Annex to chapter 14

1. Data for SDG 14

SDG 14 comprises 10 targets and a total of 10 indicators (two of which contain multiple subindicators). Of these indicators, two are tier I, three 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: 14.4.1 - Proportion of fish stocks within biologically sustainable levels; 14.5.1 - Coverage of protected areas in relation to marine areas; and 14.a.1 - Proportion of total research budget allocated to research in the field of marine technology.

None of the provided data sets includes sex disaggregated data.

The data used in the analysis of SDG 14 was downloaded on 14 September 2018. After a country level data check following a major update of the Global SDG Indicators Database of the United Nations Statistics Division on 8 July 2019, the data series of 14.5.1 (Coverage of protected areas in relation to marine areas) is replaced with amended data.

We examine data availability in the Arab region and implement data substitution, when needed, based on the criterion 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 14.4.1 and 14.a.1.

Indicator 14.5.1 is composed of three different subindicators, namely: Protected marine area (Exclusive Economic Zones) (square kilometers), Coverage of protected areas in relation to marine areas (Exclusive Economic Zones) (percentage), and Average proportion of marine Key Biodiversity Areas (KBAs) covered by protected areas (percentage). We omit the first series because evaluating it would not be as indicative and significative as evaluating one or both of the other series, since it does not measure, for instance, the size of the protected marine area with respect to the total area that could potentially be protected but as an absolute measure. The other two series measure the indicator of concern using two different approaches/ calculation methods: the series "Coverage of protected areas in relation to marine areas (Exclusive Economic Zones)" is computed by "dividing the total protected marine area within a country by the total territorial area of the country and then multiplying by 100"; whereas the series "Average proportion of marine KBAs covered by protected areas" is computed as "the mean percentage of each KBA that is covered by protected areas" which, according to the SDG Indicators Metadata Repository, "better reflects trends in protected area coverage for countries or regions with few or no Key Biodiversity Areas that are completely covered". The SDG Indicators Metadata Repository also adds that the first approach, which is now considered as the traditional simple statistical method to compute this indicator, "does not recognize the extreme variation of biodiversity importance over space (Rodrigues et al. 2004), and so risks generating perverse outcomes through the protection of areas which are large at the expense of those which require protection". Therefore, we only preserve and evaluate the "Average proportion of marine KBAs covered by protected areas (percentage)" series for 14.5.1. We note that this series is disaggregated by geographic location (point) and/ or boundary (polygon) and that thus we only use its "mid-point" values which make the averages of the upper and lower boundaries.

This preserved series of 14.5.1, which is the only evaluated subindicator in chapter 14, covers 20 Arab countries in 2017 (all Arab countries except the State of Palestine and Jordan). These 20 Arab countries, in turn, cover 400 million of the total Arab population. While the data set includes values for the years spanning 2000–2018, data availability is nearly complete for our base year (2017) and is the best compared to all other years, which explains why no data substitution was done for this subindicator of 14.5.1.

We assess the position of the region by 2030 on this single integral indicator (14.5.1), using one of its three series, as noted in box 14.1.

Box 14.1	Summary list of preserved and examined indicators/subindicators
•	Indicator 14.5.1 – 1 series out of 3 – Average proportion of marine Key Biodiversity Areas (KBAs) covered by protected areas (percentage)

This solely covers one target, as we remain unable to determine the region's position on the rest of the targets and indicators as noted in box 14.2, including those that are presented in table 14.1 on targets, indicators, tiers and data availability in Arab countries for SDG 14, but do not have sufficient data.

Box 14.2	Summary list of omitted targets

- 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

- 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

- 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

- 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

- 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation[b]

- 14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

- 14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

- 14.b Provide access for small-scale artisanal fishers to marine resources and markets

- 14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"

Annex 14.2 for a graph of the evaluated series of indicator 14.5.1, showing the country level data values of the series/indicator for 2017 for every included country.

The global, regional and subregional aggregates of the preserved series of 14.5.1 are calculated using a weighted average. The method of aggregation, in general, as well as the weighting variable to be used for the weighted averages and the weighting variable's properties 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 method or weight, the decision is 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 variable). The weight that was actually used for the preserved series of indicator 14.5.1 is the total marine KBA (in square kilometers), which is the denominator of the series, for the year 2016. The data of the weighting variable was taken from the version of the Global SDG Indicators Database of the United Nations Statistics Division that was available before June 2018, since the data were not available from any other source. While the year of the weighting variable data should supposedly be most commonly used year for the data of the respective series/indicator (2017 in our case), we used the data of the weighting variable in 2016 since it is the latest year for which data are available in the data set of the weighting variable that was provided by the Global SDG Indicators Database before June 2018. Finally, we note that the weighting variables sometimes prevent us from evaluating the series/indicator using all the data that are available or provided to us. A such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. This applies for the evaluated series of 14.5.1 where 18 Arab countries out of a potential of 20 are covered after weighting. While this affects the global, regional and/or subregional aggregates, the country-year graph includes all the Arab countries that have data for the evaluated series/indicator, regardless of the data availability of the weighting variable.

