

SESSION 4

CONVERTING POLICY INTO ACTION: FROM COMMUNITY ENGAGEMENT TO STAKEHOLDERS COMMITMENT



SEE RIVER PROJECT

HAND IN HAND
FOR RIVERS

WWW.SEE-RIVER.NET

Visualization of the Drava River Corridor “Leitbild”: Concept of Methods

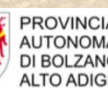
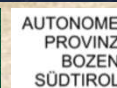
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Additional credits:

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Gianluca Vignoli – CISMA

Francesco Comiti – Free University of Bolzano



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I) Cross – sectoral cooperation and visualization: Systems understanding is the nexus!

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II) Visualization of the Drava River Corridor “Leitbild ” in Italy

Documented objectives in written form (result of the Pro Drava Project)

Perception Alignment Problem

Leitbild: Visualization approach

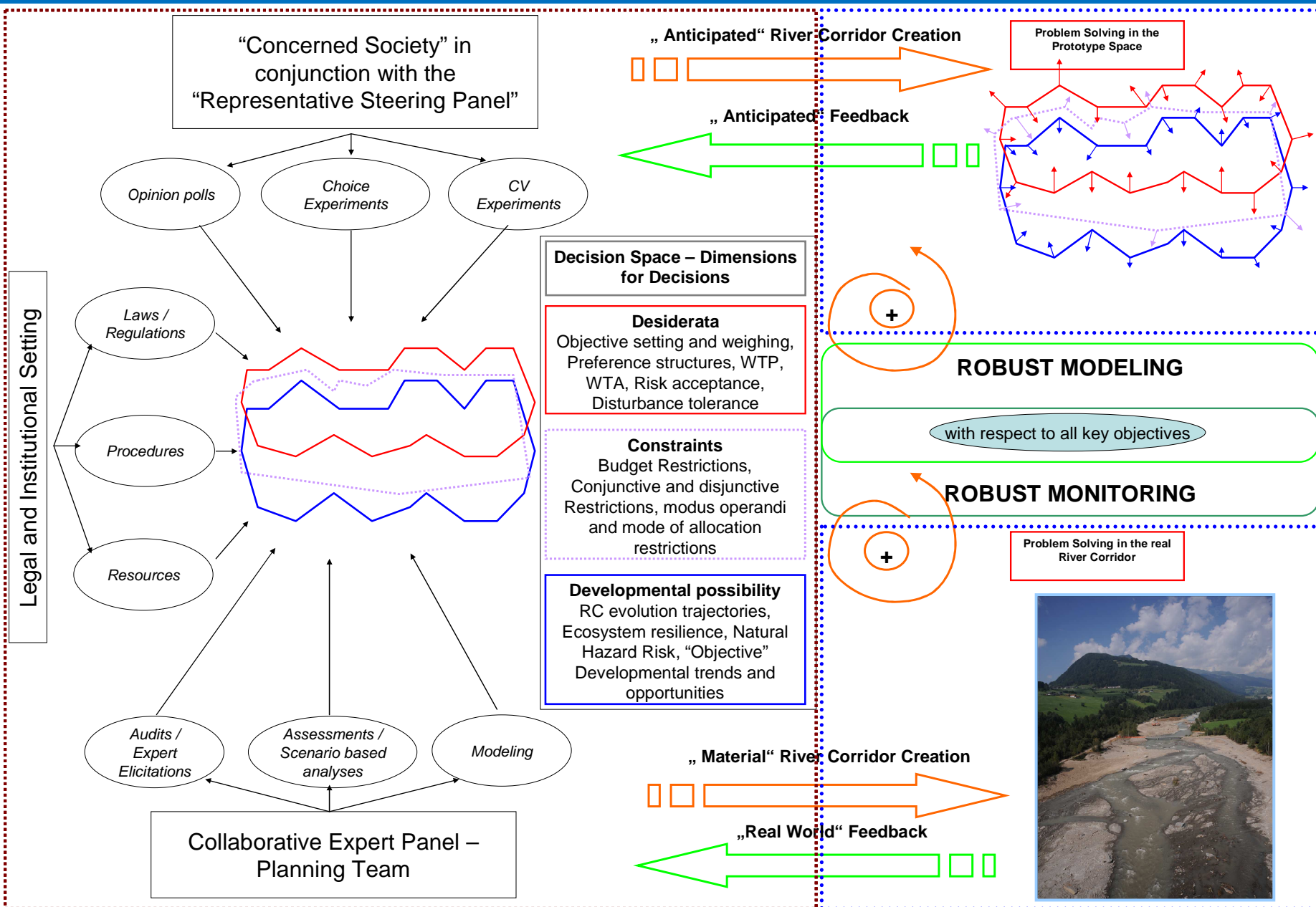
III) Application Example

Drava River Stretch between San Candido and Versiaco

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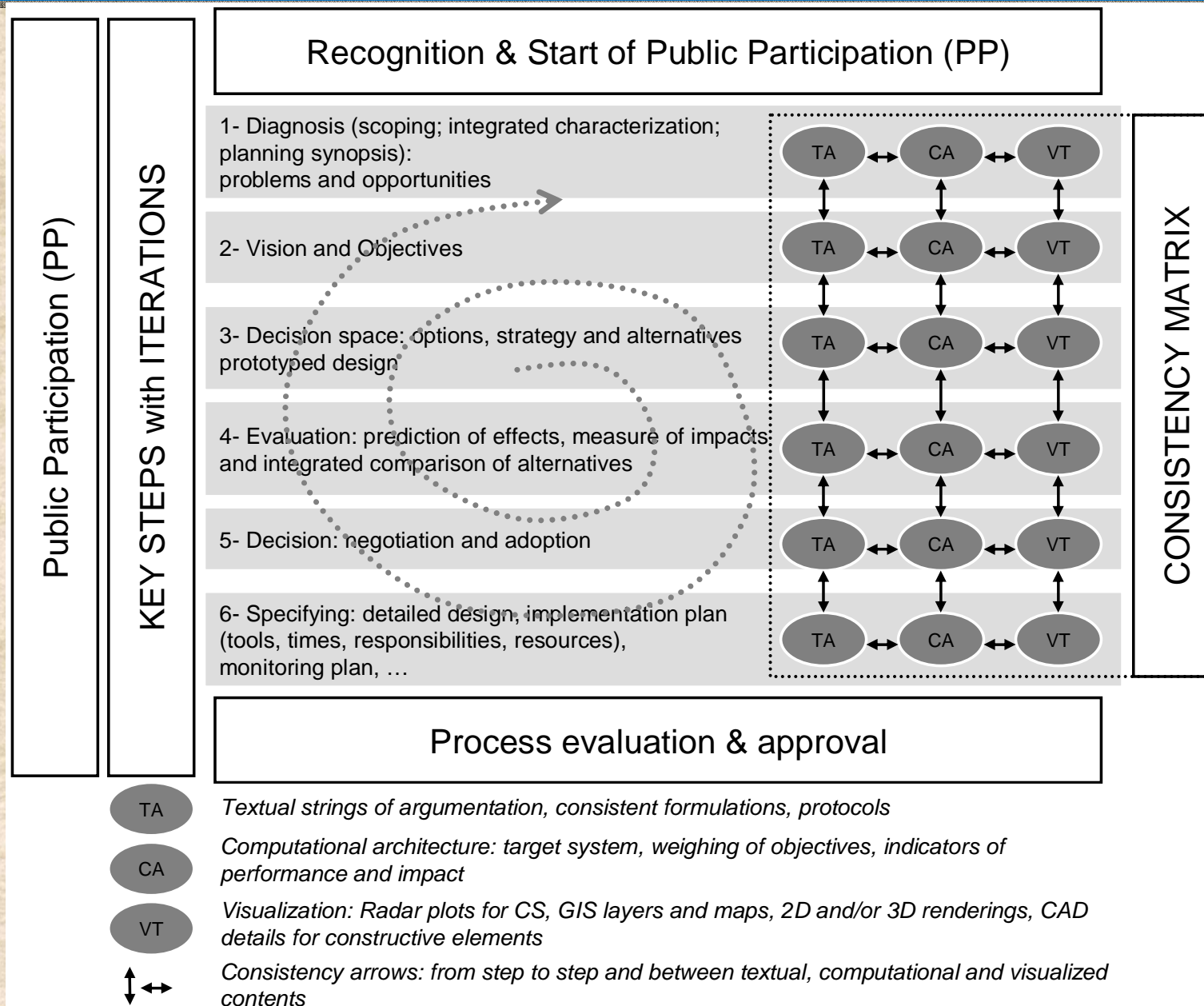
Cross – sectoral cooperation and visualization: Systems understanding is the nexus!

The model-based river corridor planning process



Cross – sectoral cooperation and visualization: Systems understanding is the nexus!

The river corridor vision alignment model



Visualization of the Drava River Corridor “Leitbild ” in Italy

Documented objectives in written form (result of the Pro Drava Project)

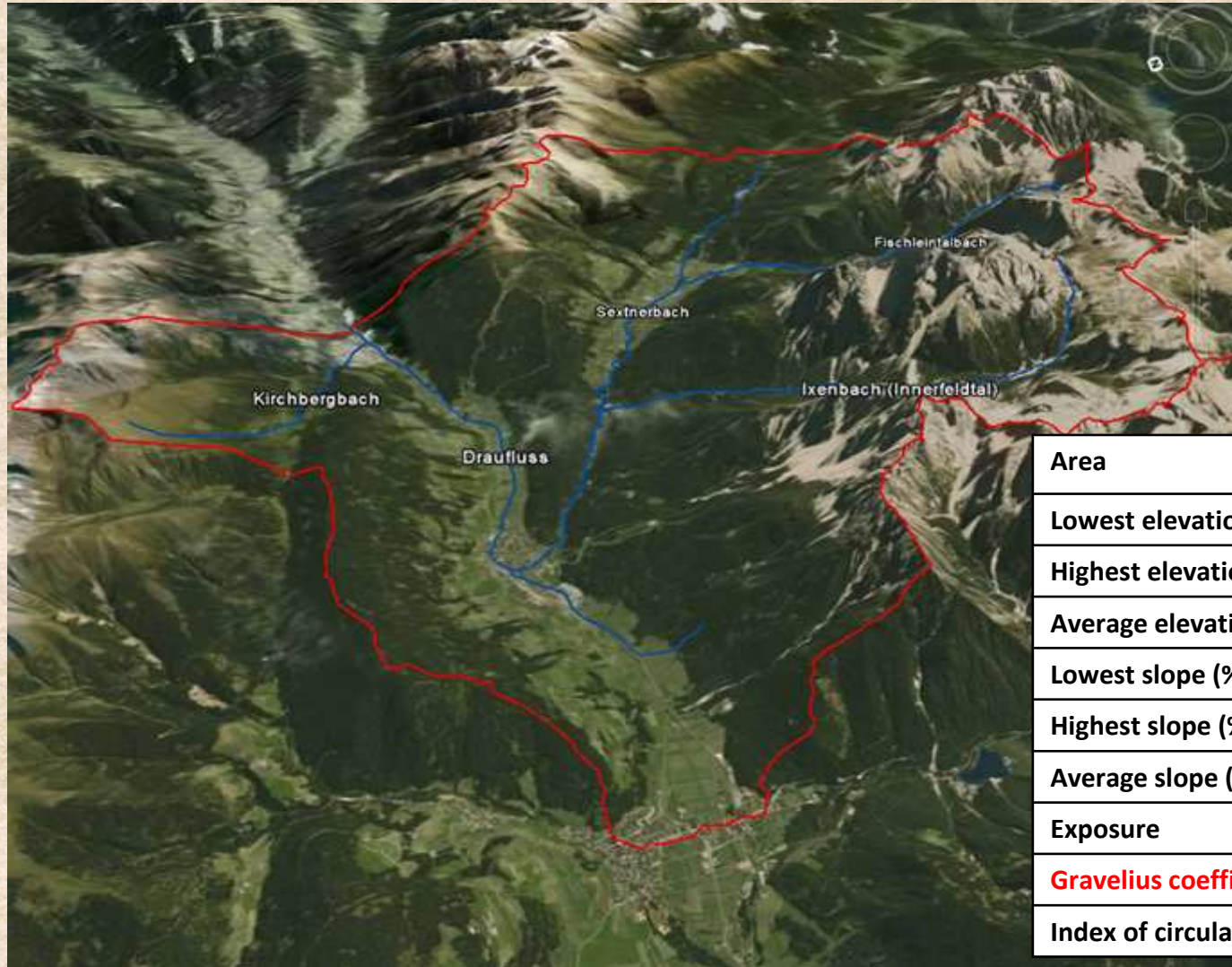
- I) Integral Protection of settlement areas and infrastructural elements as well as relevant development areas against natural hazards (Floods, Debris Flows, Avalanches)
- II) Maintenance and Creation of ecologically valuable aquatic- semi-terrestrial and terrestrial habitats in the Pro – Drava River catchment. Reestablishment of a good ecological status for the streams in the Pro - Drava catchment
- III) Safeguarding a sustainable use of water resources in the Pro – Drava catchment
- IV) Conservation and sustainable development of the Pro – Drava catchment as living space, economic space and recreation area.
- V) Information and Engagement of the concerned society Information to strengthen the multiple values of the Pro – Drava catchment.



