Session 4 Global Statistical Geospatial Framework The Way Forward

6 key issues raised in consultation

1. *Expectation that GSGF should be a standard.*
    - GSGF is a principles framework.
    - Some questions were raised about the completeness of the GSGF as a standard, this is not its intention.

1. *EG response*
    - Agree the GSGF is a principles based framework
    - Avoid the word standard in the proposal. If it must be used, be clear if it's a technical standard (e.g. ISO), statistical standard, etc
    - Some principles lend themselves to standards and standarization e.g. data and metedata interoperability, geography standards

Issues raised in consultation

2. *Location references and geocoding too focused on address, not applicable to some developing countries.*
   - Location references broadened to other location descriptions, including enumeration geographies.
   - Address or property is a preferred model wherever applicable or attainable.

2. *EG Group response*
   - Okay but strongly encourage developing countries to geocode to a point if address or property is not attainable or applicable.
   - Encourage countries to test point referencing (e.g. lat/long) or some form of proxy e.g. centroid of a polygon, telephone tower, especially in rural areas

Issues raised in consultation

3. GSGF needs to be extended to environmental data.

- GSGF is currently limited to socio-economic data, including traditional NSO Environmental statistics.
- There are many types of environmental data, the Framework does not attempt to account for all of these!

3. EG response

- Preference to be as inclusive of different data types as possible.
- Be flexible
- Make it as inclusive as possible to encourage as much geo-referencing as possible

Issues raised in consultation

3. *GSGF needs to be extended to environmental data.*
3. *EG response cont*
    - Some support for agreeing to limit to socio-economic data but with a review point in three years time to include other environmental data as uses of these data types, in official statistics, gain more transaction e.g. experimental ecosystem accounts become less experimental
    - Try to offer practice suggestions like produce official statistics on grids for those countries who do want to look beyond traditional official statistics data sources (ie socio-economic) or are using non-traditional sources in newer official statistics e.g. land accounts

Issues raised in consultation

3. *GSGF needs to be extended to environmental data.*

3. *EG response cont.*

- Leave some time to see what emerges from SDG processes e.g. the SDGs may require common geography standards that are inclusive of administrative boundaries (e.g. provinces) and environmental boundaries (e.g. river basins)

Conclusion

- Be inclusive but offer practical suggestions and a review point

Issues raised in consultation

4. *"Authoritative" data changed to "fundamental" data*
   - to reflect the need to access the most current and up to date data, and
   - to align with UN-GGIM.

4. *EG response*
   - agree

Issues raised in consultation

5. *"New data" sources identified*
   - as an area that could benefit from application of GSGF principles – eg mobile phone datasets.

5. *EG response*
   - Agree
   - Encourage sharing of examples. See next steps

Issues raised in consultation

6. *Open data policies and principles are not universally agreed on.*
    - The GSGF proposal has included reference to International principles or agreed National policies on open data.

6. *EG response.*
    - Agree

Recommendations for adoption of a Global Framework

Recommendation 1

- ~~The UNSC endorse the Global Statistical Geospatial Framework as an International Statistical Framework.~~

- The UN-GGIM adopt the Global Statistical Geospatial Framework
  - aim for August 2016
  - Important achievement for the UN-GGIM as it seeks to become a UN Functional Commission

- The UNSC endorse the Global Statistical Geospatial Framework
  - March 2017

Recommendation 2

- ~~The UNSC and the UN Committee of Experts on GGIM support the ongoing work of the Expert Group to further pursue areas of detail requiring further work.~~

