

Annex to chapter 13

1. Data for SDG 13

SDG 13 comprises five targets and a total of eight indicators (three of which contain multiple subindicators). Of these indicators, one is tier I, two are tier II, and five are tier III for which data are not available, as the indicators are still in the process of methodological definition.

The United Nations Statistics Division provides data sets for a total of three indicators: 13.1.1 - Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population; 13.1.2 - Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030; and 13.1.3 - Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

Indicators 13.1.1, 13.1.2 and 13.1.3 are exactly the same as indicators 1.5.1, 1.5.3 and 1.5.4, respectively. However, the data sets titled 1.5.1, 1.5.3 and 1.5.4 are more extensive and inclusive compared to the data sets listed under SDG 13, as they include more subindicators (including all those that are in the SDG 13 versions of these data sets). Therefore, we explore and evaluate the data sets labelled as SDG 1 instead.

None of the provided data sets includes sex disaggregated data.

Data used in SDG 13 analysis was downloaded on 7 September 2018. After the country level data check following a major update of the Global SDG Indicators Database of the United Nations Statistics Division on 8 July 2019, three series of SDG 13.1.1 (Number of people affected by disaster (number); Number of deaths due to disaster (number); Number of missing persons due to disaster (number)) are replaced with amended data.

We examine data availability in the Arab region and implement data substitution, when needed, based on the criteria of having to cover half or more of the total population of the Arab region and at least one third of the Arab countries for an indicator/subindicator to be kept in the analysis. This leads us to omit indicators 13.1.2 and 13.1.3.

Indicator 13.1.1 has 15 subindicators, some of which mean the same but are expressed differently, include other subindicators thematically or join two subindicators in one. Some of these subindicators address material losses due to disasters, namely damaged or destroyed dwellings, without referring to the affected people. Moreover, three of these subindicators include disaggregation by “hazard type” with an extensive number of categories (59; making 189 total series under 13.1.1), yet they are incomplete when looking consistently across countries/territories. We present a summary of series of 13.1.1 and how they relate to each other in table 13.1.

Table 13.1 Summary of the series provided by the United Nations Statistics Division for indicator 13.1.1 (also for indicator 1.5.1 and indicator 11.5.1)

Series 1	Number of people affected by disaster	
Series 2	Number of injured or ill people attributed to disasters	
Series 3	Number of people whose livelihoods were disrupted or destroyed, attributed to disasters	
Series 4	Number of people whose damaged dwellings were attributed to disasters	Included in the first series
Series 5	Number of people whose destroyed dwellings were attributed to disasters	
Series 6	Number of directly affected persons attributed to disasters per 100,000 population	Expressed differently

Series 7	Number of missing persons due to disaster	
Series 8	Number of deaths due to disaster	
Series 9	Number of deaths and missing persons attributed to disasters, by hazard type	Joins the two series and with disaggregation by hazard type
Series 10	Number of deaths and missing persons attributed to disasters	Joins the two series
Series 11	Number of deaths and missing persons attributed to disasters per 100,000 population	Joins the two series and expressed differently
Series 12	Number of damaged dwellings attributed to disasters	
Series 13	Number of damaged dwellings attributed to disasters, by hazard type	With disaggregation by hazard type
Series 14	Number of destroyed dwellings attributed to disasters	
Series 15	Number of destroyed dwellings attributed to disasters, by hazard type	With disaggregation by hazard type

We observe that series 2, 3, 4 and 5 are included in series 1; series 6 is just a different way to express series 1; each of series 9, 10 and 11 join series 7 and 8 whereby series 9 also comes with disaggregation by hazard type and series 11 is also a different way to express series 10; and that series 13 and 15 are nothing but the respective hazard type disaggregated versions of series 12 and 14. When there are many subindicators that mean the same but are expressed differently, we choose the one among these subindicators that is more representative, is easier to interpret, and has more data availability. Furthermore, when a series thematically covers the other, we only keep the series which has the broader measure. In light of all this, we only preserve and evaluate the five following subindicators from 13.1.1: Number of people affected by disaster, Number of missing persons due to disaster, Number of deaths due to disaster, Number of damaged dwellings attributed to disasters, and Number of destroyed dwellings attributed to disasters.

