From climate vulnerability to climate resilience: an applied research for Catalan urban systems

Josep M. Torrents Abad*†

1Polytechnic University of Catalonia - BarcelonaTech (UPC) – Spain

Abstract

(Presentation related to the URB-Net PhD workshop on urban resilience and transition) Climate change impacts on urban systems are one of those global challenges that planners and decision makers must face without delay in order to promote sustainable urban developments worldwide. Resilience framework seems to be appropriate as climate is uncertain and uncontrollable. This presentation belongs to a PhD research aimed to identify the opportunities and constraints for adaptation to climate change through urban planning in the context of improving the resilience of urban systems in Catalonia (Spain), especially in the metropolitan region of Barcelona.

Cities in Mediterranean climates are exposed to similar impacts according to scientific literature but adaptive capacities differ in every region, so local approaches are necessary. Firstly, there is a practical need to know which the real vulnerability of every urban system is before deciding how climate change adaptation can be integrated in the existing planning instruments or in new ones. In this context, indicators of vulnerability, which can be applied in the strategic environmental assessment of plans and programmes, are a useful tool to recognize the spatial distribution of vulnerability to climate change.

Through a Delphi survey, first research outputs show an integrated climate vulnerability index for Catalan municipalities, focused on urban areas. This common frame of reference displays a map of resilience needs for the region to be responded at the local levels and becomes a precious information to prioritise local action in the near future.

Keywords: Adaptation to climate, Planning, Urban resilience

*Speaker
†Corresponding author: josep.torrents@gencat.cat