Working Group "Data Integration"

Item 5 – Status Activities according to the Work Plan 2017 – 2020

UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

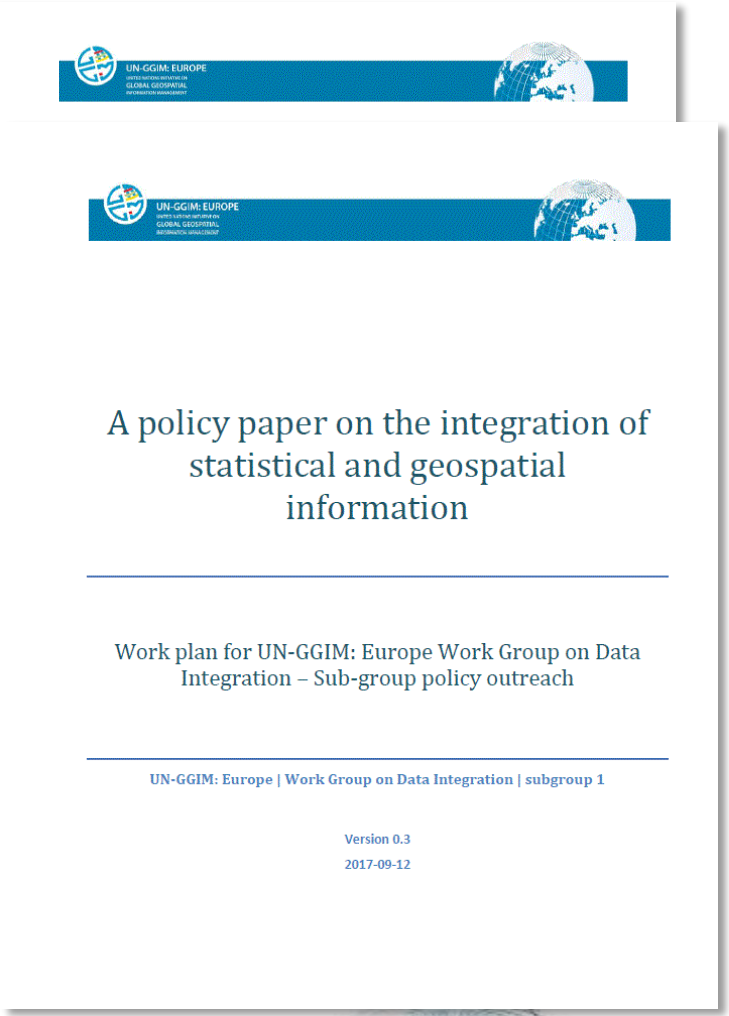
UN-GGIM: Europe – Work Plan 2017 - 2020

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

1. **Draft a policy outreach paper to be prepared for UN-GGIM-9 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. **Analyse 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

Task 1 – Policy Outreach Paper

- **First approach:** work plan for a process aiming to draft a resolution on the integration of statistical and geospatial information
- **Update:** develop a **policy outreach document** that outlines the recommendations and raises political awareness for the integration of geospatial and statistical data
- **Main users:** senior managers in NSIs, NMCAs and ministries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A policy paper on the integration of statistical and geospatial information