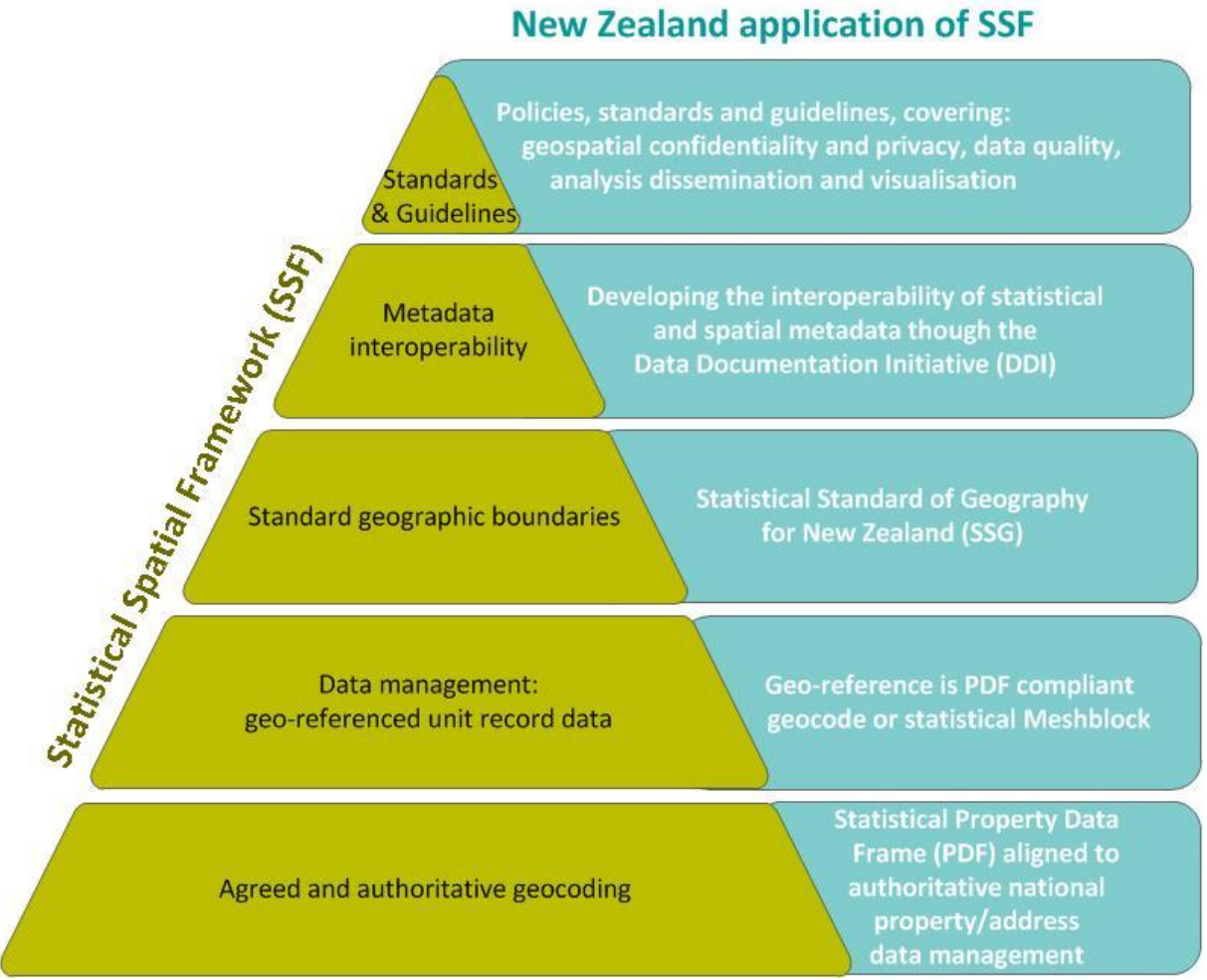
- The UNSC and the UN Committee of Experts on GGIM support the continuation of the EG but with a focus on
  - Consolidation and implementation of the Global Framework
  - Capability building
  - Knowledge management
  - Interaction with existing, new and emerging global and regional bodies pursuing areas of detail that contribute to the consolidation and implementation of the Global Framework

