

Process oriented restoration of river and riparian ecosystems

Egger Gregory



Event

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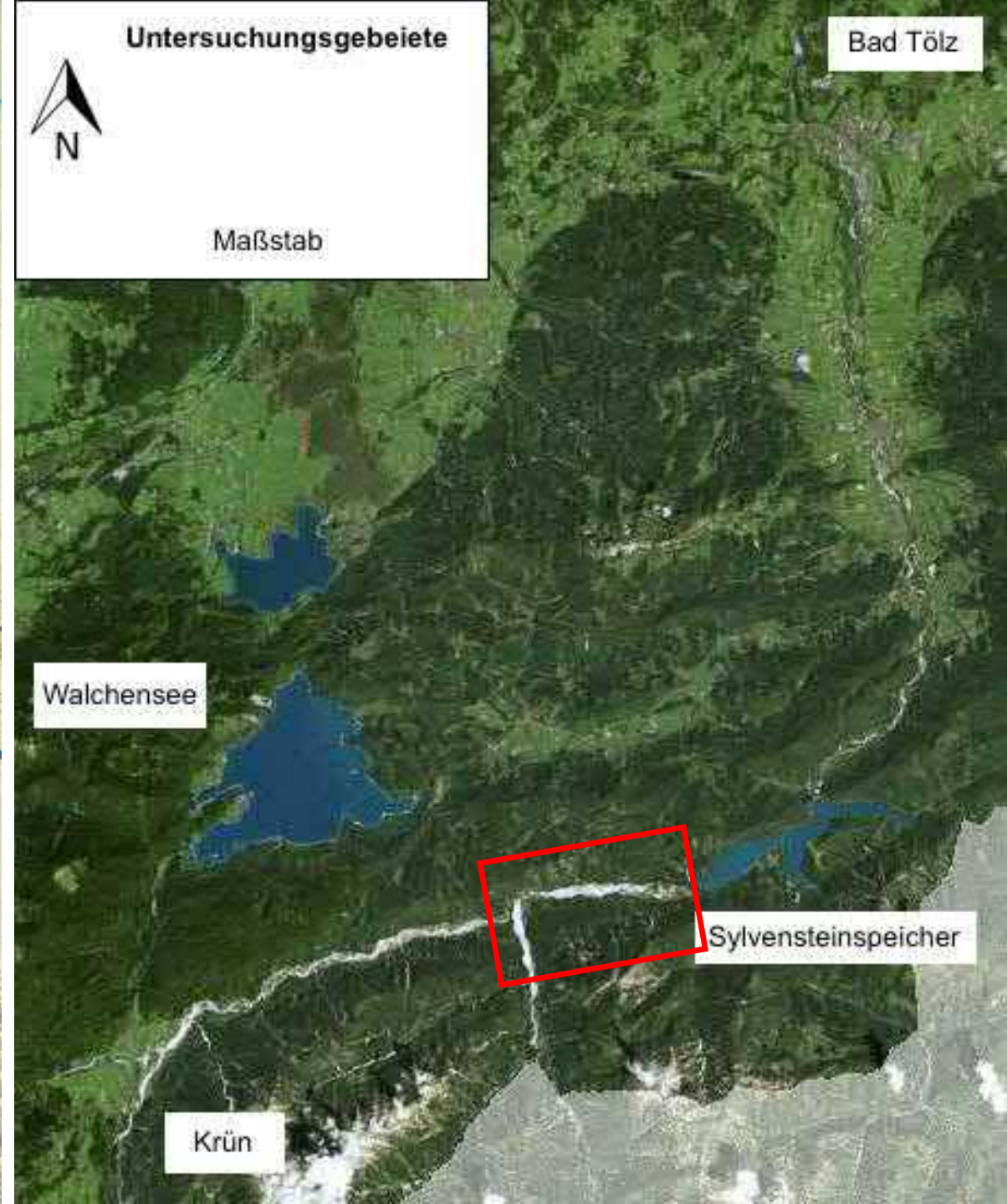
A wide, braided river system flows through a valley. The river is composed of numerous channels and oxbow-like curves, all set within a broad, flat, greyish-brown sediment plain. In the background, a range of rugged mountains stretches across the horizon under a pale, overcast sky. The foreground is dominated by out-of-focus, reddish-brown and white wildflowers, suggesting a high-altitude or alpine environment. The overall scene is one of a powerful, sediment-laden river system in a mountainous region.

