Integration of geospatial information for SDG monitoring

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UN-GGIM | United Nations Committee of Experts on Global Geospatial Information Management

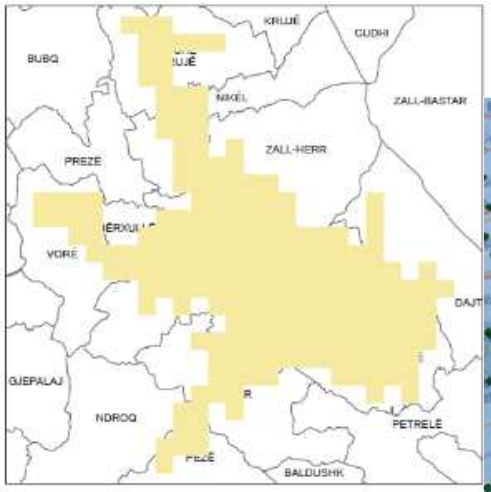
ggim.un.org

Geospatial in the 2030 Agenda for Sustainable Development

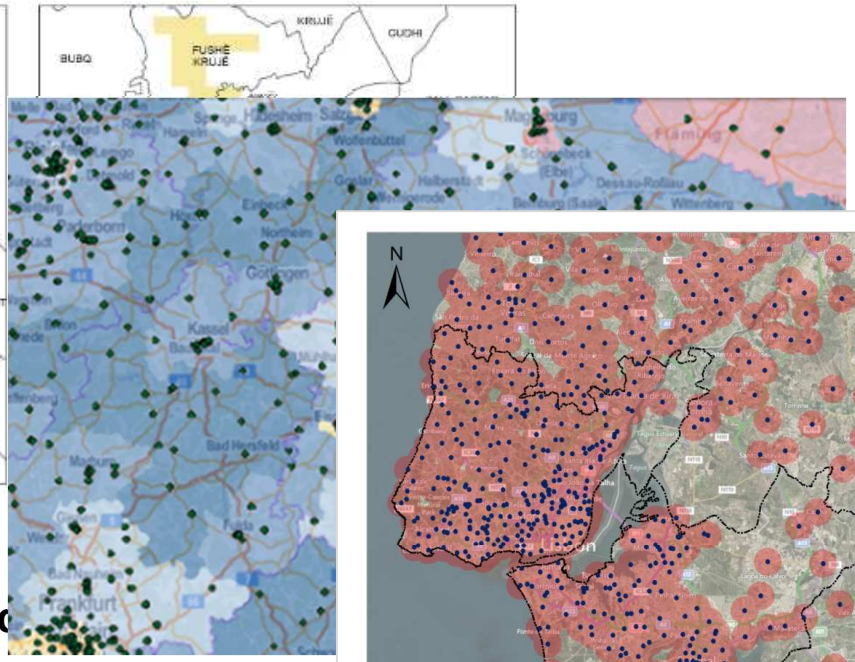
(g) **They will be rigorous and based on evidence**, informed by country-led evaluations and **data which is high-quality, accessible, timely, reliable and disaggregated by** income, sex, age, race, ethnicity, migration status, disability **and geographic location** and other characteristics relevant in national contexts.

UN GGIM: The **U**nited **N**ations Committee of Experts on **G**lobal **G**eospatial **I**nformation **M**anagement

