

TOPEUM - Research Project Fact Sheet

Title of Project	Towards an optimisation of urban planning and architectural parameters for energy use minimisation in Mediterranean cities - completed
Project Acronym	TOPEUM
Funding Program	Strategic. Networking of RDI Programmes in. Construction and Operation of Buildings
Project Identifier	URBANNET
Total Budget	≈ 400000€
Starting – Ending Date	03/2009-02/2012
Consortium	<ol style="list-style-type: none"> 1. University of Cyprus, UCY; Coordinator (CY) 2. Höskolan i Gävle (SW) 3. Bulgarian Academy of Science - National Institute of Meteorology and Hydrology, NIMH (BG) 4. EXA-High Performance Computing (CY) 5. ATLANTIS (CY)
Project Objectives	<p>The main objective of the project was to investigate the influence of different urbanization characteristics, such as the geometry and density of buildings within a city, as well as of the building materials, on the intensity of the urban heating effect, for the case of a typical city in Cyprus. The key goal of the proposed project was to improve the scientific understanding of how land cover changes associated with urbanization in Southern Europe, affect local climate, surface energy flux, and air quality characteristics. Allied with this goal was the prospect that the results from this research would be applied by urban planners, environmental managers and other decision-makers, for determining how urbanization has impacted the climate and overall environment and in order to promote sustainable development.</p>
Work Packages	<p>WP1: Project Management</p> <p>WP2: Identification of representative urban canopy areas</p> <p>WP3: Review of the urban heat island studies in the participating countries</p> <p>WP4: Wind tunnel measurements of velocity field</p> <p>WP5: Field measurement of heat flux at buildings</p> <p>WP6: Computational Modelling of urban air flow without and with heat transfer</p> <p>WP7: Identification of best practices in urban planning</p> <p>WP8: Cost Benefit Analysis</p> <p>WP9: Project Dissemination and Exploitation of Results</p>
External Reference	-
Role in the project	Principal Investigator