

DANUBE parksCONNECTED

Bridging Danube
Protected Areas
towards a
Danube Habitat Corridor



Balázs Tóth, Duna-Ipoly National Park
Georg Frank, DANUBE PARKS
Cross-sectoral Conference
Dunakiliti, 26th April 2017







2007: Declaration of Tulcea

DANUBEPARKS
 network of protected areas

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Jan Kadleck

Carl Manzano, Donau-Auen National Park, Austria

Carl Manzano

Thomas Schneider, Auen Institut Neuburg, Germany

Thomas Schneider



1 Danube Delta Biosphere Reserve 2 Srebarna Nature Reserve 3 Kallimok-Brushlien Protected Site 4 Rusenski Lom Nature Park 5 Persina Nature Park 6 Djerdap National Park
7 Gornje Podunavlje Special Nature Reserve 8 Kopački rit Nature Park 9 Lonjako Polje Nature Park 10 Duna-Dráva National Park 11 Duna-Ipoly National Park
12 Dunajské luhy Protected Landscape Area 13 Záhorie Protected Landscape Area 14 Donau-Auen National Park 15 Donauauwald Neuburg Ingolstadt

DANUBE PARKS STEP 2.0

PROJECT REPORT

2012 – 2014



Programme for Enlarging the
EUROPEAN UNION



SOUTH EAST
EUROPE
Transnational Cooperation Programme

DANUBE PARKS 2.0
network of protected areas STEP 2.0



DANUBEPARKS –
Winner of the 2015
Natura 2000 Award

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DANUBEPARKS

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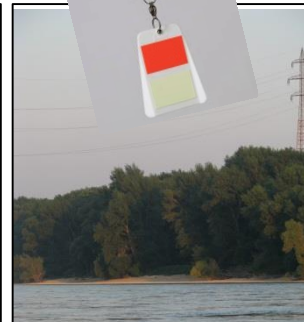
actions areas connectivity corridor countries **danube**
 danubeparksconnected develop ecological ecosystem europe fragmentation
green habitat **infrastructure** landscape **natural**
 policies protected region



