UN IAEG-SDGs Working Group on Geospatial Information

The 15th meeting of the UN IAEG-SDG

Oslo, Norway

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Topics:

- Paper on Rescuing the SDGs: The Role of Geospatial Information and Integration
- The Shortlist Case Studies

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

Paper: Rescuing the SDGs with Geospatial Information

How geospatial information can transform the production, measurement, monitoring and dissemination of SDG indicators

- The statistical community understands that geospatial information and Earth observations can provide new and consistent data sources and methodologies to integrate multiple "location-based" variables to support and inform official statistics and the indicators for the SDGs.
- These methods are able to fill data gaps and improve the temporal and spatial resolutions of data, by bringing together information from various sources, particularly related to environment.
- Thus, the WGGI has developed this paper to communicate and outline the opportunity and role for geospatial information for us all to 'Rescue the SDGs' to the IAEG-SDGs via a small and focused writing team, composed of Member State representatives.
- This paper aims to highlight potential gaps in reporting and potential quick wins; strengthen the geospatial perspective to the IAEG-SDGs process – especially when discussing methodological innovations/improvements across the indicator framework as part of the Comprehensive Review;
- Further contextualize the previous work of the WGGI, including the SDGs Geospatial Roadmap & reports:"Global and complementary geospatial data for SDGs" and "Land cover datasets for SDGs".
- **We need to rescue the SDGs with geospatial information.**
- - leading to more targeted and impactful solutions.

SDGs GEOSPATIAL ROADMAP

What

- **Use guidance on how SDG indicators can be disaggregated by geographic location**. By offering more localized granular information, the disaggregation of SDG indicators by geographic location enables the provision of more localized data.
- **Highlight the need to consider improvements to the SDG indicator metadata.** We can consider the many geospatial capabilities to improve the metadata, in turn, improving reporting.
- **Use guidance on how geography impacts the indicators.** Highlighting potential approaches and guidance that could be **developed** to help break down the challenges that countries (and SDGs Custodians) have with reporting.

How

1. **Implement Frameworks – Guided by the SDGs Geospatial Roadmap** as the mandated resource for statistical and geospatial actors working within the global indicator framework of the SDGs.

2. **Increase collaboration -** Increasing collaboration at every level is fundamental to accelerating progress: fostering collaboration with staff counterparts in other agencies and ministries and peers in other countries

3. **Take a geospatial approach** allowing more and innovative approaches in using geospatial data across different targets and indicators when appropriate

4. **Review and amend SDG indicator metadata to incorporate the geospatial dimension.** Beginning with the 'shortlist results of the analysis of the Global Indicator Framework with a “geographic location” lens – 2nd edition’, there is a geospatial basis from which many SDG indicators can be produced, measured, and monitored.

5. Prioritize a ‘**Country-led and country-owned**’ approach that focuses on national data needs and selected methods fit-for-purpose, but recognize that national data, due to a variety of factors, may only take countries so far. Globally available datasets, which often will not have similar ownership characteristics as nationally produced data still have equivalent quality and scientifically trusted accuracy. These datasets should be used to fill national data gaps still enable an indication of development and highlight where and how countries should invest for the future

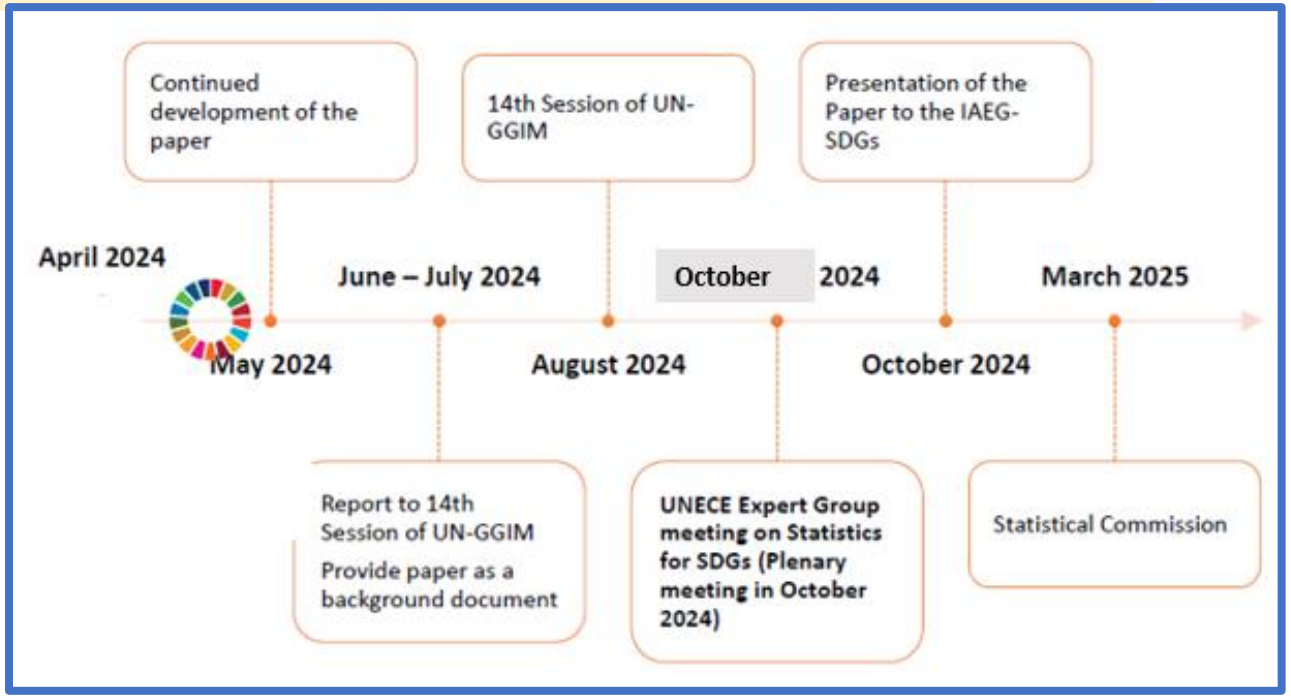
6. **Develop simple and impactful storytellin**g: the importance of data visualization

