Sustainable Development Goals, geospatial information and a Global Framework

UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

UN-GGIM: Europe Work Plan 2015-2017

- **Work Group A, Core Data: deal with core data specifications and quality, production issues, funding and data availability**
- **Work Group B, Data Integration: deal with the integration of geospatial data (including cadastral parcels) with other information**
- **Secretariat: Supporting, facilitating and executing the actions of the Executive Committee**

Tasks for Work Group B: Data Integration

Supply three deliverables:

1. **Definition of the priority user needs for combinations of data (Mid-2015).**
2. **Recommendation for methods implementing the prioritised combinations of data (Mid-2016)**
3. **Recommendation about how to manage side-effects induced by data combinations (Mid-2016)**

→ **Showcase the usefulness of data integration**

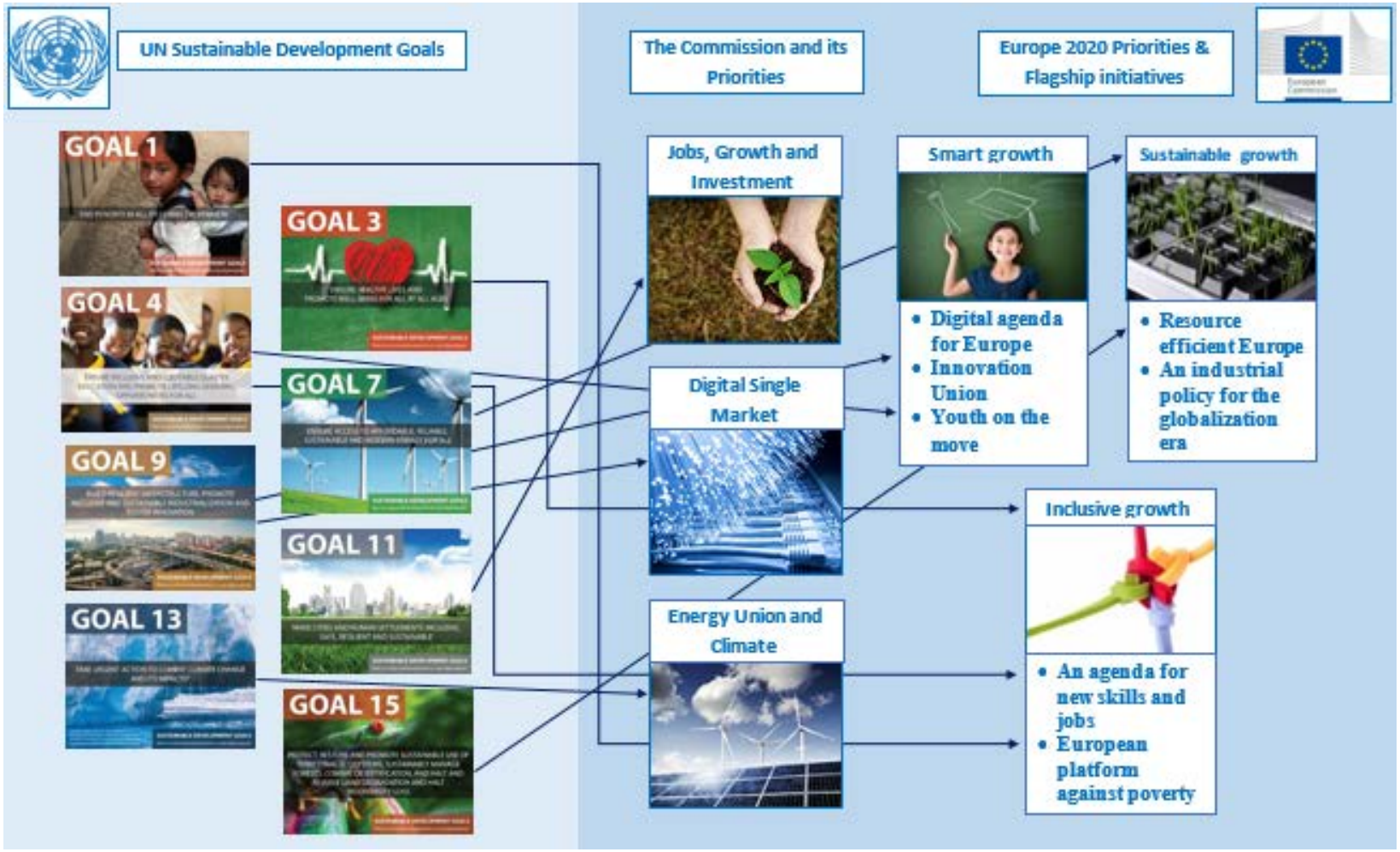
Tasks B1 – “priority user needs”– accomplished

1. **Definition of the priority user needs for combinations of data (Mid-2015).**

   Title:“Definition of priority user needs for combinations of data”

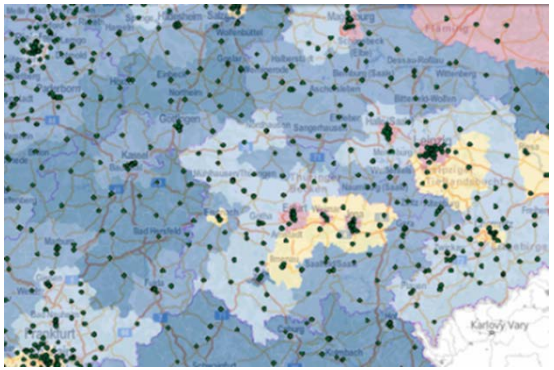
- **Subgroup B1 leader: Sweden (SE)**
- **Collect policy relevant use cases, focus on evidence based decision making**
- **Elaborate use cases → derive user needs → recommendations**
- **40+ Use cases were collected**
- **5 Recommendations**
- **Report adapted to UN SDGs publication in October 2015**
- **Report uploaded on the UN-GGIM: Europe website**

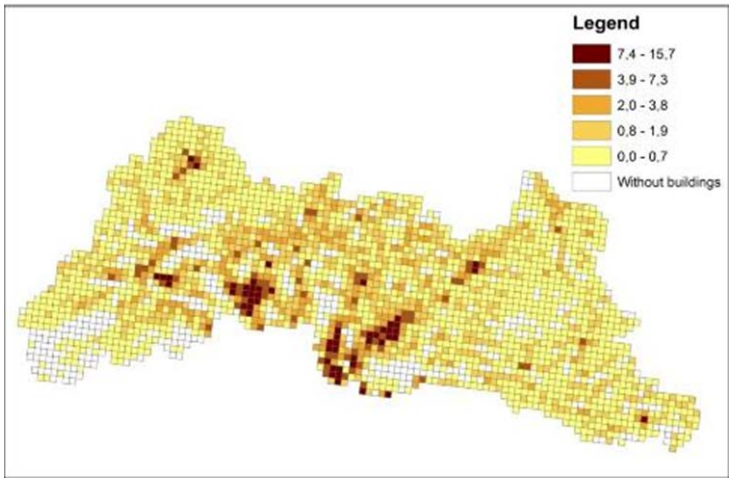
There are a lot of policies in Europe..



