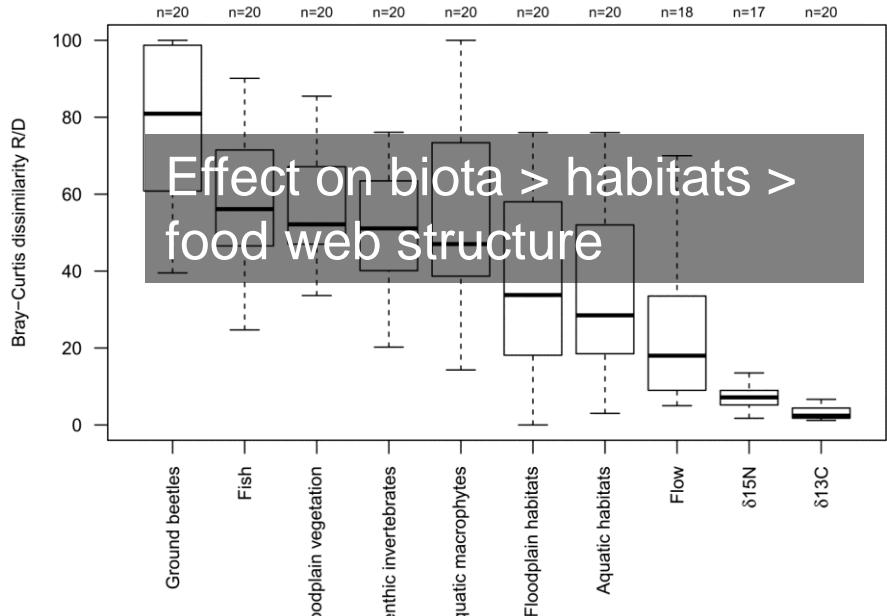
Tid brugt på implementering = 80% og overvågning = 7%