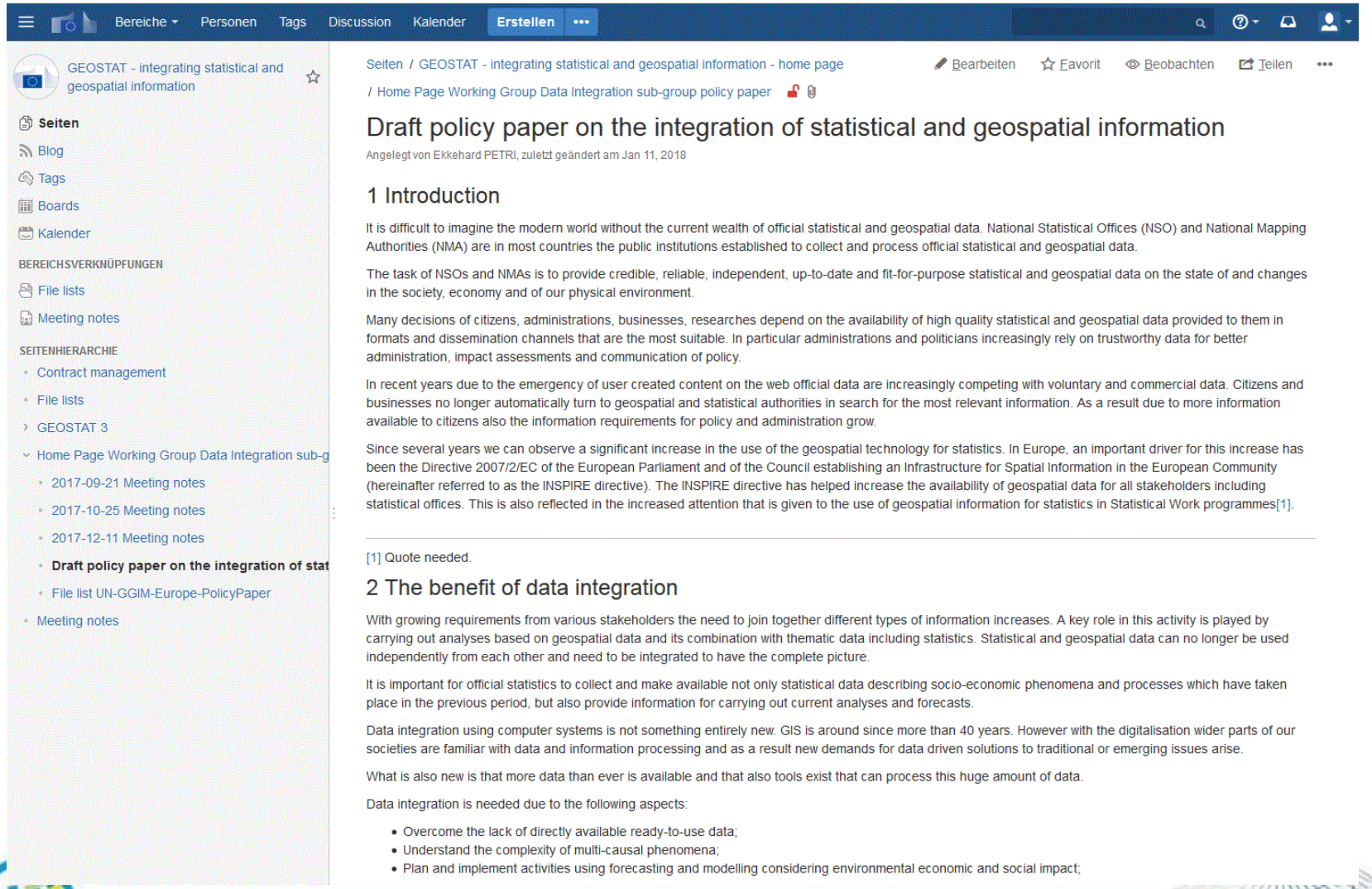
Work plan for UN-GGIM: Europe Work Group on Data Integration – Sub-group policy outreach

UN-GGIM: Europe | Work Group on Data Integration | subgroup 1

Version 0.3

2017-09-12

Task 1 – Policy Outreach Paper



Task 1 – “Leaflet” supporting the Policy Outreach Paper

Leaflet shall be addressed to policy makers who are not “geospatially related”.

The leaflet should attract policy makers and others and invite them to read more about it!

Task 1 – Outcome last meeting… next steps

- **Policy outreach paper**
  - ★ **The key messages of the policy outreach paper will be elaborated until the end of April 2018**
  - ★ **The recommendations of the policy outreach paper will be cross-checked with those of the GSGF: Europe until the end of April 2018**
  - ★ **A questionnaire with about 10-15 questions will be drafted addressing the main recommendations.**
    - ★ **The questionnaire shall be circulated within the UN-GGIM community. The results and evaluation will be used as an annex of the policy paper**
- **Leaflet**
  - ★ **The draft of the leaflet will be further elaborated until May 2018**

Task 2 – Gap 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 – Gap Analysis of SDGs