What is the main challenge?

Susitna River, Alaska/USA

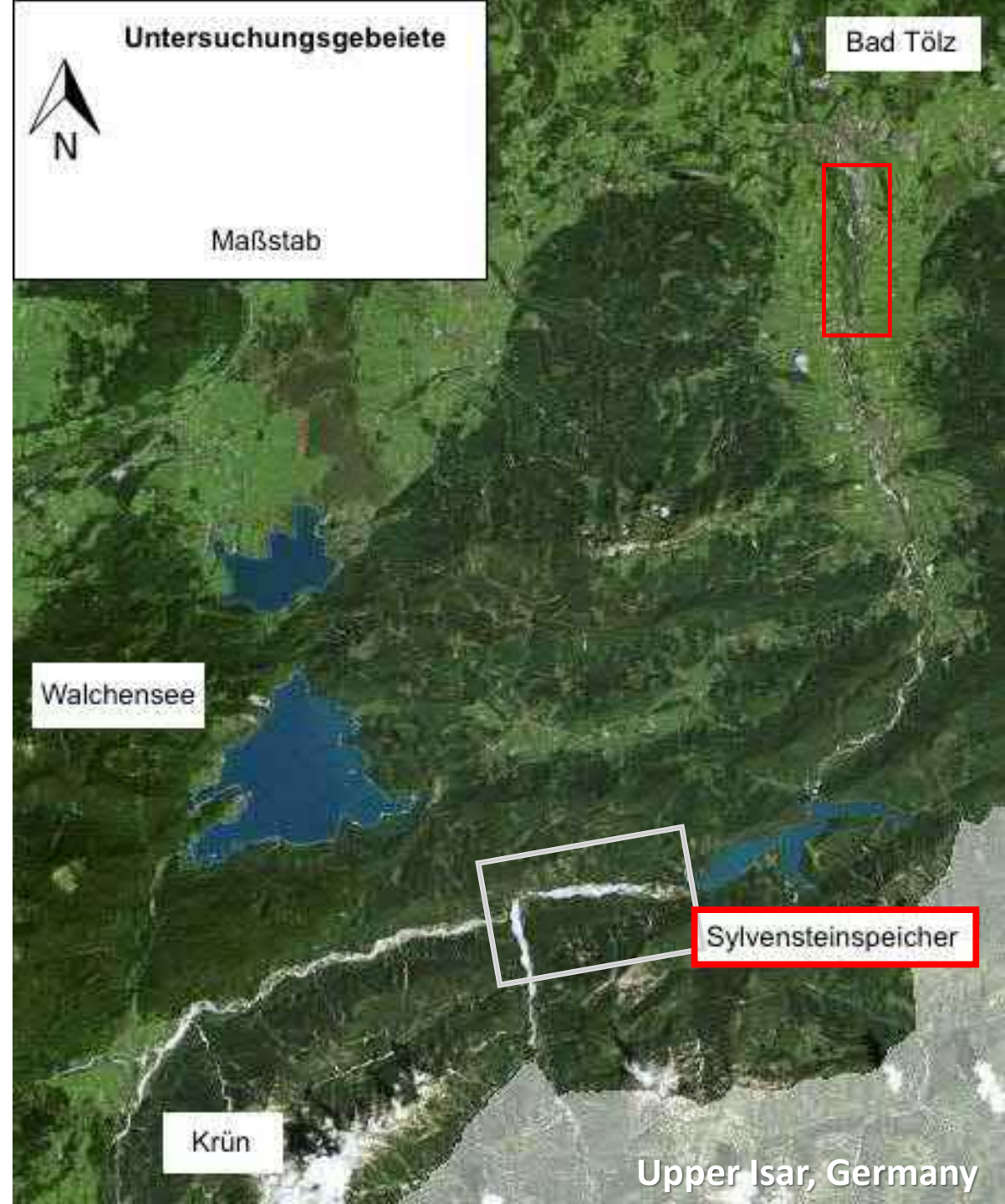


Case study Upper Isar, Germany





Upper Isar, Germany





Upper Isar, Germany

1875

1920

1913-1938
Regulierung

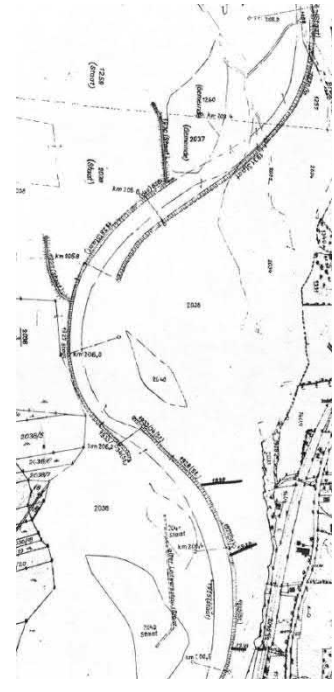
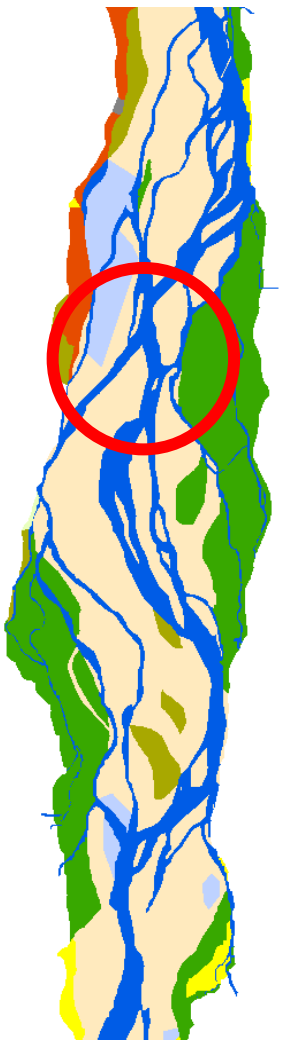
1935

1958

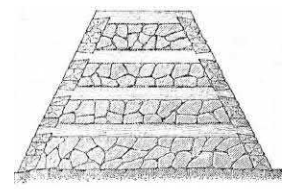
1959
Sylvenstein-
speicher

1977

