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PROGRESS ON SUSTAINABLE CONSUMPTION AND PRODUCTION IN THE ARAB REGION

Comprehensive baseline assessment of regional, sub-regional and national progress and challenges for achieving SCP and the SDGs

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Report on Sustainable Consumption and Production in the Arab Region (DRAFT)

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1. Background, objectives, and outline for the report

Since 2008, the United Nations Economic and Social Commission for Western Asia (UNESCWA) has been collaborating with the League of Arab States and UN Environment to support regional work on sustainable consumption and production (SCP). This has included showcasing best practices, reviewing progress, and exchanging views on the needs and priorities of the region to promote a shift towards SCP. This has supported implementation of the Ten-Year Framework of Programmes on Sustainable Consumption and Production (10YFP) adopted at Rio+20 in 2012, and is also now aligned with the 2030 Agenda and Sustainable Development Goals (SDGs) adopted by governments in 2015. A key objective of this work is to encourage the utilization of approaches, tools and policies which contribute to protecting the environment, conserving water and energy and other natural resources, while contributing to poverty eradication and sustainable lifestyles.

The Council of Arab Ministers Responsible for the Environment (CAMRE) at its 20th session in November 2009 adopted the *Arab Regional Strategy for Sustainable Consumption and Production* (ARSSCP) and agreed to hold regional roundtable meetings on SCP at regular intervals to follow up on implementation of the strategy. There have been four roundtable meetings held to date[1]. A 5th Roundtable Meeting on Sustainable Consumption and Production will be held in December 2017 to review progress on the regional strategy and linkages to the SDGs, build regional capacities, and assist countries in implementing their SCP plans for action. In advance of this meeting, UNESCWA commissioned a report on SCP progress in the Arab region.

1.1 Report Objectives and Scope

This report aims to provide a useful background report on progress, trends, challenges and leading practice on SCP in the Arab region to inform discussions at the 5th Roundtable Meeting on SCP. The objectives are:

- To provide a progress report on regional implementation of the 10YFP, the Arab Regional Strategy for Sustainable Consumption and Production (ARSSCP) as well as the SCP-related targets of the SDGs.
- To assess progress on a broad range of SCP indicators at the regional, sub-regional and national levels.
- To assess and compare national progress on SCP for each Arab country including progress, challenges and gaps for achieving selected 2030 SDG targets related to SCP.
- To provide conclusions and recommendations to enhance alignment and implementation of SCP and the SDGs in the region.

Following this brief introduction, the report includes several sections. **Section 2** outlines the global, regional and national framework for SCP and linkages with the SDGs, and provides a brief summary of progress to date in the region on national SCP planning.

Section 3 then provides a baseline assessment of regional progress on the 10YFP, the ARSSCP and SCP-related SDG indicators. To do so it first develops a framework of 21 SCP-related indicators and then undertakes a baseline assessment at the Arab regional and sub-regional levels which provides a snapshot of trends and progress in the region compared with global averages and benchmarks. It also includes a thematic review across priority SCP themes, including energy, water, waste and

[1] The 1st Roundtable Meeting on (SCP in the Arab Region was held on March 17-19, 2008, in Al-Ain, United Arab Emirates; the 2nd Roundtable Meeting on SCP in the Arab Region was held at the League of Arab States (LAS) on September 27-29, 2009, in Cairo, Egypt (the Arab Strategy on SCP was discussed during that event); the 3rd Roundtable Meeting was held from 26th to 27th of January, 2011, at the League of Arab States premises in Cairo, Egypt; and the 4th Roundtable Meeting (RTM) on SCP in the Arab Region was held from 17-18 June 2013 at the League of Arab States premises in Cairo, Egypt.

materials, and poverty and livelihoods providing more detailed analysis at the regional and sub-regional levels, as well as at the national level for selected indicators.

