

# ESCWA'S CONTRIBUTION TO THE REGIONAL GEOSPATIAL DATA FOR ENVIRONMENT STATISTICS

Economic And Social Commission For Western Asia



UNITED NATIONS

الاسكوا  
ESCWA

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## Multilateral GIS Projects

- Using GIS/GPS for the 2020 round of population and housing censuses
- A series of activities in collaboration with UNFPA, US Census Bureau
- Using GIS to measure human settlement indicators for SDG Goal 11.
- “Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR)”.
- GEO membership in 2018



## Online Survey (targeting NSOs)

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**Assessing the Status and Needs of Arab Countries to Produce and Utilize Geospatial Information as a Data Source for the SDGs**

**Replies: 13 out of 22 Arab Countries**

# Geospatial Online Survey 1/6

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Q. Is your administration the official data producer entity for geospatial information in your country?

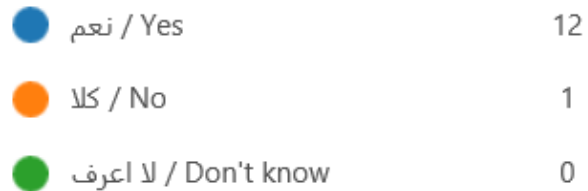
● نعم / Yes	4
● كلا / No	9
● لا أعرف / Don't know	0



## Geospatial Online Survey 2/6

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Q. Is your administration producing geospatial data?



## Geospatial Online Survey 3/6

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Q. For how long have your administration been collecting geospatial data?

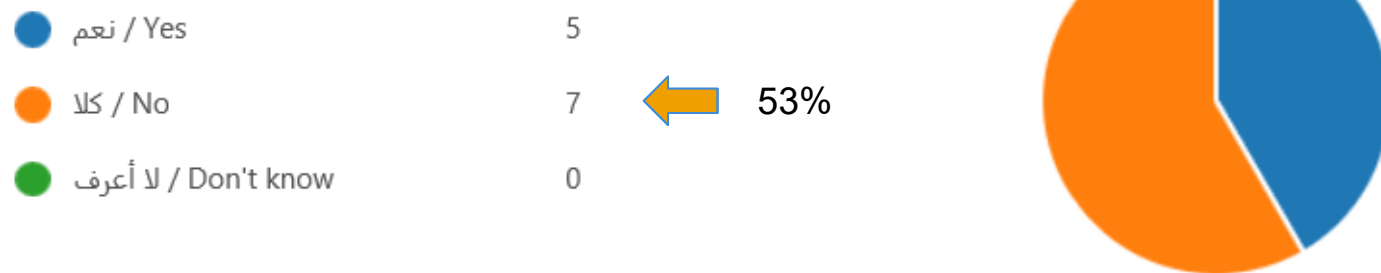
● اقل من سنة واحدة / Less than on...	0
● من سنة الى سنتين / One to two...	1
● من 3 - 5 سنين / Three to five yea...	0
● أكثر من خمس سنوات / More tha...	11
● لا اعرف / Don't know	0



## Geospatial Online Survey 4/6

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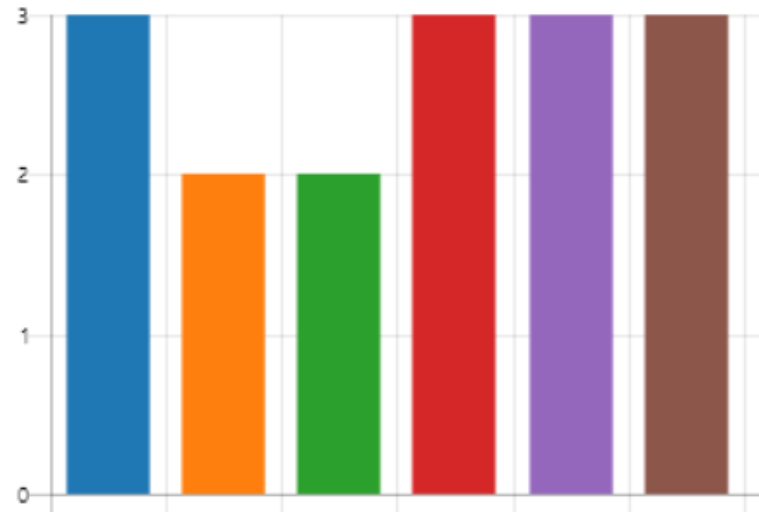
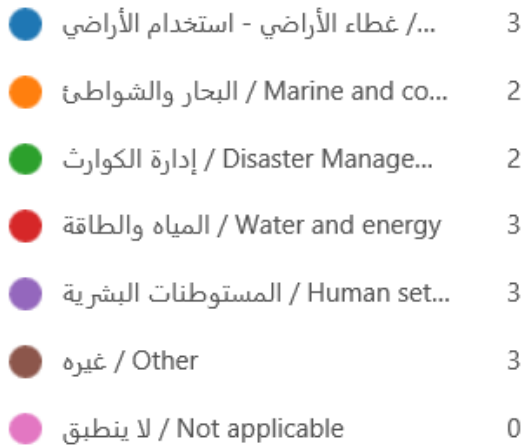
Q. Does your organization use geospatial data as a source for SDGs?