Riparian Forest Corridor



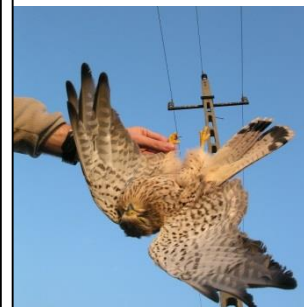
Dry Habitats



Danube Free Sky



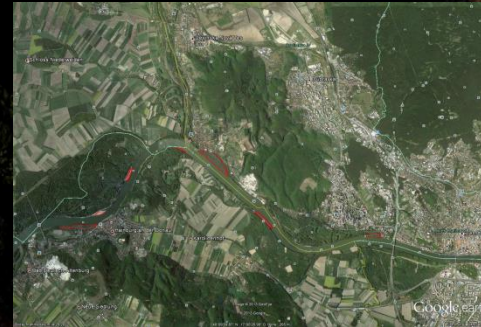
WILDIsland



1. Cross-sector learning process



2. WILDIsland Habitat Corridor



DANUBE PARKS

network of protected areas

WILD ISLANDS

TARGETS

of our DANUBE PARKS
wild islands project

more

INTERACTIVE

map of the DANUBE PARKS
wild islands

more

EXPLORE

the islands

more

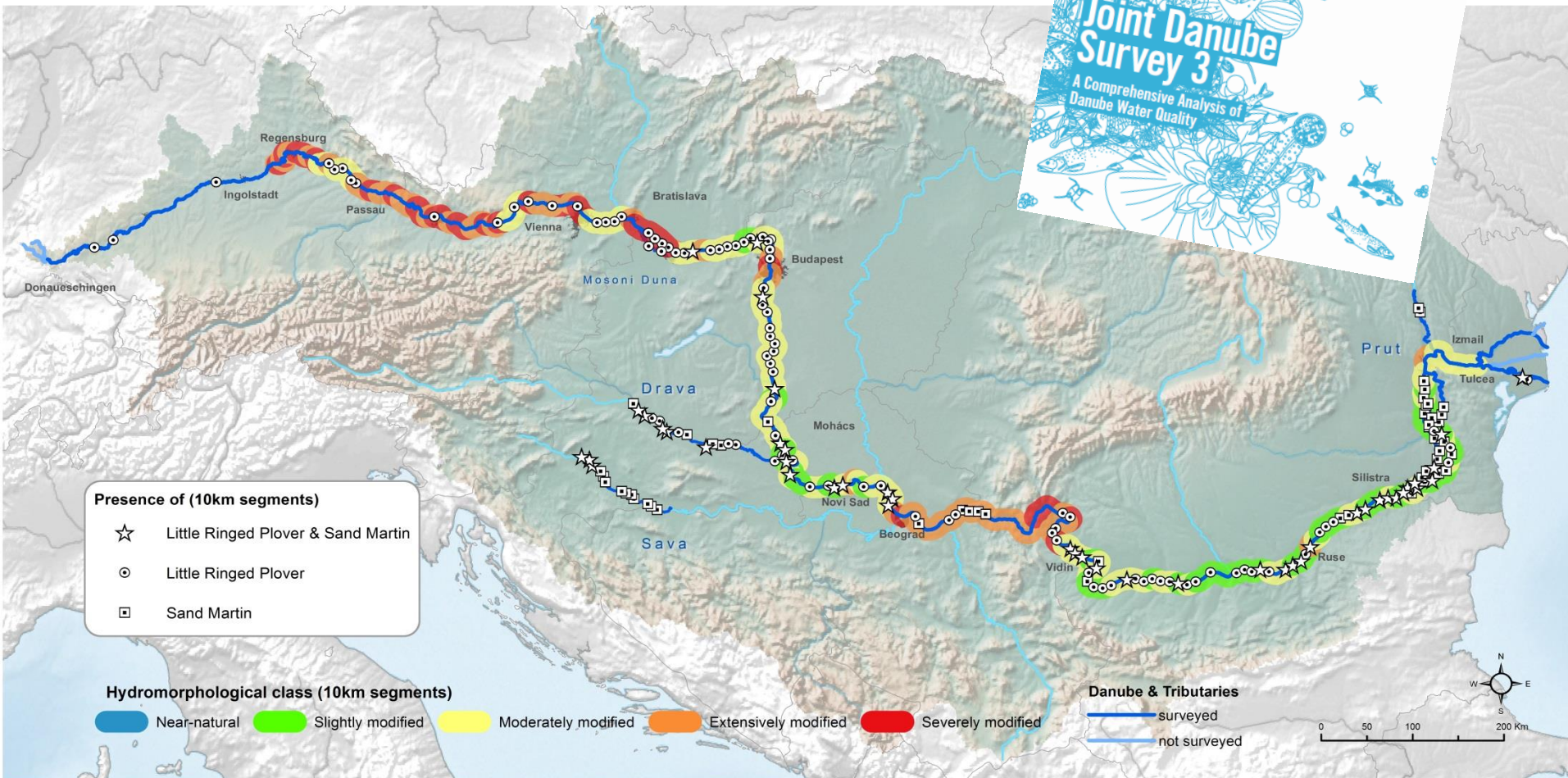
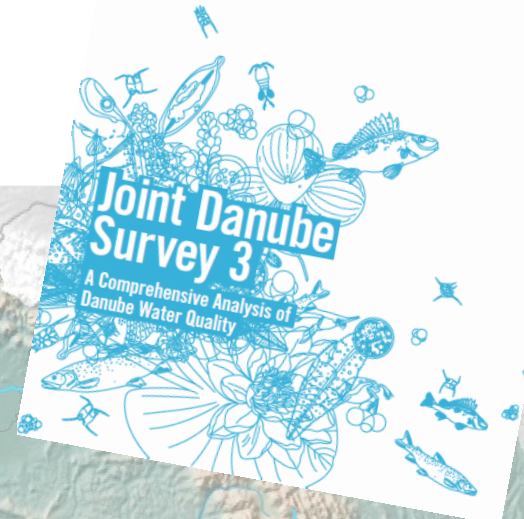
4. Long-term perspectives

