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Clustering and evaluation of adaptation measures addressing climate change induced impacts in the transportation sector

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Climate change related disasters and extreme weather events are expected to significantly increase the risk of damages on networks, systems and human assets.

In view of these anticipated adverse effects, growing attention is already placed on adaptation measures, in the form of preventive actions aiming to minimize induced hazards' negative impacts and to enhance cross-sectorial resilience.

Transportation, as a key economic sector of today's society, is no stranger to this regime.

The expected climate-related changes will impact transportation infrastructures, networks and operations, independent of transportation means; an argument that, given the increased frequency and intensity of extreme weather events and natural hazards observed worldwide in recent years can no longer be dismissed as mere speculation. Rather, it should be addressed as a reality.

Thus, it is pivotal to tackle such effects in a structured and coherent approach, highlighting those sets of measures and policies that can efficiently deal with climate change-induced impacts. Yet, such approaches remain largely undiscovered.

Although a lot of work has been conducted both at European and at international level on individual adaptation measures that address climate change induced impacts in the transportation sector, systematic and integrated methodologies that can conclude on the optimal groups and sets of measures, actions, policies and strategies along with their respective order of implementation, temporal and financial requirements and performance assessment are only reported isolated.

The objective of this session is to bring together researchers and public and private stakeholders, to reveal innovative approaches for identifying optimal sets of adaptation options on the one hand and currently applied good practices that can address climate change impacts on the other.

Presentations and discussions held during this session will enrich the current level of knowledge on adaptation options and highlight performance evaluation methodologies and approaches that can culminate in optimal (in terms of cost, time and contribution to the vulnerability reduction of transport systems) selection of adaptation measures in the field of transportation.