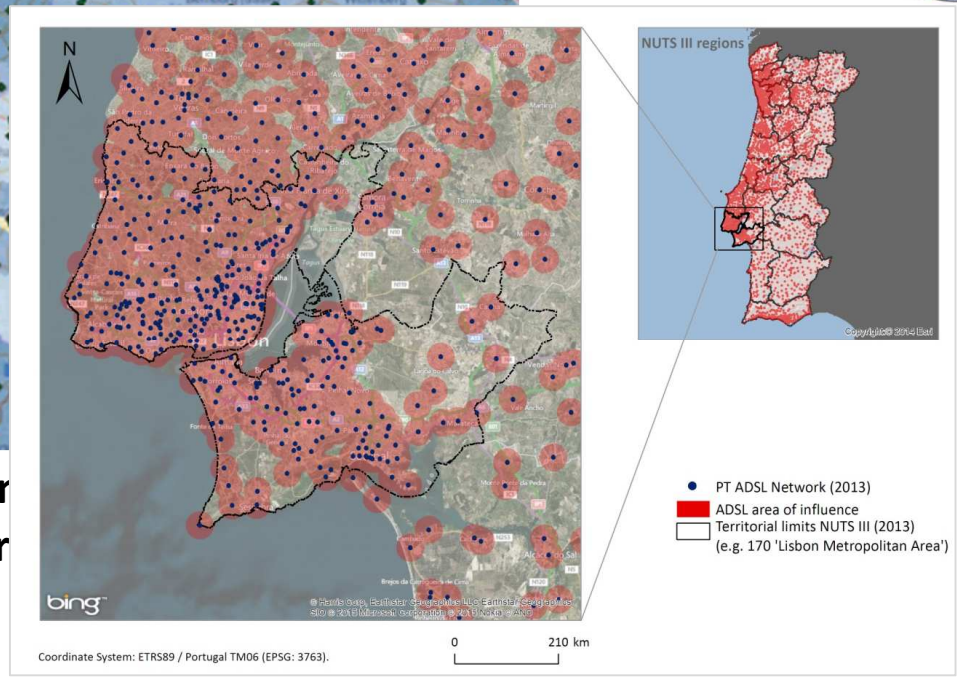
Data Integration (UN-GGIM: Europe)



Urban/rural classificatio



Future developr population (Ger

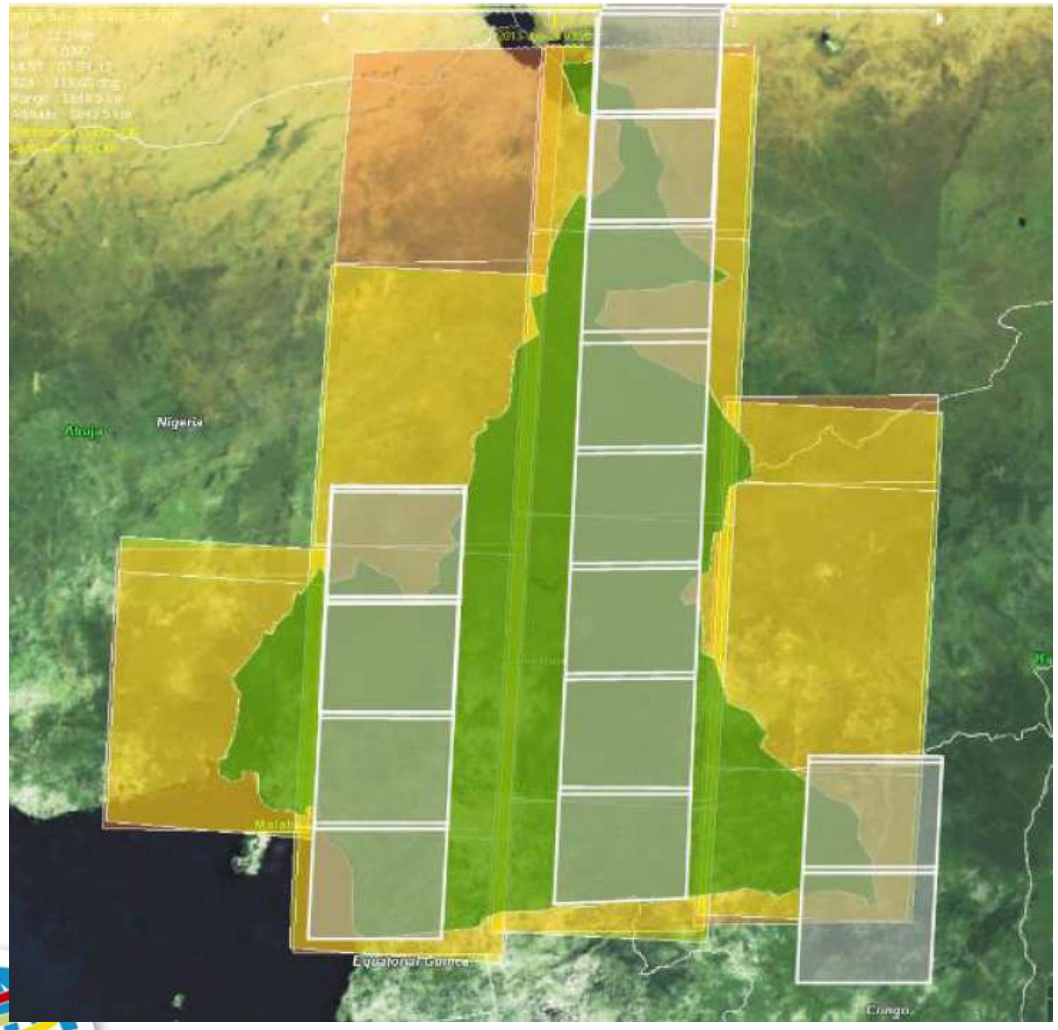


Potential territorial coverage of broadband internet access (Portugal)

