# Modelling the effects of blue-green urban UIU adaptation

The aim of this project is to use a combination of urban remote sensing techniques and physical models e.g. the Town Energy balance Model (TEB) to investigate the make-up of a city (e.g. the presence of blue-green infrastructure versus the fraction of impervious services) and its influence on urban micro-climate (e.g. the urban heat island effect, air pollution) and the risk of pluvial flooding. Health effects could also be studied.

### **Project type**

The project is suitable for MSc and BSc projects.

#### **Pre-requisites**

Numerical modelling and/or remote sensing techniques.

### **Group size**

1 student

#### **Department of supervisors**

Main supervisor: DTU Management Engineering

Co-supervisors: DTU Civil Engineering, DTU Environment or DTU Space

## **Contact person**

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#### **Urban Heat Island Effect**

Urban areas influence the atmosphere through a number of processes:

- 1. Paved surfaces and concrete canyons absorb the Sun's rays and produce heat. 2. Chemicals emitted by cars, industrial facilities, and even trees affect sunshine in different ways, often trapping it and creating more heat.
- The warm air rising from a city may collide with moist air from a nearby body of water,