3. Pilot Actions



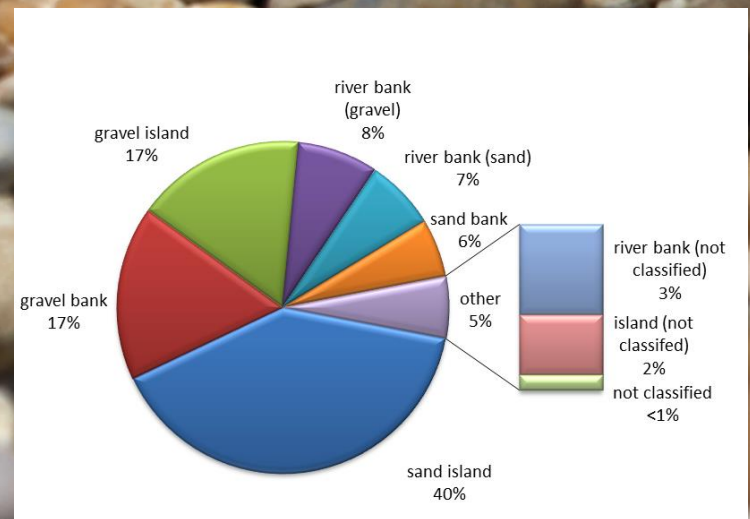


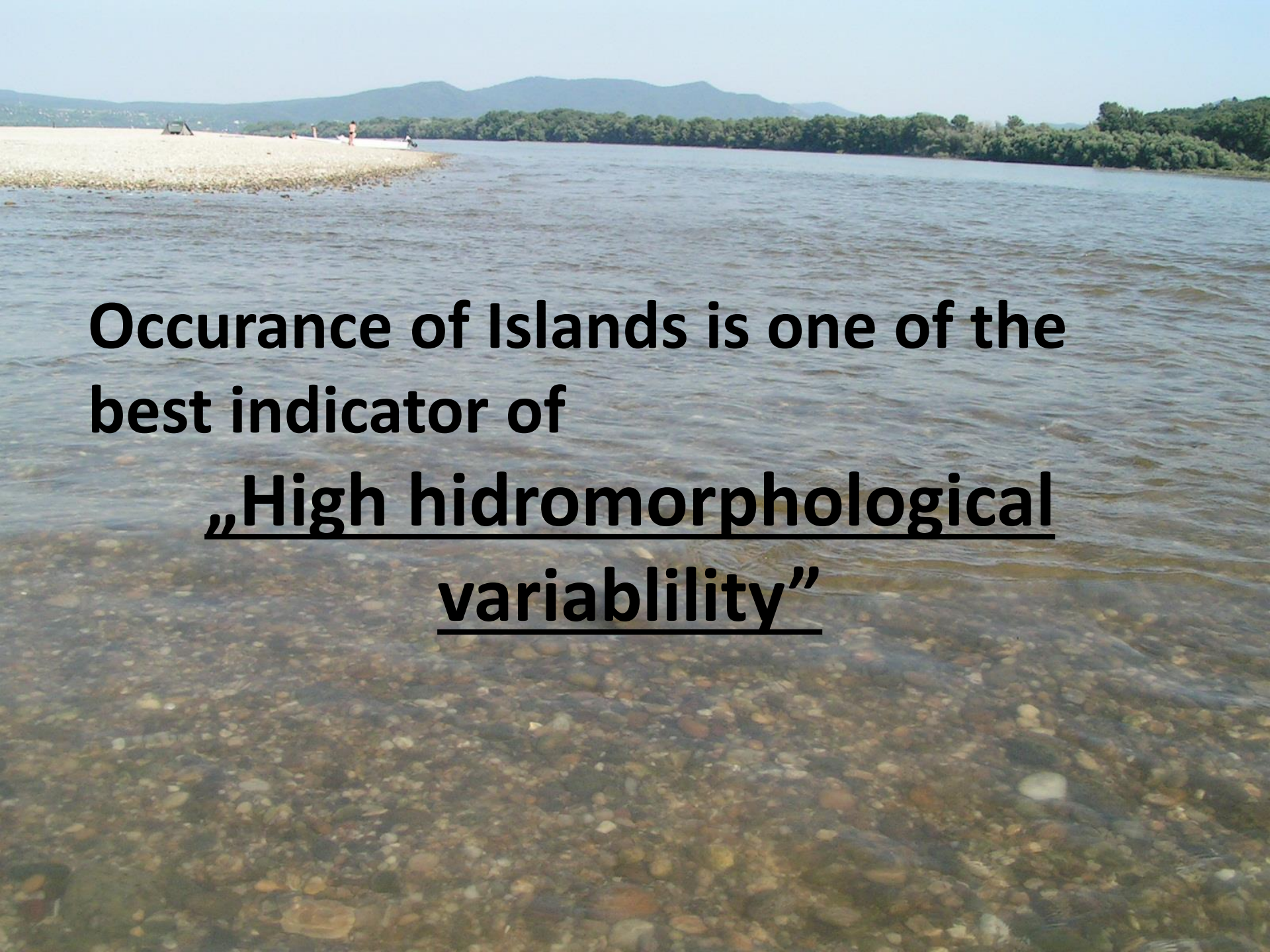
River Morphology & Restoration





>80 % of Little Ringed Plovers nest on „islands“



A wide river flows through a landscape. In the foreground, the water is shallow and clear, revealing a bed of smooth, rounded stones in various shades of brown, tan, and grey. The river's surface is marked by gentle ripples. To the left, a sandy and pebbly shoreline leads to a small, dark structure, possibly a boat or a shelter. In the distance, a dense line of green trees borders the river, with rolling mountains visible under a clear blue sky.

