UNECE Statistical Division – INGEST Project on Integration of Statistical and Geospatial data

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Tenth Plenary UN-GGIM: Europe
22 - 23 November 2023 in Brussels, Belgium

UNECE

PROJECT OVERVIEW

UNECE is leading an EU-funded project to develop statistical capacity in geospatial and statistical data integration

Foster stronger links between statistical and geospatial communities across the UNECE region

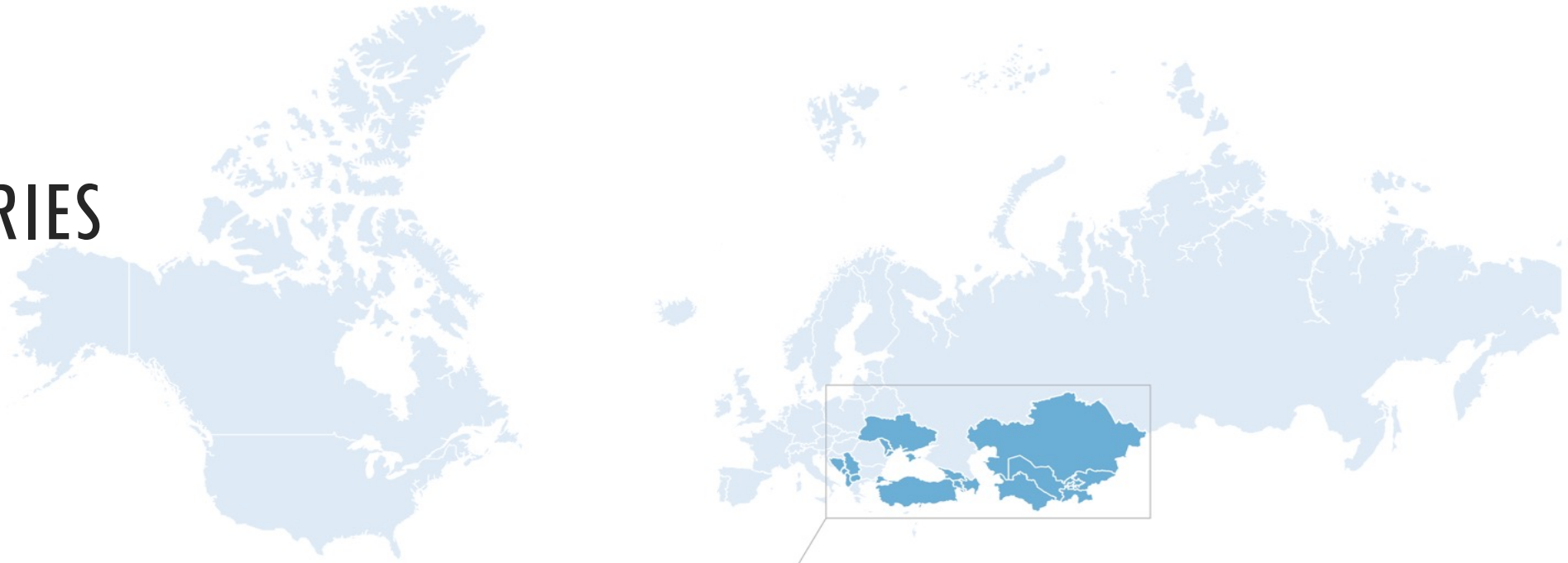Facilitate greater collaboration amongst statistical and geospatial organisations