Section 4 undertakes a regional comparative assessment of national progress for all Arab countries across a selection of 11 SCP indicators for which good quality data is available. The assessment compares national progress within the Arab region across the set of indicators, and analyses this progress in terms of indicative 2030 target values. National radar charts are produced for each country which highlight areas where Arab countries are making good progress as well as areas where there are ongoing challenges and gaps. Analysis of differences across the four Arab sub-regions is also provided.

Finally, **Section 5** provides some final conclusions regarding progress on SCP in the Arab region.

2. Introduction to Sustainable Consumption and Production and the Arab region

2.1 Global framework for SCP: a cross-cutting issue for sustainable development

Unsustainable patterns of consumption and production are a primary cause of climate change, land degradation, resource depletion, and air and water pollution. Evidence of these challenges are readily available in the Arab region and elsewhere, and include growing water scarcity, increased energy consumption and associated greenhouse gas (GHG) emissions, declining vegetation cover, expanding land degradation and desertification, escalating food and energy import bills, increasing waste generation and vehicle congestion. With urban populations rapidly expanding, governments face increasing pressure to provide basic services such as energy, water and sanitation while managing environmental impacts, resource depletion and pollution. In the face of these challenges, SCP is promoted as one of the key responses to protect the environment, improve human well-being and achieve sustainable development.

At the global level, the Ten-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP) provides the framework for action to accelerate the shift towards SCP in both developed and developing countries. The 10YFP was adopted by governments at Rio+20 in 2012. Implementation of the framework has also been embedded in the global Sustainable Development Goals (SDGs) which commenced in 2016 (target 12.1). The 10YFP provides a framework for regional and national action on SCP, including the development of national programmes and action plans. It identifies an initial list of five priorities for implementation of programmes, namely consumer information, sustainable lifestyles and education, sustainable public procurement, sustainable buildings and construction, and sustainable tourism.

As a broad program of action, the 10YFP does not include specific numerical targets and indicators for SCP, however it recommends that these should be set at regional and national scales. The framework is therefore greatly complemented by the recent adoption of the SDGs, which sets out clearer targets and a set of indicators for monitoring and reporting on SCP progress. This includes a stand-alone goal (SDG 12) on responsible consumption and production with 11 targets and 13 indicators, as well as related targets across several other goals focusing on food, education, water, energy, economy, cities, oceans and economic development. **Figure 1** highlights the interlinkages between SDG 12 and a further 11 goals of the SDGs. This analysis highlights a further 11 SCP-related targets in the SDGs (targets 4.7, 6.3, 7.2, 7.3, 8.4, 9.4, 9.5, 11.2, 11.6, 13.3 and 14.1), with 15 corresponding SDG indicators. Based on this brief analysis, there is an estimated 22 targets and 28 indicators related to sustainable consumption and production in the SDG framework, which is around 13% of all targets.

The targets and indicators of the SDGs provide an enhanced evidence-based framework for regional and national implementation of SCP, which promotes target-setting and monitoring of progress on SCP indicators. They strongly complement the programmes and priorities set out in the 10YFP and should be implemented in unison, ensuring alignment of these two global frameworks.

Figure 1: Linkages between SDG 12 and other SDGs[2]

2.2 Regional framework for SCP and priorities for the Arab region

At the regional level, a key milestone in implementing SCP was the development of the *Arab Regional Strategy for Sustainable Consumption and Production* (ARSSCP), which was adopted by CAMRE at its 20th session in November 2009. The strategy aims to promote SCP in the region by encouraging the utilization of products and services that ensure environmental protection, conserve water and energy as well as other natural resources, while contributing to poverty eradication and sustainable lifestyles. CAMRE also agreed to hold regional roundtable meetings on SCP at regular intervals to follow up on implementation of the strategy.

The ARSSCP identifies six priority areas for SCP in the region: energy, water, waste, rural development and eradication of poverty, education and sustainable lifestyles, and sustainable tourism. For each priority, the strategy recommends a suite of policy objectives and measures. The strategy highlights the important role of governments in promoting SCP in the region as both consumers and policy setters. It also urges the international community to support Arab countries to

[2] Source: UN Department of Economic and Social Affairs presentation on interlinkages between the SDGs and targets; https://www.un.org/ecosoc/sites/www.un.org.ecosoc/files/files/en/2016doc/interlinkages-sdgs.pdf

develop SCP action plans and implement a range of measures. Such action plans would create an enabling environment conducive to better promote SCP at the national level.