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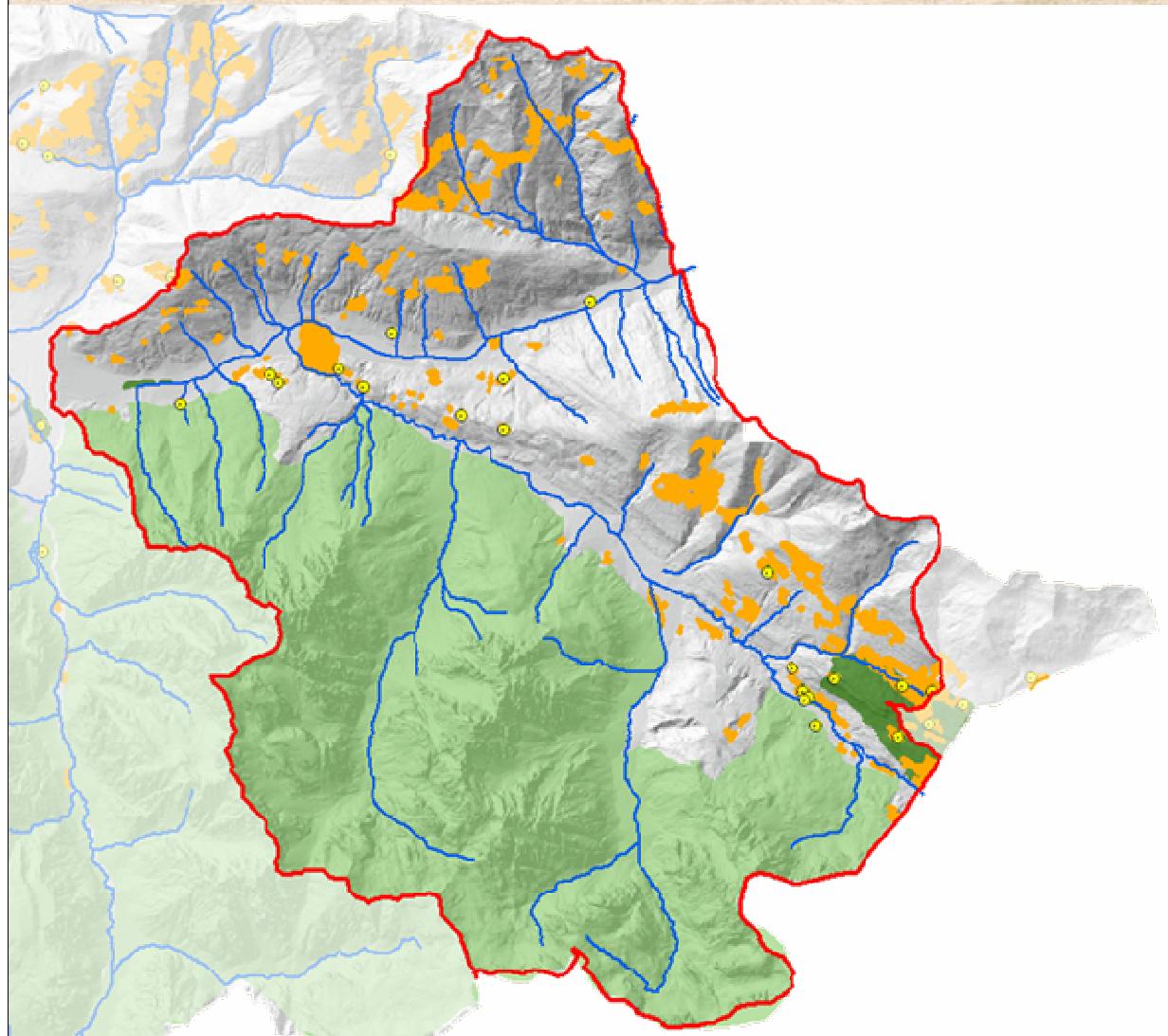
The River basin

Morphology and related parameters







Area	160 Km ²
Lowest elevation	1110
Highest elevation	3140
Average elevation	1830
Lowest slope (%)	0 %
Highest slope (%)	80 %
Average slope (%)	26,22
Exposure	NNE
Gravelius coefficient	1,85
Index of circularity	0,29

The River Basin



**Environment &
Landscape →
Protected Areas**

-  Natural Parks
-  Biotopes
-  Other protected areas
-  Wet areas

The River Basin

Environment & Landscape & Settlements



Potential pressures

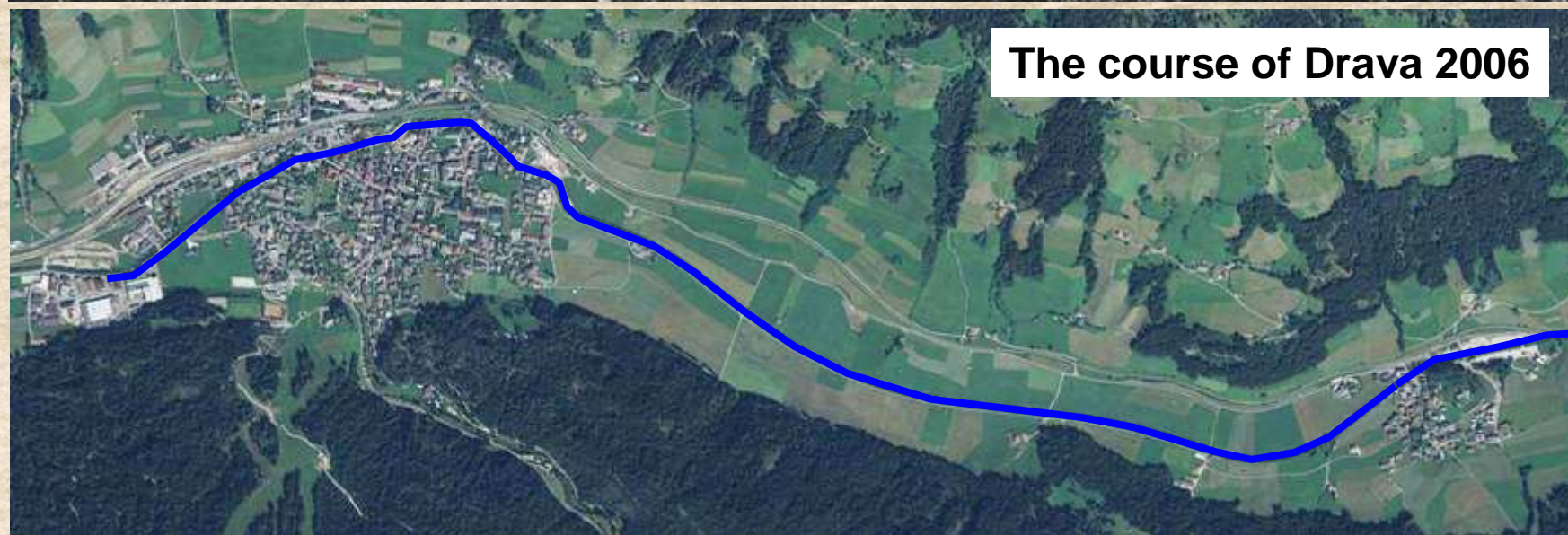
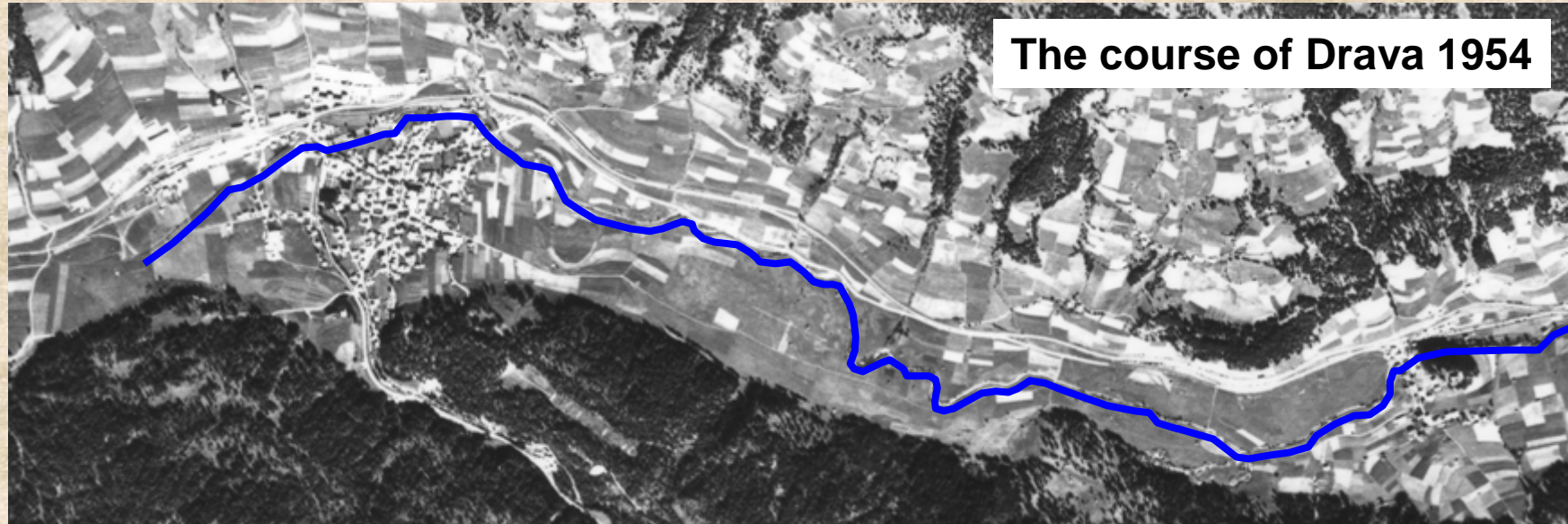


The weight of agriculture

Environment & Landscape & Agriculture



Drava River Corridor: a multidimensional congestion?



Drava River Corridor: a multidimensional congestion?

Flush-upsurge operations Hydro Peaking Effects



Drava River Corridor: a multidimensional congestion?

Water-related hazards and risks



Flood (1965)

Visualization of the Drava River Corridor “Leitbild ” in Italy

Perception Alignment Problem

- I) Conflict between objectives
- II) Problem Perception Duality: River corridor – River catchment
- III) Ambiguity of language
- IV) Ambiguity of players
- V) Engagement / Objectives dichotomy

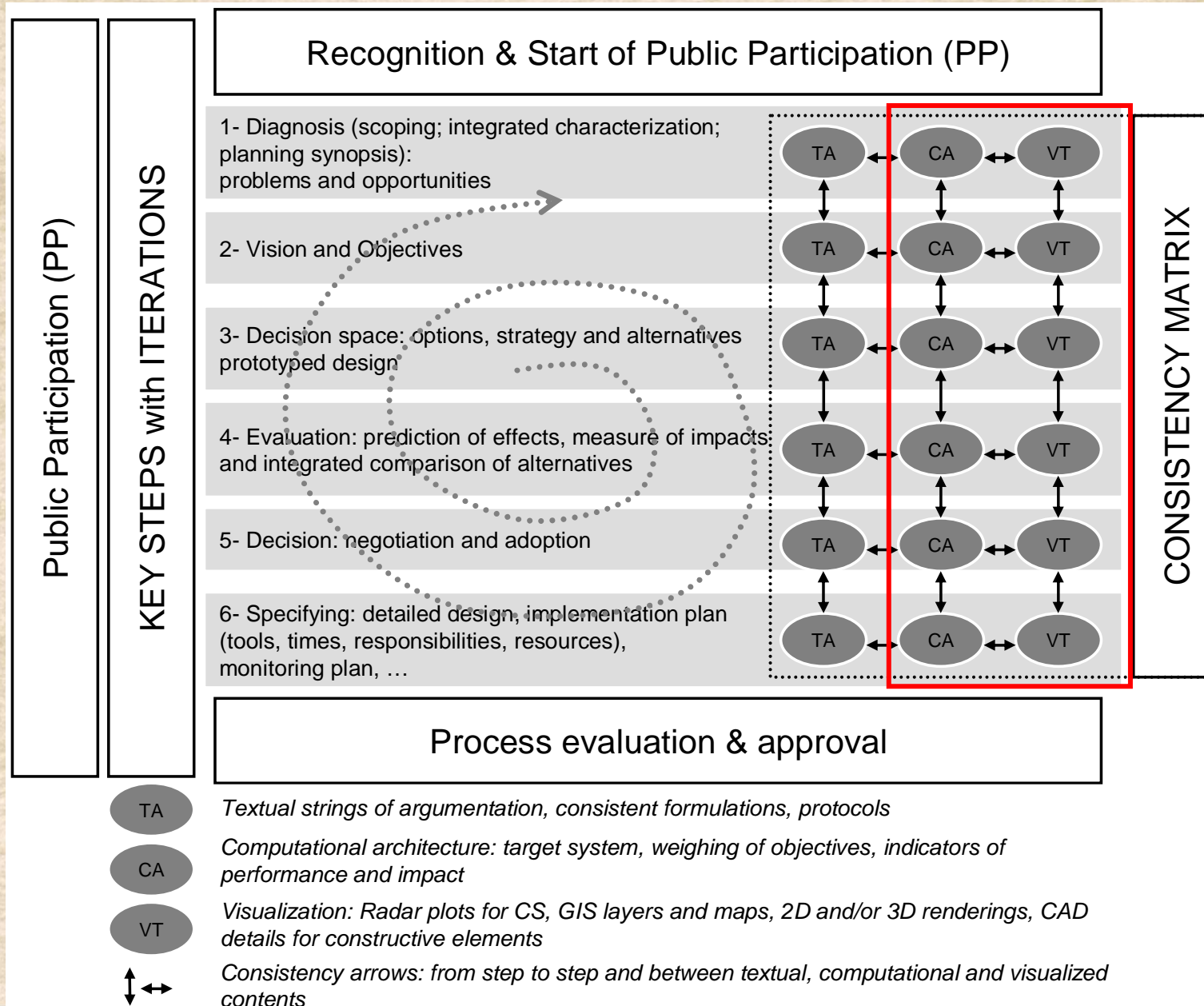
....



