UN-GGIM: Europe Work Group on "Data Integration"

Facilitating the wider utilization of geospatial information to produce indicators

IAEG SDG WG GI, Meeting 06-08.12.2018, NY

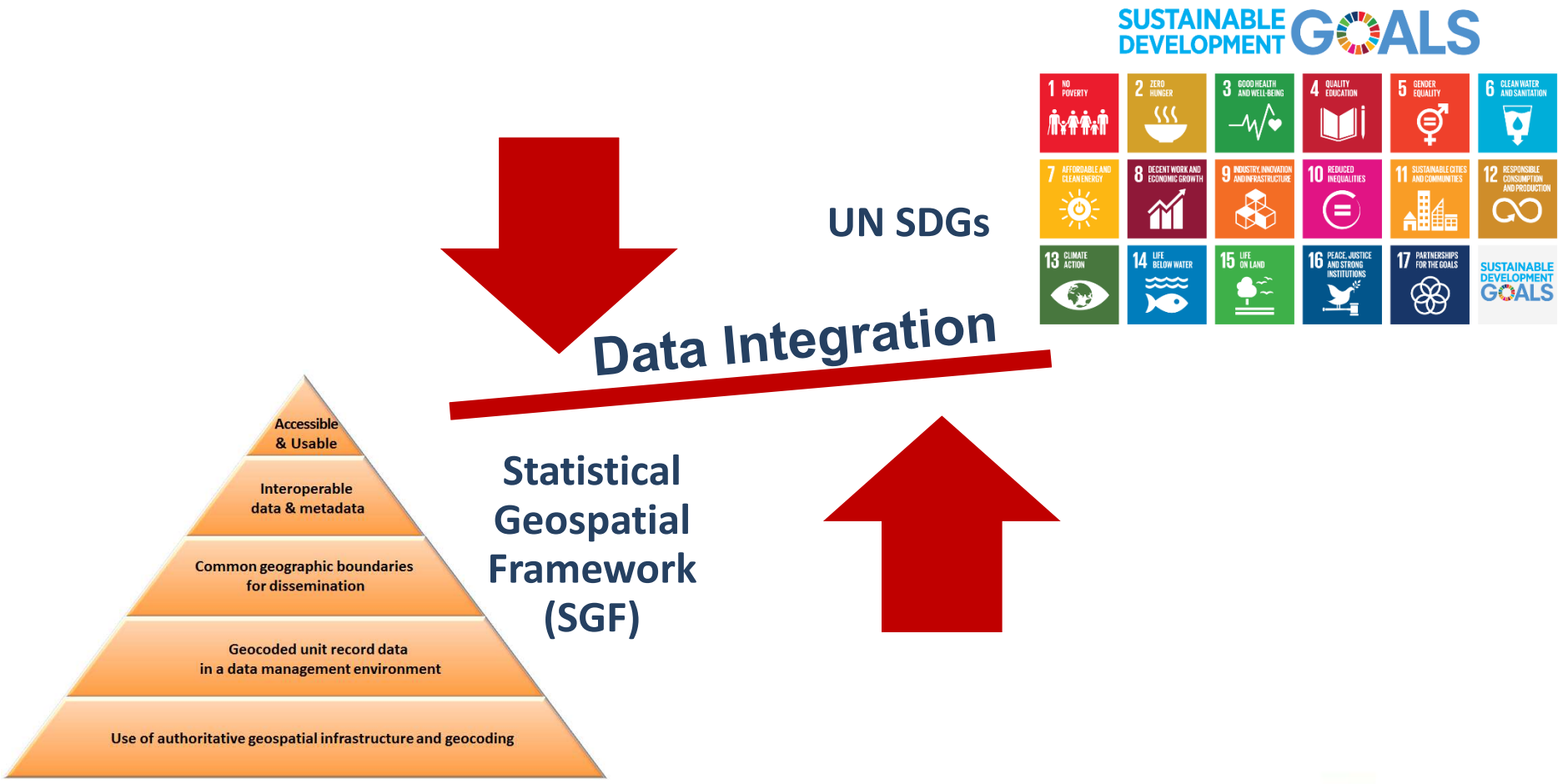
UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