Importantly, the strategy signals the importance of indicator-based monitoring of progress on SCP in the region. This includes indicators that can measure the extent of 'decoupling' of economic growth from material consumption and environmental impacts. The strategy lists a total of 42 SCP indicators that are grouped against the priority areas of the strategy. These are to provide the framework for monitoring progress at the national, sub-regional and regional levels. However, the strategy does not set out specific target values for the region to aim towards. At this stage, there has not been an assessment of progress for the region against these SCP indicators or the ARSSCP more broadly. However, some SCP indicators have been captured in recent regional scientific assessments and reports such as the regional GEO reports (UNEP, 2016), the Arab Sustainable Development Report (UNESCWA, LAS, UNEP, 2016), and recent reports of the Arab Forum on Environment and Development.

The ARSSCP sits within the broader Arab Strategic Framework for Sustainable Development 2015-2025 (ASFSD) adopted by LAS in 2014. A range of other regional strategies also include provisions that relate to SCP, including strategies on renewable energy, water, climate change, and agriculture (**Table 1**).

Table 1. SCP-related strategies adopted in the Arab region

Strategy	Timeframe	Abbreviation
Arab Strategy for Disaster Risk Reduction	2020	ASDRR
Arab Strategic Framework for Sustainable Development	2025	ASFSD
Arab Strategy for Housing and Sustainable Urban Development	2030	ASHSUD
Arab Strategy for Sustainable Consumption and Production	2020	ARSSCP
Arab Strategy for Sustainable Agriculture	2025	ASSA
Arab Strategy for Water Security	2030	ASWS
Action Plan for the Arab Strategy for Water Security	2020	AP-ASWS
Arab Strategy for the Development of Renewable Energies	2030	ASDRE
Arab Framework Action Plan on Climate Change	2020	AFAPCC

In order to align these various frameworks with the SDGs, in 2015 CAMRE requested that UNESCWA, LAS and UN Environment develop an implementation framework for the environmental dimension of the SDGs for the Arab region. In response to this request, UNESCWA commissioned a comprehensive assessment of the environmental dimension of the SDGs in the Arab region, which included a review of the alignment of existing regional and national strategies with the SDGs. The *Guiding Framework for the Environmental Dimension of the SDGs for the Arab Region* (the '*Guiding Framework*') was adopted by CAMRE in October 2017 and sets out a framework of 43 priority environmental SDG targets and 56 indicators for the region, as well as potential target values and supporting information and analysis to facilitate implementation. This provides a useful framework to align the ARSSCP and national SCP plans and development strategies with the SDGs, and to promote coherent action on SCP in the region.

While the *Guiding Framework* was not specifically focused on SCP, it includes potential target values as well as baseline data for a range of SCP-related SDG targets and indicators. This provides a useful framework and data for assessing progress on SCP in the region, which will be addressed further in the baseline assessment in **Section 3** and **Section 4** of this report.

2.3 Approach and framework for national SCP implementation and progress in the region

The 10YFP encourages the development of integrated national programmes on SCP, rather than individual national initiatives. The ARSSCP highlights the important role of governments in promoting SCP in the region as both consumers and policy setters. It also urges the international community to support Arab countries to develop SCP action plans and implement a range of measures. Such action plans would create an enabling environment conducive to better promote SCP at the national level.

There is clear evidence of progress and growing experience with national SCP implementation in the Arab region. At least seven countries in the region[3] have adopted National SCP Action Plans or similar documents. Technical assistance for developing these plans has been provided through the SWITCH-Med programme funded by the European Union and implemented by UNIDO, UN Environment and regional centres. This represents promising progress in national SCP planning in the region, which can provide useful leading practices and lessons learned for the region.