Resultater fra 20 projekter i Europa

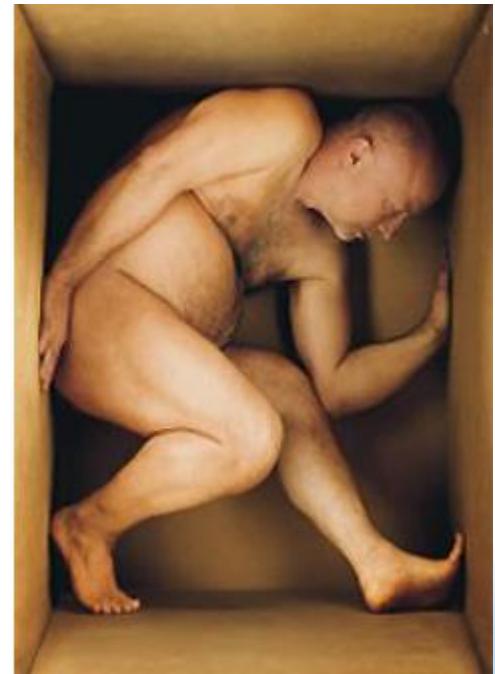
Large restoration project R1



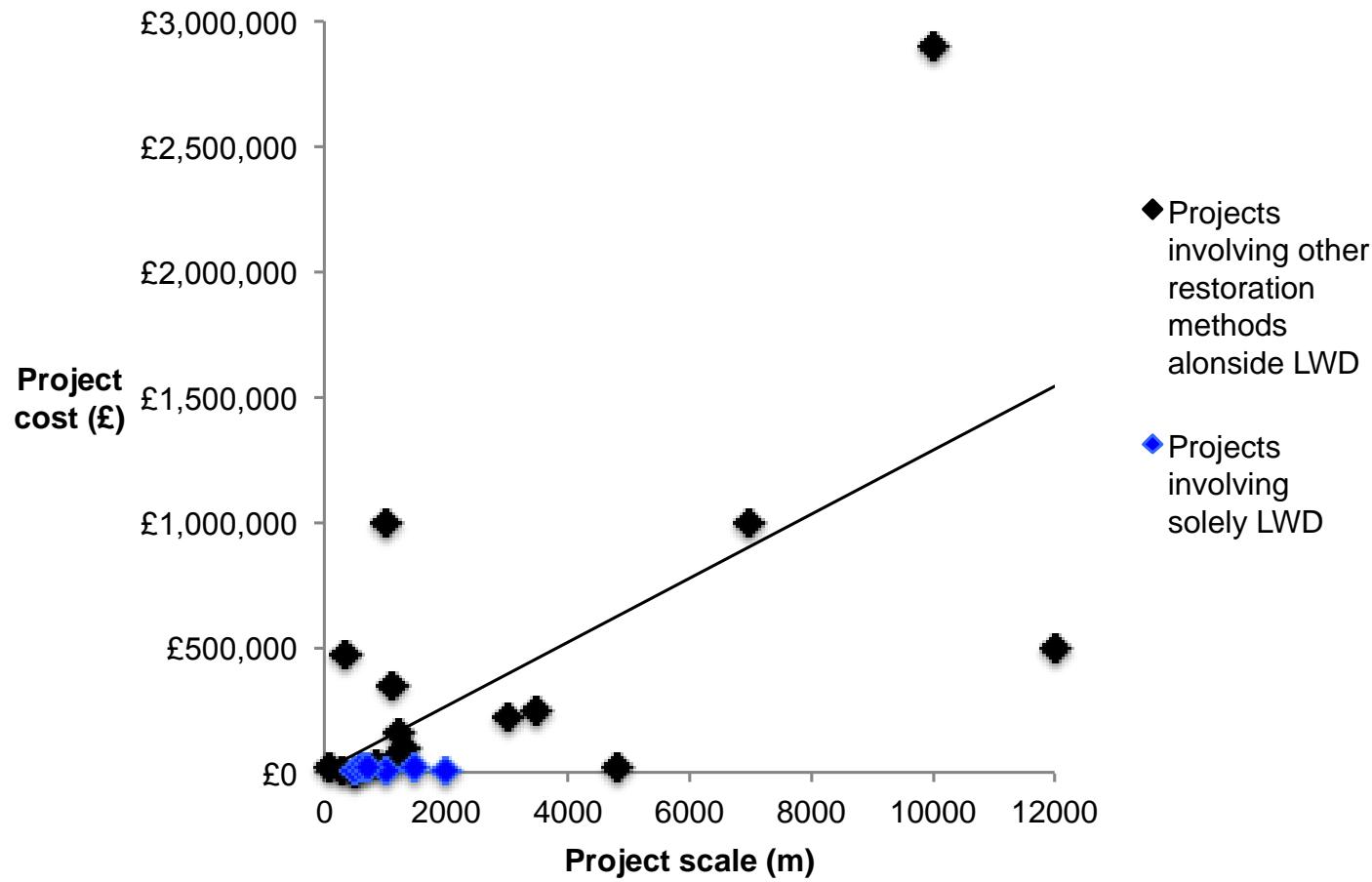
Small restoration project R2



Tab af levesteder – vandløbene og deres omgivelser er ét økosystem



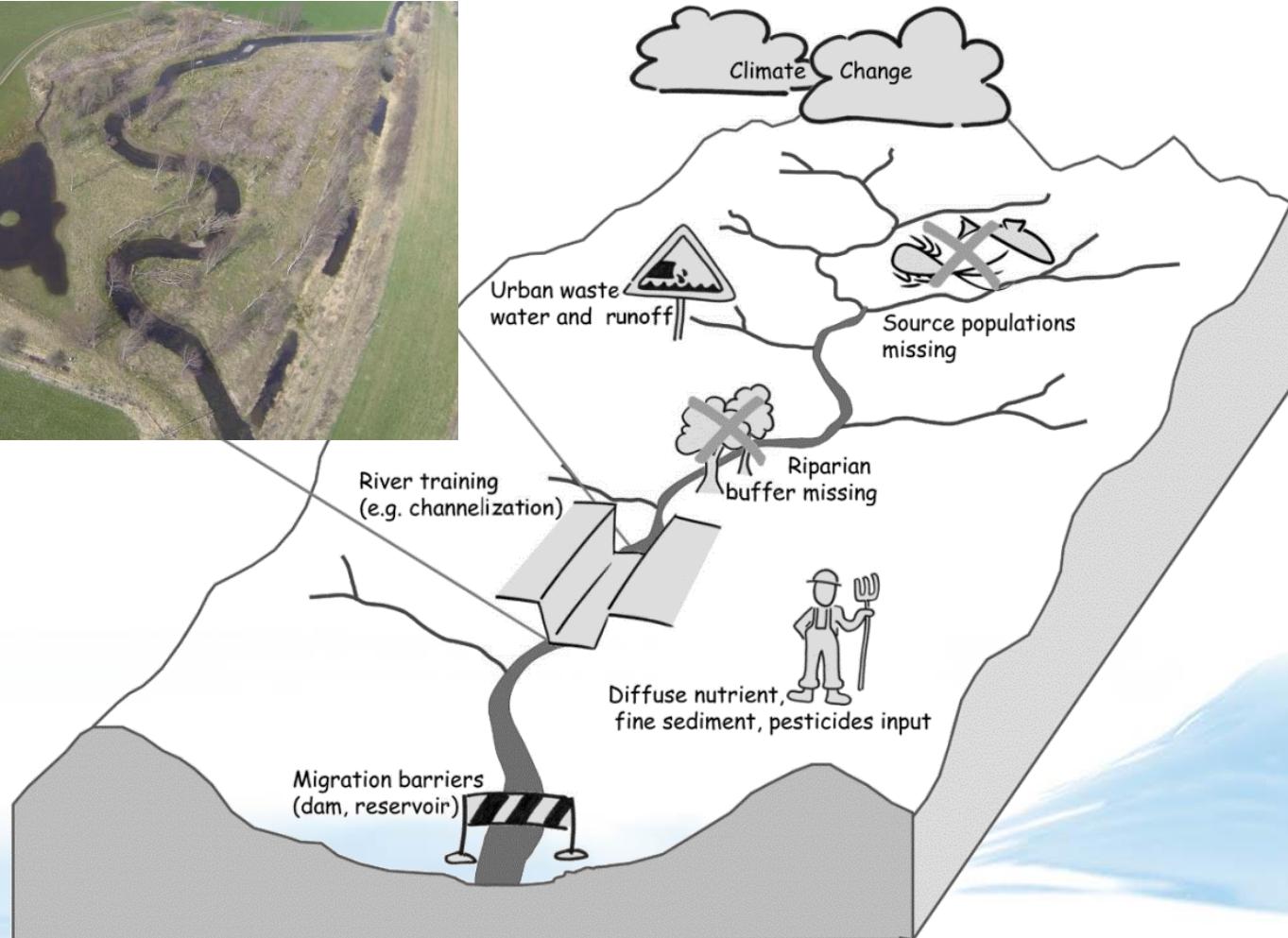
Stadig ganske småt – størrelse mod omkostninger fra UK restaureringer (2015)



