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RISKS AND BUILT ENVIRONMENT: FROM KNOWLEDGE TO PROJECT

For the next ten years, the Global Risk Report-GRR 2023-2024 estimates a growing instability in the context of rapid technological changes, economic uncertainty, global warming and conflicts. Human pressure on the environment is becoming increasingly significant, driven both by the growing global population and its concentration in urban areas, as well as by production processes based on the unstoppable exploitation of natural resources and uncontrolled consumerism.

The obsolescence of buildings and infrastructure networks and the fragility of the territory make the population exposed to these risks particularly vulnerable, also due to the increased intensity and frequency of extreme climate phenomena (Eu-Level Technical Guidance, 2021).

Appropriate management of these risks requires systematic knowledge activities (identification, quantification, evaluation, measurement, monitoring) and prefigurative and planning actions (adaptation and mitigation strategies, actions and solutions), pursuing objectives of prevention, countering and reduction of risks. The general and site-specific aspects must be integrated and interact across multiple dimensions: technical, social, environmental, and economic.

A shift in the trend regarding conventional and/or sectoral planning, design, and organizational practices is therefore necessary, starting from a critical view of the current frameworks and a clear change of perspective. The issue of change, closely linked to risk management, is crucial as it requires considering appropriate reference values that prioritize ethical principles such as precaution, environmental and social protection, and the restoration of the natural environment (Nature Restoration Law, 2024).

If the risk is the main driver of social, political and cultural transformations in the contemporary world (Beck, 2000), its perception at different levels and scales also becomes relevant: indeed, misinformation and disinformation are at the top of the short-term risks identified in the *Global Risk Report*.

Moreover, the perception of risk also has long-term effects, making it essential to carry out informational actions and actively involve communities in issues that significantly impact people's safety, health, and well-being. Adaptation to these risk scenarios must also consider their evolution over time, adopting management strategies based on anticipatory approaches, as indicated by the *Sendai Framework for Disaster Risk Reduction* (UNDRR, 2015) and the *European Strategy for Adaptation to Climate Change* (European Commission, 2021).

In this complex scenario, the Call for Issue No. 31 of TECHNE focuses on the risks arising from human actions on contexts, the environment, and nature. It also addresses those impacting the built environment, with particular emphasis on the repercussions affecting the physical, spatial, and organizational configurations of buildings, cities, and territories, in relation to key aspects such as health, safety, the conservation of cultural and natural heritage, and biodiversity. Among these risks, as also stated by the *Global Risk Report*, there are those most considered by the scientific communities for the dangerousness of the phenomena and the intensity of the impacts. The most relevant, in the short and long term, are represented, for example, by the risks due to climate change, extreme weather events, critical change to Earth systems, environmental pollution, loss of biodiversity or the collapse of ecosystems, but also to misinformation and disinformation.

Contributions may concern interventions at different scales and in different contexts, aimed at preventing and managing risks, to reduce their impacts but also to mitigate their causes in a medium and long-term perspective, in order to overcome merely contingent and emergency responses.

Authors are, therefore, invited to present and critically discuss the results of studies, research and design experimentations related to the management and mitigation of anthropic risks (caused by human activities, such as industrial activities, transport, environmental pollution, greenhouse gas emissions, etc.) and natural and environmental risks that, in addition to anthropic ones, act on the built environment (earthquakes, floods, climate change, landslides, instabilities, etc.), highlighting their impacts on urban settlements as well as in the socioeconomic and environmental fields, **contextualizing their contribution in relation to the state of the art and one of the following topics:**

1. Risk perception. For example, processes, best practices and tools to inform, empower and actively involve individuals and communities in risk analysis, assessment, prevention and management actions.

2. Risk prediction and prevention. For example, monitoring and on-field studies, predictive models and simulations, also for impact assessment, strategies for building risk scenarios, etc.

3. Risk management. For example, integrated knowledge and management models, decision support guidelines, projects and technologies for the recovery and/or restoration of ecosystem balances, interventions for risk mitigation and adaptation of buildings, settlement systems and cultural and natural heritage.

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