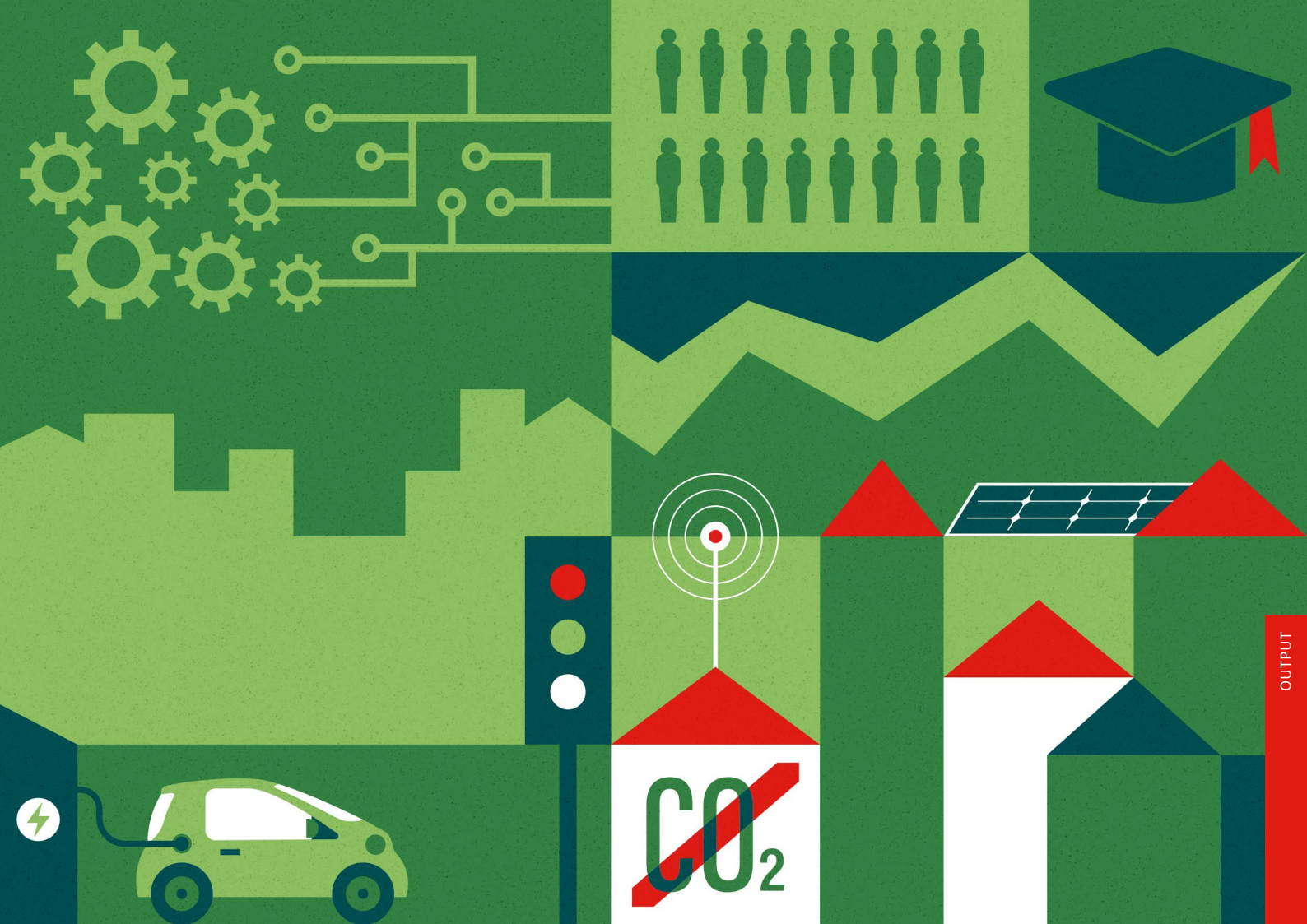




SSPCR 2025
Smart and Sustainable
Planning for Cities and Regions
Conference

BOOK OF ABSTRACTS

9-12 December 2025
Eurac Research
NOI Techpark, Bolzano/Bozen, Italy

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10 years of Smart and Sustainable Planning for Cities and Regions Conference

