

Creating space for melting mountains



Country /City
University / School
Academic year
Title of the project
Authors

Switzerland / Zurich
ETH Zurich
2021 - 2022
Spina Dorsela
Marin Lercher, Florian Rüegg

TECHNICAL DOSSIER

Title of the project	Spina Dorsela
Authors	Marin Lercher, Florian Rüegg
Title of the course	cinétique, climate-change adaptation to natural hazards
Academic year	2021 - 2022
Teaching Staff	Martina Voser, Coralie Berchtold, Yann Junod, Sofia Prifti
Department / Section / Program of belonging	D-ARCH Department of Architecture / Landscape Architecture / Studio Voser
University / School	ETH Zurich



" Creating space for melting mountains "

The Upper Engadin area is currently facing various challenges. On one hand, natural hazards, intensified by climate change and the thawing of permafrost, such as floods, debris flows and rockfalls. On the other hand, unplanned settlement growth, leading to spaces that are disconnected from their surroundings, and lacking urban qualities. Consequently, due to human settlements and agricultural expansion, the Engadin mountains have been detached from the river basin of the Inn, with negative consequences for both flora and fauna. "Spina Dorsela" aims to address these challenges and transform them into opportunities. The Inn river acquires a new role and becomes the backbone of the valley. Through renaturation, it can absorb large amounts of water during heavy precipitation, while creating habitats of increased ecological value. Additionally, it offers seasonal recreational spaces for residents and visitors. Perpendicular to the Inn river, forested cross ribs create a new structure in the valley that can mitigate natural hazards from the side valleys and connect the mountain to the river. This structuring of the valley provides the infrastructure for a sustainable expansion of the settlements. In the future, there may even be an alpine city that emerges, developing between and in harmony with the opposing forces of the mountain and the river.

For further information

Máster d'Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal.paisatge@upc.edu

Máster d'Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edificio Omega 1-3
08034 Barcelona - Spain

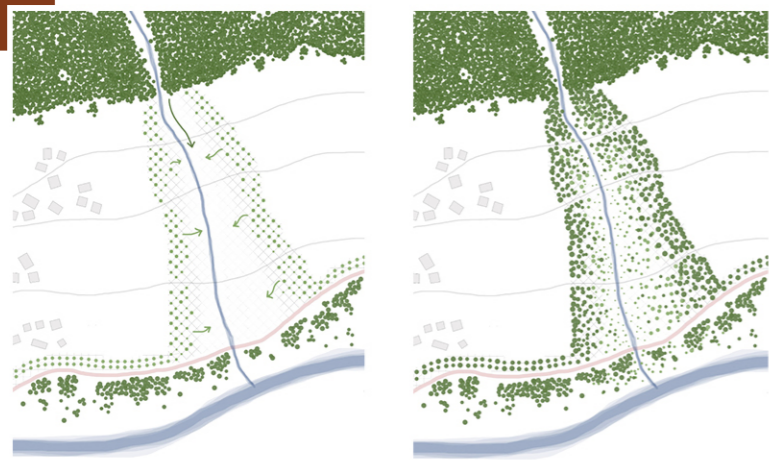
COAC - Colegi oficial d'Arquitectes de Catalunya

Carrer Arcs, 1-3
08002 Barcelona - Spain

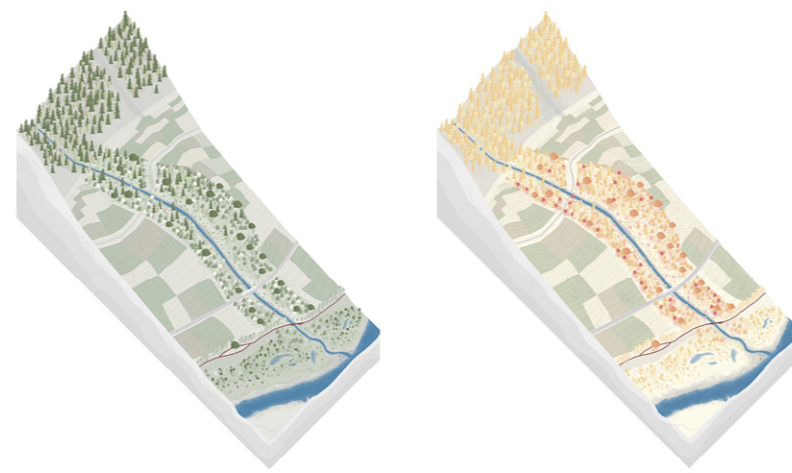
12th International Biennial Landscape Barcelona