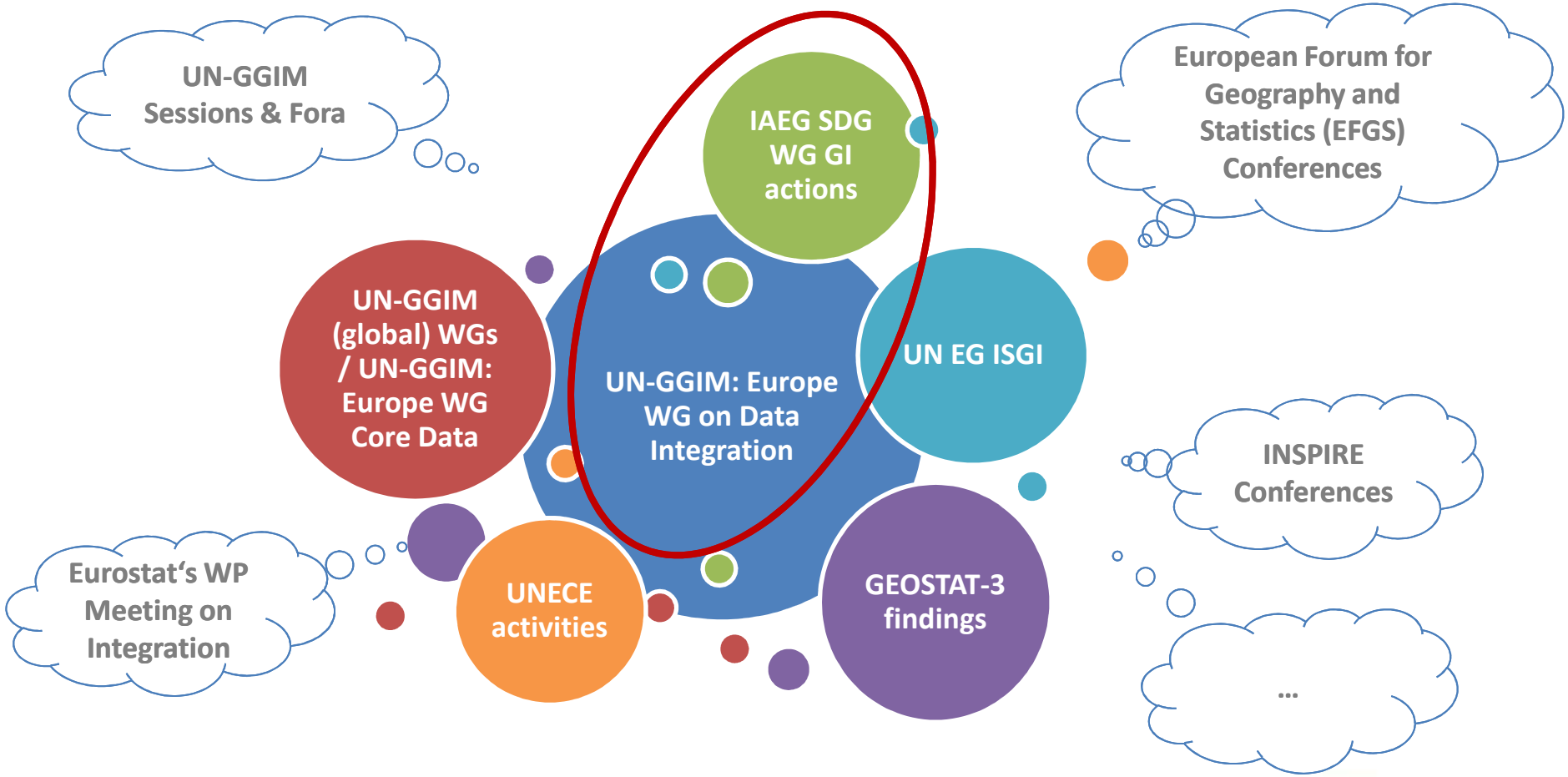
Content

- **Status report on the activities of the UN-GGIM: Europe Working Group on Data Integration**
  - ★ **The territorial dimension in SDG indicators: the contribution of geospatial data analysis and its combination with statistical data**
- **GEOSTAT-3 – a practical approach to obtain figures for the indicators**