Consolidation and implementation of the Global Framework

- Continue to collect examples of the country level application of the framework
  - As a start, EG members agreed to prepare country level application examples for inclusion in the proposal going to UN-GGIM and UNSC
  - The country level examples to be published on the UN website

Statistical Spatial Framework (SSF)

Integration of statistical & geospatial information

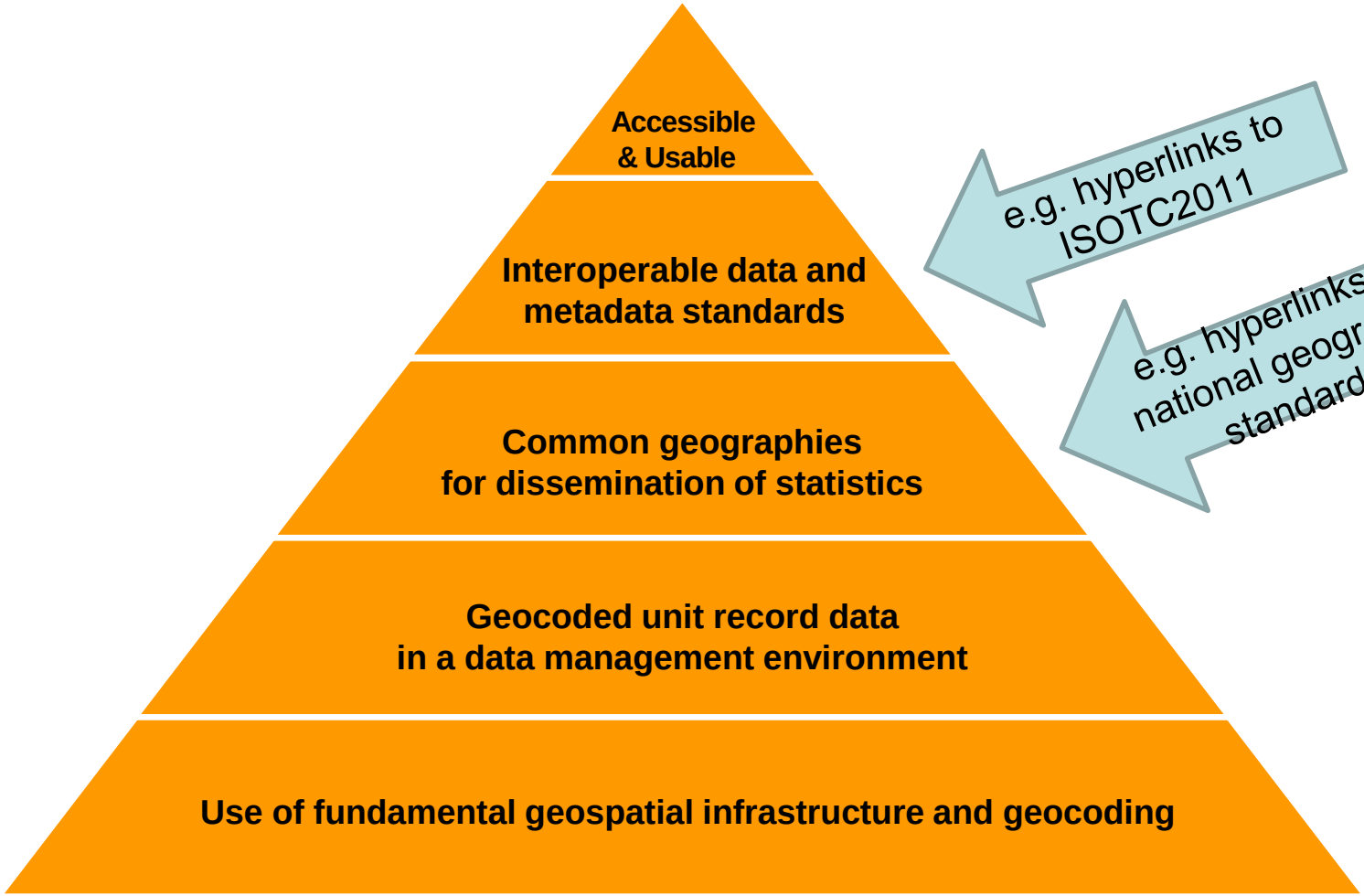


- Geospatial infrastructure is in place
- Core geospatial capability
- Getting our house in order
- Building geo-statistical infrastructure – the elements of the SSF
- Collaborating with national mapping agency – taking a standards based approach