While it is important to ensure an integrated national approach, there is no single formula by which national SCP programmes can or should be instituted. Every country needs to determine, for itself, how best to approach the development, implementation and monitoring of its SCP programme considering the existing political, cultural, economic and ecological conditions. UN Environment has developed guidelines to assist countries with developing their national programs on SCP (United Nations Environment Programme, 2008). These guidelines provide a useful resource that sets out several building blocks and elements of success for implementing SCP programmes. These include: national commitment and leadership and stakeholder consultation; comprehensive analysis; the definition of clear priorities, targets and indicators; and integration of SCP into national development strategies.

The setting of objectives and targets is crucial to the success of any SCP plan or programme. The adoption of the SDGs provides new and useful guidance in this regard, which presents an opportunity for the Arab region to adopt clear SCP targets at the national level. Such targets and corresponding indicators provide the means to monitor progress on SCP as well as the SDGs. A related cross-cutting step is to link national SCP plans and programs to existing national development strategies and visions. An effective way to achieve this is to include clear numerical targets in national SCP plans which can then be easily integrated into national development plans and strategies.

At the national level, several Arab countries have recently finalised national development visions and strategies which also include targets and indicators related to SCP. Given that mainstreaming of SCP targets into national development strategies is a critical element of success for national SCP planning, a brief review was undertaken of four Arab countries to assess the adoption of SCP targets in their national strategy documents. The four countries selected were: Jordan, United Arab Emirates (UAE), Egypt and Somalia. These countries were selected to cover different Arab sub-regions and because they had recently adopted a national vision or development strategy, and documentation was available in the English language. These countries were also reviewed in the recent assessment of the environmental dimension of the SDGs, and as such documentation and information was readily accessible. The review focused on identifying national targets that related to SCP that had been incorporated into national development visions or strategy documents. The documents reviewed are listed in **Table 2**.

[3] Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine and Tunisia.

Table 2: National Strategies and Documents Reviewed in Mapping Exercise

Country	Strategies available in English
Jordan	• Jordan 2025: A National Vision and Strategy • National Plan for Green Growth (2017-25) • National Strategy and Action Plan for SCP 2016-2025
UAE	• UAE Vision 2021 • Green Agenda and Green Economy Report
Egypt	• Egypt Vision 2030 • National Action Plan for SCP 2015
Somalia	• National Development Plan 2017-19

Appendix 1 provides a compilation of SCP-related targets adopted by Arab countries in their national visions and strategies. Overall, it can be seen that both Egypt and Jordan have relatively good coverage of SCP targets relating to water, energy, waste and other SCP-themes in their national vision documents. This is promising, as both of these countries have also adopted a national SCP action plan which may have contributed to the greater awareness of SCP-related issues, and greater uptake and mainstreaming of SCP targets into national strategies. In particular, the targets from Jordan's National Action Plan on SCP are integrated into their national vision. While the United Arab Emirates has undertaken a detailed national baseline assessment of a range of SCP-related indicators as part of its national program on green economy, it has not set specific target levels for many of these indicators in its national vision and this could be further developed. In the case of Somalia, there was very limited coverage of SCP targets in its national development plan, apart from some targets associated with nutrition and food security.

Overall, clear progress is evident in the region in terms of national planning for SCP. Arab countries are taking SCP objectives seriously, seven countries have adopted national SCP action plans, and countries are also clearly mainstreaming relevant targets and indicators into their national development strategies. This is critical if actions to achieve SCP are to gain the necessary political support, momentum and funding. The compilation of nationally-adopted SCP targets in **Appendix 1** provides a useful reference guide for other Arab countries seeking to undertake national SCP planning processes, including mainstreaming national SCP and SDG targets and indicators into their strategies.