(A) Global metadata

1. Current reporting situation

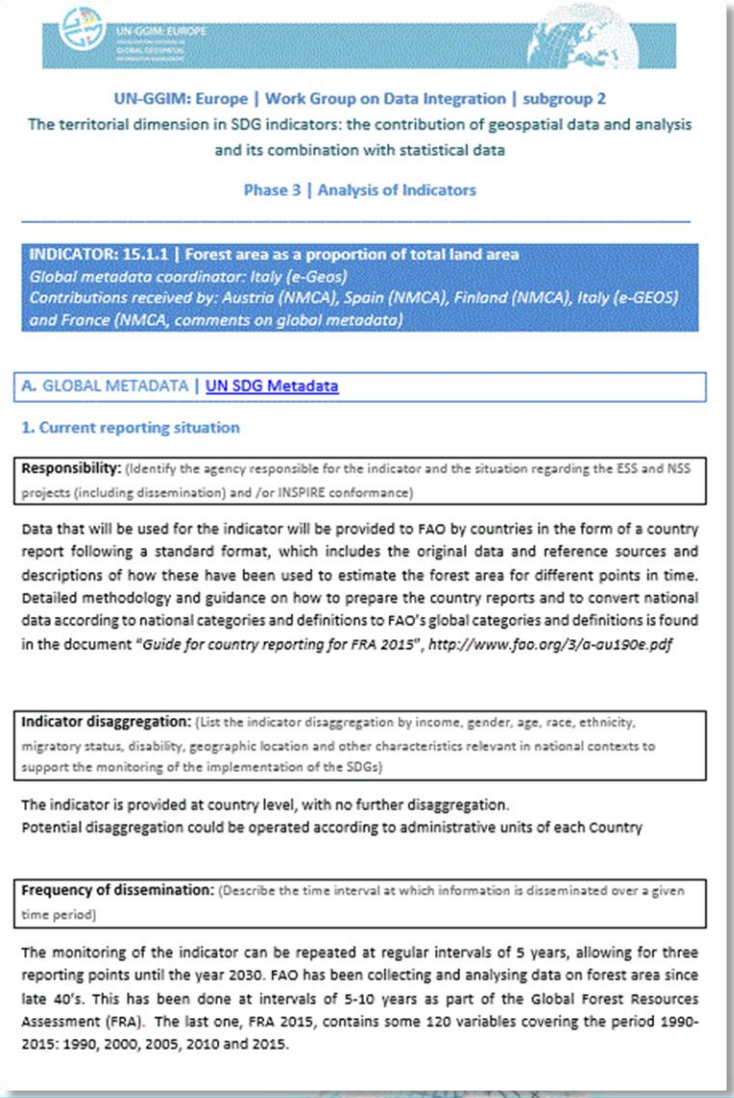
- ★ Responsibility
- ★ Indicator disaggregation
- ★ Frequency of dissemination
- ★ Timeliness
- ★ Data sources
- ★ Geospatial data analysis and integration
- ★ Data quality requirements
- ★ Current use of geospatial data for the indicator

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)

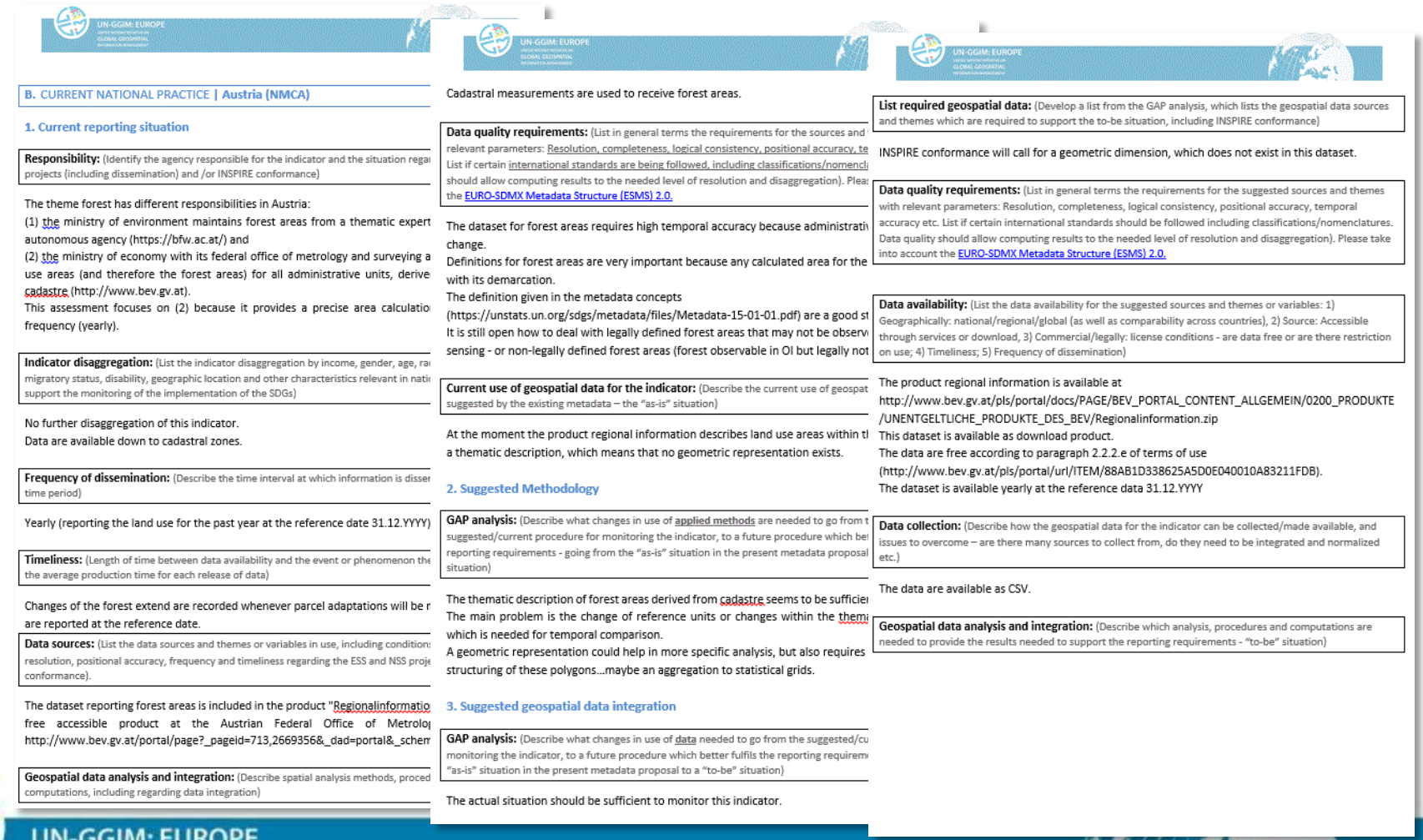
The monitoring of the indicator can be repeated at regular intervals of 5 years, allowing for three reporting points until the year 2030. FAO has been collecting and analysing data on forest area since late 40's. This has been done at intervals of 5-10 years as part of the Global Forest Resources Assessment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