## Geospatial Online Survey 5/6

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Q. Indicate which fields rely on geospatial data as sources for SDGs  
(one or more possible choices)





## Geospatial Online Survey 6/6

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Q. Specify your organization's needs in order to build or enhance its capacity for using geospatial data production *(one or more possible choices)*

● تمويل / Funding	8
● تدريب وورش عمل / Training and...	13
● تجهيزات وبرمجيات / Hardware an...	7
● غيره / Other	0

← 46%





## Developing and Utilising Geospatial Data and Workflows to Monitor Environmental -Sustainable Development Goal

### Partnership between the UN-ESCWA and ETC-UMA

Team including Dr. Wafa Aboul Hosn, Dr. [Ameer Abdulla](#), ETC-UMA Senior Advisor; Assoc. Prof. GCI,UQ)

Mr. [Christoph Schröder](#), (ETC-UMA; GIS and Data Expert) and Dr. [Dania Abdul Malak](#). (ETC-UMA; Director)

Coordinating Team of the Country Focal Points in Jordan (DOS), Egypt (CAPMAS) and Palestine (PCBS)

Final report on [http://www.etc.uma.es/un\\_escwa\\_etcuma/](http://www.etc.uma.es/un_escwa_etcuma/)

# Country Scoping and Assessment:

Undertook Survey on availability and accessibility of relevant sources of spatial data for SDG indicator reporting in 3 select countries

[https://ec.europa.eu/eusurvey/runner/SDG\\_data\\_needs](https://ec.europa.eu/eusurvey/runner/SDG_data_needs)

B) Data availability for environmental SDG monitoring

**Population, human settlements and infrastructure**

**Land use and land cover**

**Biodiversity**

**Water**

**Air Quality**

**Marine**

C) Data needs and data gaps select the thematic areas where data is needed to meet the requirements

D) Spatial data analysis, management and storage capacities

# Country Scoping and Assessment:

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2. Convened a National Workshop for stakeholders that are associated with SDGs, environmental data, and geospatial information systems, in these 3 countries: Cairo, Egypt (May 2018), Amman, Jordan (May 2018), and Palestine (May 2018)
3. Undertook basic training and raising awareness in these 3 countries on the importance of geospatial workflows, global initiatives and technologies, and publicly accessible data that is relevant to SDG monitoring.
4. Developed an overview of data and expertise availability and identify needs for establishing effective geospatial workflows for measuring and monitoring SDGs.

## SDGs considered

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6.6.1 Change in the extent of water-related ecosystems over time