Barcelona October 2023

SCHOOL PRIZE



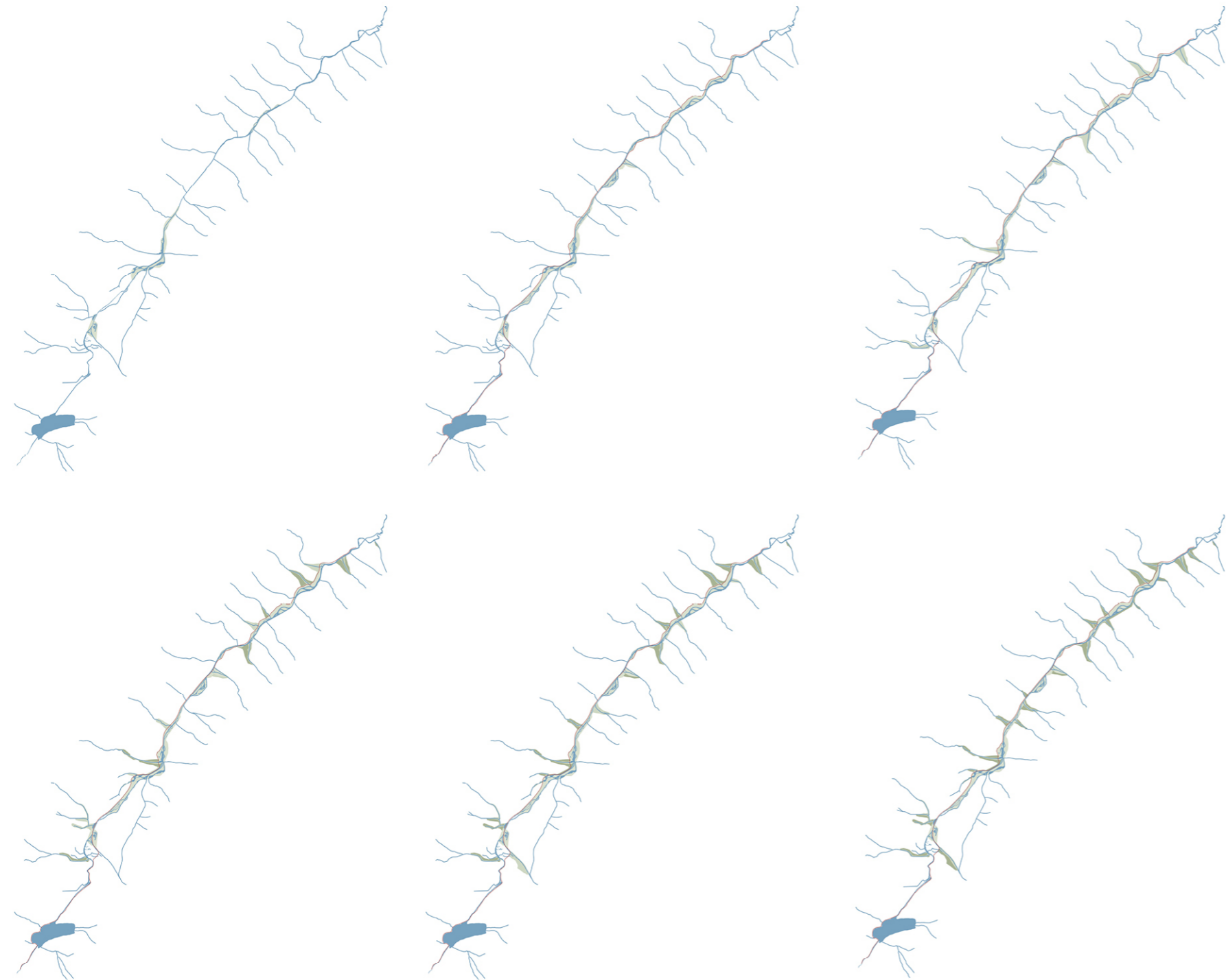
Vegetation strategy _ establishment and evolution