**Occurance of Islands is one of the
best indicator of
„High hidromorphological
variablility”**

Cross section of the riverbed



Flood

Low variability

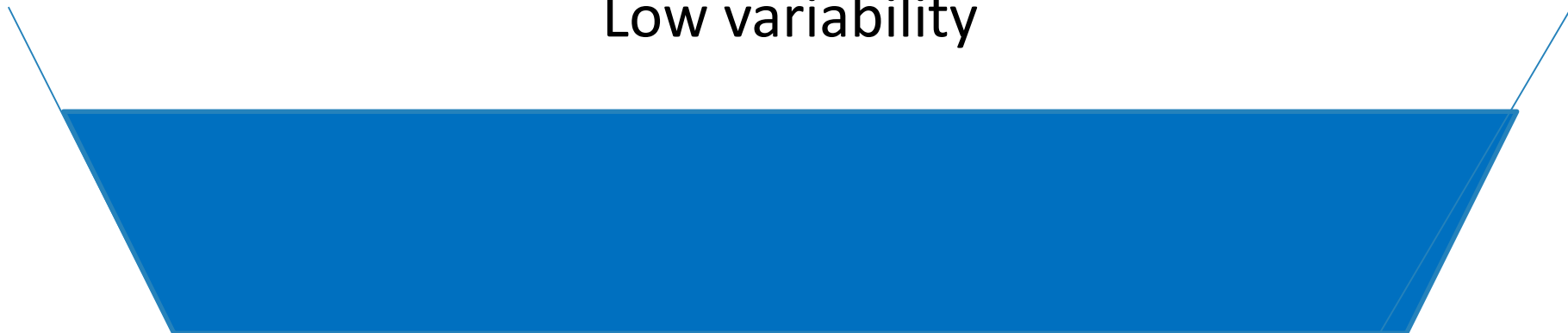


High variability

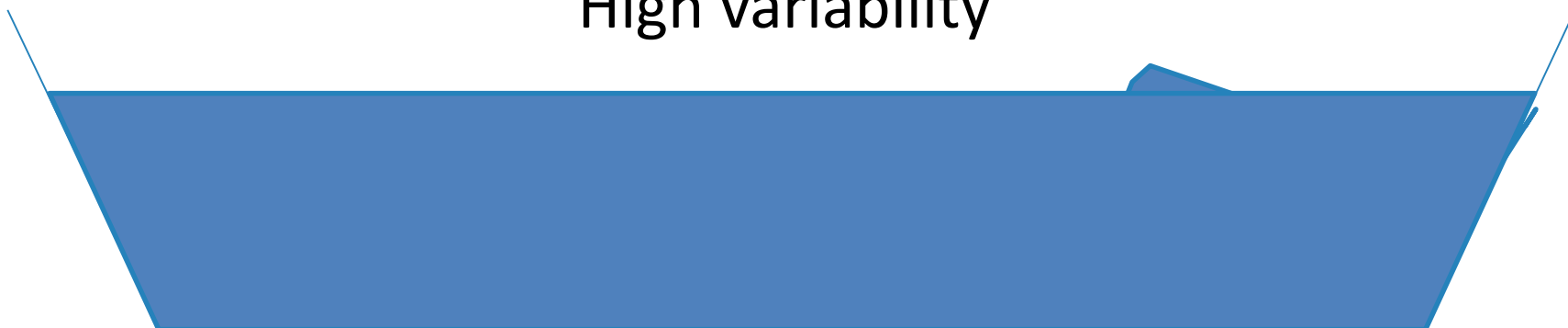


High water level

Low variability

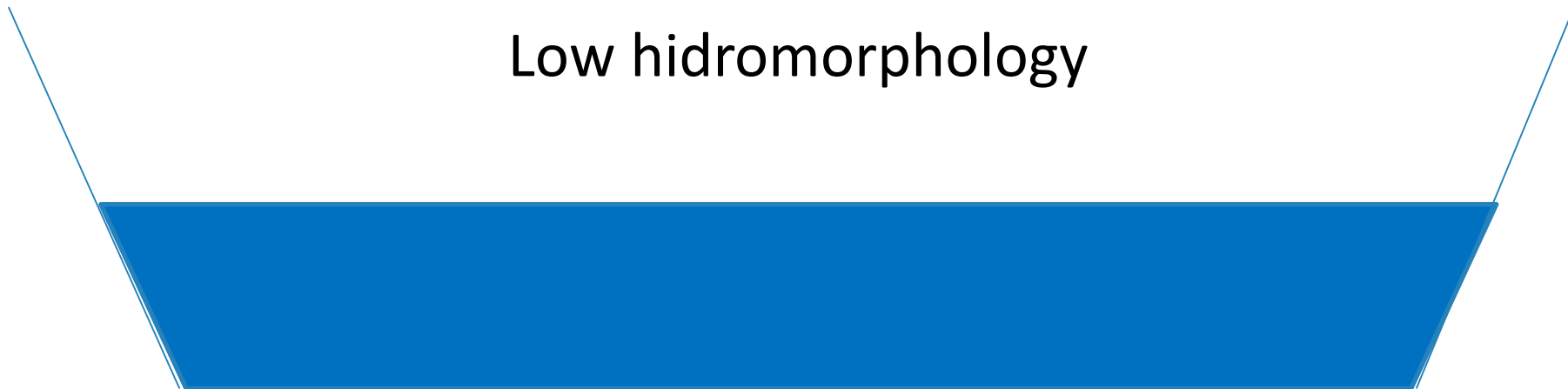


High variability

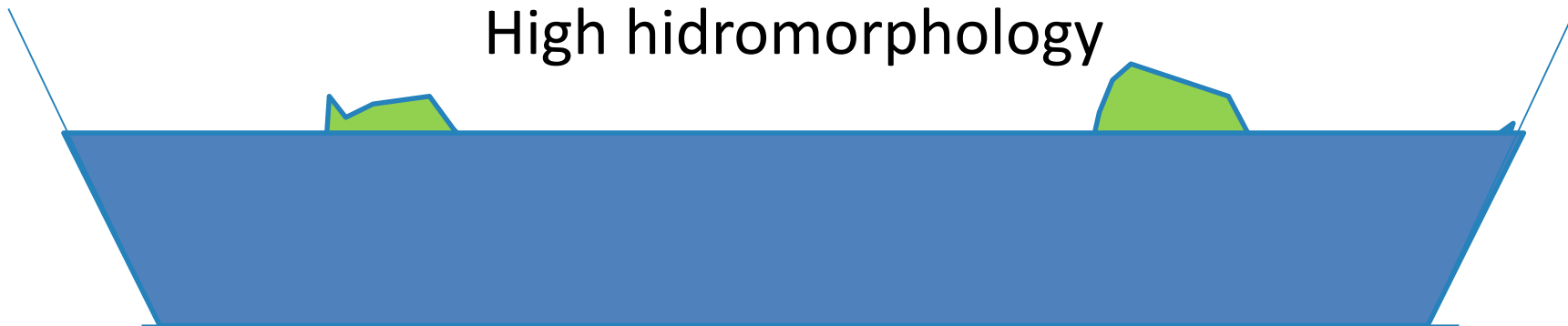


Mid water level

Low hidromorphology

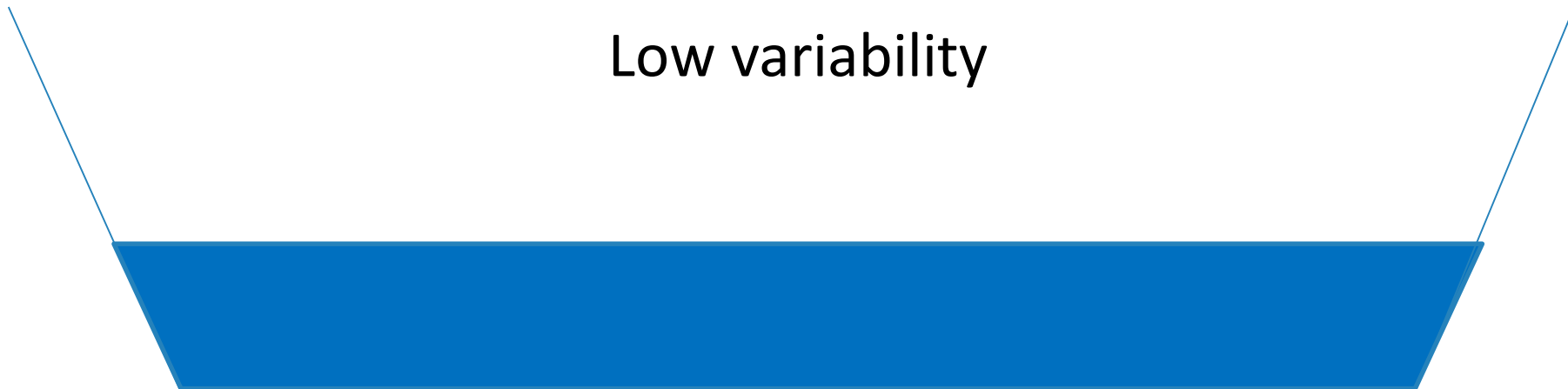


High hidromorphology

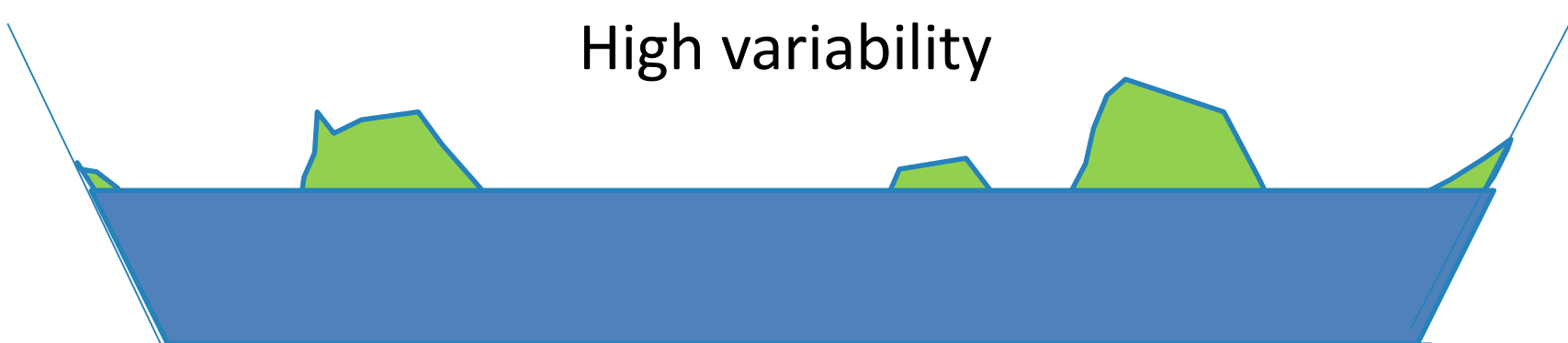


Low water level