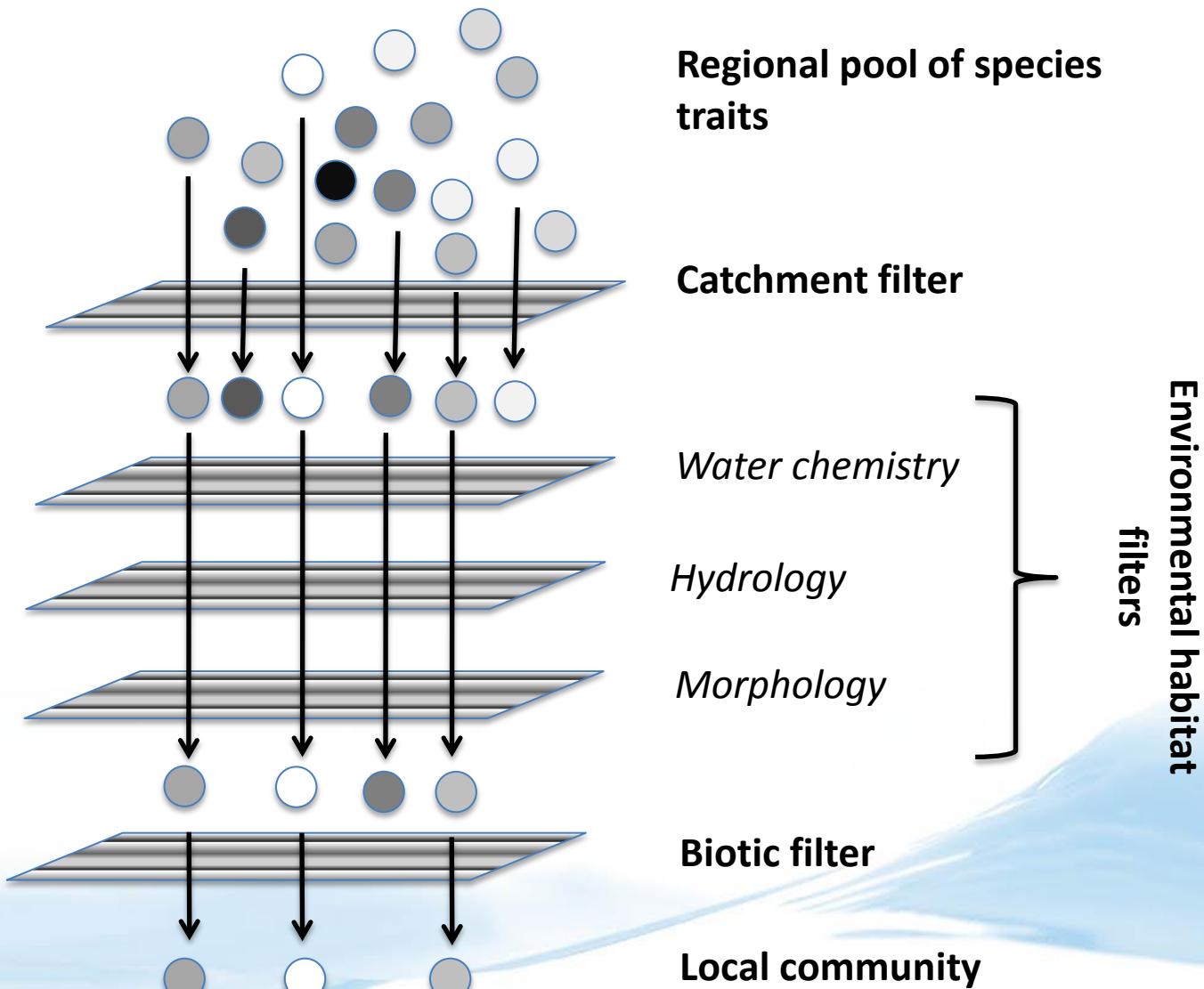
Multiple stressorer er en realitet



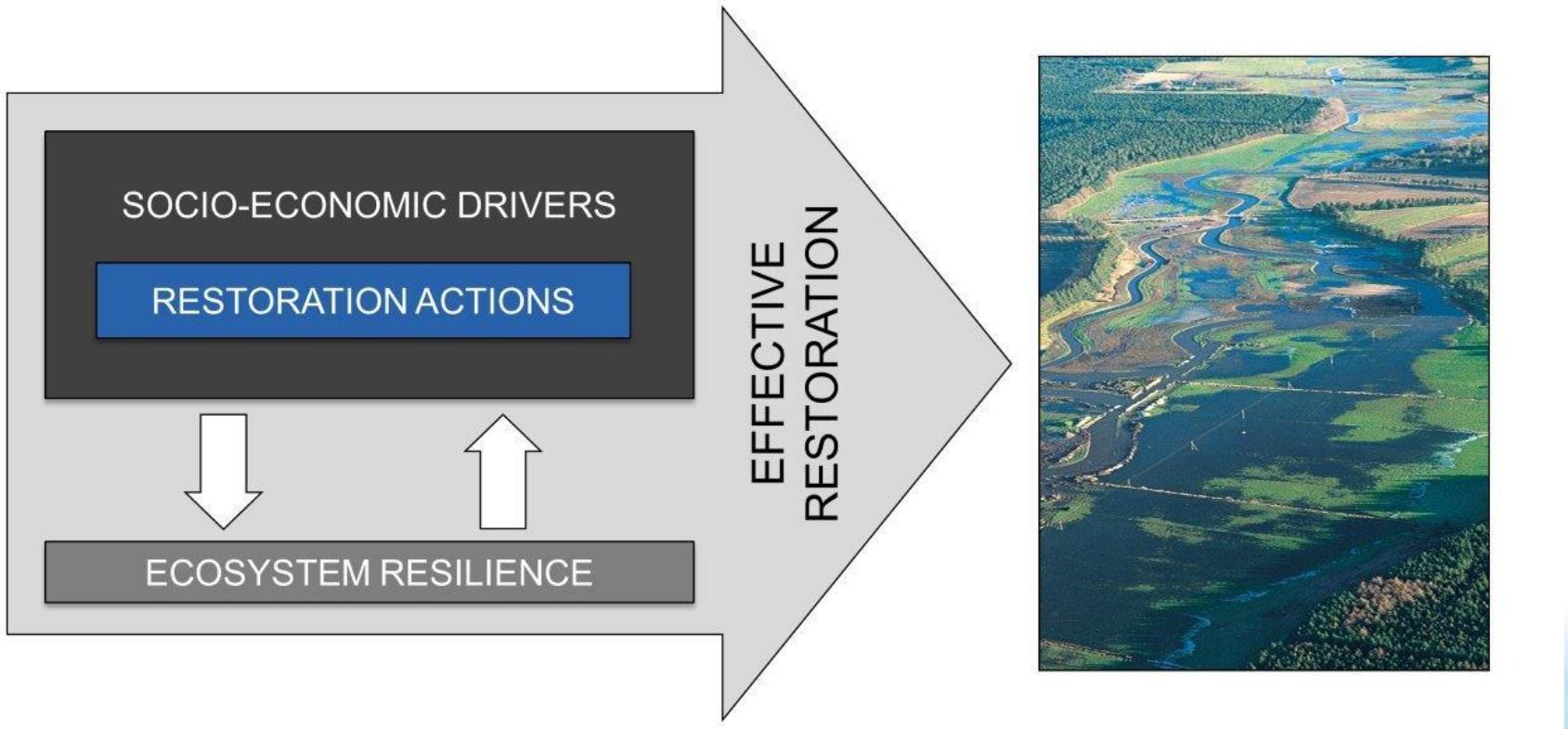
En vandløbstrækning er påvirket af hvad der sker i oplandet