Task 2 – Gap Analysis: Selection of indicators

Indicator		Tier
11.2.1	Proportion of population that has convenient access to public transport	II
11.3.1	Ratio of land consumption rate to population growth rate	II
11.7.1	Average share of the built-up area of cities that is open space for public use	III
15.1.1	Forest area as a proportion of total land area	I

Task 2 – Gap Analysis of the selected SDGs

(B) Current National Practice(s): e.g. 15.1.1 → AT, ES, IT, FI (SI, FR)



B. CURRENT NATIONAL PRACTICE | Austria (NMCA)

1. Current reporting situation

Responsibility: (Identify the agency responsible for the indicator and the situation regar 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 expert 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 disser 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 the 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 proje 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 st
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 not

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 proposal 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 thema 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.)

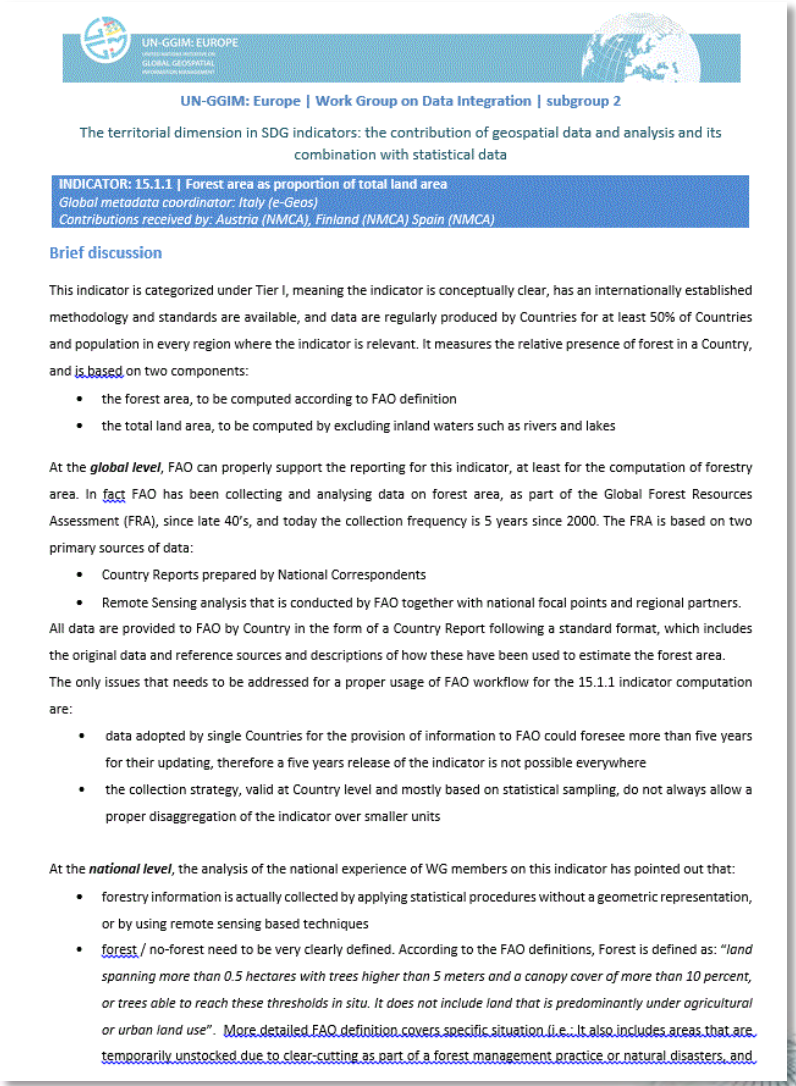
The data are available as CSV.

