

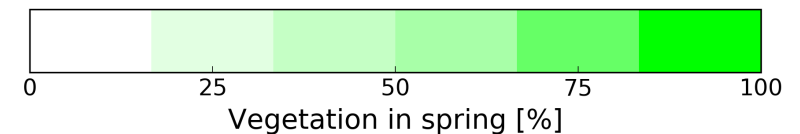
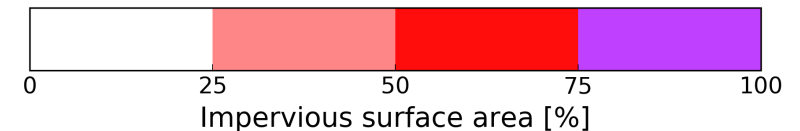
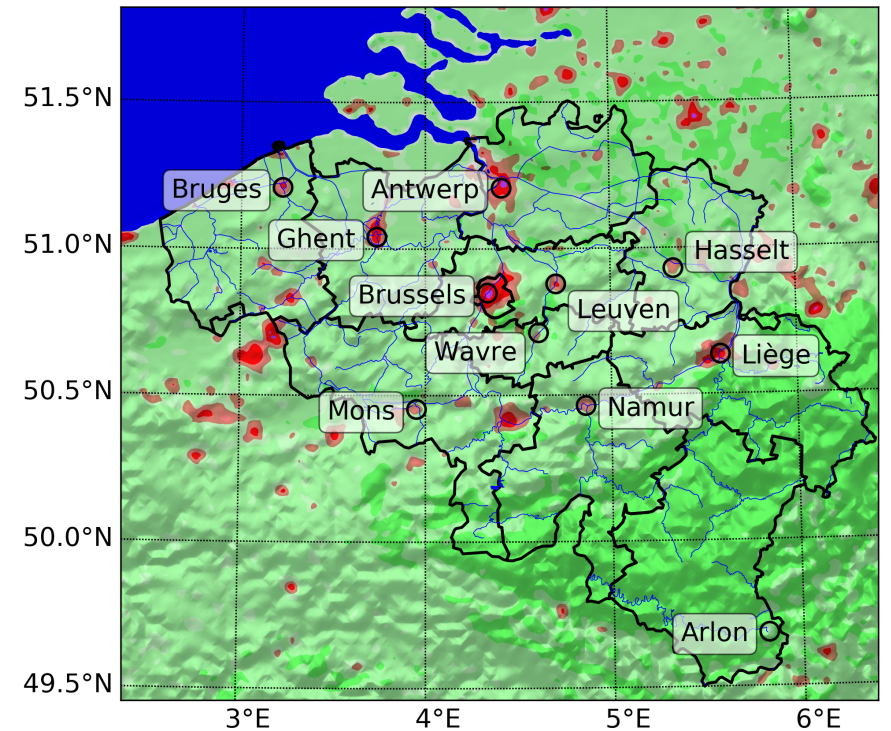
TERRA-URB applications in Belgium

Hendrick Wouters

KU Leuven

Model setup for Belgium

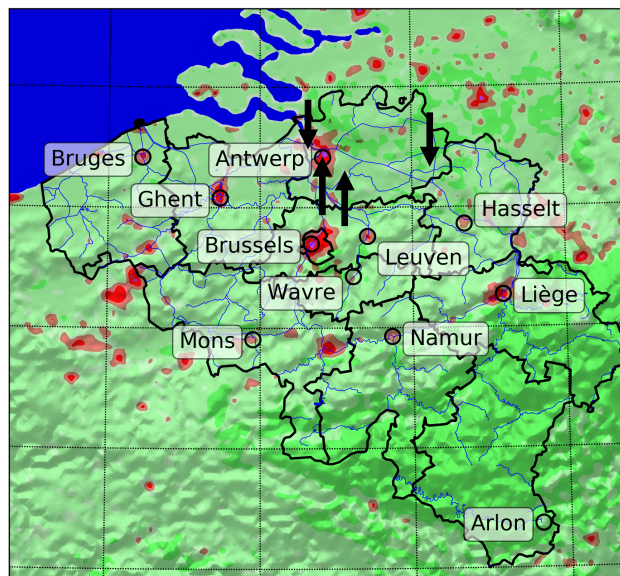
- COSMO5.0_clm9
- 2.8km resolution (0.025°)
- 200 x 200 grid points centered over Brussels
- 40 vertical layers
- TERRA_URB v2.2 (Wouters et al., 2016)
- Vegetation skin-layer (Schulz et al., 2017)



