The surface temperature has been taken from Landsat 5 and Landsat 8 (years: 2003-2014) for the area of Warsaw – capital city of Poland. Images have been divided into two groups: late spring/early summer and late summer/early fall. For the first season (spring/summer) 6 images have been used, for the second: 5 images.

Information about LST gathered from two transects span over different (according to land cover) parts of the city. The length of the transects is 2 km (200 px, each every 60 meters).

It has been found, that the surface temperature increased throughout the years independently of land cover. However the variety of LST inside the classes is distinguished. The highest inertial diversity showed up inside artificial classes, lower in more natural. The agriculture/natural areas are the most complex.

Additionally, the weather information has been collected to compare the behavior of satellite data. The LST comparison may allow tracking spatial changes of the city and locating indigenous disturbances of vegetation condition.