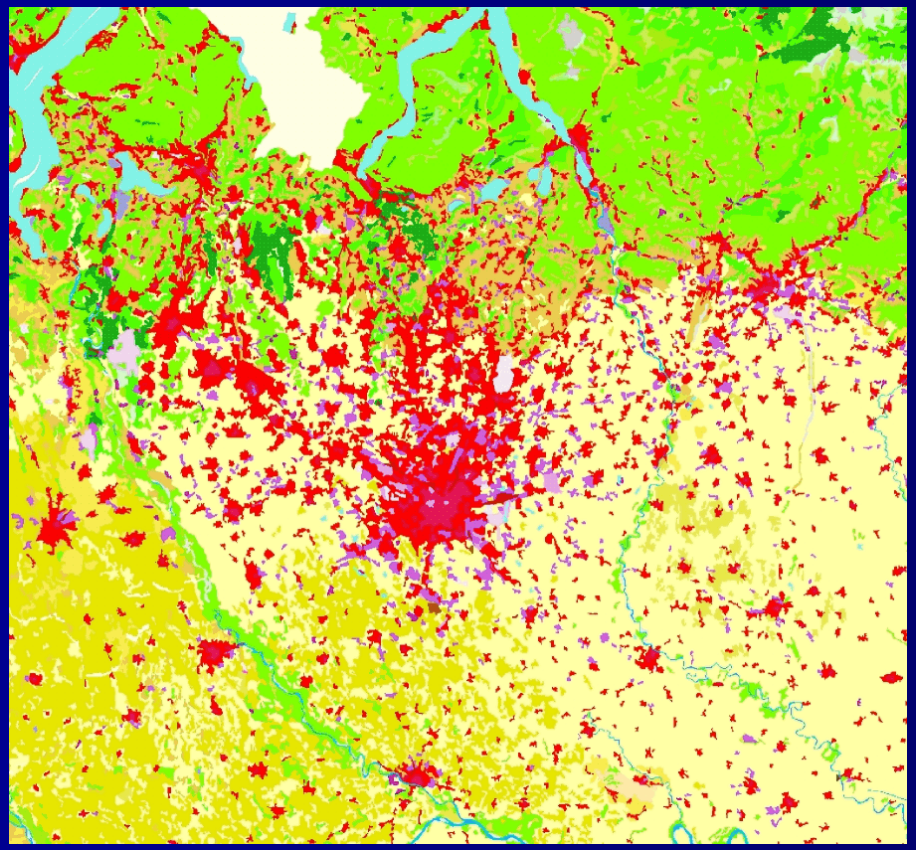
Urban Morphological Zones

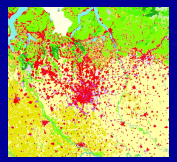


A dataset for urban analysis

Roger Milego, ETC/TE

UMZ definition

- "A set of urban areas laying less than 200m apart"
- Urban areas defined from land cover classes contributing to the urban tissue and function.
  - Which CLC classes?
    - 1.1.1 (Continuous urban fabric)
    - 1.1.2 (Discontinuous urban fabric)
    - 1.2.1 (Industrial or commercial units)
    - 1.4.1 (Green urban areas)
    - 1.4.2 (Sport and leisure facilities) and 1.2.2 (Road and rail networks and associated land): only if they are adjacent to at least one of the classes above.

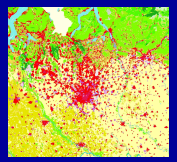


UMZ creation methodology

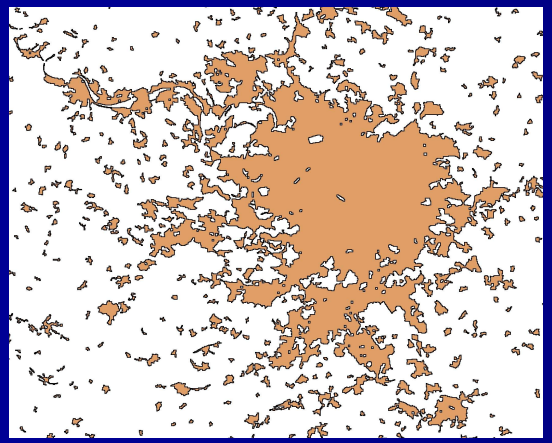
- First step: Reclassification of CLC90 data
- Buffering discarded
- Expansion + shrinking processes (by 1 pixel = 100 m)