Low variability

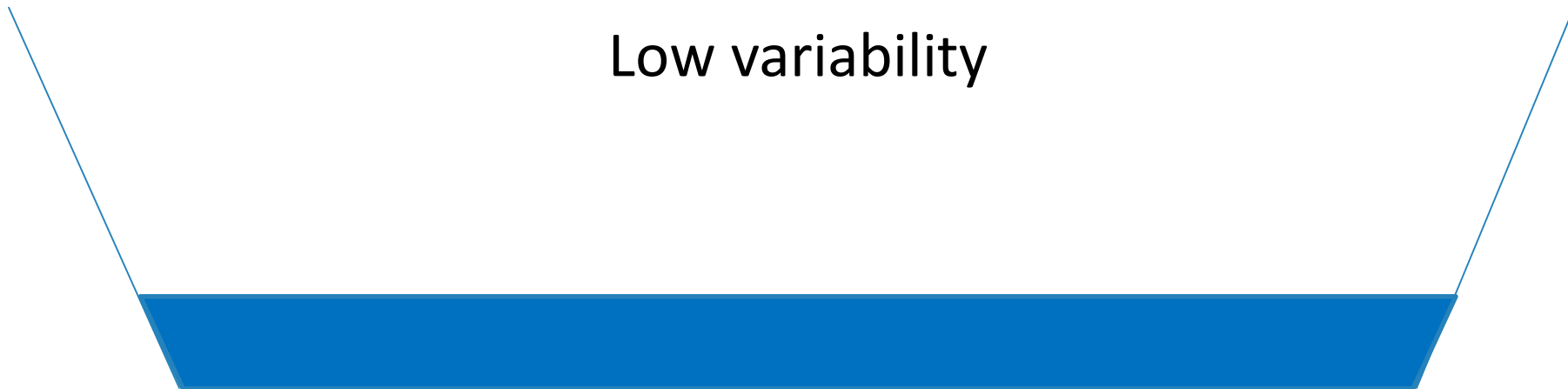


High variability

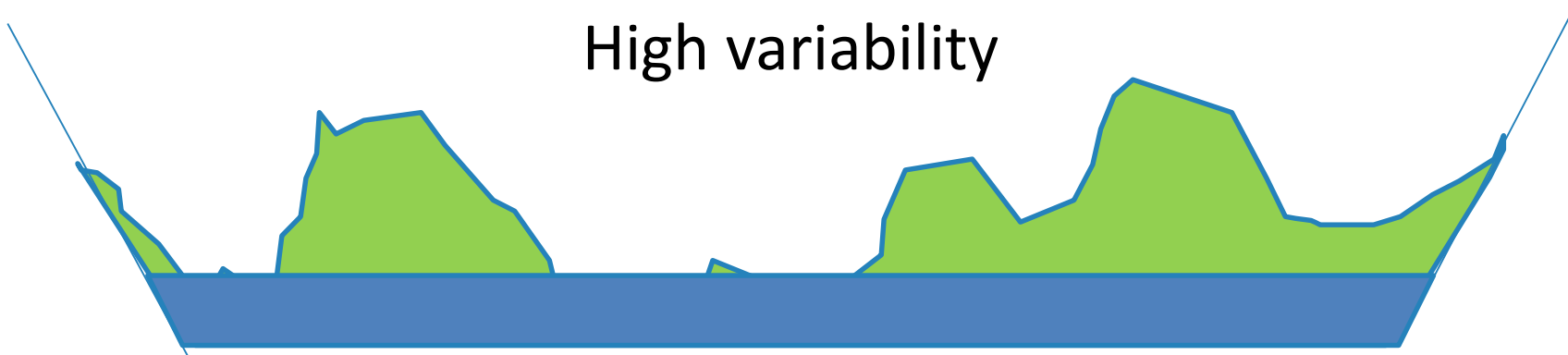


Minimal water level

Low variability



High variability



Low variability

High variability

High hydromorphological variability = High biodiversity

Different habitats

Shallow moderate flow

gravel

Deep, moderate flow

Pool

Riffle

Young forest

Older forest

meadow

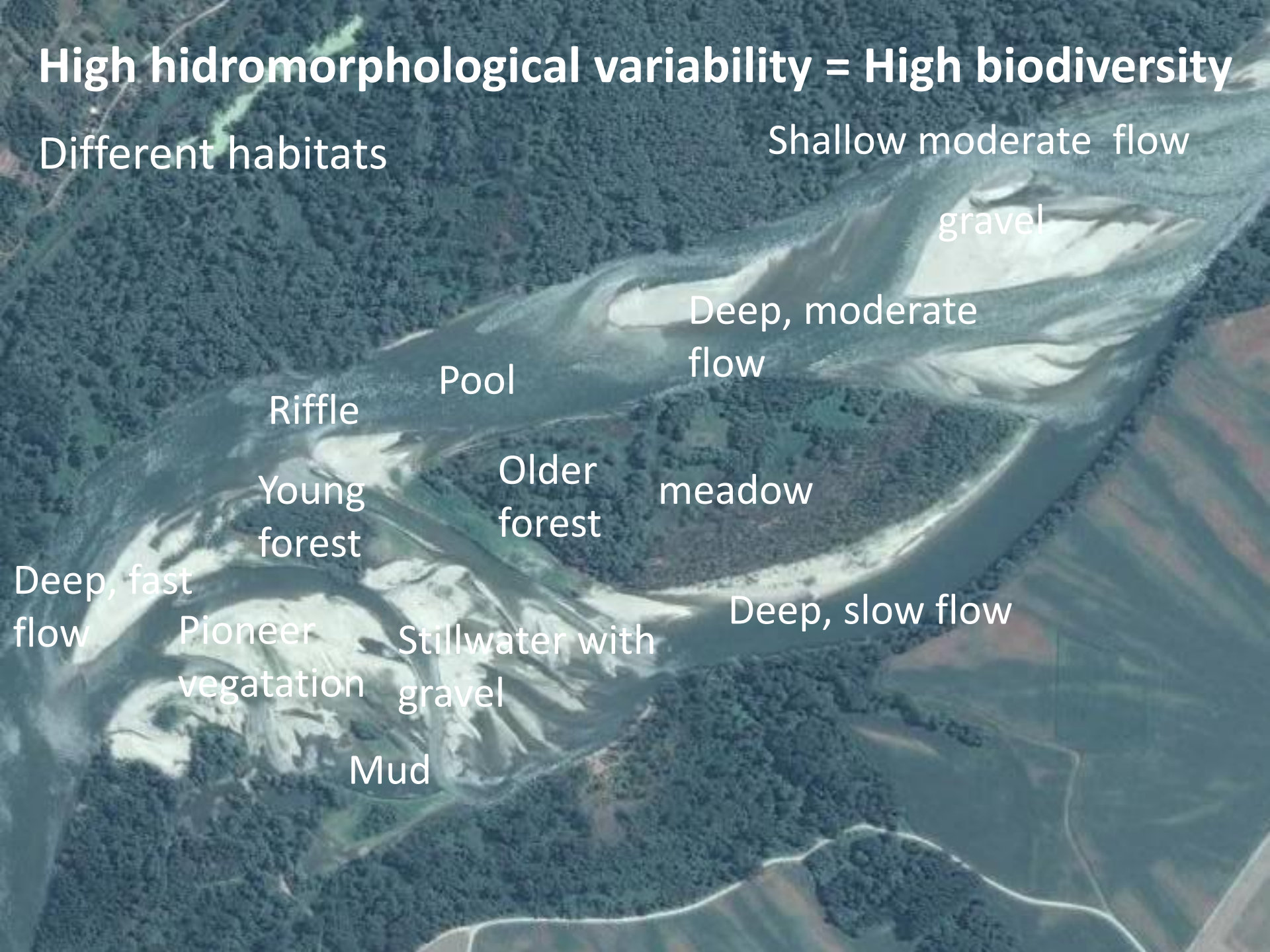
Deep, slow flow

Deep, fast flow

Pioneer vegetation

Stillwater with gravel

Mud



An aerial photograph showing a river system. The river flows from the top left towards the bottom right. The banks are lined with agricultural fields and a large plantation. The water in the river is dark, indicating depth and moderate flow. The surrounding land is a mix of green fields and brownish areas, possibly indicating different soil types or vegetation. The plantation is a large, dark green area with a grid-like pattern, likely a forest or a large-scale agricultural project. The overall scene is a rural landscape with a prominent river and agricultural activity.