Consolidation and implementation of the Global Framework

- Continue to collect examples of the country level application of the framework
  - As a start, EG members agreed to prepare country level application examples for inclusion in the proposal going to UN-GGIM and UNSC
  - The country level examples to be published on the UN website
- For each of the five principles,
  - Collect country level examples of practices, policies, guidelines, standards, use cases, etc
  - Collect regional and global practices, standards, etc where they exist
  - Collect examples of obstacles countries have faced in implementing the principles and how they have been overcome
  - Publish through the UN website

The Framework



Capability building

- Focus here is advice and guidance to countries on where they can go for help with implementing the framework
  - E.g. for 2020 Round of Censuses, both the UN and UN regional bodies can advise
  - E.g. for SDGs, the IEAG-SDG, UN Global Working Group on Big Data, UN-GGIM Regional Bodies, etc are all providing guidance
  - E.g. for methods in how to use new data sources like satellite data for official statistics, the UN Global Working Group on Big Data can advise
  - E.g. examples integrated official statistics like Land Accounts
  - Publish through the UN website

Knowledge Management

- Active use of website
  - Links to other UN and professional forums e.g. EFGS, IAOS
  - Use cases
  - Potentially FAQs, blog, etc?

Australian Bureau of Statistics

Interaction with existing, new and emerging global and regional bodies pursuing areas of detail that contribute to the consolidation and implementation of the Global Framework

- Reach out to other bodies with similar mandates to the EG
  - Develop a map of all the linkages and how they interact. Publish an interactive map on the website
  - Steer relevant groups to the Framework and its relevance and applicability to their work programmes
  - Seek to 'outsource' technical issues raised through the EG consultation process to these other bodies e.g metadata and data interoperability to UNECE-HLG and Standards Bodies like ISO and OGC
  - Where gaps still exist, ie no other body will take the 'issue' on, the EG may decide to take it on
  - Seek to have an EG member representative on these other groups e.g. the IEAG-SDG WG on Geospatial Information (first meeting two days before UN-GGIM in Aug 2016), UN GWG on Big Data Task Team on Satellite Imagery Data, SEEA (?), Land Management groups.

EG-IGSI Mandate

- Provide a forum for coordination of statistical and geospatial community with the view to developing a Global SGF as a standard for the integration of statistical and geospatial data

- Propose workplans and guidelines to advance the implementation of a Global SGF so there is increased information to support social, economic and environmental policy decision making

- Address various technical, institutional and information policy issues related to implementation of a Global SGF, especially issues of confidentiality

- Pursue implementation of the Global SGF in the *2020 Round of Censuses* with understanding it will apply to *other initiatives* (other Censuses) and global initiatives such as Post-2015 (ie *SDGs*) and *Big Data*

Mandate one

	Statistical Community	Geospatial Community
Global Statistical Geospatial Framework	UNSC/UN-GGIM EG	UNSC/UN-GGIM EG
EG's objective: **to integrate statistical and geospatial data**	UNSC/UN-GGIM EG UNECE WG3 EFGS	UNSC/UN-GGIM EG EFGS UN-GGIM: Europe UN-GGIM: Americas UN-GGIM: Asia and Pacific

Mandate two

	Statistical Community	Geospatial Community
Principle 1 - fundamental geospatial infrastructure and geocoding	?	
Principle 2 - geocoded unit record data in data management environment	?	
P3 - Common dissemination geographies	UNECE HLG-MOS-Dissemination	
P4 - Interoperable data and metadata standards	UNECE HLG-MOS?	UN-GGIM - Expert Group (Olav presentation)
P5 - Accessable and useable	Confidentiality groups Open data groups UNECE legislation group	