SEE River

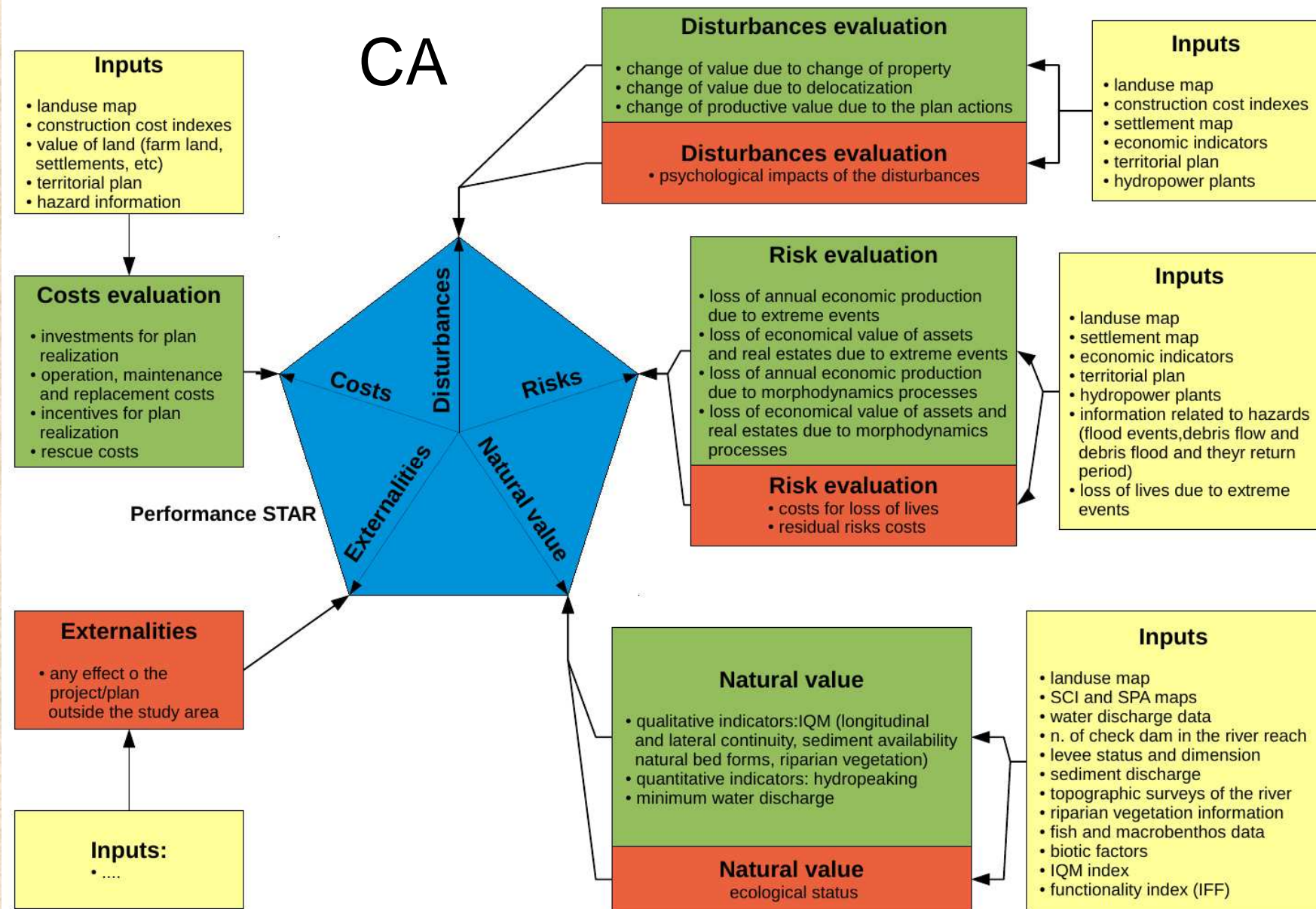
Visualization of the Drava River Corridor “Leitbild ” in Italy

The river corridor vision alignment model



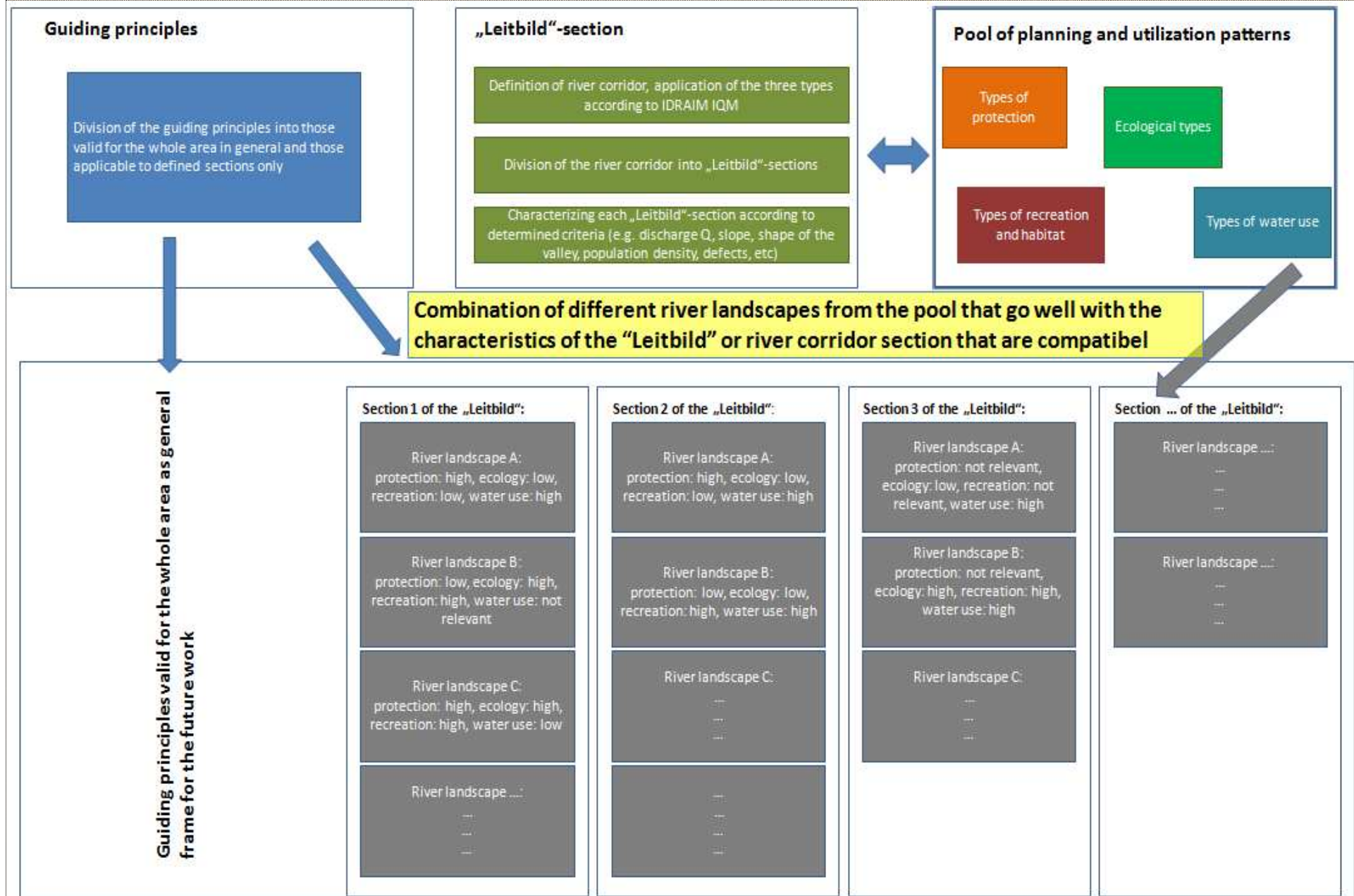
Visualization of the Drava River Corridor “Leitbild ” in Italy

The river corridor vision alignment model



Visualization of the Drava River Corridor “Leitbild” in Italy

The Leitbild Visualization Approach



Application Example

Drava River Stretch between San Candido and Versiaco

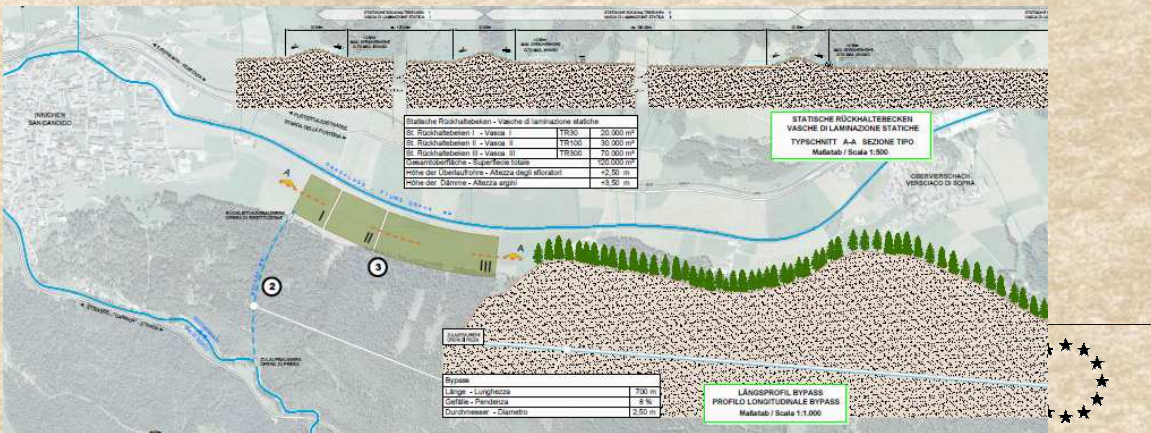
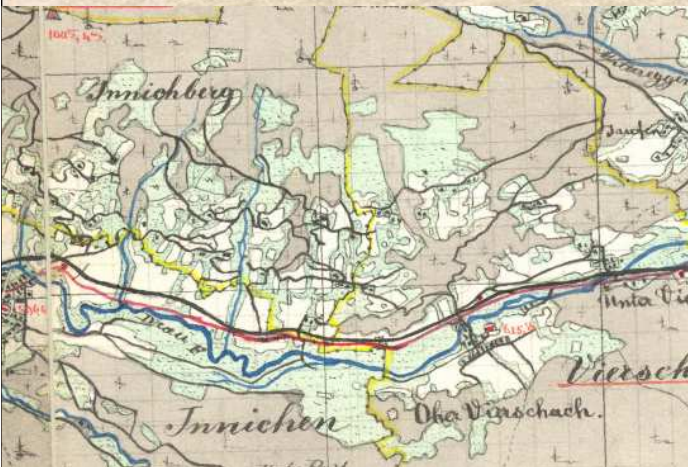
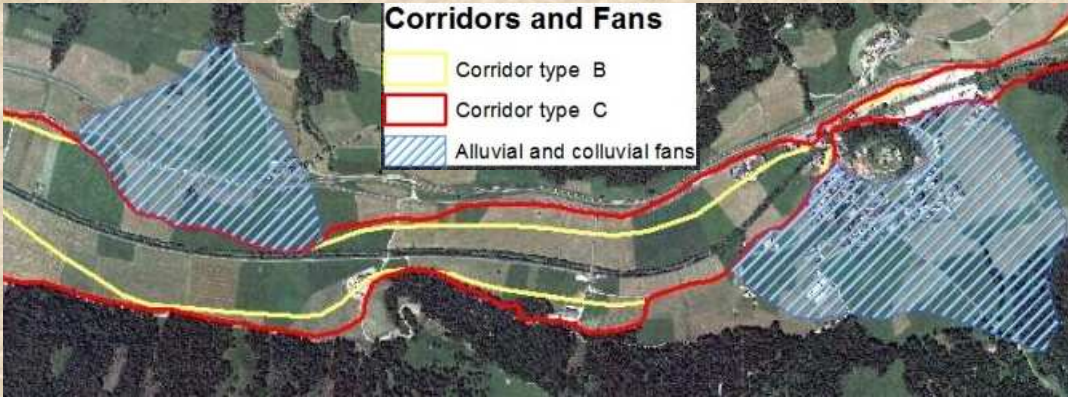