Oplandet er et filter

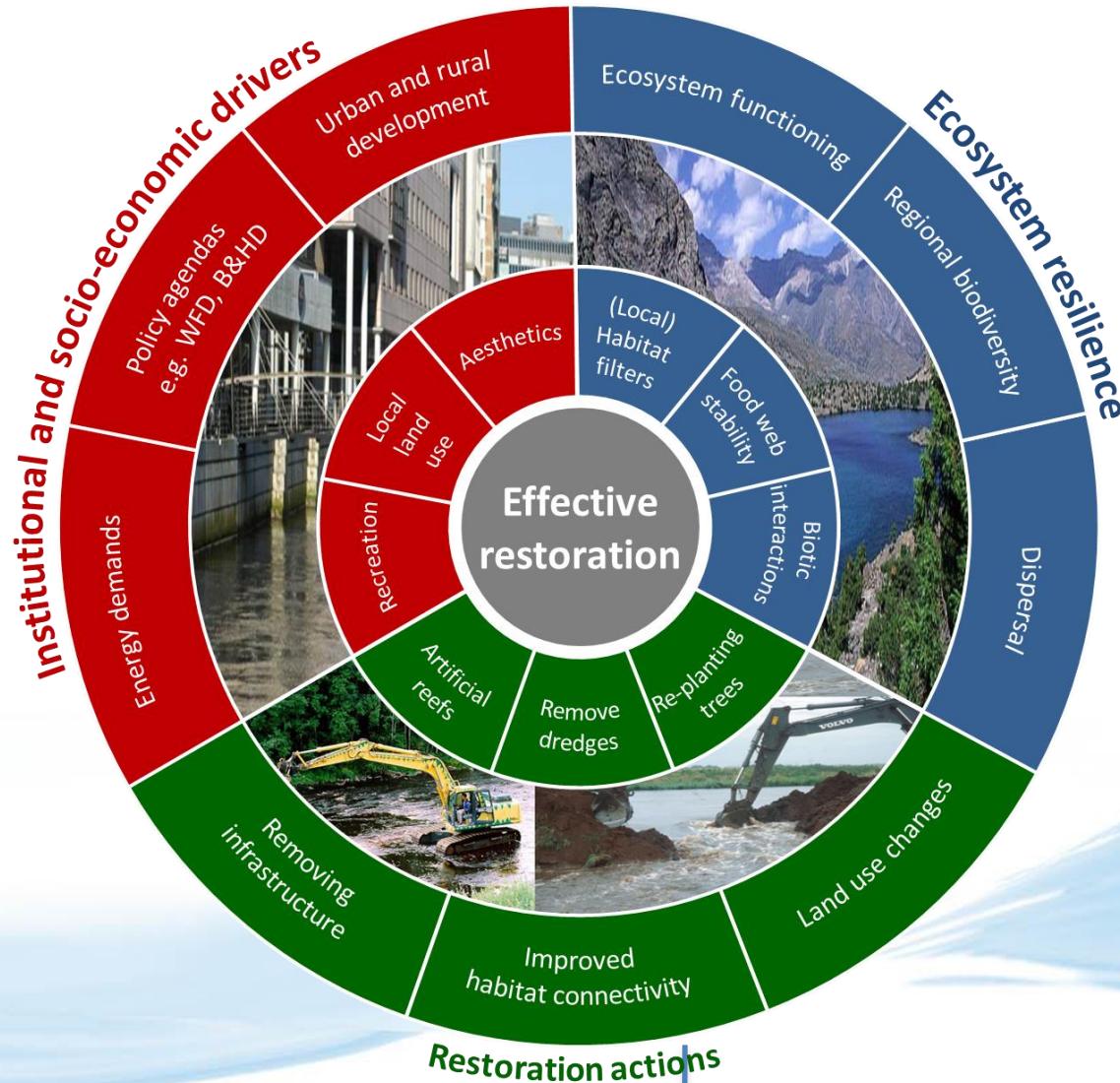


Vi må se på restaurering på en ny måde

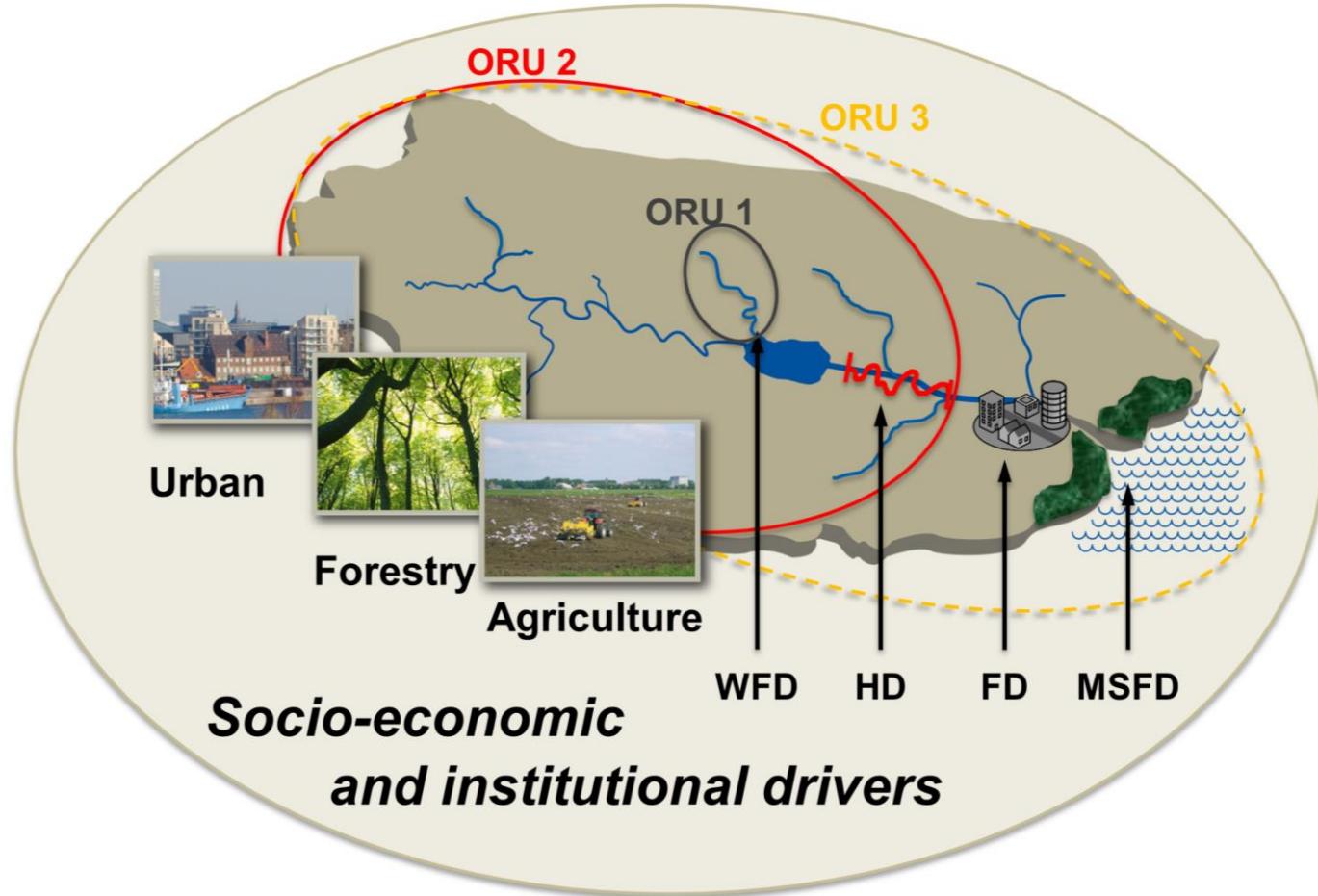