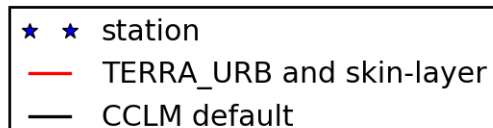
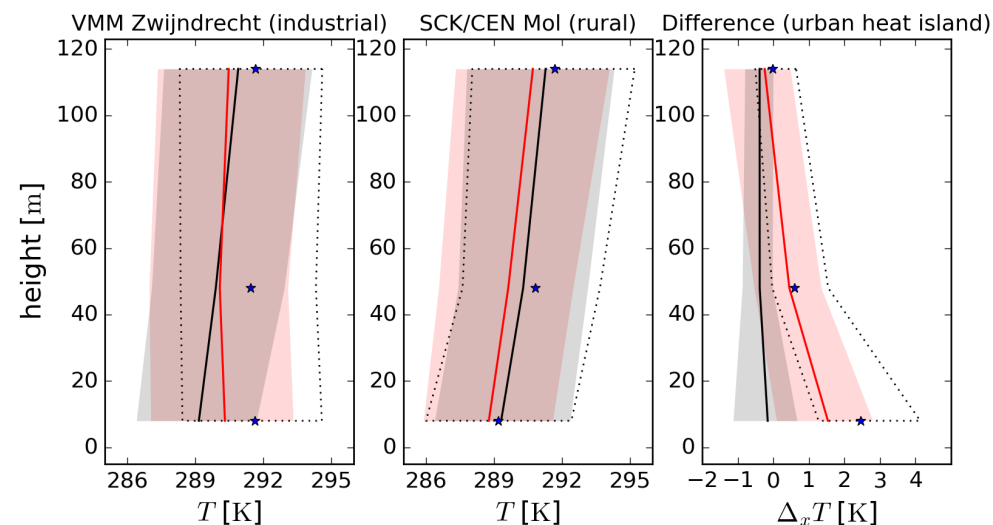
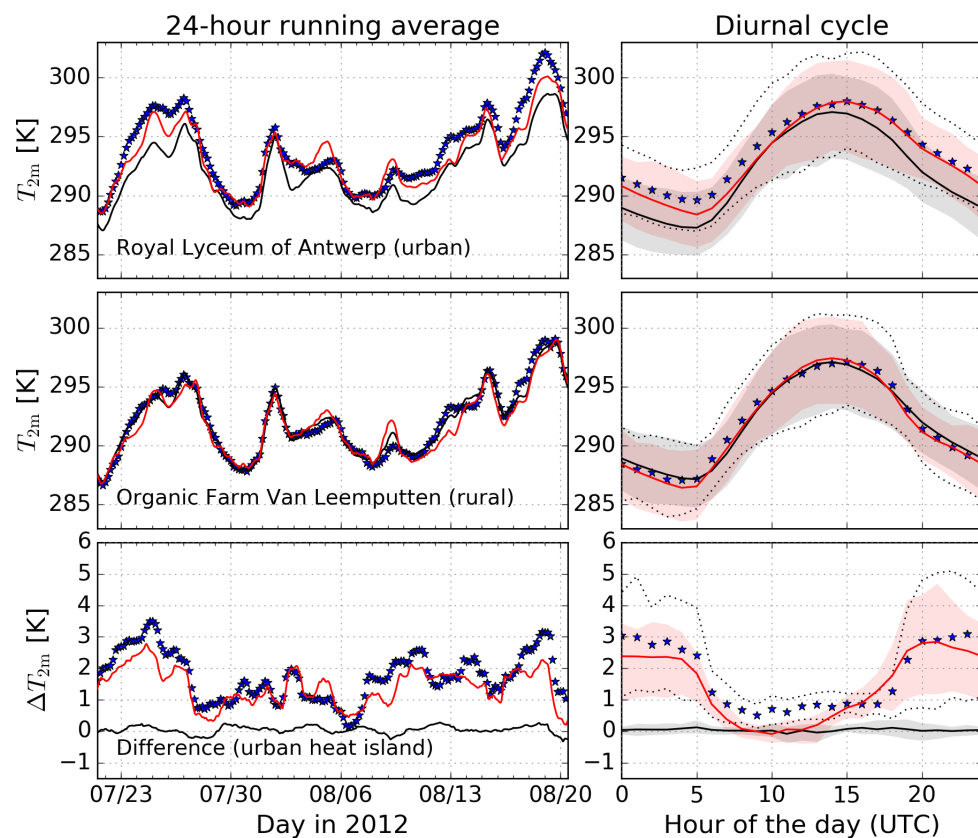
Evaluation of the urban heat island