11.3.1 Ratio of land consumption rate to population growth rate

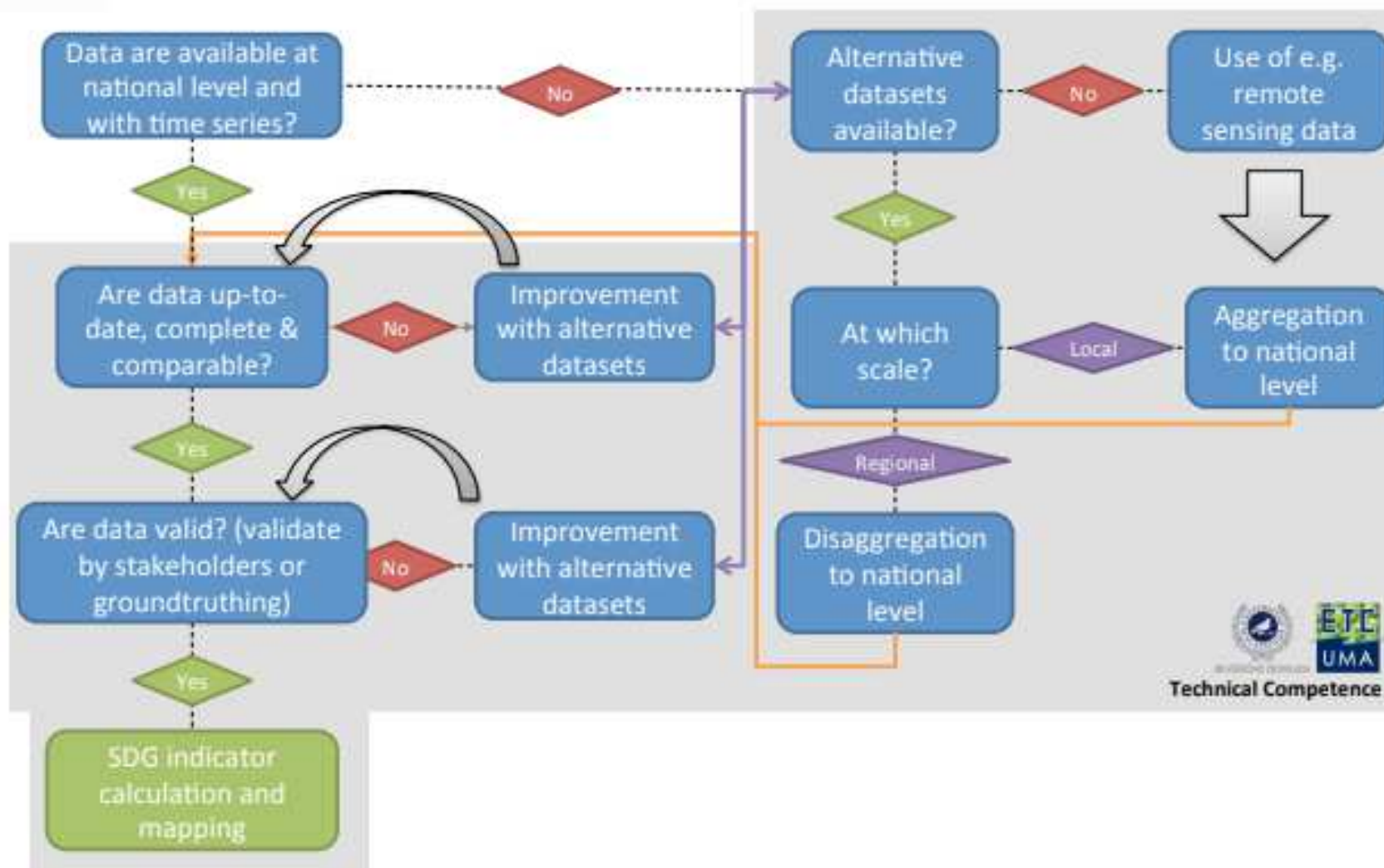
11.6.2: Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities

14.5.1 Coverage of protected areas in relation to marine areas

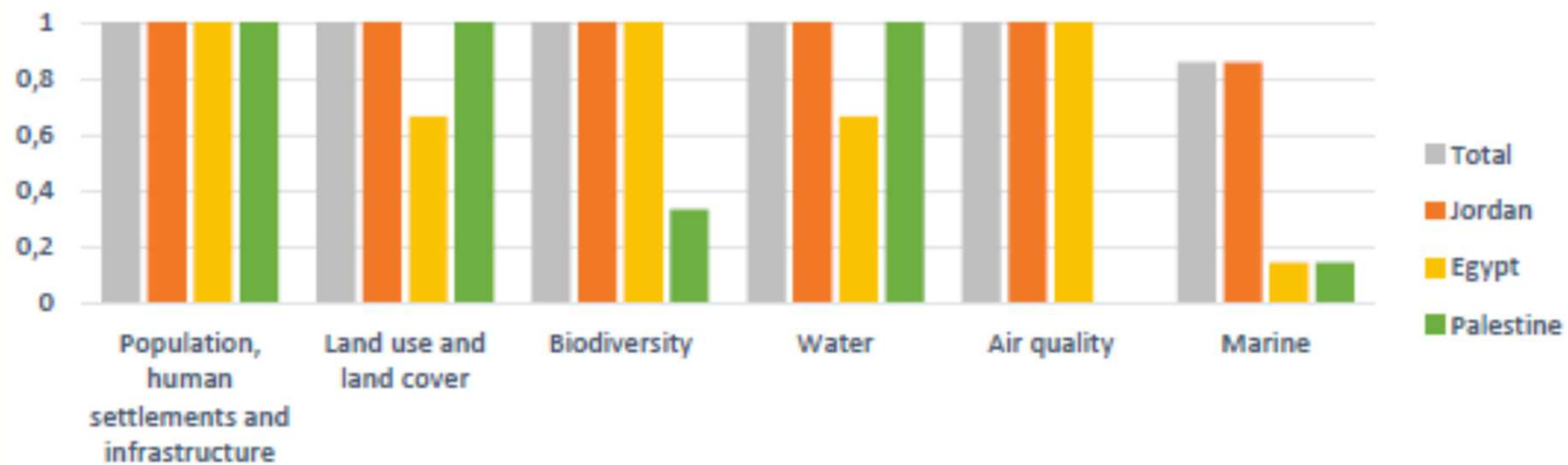
15.3.1 Proportion of land that is degraded over total land area



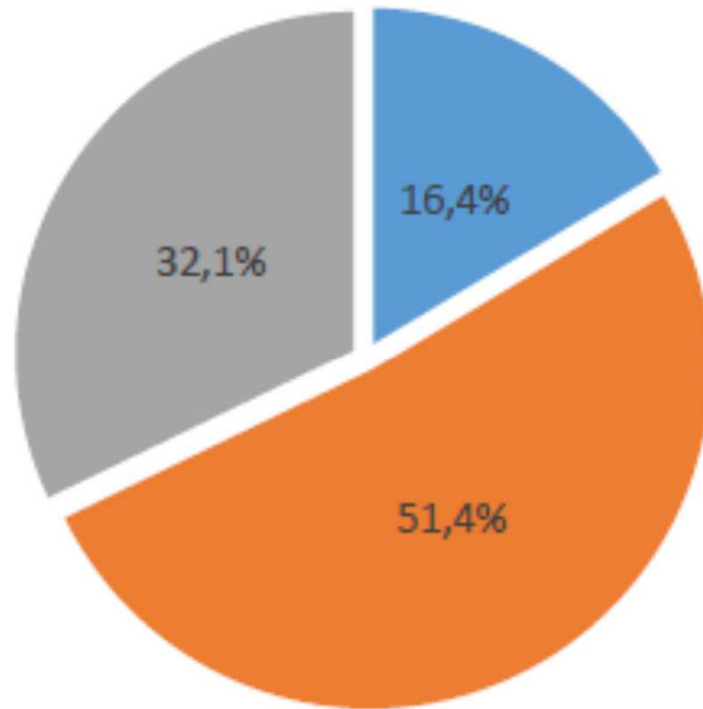
## Workflow to develop SDG indicators based on spatial data