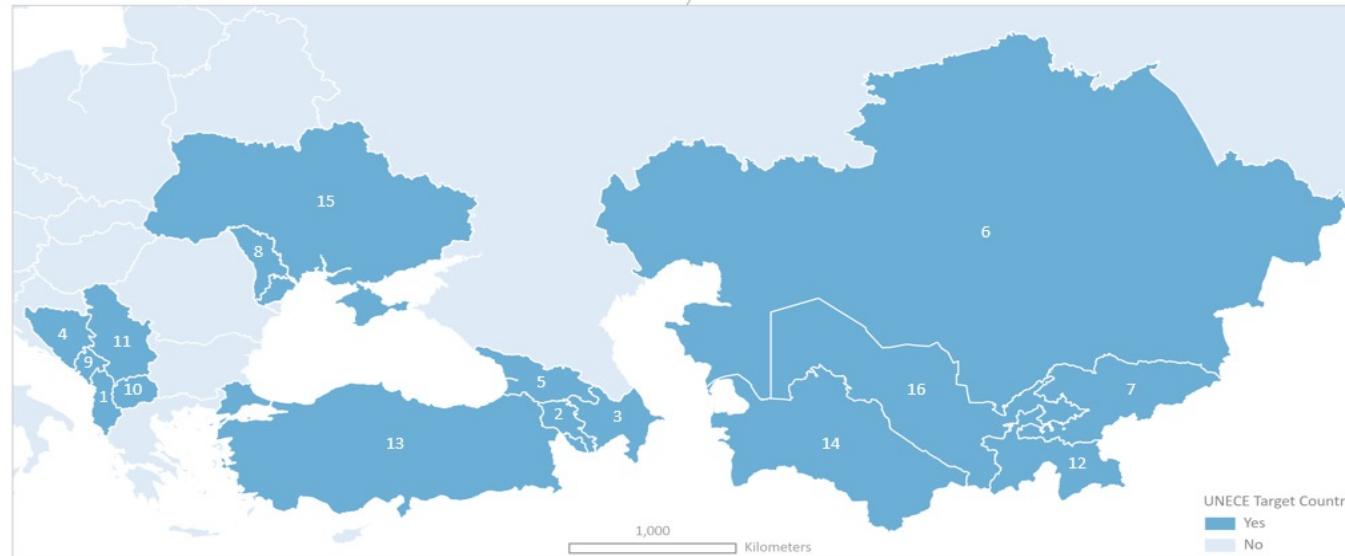Encourage greater integration of geospatial and statistical information

Promote stronger institutional partnerships and the use of common standards

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TARGET COUNTRIES

UNECE Target Country

1. Albania
2. Armenia
3. Azerbaijan
4. Bosnia and Herzegovina
5. Georgia
6. Kazakhstan
7. Kyrgyzstan
8. Moldova
9. Montenegro
10. North Macedonia
11. Serbia
12. Tajikistan
13. Turkey
14. Turkmenistan
15. Ukraine
16. Uzbekistan

UNECE Target Country
Yes
No

1,000 Kilometers

PROJECT ACTIVITIES

Develop an online survey and issue to all national statistical and geospatial organisations across the UNECE region to gain stakeholder insights on data integration.
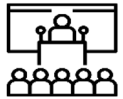
Create a report describing the issues and obstacles hampering the greater integration of geospatial and statistical data, and potential solutions for overcoming them.

Establish a UNECE-led task force on standards issues relating to data integration.

Identify domains where integration is hampered by a lack of common standards and set priorities for standards harmonisation work.

Organise a joint UNECE/Eurostat/UN-GGIM: Europe Workshop on Integrating Statistical and Geospatial Data in Autumn 2023.

Create supportive material on data integration including a wiki space, blog series, methodological guidelines, cheat sheets etc.

Provide online consultations, training workshops or similar events as required.

PROJECT WORK PACKAGES

Mobilisation

Define project, agree proposed activities and management plan

Desktop Assessment

Review target countries geospatial capacity and maturity; complete SWOT analysis using IGIF strategic pathways; review key policies and open data sources; identify use cases of best practice

Report Write-Up

Complete report and issue to relevant stakeholders

Communication & Outreach

Ongoing communication and awareness-raising activities

WP1

WP3

WP5

WP7

WP2

WP4

WP6

Literature Review

Research and evaluate the available published literature relating to geospatial and statistical data integration

Stakeholder Engagement

Design and issue an online survey to stakeholders; create a working group on standards issues; organise Joint UNECE/Eurostat/ UN-GGIM: Europe Workshop

Capacity Development

Organise online consultations, training workshops and similar events as required

UNECE SURVEY INTEGRATION OF STATISTICAL AND GEOSPATIAL INFORMATION

- Obtain insight from the statistical and geospatial communities.
- Ensure the views of key stakeholders were included in the project.
- Acquire user feedback to inform the direction of project activities.