SDG's that benefit from a SGF

National Use Cases





Albania

Germany

Denmark

Spain

Italy

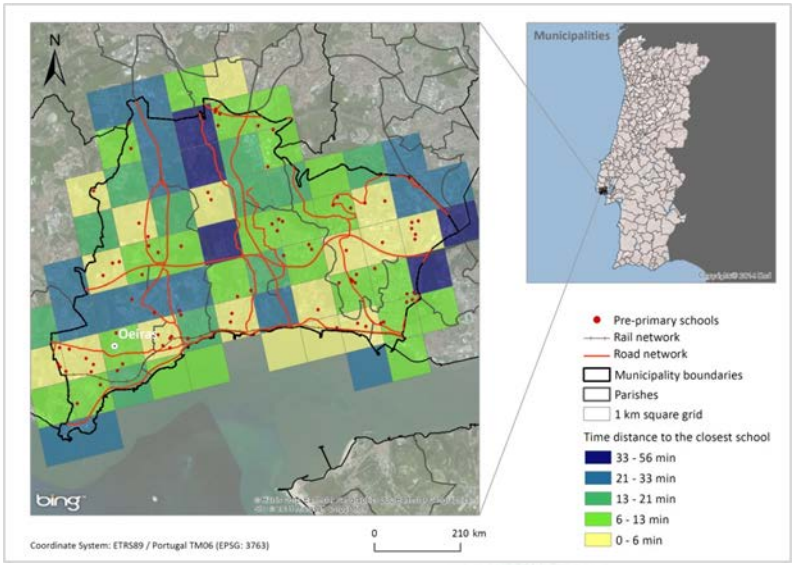
Poland

Portugal

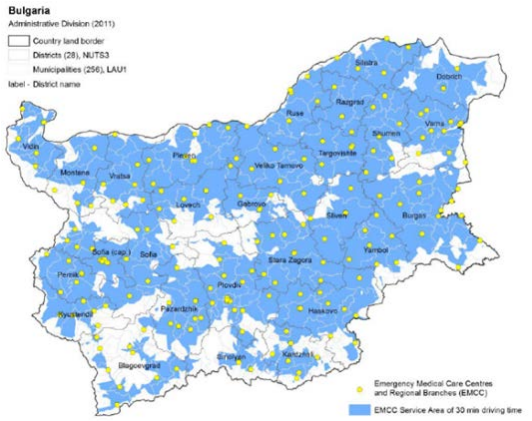
Sweden

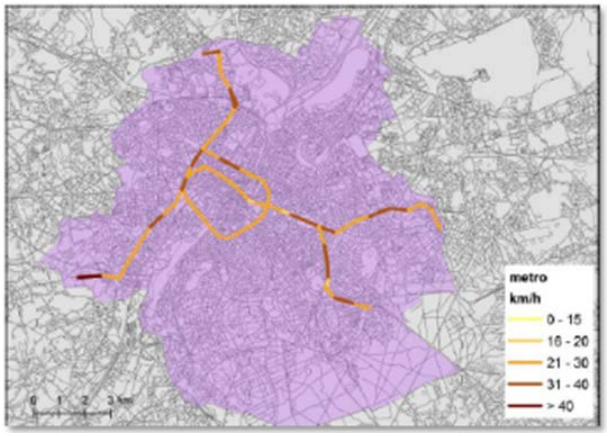
Turkey

UK



Cross-Border Use Cases





DG REGIO

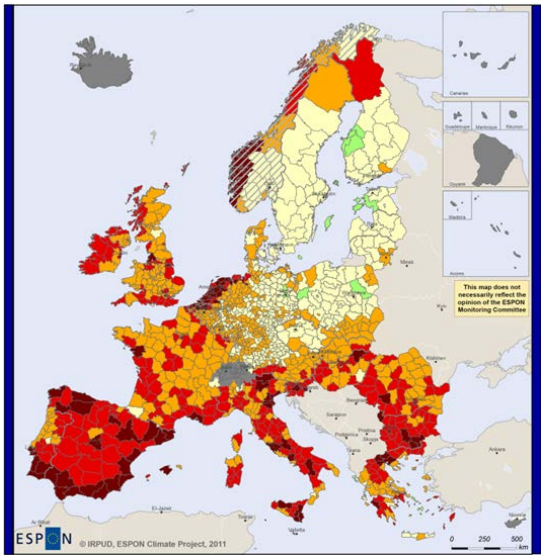
The Netherlands

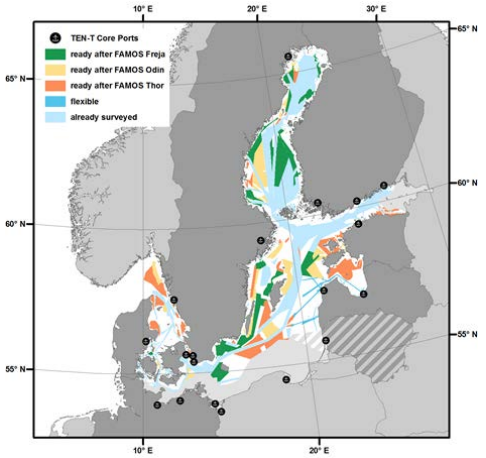
Sweden

ESPON

GEOSTAT 1B

European Court of Auditors





Priority User Needs

People

- **Solid facts to take action against inequality on a local and national level in Poland**
- **Why the urban and rural dimension is of great importance in Turkey**
- **Accessibility to Schools in Portugal**
- **Ensure access to Emergency Hospitals in Europe**

Priority User Needs

Prosperity

- **Where establishing new Wind Power could still be worthwhile in Germany**
- **Catchment areas of European airports to ensure proper return on investment**
- **Potential territorial coverage of broadband internet access at regional level in Portugal**
- **Accessibility to Central Places in Germany**

Priority User Needs

Prosperity continued

- The state of spatial management in Poland
- Access to green infrastructure in Sweden
- Access to public transport in urban areas in Europe