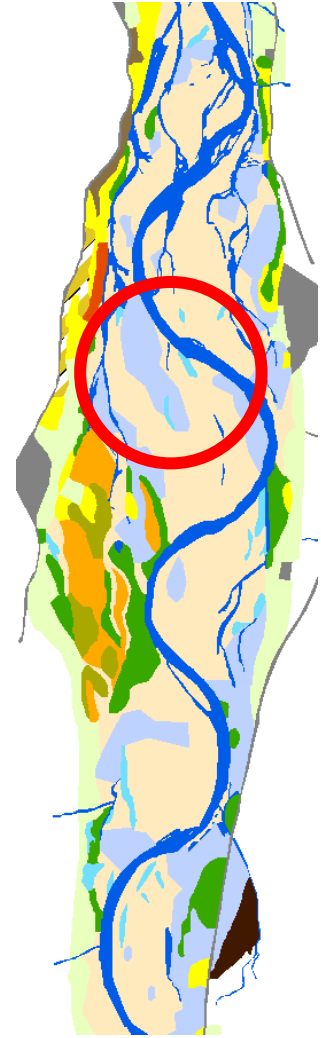
2015



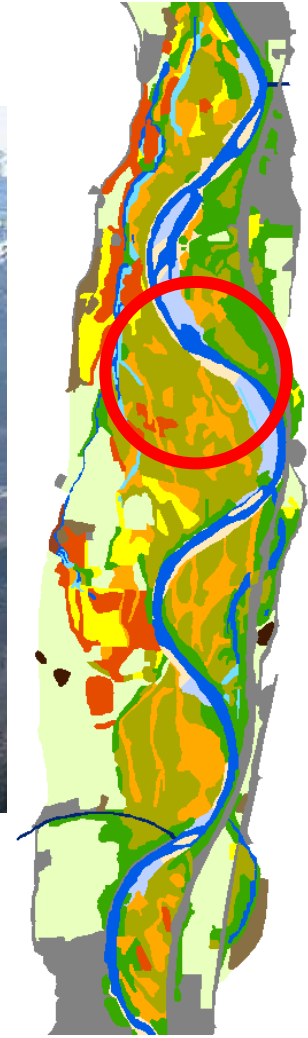
Flusskarte der Isar (aus: Speer, 1977)



Wurhre (Traverse)
(aus: Speer, 1977) nach Kellerer (1988)



<https://de.wikipedia.org/wiki/>



Grafiken: Speer 1977, Xiao 2016





Upper Isar, Germany



PRINCIPLES for process-oriented renaturation

Rio Pestrohue, Andes/Chile

1) Enable dynamic processes!



