

*Working Group on Geospatial Information*

# Monitoring Agenda 2030 through a geospatial lens

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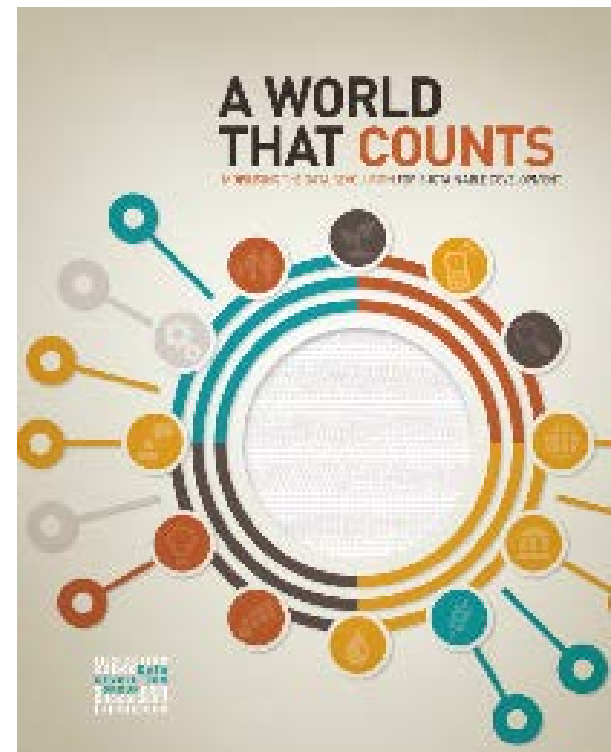
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The time is right for  
contributions from  
Geospatial Information  
to the Sustainable  
Development!



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UNITED NATIONS  
COMMITTEE OF EXPERTS ON  
GLOBAL GEOSPATIAL  
INFORMATION MANAGEMENT

Future trends in geospatial  
information management:  
the five to ten year vision

SECOND EDITION

# Future trends: Increased need for integration of Statistical and Geospatial information

- SDG monitoring on all levels
- Producing information at the right scale
- Institutional arrangements



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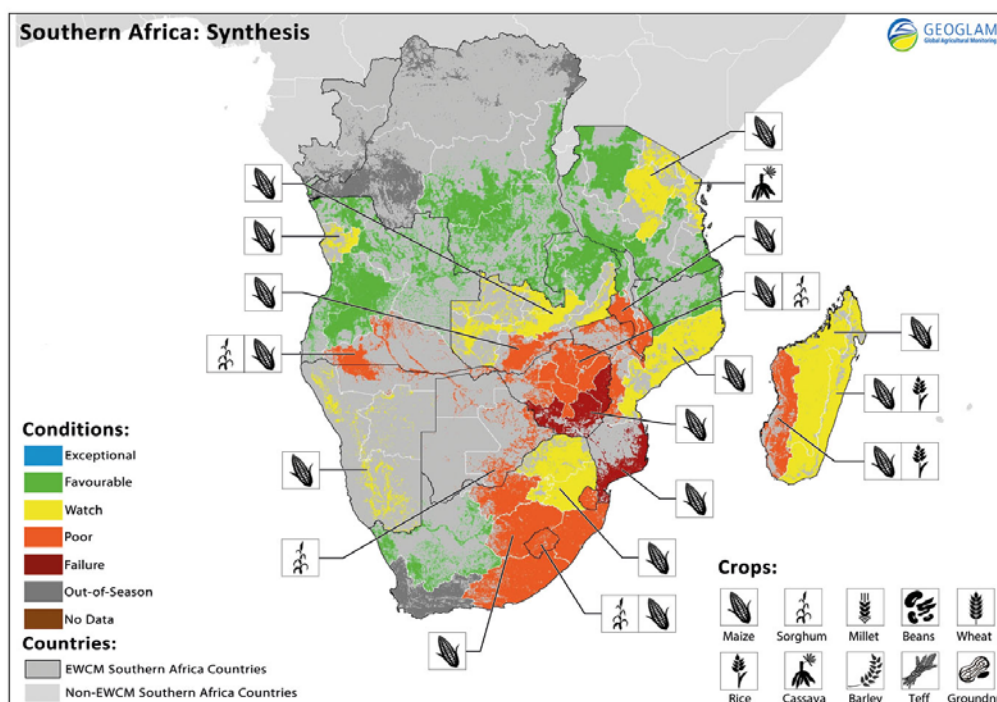