The main drivers for this work group…



The main communication platforms…



The main outcome and findings…

Kick off, November 2014

1st WG B Meeting, May 2015

Deliverable B1

Data Integration – Definition of priority user needs for combinations of data

UN-GGIM: Europe, Work Group B, First delivery

Version 1.1
2015-10-23

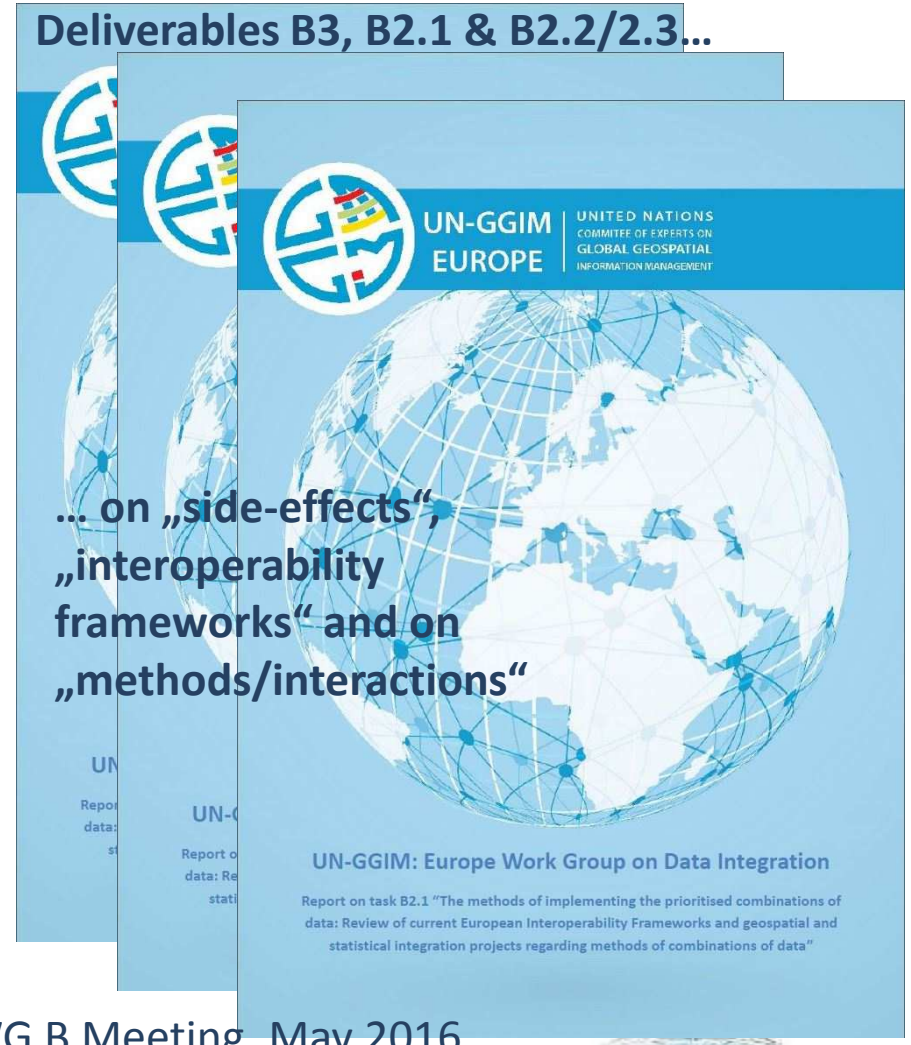
The main outcome and findings…

4th WG B Meeting, November 2015

5th WG B Meeting, May 2016

Deliverables B3, B2.1 & B2.2/2.3…

… on „side-effects“, „interoperability frameworks“ and on „methods/interactions“



The channel to publish the outcome…

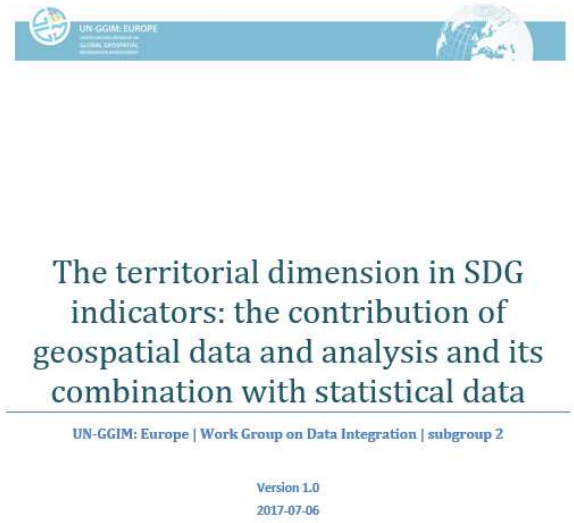
UN-GGIM: Europe – Work Plan 2017 - 2020

The following tasks were accepted by the UN-GGIM: Europe at its Plenary Session on 7-8 June 2017:

1. **Draft an policy outreach paper to be prepared for UN-GGIM-8 on data integration topics and make use of the findings/recommendations of the deliverables B.1, B.2.1, B.2.2/2.3 and B.3.1**
   → task 1 / subgroup 1
2. **Select 1-3 new global, regional or national indicators (e.g. focusing on "accessibility") reflecting the European perspective (INSPIRE, Copernicus,…) reflecting "data integration" aspects and cross-cutting issues.**
   → task 2 / subgroup 2