For a decade the SSPCR International Conference has been shaping the future of urban and regional development. The conference brought together the international scientific and professional community to discuss pathways for more sustainable, resilient, and inclusive cities and regions. The **SSPCR - Smart and Sustainable Planning for Cities and Regions 2025** conference was held from **9 to 12 December 2025**, organized by **Eurac Research** at the **NOI Tech-park, Bolzano** (Italy).

SSPCR 2025 gathered **269 on-site participants from 47 countries** and featured a rich programme including **7 thematic tracks, 16 special sessions, and 7 events**. The discussions addressed the interconnected challenges of climate neutrality, energy transition, mobility systems, social justice, governance, circular economy, and the growing role of data and artificial intelligence in urban and regional planning.

The seven Thematic Tracks covered key domains shaping contemporary planning debates:

- 1.** energy transition towards climate-neutral cities;
- 2.** adaptive regeneration strategies;
- 3.** sustainable mobility systems;
- 4.** just and inclusive urban governance;
- 5.** economics and valuation of the urban energy transition;
- 6.** circular economy approaches;
- 7.** data- and AI-powered territories for planning and management.

A key focus of the conference was the shared understanding that the climate transition can no longer be addressed from a purely technical perspective.

Instead, it requires integrated solutions that take into account the quality of living spaces, social inclusion, community well-being, and the cultural value of places. In this respect, SSPCR 2025 aligned with the principles of the New European Bauhaus, promoting an ecological transition that combines sustainability, aesthetics, and inclusiveness.

Central questions discussed during the conference included how to integrate energy efficiency and mobility within urban systems facing rapid economic and social change; which strategies can enhance urban resilience to extreme climate events; and how planners can effectively use data, artificial intelligence, and digital models while ensuring meaningful community involvement. SSPCR 2025 emphasized the importance of fostering dialogue across disciplines, reinforcing the idea that urban and regional transformation is not only a technical or engineering challenge, but also a cultural and social process requiring new imaginaries, new living models, and innovative forms of participation.

Moments from SSPCR 2025: Daniele Vettorato opening the conference





Closing Plenary Session: “Global reflections and future pathways,, - from left to right Rolf Schuett, Pietro Elisei, Giancarlo Cotella, Li Fan, Daniele Vettorato

The SSPCR 2025 conference also featured two exceptional keynote speakers: **Barbara Widera** (Associate Professor at the Faculty of Architecture of Wroclaw University of Science and Technology in Poland, and Board Member of the EU Mission for Adaptation to Climate Change) and **Thomas Maloutas** (Researcher Emeritus at the National Centre for Social Research – EKKE, and Professor Emeritus in the Department of Geography at Harokopio University in Athens, Greece).

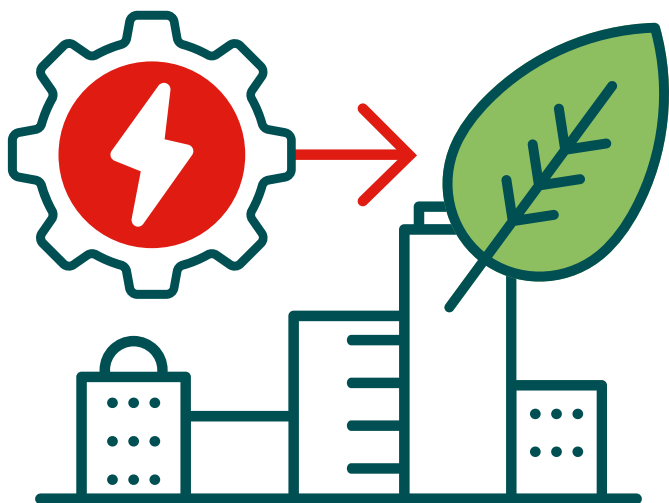


Keynote Speakers: on the left Barbara Widera “Why Beauty, Sustainability, and Inclusiveness Must Be Considered Together,, - on the right Thomas Maloutas “The challenge of inclusiveness,,