Increased earth observation capacity

- **High repetition rates** to acquire large data coverage in short time periods.
- **High spatial resolution** (MMU < 1 ha) supports assessment of forest stands with low canopy closure and mapping of small disturbances of forests and forest degradation
- **High spectral resolution** with dedicated bands (red–edge) to discriminate between forest and spectrally similar vegetation types

Application of EO in forest monitoring



Landsat / Sentinel-2 coverages (10 days simulation) – covering Camaroon

Picture: Courtesy ESA

Application of EO in wastewater monitoring

IAEG indicator: Proportion of wastewater safely treated

EO support for the indicators (pop density, landuse, landcover, etc.) integrated with other geospatial, survey and admin data

1)

EO integrated with other geospatial data to estimate waste water generation potential, releases and their impacts.

2)

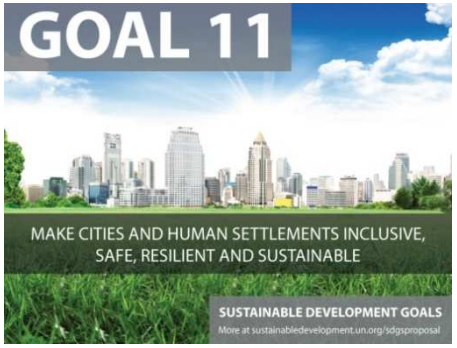
High resolution satellite images can document the location of treatment facilities.

EO data integration: more than filling gaps…

- Indicator framework will place many demands on national statistical systems
- Lack of capacity for additional monitoring
- Huge cost to support more demanding indicators
- Cost effective gains can be made when EO data are considered
- WHO/UNICEF JMP-SDSN work on cost effective monitoring of the water sector will be informative for SDG monitoring in general

Can help discussions on (some) grey indicators?