SEE River



Innichen - Vierschach

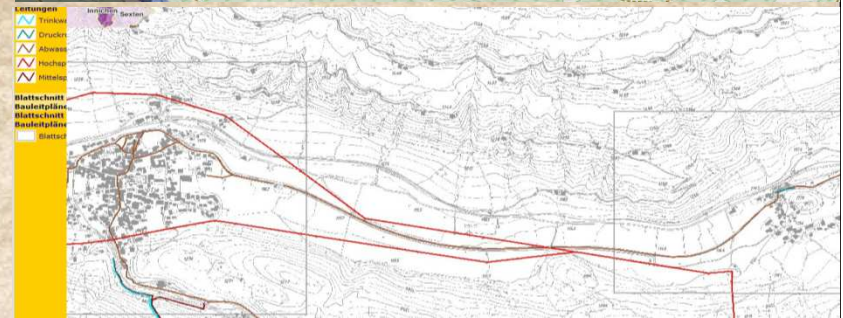
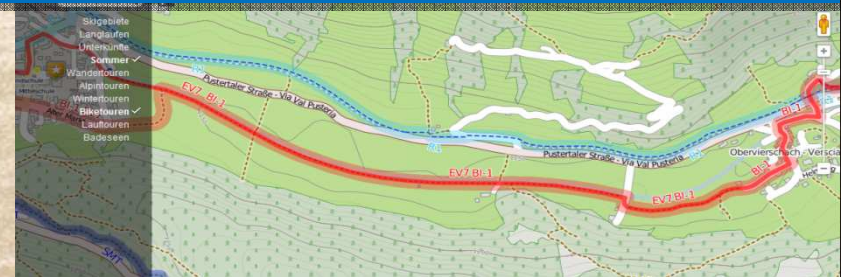
- proposal of measures
elaborated by 3 M Engineering
- historical river course
- Bundle of measures



Application Example

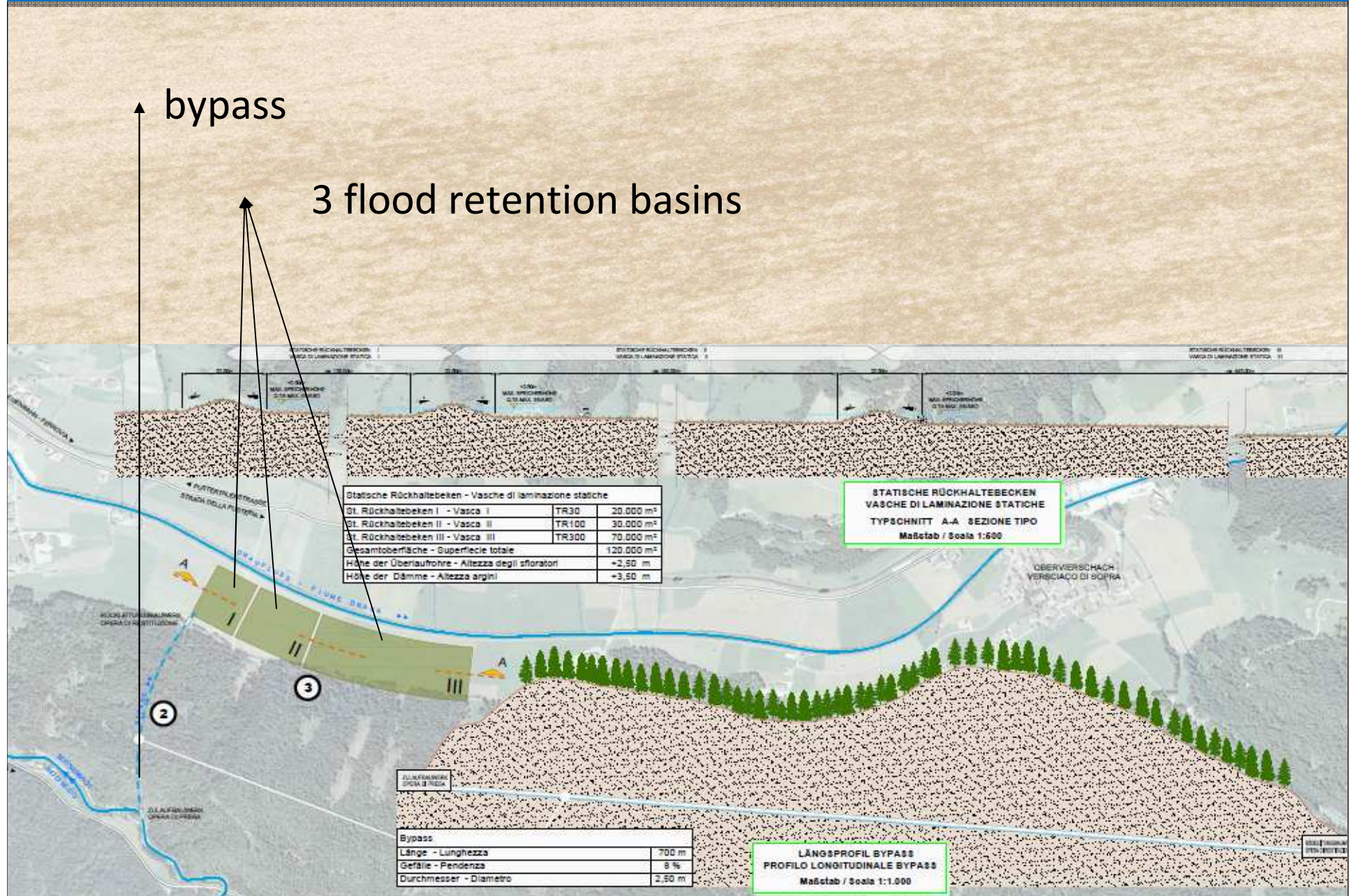
Drava River Stretch between San Candido and Versiaco

Existing land-use:
bike way, bridges, buildings,
agricultural areas....



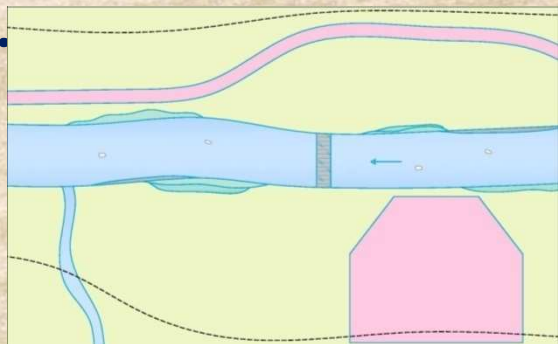
Application Example

Drava River Stretch between San Candido and Versiaco

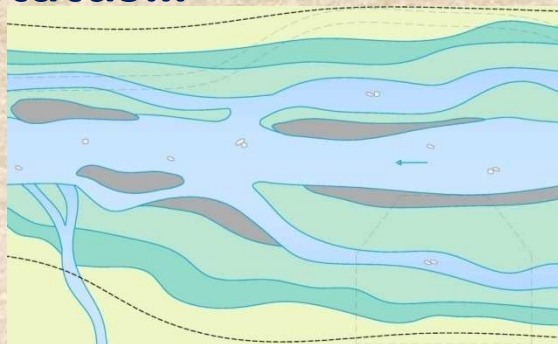


Combination of different pictures of river landscape

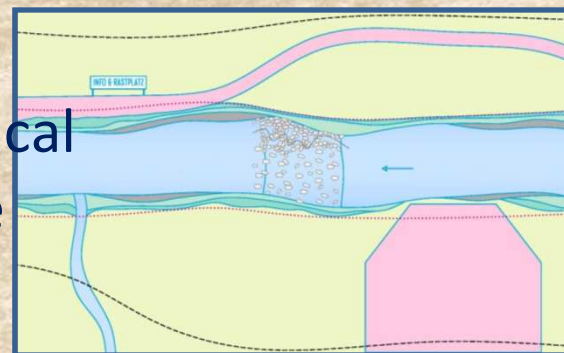
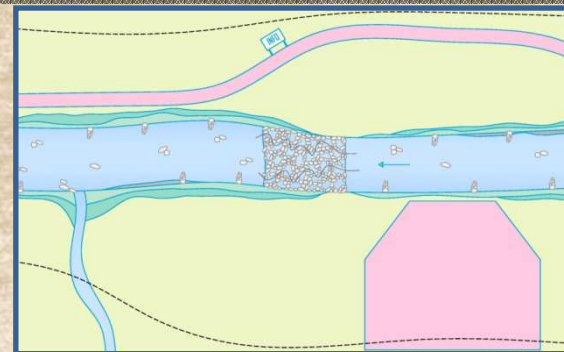
Present status



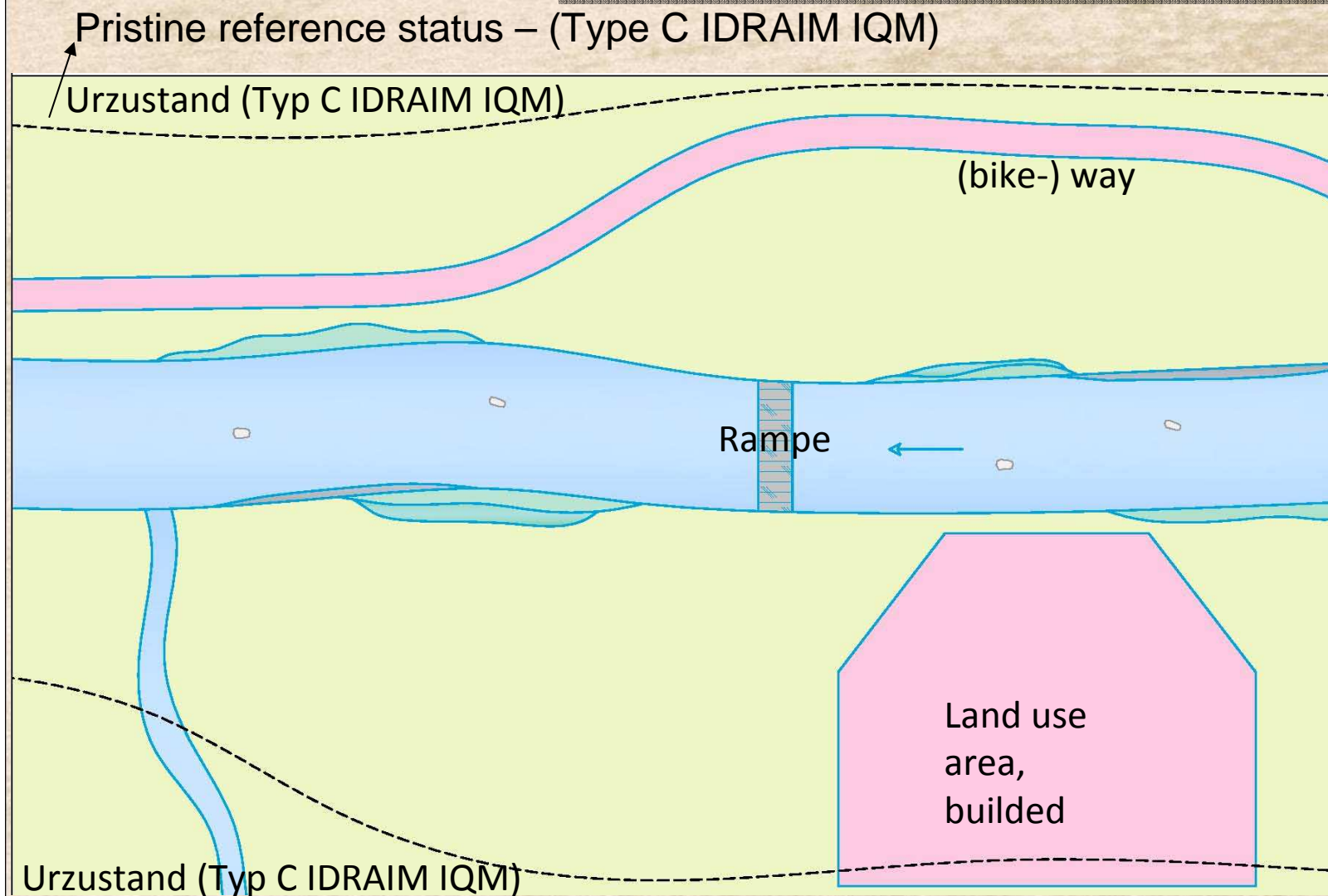
„pristine reference“ status...