The subindicators of 13.1.1 are subject to our data substitution scheme for the year 2017, in order to ensure the desired data coverage (table 13.2).

Table 13.2 Data substitution scheme for selected indicators and subindicators

Indicator or subindicator	Number of substituted data points (Arab)	Year
	13 (0)	2016
	6 (0)	2015
	13 (1)	2014
13.1.1 (Number of people affected by disaster (number))	7 (1)	2013
	5 (1)	2012
	3 (1)	2011

	5 (1)	2010
	2 (1)	2009
	15 (1)	2016
	9 (0)	2015
	11 (1)	2014
	7 (1)	2013
13.1.1 (Number of deaths due to disaster (number))	3 (1)	2012
	6 (1)	2011
	5 (1)	2010
	1 (1)	2009
	9 (0)	2016
	7 (0)	2015
	5 (0)	2014
	4 (0)	2013
13.1.1 (Number of missing persons due to disaster (number))	5 (0)	2012
	3 (2)	2011
	7 (2)	2010
	4 (1)	2009
	6 (0)	2016
	14 (0)	2015
	24 (3)	2014
13.1.1 (Number damaged dwellings attributed to disasters (number)) and (Number destroyed dwellings attributed to disasters (number))	10 (2)	2013
	4 (1)	2012
	4 (0)	2011
	4 (1)	2010
	3 (1)	2009

We express each of the first three preserved series (the ones related to people) per 100,000 population not only to match the official definition of indicator 13.1.1 but, more importantly, to get a measure that is relative to the population and, thus, that is more significant and indicative. The SDG Indicators Metadata Repository of the United Nations Statistics Division recommends calculations of the indicator 13.1.1 as a simple summation of related indicators (death, missing people and affected people) from national disaster loss databases divided by the global population data and expressed per 100,000 people, which however would cause us to lose half of the available observations. Thus, we report on all three people-related series in 13.1.1 separately and express them per 100,000 national population, while for the two dwellings-related series where the availability of data for all Arab countries is the same for both, we add them together and form a sum.

This leaves us with only these five integral sub-indicators of SDG 13.1.1 to assess the position of the region by 2030 for SDG 13, as noted in box 13.1.

Box 13.1	Summary list of preserved and examined indicators/subindicators
<ul style="list-style-type: none"> Indicator 13.1.1 – 5 series out of 189 – Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population 	

However, we lose the ability to determine the region's position on the rest of the Targets, indicators and sub-indicators as noted in box 13.2, including those in table 13.3 on targets, indicators, tiers and data availability in Arab countries for SDG 13, but that do not have sufficient data.

Box 13.2	Summary list of omitted targets
<ul style="list-style-type: none"> 13.2 Integrate climate change measures into national policies, strategies and planning 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning 13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities 	

Annex 13.2 contains a graph for each of the evaluated series/indicators, showing the country level data values of the series/indicator for the years whose data points were used for every included country.

The global, regional and subregional aggregates of two dwellings-related series of 13.1.1 are calculated using a total sum, whereas the aggregates of all three people-related series of 13.1.1 are calculated using a weighted average. The method of aggregation, in general, as well as the weighting variables to be used for the weighted averages and the properties of the weighting variables are all chosen based on what is advised by the corresponding SDG Indicators Metadata Repository or by the original source of the corresponding data that is referred to by this metadata. If none of these two references advise on the aggregation methods or weights, the decisions are made based on the most common scientific logic fitting the case and its feasibility (e.g. the availability of the needed data for the weighting variables). The year of the weighting variable data is the most commonly used year for the data of the respective series/indicator or the latest available year.

The following weight was used for the indicators/series whose global, regional and subregional aggregates are weighted averages: Total Population in 2015 (from the World Population Prospects). The chapter includes more details about the weighting variables, including which weight was used for which series or indicator.

We calculate the world, regional and subregional averages for the evaluated indicator but we fail to include its target value to facilitate comparability. In fact, as SDG 13.1 aims to “strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries”, it is not possible to infer the official desired target value and thus it is not shown.