Geospatial analysis
Target 11.2 indicator example

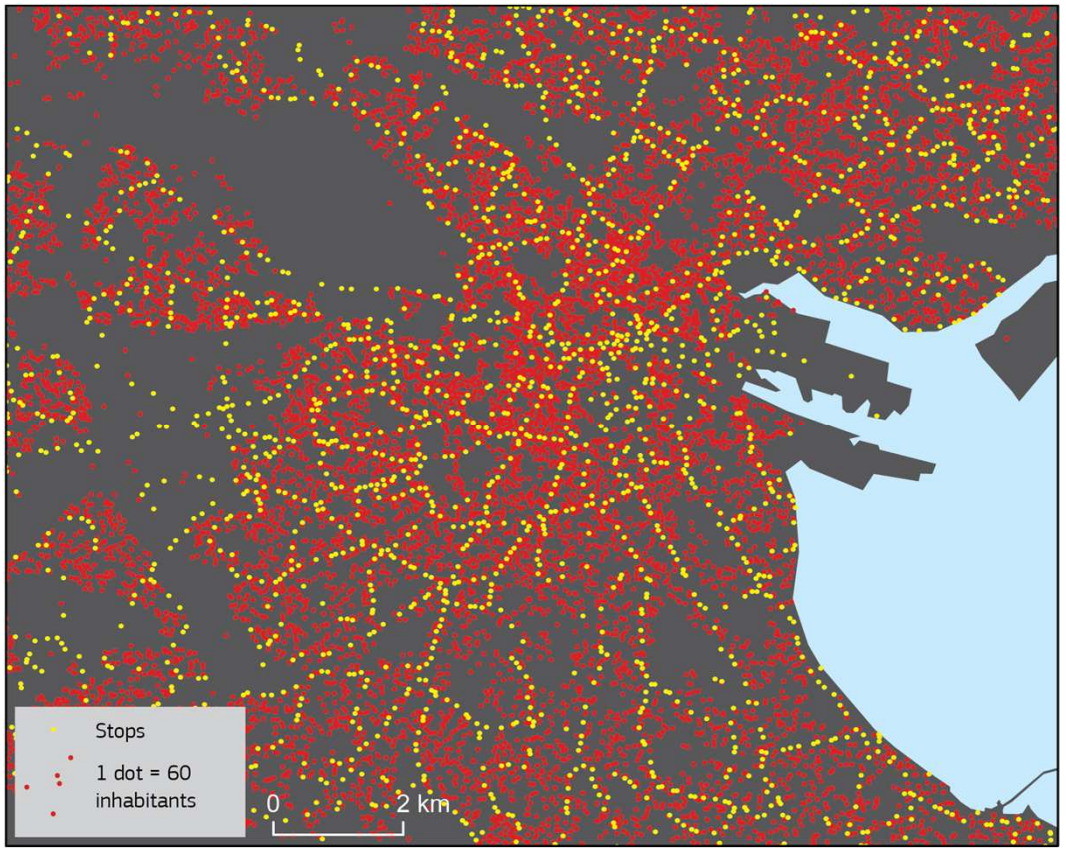


"Proportion of the population that has a public transit stop within 0.5 km"

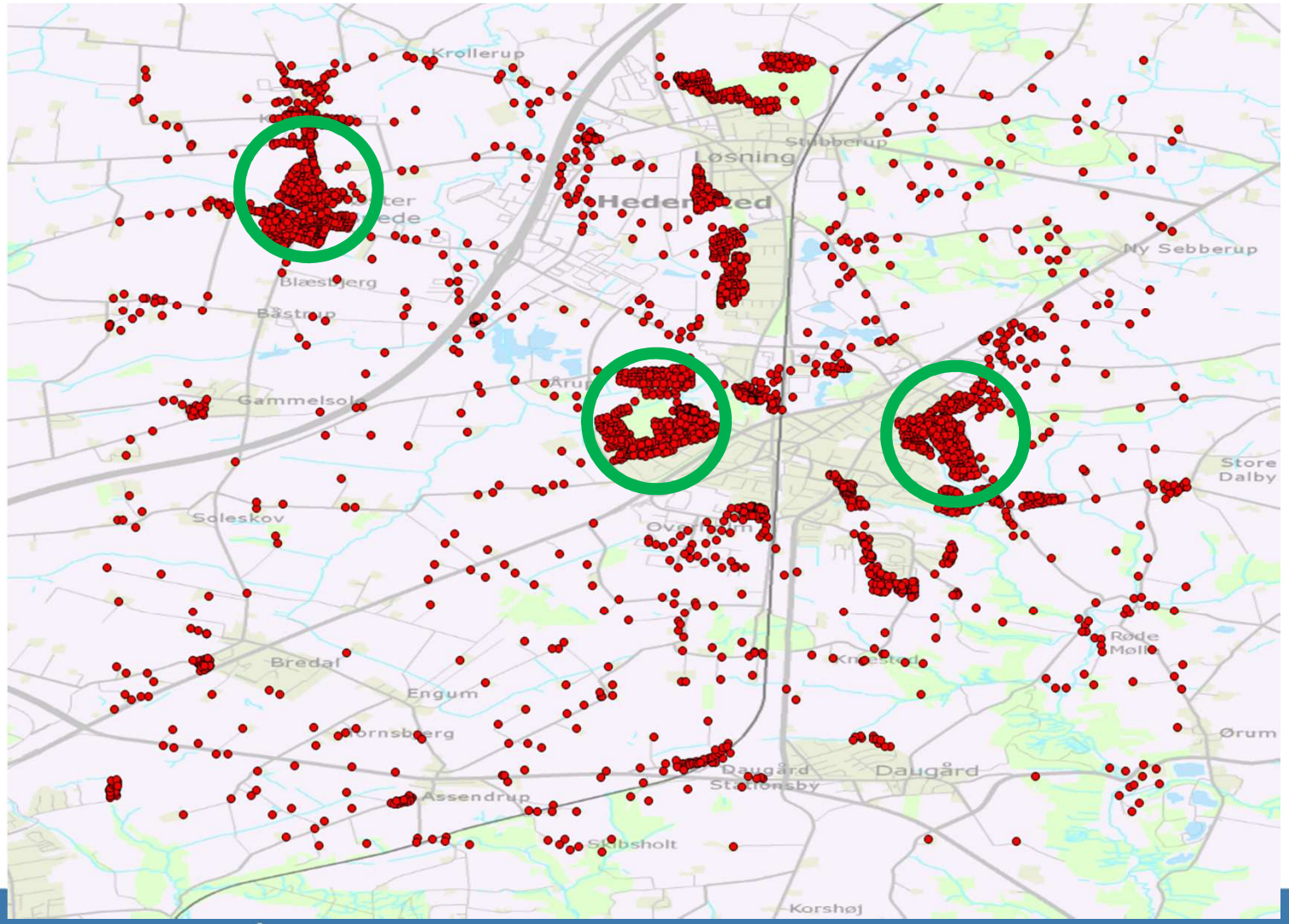
Data sources needed:

- Population distribution (grid/addresses)
  - include data on a spatially detailed distribution of residential population inside the cities or regions.
- Road network
  - The road segments should include attributes allowing for a selection of streets accessible by pedestrians.
- Public transport data
  - the location of stops and stations (frequency of departures at these stops).

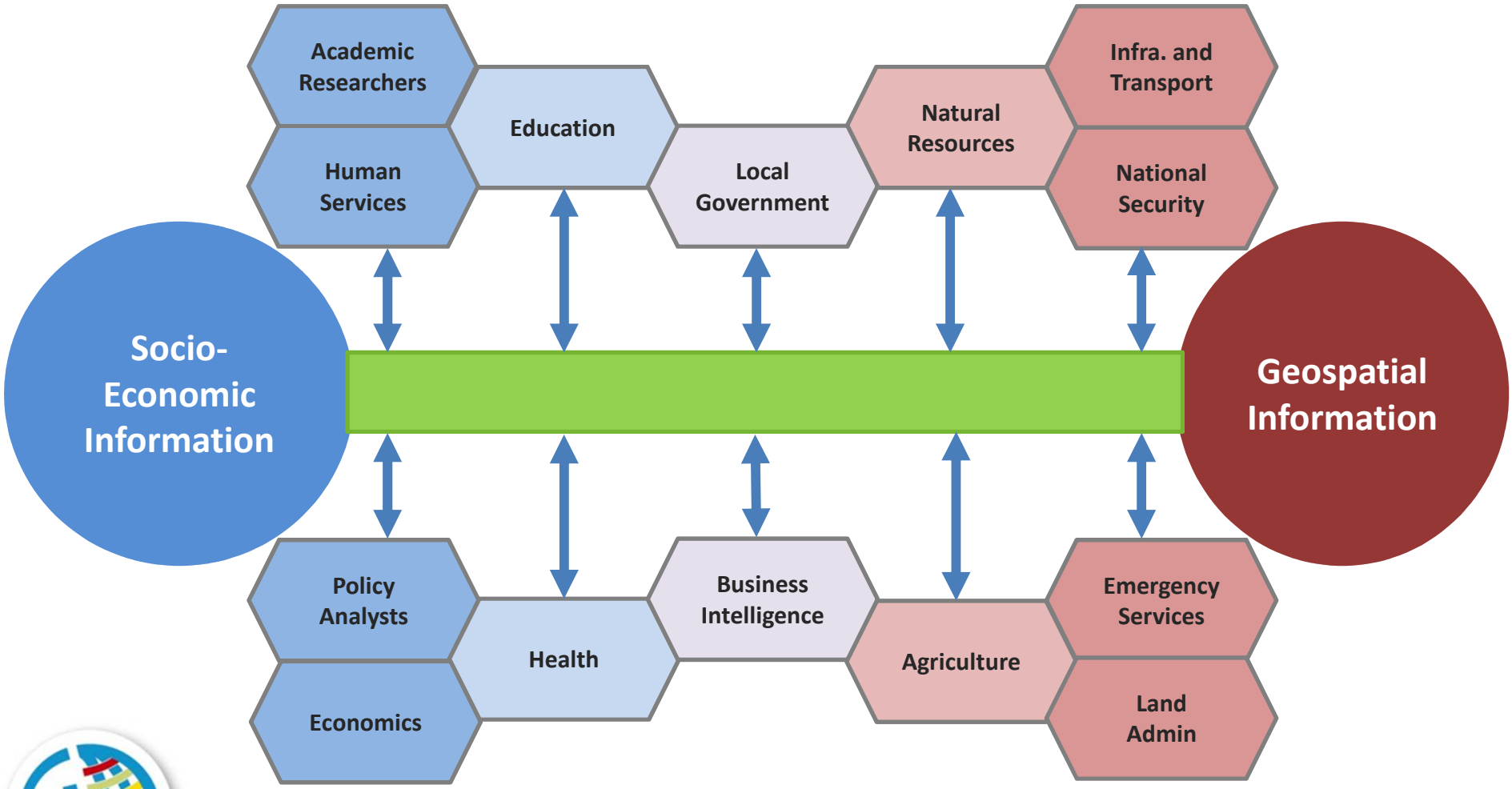
European example (DG Regio): Access to public transport in urban areas in Europe