The survey was designed around 4 key areas:

1. Use of data and technology.
2. Involvement in wider activities at national and international levels.
3. Issues and obstacles to greater data integration.
4. Opportunity to register interest in future project activities.

UNECE Survey on the Integration of Statistical and Geospatial Information

Spring 2023

This survey will inform a European Union funded project which seeks to strengthen the integration of statistical and geospatial information across the UNECE region. Your feedback will help to set the direction of future activities relating to statistical and geospatial data integration.

Some recommendations:

- Identify and promote sustainable funding resources and models to support data integration activities at national levels.
- Enhance communication and engagement strategies to grow awareness of the benefits of data integration and better support the sharing of best practice and new technologies.
- Promote greater data standardisation and interoperability through harmonised standards, operating models, production processes and services.
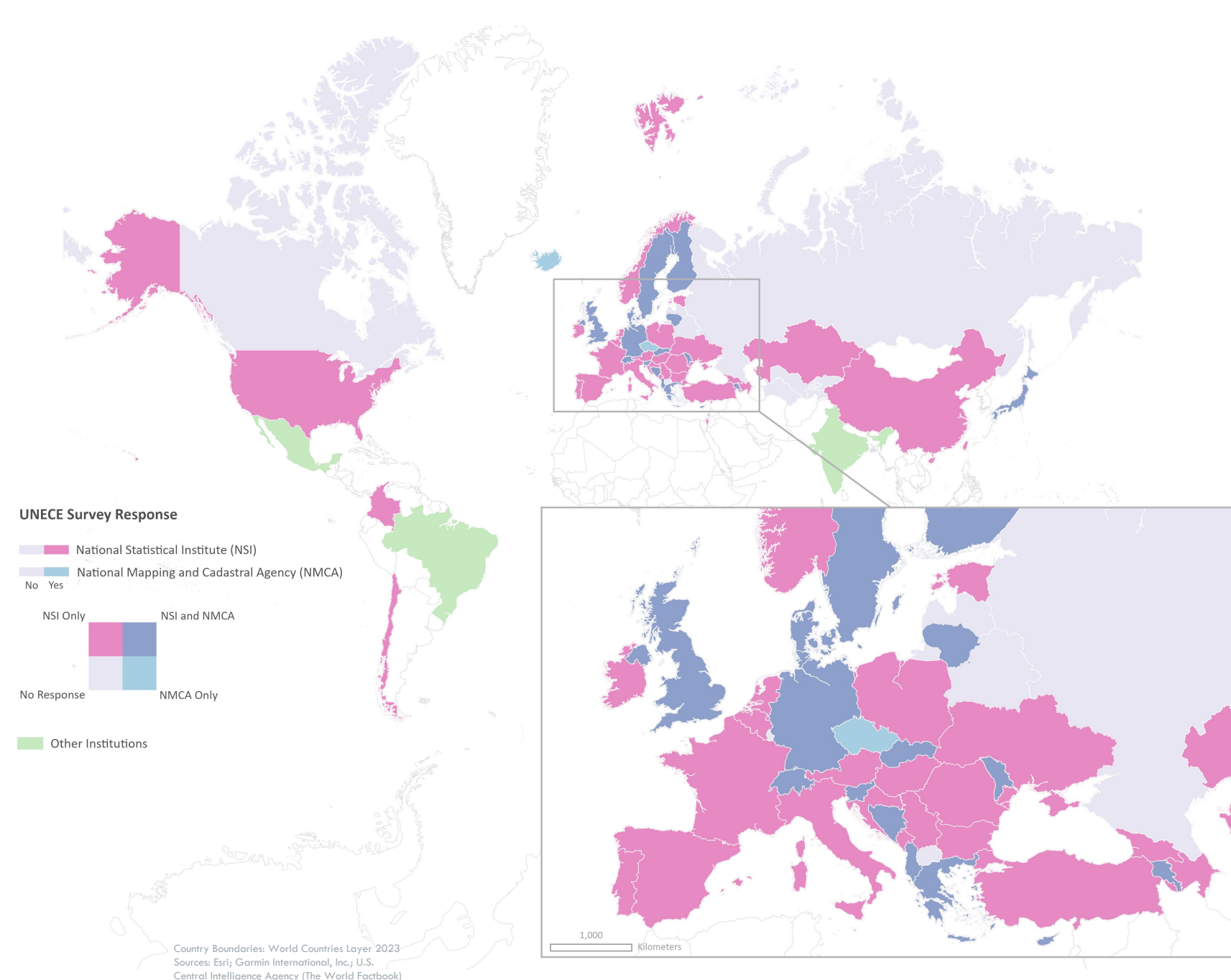
SURVEY RESPONSE