Visualized scenarios,
Hypothetical
landscape
changes



00 present status

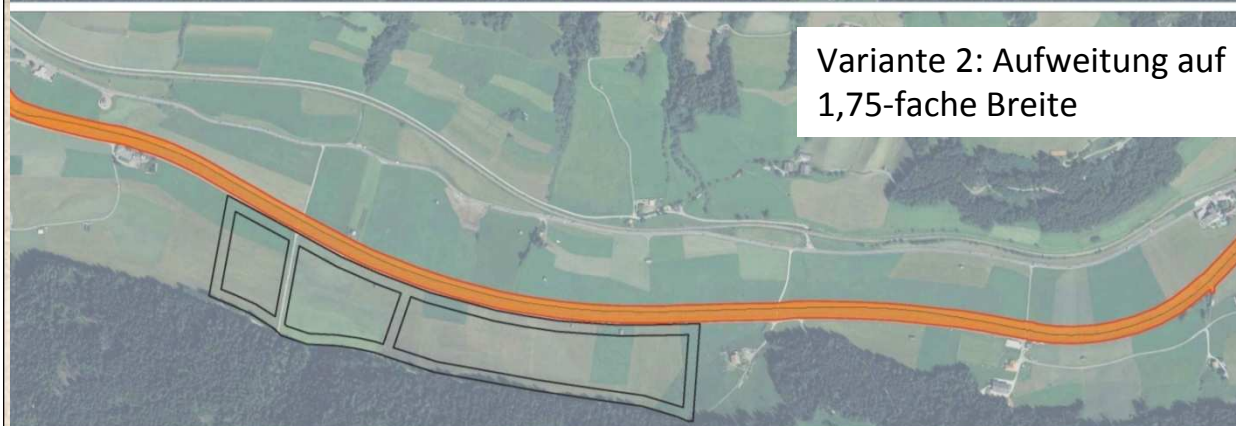


Application Example

Drava River Stretch between San Candido and Versiaco



Alternative 3:
River widening up to a
width of 2,5 times the
present width



Alternative 2:
River widening up to a
width of 1,75 times the
present width



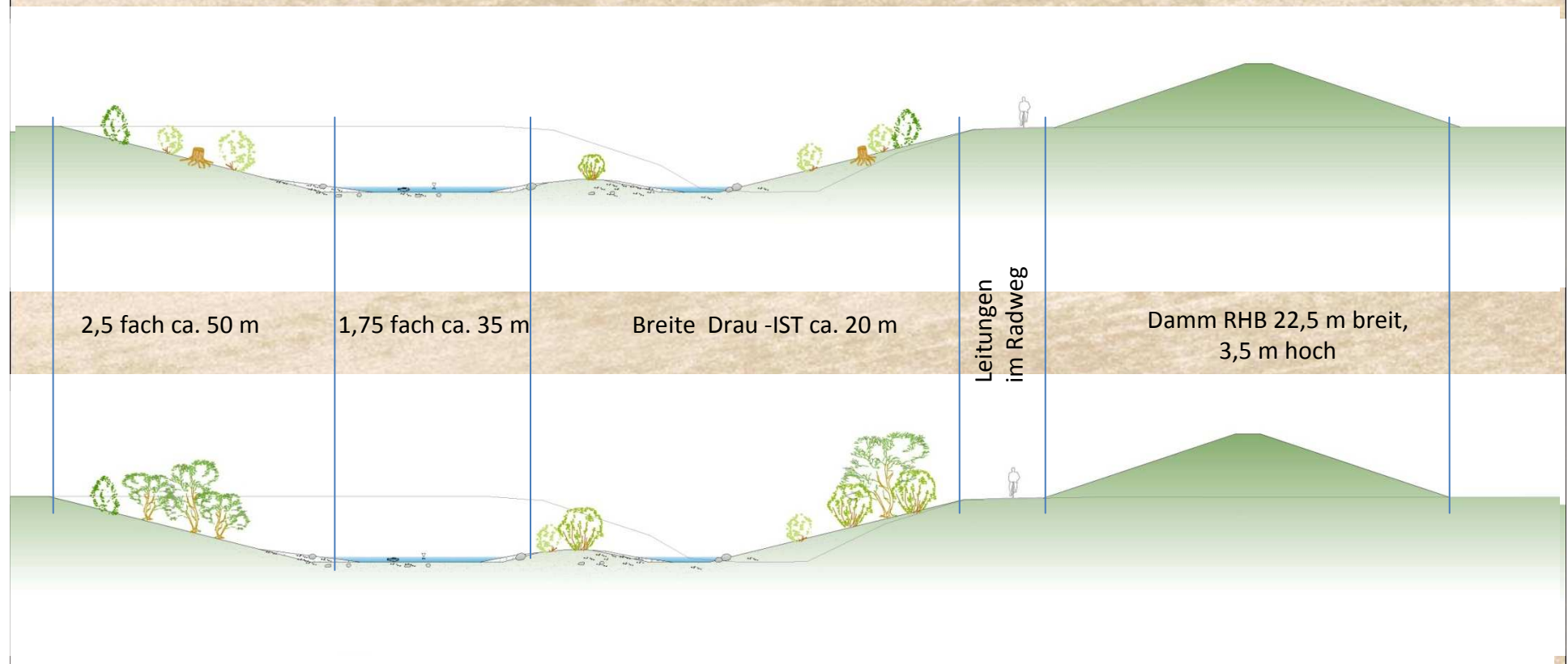
Alternative 1:
Morphological
enhancements within the
current boundaries



Application Example

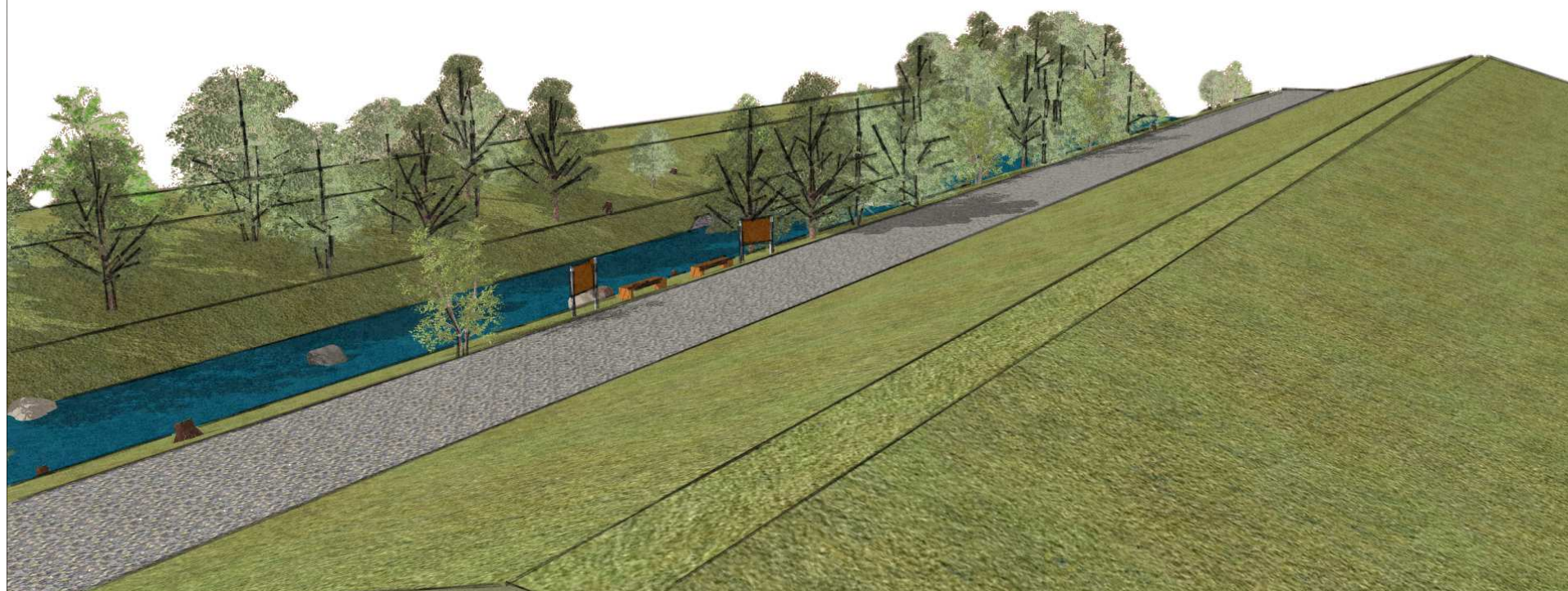
Drava River Stretch between San Candido and Versiaco

