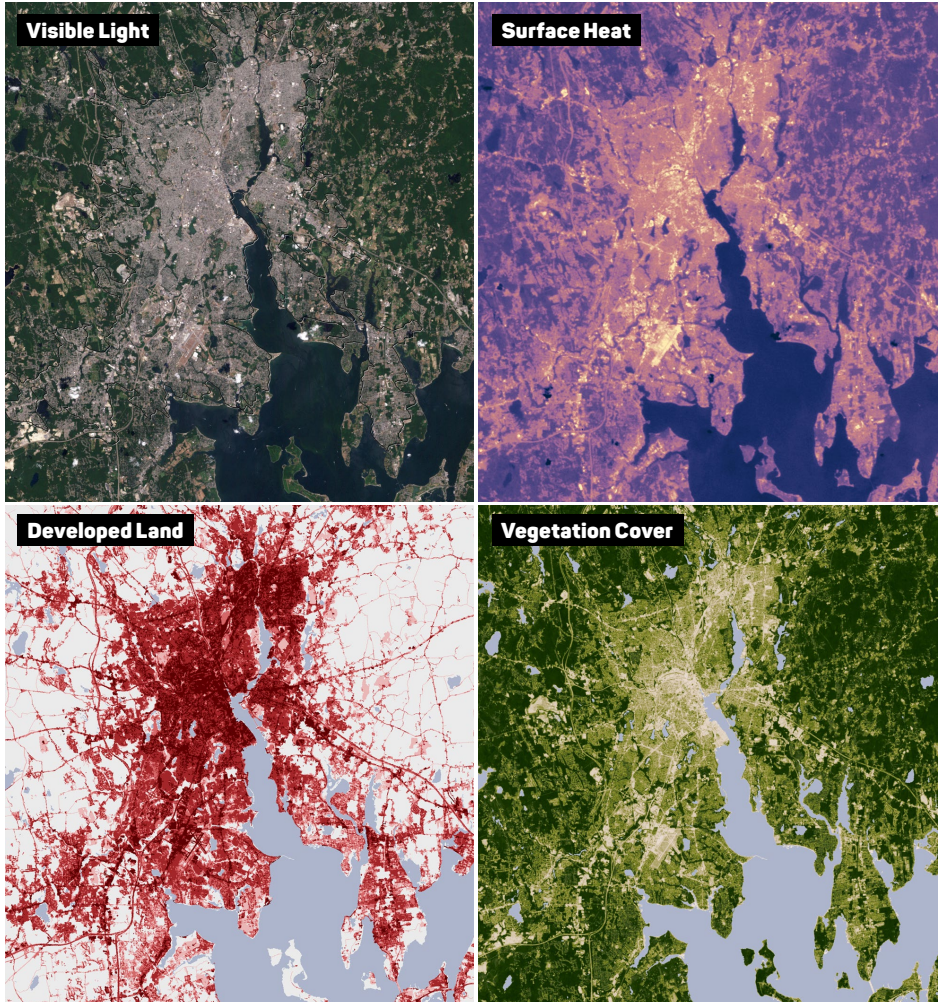


Urban Heat Islands

Heat from urban structures like buildings and roads keeps cities warmer than the countryside.



NASA scientists studying summer land surface temperature of cities in the Northeast, like Providence, RI, found that temperatures were an average of 7°C to 9°C (13°F to 16°F) warmer than surrounding rural areas over a three year period. These urban heat islands are a result of reduced vegetation, increased development, and other factors.

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climatekids.nasa.gov/heat-islands/

Satellite-produced maps help scientists highlight key differences in development, infrastructure, and vegetation that lead to urban heat islands.



Green spaces in urban areas, like New York City's Central Park, help keep cities cooler.

City infrastructure—like buildings and roads—absorbs energy from the Sun, creating hotter areas.

Temperatures in cities can be several degrees hotter, on average, than nearby rural areas. This effect persists at night, too. Cities remain hotter even after the Sun sets for two reasons: buildings, sidewalks, and parking lots release heat into the air slowly, and they also prevent heat in the ground from escaping. Parks and other natural areas can help to cool cities down. That's because plants use energy from the Sun in photosynthesis, and they release water vapor into the air, acting like nature's air conditioners.