## Data availability per thematic domain (1= all datasets available; 0 = no datasets available)

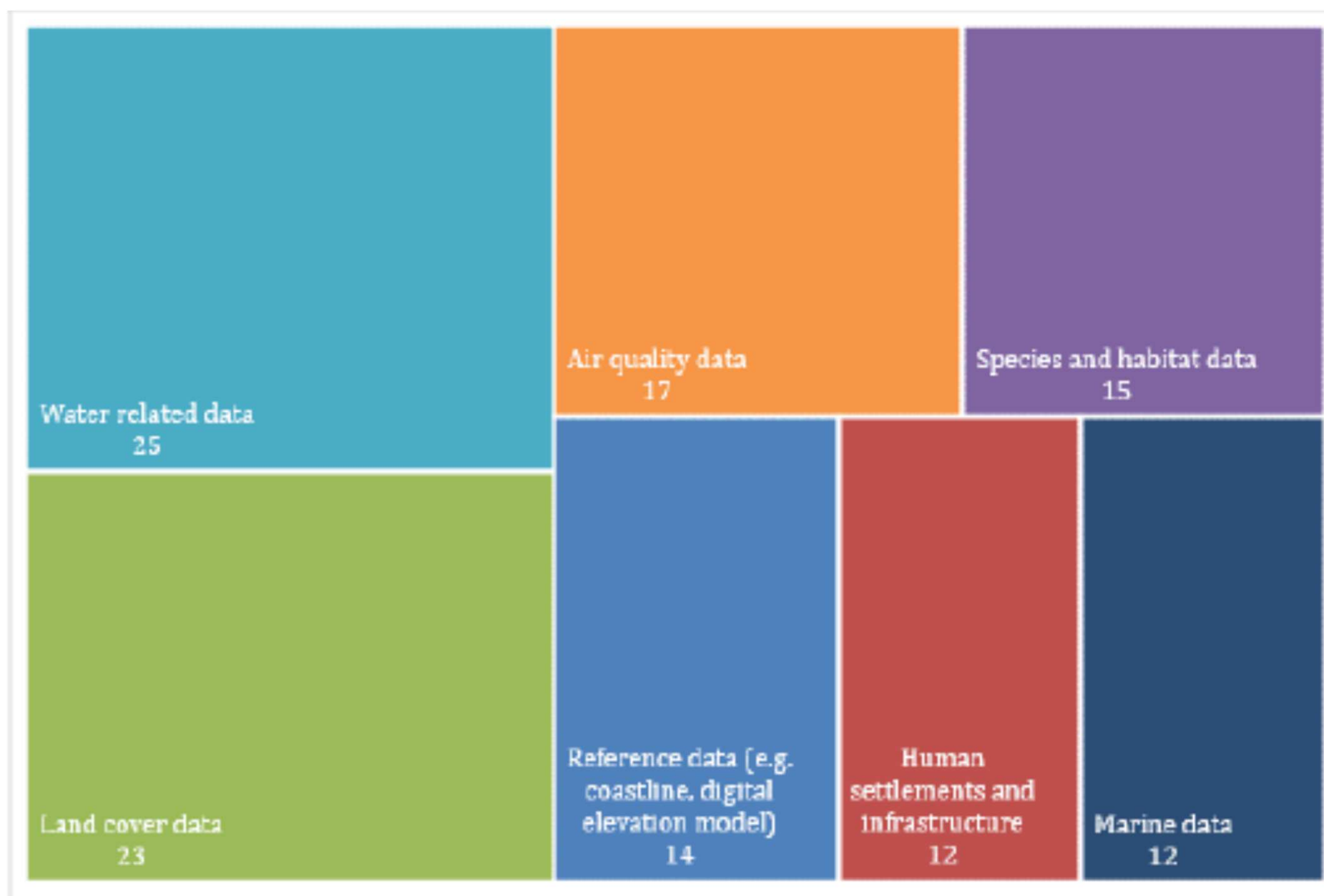


### Access type for available data



■ Open access ■ Access upon-request ■ Restricted access


























**Figure 4: Data gaps identified per thematic domain**

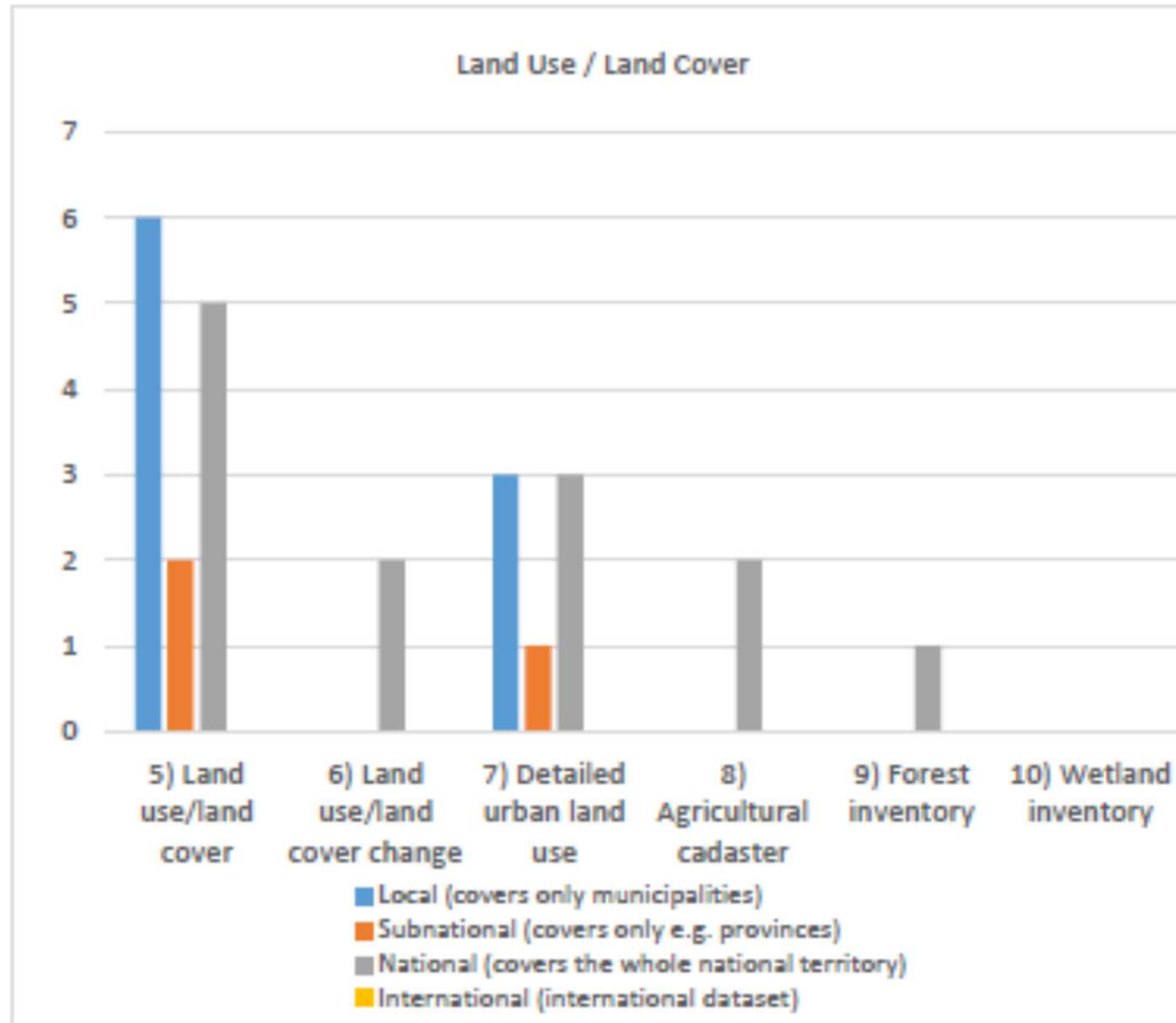
# Data availability for environmental geospatial SDG indicators

Table 1: Data availability for environmental geospatial SDG indicators

		 Adequate data available	 Data available (requires further validation)	 No data available	 unknown	
 <b>2</b> End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Relevant target					
	Indicators					
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					
 <b>6</b> Ensure availability and sustainable management of water and sanitation for all	Relevant target					
	Indicators					
	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	6.3.1 Proportion of wastewater safely treated				
		6.3.2 Proportion of bodies of water with good ambient water quality				
	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources				
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					

# Assessment of Spatial Data in Jordan

On  
Population,  
human  
settlements  
and  
infrastructure  