Table 13.3 Targets, indicators, tiers and data availability for Arab countries – SDG 13 (Take urgent action to combat climate change and its impacts)

Target	Indicator	Number of subindicators	Tier	Data availability*
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	5 chosen out of 189**	Tier II	12, 11, 6, 12, 12
	13.1.2 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	(Dropped) 2	Tier I	x
	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	(Dropped) 3	Tier II	x
13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	(No data)	Tier III	x

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula	(No data)	Tier III	x
	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions	(No data)	Tier III	x
13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	13.a.1 Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the \$100 billion commitment	(No data)	Tier III	x
13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities	(No data)	Tier III	x

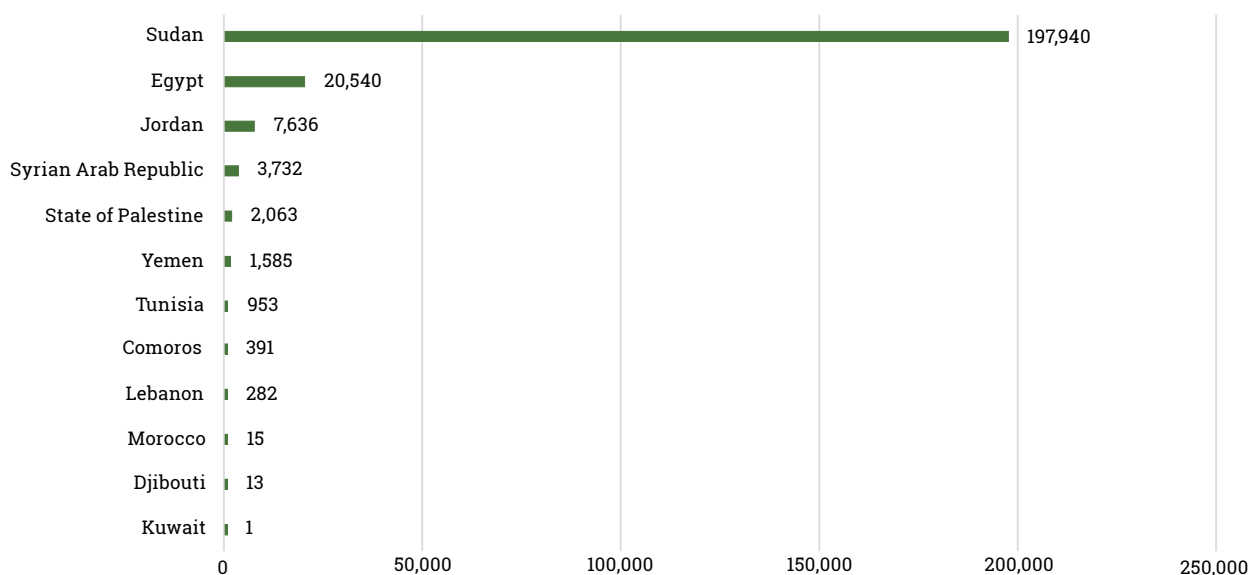
* Figures refer to the number of Arab countries with data for the indicator, while x means there are no data or the indicator was dropped.

** For indicator 13.1.1, there exist 15 main series, 3 of which have disaggregation by hazard type (consisting of 59 different categories). Therefore, the total number of series for this indicator is 189, out of which we choose to keep only five series. Source: <https://unstats.un.org/sdgs/indicators/indicators-list/> and author's calculations.

