

EGU21-9000

<https://doi.org/10.5194/egusphere-egu21-9000>

EGU General Assembly 2021

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Land Cover Change: Does it affect temperature variability?

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Changes in the land cover occur all the time at the surface of the Earth both naturally and anthropogenically. In the last decades, certain types of land cover change, including urbanization, have been correlated to local temperature increase, but the general dynamics of this relationship are still not well understood. This work examines whether land cover is a parameter affecting temperature increase by employing global datasets of land cover change, i.e. the Historical Land-Cover Change Global Dataset, and daily temperature from the NOAA database. We thoroughly investigate the temperature variability and its possible correlation to the different types of land-cover changes. A comparison is specifically made between the rate of temperature increase measured in urban areas, and the same rate measured in nearby non-urban areas.