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)

Task 2 – Gap Analysis of the selected SDGs

(C) Brief discussion papers

- Summary of the gap analysis
- Recommendations on how to deal with common issues



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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

INDICATOR: 15.1.1 | Forest area as proportion of total land area
Global metadata coordinator: Italy (e-Geos)
Contributions received by: Austria (NMCA), Finland (NMCA) Spain (NMCA)

Brief discussion

This indicator is categorized under Tier I, meaning the indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by Countries for at least 50% of Countries and population in every region where the indicator is relevant. It measures the relative presence of forest in a Country, and is based on two components:

- the forest area, to be computed according to FAO definition
- the total land area, to be computed by excluding inland waters such as rivers and lakes

At the ***global level***, FAO can properly support the reporting for this indicator, at least for the computation of forestry area. In fact FAO has been collecting and analysing data on forest area, as part of the Global Forest Resources Assessment (FRA), since late 40's, and today the collection frequency is 5 years since 2000. The FRA is based on two primary sources of data:

- Country Reports prepared by National Correspondents
- Remote Sensing analysis that is conducted by FAO together with national focal points and regional partners.

All data are provided to FAO by Country 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.
The only issues that needs to be addressed for a proper usage of FAO workflow for the 15.1.1 indicator computation are:

- data adopted by single Countries for the provision of information to FAO could foresee more than five years for their updating, therefore a five years release of the indicator is not possible everywhere
- the collection strategy, valid at Country level and mostly based on statistical sampling, do not always allow a proper disaggregation of the indicator over smaller units

At the ***national level***, the analysis of the national experience of WG members on this indicator has pointed out that:

- forestry information is actually collected by applying statistical procedures without a geometric representation, or by using remote sensing based techniques
- forest / no-forest need to be very clearly defined. According to the FAO definitions, Forest is defined as: "*land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use*". More detailed FAO definition covers specific situation (i.e.: It also includes areas that are temporarily unstocked due to clear-cutting as part of a forest management practice or natural disasters, and

Task 2 – Gap Analysis of SDGs – "Swedish classification model"

Indicator		Tier	Global	National
11.2.1	Proportion of population that has convenient access to public transport	II		
11.3.1	Ratio of land consumption rate to population growth rate	II		
11.7.1	Average share of the built-up area of cities that is open space for public use	III		
15.1.1	Forest area as a proportion of total land area	I		

- **Green- possible to report or already being reported**
- **Orange – possible to develop: data integration needed or change in surveys ;**
- **Red – very difficult to report, no current survey, no available method**
- **Grey – not relevant for country / global data enough.**

Task 2 – Outcome last meeting… next steps

- Any additional inputs on national practices is desired until end-April 2018!
- Consolidation of the gap analysis be ready until mid-May 2018
- Report assessment for your country based on the Swedish classification model!
  - ★This information will be used for an overall assessment on the national reporting situation for the selected indicators in the final report
  - ★Until now we have received inputs from CH, ES, PT, FI and IT (…and DE)

Contribution to the IAEG SDG WG GI

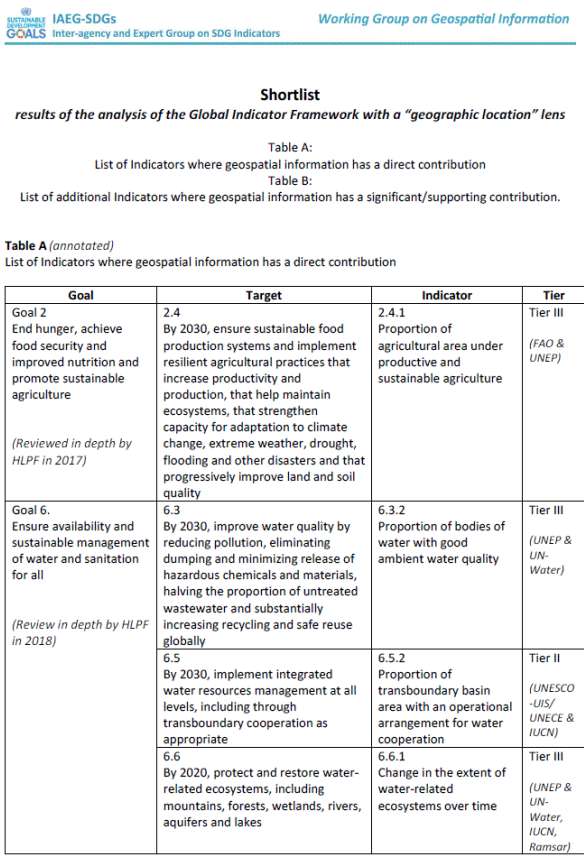
IAEG-SDGs *Working Group on Geospatial Information*

Inter-agency Expert Group on SDG Indicators

Short list of ”geospatial” indicators

The IAEG SDG WG GI has selected a list of 15 indicators (5 tier I, 3 tier II, 7 tier III):

https://unstats.un.org/sdgs/iaeg-sdgs/



IAEG-SDGs Inter-agency and Expert Group on SDG Indicators — *Working Group on Geospatial Information*

Shortlist

results of the analysis of the Global Indicator Framework with a “geographic location” lens

Table A:
List of Indicators where geospatial information has a direct contribution
Table B:
List of additional Indicators where geospatial information has a significant/supporting contribution.