UN-GGIM: Europe WG on Data Integration Draft Scoping Paper for Task 2

- Work plan with the aim to set up a line of work addressing specific SDG indicators and targets by taking into account the specificities of the European context
- Reflecting experiences of European and national initiatives and the activities of the IAEG-SDG WG GI and the addressing the SDGs



Task 2 – Analysis of SDGs & EU indicators

Check and assess (1) methodology and (2) data availability:

- **Systematization of global "metadata" for indicators and national practices, including tier I, II and III SDG indicators;**
- **EU-SDG indicators potentially benefiting from geospatial information;**
- **additional national specific indicators benefiting from geospatial information and its combination with statistical data, defined within the context of national SDG monitoring**

Task 2 – Pre-Selection of indicators

Selection of indicators based on: a) number of contributions; b) maturity of operationalization; c) possibility of operationalization at national level and at European level; and d) policy relevance for the European context

From	Tier	Indicator	EU-SDG	Current national practices					Global metadata
IAEG WG GI GEO	I	14.5.1 | Coverage of protected areas in relation to marine areas	similar	EEA and JRC (related MAR004)					Systematization Gap analysis (EEA and JRC)
IAEG WG GI GEO	I	15.1.1 | Forest area as a proportion of total land area	integral	Austria (NMCA)	Spain (NMCA)	Finland (NMCA)	Italy (e-GEOS)	JRC	Gap analysis (FR)
IAEG WG GI GEO	II	11.2.1 | Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	similar	France (NMCA)	Sweden (NSI)	Austria (NSI)			Gap analysis (FR and SE)
IAEG WG GI GEO	II	11.3.1 | Ratio of land consumption rate to population growth rate	similar	Portugal (NSI and NMCA)	Italy (e-GEOS)	Finland (NMCA)	Spain (NMCA)		Systematization Gap analysis (PT, FR, IT and FL)
IAEG WG GI GEO	III	11.7.1 | Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities							
National		New housing close to public transport stops (Sweden)							

Task 2 – Work phases and actions

- Phase 1 | Organise the work scope by defining the main activities […] until 31 May 2017 → accomplished
- **Phase 2 | Select specific indicators for which the integration between geospatial information and statistical data is relevant for SDG monitoring on a territorial perspective including spatial disaggregation until 31 December 2017**
- **Phase 3 | Definition of an evaluation system to analyse the indicators at a national (and if possible on a sub-national), regional/European and at the global level […] until 31 March 2018**
- Phase 4 | Identification of best practices both at the European and national levels […] until 15 November 2018.

Task 2 – work tasks for phase 2 (Jan'18)

- Check if information in Member States is available for all 4 selected indicators, especially for indicator 11.7.1
- Check European level analysis with Eurostat how to proceed, if a gap analysis exists on the selected indicators

Resulting in

- Completed metadata systematization by nominated WG members of the selected indicators
  - ★ for 2 levels: (A) Global metadata and (B) Current National Practice(s)
  - ★ information about: current reporting situation, suggested methodology, suggested geospatial data integration
- Reports (non-technical) on national practices and gap analysis
  - ★ "assessment on what is required vs. what is available"

Task 2 – work tasks for phase 2 (Jan'18)