Shortly after realization

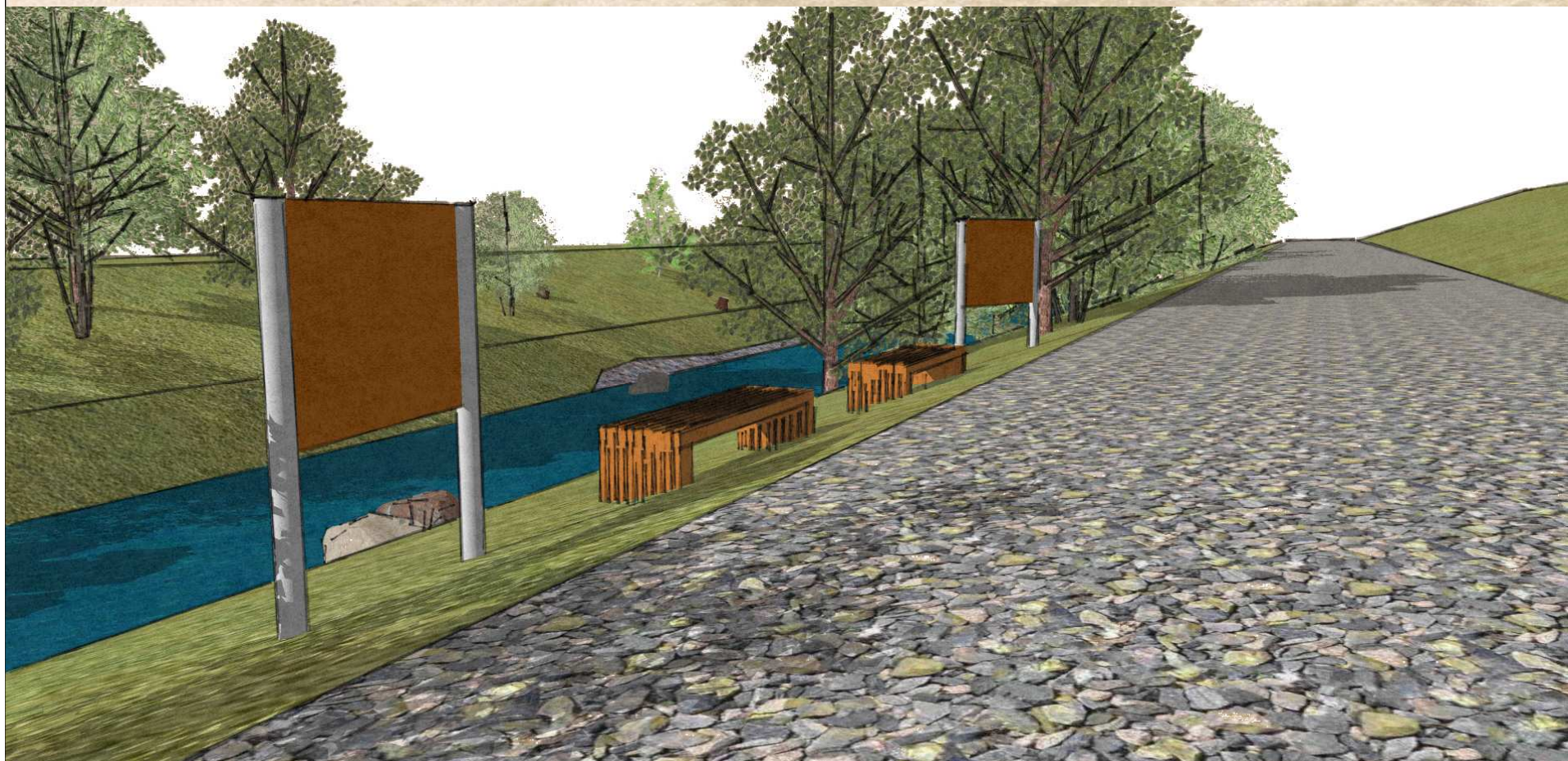


Several years after realization

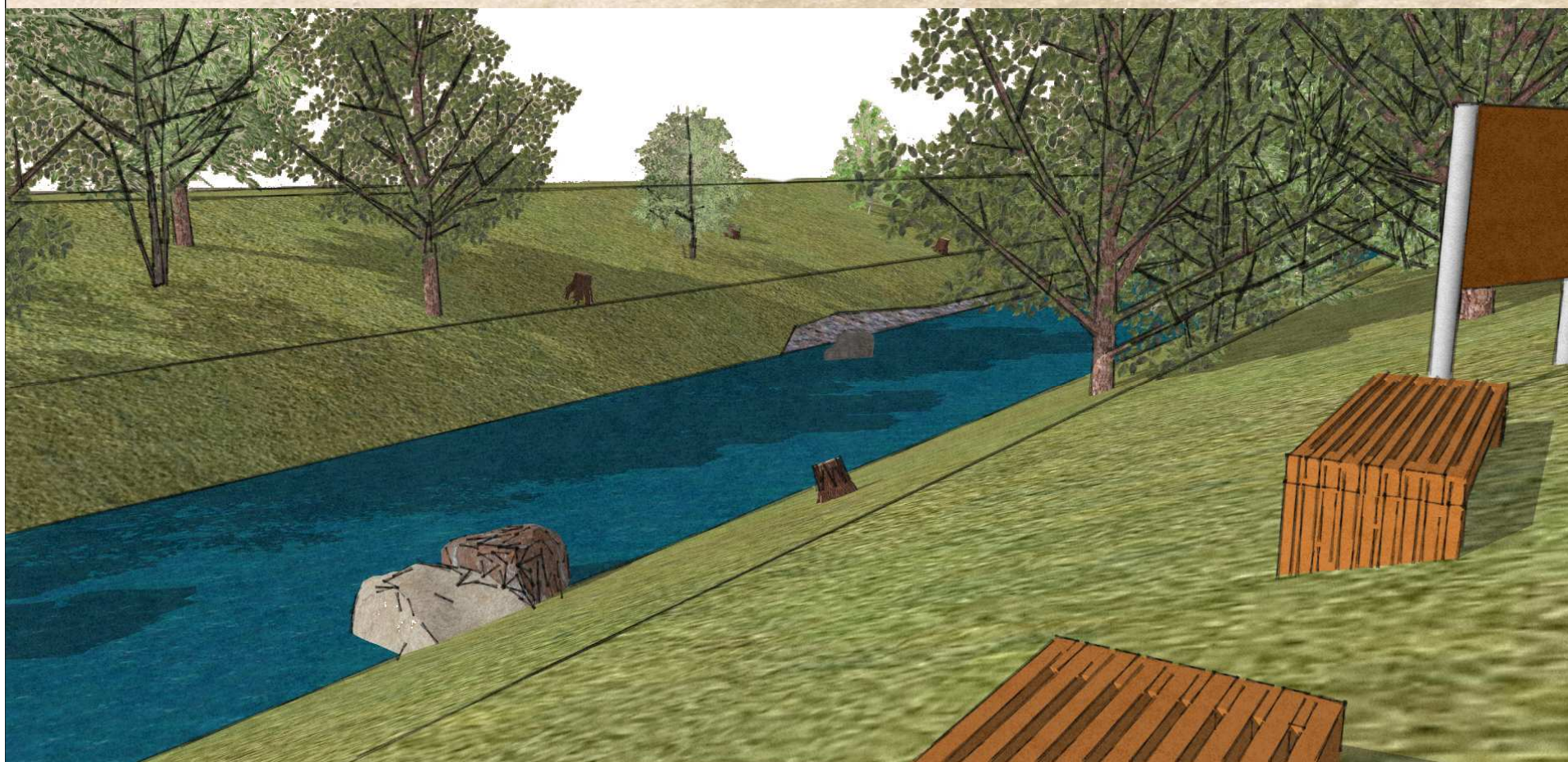
Visualization alternative 1: Morphological enhancements within the current boundaries



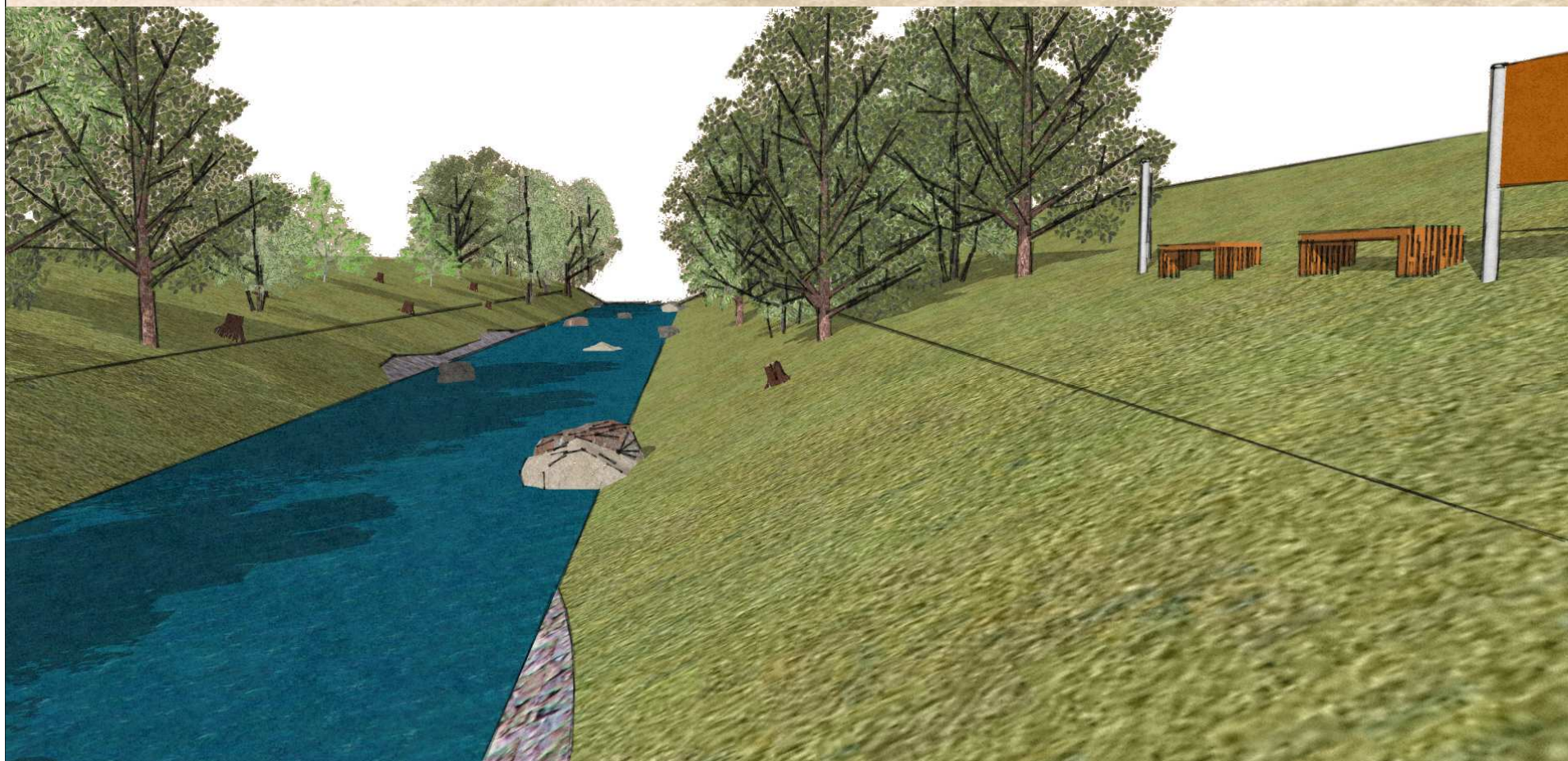
Visualization alternative 1: Morphological enhancements within the current boundaries



Visualization alternative 1: Morphological enhancements within the current boundaries



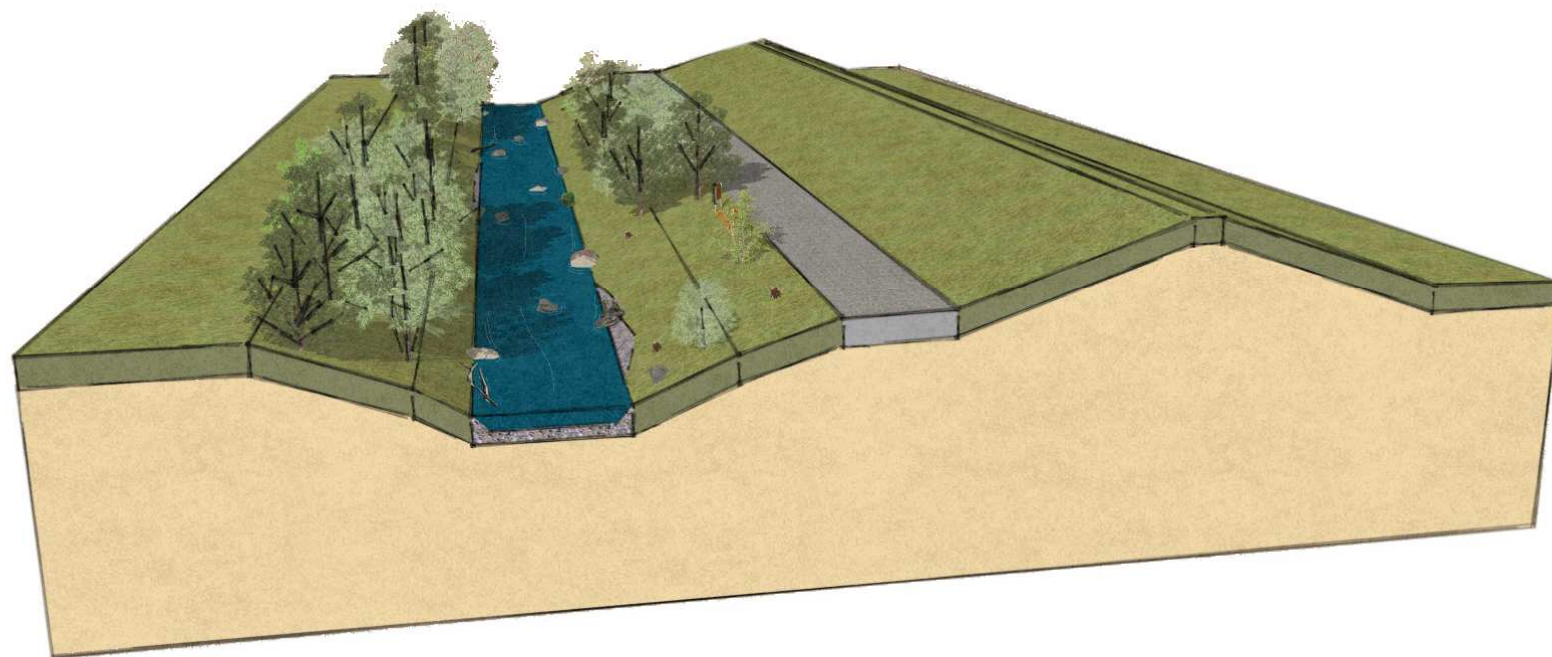
Visualization alternative 1: Morphological enhancements within the current boundaries



Visualization alternative 1: Morphological enhancements within the current boundaries



Visualization alternative 1: Morphological enhancements within the current boundaries



Visualization alternative 1: Morphological enhancements within the current boundaries



Visualization alternative 2: River widening 1,75 X



Visualization alternative 2: River widening 1,75 X



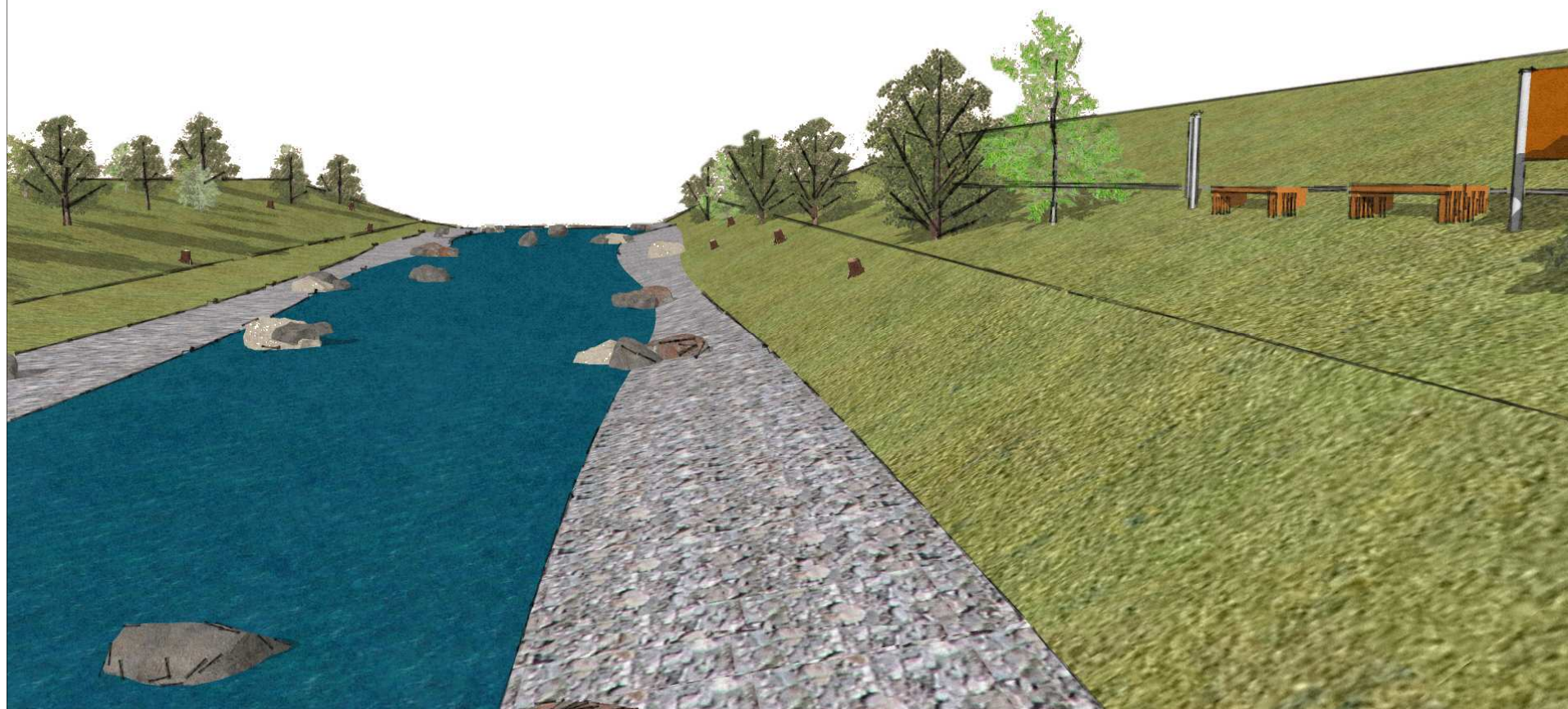
Visualization alternative 2: River widening 1,75 X



