



COOL RETROSPECTIVE: Cool Surfaces in the News

Each quarter, the Global Cool Cities Alliance (GCCA) compiles news covering cool roofs, cool pavements, and a wide range of urban heat island-related issues in a report we call *Cool Retrospective*. In this issue, we take a look back at the fall of 2014.

Further Evidence That Cool Roofs Make Cooler Cities

Dr. Ronnen Levinson, a researcher with the Lawrence Berkley National Laboratories (LBNL) Heat Island Group and GCCA Board Member, presented cool roofs as one of LBNL's 8 Big Ideas at an event in October. His presentation, "[Cool Roofs through Time and Space](#)", featured LBNL's Heat Island Group's [new California Cities Albedo Map](#). You can also hear Dr. Levinson talk about their latest project in [an interview with KPCC-FM](#).

The IPCC's [Climate Change 2014: Mitigation of Climate Change](#), notes that "several opportunities for heat island reduction, air quality improvement and radiation management" by increasing the albedo of building roofs and pavements can be strategies for both climate change mitigation and adaptation (page 699 of the full report).

Urban Heat Islands and Climate Change Combine to Threaten Vulnerable Populations

[A new Harvard study](#) maps the most vulnerable parts of urban heat islands, and finds that low-income communities are often left to deal with the worst effects of extreme urban heat. The study

also notes that cool roofs can help bring down temperatures.

[Climate Central](#) analyzed summer temperatures in 60 U.S. cities (1970 to date) to better understand the combined impact of climate change and urban heat islands. [The study](#) found that 57 cities had measurable urban heat island effects, and that single day heat island differences reached 27 degrees Fahrenheit in some cities.

Cities are Taking Action on Extreme Heat

[In September](#), New York City Mayor de Blasio issued the [One City Built to Last](#) plan that continues the NYC CoolRoofs program and sets an annual goal of coating one million square feet of rooftops with reflective paint over the next ten years. By 2025, this is expected to reduce citywide GHG emissions by 3,500 metric tons of carbon dioxide equivalent, generate \$1 million in annual energy cost savings, and train 500 New Yorkers who will be prepared for jobs promoting energy efficiency in buildings.

A new law requiring cool roofs on new homes [went into effect](#) October 1st in Los Angeles. This law also requires roof replacements to meet reflectivity standards. You can find more information on this city code [here](#) and [here](#).

Researchers at Arizona State University have found that a combination of [increased tree canopy and deployment of white roofs](#) can help lower temperatures in Phoenix.

A video report on the [White Roofs Project](#), a private volunteer effort to coat roofs in New York and elsewhere.

White Roofs Around the World

The Cool Roof Project – through the Asian Cities Climate Change Resilience Network, and the Rockefeller Foundation – is installing cool roofs in Indore city, India, and residents are already getting relief from the urban heat. Read more about it [here](#).

[Sanctuary magazine](#), which covers the design and construction of sustainable housing in Australia, recommends a white roof for people wanting to combat rising temperatures down under. As Dr. Dominique Hes, senior lecturer in architecture at Melbourne University says, “[i]f in doubt, go white.”

A recent study shows that the urban heat island effect is turning the upper floors of older tenement flats into ovens in China. [Researchers are encouraging](#) government agencies to help residents beat the heat by offering subsidies to paint rooftops white.

Cool roofs come in a variety of colors, and they all help bring down urban temperatures. It all depends on the reflectivity of the paint, according to [this report](#) from the Philippines.

More Evidence That White Roofs Make Sense in Northern Climates

The [city of Worcester](#), Massachusetts is painting municipal and public school building roofs white to conserve energy and save money as part of their Climate Action Plan.

A [recent study](#) by researchers at the University of Wisconsin in Madison shows that urban heat islands can be found in northern climates, where white roofs and [reflective surfaces bring](#) relief to city residents in hot weather.

Contact GCCA

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