Deep moderate flow, gravel

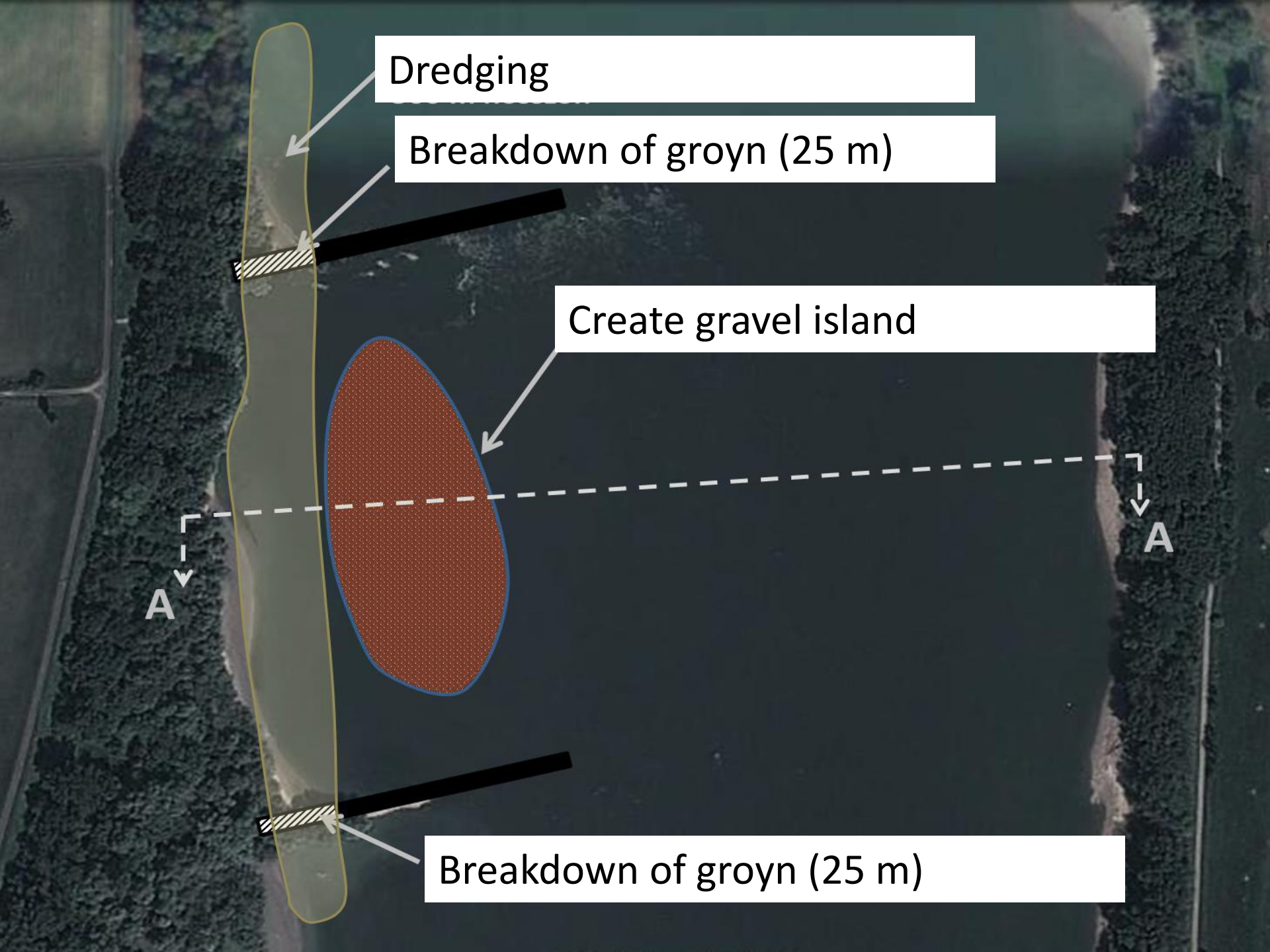
Forestry plantations

Stillwater, mud)

8/8/2013

3D modelling of habitat changing in Danube

1675 Rkr



Dredging

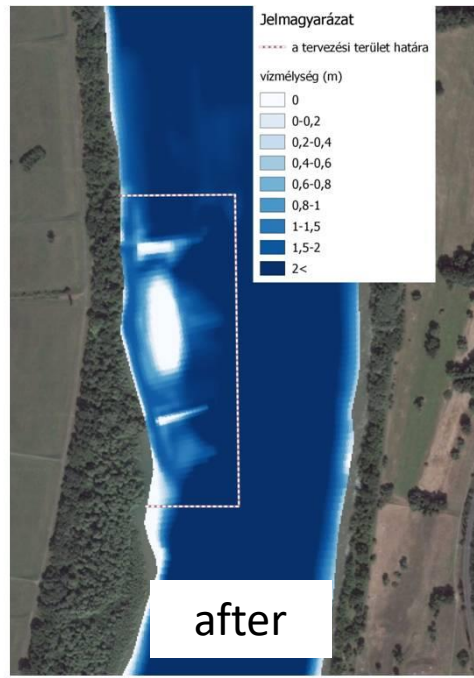
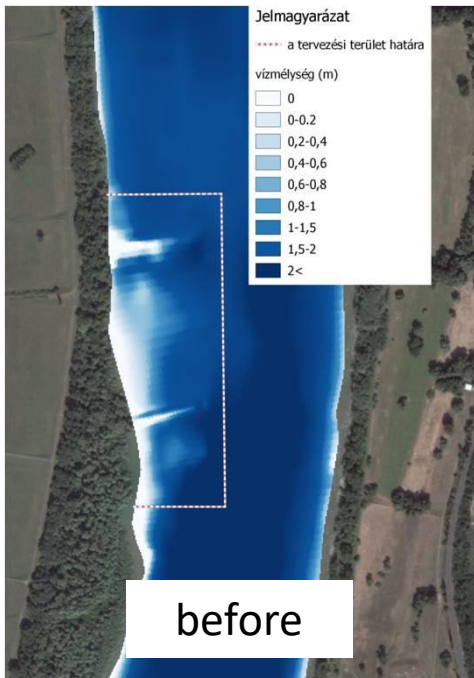
Breakdown of groyn (25 m)