**Target 2.c** Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

## MONITORING CROP CONDITIONS WITHIN COUNTRIES AT RISK OF FOOD INSECURITY

Crop condition map synthesizing information for all Early Warning Crop Monitor (EWCM) crops. Crop conditions over the main growing areas are based on a combination of national and regional crop analyst inputs along with Earth observation data. Crops that are in other than favourable conditions are displayed on the map with their crop symbol.

*“Development planning and SDG outcomes can be visualized with maps.” (CIESIN)*



GEGLAM Early Warning Crop Monitor



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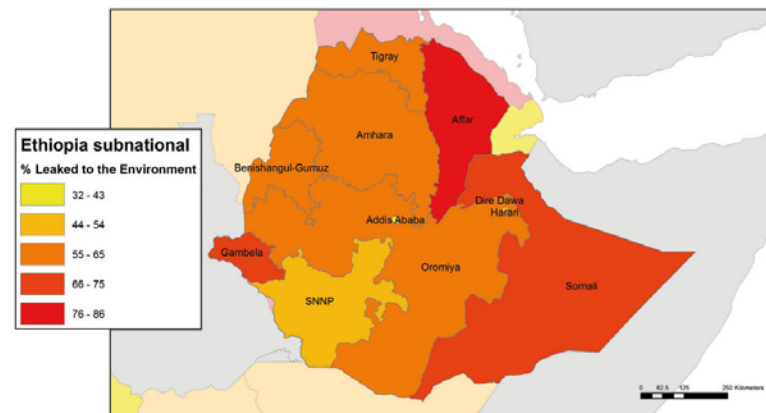
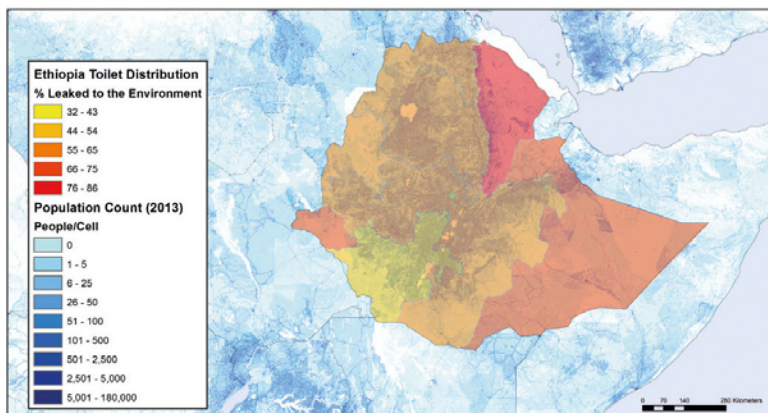
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**Target 6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the least hazardous chemicals and materials, halving the proportion of untreated waste water and substantially increasing recycling and safe reuse globally.