2. Country graphs

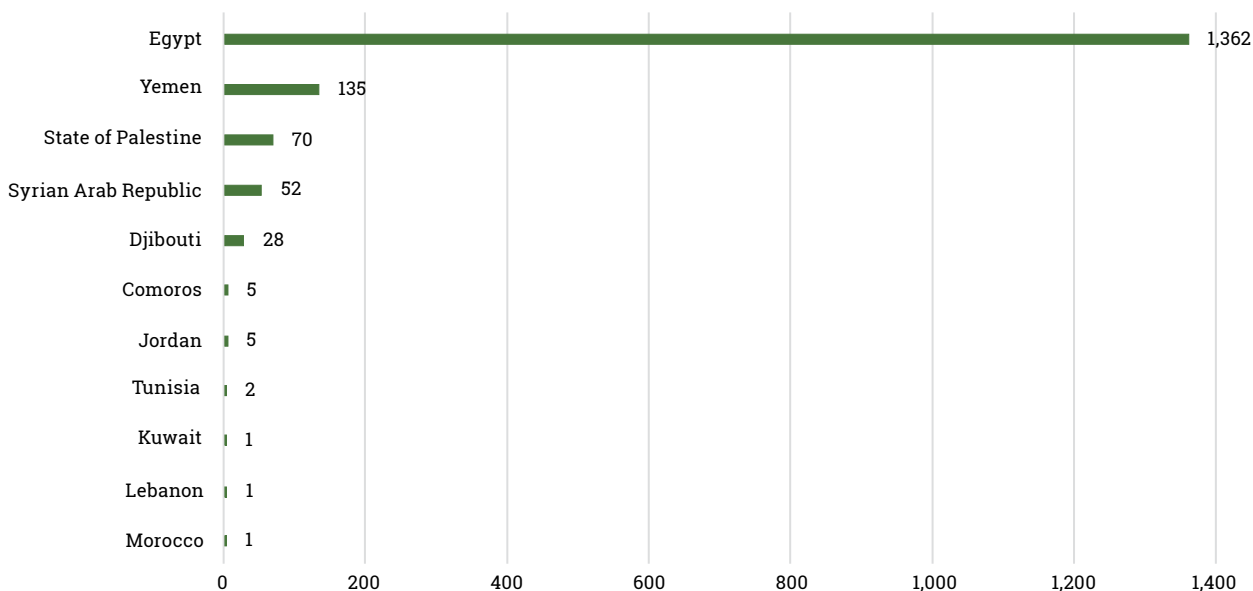
Figure 13.1 Five series of indicator 13.1.1 - Number of deaths, missing persons and persons affected by disaster per 100,000 people

Number of people affected by disaster (number)



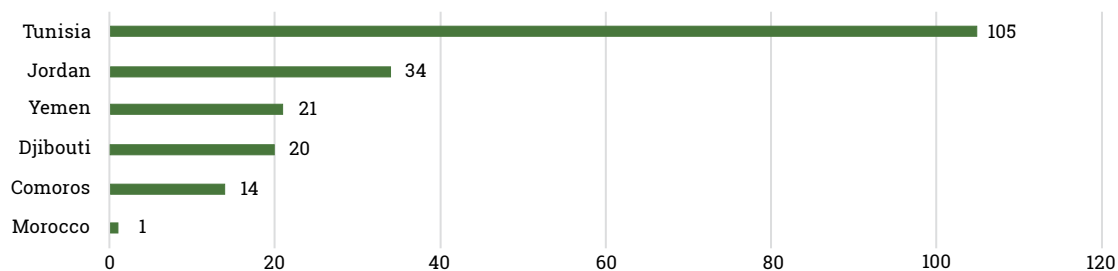
Note: Data are from 2017 apart from Syrian Arab Republic (2009), Yemen (2010), Kuwait (2011), Djibouti (2012), Tunisia (2013) and Morocco (2014).

Number of deaths due to disaster (number)



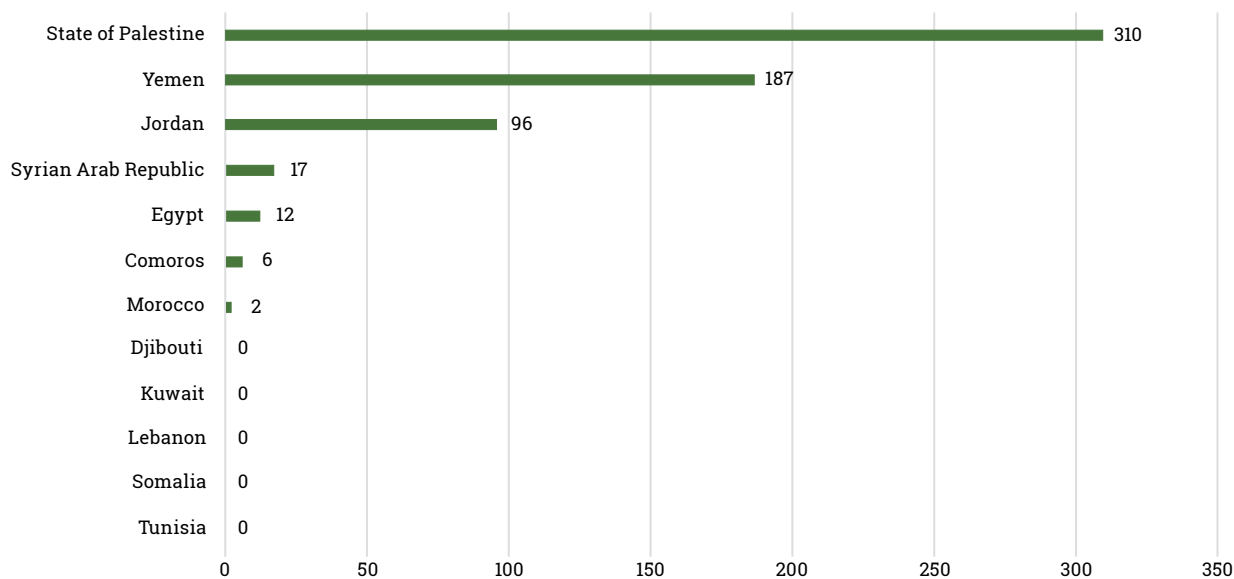
Note: Data are from 2017 apart from Syrian Arab Republic (2009), Yemen (2010), Kuwait (2011), Djibouti (2012), Tunisia (2013), Morocco (2014) and Lebanon (2016).