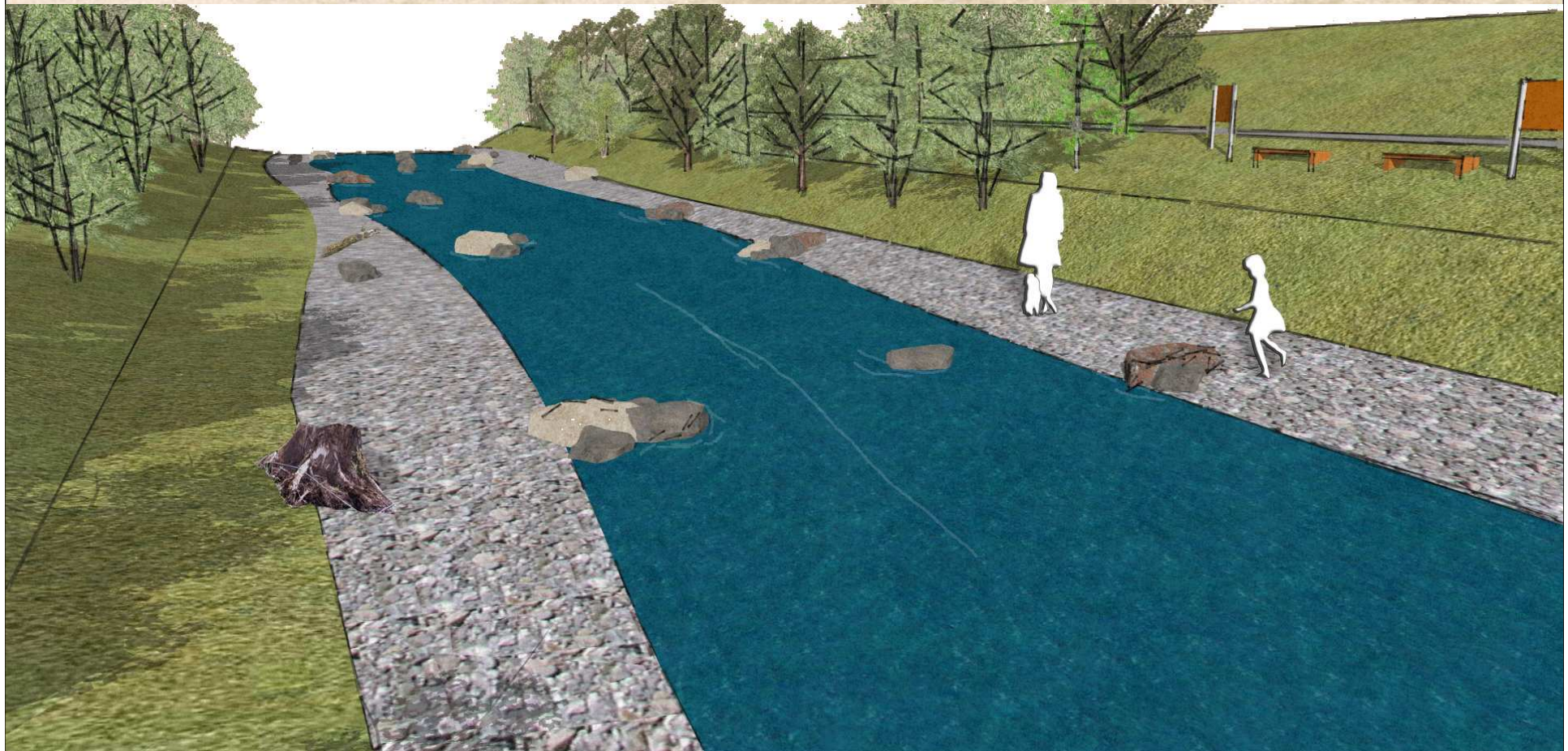
Visualization alternative 2: River widening 1,75 X



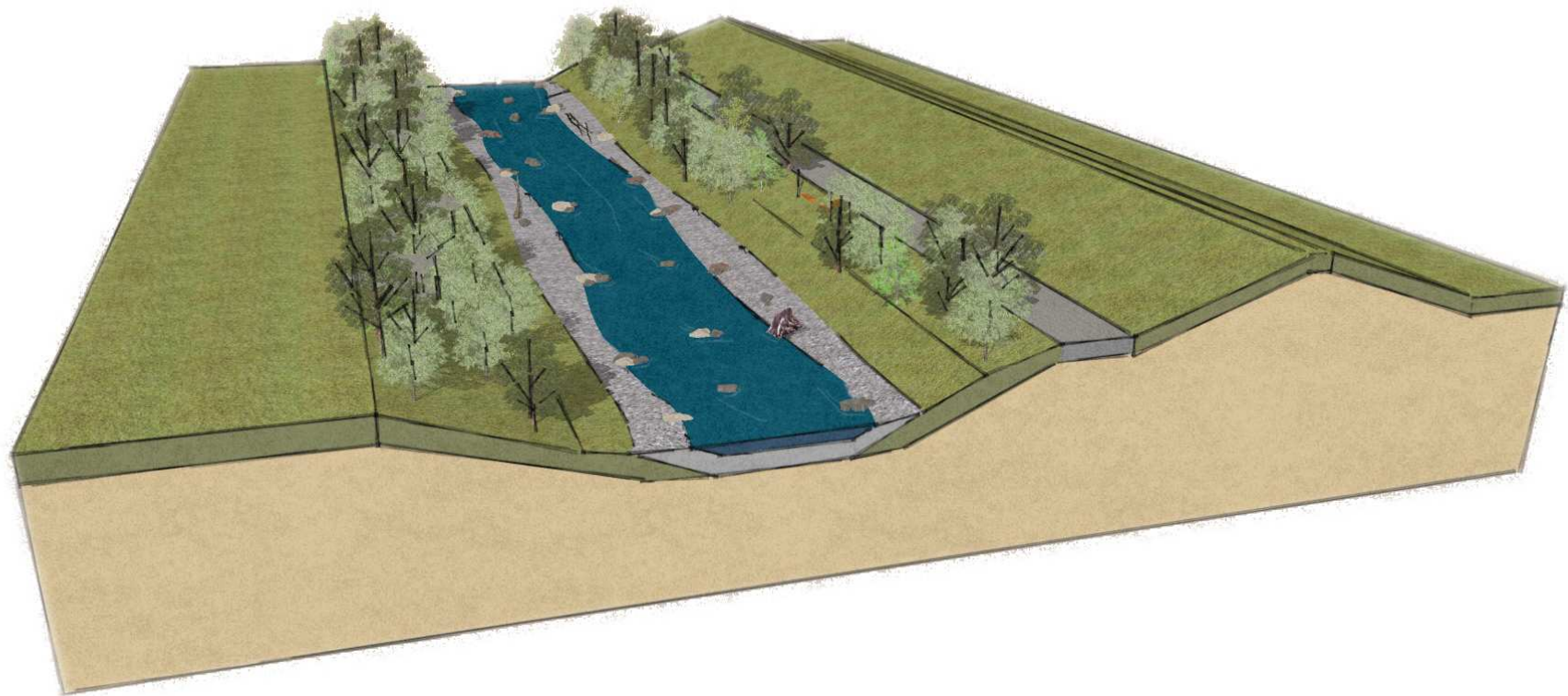
Visualization alternative 3: River widening 1,75 X



Visualisierung Variante 2 Aufweitung 1,75-faches



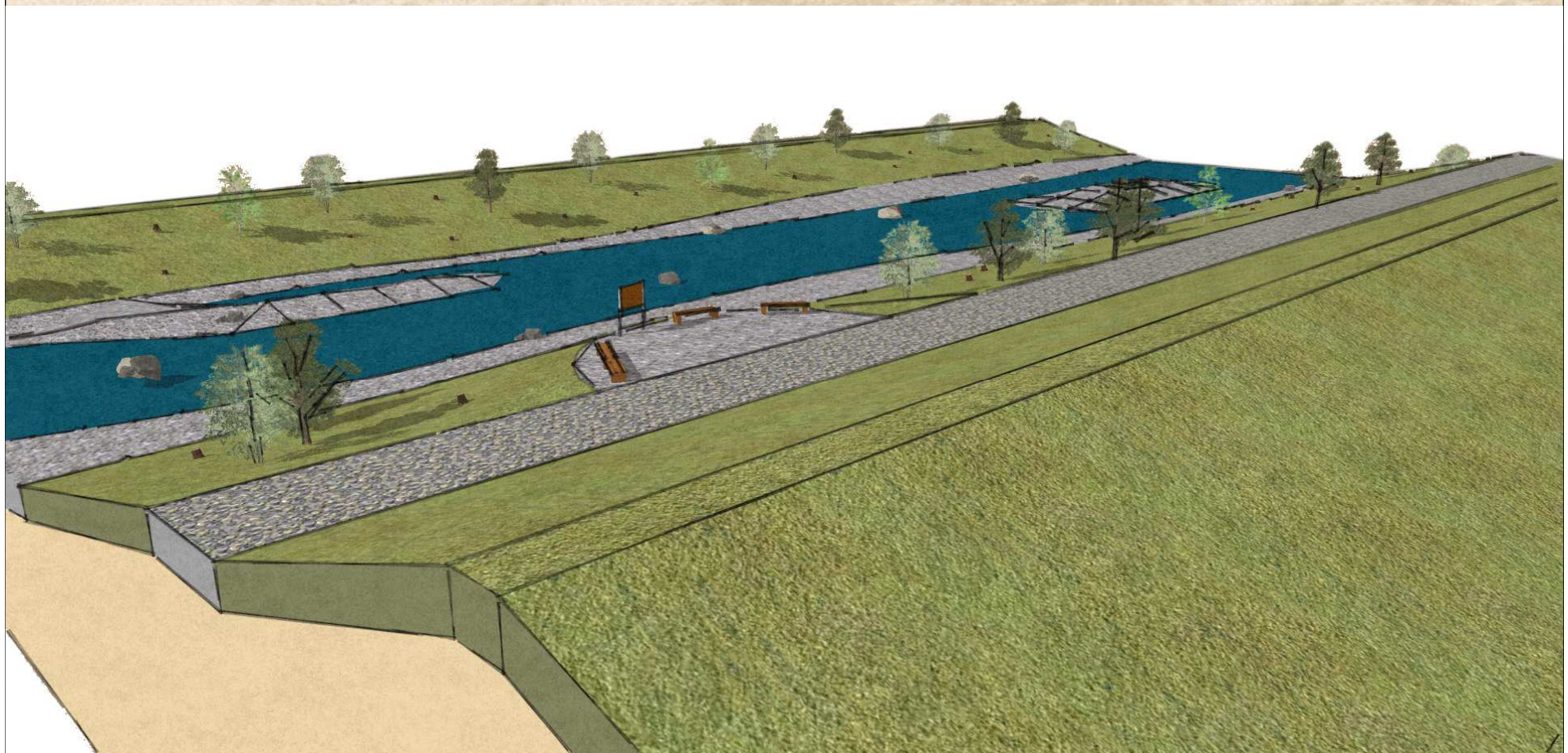
Visualization alternative 2: River widening 1,75 X