We calculate the world, regional and subregional aggregates for the evaluated indicator but we fail to include its target value since the evaluated subindicator of 14.5.1 "Average proportion of marine KBAs covered by protected areas (percentage)" is not perfectly compatible with the definition of target 14.5 (By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information) that is rather closer to one of the omitted subindicators.

Table 14.1 Targets, indicators, tiers and data availability for Arab countries – SDG 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)

Target	Indicator	Number of subindicators	Tier	Data availability*
14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	14.1.1 Index of coastal eutrophication and floating plastic debris density	(No data)	Tier III	x
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches	(No data)	Tier III	x
14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations	(No data)	Tier III	x

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	14.4.1 Proportion of fish stocks within biologically sustainable levels	(Dropped) 4	Tier I	x
14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	14.5.1 Coverage of protected areas in relation to marine areas	1 chosen out of 3	Tier I	20
14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation[b]	14.6.1 Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	(No data)	Tier II	x
14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	14.7.1 Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries	(No data)	Tier III	x
14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	14.a.1 Proportion of total research budget allocated to research in the field of marine technology	(Dropped) 1	Tier II	x
14.b Provide access for small-scale artisanal fishers to marine resources and markets	14.b.1 Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries	(No data)	Tier II	x

14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"	14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources	(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.
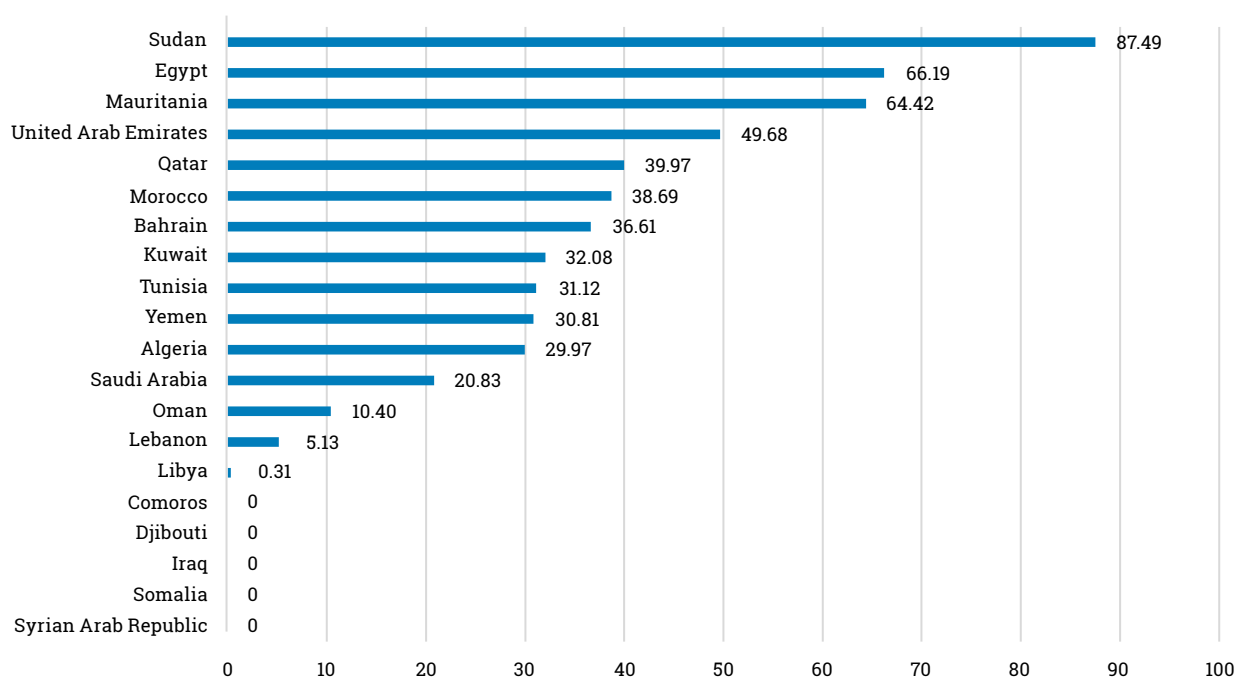We note that the weighting variables sometimes prevent us from evaluating the series/indicator using its full data that is available/ provided to us. A such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. While this affects the global, regional, and/or subregional aggregates, the country- year graphs include all the Arab countries for the evaluated series/indicator that have data, regardless of the data availability of the weighting variable.
Source: https://unstats.un.org/sdgs/indicators/indicators-list/ and author's calculations.

2. Country graphs

Figure 14.1 **Indicator 14.5.1 - Average proportion of marine Key Biodiversity Areas (KBAs) covered by protected areas (percentage)**
Average proportion of marine KBAs covered by protected areas (percentage)

Country	Value
Sudan	87.49
Egypt	66.19
Mauritania	64.42
United Arab Emirates	49.68
Qatar	39.97
Morocco	38.69
Bahrain	36.61
Kuwait	32.08
Tunisia	31.12
Yemen	30.81
Algeria	29.97
Saudi Arabia	20.83
Oman	10.40
Lebanon	5.13
Libya	0.31
Comoros	0
Djibouti	0
Iraq	0
Somalia	0
Syrian Arab Republic	0

Note: All data are for 2017.

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