Number of missing persons due to disaster (number)



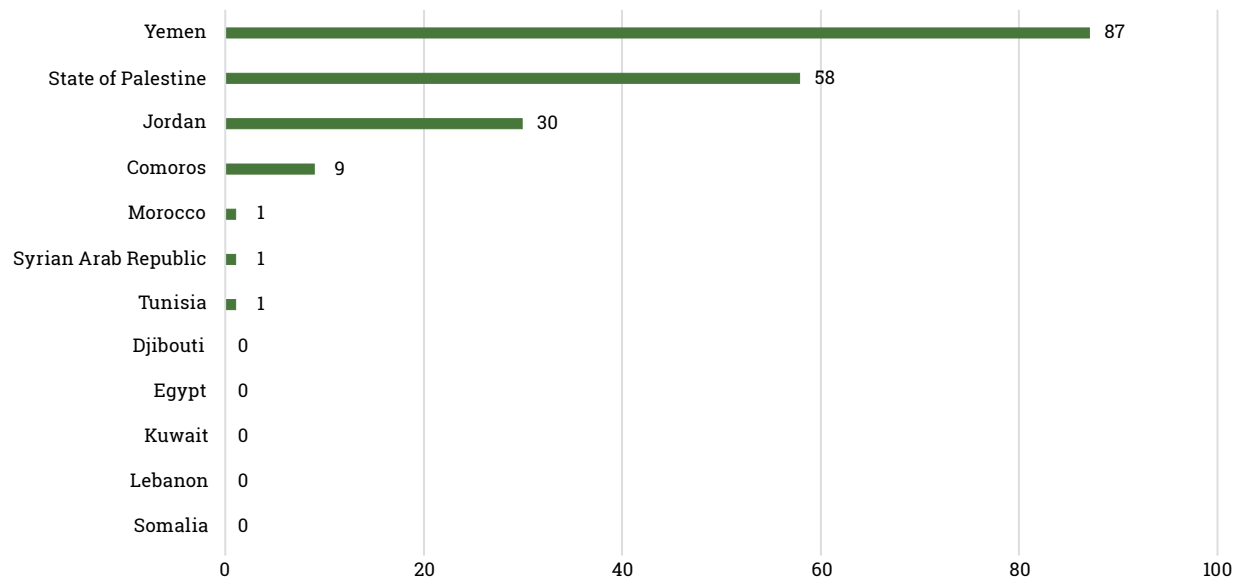
Note: Data are from various years as follows: Tunisia (2009); Jordan and Yemen (2010); Djibouti and Morocco (2011); Comoros (2017).

Number damaged dwellings attributed to disasters (number)



Note: Data are from 2017 apart from Syrian Arab Republic (2009), Yemen (2010), Djibouti (2012), State of Palestine and Tunisia (2013), Comoros, Lebanon and Morocco (2014).

Number destroyed dwellings attributed to disasters (number)



Note: Data are from 2017 apart from Syrian Arab Republic (2009), Yemen (2010), Djibouti (2012), State of Palestine and Tunisia (2013), Comoros, Lebanon and Morocco (2014).