Context:

- Issued in March 2023
- 4-week completion period

Survey respondents:

- 67 organisations (15 from target countries)
- 49 countries (including 11 target countries)
- 45 National Statistical Institutes (NSIs)
- 18 National Mapping and Cadastral Agencies (NMCAs)
- 4 other bodies
- 17 countries with responses from both NSI and NMCA

Thanks to everyone who responded for their valuable insights!

UNECE Survey Response

National Statistical Institute (NSI)

National Mapping and Cadastral Agency (NMCA)

No   Yes

NSI Only   NSI and NMCA

No Response   NMCA Only

Other Institutions

Country Boundaries: World Countries Layer 2023
Sources: Esri; Garmin International, Inc.; U.S.
Central Intelligence Agency (The World Factbook)
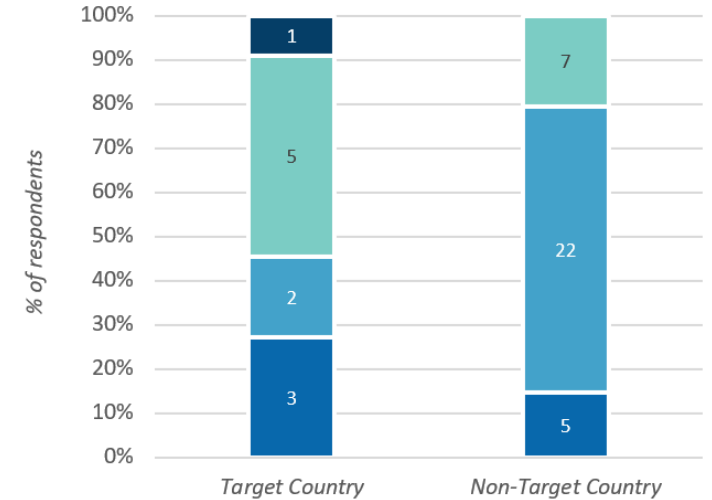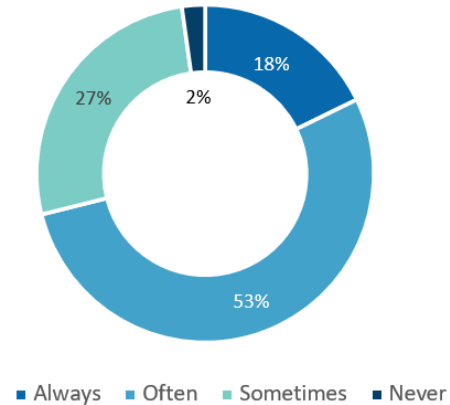
1,000   Kilometers

DATA AND TECHNOLOGY

Common NSI uses of geospatial data:

- Census operations
- Geocoding
- Spatial analysis
- Dissemination (e.g. grid statistics)
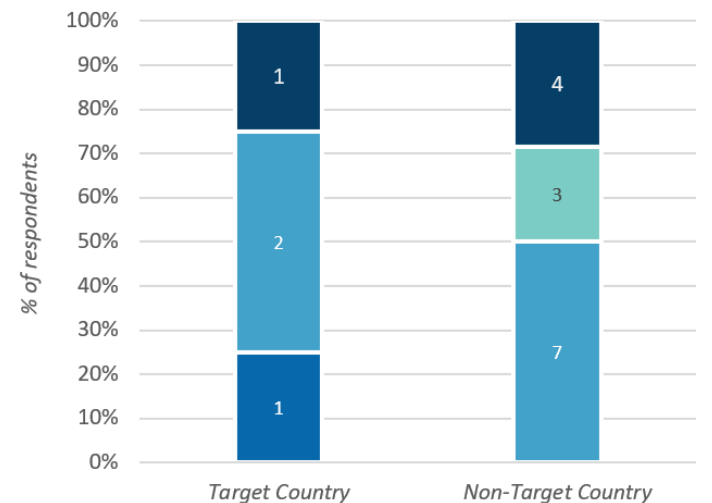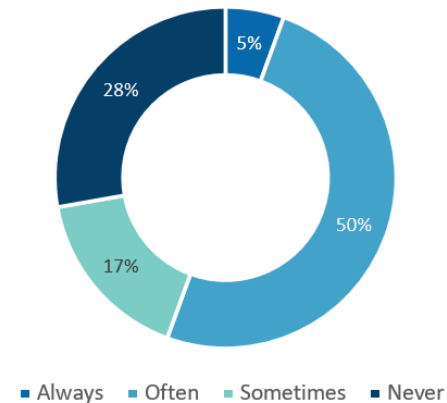
Common NMCA uses of statistical data:

- Data production and management
- Thematic map production
- Spatial analysis using demographic data

If you are an NSI, how often do you use geospatial data within your workflows?

If you are a NMCA, how often do you use statistical data within your workflows?
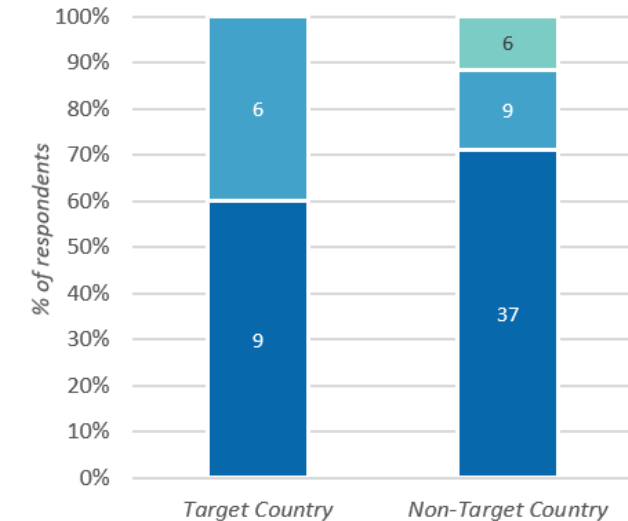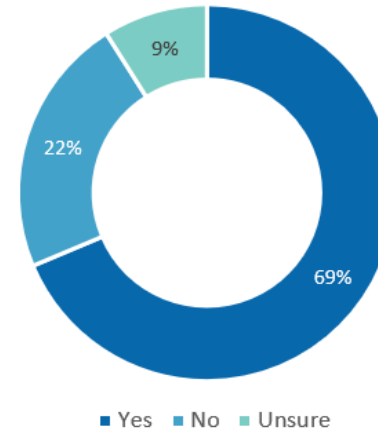
COLLABORATION AND PARTNERSHIPS

National working group activities:

- INSPIRE Directive
- Land use classification
- Data validation
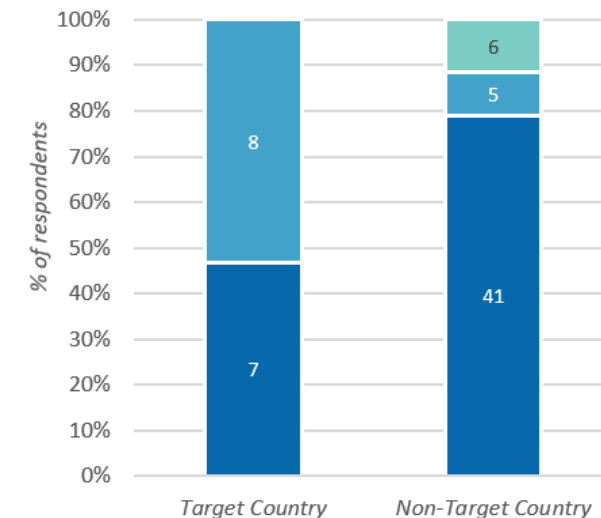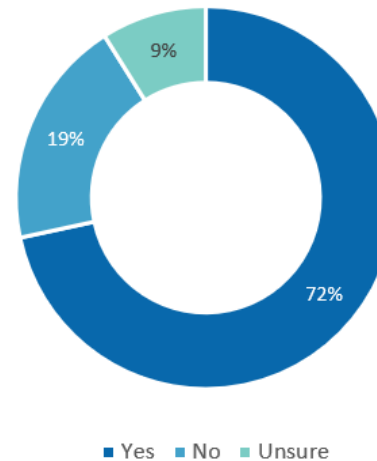- Spearheading use of geospatial data

Regional/International working groups:

- GISCO Working Group
- UN EG-ISGI
- UN-GGIM: Europe LoW on Data Integration
- EFGS

Do you participate in any national working groups with your statistical or geospatial counterpart?