3. Baseline assessment of Arab regional progress on SCP

The aim of the regional baseline assessment was to provide a report on progress on the indicators of the ARSSCP as well as SCP-related indicators from the SDGs. This included an assessment of trends as well as benchmarking of progress at the regional and sub-regional levels against global benchmark values. The method for the baseline assessment was similar to that adopted for the Arab Sustainable Development Report (Allen et al., 2017) and the more recent assessment of the environmental dimension of the SDGs (Allen, 2017). The main stages of the assessment were:

- Specifying the framework for the assessment and selection of SCP indicators and benchmark values and data collection.
- Baseline assessment of historical trends for each indicator and evaluating their favourability.
- Benchmarking of recent baseline values for each indicator (most recent year available) against a numerical target or benchmark value.
- Overall assessment of progress for each indicator.
- Thematic review of progress at the regional, sub-regional and national levels.

The latest data for each SCP indicator was collected for all 22 Arab countries (where available), drawing primarily from official databases of the UN and international organisations, primarily the UN

Statistics Division SDG Database[4] and other UN datasets compiled from country data such as the UN Statistics Division environment statistics. To provide an indication of regional and sub-regional progress, country-level data was aggregated for the Arab region as a whole as well as for each of the four Arab sub-regions[5] using population weighted averages (or other weighting factors as applicable).

In terms of benchmarking progress, while the ARSSCP includes a range of qualitative objectives, it does not set out specific numerical target values for the region to aim towards. This is a key gap in the existing strategy that could be addressed by better aligning it with the SCP-related targets of the SDGs. The *Guiding Framework for the Environmental Dimension of the SDGs for the Arab Region* (the 'Guiding Framework') identifies guideline numerical target values that could be adopted in the Arab region. However, these are mostly national target values as most targets relate to national-scale implementation. Where relevant, these target values are identified during the assessment and are then used as a basis for benchmarking progress in the national assessment in **Section 4**. For the purposes of this regional assessment, progress on SCP indicators was benchmarked against global average benchmarks[6].

3.1 Assessment framework and selection of SCP targets and indicators

The framework for the baseline assessment was developed by aligning the priority areas and targets of the SCP with the SCP-related goals and targets of the SDGs. The resulting framework included four priority themes: 1. Energy; 2. Water; 3. Waste and materials; and 4. Poverty and livelihoods. Additional themes relating to education and sustainable lifestyles and tourism were also considered, but were excluded based on priorities for the division within UNESCWA, as well as due to a lack of SCP-related indicators and data.

For each of the four priority areas selected, relevant targets and indicators from the ARSSCP and the SDGs were reviewed to identify a set of indicators for the baseline assessment. The objective was to identify a set of SCP indicators that adequately addressed the ARSSCP while at the same time also aligned with the SCP indicators included in the SDGs. The availability of data was also another important consideration, as many SCP indicators are not comprehensively monitored in the Arab region (particularly relating to materials and waste).

Based on an initial analysis, it was assessed that approximately 25 SDG targets and 32 indicators corresponded to the majority of the objectives of the ARSSCP. Following a review of the availability of data for these indicators as well as consultation with UNESCWA, a final set of **21 SCP-related indicators** were selected which aligned with both the ARSSCP and the SDGs. Preference was given to using SDG indicators as they have been recently and formally adopted at the global level. Many of the indicators selected have also been adopted by Arab countries as priority environmental indicators for monitoring progress on the SDGs in the Arab region[7]. The framework of priority themes, targets and indicators selected for this SCP baseline assessment are listed in **Table 3**.

[4] https://unstats.un.org/sdgs/indicators/database/

[5] Gulf Cooperation Council (**GCC**): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates; Least Developed Countries (**LDCs**): the Comoros, Djibouti, Mauritania, Somalia, the Sudan and Yemen; **Maghreb**: Algeria, Libya, Morocco and Tunisia; and **Mashreq**: Egypt, Iraq, Jordan, Lebanon, Palestine and the Syrian Arab Republic.

[6] Benchmarks as follows: Arab region (benchmarked against global average); Mashreq, Maghreb and GCC (benchmarked against developing country average, or middle income or world average where not available); LDCs (benchmarked against LDC average, or developing country average where not available).