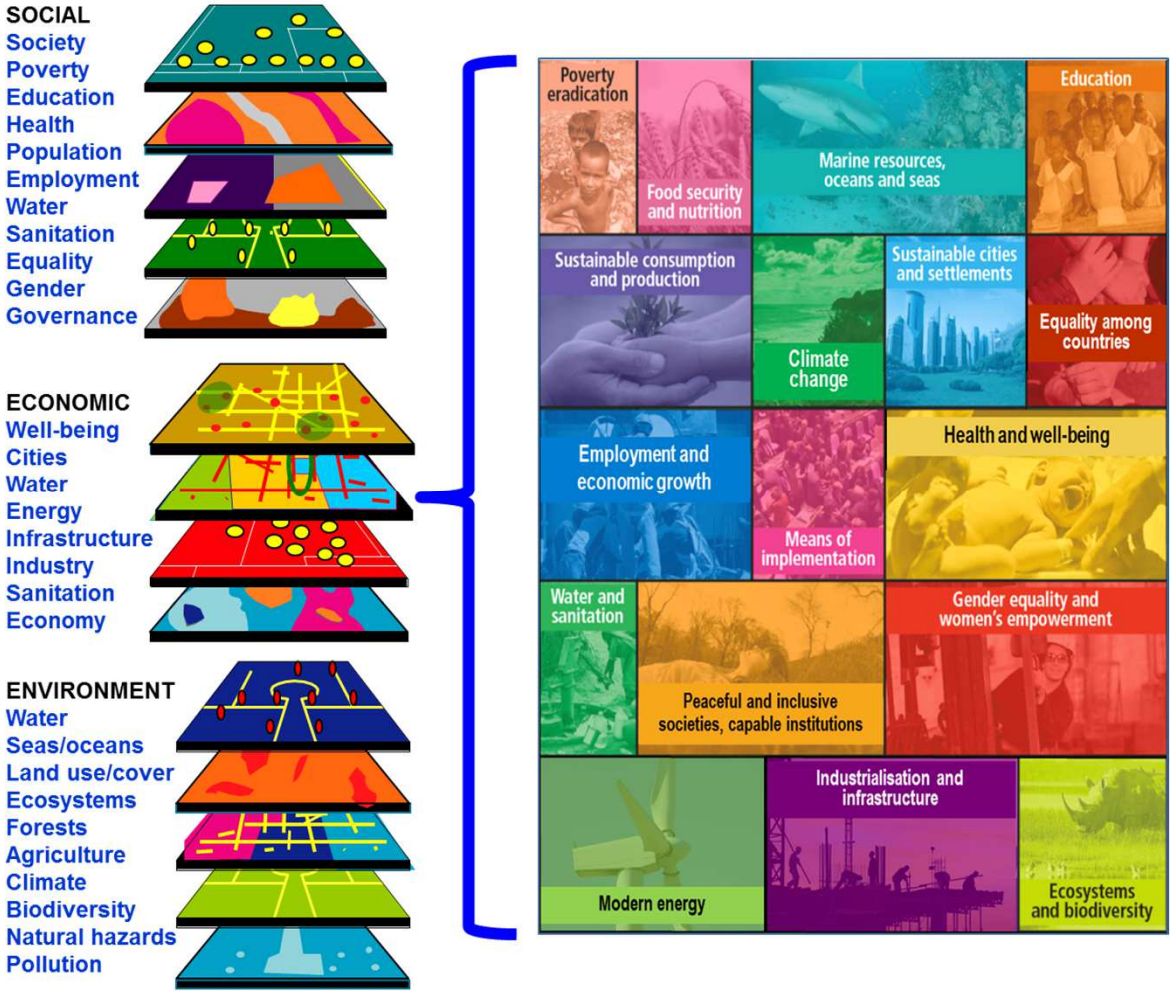
Geospatial analysis: *Proportion of the population that has a public transit stop within 0.5 km*