Do you participate in any regional/international working groups relating to statistical or geospatial data?
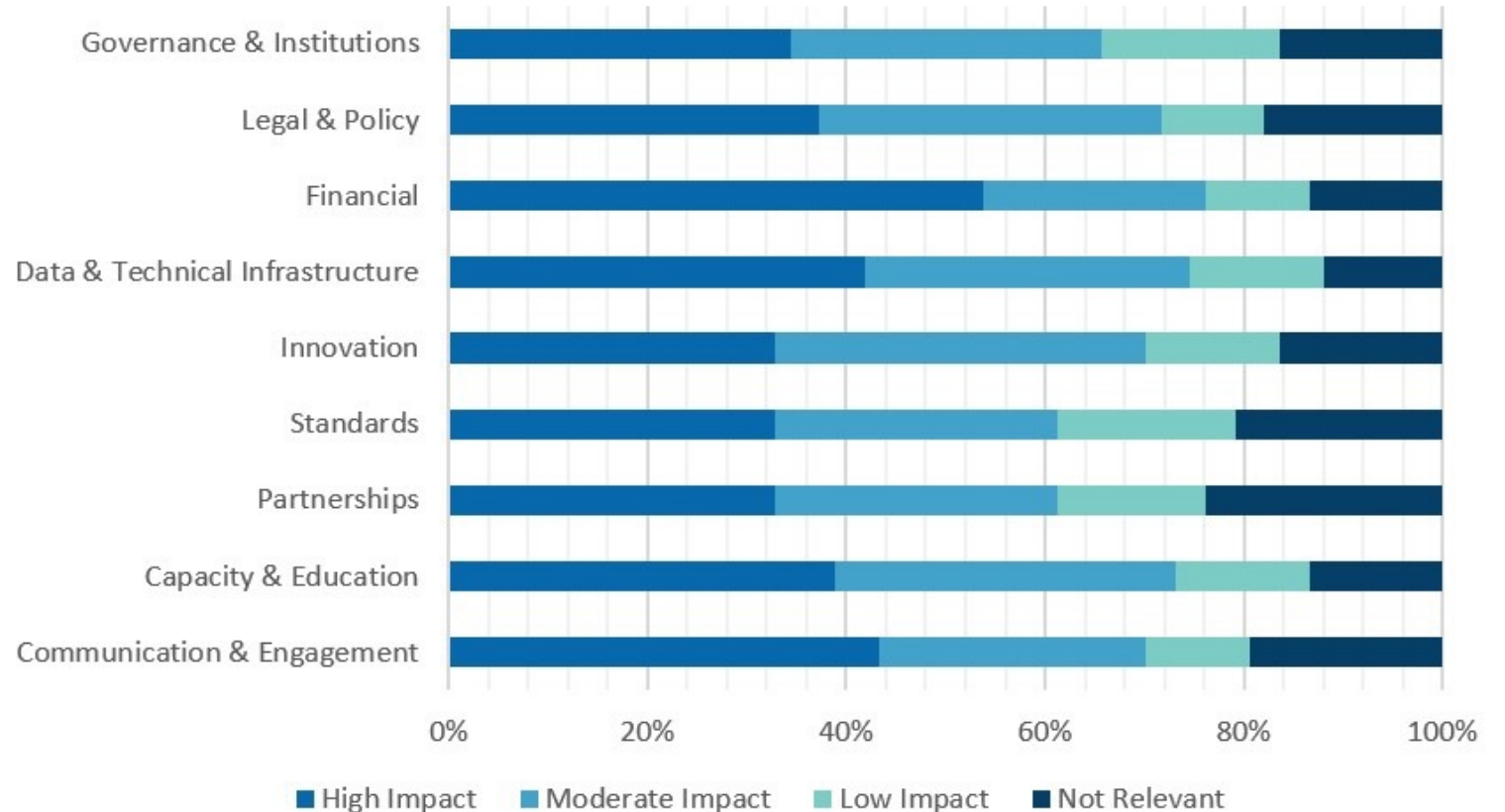
ISSUES AND OBSTACLES