[7] As adopted in the *Guiding Framework for the Environmental Dimension of the 2030 Agenda in the Arab Region* adopted by CAMRE in September 2017.

Table 3: Proposed indicators for SCP Baseline Assessment

Priority Themes & ARSSCP Targets	Related SDG Targets	Indicators Selected for SCP Baseline Assessment
ENERGY		
• To improve energy accessibility • To increase share of renewable energy in the fuel mix • To disseminate renewable energy technologies especially in rural and remote areas7 • To improve energy efficiency • To support cleaner and more efficient utilization of oil and natural gas resources. • To support development of carbon sinks through sustainable afforestation • To address the deterioration of air quality in many Arab cities	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities 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 12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities 13.2 Integrate climate change measures into national policies, strategies and planning	1. 7.1.1 % of population with access to electricity (% of total population) (urban/rural) 2. 7.2.1 Renewable energy consumption (% of total final energy consumption) 3. 7.3.1 Energy intensity measured in terms of primary energy and GDP 4. 7.3.1.ADD Energy consumption per capita, 2012 (kilogram of oil equivalent) 5. 9.4.1 CO_2 emission per unit of value added 6. 11.6.2.ALT PM2.5 air pollution, mean annual exposure 7. 12.c.1.ALT Energy subsidies (percentage of GDP) 8. 13.2.1.ADD-1 Carbon dioxide emissions (CO2), kg CO2 per $1 GDP (PPP) **9.** 13.2.1.ADD-2 Carbon dioxide emissions (CO2), metric tons of CO2 per capita
WATER		
• To encourage the integrated management of water resources (IWRM), including river basins and water catchments, on the basis of international law and existing agreements. • To protect water resources, including surface and groundwater, wetlands and regional seas from pollution. • To support the efforts to develop alternative water resources and developing sustainable technologies for water desalination, rainwater harvesting and the recycling and efficient reuse of treated waste water. • To promote efficiency of water consumption in different consuming sectors11.	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 6.4 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.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	10. 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources 11. 6.4.ADD Domestic Consumption of Water Per Capita 12. 6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
WASTE & MATERIALS		
• Adopting integrated solid waste management strategy and emphasizing the preventative and	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth	13. 8.4.1 Material footprint per capita 14. 11.6.1.ALT Proportion of population served by municipal waste collection

recovery components of 3Rs to achieve the cradle-to-cradle approach. • Protect human health and the environment by promoting waste avoidance and minimization and by utilizing waste as a resource wherever possible. • Protecting human health and the environment against hazardous wastes including E-waste.	from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead 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 12.2 By 2030, achieve the sustainable management and efficient use of natural resources 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	15. 11.6.ADD Generation of municipal waste per capita (municipal waste collected per capita, tonnes) 16. 12.3.1 Global food loss index
POVERTY & RURAL DEVELOPMENT		
• To eradicate poverty while giving the role of women due consideration • To achieve food security and achieve the MDG of halving the number of people suffering from hunger by 2015 • To achieve better quality of life for rural populations • To narrow the development gap between rural and urban areas.	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions 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 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	17. 1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural) ($1.90 per day, 2011 PPP) 18. 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES 19. 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) 20. 6.1.1.ALT % of population with access to improved water sources 21. 11.1.1.ALT % of urban population living in slums

3.2 Regional baseline assessment of SCP trends and progress

The aim of the baseline assessment was to assess progress and trends across the 21 SCP indicators and identify areas with good regional progress as well as where progress was lagging behind. The results of the assessment are compiled and summarised in **Table 4** at both the Arab regional level (i.e. 22 countries) as well as for each of the four Arab sub-regions. The assessment included an analysis of the favourability of historic trends as well as a comparison of current baseline values against global average benchmarks. These two factors were then combined to provide an overall assessment of progress on each indicator, with each indicator allocated into one of four categories:

