



Trying to keep cool within urban heat islands

Urban heat islands are a new type of microclimatic phenomenon that causes a significant increase in the temperature of cities as compared to surrounding areas. Although experts consider this an urgent EU public health concern, there are too few policies to address it. UHI seeks to encourage a transnational discussion of urban heat islands, as well as efforts to measure and address the problem.

UHI encourages cooperation between climatologists and urban planners in an effort to make our cities healthier places to live. Along with raising awareness, the project also supports efforts to monitor urban heat islands, conducts pilot efforts aimed at mitigation, and promotes longer-term policy solutions.

Cities and metropolitan areas are the engines of economic growth and employment; they play a key role as centres of innovation and they are on the frontline of social cohesion and environmental sustainability. Unfortunately, they also foster environmental challenges, like the urban heat island

effect, which may be exacerbated by climate change. The phenomenon of urban heat islands is caused when paved surfaces greatly outnumber the green areas in a city. The problem has been known and studied since the 1980s. Buildings and roads absorb the heat produced during the day and then release it, like giant heaters. As a result there is often big difference in the temperature between a city and its surrounding areas. Urban heat islands produce multiple negative effects in a city: They can increase energy consumption for cooling homes, offices and shopping centres, and cause more frequent episodes of blackouts, due to the

With the new Plan for Urban Re-development, and the help of the UHI project, the city of Modena will be able to reshape the Artisan Village in a more functional manner that better meets the needs of citizens and companies.

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excessive demands for electricity. But even more serious are the effects that the higher temperatures have on the health of citizens.

Raising awareness, pilot projects

An important part of the work of UHI is to bring attention to the problem on a transnational level. UHI seeks to examine possible climate change adaptation measures that can help to alleviate this human-made microclimate phenomenon and show how these strategies can be practically applied by policy makers and citizens.

The project addresses the problem, and helps us learn more about it also through pilot initiatives. The pilots involved feasibility studies and strategies for appropriately altering planning rules and governance to tackle the problem of urban heat islands. The pilots were carried out in eight metropolitan areas: Bologna/Modena, Budapest, Ljubljana, Lodz, Prague, Stuttgart, Venezia/Padova, Vienna.

The feasibility studies carried out in the pilot areas focused on the specific morphology of EU urban areas, which are often characterised by the presence of historical old towns. The results of the pilots are therefore useful for other European local administrators who are seeking to integrate sustainable development approaches in their territorial planning policies.

The plans developed by the pilots can be integrated into the national and regional programmes for urban and land planning. They can also contribute to the application of an integrated Decision Support System, where a systematic diagnosis of climate change-related problems foster solutions that are encouraged by policymakers in an effort to elaborate long-term and effective programmes for the development of the urban areas.

1810

Year when urban heat island phenomenon was first investigated and described by Luke Howard

16

Percentage of cities becoming a megacity by 2015

8

Pilot models applied by the project representing different mitigation measures

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