Table A *(annotated)*
List of Indicators where geospatial information has a direct contribution

Goal	Target	Indicator	Tier	
Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture *(Reviewed in depth by HLPF in 2017)*	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.4.1 Proportion of agricultural area under productive and sustainable agriculture	Tier III *(FAO & UNEP)*	(1)
Goal 6. Ensure availability and sustainable management of water and sanitation for all *(Review in depth by HLPF in 2018)*	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.2 Proportion of bodies of water with good ambient water quality	Tier III *(UNEP & UN-Water)*	(2)
	6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation	Tier II *(UNESCO-UIS/ UNECE & IUCN)*	(3)
	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6.1 Change in the extent of water-related ecosystems over time	Tier III *(UNEP & UN-Water, IUCN, Ramsar)*	(4)

Cross-cutting issues:

- Task on ***disaggregation***, including urban/rural.
- Task on ***alternative data sources***, including crowd sourced data and VGI.
- Task on ***national vs. global data***.

Contribution by UN-GGIM: Europe:

- **Survey and evaluation by the WG on Core Data based on use cases for geospatial data needed for the SDG monitoring provided in June 2017**
- **Findings of WG Data Integration, Task 2 – Analysis of specific indicators 11.2.1, 11.3.1, 11.7.1 and 15.1.1 provided in December 2017**

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
- **GEOSTAT-3 Work Package 2**: Test SDGs selected by WG on Data Integration

Contribution to the GEOSTAT-3 project

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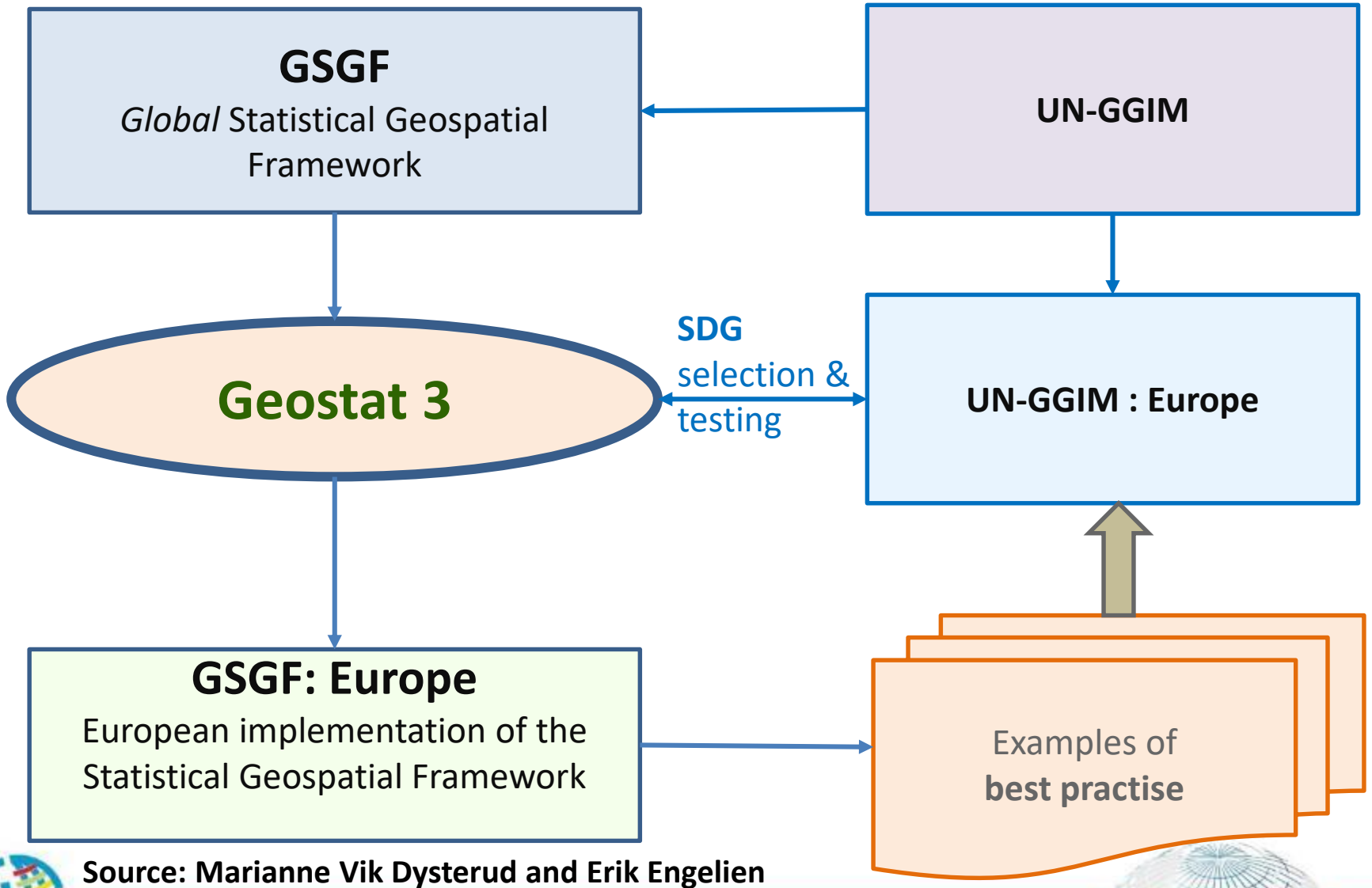
- GEOSTAT-3 Work Package 2: Test SDGs selected by WG on Data Integration