1. Going backwards	Baseline worse than benchmark *and* unfavourable trend ● + (↗, ↘)
2. Requires attention	Baseline worse than benchmark *or* unfavourable trend ● or (↗, ↘)
3. Good progress but needs data	Baseline better than benchmark with no trend available ● (no trend)
4. Good progress and on track	Baseline better than benchmark *and* favourable trend ● + (↗, ↘)

3.2.1 Arab regional and sub-regional progress and priorities

The results from the regional baseline assessment are briefly in **Table 4** which provides a snapshot of progress on each of the 21 SCP indicators at the Arab regional and sub-regional levels. **Figure 2** provides a summary chart of the proportion of indicators that fall into each of the four categories listed above at the Arab regional level and for each of the sub-regions.

At the Arab regional level, key areas where progress is on track and trending well include access to electricity with over 88% coverage (7.1.1), development assistance for water and sanitation (6.a.1), the proportion of population with municipal waste collection which stands at over 75% for those countries with data (11.6.1.ALT), and the proportion of population below the international poverty line which has fallen below 5% in the region (1.1.1) (see **Table 4**; **dark green**). For each of these indicators, the region has experienced a favourable historic trend and the most recent baseline value was better than the global benchmark. In addition, the indicator for mortality associated with water and sanitation also performed better than the global benchmark, however no trend data was available to complete the assessment.

Most of these indicators where good progress is being made relate to improvements in the supply of important services to the Arab population and this reflects the good progress that the region has made in the provision of these services. Based on this assessment, the region is making good progress on these indicators and could be considered on track for progressing towards related SDG targets. Efforts in these areas are proving effective and should be continued. However, overall, this corresponded to only around 20% of the total number of SCP indicators reviewed (**Figure 2**).

Table 4 also shows that the increased provision of these critical services to the population has come at an environmental cost for the region. Key indicators experiencing little or no progress in the region and which are currently going backwards include exposure to air pollution (11.6.2.ALT), per capita CO_2 emissions (13.2.ADD-2), level of water stress (6.4.2), and per capita municipal waste (11.6.ADD). For these indicators, the region has experienced an unfavourable historic trend and the current baseline value was worse than the global benchmark (**dark red** in **Table 4**). For these indicators, the region has made little progress and is going backwards, and breakthroughs are needed to turn the situation around.

Table 4: Summary of the baseline assessment of SCP indicators for the Arab region and four sub-regions[8].