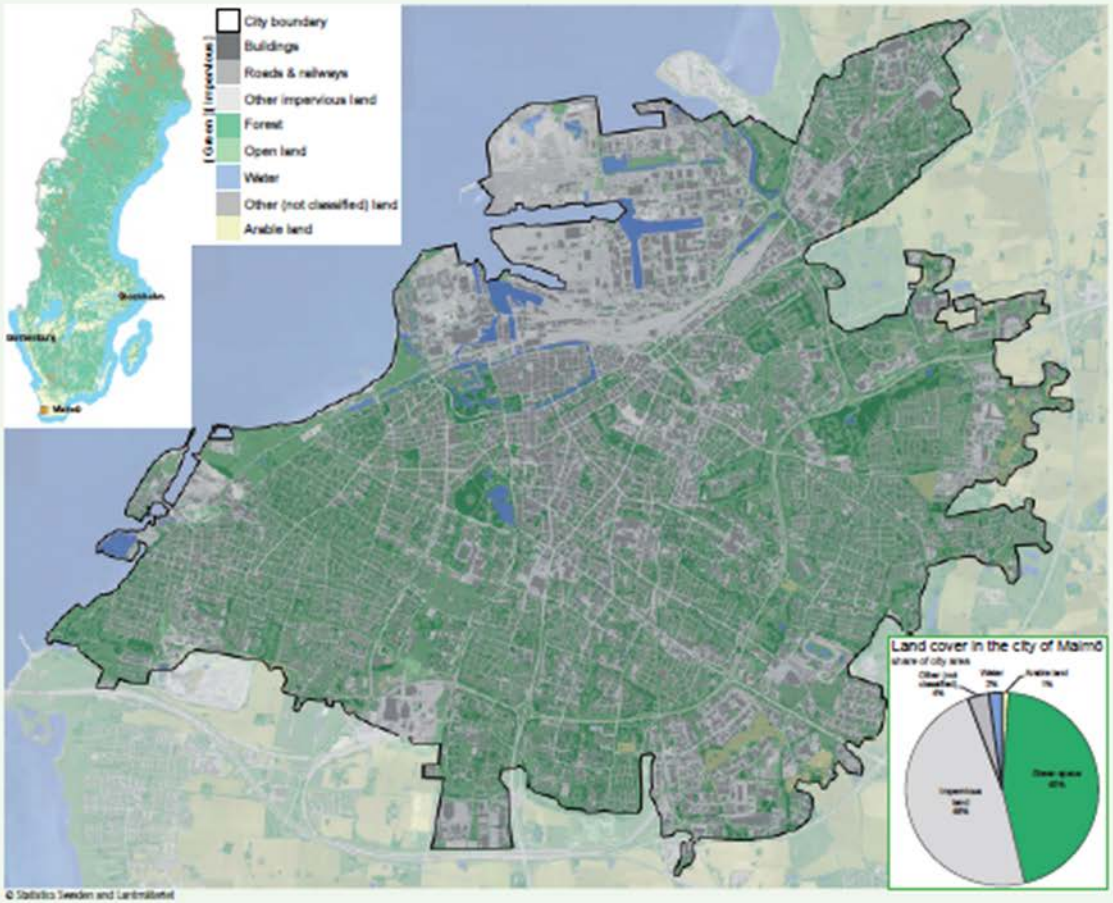
Priority User Needs

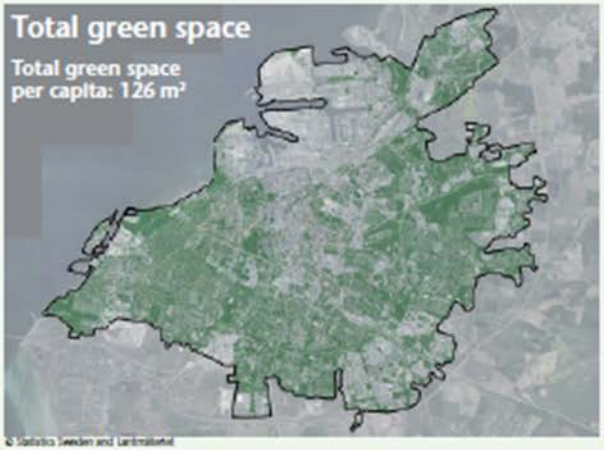
Planet

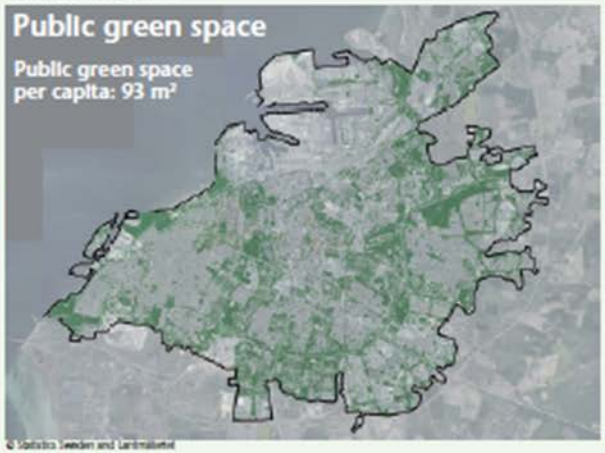
- **Preventive measures in a crisis situation caused by the climate in Denmark**
- **Adaptation to climate change in Europe**
- **Land accounts for Biodiversity in Sweden**
- **Sensitivity to desertification in Andalusia 1956-2100**

