Urban heat islands and carbon storage

ACT - Living Lab Climat-Biodiversité
Projet Carboschool

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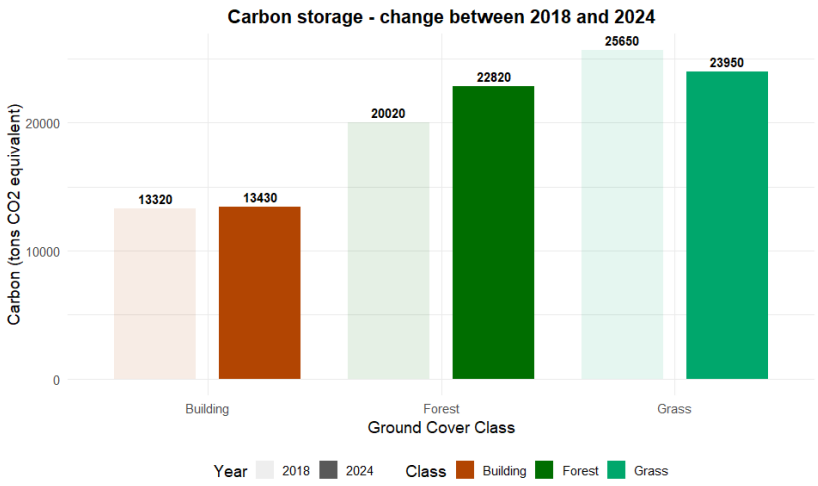
Carbon storage - TPG

- 60k t CO2eq
  - +2% from 2018
  - ~180 t CO2eq / y
- Rise in “forest” land cover class

University emissions (2022)
62.5kt CO_2 eq.



Urban Heat Islands - TPG campus

Land Surface Temperature (LST) from the ICEtool model

“Opération campus” - renovation and development projects

- Over the last 10 years
- Promote “soft mobility”
- Mixed use (housing, teaching, research, outdoor activities)
- Greener + more sustainable

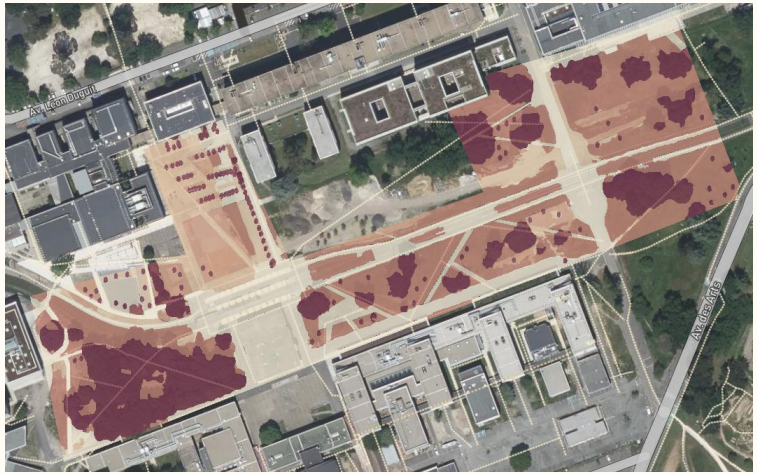
Can we estimate the effects of these projects on temperature and carbon storage?