Urban areas | Expansion process | Shrinking process

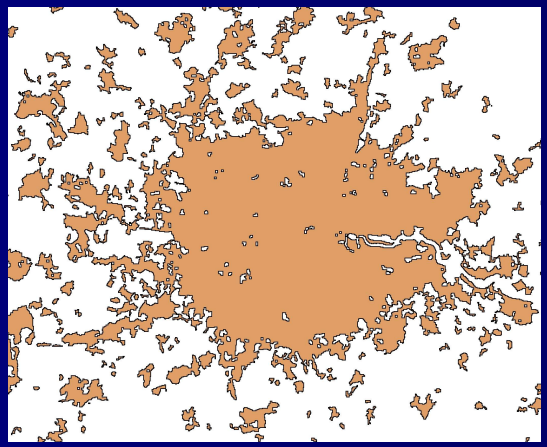
- Vectorisation of results
- Problem: overestimation of urban area in some cases



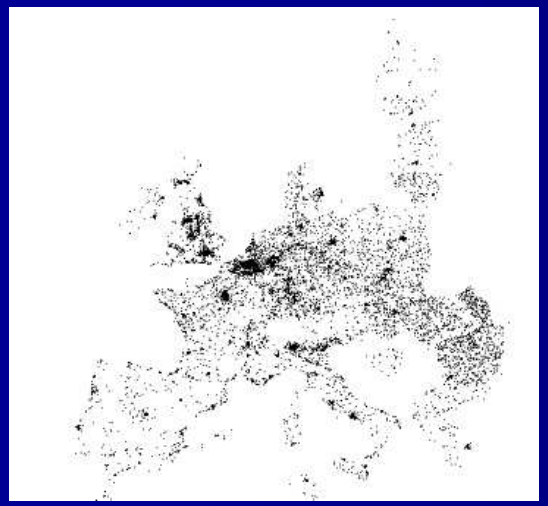
UMZ results

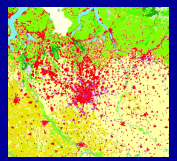


Paris



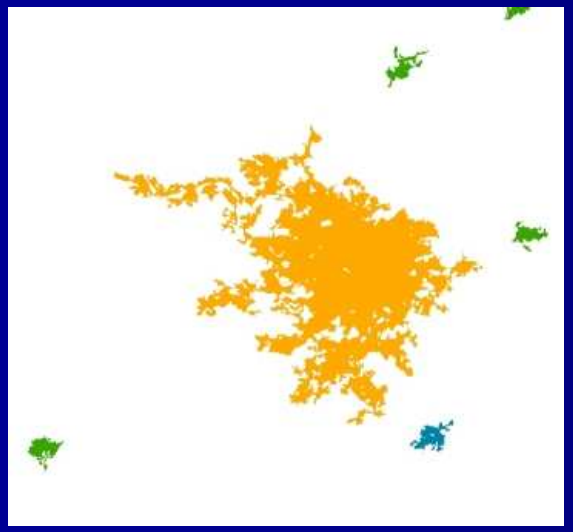
London



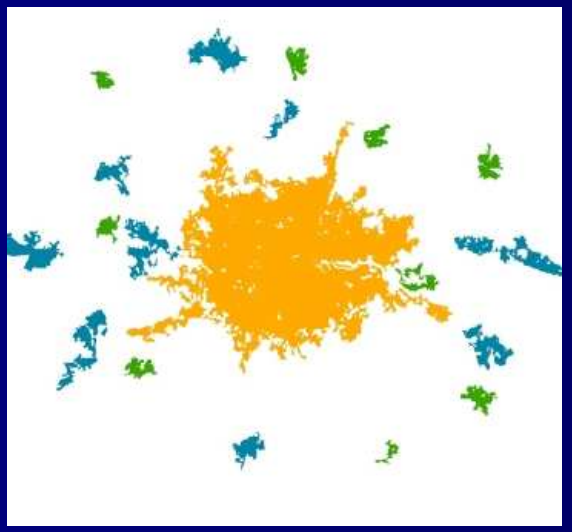


For Europe, about 150 000 polygons!

