

Local Climate Zone (LCZ) mapping

Motivation: Land cover types and spatial structure of built-up area well correlate with air temperature.

Task: Use Google Earth map of Your city, PPT presentation explaining concept of LCZ and study material (link below) and find a typical representative of individual LCZs in Your city.

Draw 1-3 polygons that well represent individual LCZs in Your city. See Figure below as an example. In Google Earth You can add the legend (LCZ types with selected color) as follows:

Right click on

My places -> Add -> Folder

Create name of the of the folder – e.g. LCZ3

Then right click on LCZ3 folder

LCZ3 -> Add -> Polygon

Create name of the polygon (e.g. Site_3_1) and select color of the polygon, do not close window and place mouse over the map.

Find suitable place - left click defines polygon outer points, right click close the polygon

Repeat for 2–3 polygons for each LCZ

Now create folder for another LCZ – e.g. LCZ4 and repeat as above

Alternatively, You can create only the polygons (without folders). In this case You must add proper names to individual polygons (see example – figure below)

Finally save Your map as follows:

File -> Save -> Save folder My places

This creates file My places.KMZ on Your computer.

When finished, please send me KMZ file and text shortly discussing: 1) which LCZs can be easily found in Your city according Your opinion; 2) which LCZs do not exist in Your area.

Study literature: Stewart, I.D., Oke, T.R. (2012): Local climate zones for urban temperature studies. https://is.muni.cz/auth/el/1431/podzim2018/ZX601/um/67875456/08_local_climate_zones_1.pdf

Notes:

- It is not necessary to cover the whole area; find just typical spots as a “training sites”
- Not all LCZ categories must occur in Brno area

Example (elaborated in Google Earth application)