## POPULATION DENSITY OVERLAID ON UNTREATED WASTEWATER LEAKING TO THE ENVIRONMENT, ETHIOPIA SUB NATIONAL



WHO/UNICEF Joint Monitoring Programme (JMP)  
for Water Supply and Sanitation

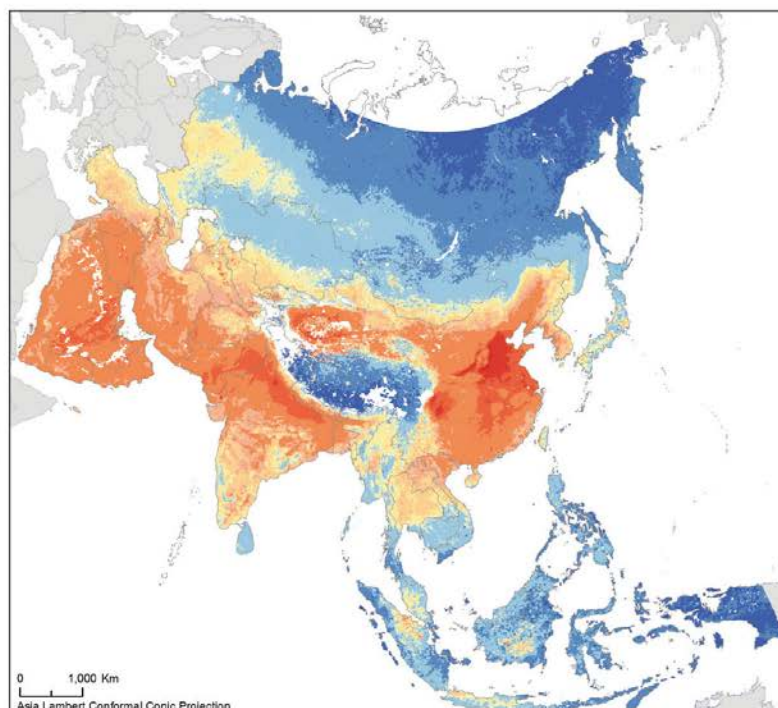
Integrating data from Earth observations and geospatial information with national surveys to monitor the impact of untreated wastewater on the population. The map on the left shows the extent of leakage of wastewater, excreta and grey water, with areas in red denoting extensive pollution. The map on the right integrates all data and shows where there is high impact, i.e., high leakage in densely populated areas.





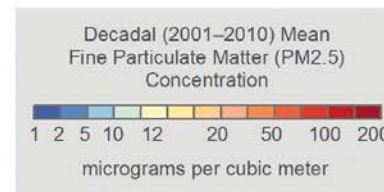
**Target 11.6** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

## MEASURING AIR QUALITY IN CITIES AND ACROSS REGIONS



**Global Annual PM2.5 Grids from MODIS, MISR and SeaWiFS Aerosol Optical Depth (AOD), 2001–2010: Asia**

Measurements from satellites provide information on air quality in communities and regions. For example, this map shows baseline data on particulate matter that could be used by statistical agencies, public health organizations, and environmental protection officials to develop more in-depth indicators, for example by deploying sensor networks to efficiently generate complete national data in near real-time.