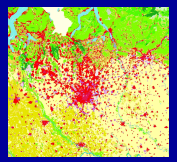
- UMZ selection by means of the GISCO settlements:
  - Three categories
    - > 500 000 inhabitants
    - 100 000 – 500 000 inhabitants
    - 50 000 – 100 000 inhabitants



Paris

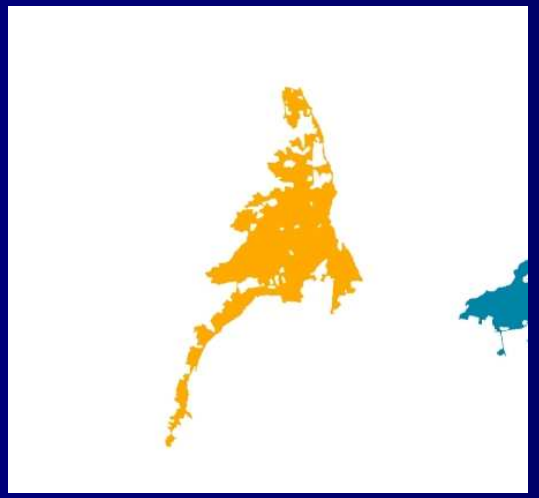


London

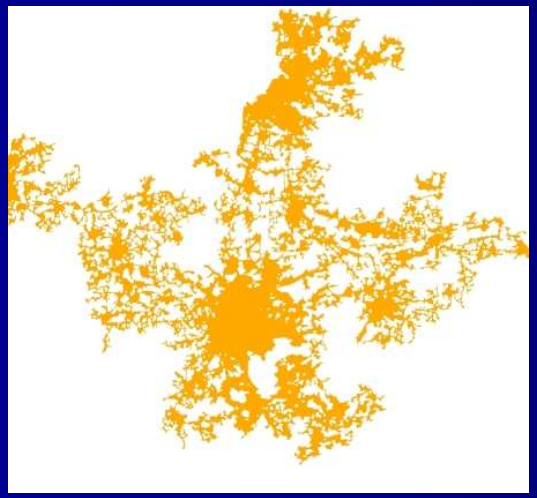


More examples...