(A) Global metadata

1. Current reporting situation

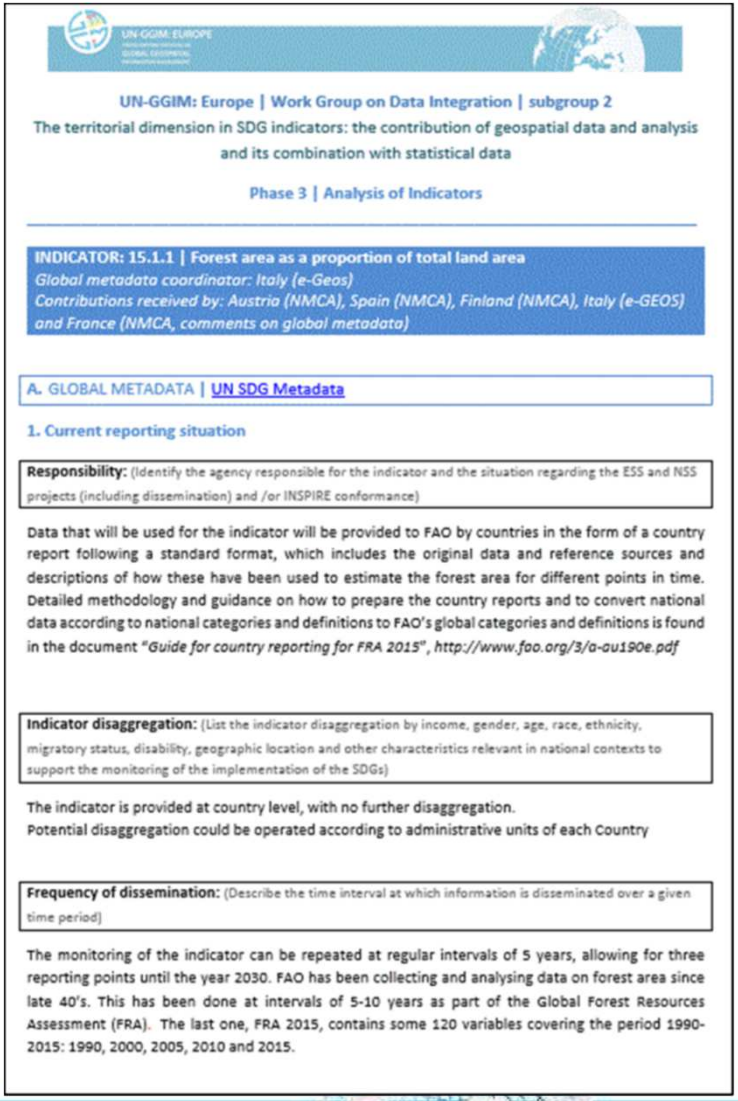
- ★ Responsibility
- ★ Indicator disaggregation
- ★ Frequency of dissemination
- ★ Timeliness
- ★ Data sources
- ★ Geospatial data analysis and integration
- ★ Data quality requirements
- ★ Current use of geospatial data for the indicator

2. Suggested Methodology

- ★ Gap analysis

3. Suggested geospatial data integration

- ★ Gap analysis
- ★ List of required geospatial data
- ★ Data quality requirements
- ★ Data availability/collection
- ★ Geospatial analysis and integration



UN-GGIM: Europe | Work Group on Data Integration | subgroup 2

The territorial dimension in SDG indicators: the contribution of geospatial data and analysis and its combination with statistical data

Phase 3 | Analysis of Indicators

INDICATOR: 15.1.1 | Forest area as a proportion of total land area

Global metadata coordinator: Italy (e-Geos)

Contributions received by: Austria (NMCA), Spain (NMCA), Finland (NMCA), Italy (e-GEOS) and France (NMCA, comments on global metadata)

A. GLOBAL METADATA | UN SDG Metadata

1. Current reporting situation

Responsibility: (Identify the agency responsible for the indicator and the situation regarding the ESS and NSS projects (including dissemination) and /or INSPIRE conformance)

Data that will be used for the indicator will be provided to FAO by countries in the form of a country report following a standard format, which includes the original data and reference sources and descriptions of how these have been used to estimate the forest area for different points in time. Detailed methodology and guidance on how to prepare the country reports and to convert national data according to national categories and definitions to FAO's global categories and definitions is found in the document *"Guide for country reporting for FRA 2015", http://www.fao.org/3/a-au190e.pdf*

Indicator disaggregation: (List the indicator disaggregation by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts to support the monitoring of the implementation of the SDGs)