Friberg et al. 2016 WIREs Water

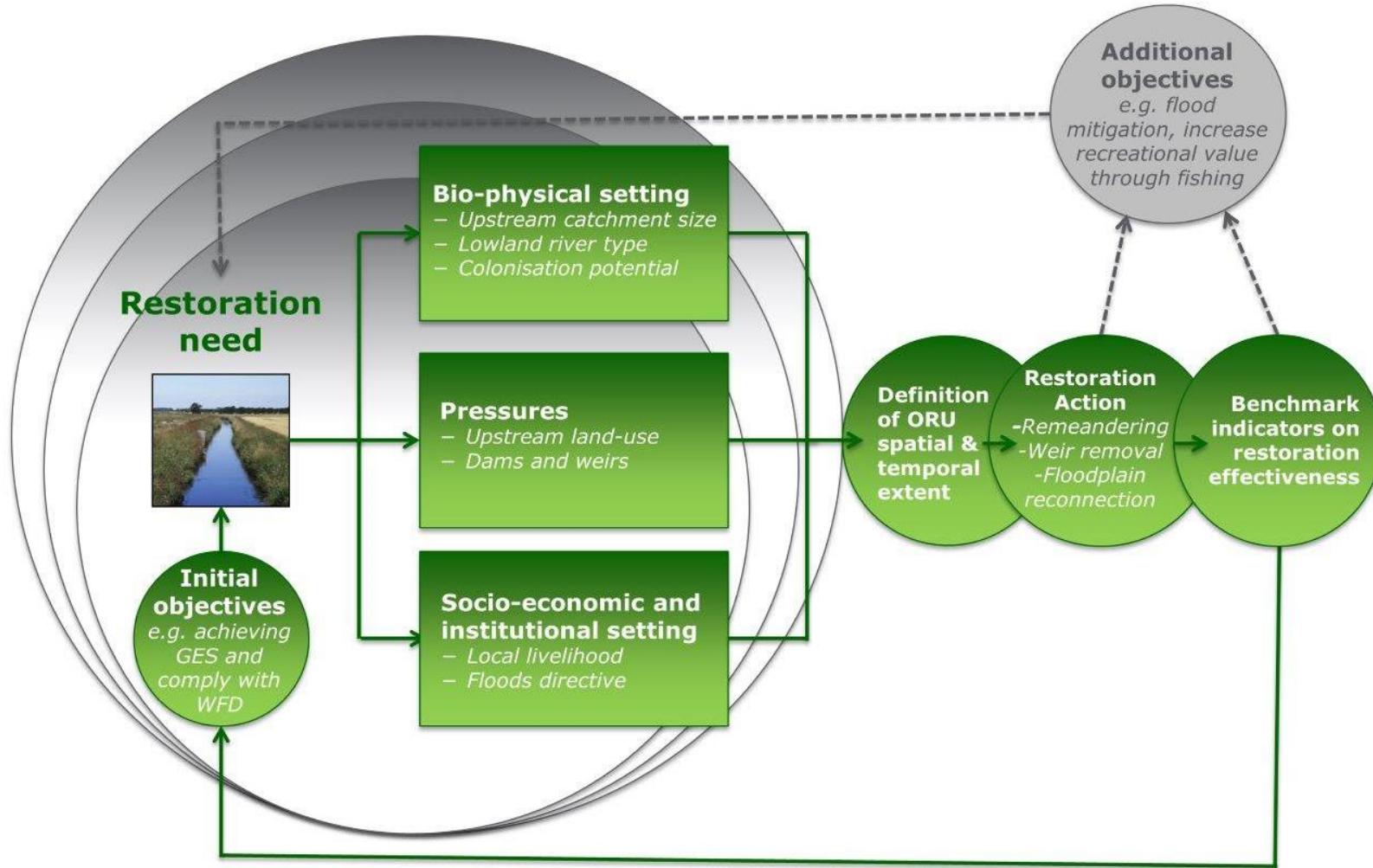
Den rumlige skala er vigtig for alle tre elementer



Den operationelle restaureringsenhed (ORU)