Rescuing the SDG's with Geospatial Information

What we propose happens next

- We sought the feedback of the UN GGIM at the session in New York in August 2024.
- In September we discussed a draft of the paper at the joint UN EG ISGI and WGGI meeting in Nairobi.
- This month, October 2024 the IAEG_SDGs will review the paper and hopefully adopt it for submission to the statistical Commission. In providing its guidance to the WGGI, we aim to facilitate the review of focus SDG indicators, with their support, using this to collaborate with the SDG custodian agencies.

- In November 2024 we style and edit the paper for submission to the Statistical Commission



The Second edition Shortlist

Prioritization of Indicators

- With the assistance of the secretariat and the global SDG database we have analyzed the metrics of how the SDG's in the shortlist are reported
- this identifies priority areas for us to work on
- We have discussed with the IAEG- SDGs Secretariat and they have invited the WGGI to present these findings to the IAEG-SDGs
- **We ask you to contact the Co-chairs and Secretariat if you wish to review these indicators.**

Shortlist A: Geospatial information can provide these Indicators

Shortlist A			
Priority #	SDG	Indicator	Data for at least one year since 2015
1	2	2.4.1	8.59%
2	9	9.1.1	10.36%
3	14	14.1.1	47.19%
4	6	6.3.2	50.78%
5	6	6.5.2	63.73%
6	6	6.6.1	74.36%
7	14	14.5.1	88.20%
8	11	11.3.1	89.12%
9	15	15.1.2	89.64%
10	11	11.7.1	91.19%
11	11	11.1.1	94.30%
12	11	11.2.1	94.82%
13	9	9.c.1	99.31%
14	11	11.6.2	100%
15	15	15.1.1	100%

Shortlist B: Geospatial information can provide significant information for these Indicators

Shortlist B			
Priority #	SDG	Indicator	Data for at least one year since 2015
1	5	5.2.2	0%
2	11	11.7.2	3.63%
3	1	1.4.2	10.02%
4	5	5.4.1	17.96%
5	14	14.3.1	21.24%
6	5	5.a.1	21.50%
7	14	14.4.1	29.53%
8	5	5.a.2	39.38%
9	1	1.1.1	48.96%
10	4	4.5.1	49.78%
11	13	13.1.1	70.67%
12	15	15.2.1	86.22%
13	6	6.4.2	91.19%
14	17	17.6.1	99.22%

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#	Item	Timeline
1	**Promoting the work of the IAEG-SDGs WGGI**	
	• Support the IAEG-SDGs with side event(s) at the Statistical Commission that promote the SDGs Geospatial Roadmap, the 'Rescuing' paper, the revised Short-list of SDG Indicators and other areas/events where geospatial information has a direct contribution;	Ongoing
	• Convene virtual seminars with members of SDG Custodian Agencies and Member States to promote case studies and examples of geospatially produced SDG indicators;	Ongoing
	• Convene meetings with countries implementing the SDGs Geospatial Roadmap to check in on progress, identify areas of improvement, and foster the sharing of experiences and cases; and,	Ongoing
	• Participate and promote the WGGI's work at regional and international forums.	Ongoing

2. Strengthening coordination and coherence of geospatially enabled SDGs

- Promote coordination and coherence of geospatial information with other subsidiary bodies through bilateral meetings.
- Support custodian agencies with methodological assistance to bring geography to the global indicator framework.