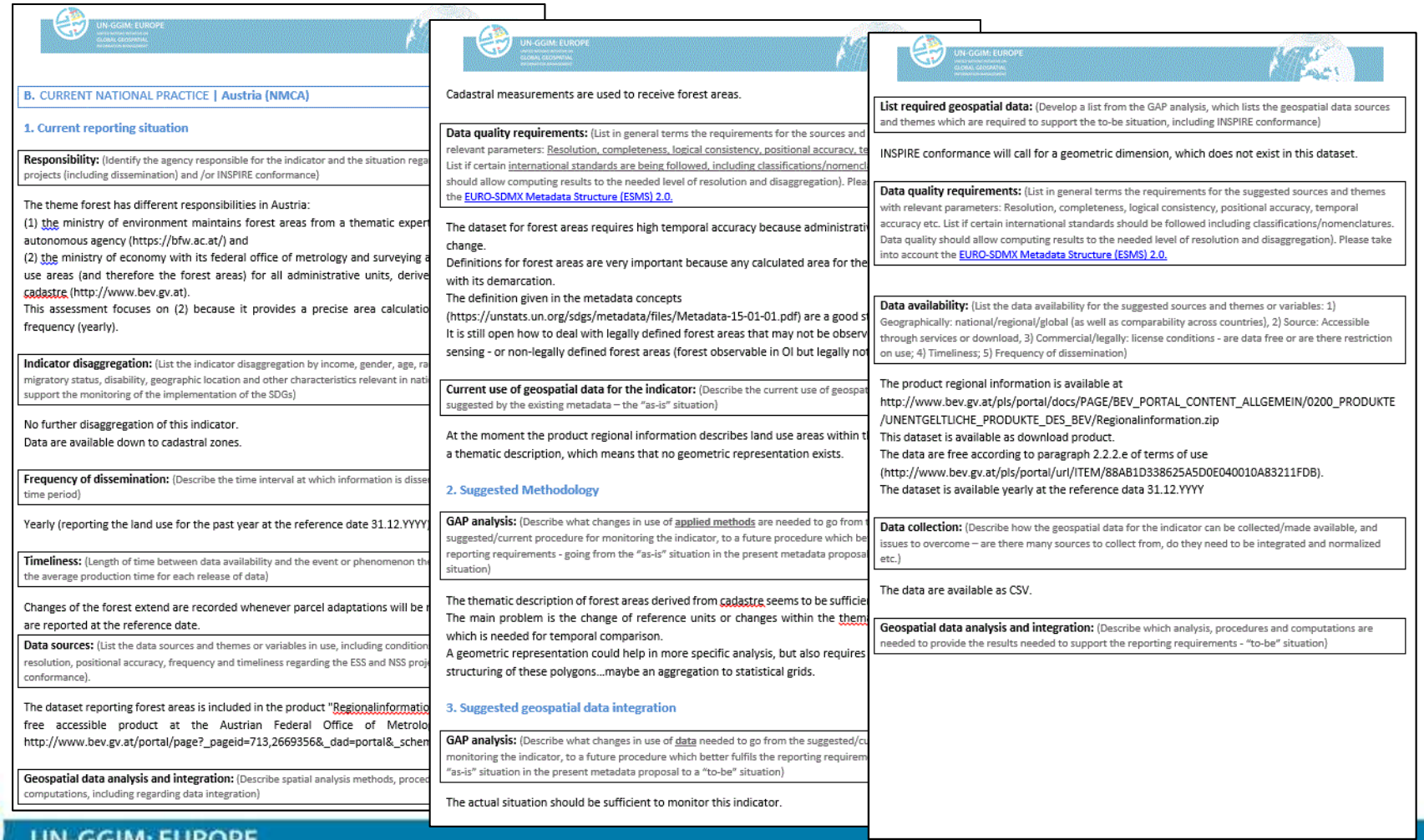
The indicator is provided at country level, with no further disaggregation.
Potential disaggregation could be operated according to administrative units of each Country

Frequency of dissemination: (Describe the time interval at which information is disseminated over a given time period)

The monitoring of the indicator can be repeated at regular intervals of 5 years, allowing for three reporting points until the year 2030. FAO has been collecting and analysing data on forest area since late 40's. This has been done at intervals of 5-10 years as part of the Global Forest Resources Assessment (FRA). The last one, FRA 2015, contains some 120 variables covering the period 1990-2015: 1990, 2000, 2005, 2010 and 2015.

Task 2 – work tasks for phase 2 (Jan'18)

(B) Current National Practice(s): 15.1.1 → AT, ES, IT, FI (and SL)



B. CURRENT NATIONAL PRACTICE | Austria (NMCA)

1. Current reporting situation

Responsibility: (Identify the agency responsible for the indicator and the situation rega… projects (including dissemination) and /or INSPIRE conformance)

The theme forest has different responsibilities in Austria:
(1) the ministry of environment maintains forest areas from a thematic exper… autonomous agency (https://bfw.ac.at/) and
(2) the ministry of economy with its federal office of metrology and surveying a… use areas (and therefore the forest areas) for all administrative units, derive… cadastre (http://www.bev.gv.at).
This assessment focuses on (2) because it provides a precise area calculatio… frequency (yearly).

Indicator disaggregation: (List the indicator disaggregation by income, gender, age, ra… migratory status, disability, geographic location and other characteristics relevant in nati… support the monitoring of the implementation of the SDGs)

No further disaggregation of this indicator.
Data are available down to cadastral zones.

Frequency of dissemination: (Describe the time interval at which information is disse… time period)

Yearly (reporting the land use for the past year at the reference date 31.12.YYYY)

Timeliness: (Length of time between data availability and the event or phenomenon th… the average production time for each release of data)

Changes of the forest extend are recorded whenever parcel adaptations will be r… are reported at the reference date.