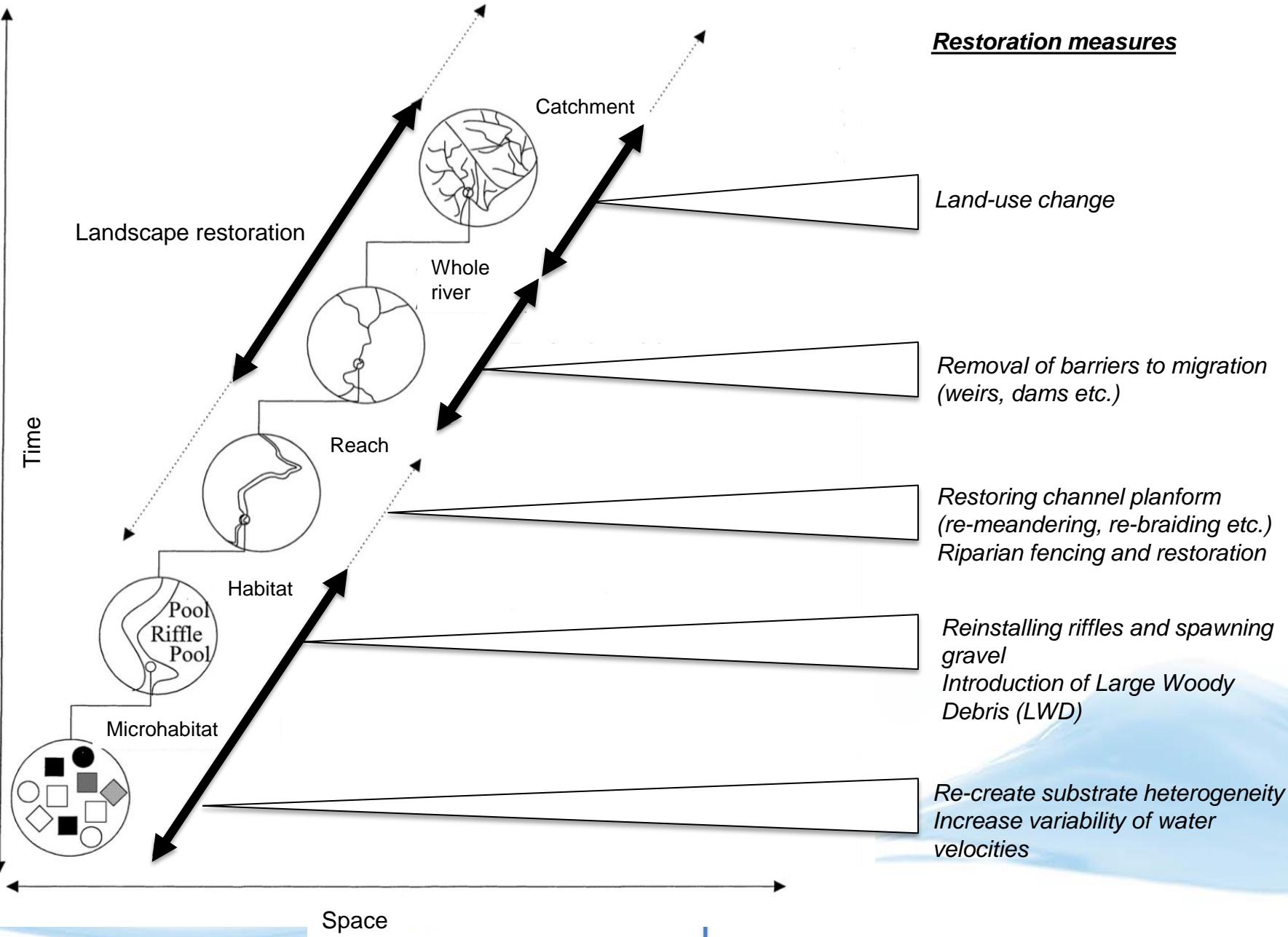


ORU

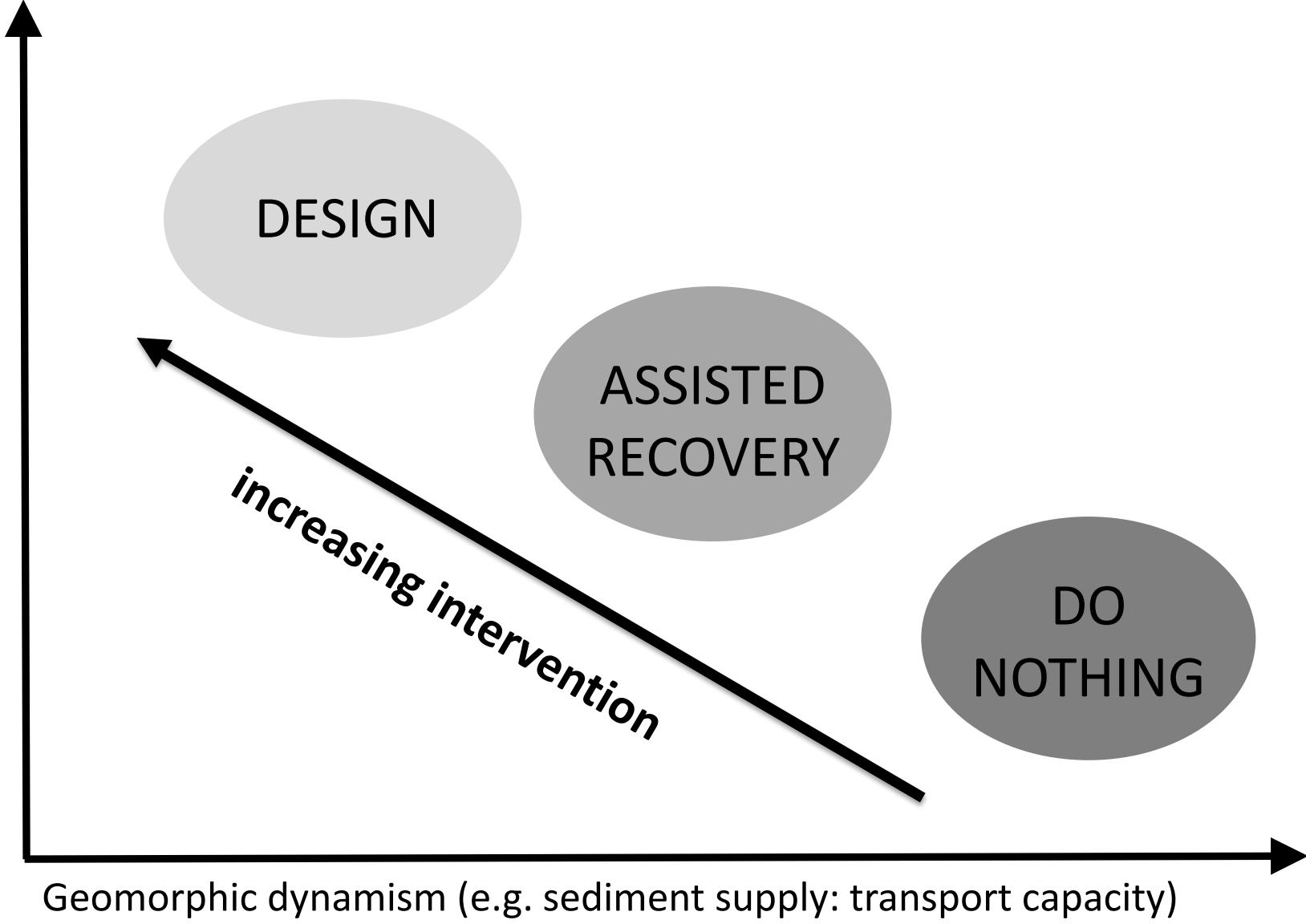


Fokus på form i stedet for funktion





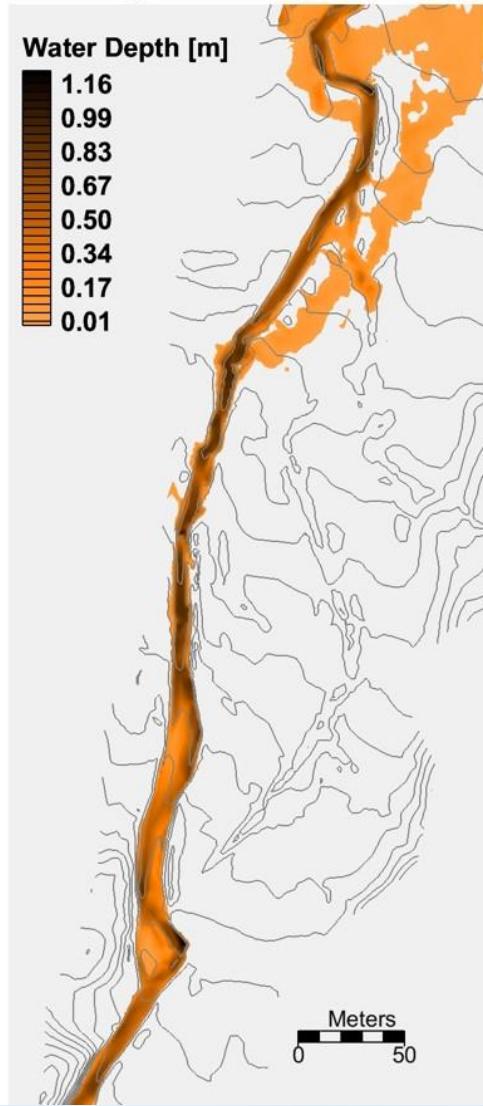
Degree of impact to natural physical process