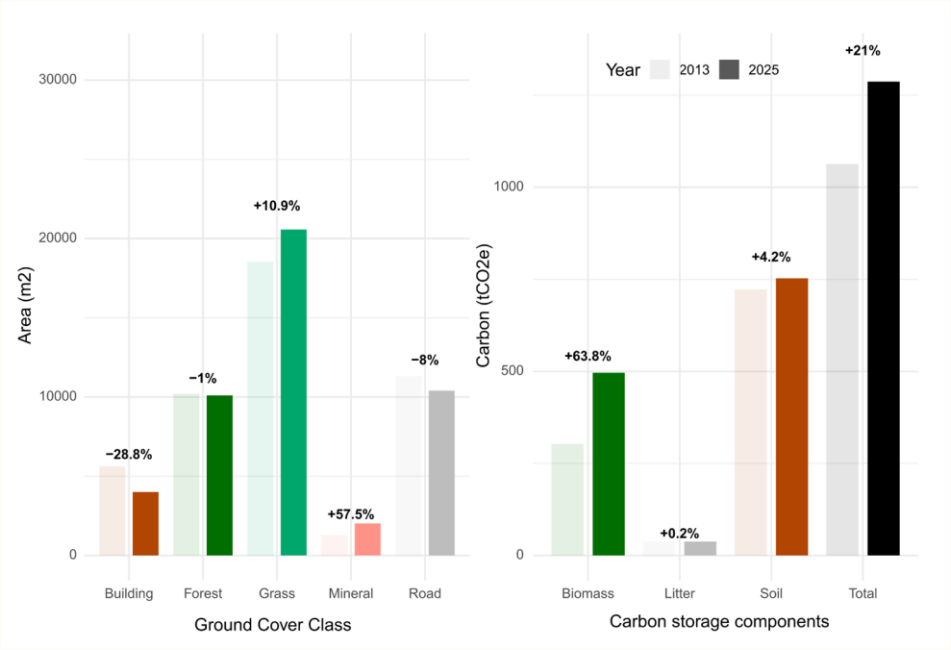
OPÉRATION CAMPUS Bordeaux

“Opération campus” - Montaigne

- +10% grass
- -10% artificial surfaces
- +13 trees / Ha

~ +20% carbon storage

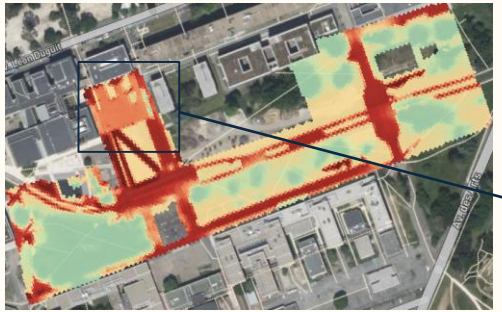


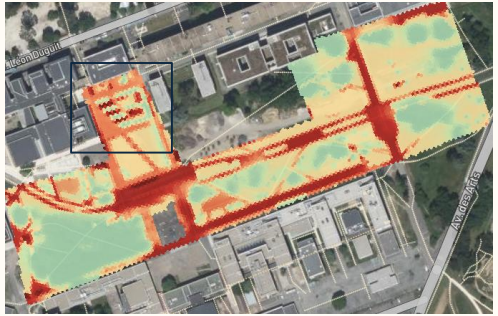


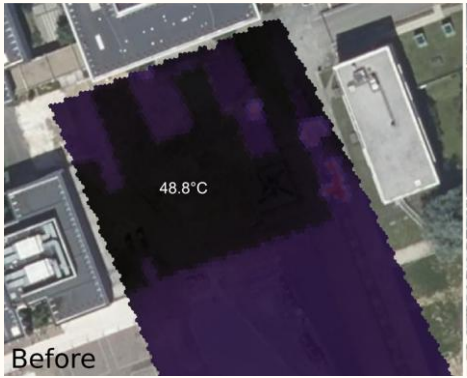
“Opération campus” - Montaigne

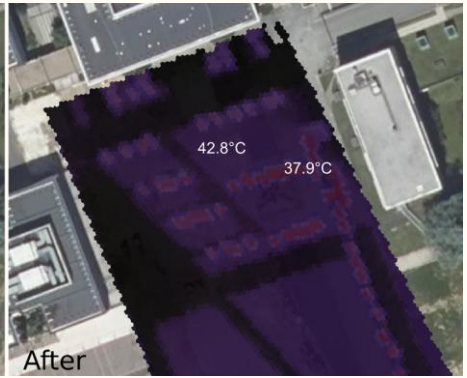
- +10% grass
- -10% artificial surfaces
- +13 arbres / Ha

Land Surface Temperature : -1°C (zone average 33.77° -> 32.9°)









Large local effect on perceived temperature -8 to -10°C