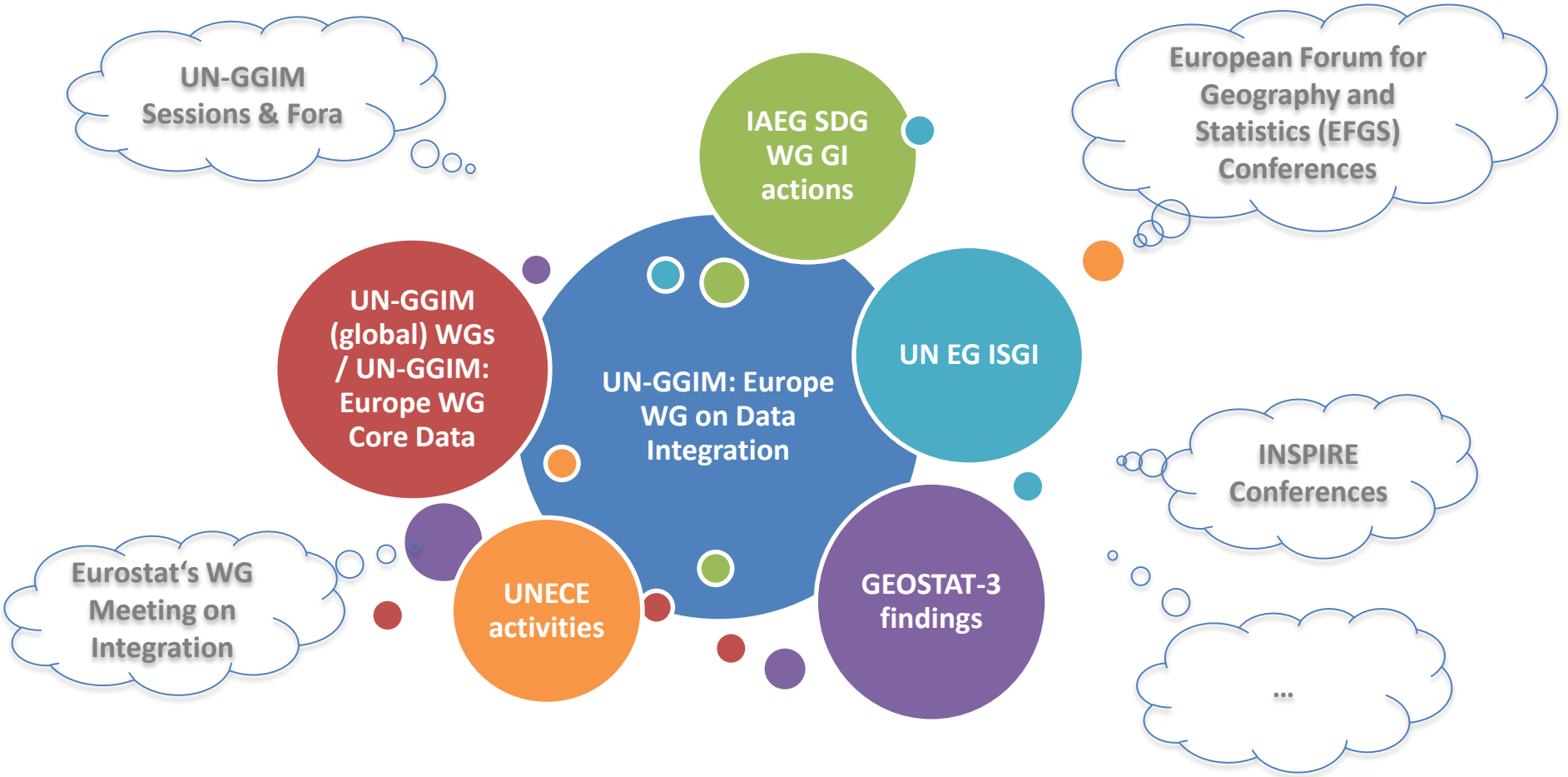
→ 11.2.1, 11.3.1 and 11.7.1 have been selected for testing
→ The gap analysis material will be used as rationale