Swedish Use cases

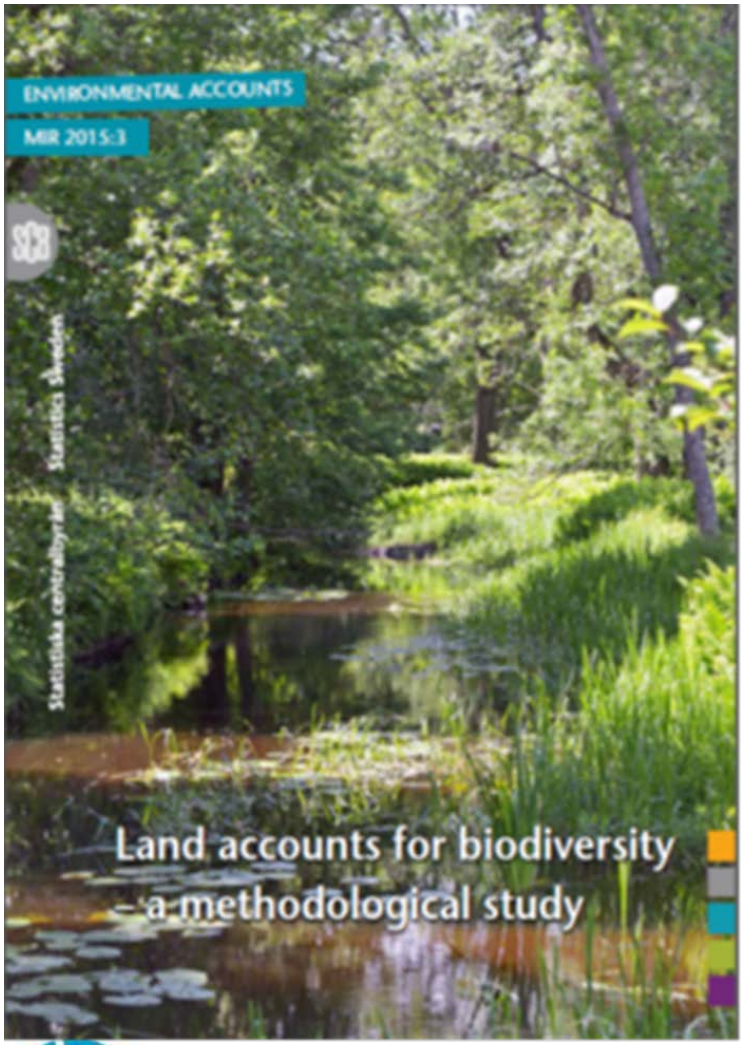
City of Malmö

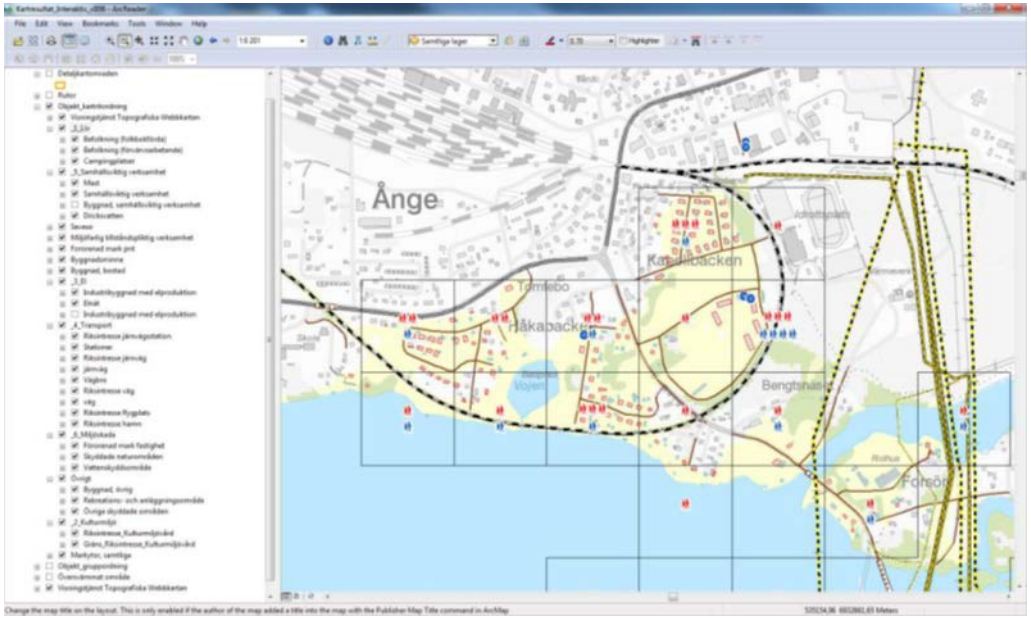


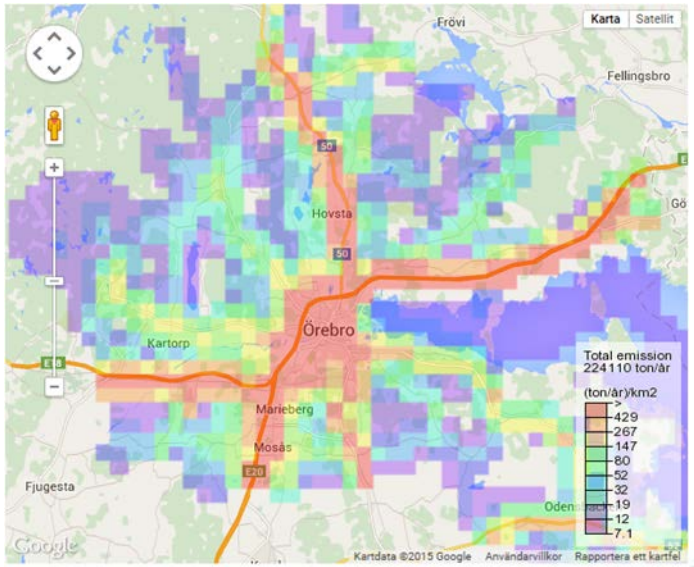




Swedish Use cases







Based on the use cases: linking policy to action and outcome

Policy

- UN Sustainable Development Goals
- Europe 2020, Territorial Agenda for Europe, Work programmes
- National Policies, Green growth strategies
- Local Policies

Action

- Measures to create jobs, reduce income inequalities etc
- City planning, decisions on best locations
- Measures to preserve eco systems
- Preparedness for natural hazards, risk reduction plans and measures

Outcome

- Smart, sustainable and inclusive growth that leaves no one behind
- Results that can be measured and evaluated (indicators, ..)
- Accountability, public spending, value for money..
- Saving lives, buildings and infrastructure, prevent diseases

Tasks B1 – “priority user needs”– accomplished
How to better meet user needs in Europe?

In a nutshell WG B identified the need for

- ★ A European Spatial Data Strategy building on National Spatial Data Strategies
- ★ Priority data (incl. core data) for a Statistical Geospatial Framework (SGF)
- ★ Improved workflows with geospatial technology

Recommendations & actions:

- ★ What? → Proposed „List of actions“ (incl. objectives)
- ★ Who? → WG B (NSIs and NMCAs), ExCom, Secretariat, Private sector
- ★ When? → 2016 - 2019

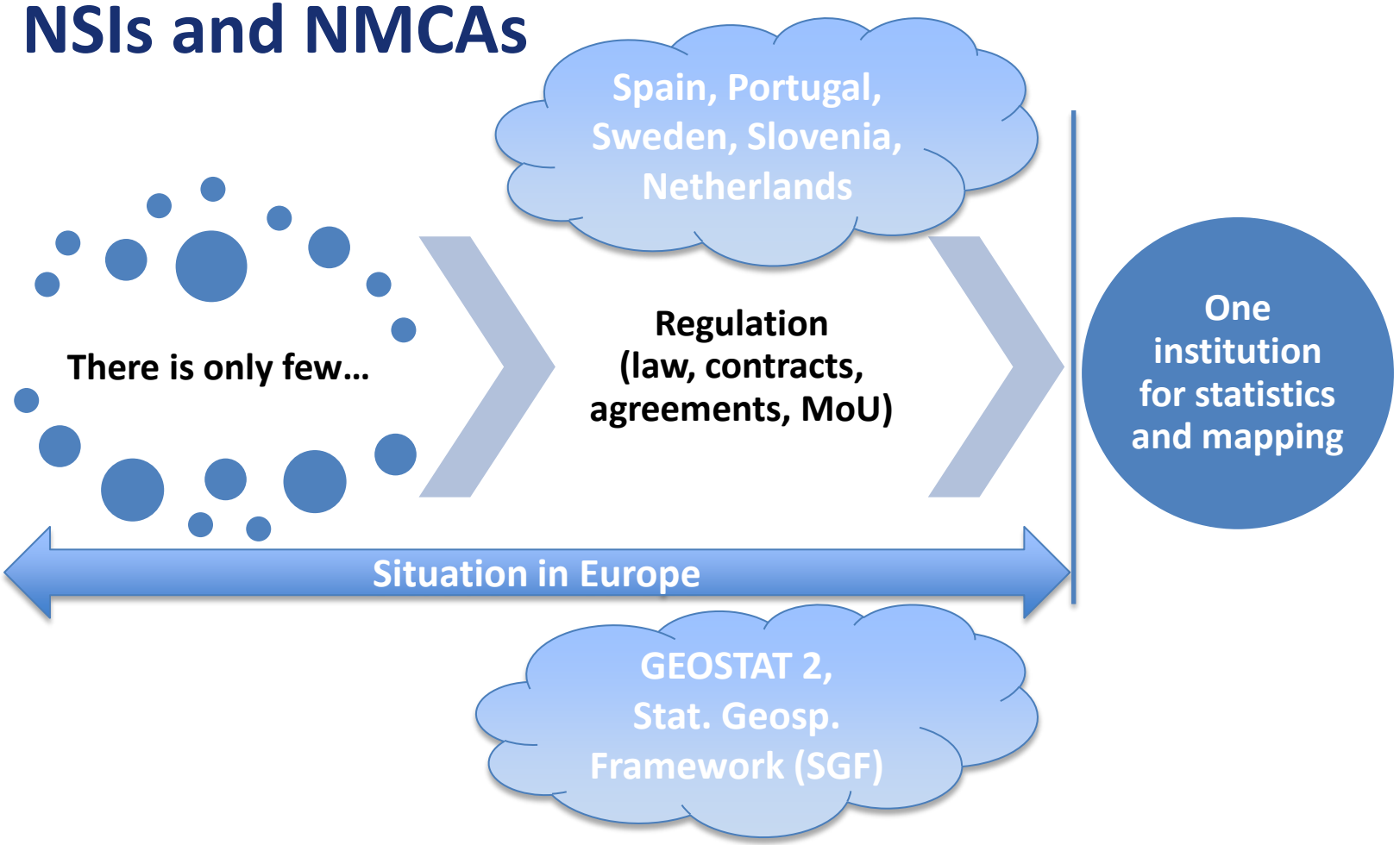
Tasks B2: “methods”