CIESIN Columbia University, April 2015



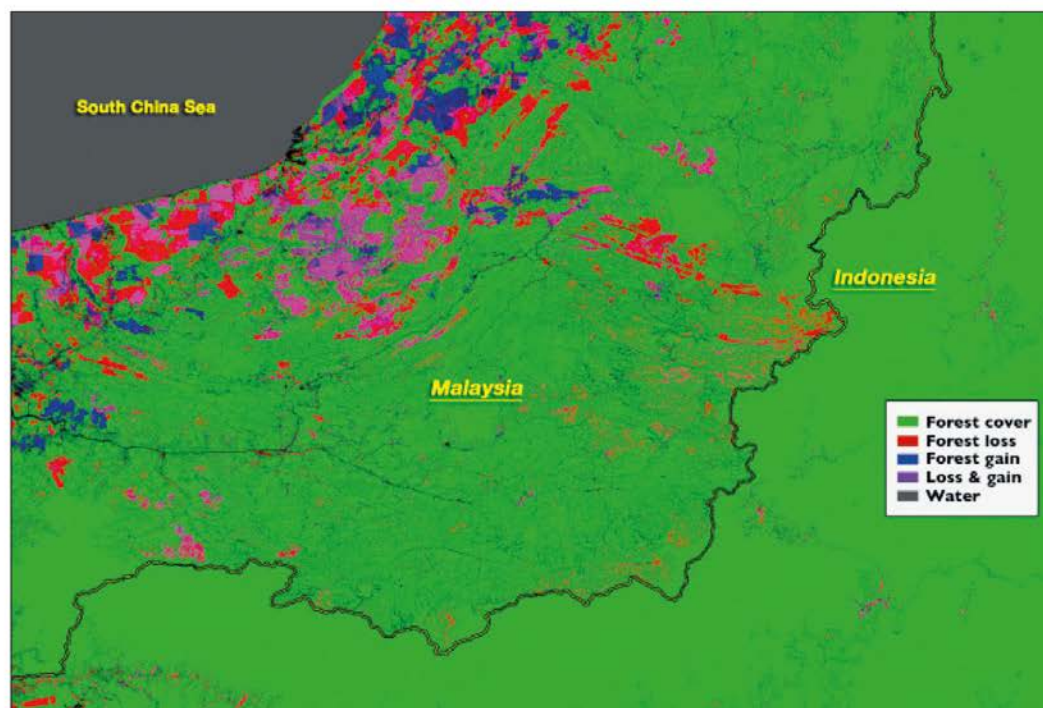




**Target 15.2** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

## EARTH-OBSERVING SATELLITES CAN TRACK TREE COVER EXTENT AND FOREST LOSS AND GAIN OVER TIME

The border between Malaysia and Indonesia on the island of Borneo stands out in the Landsat-based map of forest disturbance. Red pixels represent forest loss between 2000 and 2012.



NASA Goddard, based on data from Hansen et al., 2013.

*“Mapping SDG-related data will improve measuring and monitoring of progress toward the SDG Indicators.”*



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# Tasks of the IAEG-SDGs

- Develop the global indicator framework and a list of indicators
- Provide technical support for the implementation
- Review methodological developments, the indicators and their metadata
- Review capacity-building activities
- Report on progress at the global level





# Indicator Tier System

- **Tier I:** methodology and standards exist, data regularly produced by countries
- **Tier II:** methodology and standards exist, data are not regularly produced by countries
- **Tier III:** no established methodology and standards, no data