Highest impact themes:

1. Financial
2. Communication & Engagement
3. Data & Technical Infrastructure

Overall respondent rating of UN-GGIM IGIF strategic pathways

JOINT UNECE / EUROSTAT / UN-GGIM: EUROPE WORKSHOP ON INTEGRATING STATISTICAL AND GEOSPATIAL DATA

- UNECE in collaboration with Eurostat, UN-GGIM: Europe and our hosts, the Republic Geodetic Authority of the Republic of Serbia (4-5 October 2023, Belgrade, Serbia).

- Feedback from the UNECE Survey has guided the design and structure of the workshop.

- Innovative and best practices, as well as lessons learned, on the integration of statistical and geospatial data.

  - Effective Governance

  - Data and Technology

  - People and Partnerships

- Discussions: how to optimise current governance and policy frameworks, identify the skills needed to progress data integration activities, determine the best ways to communicate and engage with key stakeholders in the field, and identify the key building blocks needed to form successful and sustainable partnerships both now and into the future

Workshop wiki pages: https://statswiki.unece.org/x/7AHnFw

WORKSHOP'S KEY TAKEAWAYS

- Sharing experiences, best practices and connecting statistical and geospatial communities provided inspiration for future work and further collaboration.
- Frameworks are an important means of bringing different datasets together to solve common challenges.
- Building trust in data is key and AI can help to harness the benefits of data and its integration.
- Stronger integrative framework needs to be developed.

- Shared understanding of common challenges at every level of organisation
- Benefits of integration data need to be more effectively communicated with decision-makers.
- Participation of EECCA countries in data integration activities will ensure that the benefits are equally achieved across the region.

Workshop wiki pages: https://statswiki.unece.org/x/7AHnFw

TASK FORCE ON STANDARDS ISSUES

- Aim to support the greater harmonization and interoperability of statistical and geospatial information through the use of common standards.

  - Discuss the use of standards
  - Explore issues and constraints
  - Identify priorities and future actions

Activities (sub-groups on technical and on wider governance issues):

a) Understand the current use of standards and share use cases and best practice.

b) Determine the suitability of those standards to data integration activities and identify domains where data integration is hampered by a lack of common standards.

c) Identify priorities for standards harmonization work and recommend related actions.

Output:

- A report containing recommended actions and methodological guidelines to support their implementation at a national level.

TASK FORCE

- Chairs: Rico Santiago (Ordnance Survey of Northern Ireland) & Rina Tammisto (Statistics Finland)

- Secretariat: Sara Stewart & *Taeke Gjaltema*

- 18 Members, 13 countries, 11 NSOs and 6 NMCA

To Join:

- A report containing recommended actions and methodological guidelines to support their implementation at a national level.

INGEST
INTEGRATING GEOSPATIAL
AND STATISTICAL DATA

WIKI SPACE

Integration of Geospatial and Statistical Data

Pages

Blog

PAGE TREE

- INGEST Blog Series
- Joint UNECE, Eurostat, U
  - 9th Joint UN-GGIM: Eu
  - GeoStat 2023 - Timeta
- Presentations

https://statswiki.unece.org

Integration of Geospatial and Statistical Data Home

Welcome to our space on the integration of geospatial and statistical data

Data is a critical resource for evidence-based decision-making and the 2030 Agenda for Sustainable Development has brought the need for harmonised data of increasing quality, accuracy, currency and granularity to the forefront of global, regional and national agendas to support the measurement and monitoring of its SDGs. The integration of geospatial and statistical data is one of the most promising ways to maximise the value of data-driven decision-making and global efforts to progress data integration have been ongoing for a decade, centred upon the work of the United Nations, its various bodies and expert groups, and increasingly extended and adapted to regional and national contexts through the work of UNECE, Eurostat, UN-GGIM: Europe, EFGS and others. The benefits of integrating geospatial and statistical data are great: enhancing the value of the geospatial and statistical data itself through improved quality, improving the interoperability of datasets, providing new possibilities for analysis and presentation, and resulting in greater insights which can inform decision-making and policy development across multiple levels.