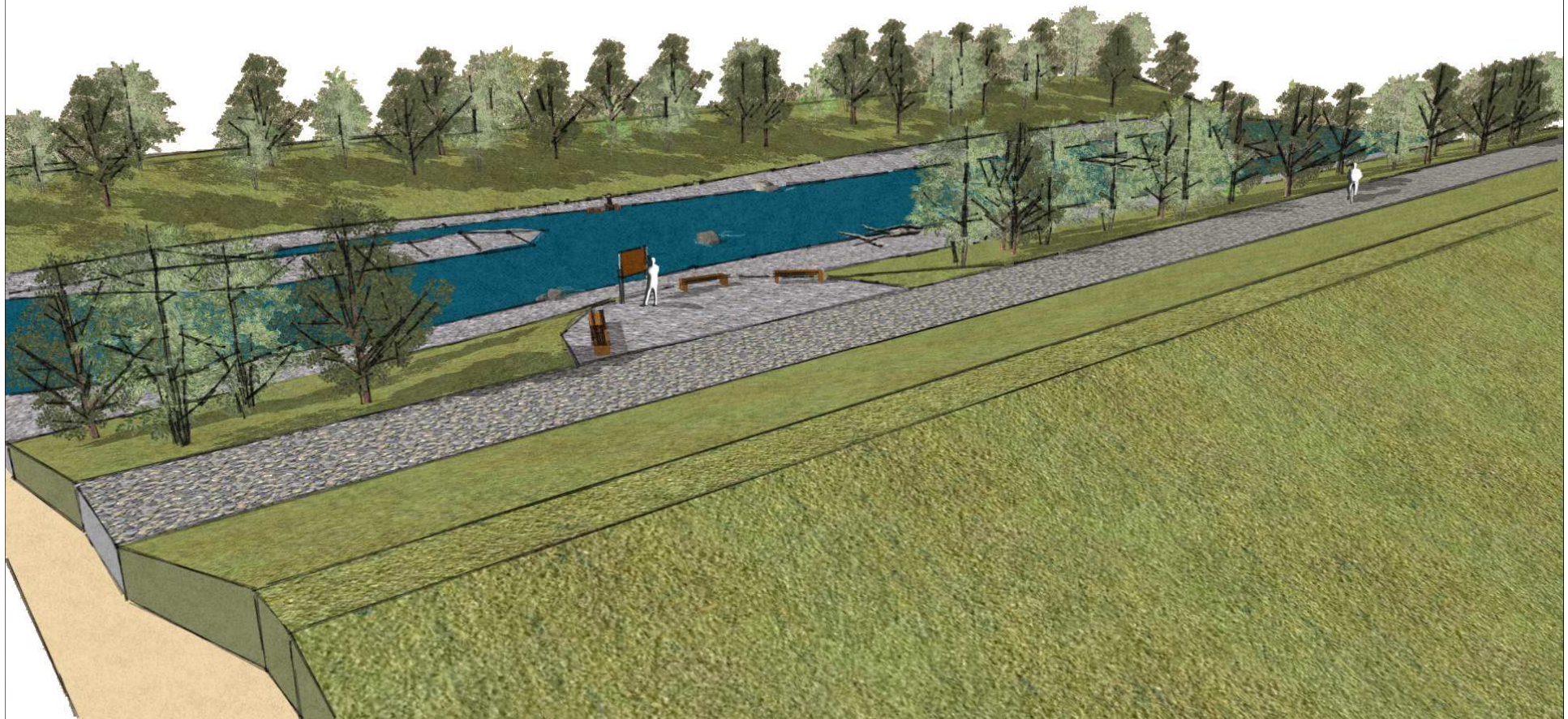
Visualization alternative 2: River widening 1,75 X



Visualization alternative 3: River widening 2,5 X



Visualization alternative 3: River widening 2,5 X



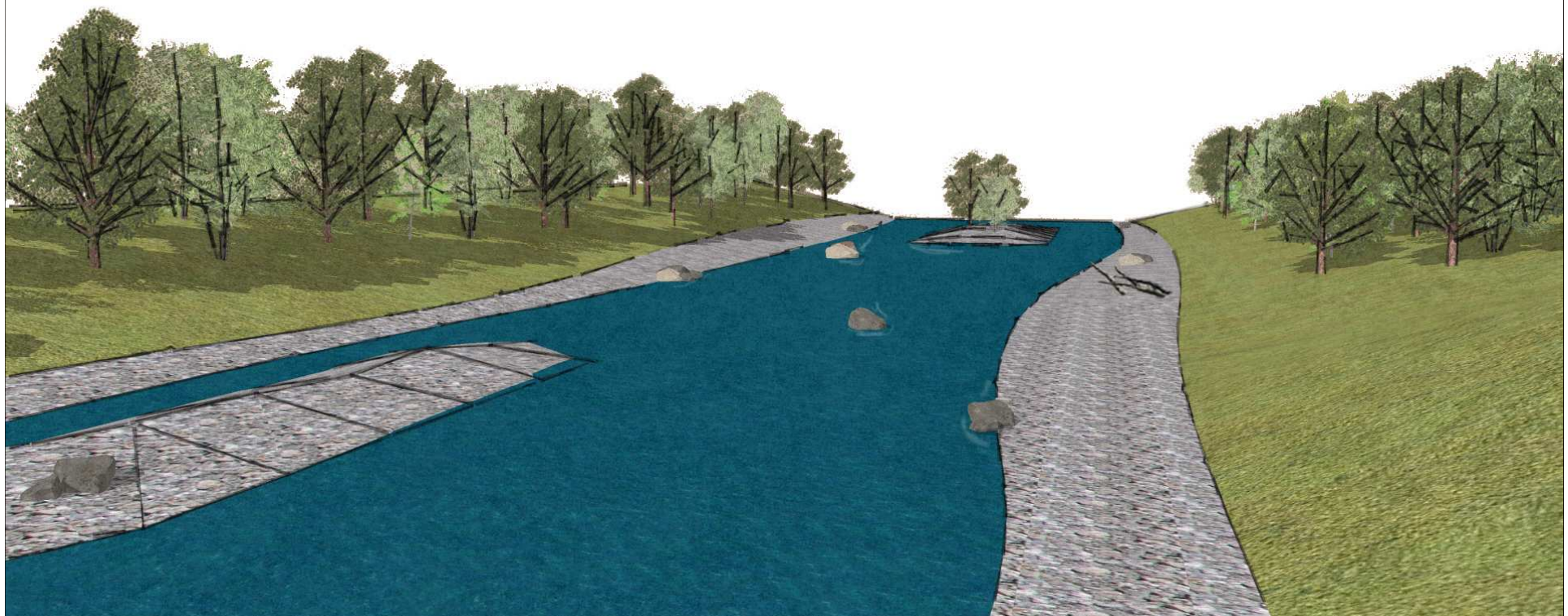
Visualization alternative 3: River widening 2,5 X



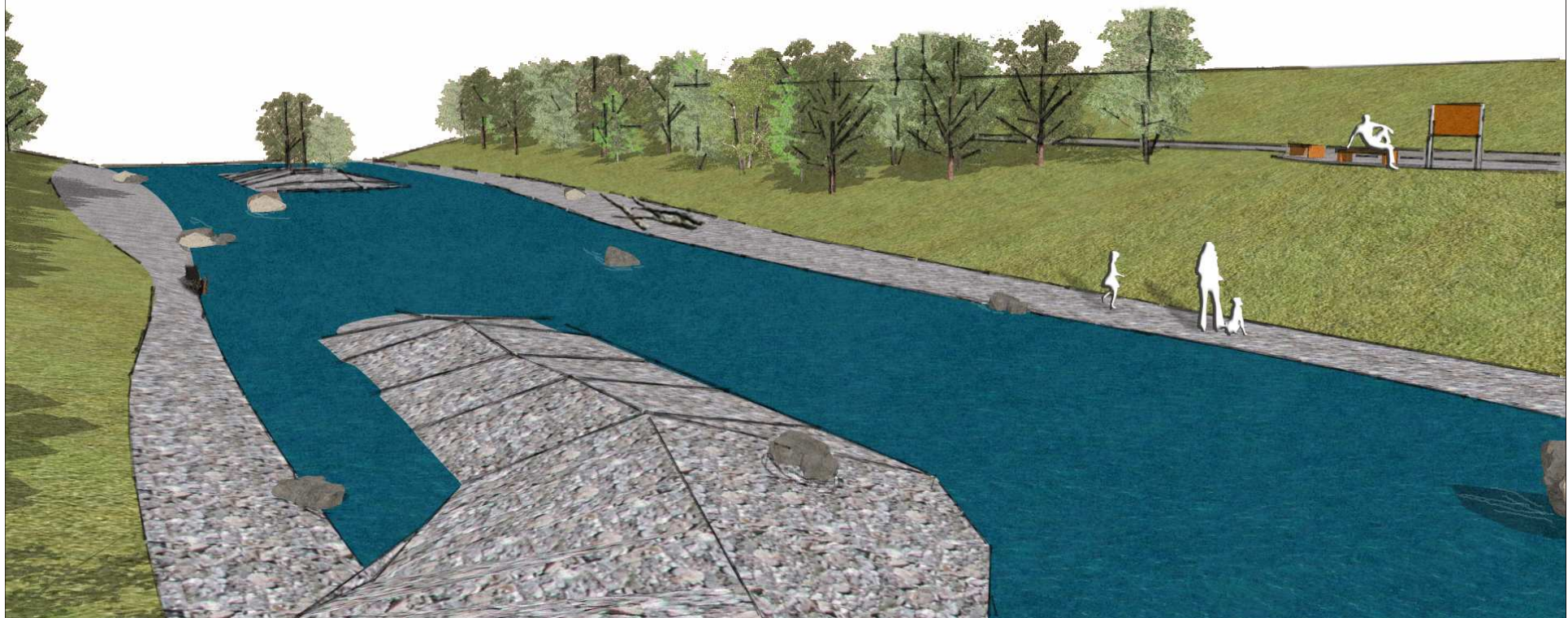
Visualization alternative 3: River widening 2,5 X



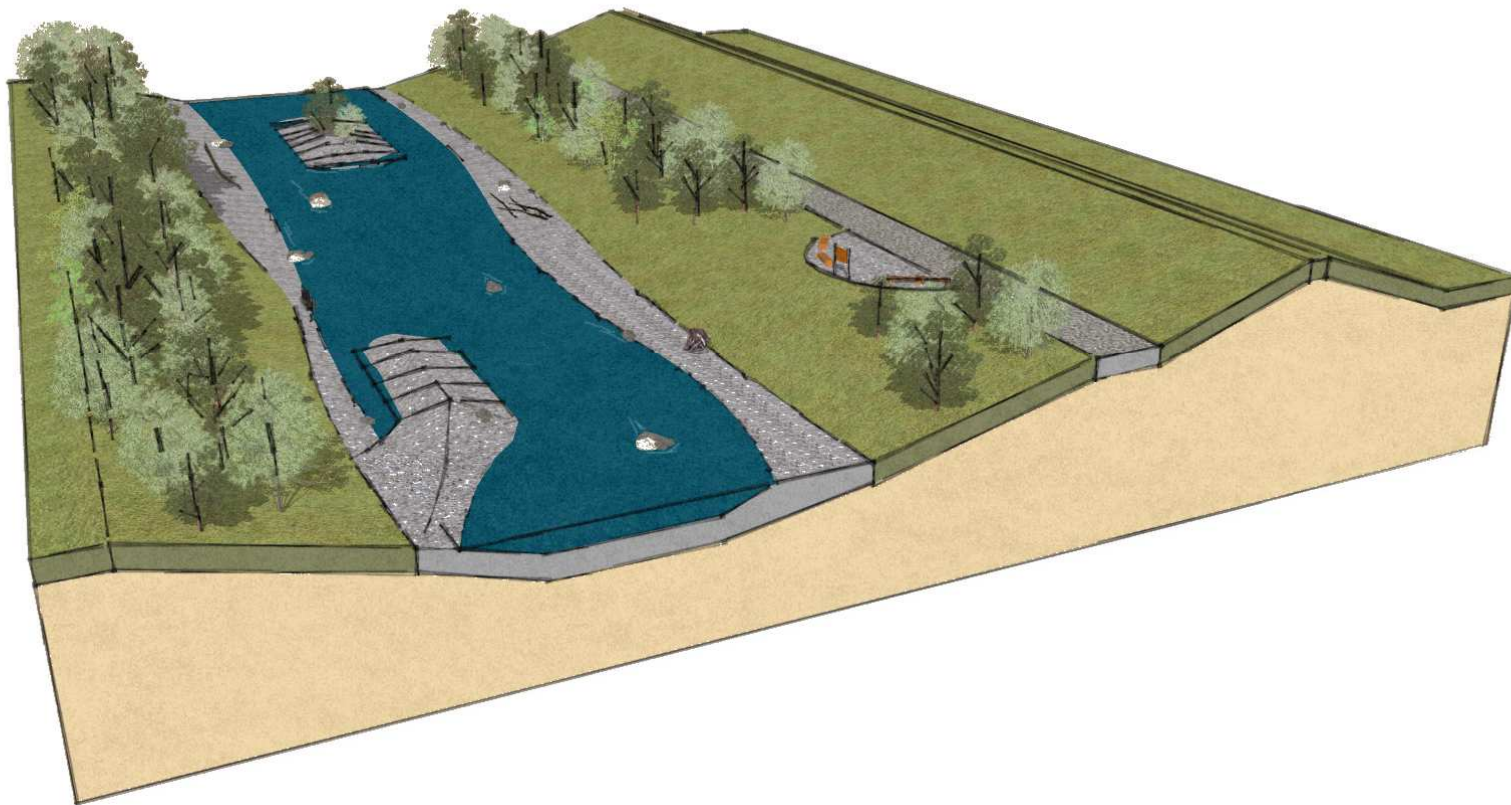
Visualization alternative 3: River widening 2,5 X



Visualization alternative 3: River widening 2,5 X



Visualization alternative 3: River widening 2,5 X



Visualization alternative 3: River widening 2,5 X



CONCLUSIONS:

PARTIALLY OPEN QUESTIONS:

- Land acquisition: How much is needed (from an ecological and flood risk mitigation perspective) – *land acquisition/exchange model is in elaboration*
- Decision regarding the positioning of the levees, bike route and related structures: leaving the bike route unchanged or transfer it on the levee (land demand?) – *detailed planning is in due course*

RESULT:

- **Decision: Flexible implementation of the alternative 2! – this is a “visualized and accepted point of departure” based on at least temporarily harmonized perceptions!**

CHALLENGE:

- **Knowledge transfer to other river corridor management processes**



TA CA VT

The river corridor vision alignment model

THANKS FOR ATTENTION