2. **Recommendation for methods implementing the prioritised combinations of data (Mid-2016)**

- **review** current European interoperability **frameworks** and geospatial, statistical and other thematic data integration **projects** regarding methods for combinations of data;
- **provide best practise guidance for the interaction** between NMCAs, NSIs, environment agencies and other relevant organisations;
- **review current use of data from multiple sources** (crowd sourcing, community sourcing and regulatory geospatial representations) to identify case studies and best practices relevant for combinations with core data;

- **Subgroup B2 leader: United Kingdom (UK)**
- **activities started in June 2015**

Tasks B2: “methods” – Interaction between NSIs and NMCAs



→ „Master Vision“ (recommendation) for organisations to follow

Task B3: “side-effects”

3. **Recommendation about how to manage side-effects induced by data combinations (Mid-2016)**

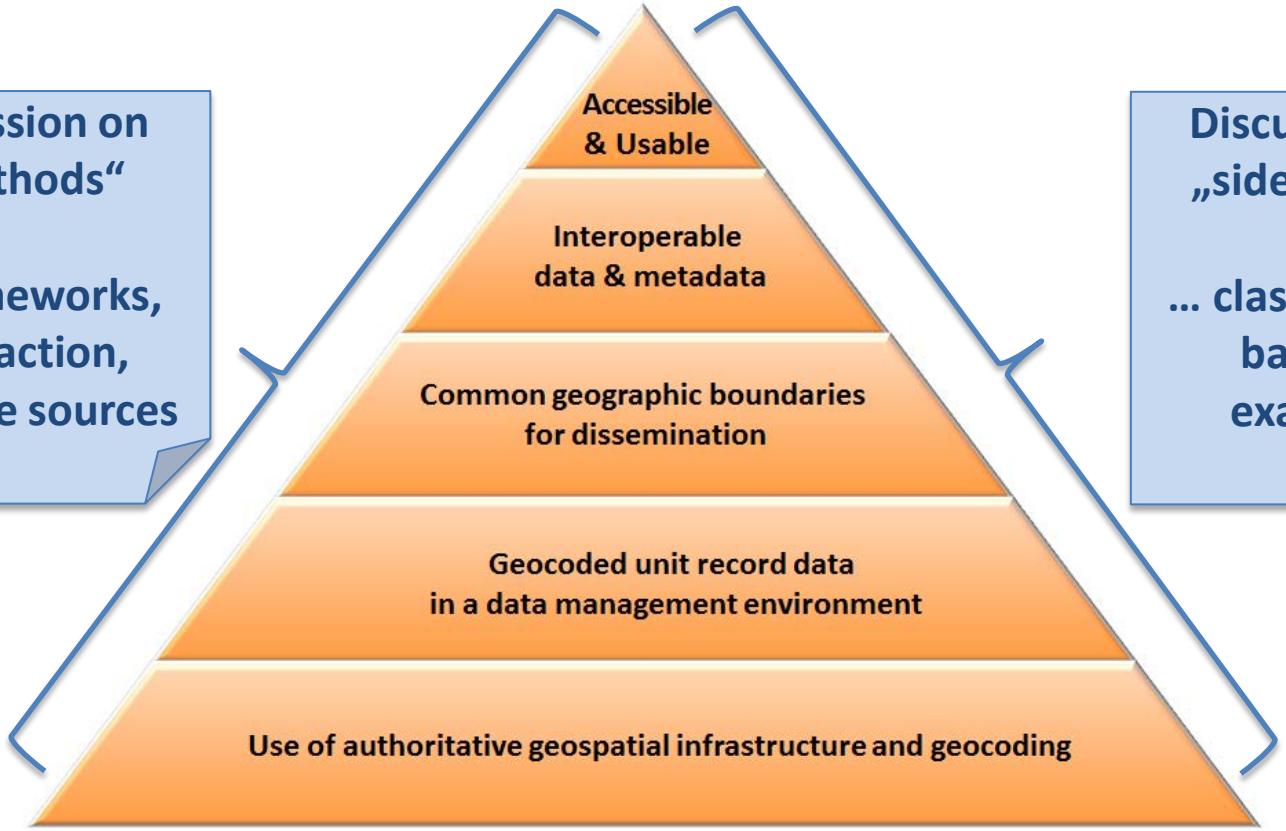
- **recommend effective methods** of governance, quality management, data interoperability, access control and privacy safeguards **for the integration of data from multiple sources with core data**;
- **identify legal and other barriers** for the integration of data from relevant sources.