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TRACK 2

Adapting Cities and Regions: Transformative Strategies for Adaptive Regeneration

ORAL PRESENTATIONS

053 - Regenerating Mountain Villages through Hydropower Infrastructure. A Case Study from Central Italy

Giulia Azzini (1)

(1) Politecnico Di Milano, Dastu, Bologna, Italy

Keywords: Hydropower Infrastructure, Regeneration, Design-driven approach

Abstract This contribution is part of an ongoing PhD research in Architecture, Urban and Interior Design, focusing on the regeneration of the built heritage in mountain villages of Mediterranean Europe. Specifically, it investigates hydropower heritage as a system of interconnected artifacts that have transformed the mountain from a natural to a cultural landscape, as argued by Michael Jakob (2021).

In contemporary times, hydropower heritage has gained renewed relevance for several reasons. Firstly, it is widely diffused across mountain territories, as a result of the intense exploitation of water streams and rivers between the late 19th and early 20th centuries. Secondly, numerous studies underline its strategic role in the global energy transition, positioning mountain areas as privileged laboratories for experimenting with new development models (Quaranta et al. 2023; Perpiña Castillo et al. 2024). Moreover, these areas often suffer from socio-economic fragility (Carrosio and Faccini 2018), making reflections on their future development increasingly urgent.

Within this framework, the research explores territorial regeneration strategies by reactivating the relationships between space, energy, and natural resources. The Roveto Valley, an Apennine area in the Abruzzo region, Italy, serves as the main case study. Since 2015, the “Liri River and Landscape Contract” has promoted the reactivation of the river corridor and its hydropower infrastructure as a starting point for broader territorial regeneration.

The analysis is conducted across three scales — territory, village, and object — in order to recognise the material consistency and networked value of hydropower infrastructure. Building on this cross-scalar reading, the paper presents a blueprint for the enhancement of the Torlonia hydropower plant, located in the municipality of Canistro. The proposal envisions the building as a catalyst for new cultural, social, and economic practices beyond energy production, reactivating latent dynamics already present in the area.

The ultimate goal is to define a design prototype for similar contexts, emphasising the relevance of

the relationship between energy, space, and natural resources in the regeneration of small mountain villages.

097 - Rural revitalisation in Songyang

Li Fan (1)

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Keywords: Rural Revitalisation, China, Policy, Mountain

Abstract Rural revitalisation in China has traditionally involved the demolition of old housing, construction of new developments, and the relocation of original residents. Since the beginning of Xi Jinping's leadership in 2012, however, national policy has shifted toward a pro-conservation model of urban and rural regeneration. Central to this transformation is the Excellent Traditional Culture policy (2013), which promotes balanced development across urban-rural divides and regional disparities. This policy reframes rural areas not as impoverished backwaters, but as valuable cultural and ecological landscapes. Initiatives such as the Beautiful Countryside programme reflect this reorientation by emphasising infrastructure improvement, environmental quality, and the aesthetic and cultural preservation of rural settlements.

Zhejiang Province exemplifies this policy shift through its early implementation of the Project for Thousands of Villages (2003), which placed cultural heritage at the core of rural development. In Songyang County, a targeted village conservation programme aligns with this agenda, integrating rural heritage into the broader revitalisation strategy. This paper applies UNESCO's Historic Urban Landscape (HUL) approach—which considers built heritage, natural environment, local communities, and intangible culture—to analyse the revitalisation of mountain villages in Songyang. The study argues that the HUL framework offers a robust methodology for understanding rural conservation practices in contemporary China, particularly in mountainous regions where the natural environment is inseparable from settlement identity.