***Potential for geospatial and other data sources to address these gaps***



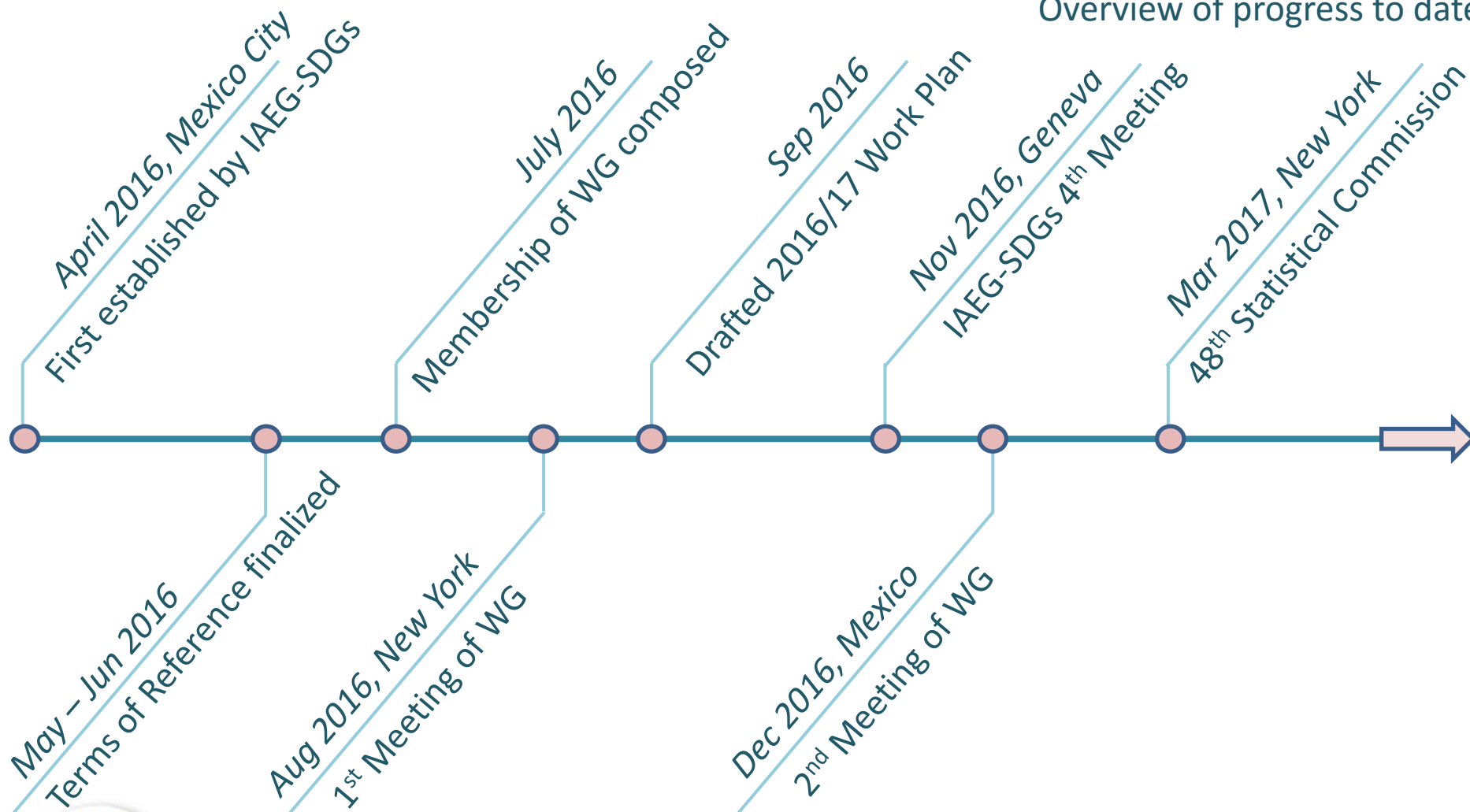
# IAEG-SDGs Working Groups

IAEG-SDGs at its 3rd Meeting in Mexico City (30 March-2 April), decided to create three working groups:

- Interlinkages
- Geospatial information
- Statistical Data and Metadata Exchange (SDMX)



Overview of progress to date





Tasks will include to consider how geospatial information can contribute to the indicators and metadata:

- a) as a direct indicator in itself;
- b) to support and augment statistical data;
- c) to improve the production process of statistical data;
- d) to validate national statistical data inputs;
- e) to communicate and visualize the geographic dimensions and context of the indicators where appropriate; and
- f) to provide granularity and disaggregation of the indicators where appropriate.



## Membership of the Working Group

<b>Co-Chair:</b>	<b>Sweden</b>	<b>Co-Chair:</b>	<b>Mexico</b>		
<i>Members:</i>	<b>Botswana</b>	<i>Members:</i>	<b>Brazil</b>	<i>Members:</i>	<b>UN-GGIM: Africa (Ethiopia)</b>
	<b>Cabo Verde</b>		<b>Colombia</b>		<b>UN-GGIM: Americas (USA)</b>
	<b>France</b>		<b>Germany</b>		<b>UN-GGIM: Arab States (tba)</b>
	<b>Jamaica</b>		<b>Uganda</b>		<b>UN-GGIM-Asia Pacific (China)</b>
	<b>Denmark</b>		<b>GWG-Big Data (tba)</b>		<b>UN-GGIM: Europe (Germany)</b>
	<b>WHO</b>		<b>UN-GGIM EG-ISGI (United Kingdom)</b>		<b>UN-GGIM: Europe (Italy)</b>
	<b>EuroStat</b>		<b>OECD</b>		<b>GEO</b>



# 2016/2017 Work Plan

*Focus: Consider how geospatial information can contribute to the global indicators and metadata*