- **Subgroup B3 leader: Austria (AT)**
- **activities started in September 2015**

5 principles of the Statistical Geospatial Framework (SGF)

Discussion on „Methods“

… frameworks, interaction, multiple sources



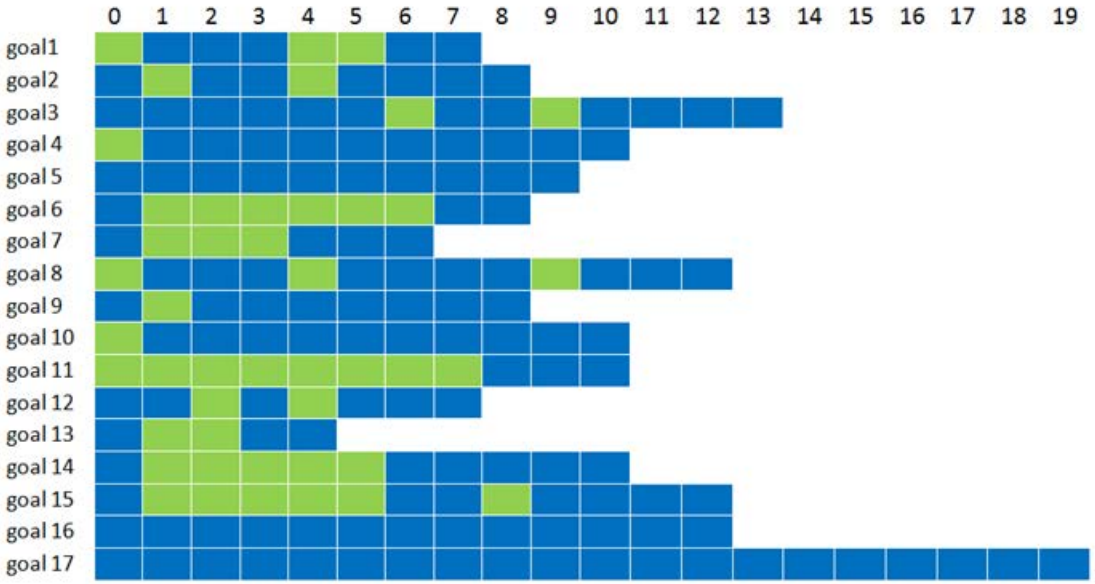
Discussion on „side effects“

… classification, barriers, examples

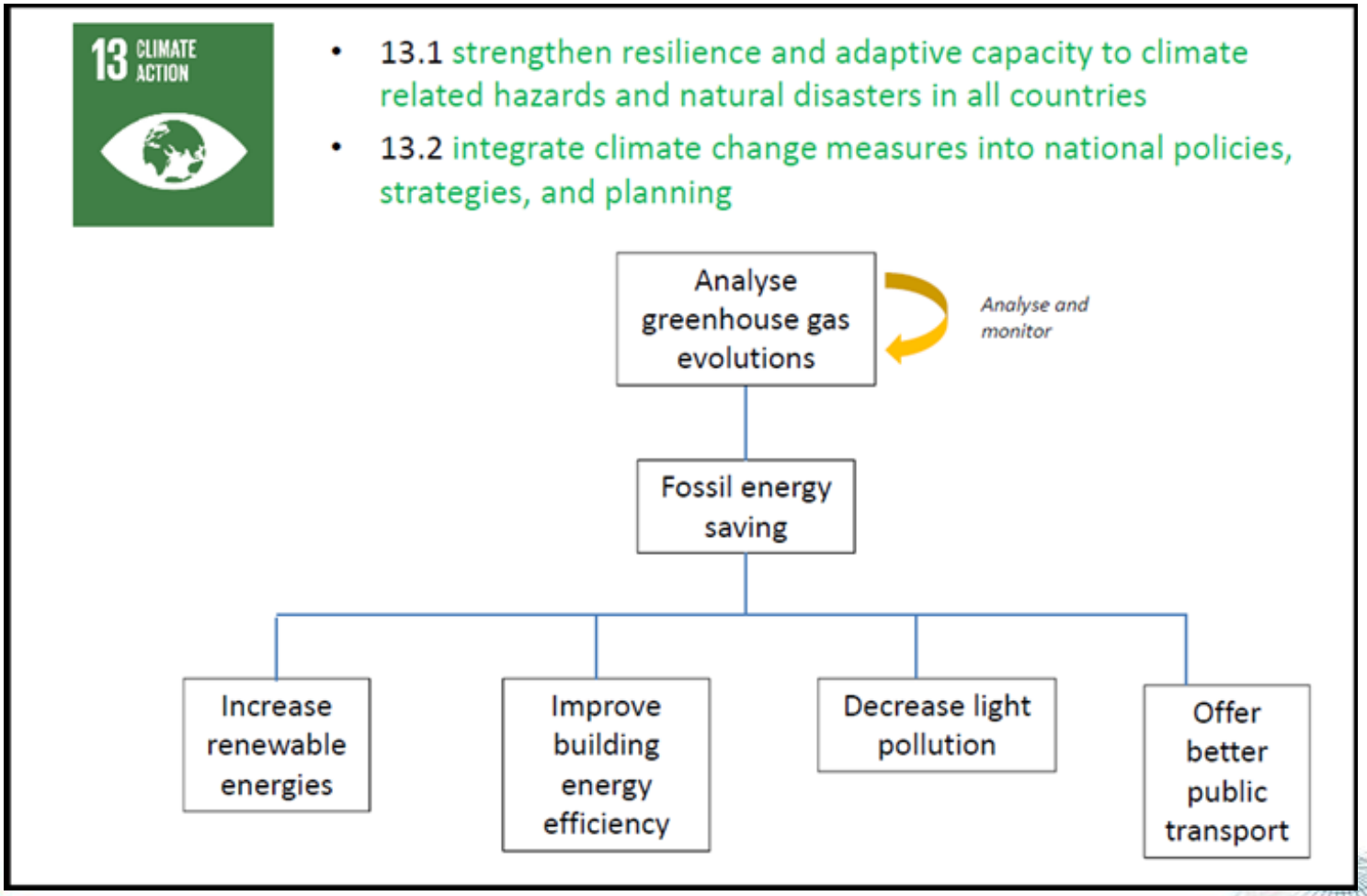
→ will be considered by WG B “Data Integration”