169 - Landscape as Governance: South Tyrol's Holistic Management of UNESCO Heritage in Mountain Territories

Marcella Morandini (1)

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Keywords: UNESCO Heritage Governance, Integrated Spatial Planning, Adaptive Landscape Management, Landscape

Abstract In South Tyrol, unlike in many other Alpine regions, mountain villages are not places of decline but rather sites of dynamic transformation - shaped by shifting economic roles, evolving tourist and social patterns, and climate-related challenges. The key question is not regeneration, but rather how to govern change without compromising the deep inter-connection between cultural and natural landscapes. With the adoption of Provincial Law 13/2023 on the “Coordinated management of UNESCO-recognised sites and elements in the province of Bolzano”, the Autonomous Province of Bolzano–South Tyrol has formalised a comprehensive and anticipatory approach to UNESCO heritage governance. The law integrates the management of the Dolomites World Natural Heritage Site and intangible cultural practices such as the traditional “Waalwege” irrigation systems, alpinism and transhumance. It also establishes a framework to support future inscription processes, ensuring consistency and strategic alignment across sectors. More than a protection mechanism, the law provides the foundation for embedding UNESCO values into spatial planning, environmental policy and local development strategies.

This paper presents the law as a territorial application of the UNESCO Historic Urban Landscape (HUL) approach, adapted to the specific context of mountain regions. Drawing on case studies from the Upper Vinschgau and Dolomites, we explore how interdisciplinary coordination and integrated heritage management inform spatial decision-making processes. South Tyrol's experience offers a forward-looking governance model that treats heritage as an enabler of long-term landscape continuity and adaptive capacity, rather than a constraint. It demonstrates how mountain territories can transition from reactive preservation to strategic, heritage-informed planning, offering a broadly relevant contribution to rural regions worldwide.

259 - Forest bathing as a tool to revitalize mountain areas: an example in the Italian Alps

Alessandro Paletto (1) - Sofia Baldessari (1) – Sandro Sacchelli (1)

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Keywords: Forest Bathing, Forest Therapy, Nature-based Wellbeing, Local Development

Abstract In the last years, the concept of forest bathing—originated in the early 1980s in Japan—has spread worldwide as a practice to improve the human well-being. In literature, many studies have investigated the benefits of forest bathing as well as of other forest-based wellbeing activities from a physiological and psychological point of view, while the socio-economic dimension is still neglected by scientific literature. The present study - conducted in the context of “The role of forests for wellbeing improvement: advances from psycho-physiological analysis and technologies (FOR. WELL)” project - focused on the role of forest bathing in revitalizing mountain and marginal areas in Italy through two steps: (i) exploring the perspectives and points of view of different stakeholders towards the key characteristics of forest bathing activities (i.e. psycho-physical effects on human health, site and stand characteristics of forest bathing trails, and socio-economic impacts); (ii) estimating the economic impact at the territorial level in a case study in the Italian Alps (Parco del Respiro in Trentino-Alto Adige region).

260 - Heritage, Landscape and Social Cohesion Structures in Tadami Biosphere Reserve: the Tonari Gumi System

Paola Fontanella Pisa (1,2,3)

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Keywords: Community Resilience, Social Cohesion, Disaster Risk Reduction (DRR), Climate Change Adaptation

Abstract Tadami is a municipality in Japan's Fukushima Prefecture, consisting of 27 settlements in a mountainous valley. This study explores the cultural expressions of social cohesion identified in Tadami, and their contribution to community resilience to natural hazards, and in response to climate change and rural outmigration-related challenges. Using anthropological methods, the research found that disaster management in Tadami relies on three interdependent approaches: self-help (ijjyo), mutual help (kyoujo), and governmental aid (koujo), with

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Presenting Authors

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