This space is designed to bring together information on upcoming workshops, links to key groups and resources relating to data integration, as well as the home of a new blog series on integrating geospatial and statistical data, INGEST, which has recently been launched. Happy exploring!

Workshops

Workshops on integrating geospatial and statistical data	When and Where
Joint UNECE, Eurostat, UN-GGIM Europe Workshop on Integrating Statistical and Geospatial Data	4-5 October 2023, Belgrade, Serbia
9th Joint UN-GGIM: Europe - ESS - UNECE Meeting, 3 October	3 October 2023, Belgrade, Serbia
EFGS 2022 Conference - Towards standardised geospatial statistics	27-28 October 2022, online
8th Joint UN-GGIM: Europe – UNECE Meeting on the Integration of Statistical and Geospatial Information	24 March 2022, online
EFGS 2021 Conference - Unlocking value from data	7-8 September 2021, online
Joint Workshop on the Integration between Geospatial and Statistical Information in International Organisations and Member States	28 April - 12 May 2021, online
7th Joint UN-GGIM: Europe – ESS – UNECE Meeting on the Integration of Statistical and Geospatial Information	24 March 2021, online
EFGS 2020 Webinar	20-21 October 2020, online

UNECE

eurostat

UN-GGIM
UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Quick Links

INGEST Blog Series

Key Organisations:

UNECE Statistics Division

Eurostat

UN-GGIM: Europe

UN-GGIM (Global)

European Forum for Geography and Statistics

Key Resources:

The Global Statistical Geospatial Framework (GSGF)

The United Nations Integrated Geospatial Information Framework (UN-IGIF)

https://statswiki.unece.org/x/3wDnFw

BLOG SERIES

6 blog posts published so far including:

1. Welcome to Ingest, our new blog series on integrating geospatial and statistical data
2. Data Integration: Key players and recent developments
3. UNECE Survey - Part 1: Background and Context
4. UNECE Survey - Part 2: Data and Technology
5. UNECE Survey - Part 3: Collaboration and Partnerships
6. UNECE Survey - Part 4: Issues and Obstacles
7. Low-down on the recent Joint UNECE / Eurostat / UN-GGIM: Europe Workshop

Blog / 2023 / July / 03

Welcome to INGEST, our new blog series on integrating geospatial and statistical data

Created by Sara Stewart, last modified on 24 Jul, 2023

Do you want to learn more about integrating geospatial and statistical data but aren't sure where to start? Are you short on time and need bite-sized information on important developments and trends in the field of data integration? Well, you have come to the right place!
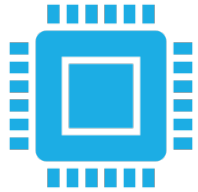
Welcome to our exciting new blog series, INGEST (which, in case you haven't noticed, is short for INtegrating GEospatial and STatistical data) where we will be exploring a range of topics relating to data integration as well as sharing guidance, resources and best practice to help you on your journey towards greater data integration. Whether you are just beginning this journey of discovery, or you are a seasoned pro who is hoping to broaden your knowledge and keep up to date with developments in the field of data integration, we hope there will be something for everyone. We'd also love to hear you thoughts on the topics that we explore so please feel free to comment on the posts and we can connect you to the wider community and stimulate discussion.

In this introductory post to the INGEST Blog Series, we will start right at the beginning and explore what integrating geospatial and statistical data is all about and discuss why it is important. So are you ready to dive in? Let's go!

INGEST
INTEGRATING GEOSPATIAL AND STATISTICAL DATA

https://statswiki.unece.org/x/OwLnFw

FUTURE ACTIVITIES

Task Force on Standards Issues relating to the Integration of Statistical and Geospatial Information

Report containing recommended actions and guidelines produced by the Task Force.

Further developing the wiki space with supportive material and resources.

Producing regular blog posts for INGEST

Providing online consultations, training workshops or similar events.

Questions

UNECE