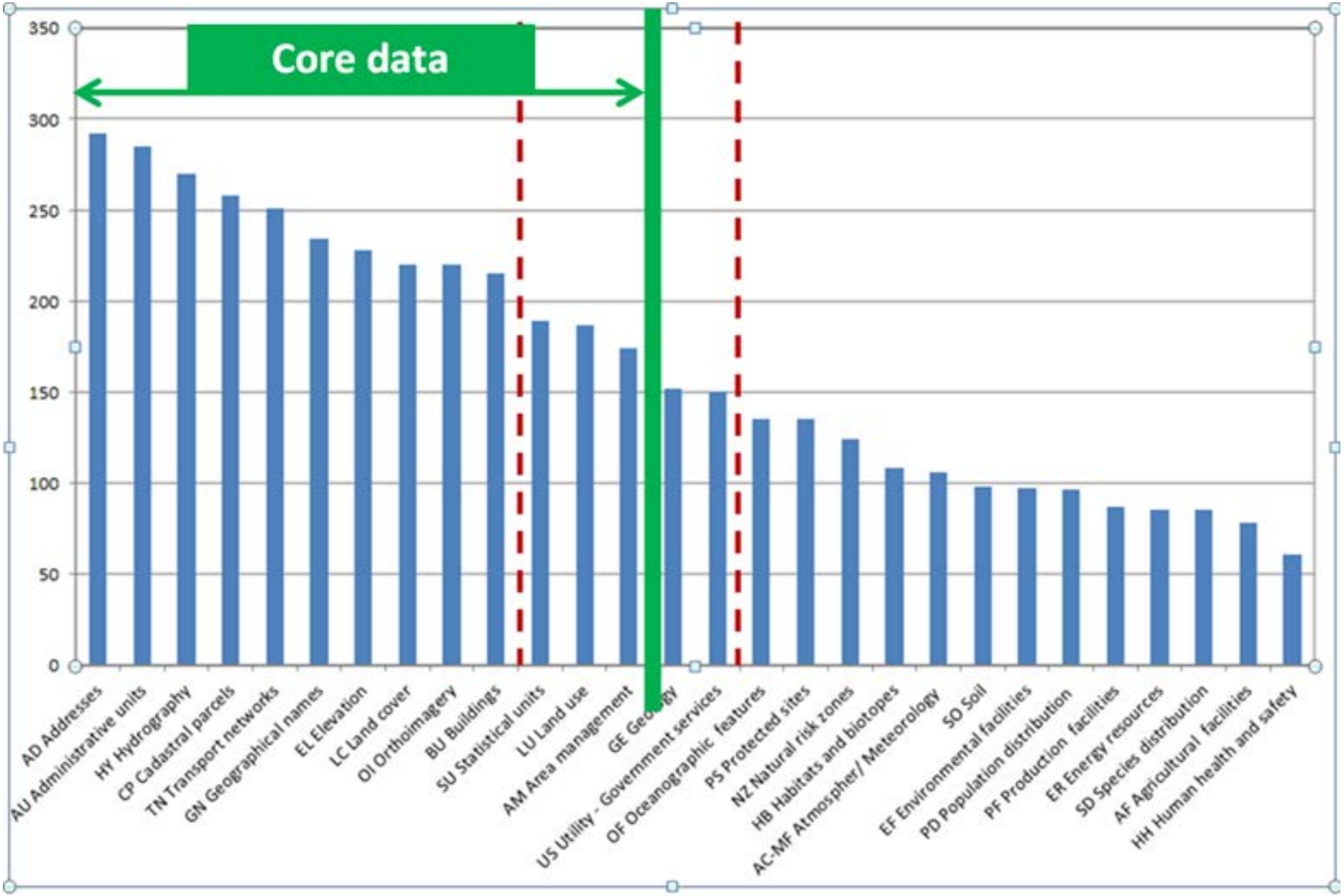
WG A: Classifying SDG targets consuming GI

- Risk, pollution, climate
- Natural resources (water, ocean, ecosystems)
- Economy (agriculture, energy, settlements, poverty, education …).



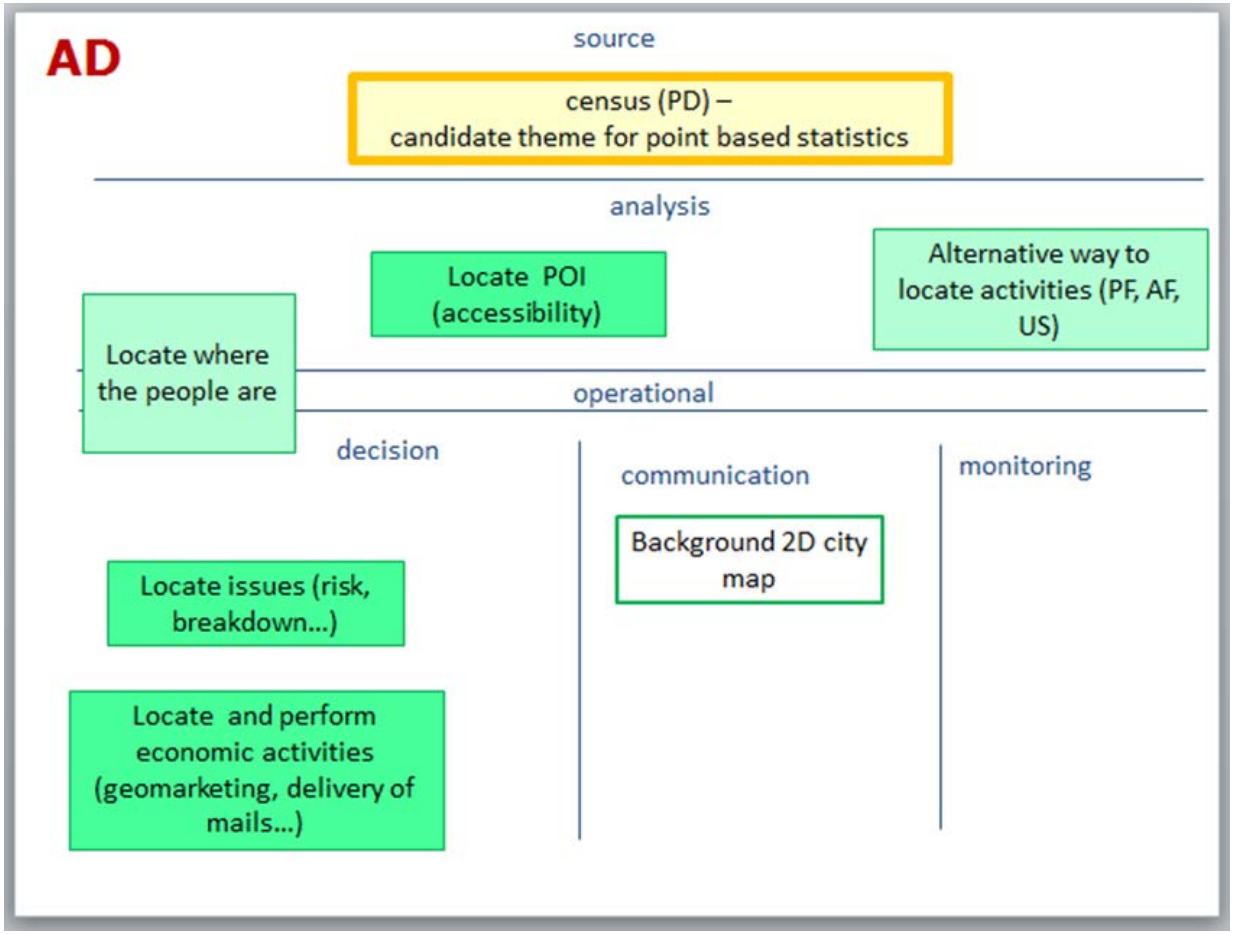
WG A – Defining core data: Use case example for climate change SDG