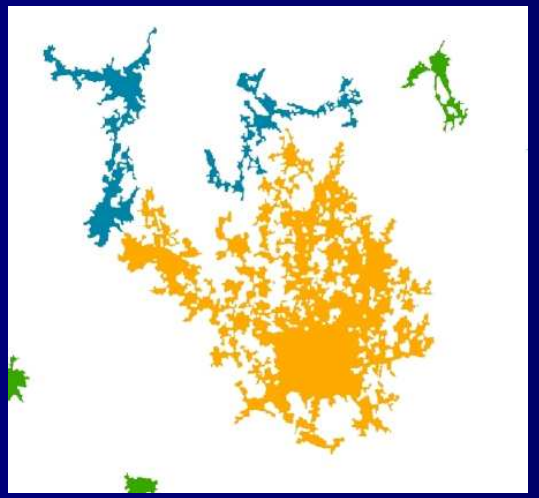
Bilbao



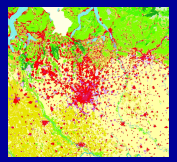
Copenhagen

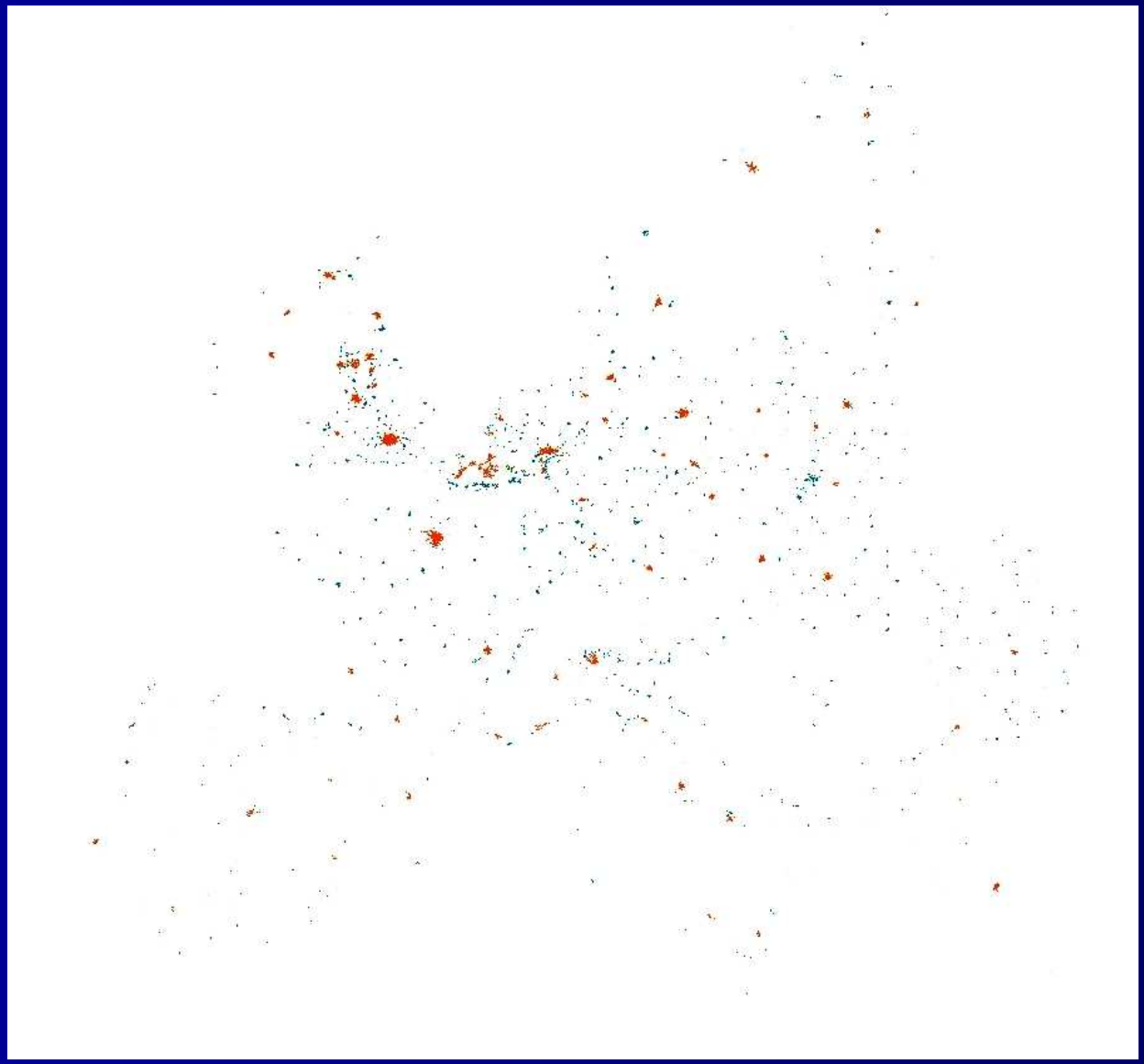


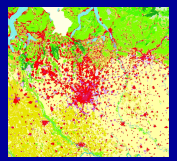
Brussels



Milan







For Europe, about 900 UMZs.

UMZ last updates

- Malta and Sweden UMZs added (from CLC2000).
- Correction of systematic geometric shift in the Baltic States.
- Correction of UMZ errors coming from CLC interpretation errors.

Further steps

- Recreation of UMZs using CLC2000 data.