Formalise cooperation with the UN Expert Group on the Integration of Statistical and Geospatial Information generally, and support the Task Team on Disasgregation of Statistics by Geographic Location generally

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3. Liaising with the IAEG-SDGs and responding to emergent requests • **Responding to emergent requests from the IAEG-SDGs.**	**Ongoing**
4. Collecting national experiences of how geospatial information is contributing to the SDG indicators • **Collect examples of how the SDGs Geospatial Roadmap has been implemented** • **Collect examples of good practice in geo-statistical integration for the SDG indicators** • **Collect examples of methodological innovation in the SDGs**	Ongoing

Toward Endorsing (Global) Geospatial/EO Guidance Notes

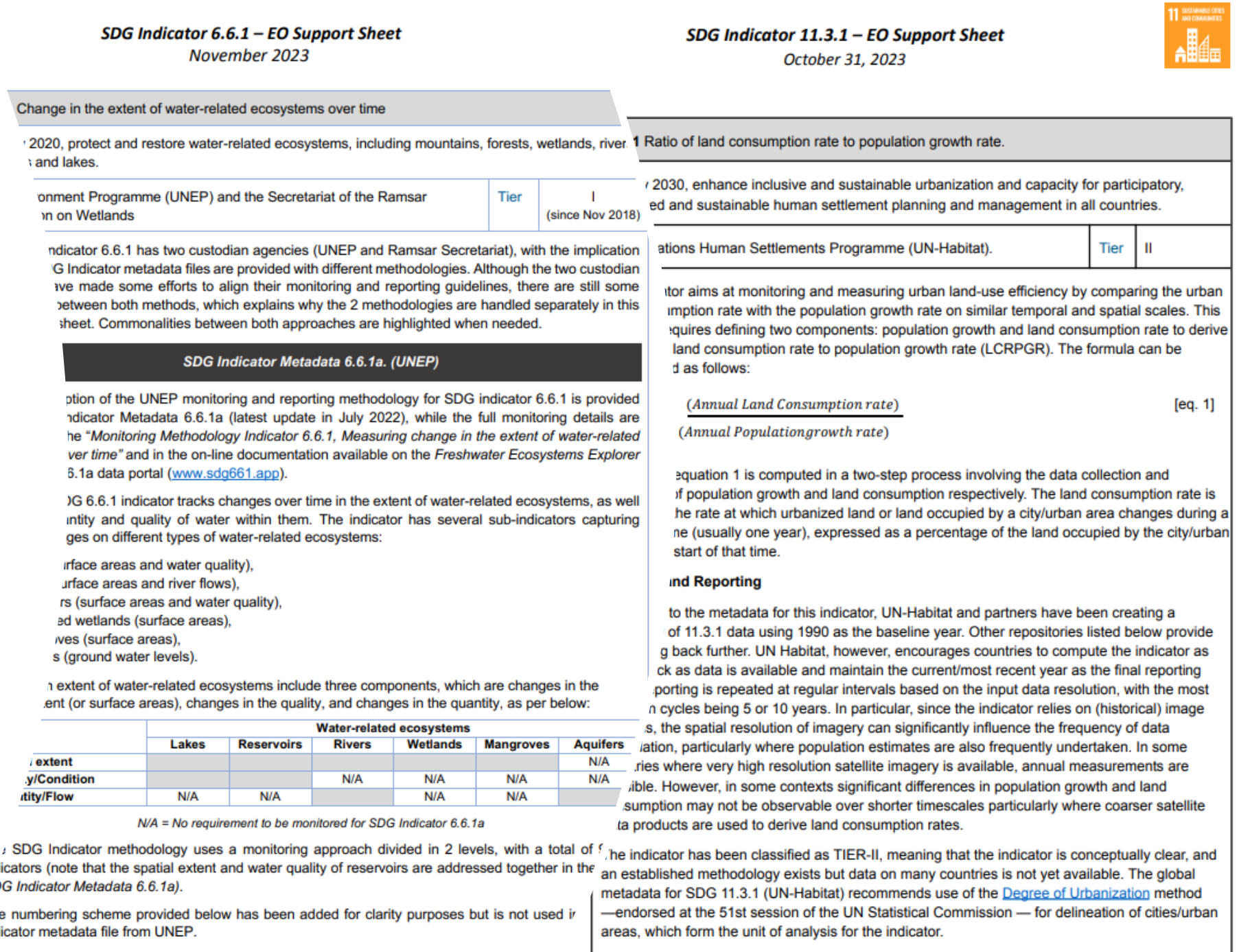
The Committee on Earth Observation Satellites (CEOS) and the WGGI are reviewing guidance notes that highlight how specific SDG indicators can be produced, focused on understanding

- Requirements
- Stakeholders
- CEOS Missions
- Tools, Services, Derived Products