Core data
350
300
250
200
150
100
50
0
AD Addresses
AU Administrative units
HY Hydrography
CP Cadastral parcels
TN Transport networks
GN Geographical names
EL Elevation
LC Land cover
OI Orthoimagery
BU Buildings
SU Statistical units
LU Land use
AM Area management
GE Geology
US Utility - Government services
OF Oceanographic features
PS Protected sites
NZ Natural risk zones
HB Habitats and biotopes
AC-MF Atmospher/ Meteorology
SO Soil
EF Environmental facilities
PD Population distribution
PF Production facilities
ER Energy resources
SD Species distribution
AF Agricultural facilities
HH Human health and safety

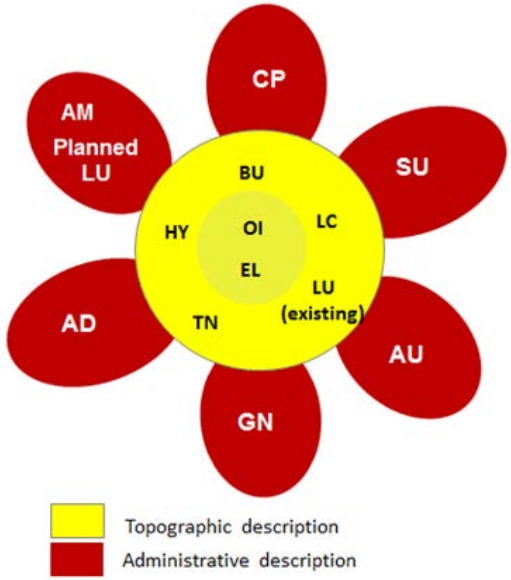
Core themes linking to the SGF:

Addresses, Cadastral Parcels and Buildings



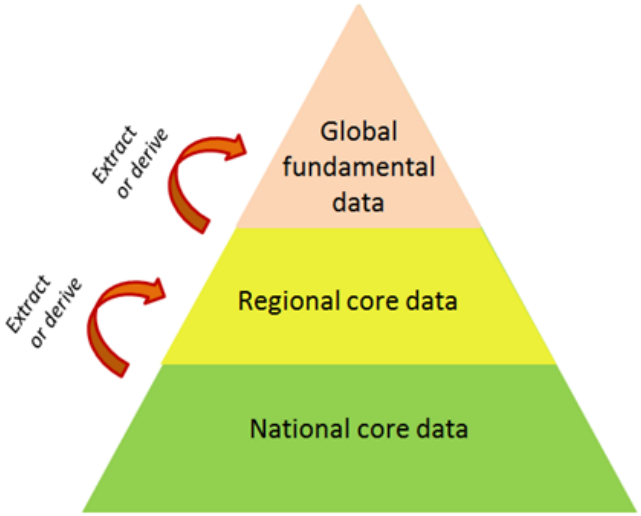
Core data – indirect or direct use for SDG's

- Indirect use:
  - ★Data is used as background providing meaningful context to more thematic data;
  - ★Data is used as main source or as ancillary data to derive or to facilitate the production of other data;
  - ★Data is used to transform an indirect location into a direct one by geocoding process;
  - ★Data enables the combination with other data, typically by semantic jointure.
- The resulting selection includes both topographic and administrative description of the territory

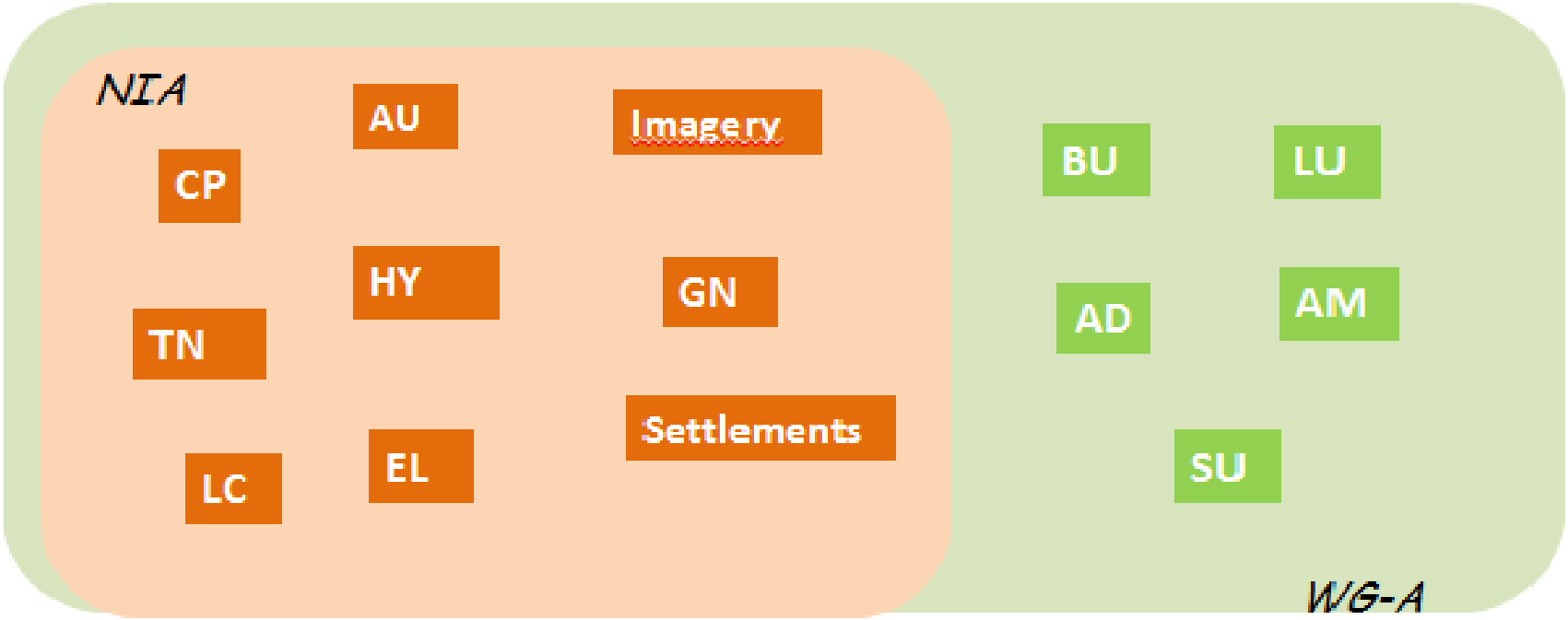


Levels of Detail of required Geospatial Data

- Geospatial data for policy use - International and strategic level
- Geospatial data for planning and management - National and management level
- Geospatial data for local level action - Local and action level



UN-GGIM NIA selection as subset of WG A



The SGF in a European context

- The UN-GGIM: Europe WG A and B have included SGF aspects in the work:
  - ★ WG A – core data include the georeferencing aspects for statistical purposes
  - ★ WG B – the SGF is important to illustrate the aspects of integration
- The ongoing work on GSBPM in the GEOSTAT 2 project relate to the SGF
- Proposals for GEOSTAT 3 include the SGF
- The EFGS website include the SGF