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## Cooperation between public administration and scientific research in raising awareness on the role of urban planning in responding to climate change in Portugal

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Following the IPCC predictions of climate change, even considering one of the "best" scenarios (B1), temperature will rise circa 2°C by 2100. In southern Europe, predictions also indicate a greater precipitation variability, that is the increase in drought frequency, together with an increment of flood risk, with detrimental impacts on water availability and quality, summer tourism and crop productivity, among others. Urban areas create their own local climate, resulting in higher temperatures (UHI), modified wind patterns and lower air quality, among several other consequences. Therefore, as a result of both global and urban induced changes, the climate of cities has suffered several modifications over time, particularly in sprawling urban areas.

In November 2007, the ministers responsible for spatial planning and territorial cohesion of the European Union, gathered at the Azores Informal Ministerial on Territorial Cohesion during the Portuguese Presidency, considered climate change to be one of the most important territorial challenges Europe is facing and stated that "our cities and regions need to become more resilient in the context of climate change". They also agreed that spatial and urban planning is a suitable tool to define cost-effective adaptation measures. Furthermore, the Ministers committed themselves to put mitigation and adaptation issues of climate change into the mainstream of spatial and urban development policy at national, regional and local level. These decisions have lead to different actions in the Member States.

In Portugal, the new Policy for the Cities POLIS XXI has selected the relationship between climate change and urban development as one of the key issues to be addressed by projects initiated by local authorities and submitted for co-financing through the OP "Territorial Enhancement" of the NSRF.

This paper presents one of the actions taken by the Portuguese Directorate General for Spatial Planning and Urban Development (DGOTDU), the national authority responsible for the technical implementation of the Policy for the Cities, in order to raise awareness on this issue and stimulate local authorities to carry out projects aimed at enabling urban communities to increase their resilience to climate change.

A booklet on climate change in urban areas, prepared in collaboration with the University of Lisbon, will soon be edited by DGOTDU. This booklet, addressed to local decision makers, both politicians and technicians, starts by giving an overall view of the state of the art science-based knowledge on climate change, both on global and regional scale. It moves on to explain the challenges raised by climate change in Portugal, focusing on urban areas and urban development issues. The content makes use of the results of previous research, such as the results obtained from the SIAM project and other studies on urban climate, carried out by the University of Lisbon. These results were complemented with a focused approach on specific urban development issues, through collaboration with DGOTDU. The booklet ends by presenting selected examples of "good practices", aimed at either tackling the negative impacts or enhancing the potential positive consequences of climate change. An extensive reference bibliography for further consultation is also included.