in-situ

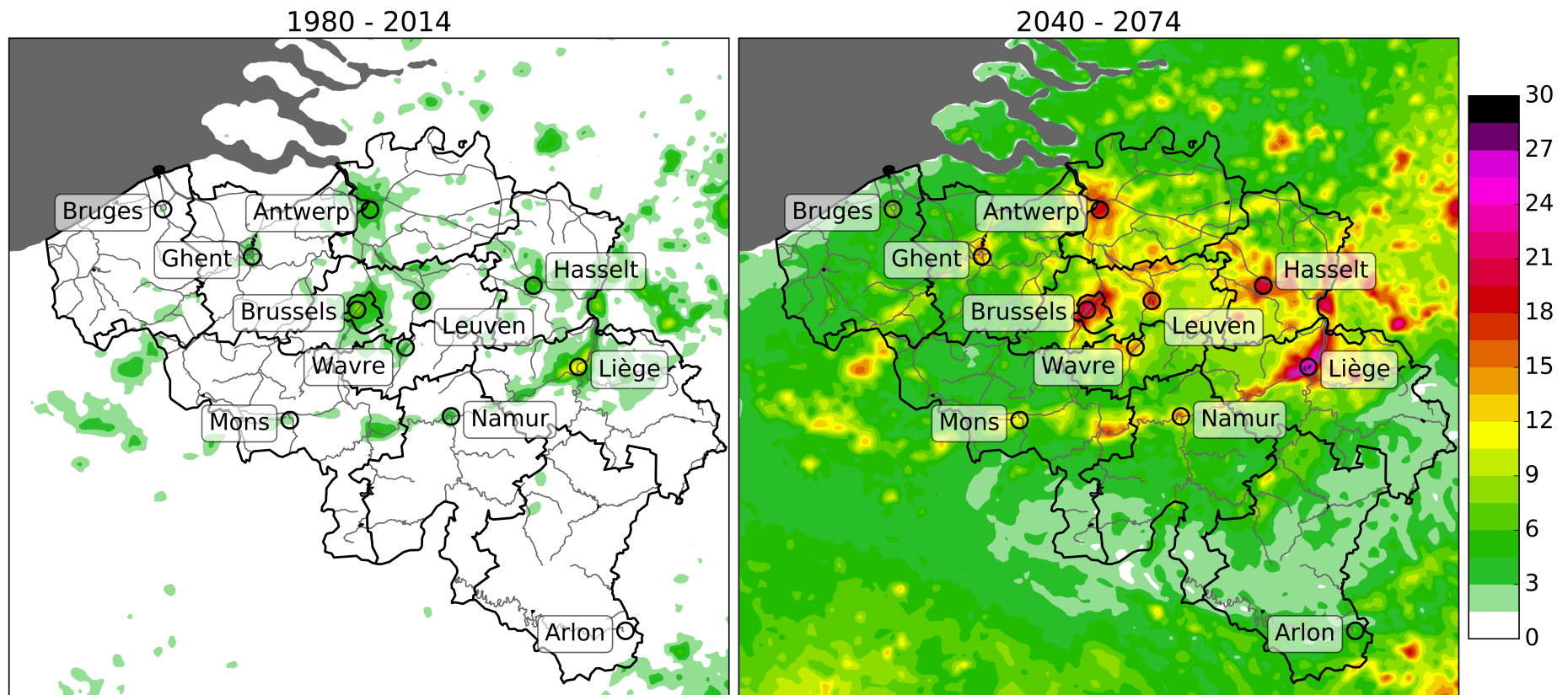


tower



Climate application

heat-wave days per year in Belgium



Wouters, H., De Ridder, K., Poelmans, L., Willems, P., Brouwers, J., Hosseinzadehtalaei, P., Tabari, H., Vanden Broucke, S., van Lipzig, N. P. M., Demuzere, M. (2017), Heat stress increase under climate change twice as large in cities as in rural areas: A study for a densely populated midlatitude maritime region, *Geophys. Res. Lett.*, 44, 1–11, doi:10.1002/2017GL074889.