Data sources: (List the data sources and themes or variables in use, including condition… resolution, positional accuracy, frequency and timeliness regarding the ESS and NSS proj… conformance).

The dataset reporting forest areas is included in the product "Regionalinformatio… free accessible product at the Austrian Federal Office of Metrolo… http://www.bev.gv.at/portal/page?_pageid=713,2669356&_dad=portal&_schem…

Geospatial data analysis and integration: (Describe spatial analysis methods, proced… computations, including regarding data integration)

Cadastral measurements are used to receive forest areas.

Data quality requirements: (List in general terms the requirements for the sources and… relevant parameters: Resolution, completeness, logical consistency, positional accuracy, te… List if certain international standards are being followed, including classifications/nomencl… should allow computing results to the needed level of resolution and disaggregation). Plea… the EURO-SDMX Metadata Structure (ESMS) 2.0.

The dataset for forest areas requires high temporal accuracy because administrati… change.
Definitions for forest areas are very important because any calculated area for the… with its demarcation.
The definition given in the metadata concepts
(https://unstats.un.org/sdgs/metadata/files/Metadata-15-01-01.pdf) are a good s…
It is still open how to deal with legally defined forest areas that may not be observ… sensing - or non-legally defined forest areas (forest observable in OI but legally no…

Current use of geospatial data for the indicator: (Describe the current use of geospat… suggested by the existing metadata – the "as-is" situation)

At the moment the product regional information describes land use areas within t… a thematic description, which means that no geometric representation exists.

2. Suggested Methodology

GAP analysis: (Describe what changes in use of applied methods are needed to go from t… suggested/current procedure for monitoring the indicator, to a future procedure which be… reporting requirements - going from the "as-is" situation in the present metadata proposa… situation)

The thematic description of forest areas derived from cadastre seems to be sufficie…
The main problem is the change of reference units or changes within the them…
which is needed for temporal comparison.
A geometric representation could help in more specific analysis, but also requires… structuring of these polygons…maybe an aggregation to statistical grids.

3. Suggested geospatial data integration

GAP analysis: (Describe what changes in use of data needed to go from the suggested/cu… monitoring the indicator, to a future procedure which better fulfils the reporting requirem… "as-is" situation in the present metadata proposal to a "to-be" situation)

The actual situation should be sufficient to monitor this indicator.

List required geospatial data: (Develop a list from the GAP analysis, which lists the geospatial data sources and themes which are required to support the to-be situation, including INSPIRE conformance)

INSPIRE conformance will call for a geometric dimension, which does not exist in this dataset.

Data quality requirements: (List in general terms the requirements for the suggested sources and themes with relevant parameters: Resolution, completeness, logical consistency, positional accuracy, temporal accuracy etc. List if certain international standards should be followed including classifications/nomenclatures. Data quality should allow computing results to the needed level of resolution and disaggregation). Please take into account the EURO-SDMX Metadata Structure (ESMS) 2.0.

Data availability: (List the data availability for the suggested sources and themes or variables: 1) Geographically: national/regional/global (as well as comparability across countries), 2) Source: Accessible through services or download, 3) Commercial/legally: license conditions - are data free or are there restriction on use; 4) Timeliness; 5) Frequency of dissemination)

The product regional information is available at
http://www.bev.gv.at/pls/portal/docs/PAGE/BEV_PORTAL_CONTENT_ALLGEMEIN/0200_PRODUKTE/UNENTGELTLICHE_PRODUKTE_DES_BEV/Regionalinformation.zip
This dataset is available as download product.
The data are free according to paragraph 2.2.2.e of terms of use
(http://www.bev.gv.at/pls/portal/url/ITEM/88AB1D338625A5D0E040010A83211FDB).
The dataset is available yearly at the reference data 31.12.YYYY

Data collection: (Describe how the geospatial data for the indicator can be collected/made available, and issues to overcome – are there many sources to collect from, do they need to be integrated and normalized etc.)

The data are available as CSV.