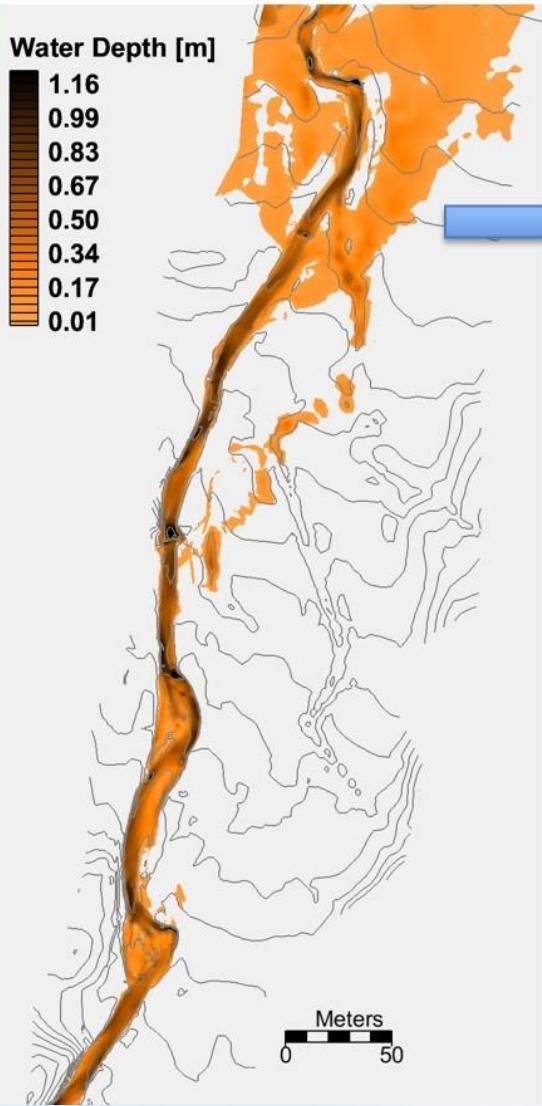
Processbaseret restaurering



2011 pre-design

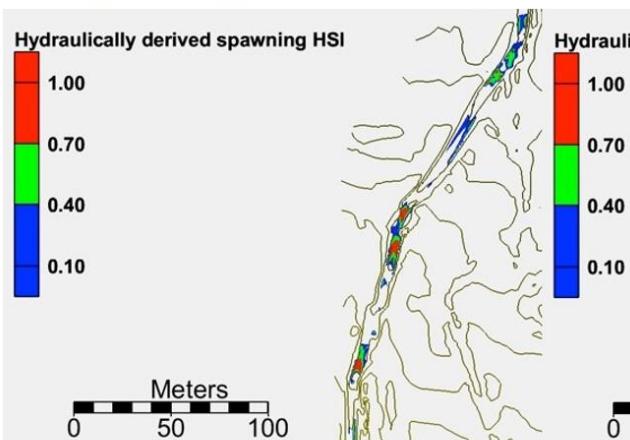


2014 post-construction
and floods

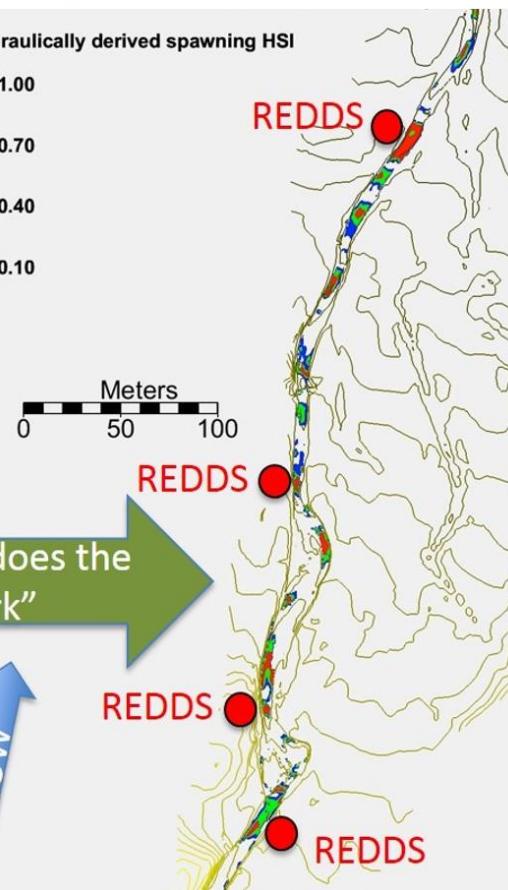




2011 pre-design



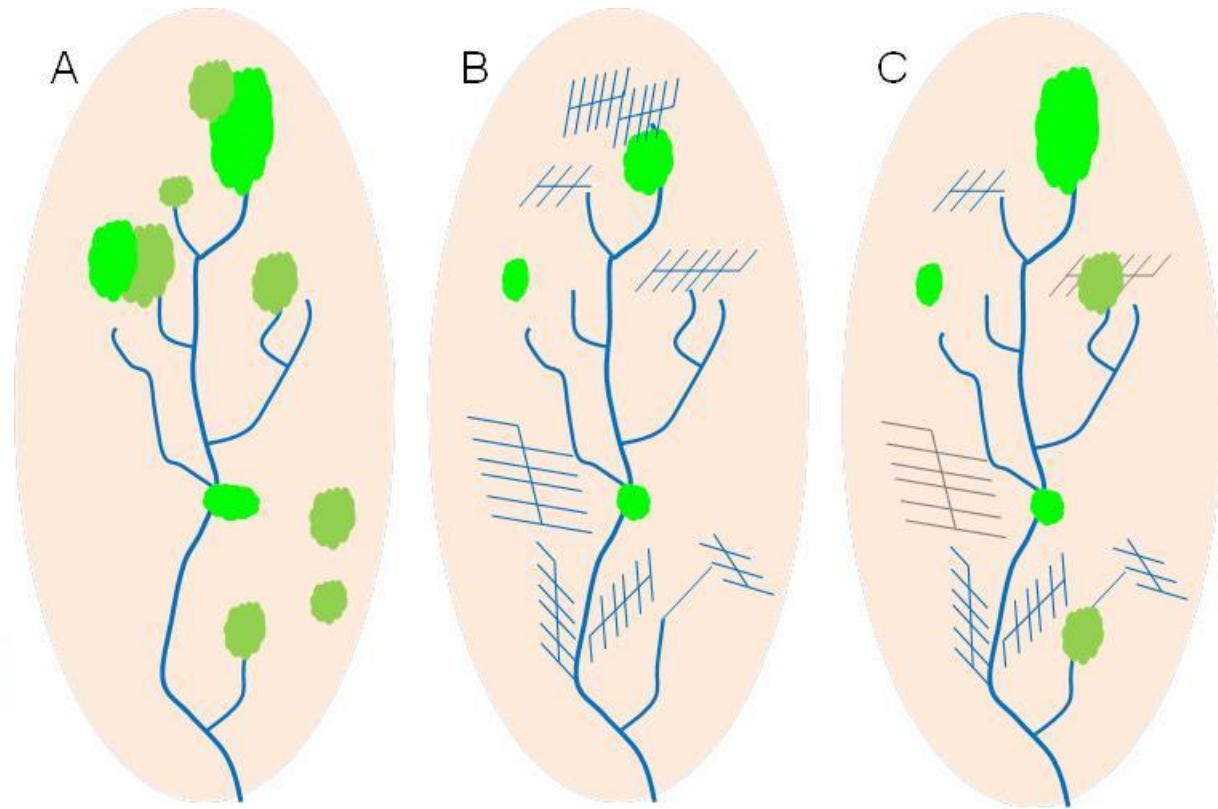
2014 post-construction and floods



Naturens materialer er en bæredygtig måde at restaurere på



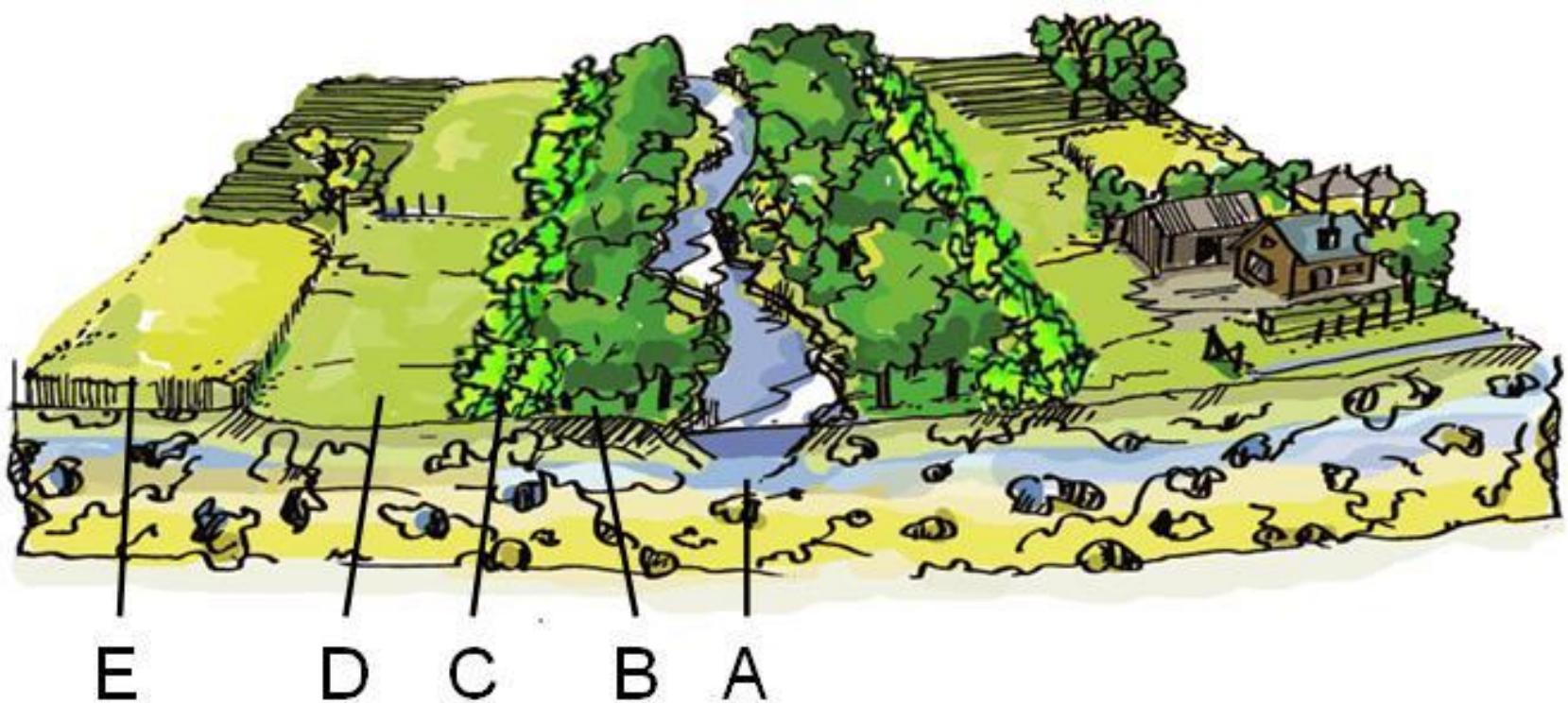
Oplandets evne til at tilbageholde vandet skal også restaureres



Landskabets udvikling

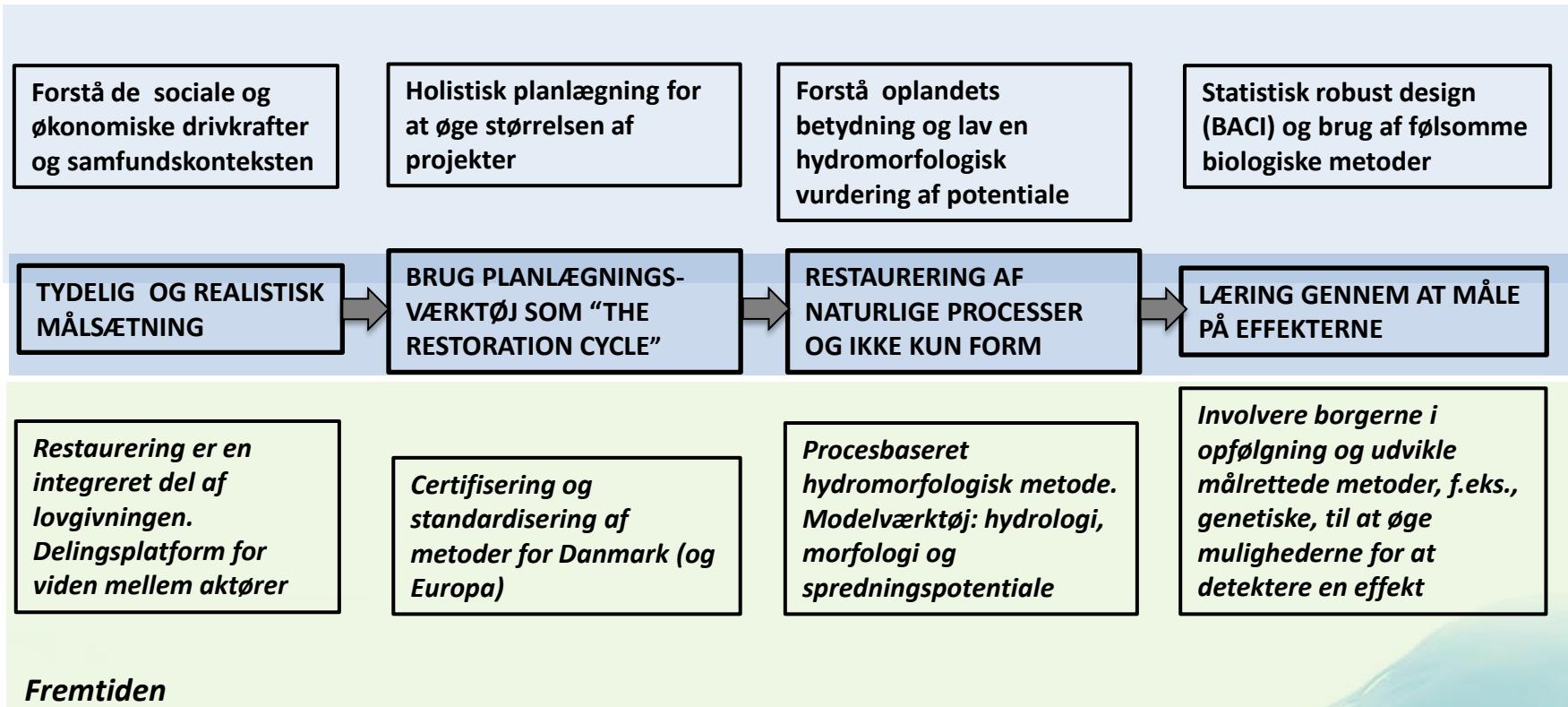


Randzoner med træer er effektive i at genskabe et bedre vand(løbs)miljø



Hvad har vi lært?

I dag



Friberg et al. 2016 Advances in Ecological Research

TAK!

Effective River Restoration in the 21st Century: From Trial and Error to Novel Evidence-Based Approaches

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Effective restoration of aquatic ecosystems: scaling the barriers

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The focus of ecosystem restoration has recently shifted from pure rehabilitation objectives to both improving ecological functioning and the delivery of ecosystem services. However, these different targets need to be integrated to create a unified, synergistic, and balanced restoration approach. This should be done by combining state-of-the-art knowledge from natural and social sciences to create manageable units of restoration that consider both the temporal and multiple spatial scales of ecosystems, legislative units, and policy agendas. Only by considering these aspects combined can we accomplish more cost-efficient restoration resulting in resilient ecosystems that provide a wealth of ecosystem services and the possibility for sustainable economic development in the future. We propose a novel conceptual framework that will yield more effective ecosystem res-



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