Symbiosis – supporting user needs



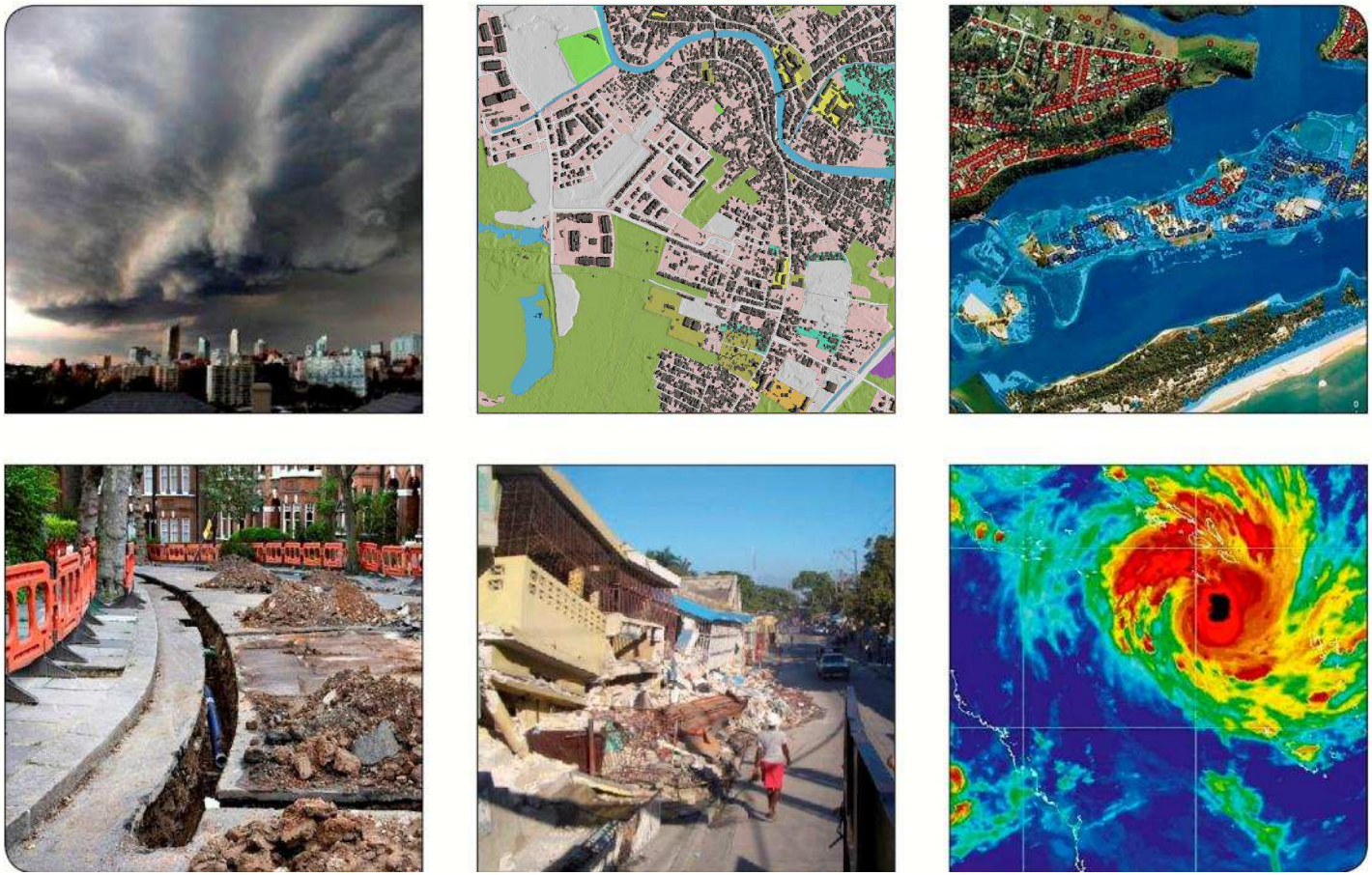
So where does geospatial fit in?



Conclusions

- Geospatial information and analyses can significantly enhance the effectiveness of the SDG indicators in monitoring and guiding sustainable development from global to local scales
- The value of statistical and geospatial data compilation for the implementation and monitoring of the 2030 Agenda constitutes an important basis for the continued collaboration between our two communities
- This requires of us, not only to promote the use of statistical and geospatial data as reporting and monitoring tools for achieving the SDGs, but also to support capacity building in the intersection of our distinct disciplines and development of the requisite infrastructure.

Unleashing the power of ‘Where’ ….



… to make the world a better place