1) Enable dynamic processes

An aerial photograph of a wide river with a large, light-colored sandbar in the center. The river flows from the top left towards the bottom right. The surrounding landscape includes green fields, forests, and a dirt road on the right side. The sky is clear and blue.

- a) Bringing the river to the floodplain!

1) Enable dynamic processes



- **b) Bringing the floodplain to the river!**



2) Give space to the rivers!

Concept „Espace de liberté“ Free moving corridor



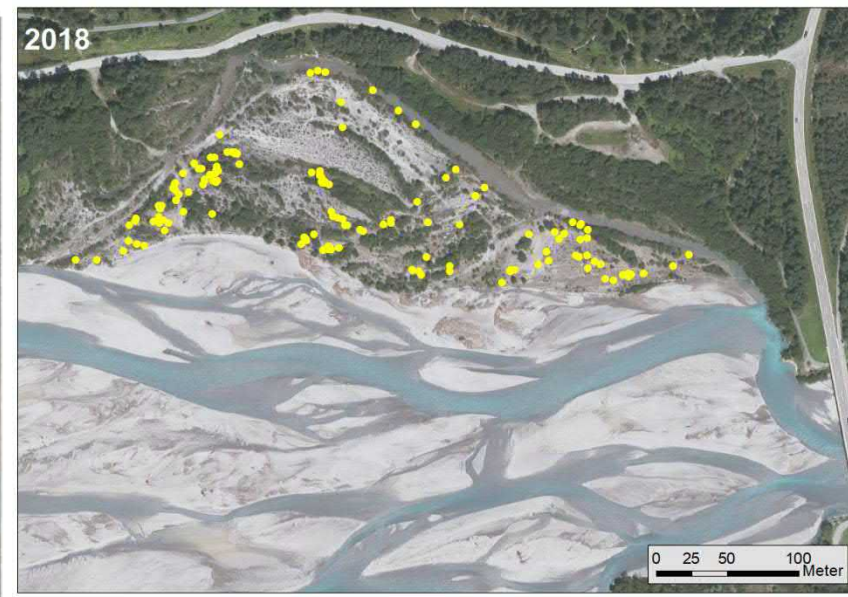
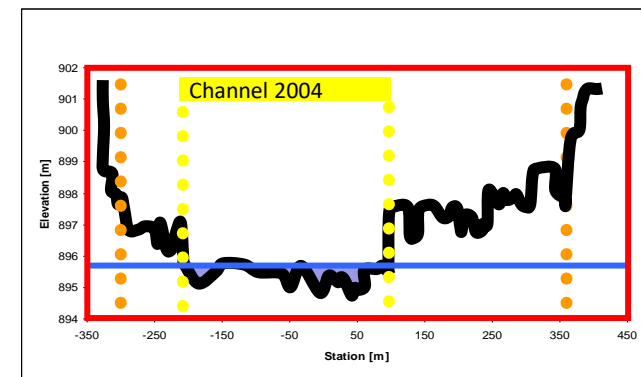
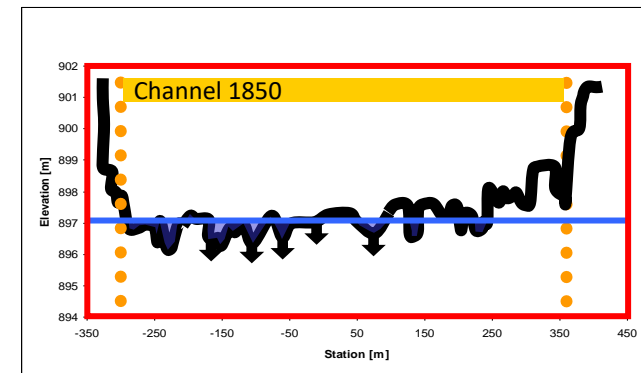
Allier, France

3) Giving time to the rivers!



Life Project Tyrolean Lech

Myricaria germanica



An aerial photograph of a wide, braided river system flowing through a valley. The river consists of multiple channels of varying widths, some of which are dry, creating a complex, interconnected pattern of water and sandbars. The surrounding landscape is a mix of dense green forests and open fields. In the background, a range of rugged, snow-capped mountains stretches across the horizon under a clear blue sky. A small town is visible in the middle ground on the left side of the river.

Summary



No land use!



Reconnection of river and floodplain!



The river is the builder!



Thank you!



Event

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