Land Cover  
Biodiversity  
Water  
Air Quality  
Marine Env



# Level of Expertise in Geospatial Capacities in Jordan




**Figure 5: Level of expertise in different technical areas.**

Shared with me > Country

Name


 Workshop Participants


 National PPTs

 ETC\_UMA


Shared with me > Country Missions and W

Name

 Hashim Anwar 2018\_The ...

 GIZ\_Climate Change Adaptation and Urban Resilie...

 National Priorities in Environmental Statistics Egy...

 Afifi\_Towards an Egyptian National Data Center\_C...

 Abdel Khaliq 2018\_ Progress Towards the SDGs in ...

 Alkuzami\_ESCWA\_GIS projects and Agro informati...

 Alkuzami\_ESCWA\_GIS projects and Agro informati...

# Follow up

- Joint support from UNSD UNEP EEA FAO for National and regional capacity on Geospatial (GIS, Satellite Imagery, Open Data, Remote Sensing)
  - ESCWA is sponsoring the 3 countries to ESRI Training
    - <https://www.visitdubai.com/en/events/esri-middle-east-and-africa-user-conference>
- Use of assessments in other projects by Organizations and by Countries
- At the UN and GGIM levels request more cooperation between Geospatial entities and NSOs
- Develop Regional Capacity Building Project on Geospatial for SDGs Environment

# THANK YOU

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