GEOSTAT-3 - in the whole picture



Source: Marianne Vik Dysterud and Erik Engelien

The main communication platforms…



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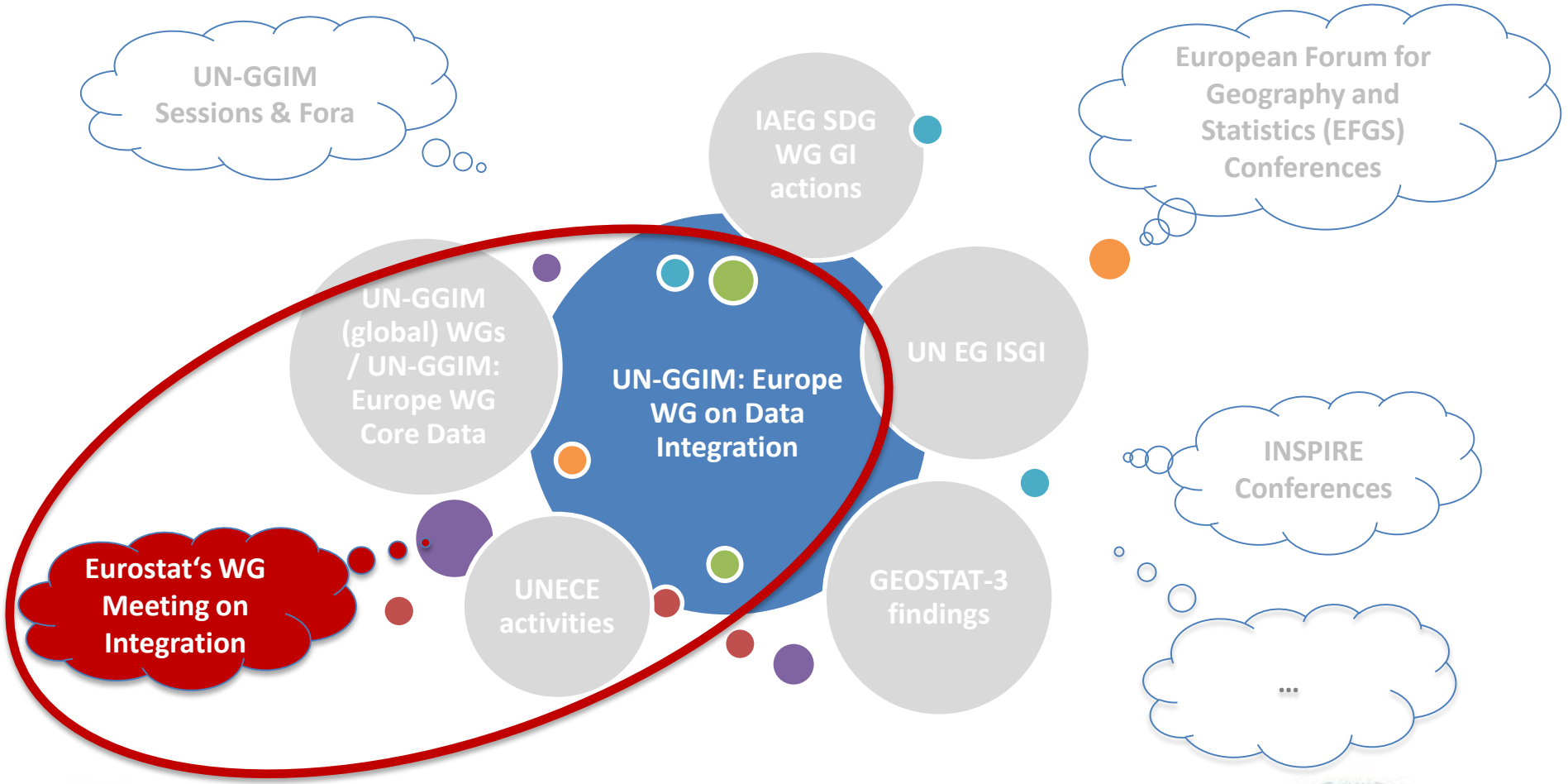

Thank you very much for your attention!

Source: AppleOne Blog

Chair: Hansjörg Kutterer

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