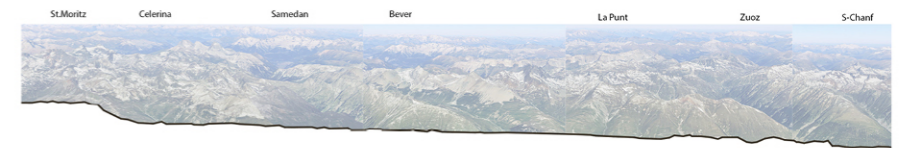
Forested cross ribs _ seasonal changes



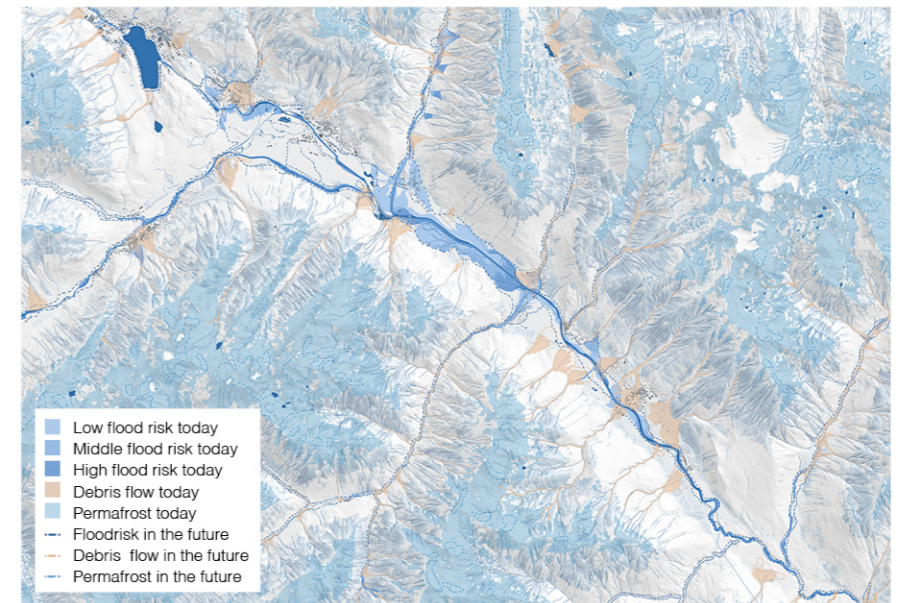
Inn river _ the backbone of the valley



Time evolution of the spina



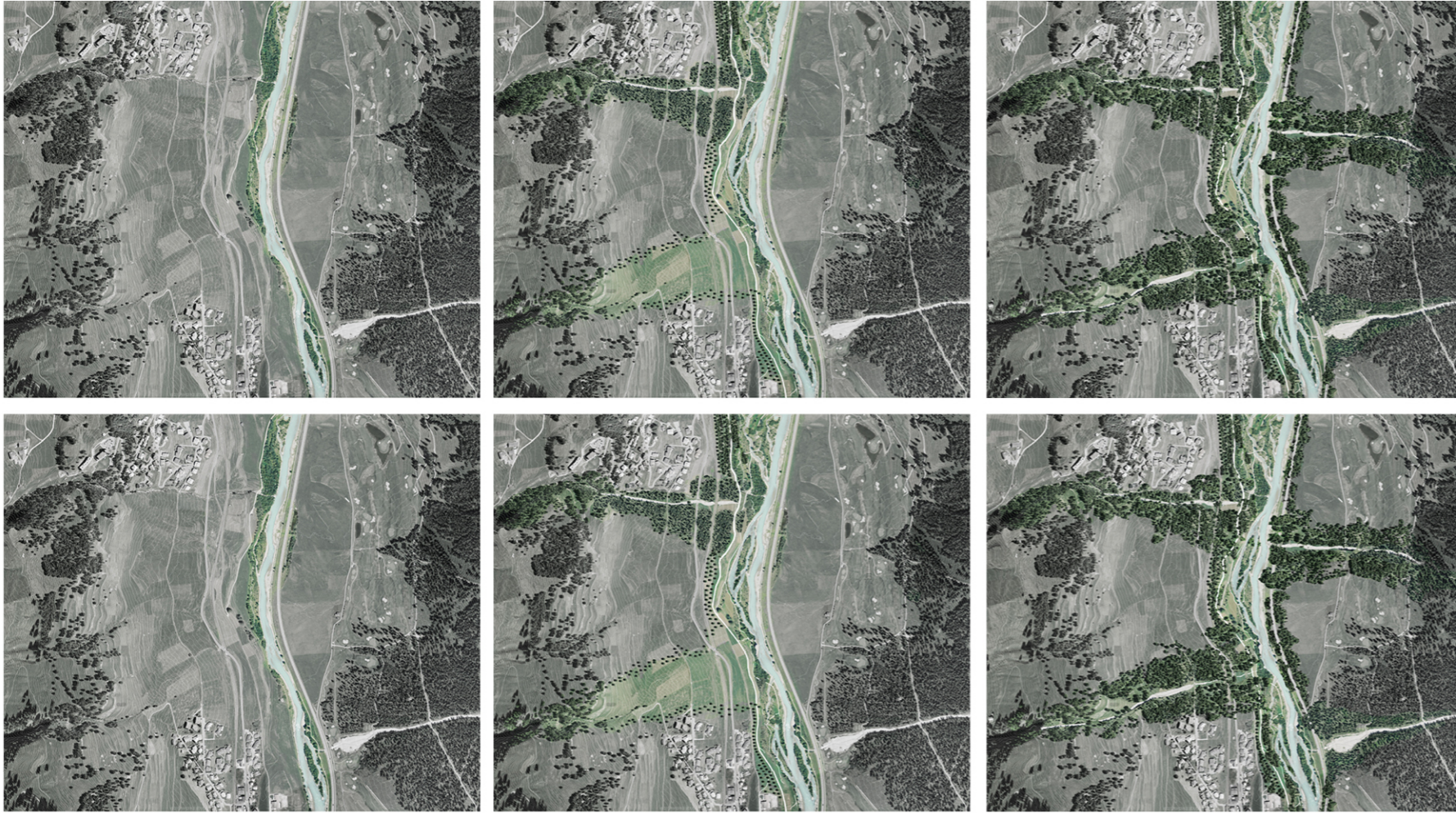
Longitudinal section of the Engadin valley



Analysis map of the natural dangers



Engadin _ climate-change adaptation to natural hazards



The new interventions establishing ecosystems with time



Adaptive landscapes to seasonal changes



Envisioning the Engadin valley as a climate-change proof region

