Built Environment leArning for Climate adaptatiON

BEACON aims to develop trans-disciplinary and innovative research-based learning in the built environment to tackle climate change in coastal regions

Climate change is one of the greatest environmental threats affecting all countries with almost no exception. Coastal areas are some of the most vulnerable due to, in addition to changes in temperature, precipitation and more frequent flooding, they are highly impacted by sea level rise and tidal waves, which accelerate coastal erosion. As the built environment demonstrates a high fragility and vulnerability to long-term climate impact as well as extreme hazards, strengthening the coastal built environment with an effective level of resilience is vital if they were to withstand predicted climate change impacts. Although there is an urgent need to translate awareness of climate change impacts into tangible adaptation measures, recent studies have shown that there are significant knowledge gaps in relation to both risks and the effective responses within the context of the built environment.

Levels of preparedness of construction and property industries, in terms of having viable and sustainable adaptation plans to tackle climate change, are lagging behind and unsatisfactory. There is an urgent need for further education, an enhanced knowledge base and skills upgrading in climate change adaptation to reach a resilient and sustainable built environment.

In order to address climate change and build resilience to disaster and climate change impacts, a multi-stakeholder, multi-sector and a trans-disciplinary approach is needed.

Project partners:

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Objectives

- Identify climate change impact on the built environment in coastal regions
- Develop a coherent framework for integrating the requirements of the Paris Agreement with the Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR) in the context of the impact of climate change on the built environment in coastal regions
- Recognise the opportunities for climate adaptation in the coastal built environment in line with the coherent framework
- Understand skills gaps in climate adaptation in the built environment to tackle climate change in coastal regions
- Develop a trans-disciplinary and innovative research-based learning to improve competencies in climate change adaptation in the built environment in coastal regions

Project Outputs

- A review of the climate change impact on the coastal built environment
- A synthesis report on opportunities and constraints for integrating Paris Agreement with the Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR) in the context of built environment in coastal regions
- A comprehensive framework for climate change adaptation in design, construction and retrofitting aligning with SDGs and SFDRR
- Review of the role of the built environment stakeholders in climate change adaptation in the built environment and associated skill gaps and mismatches
- Guidance notes with case studies and good practices on implementing local adaptation strategies in the built environment in coastal regions
- A trans-disciplinary and innovative research-based learning platform in the built environment to tackle climate change in coastal regions and the proposed competency framework
- Development of curricular of the proposed learning platform

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