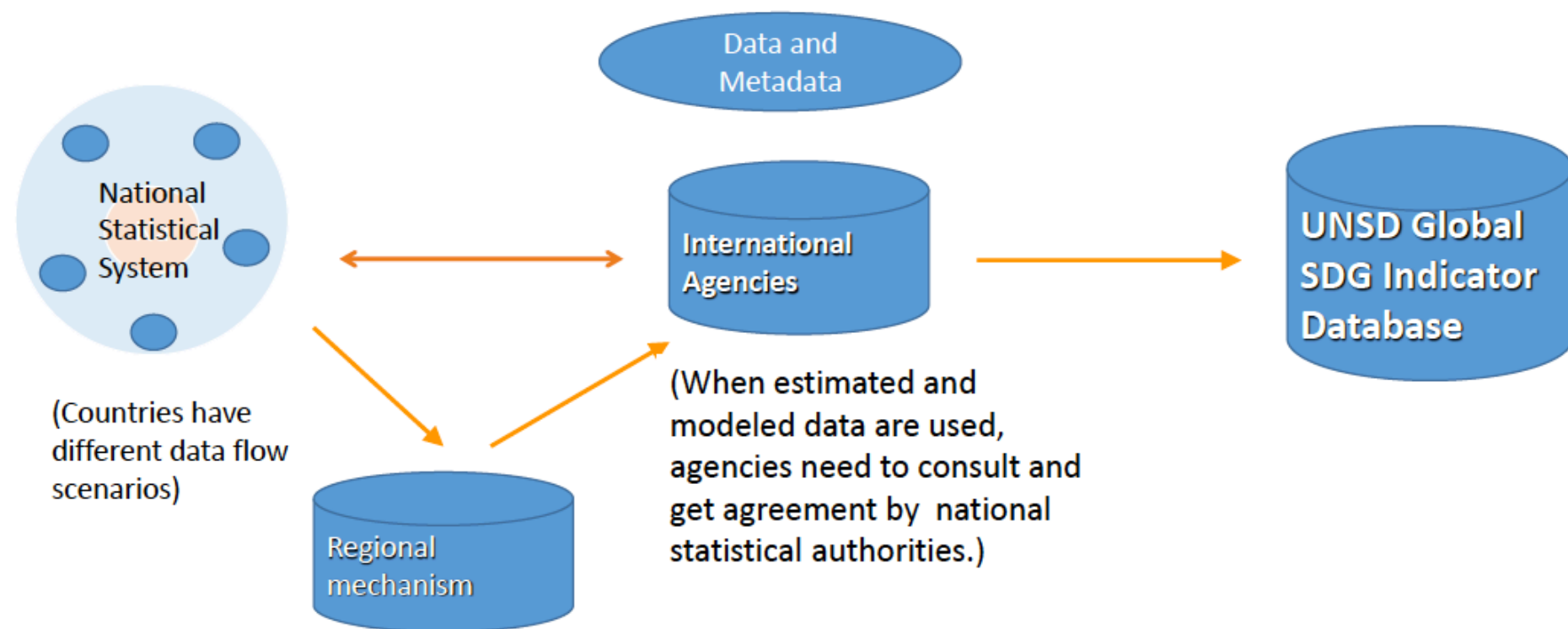
- Review the global indicators incl. metadata through a 'geographic location' lens
- Identify existing geospatial data gaps, geospatial methodological and measurement issues
- Propose means of addressing these data gaps and issues





# Global Reporting Mechanism

## Data flow from national to global level





# SDG Website: <http://unstats.un.org/sdgs/>

## SDG Indicators Global Database with global, regional and country-level data

### SDG Indicators

#### Global Database

Explore the data:

By SDG indicator

By country or area

▼ World

Area : World

Go

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CSV Excel

Search:

Indicator Series Description

1.1.1	SD	Proportion of population below the international poverty line of US\$1.90 per day
1.1.1	SD	Proportion of employed population below the international poverty line of US\$1.90 per day (the working poor)
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1.1.1	SD	Proportion of employed population below the international poverty line of US\$1.90 per day (the working poor)
2.1.1	SD	Prevalence of undernourishment
2.1.2	SD	Estimated prevalence of moderate or severe food insecurity in the adult population
2.1.2	SD	Estimated prevalence of moderate or severe food insecurity in the population (lower bound)
2.1.2	SD	Estimated prevalence of moderate or severe food insecurity in the population (upper bound)
2.1.2	SD	Estimated prevalence of severe food insecurity in the population

Showing 1 to 152 of 152 entries

Footnotes

## SDG Indicator Metadata available

### SDG Indicators

#### Metadata repository

Search

Enter Text

Select Goal

Select Target

Filter

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#### Goal 1. End poverty in all its forms everywhere

Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day

- Indicator 1.1.1: Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural) [See metadata](#)

Target 1.3: Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

- Indicator 1.3.1: Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable [See metadata](#)

#### Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

- Indicator 2.1.1: Prevalence of undernourishment [See metadata](#)
- Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) [See metadata](#)

Target 2.5: By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

- Indicator 2.5.2: Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction [See metadata](#)

Target 2.c: Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

- Indicator 2.c.1: Indicator of food price anomalies [See metadata](#)



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**Thank you!**

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