Mandate four

	Statistical Community	Geospatial Community
2020 Round of Censuses	UNSD Census Program UNECE Census Program etc.	?
Related initiatives e.g. Economic Censuses	Business Register groups	Business/Property groups
Global Initiatives - Big Data	UNSD GWG Big Data UNECE Big Data Groups OECD Global Science Forum WG on Ethics of New Forms of Data (confidentiality and privacy)	?
Global Initiatives - SDGs	IEAG - SDG	UN-GGIM - SDGs IEAG - SDG - WG on GI

EG agreed to ….

It was agreed that:

- The Global Statistical Geospatial Framework was, pending incorporation of EG feedback on the six key issues, ready for global consultation
- UNSD would facilitate the global consultation during May, allowing time for a final proposal to be ready by end June for translation and consideration at UN-GGIM in August.
- UNSD will facilitate the adoption of the Global Framework at UN-GGIM in August, and endorsement by UNSC soon after (out of session) or in March (at UNSC)

Mandate objective one

- **but as a framework**
- **not a (statistical or technical or international) standard**

EG agreed to ….

It was agreed that:

- the Global Forum held in 2014 was an important milestone for coordination and dialogue of statistical and geospatial communities and encouraged another Global Forum be held in the not-to-distant future

Mandate objective one

- **to provide a forum for coordination and dialogue of statistical and geospatial communities**

EG agreed to ….

It was agreed that:

- EG members would prepare a country level example of the practical application of the Framework principles in their country. A blank template would be sent to EG members asap to be completed and returned by mid May
- UNSD would provide advice on the establishment and maintenance of an interactive knowledge management and information sharing platform
- A mapping of UN and UN Regional Bodies (both statistical and geospatial) would be drafted and shared amongst EG members for comment, gaps, etc and used as the basis for outreach and knowledge management activities e.g. for mapping existing EG work programme issues to existing bodies that may be able to take these issues on

Mandate objective two, three and four

EG agreed to ….

It was agreed that:

- EG members encouraged an extension of their mandate to include communication, especially to decision makers. Part of this would also be looking at best practices for analysis and outputs that attract policy/political interest

- EG members encouraged development of some guidance on topics such as comparing geography over time; generating national data more frequently than a five/ten yearly census (e.g. modelling); mechanism for how institutions can partner and work together (e.g. joint governance, collaborative projects, legislation, etc); guidance on how to bring NSDS and NSDI developments together;

- EG members thanked Eurostat, Finland and Australia for taking forward the work program activity to develop common terminology and agreed to establish a small editorial board from both NSOs and NMAs to continue this work, including translation, and work with those in the standards community (e.g. Andrew Jones re ISO repository and W3C re a terminology repository) to build coherence and re-use of the same terminologies

Principle 4

Statistical Community

NSS Socio-Economic Datasets

- **Core Statistical** — Census, Demographics, Agriculture, Building, Labour Force, etc.
- **Tax** — Income and Business Tax
- **Immigration**
- **Health** — Medicare, Pharmaceuticals, Workforce
- **Land** — Valuation and Use
- **Social Welfare** — Unemployment, Disability, Family Support
- **Others ...**

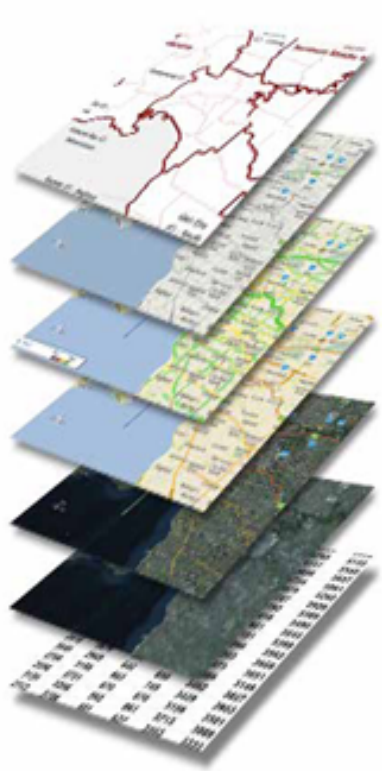
SSF bridge

Spatial Community

Foundation Spatial Data Frameworks – Fundamental Elements

Data layers:

- Admin. & statistical boundaries
- Addressing, Place Names
- Transport, Water
- Land and Property
- Elevation and Depth
- Imagery
- Positioning



What about principle 4 - data and metadata standards and interoperability? …. can we agree to the following?

- Identify touch points where both NSOs and NMAs have common interests e.g. SDMX, addressing

- Identify geospatial bodies such as European WG on Core Data and UN Global Working Group on Fundamental Data and statistical bodies such as the UNECE-HLG-MOS-Standards that may be able to work together to facilitate the integration of geospatial and statistical data

- At the national level, encourage NSOs who are undergoing modernisation and transformation activities to reach out to National Mapping Agencies to identify areas where modernisation efforts could be designed and developed to facilitate the integration of geospatial and statistical data. To also reach out to National Mapping Agencies to establish mechanisms for cooperation in modernisation efforts e.g. inviting the NMA onto modernisation governance boards.

- At the national level, encourage NSOs and NMAs to collaborate when partaking in international and regional experiments and trials e.g. positioning for 2020 Round of Censuses, Big Data experiments through UNECE, UN-GWG, etc., SDG experiments

EG agreed to ….

Other ideas:

- encourage more Expert and Working Groups to report jointly to UNSC and UN-GGIM? (Unique position of having two members of the EG being the Chair and Vice-Chair of UN-GGIM and one member of the EG being Chair of UNSC)

- an extension to our mandate to include communication with decision makers. Part of this would also be looking at best practices for analysis and outputs that attract policy/political interest

- development of guidance on topics such as comparing geography over time; generating national data more frequently than a five/ten yearly census (e.g. modelling); mechanism for how institutions can partner and work together (e.g. joint governance, collaborative projects, legislation, etc); guidance on how to bring NSDS and NSDI developments together;

Existing work program

Build capability through the application of the Framework and geospatial technologies to the 2020 Round of Population Censuses;
Enhance collaboration and partnership between statistical and geospatial organisations;
Work towards consistent terminology internationally and across communities;
Protect confidentiality within statistics released for small geographic areas and across different geographies;
Ensure data interoperability between statistical and geospatial domains;
Investigate the application of statistical, administrative and grid geographies to data release;
Develop and share methods for ensuring effective and authoritative geocoding; and
Contribute to the broader discussion on the use of Big Data in official statistics and geospatial information.

Other issues raised in consultation

For consideration in future work program

- Develop methods to track changes over time for geometries (Germany).
- Define data assets in a "service oriented architecture“ construct (USA).
- Develop "channel management standards” (USA).
- Develop best practices for maintaining data over time (USA).
- Work towards establishing the Global Statistical Geospatial Framework into a formal standard (New Zealand).
- Agree to a system of unique identifiers for all geospatial features, including an appropriate time and version control mechanism (Eurostat).
- Promote favorable access and use conditions for geospatial data relevant for geocoding and use within the context of framework purposes (Eurostat).
- Work to harmonize the geographic and geospatial objects used by the statistical and geospatial communities as their geographic reference framework (Poland).

Membership, composition and terms of office

- Elect two co-chairs, to serve for a period of three years, renewable for period of an additional three years

- Current term ends November 2016
- Proposal is for UNSD to write out to members of EG seeking agreement to renew term of current co-chairs for another three years (to steer Global SGF to approval and endorsement by UNSC and UN-GGIM
- Do EG members agree?