

ATHENS TO ITS COMBAT HEAT ISLAND EFFECT WITH A CITY OF GREEN ROOFS?



With over three thousand hours of sunshine per year, Athens, and Greece in general, is blessed with the gift of sun. And as a result, solar heaters rule the cityscape. Establishing their presence in the 1970s, solar heaters became popular in Greece, and since then their use has continued to increase.

Greece ranks second amongst European countries for installed solar capacity, just after Germany. Compared to the recent sharp increase of solar energy use in many European countries, Greece's rates have been stable since the 1990s – at remarkably high rates.

Almost three million square meters of photovoltaic panels are spread all over Greece, serving more than a million households. Greece has an important role in solar technology innovation and production.



Even though these mini, solar rooftop farms are mostly seen as a nuisance to the eye, no one can deny that using solar energy can only be beneficial to the community and the urban habitat.

On these rooftops, under the same sunny sky, another environmental project is trying to gain ground, green terraces. Are roof gardens the answer for the trees that Athens so desperately needs, but cannot provide land for?



Planting trees all over the city's rooftops is an idea that has been around for a long time in Athens. Roof gardens are commonly encountered on classy buildings and hotels and considered an eccentric decoration.



According to environmental studies, green rooftops can improve the city's microclimate and assist in the atmosphere's purification. Additionally, they can mitigate the energy consumption of their buildings.

Soil and plants are effective insulators, preventing heat losses during winter and maintaining lower temperatures inside buildings during the summer.

The age and design of buildings govern the realization of the green terraces.

Structural failures of the roof, due to the increased static load, and dampness related problems are common.

In terms of legislation, green rooftops have been described as essential for Athens, so as to be compulsory. In the past, Athens Municipality tried to organize these attempts by carrying out various campaigns, but it didn't manage to attract many followers. Currently, government grants a percent of the expenses and also has scheduled the transformation of the terraces on eighty seven public buildings. In comparison with the casual abandonment of green public spaces, the communal character of the terrace, on apartment buildings, could be the answer to a successful maintenance of green rooftops.

As strange as it may sound, the rooftops of Athens are spawning grounds of environmental sustainability in the core of urban landscape. It remains to be seen if in the near future solar farms and green fields on the terraces will compose the modern-day hanging gardens.

Source: <http://www.globalsiteplans.com/environmental-design/athens-to-its-combat-heat-island-effect-with-a-city-of-green-roofs/>