That support the production of reliable indicators from (authoritative/fit-for-purpose) geospatial/EO data sources. Presently notes are developed for:

- 6.6.1
- 11.3.1
- 14.1.1(a)
- 15.3.1

See: https://ceos.org/sdg/



SDG Indicator 6.6.1 – EO Support Sheet
November 2023

Change in the extent of water-related ecosystems over time

2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, river and lakes.

onment Programme (UNEP) and the Secretariat of the Ramsar n on Wetlands | Tier | I (since Nov 2018)

ndicator 6.6.1 has two custodian agencies (UNEP and Ramsar Secretariat), with the implication G Indicator metadata files are provided with different methodologies. Although the two custodian ave made some efforts to align their monitoring and reporting guidelines, there are still some between both methods, which explains why the 2 methodologies are handled separately in this sheet. Commonalities between both approaches are highlighted when needed.

SDG Indicator Metadata 6.6.1a. (UNEP)

ption of the UNEP monitoring and reporting methodology for SDG indicator 6.6.1 is provided ndicator Metadata 6.6.1a (latest update in July 2022), while the full monitoring details are he "*Monitoring Methodology Indicator 6.6.1, Measuring change in the extent of water-related ver time*" and in the on-line documentation available on the *Freshwater Ecosystems Explorer* 6.1a data portal (www.sdg661.app).

)G 6.6.1 indicator tracks changes over time in the extent of water-related ecosystems, as well ntity and quality of water within them. The indicator has several sub-indicators capturing ges on different types of water-related ecosystems:

rface areas and water quality),
urface areas and river flows),
rs (surface areas and water quality),
ed wetlands (surface areas),
ves (surface areas),
s (ground water levels).

n extent of water-related ecosystems include three components, which are changes in the ent (or surface areas), changes in the quality, and changes in the quantity, as per below:

	Water-related ecosystems					
	Lakes	Reservoirs	Rivers	Wetlands	Mangroves	Aquifers
extent						N/A
y/Condition			N/A	N/A	N/A	N/A
tity/Flow	N/A	N/A		N/A	N/A	

N/A = No requirement to be monitored for SDG Indicator 6.6.1a

SDG Indicator methodology uses a monitoring approach divided in 2 levels, with a total of licators (note that the spatial extent and water quality of reservoirs are addressed together in the *DG Indicator Metadata 6.6.1a)*.

The numbering scheme provided below has been added for clarity purposes but is not used ir indicator metadata file from UNEP.

SDG Indicator 11.3.1 – EO Support Sheet
October 31, 2023

1 Ratio of land consumption rate to population growth rate.

2030, enhance inclusive and sustainable urbanization and capacity for participatory, ed and sustainable human settlement planning and management in all countries.

ations Human Settlements Programme (UN-Habitat). | Tier | II

tor aims at monitoring and measuring urban land-use efficiency by comparing the urban mption rate with the population growth rate on similar temporal and spatial scales. This quires defining two components: population growth and land consumption rate to derive land consumption rate to population growth rate (LCRPGR). The formula can be d as follows:

$$\frac{(Annual\ Land\ Consumption\ rate)}{(Annual\ Population growth\ rate)} \quad \text{[eq. 1]}$$

equation 1 is computed in a two-step process involving the data collection and f population growth and land consumption respectively. The land consumption rate is he rate at which urbanized land or land occupied by a city/urban area changes during a ne (usually one year), expressed as a percentage of the land occupied by the city/urban start of that time.

nd Reporting

to the metadata for this indicator, UN-Habitat and partners have been creating a of 11.3.1 data using 1990 as the baseline year. Other repositories listed below provide g back further. UN Habitat, however, encourages countries to compute the indicator as ck as data is available and maintain the current/most recent year as the final reporting porting is repeated at regular intervals based on the input data resolution, with the most n cycles being 5 or 10 years. In particular, since the indicator relies on (historical) image s, the spatial resolution of imagery can significantly influence the frequency of data ation, particularly where population estimates are also frequently undertaken. In some ries where very high resolution satellite imagery is available, annual measurements are ible. However, in some contexts significant differences in population growth and land sumption may not be observable over shorter timescales particularly where coarser satellite ta products are used to derive land consumption rates.

he indicator has been classified as TIER-II, meaning that the indicator is conceptually clear, and an established methodology exists but data on many countries is not yet available. The global metadata for SDG 11.3.1 (UN-Habitat) recommends use of the Degree of Urbanization method —endorsed at the 51st session of the UN Statistical Commission — for delineation of cities/urban areas, which form the unit of analysis for the indicator.

Thank you

Key messages:

- **Geospatial information is official data for the SDGs and the global indicators**
- **There are established frameworks, standards, guides, good practices, global data and methodologies that can be used at all levels of geographic disaggregation from the national to local levels**

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