Create gravel island

A

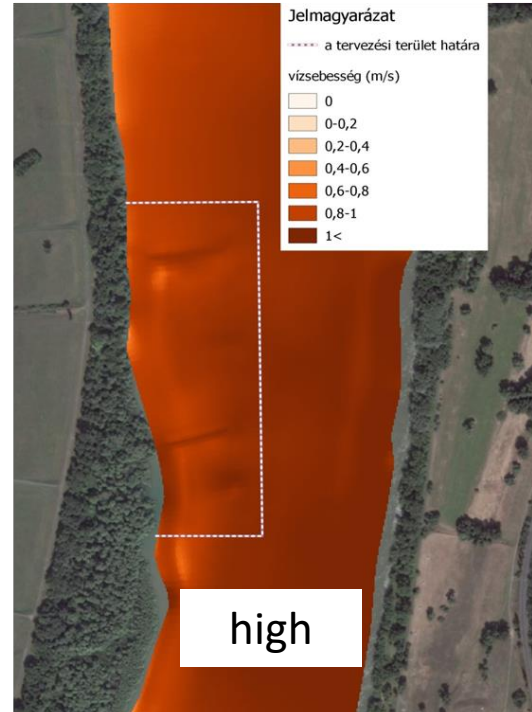
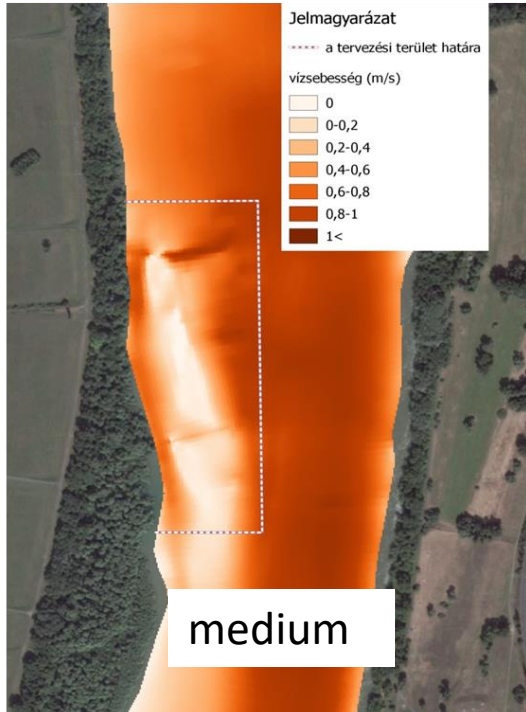
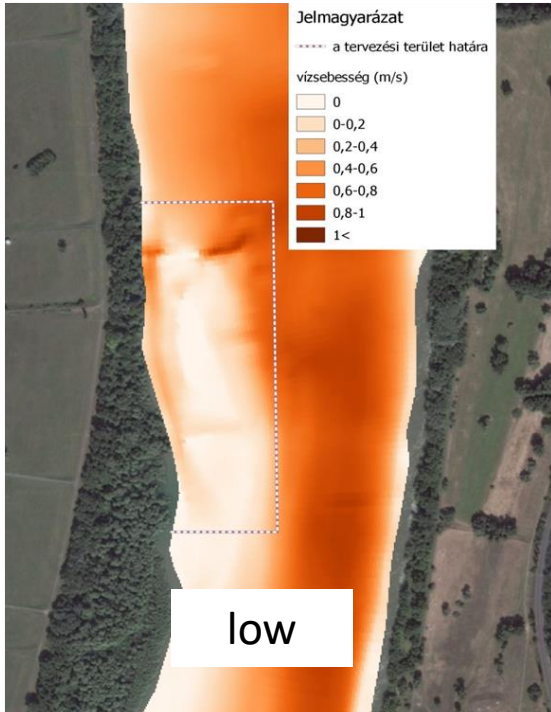
A

Breakdown of groyn (25 m)



Depth before and after the reconstruction
← (low water level)

↓ Velocity after the reconstruction
(different water levels)



Results

1. Increased structural diversity. (= increased biodiversity)
2. 10-20 cm/s velocity in littoral zone (nursery for reophilous species).
3. Groynes and island provide protection against wave stress.
4. The 3D modell proved, that island sustainable in long term. Sheer stress in not more than 4 N/m². (Critical sheer stress in similar case 5,7 N/m²)
5. The restoration is compatible with navigation and flood protection.

Thank you for your attention!

... let's continue with our fruitful cooperation ...

Cross-sectoral Cooperation

- Joint Learning Process
(2 conferences & national meetings in each country)
- Inputs for environmentally sound waterway maintenance document
- WILDisland: aiming to create win-win situations
- Joint pilot actions: planning & implementation
(restoration of (potential) WILDislands)
- Joint Capitalization
(Stakeholder Conference, 2019, Vienna)
- Creating future perspectives
(joint Directors Meeting; 2019, Budapest)