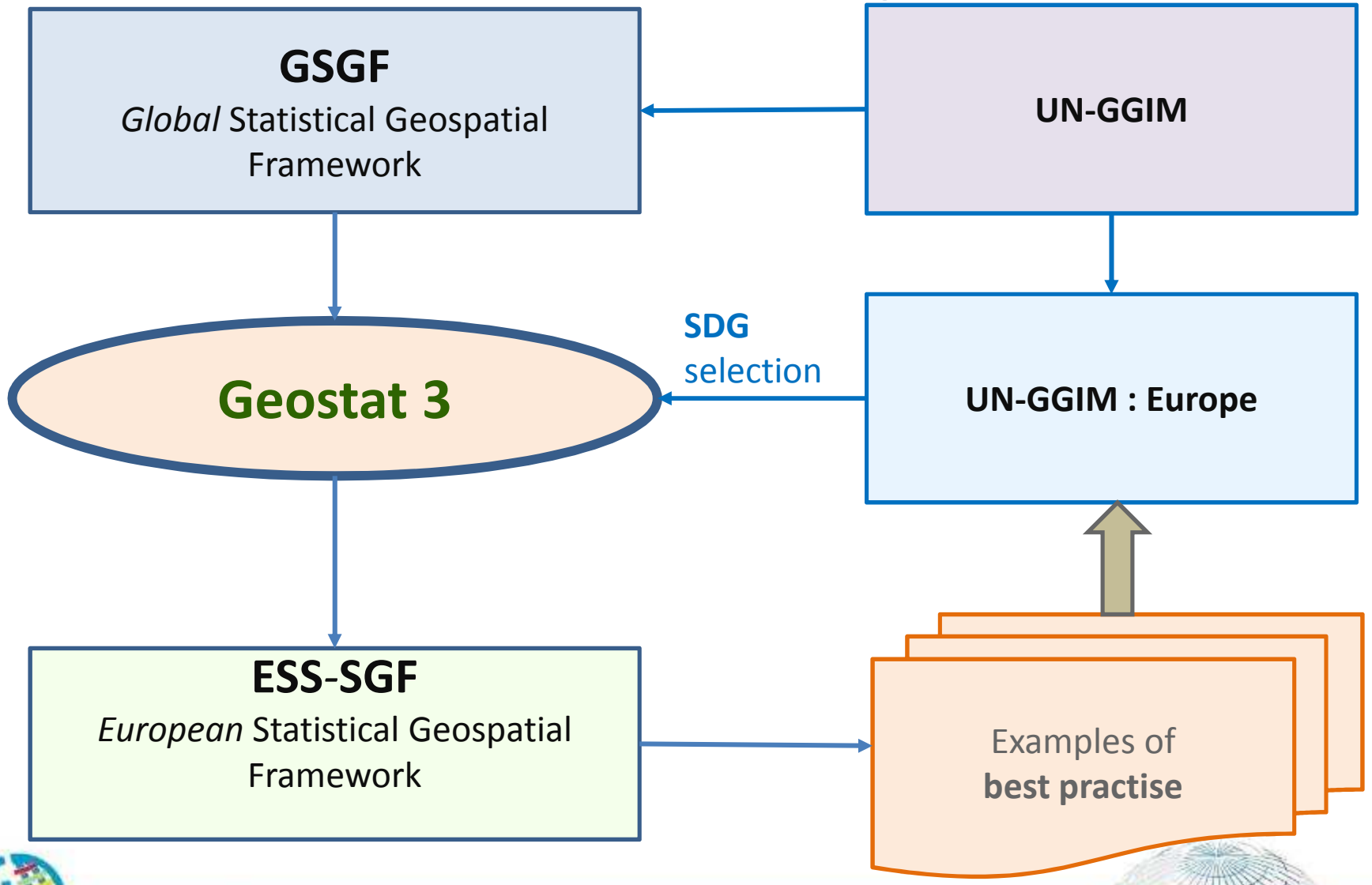
Geospatial data analysis and integration: (Describe which analysis, procedures and computations are needed to provide the results needed to support the reporting requirements - "to-be" situation)

Contribution to the GEOSTAT-3 project

Objective: Project funded by Eurostat to develop a European version of the GSGF and to test SDG indicators

- **GEOSTAT-3 Work Package 1: Contribute to the improvement of the Global Statistical and Geospatial Framework (GSGF) and – particularly – the development of a European version of it (ESS-SGF, GEOSTAT-3).**
- **GEOSTAT-3 Work Package 2: Test SDGs selected by WG on Data Integration**

GEOSTAT-3 - in the whole picture



GEOSTAT-3: Testing of SDG indicator(s)

Indicators under consideration so far

- **SDG 11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities**
- **SDG 11.3.1 Ratio of land consumption to population growth**
  - ★ **(~ EU indicator 15.21)**
- **SDG 11.7.1 Average share of the built-up area of cities that is open space for public use by sex, age and persons with disabilities**

Thank you very much for your attention!

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