

Urban Green Spaces and Climate Change: A Definitive Tool for Heat Island Effect Prevention

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R.K., B.K., J.L., F.P., R.W., J.B. – Data gathering, synthesis, and poster creation

What is the Heat Island Effect?

It is a heating effect created by major cities from higher pollution from greenhouse gasses and electricity use. The heat island effect is a major contributor to global climate change, as it is constantly creating new heat and destroying old cooling sources through urban land use. In this meta-analysis, we set out to inquire whether parks, gardens, and general green spaces could be a potential solution to this global problem.

Why Use Urban Green Spaces?

Our meta-analysis has determined that these spaces are essential in combating the climate change.



Figure 1: Central Park, NYC, USA. This is best example of an effective urban green space.

Results

ALL green spaces globally showed significant cooling of air and radiation temperatures, in fact they offset enough heat to cool their surrounding areas. This cooling was so effective, that even small parks exhibited significant temperature changes.

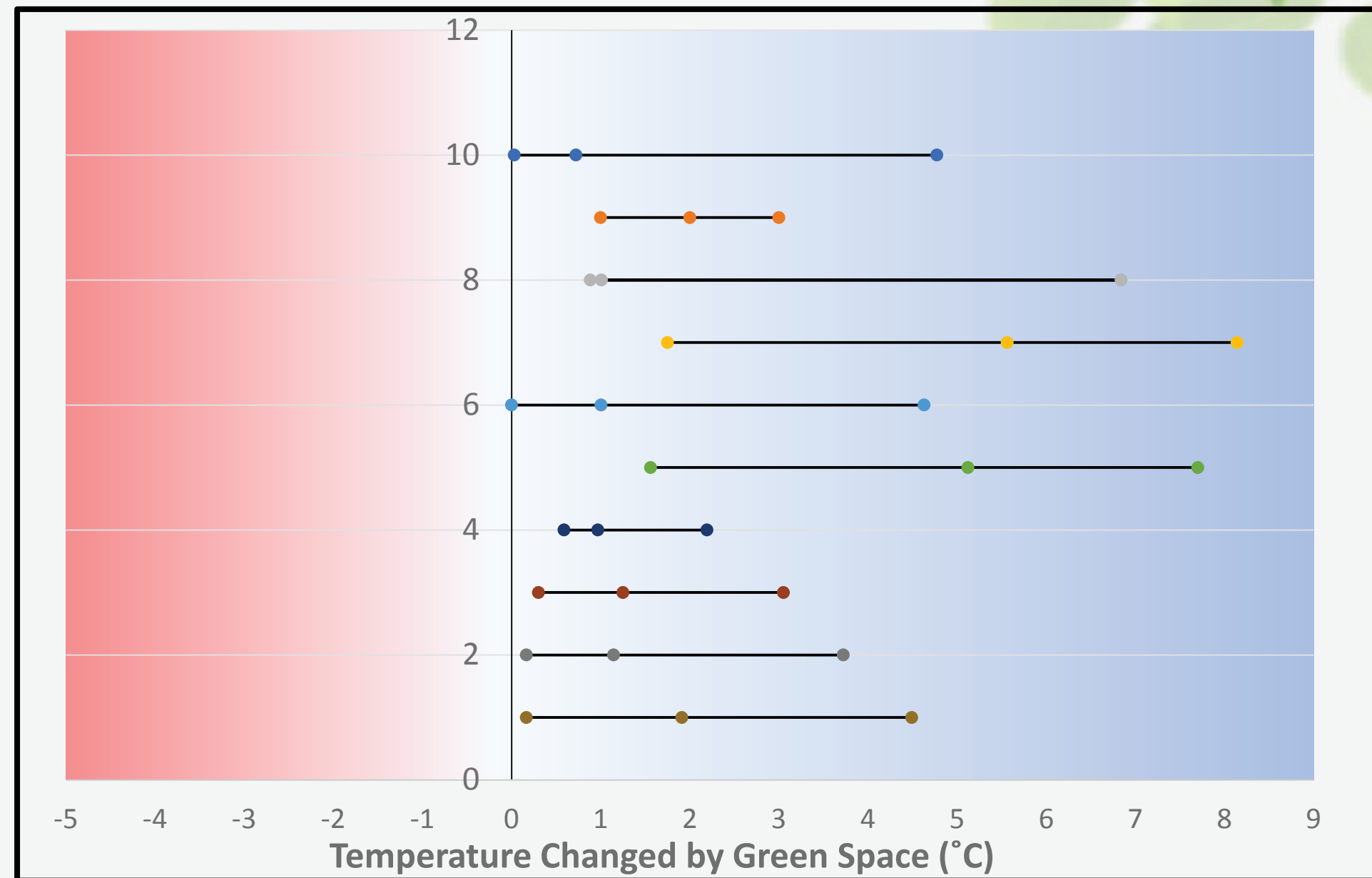


Figure 2: Forest plot of temperature data from research papers used in this meta-analysis. The red shows which studied green-spaces heated up an area and the blue shows which cooled down examined locales.

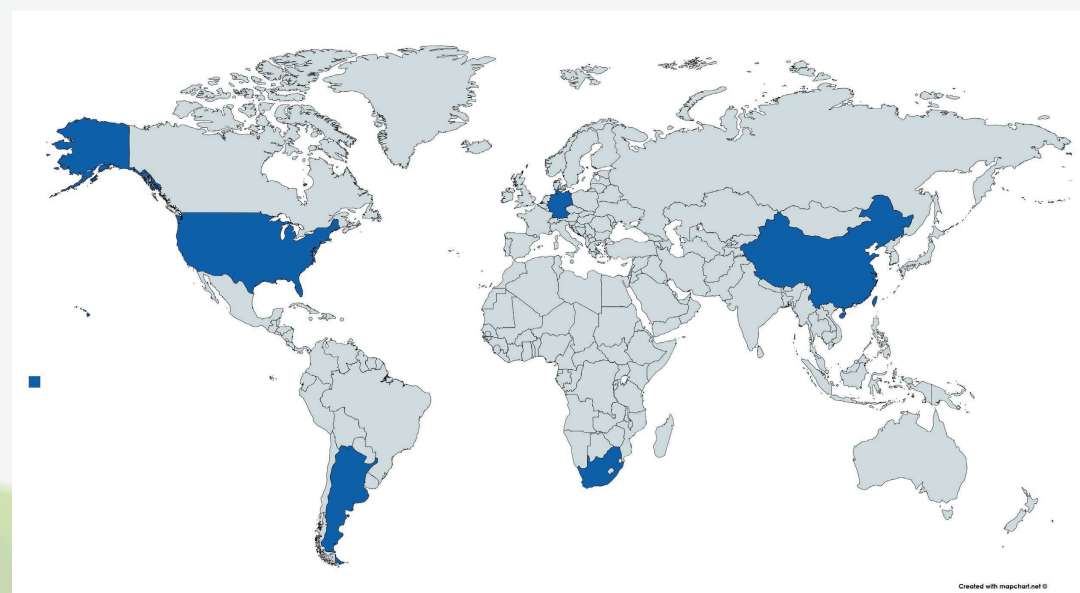


Figure 3: Frequency map of the origins of meta-analysis papers.

Implications

- Decrease heat island effect
- Slow down climate change
- Facilitate cleaner air resources
- Boost human and mental well-being
- Optimize urban space use
- Boost biodiversity, sustainability and reduce species loss in urban areas