SCP THEMES & INDICATORS				BENCHMARKS				ARAB REGION				MASHREQ				MAGHREB				GCC				LDCs			
Indicator Number	Short Description of Indicator	UNITS	Countries with Data	World	Developed	Developing	LDCs	Baseline	Status	Trend	Assessment	Baseline	Status	Trend	Assessment	Baseline	Status	Trend	Assessment	Baseline	Status	Trend	Assessment	Baseline	Status	Trend	Assessment
ENERGY																											
7.1.1#	Access to electricity	%	22	85.3	99.9	88.7	38.2	88.2	●	↗		99.0	●	↗		96.8	●	↗		100	●	↗		49.9	●	↗	
7.2.1#	Share of renewable energy (final demand)	%	22	18.9	11.8	22.3	73.8	4.0	●	↗		4.2	●	↗		4.2	●	↗		0.0	●	↔		50.6	●	↗	
7.3.1#	Energy intensity	MJ/USD	22	5.4	4.7	5.8	5.8	5.1	●	↗		3.8	●	↗		4.2	●	↔		5.8	●	↗		5.3	●	↘	
7.3.ADD	Per capita energy consumption	Kgoe	19	1920.7	4145.4	1396.4	364.7	1813.2	●	↗		930.2	●	↗		1099.9	●	↗		7785.8	●	↗		353.1	●	↗	
9.4.1^	CO_2 emissions per unit value add	Kg	17	0.77	0.39	0.96	0.61	1.4	●	↘		1.1	●	↘		0.91	●	↗		1.6	●	↘		2.7	●	↘	
11.6.2.ALT	Exposure to PM2.5 air pollution	ug/m^3	21	44.0	15.2	52	49.0	62.3	●	↗		76.6	●	↗		35.1	●	↗		90.0	●	↗		48.3	●	↘	
12.c.1.ALT^	Energy subsidies as % of GDP	%	18	6.6	1.9	N/A	4.0	8.3	●	-		6.7	●	-		6.8	●	-		10.0	●	-		1.7	●	-	
13.2.ADD-1#	CO_2 emissions per GDP	Kg/USD	20	0.34	0.25	0.39	0.13	0.31	●	↗		0.27	●	↗		0.29	●	↘		0.34	●	↔		0.24	●	↗	
13.2.ADD-2#	CO_2 emission per capita	Kg/pc	22	5.0	9.7	3.9	0.3	5.1	●	↗		2.9	●	↗		3.1	●	↗		19.8	●	↗		0.7	●	↗	
WATER																											
6.4.2#	Level of water stress	%	21	9.3	10.1	9.7	4.3	312.3	●	↗		129.3	●	↗		142.7	●	↗		1311.9	●	↗		227.7	●	↗	
6.4.ADD	Per capita domestic water consumption	1000 m^3	22	6.30	12.58	5.55	1.57	6.64	●	↘		9.5	●	↗		5.82	●	↘		7.08	●	↘		1.62	●	↘	
6.a.1**	ODA: water & sanitation	USD mil	18	47.8	N/A	76.3	46.7	80.6	●	↗		105.3	●	↗		120.5	●	↔		-	-	-		27.0	●	↗	
WASTE & MATERIALS																											
8.4.1/12.2.1	Per capita material footprint	Tonne pc	20	10.1	20.4	7.8	1.8	6.6	●	↗		5.4	●	↗		3.7	●	↗		19.4	●	↗		2.2	●	↔	
11.6.1.ALT	% population with municipal waste collection	%	13	65.2	96	n/a	39.3	76.92	●	↗		76.75	●	↗		80.46	●	↗		100	●	↔		67.18	●	↘	
11.6.ADD	Per capita municipal waste collected	Kg/pc/day	14	1.19	2.15	n/a	0.6	1.88	●	↗		2.97	●	↗		0.72	●	↘		3.68	●	↘		0.15	●	↗	
12.3.1	Global food security index – food loss	score	14	85.1	92.9	81	70.5	84.8	●	↗		82.1	●	↗		82.3	●	↗		89.0	●	↗		89.8	●	↗	
POVERTY & LIVELIHOODS																											
1.1.1	% population below intern'l poverty line	%	14	10.7	0		45.5	4.83	●	↘		1.57	●	↘		5.68	●	↘		0	●	↔		15.97	●	↗	
2.1.2	Food insecurity experience scale	%	18	18.6	5.7	28.1	47.3	28.4	●	-		31.1	●	-		16.8	●	-		17.3	●	-		43.0	●	-	
3.9.2	Mortality rate: water & sanitation	p.100,000	21	12.4	0.4	15.0	69.4	9.1	●	-		2.0	●	-		2.5	●	-		0.2	●	-		36.0	●	-	
6.1.1	Access to safe drinking water	%	21	91.1	99.2	89.3	69.4	84.0	●	↗		94.0	●	↗		86.2	●	↗		97.6	●	↗		53.2	●	↘	
11.1.1.ALT#	Urban population living in slums	%	14	N/A	N/A	27.1	62.7	34.8	●	-		21.4	●	-		11.8	●	-		18	●	-		78.5	●	-	

[8] Sources for all of the data used in the analysis are provided in the footnotes for the charts and figures in the thematic review in Section 3.3.

Overall, the majority of SCP indicators showed mixed progress in the region (approximately 60%) and require further attention (**Figure 2**). Four indicators had baseline values that were worse than the global benchmark but which were improving with a favourable trend, namely renewable energy (7.2.1), carbon emissions per unit value added (9.4.1), domestic water consumption (6.4.ADD), and access to safe drinking water (6.1.1). For these indicators, the region is moving in the right direction and efforts should be made to accelerate progress.

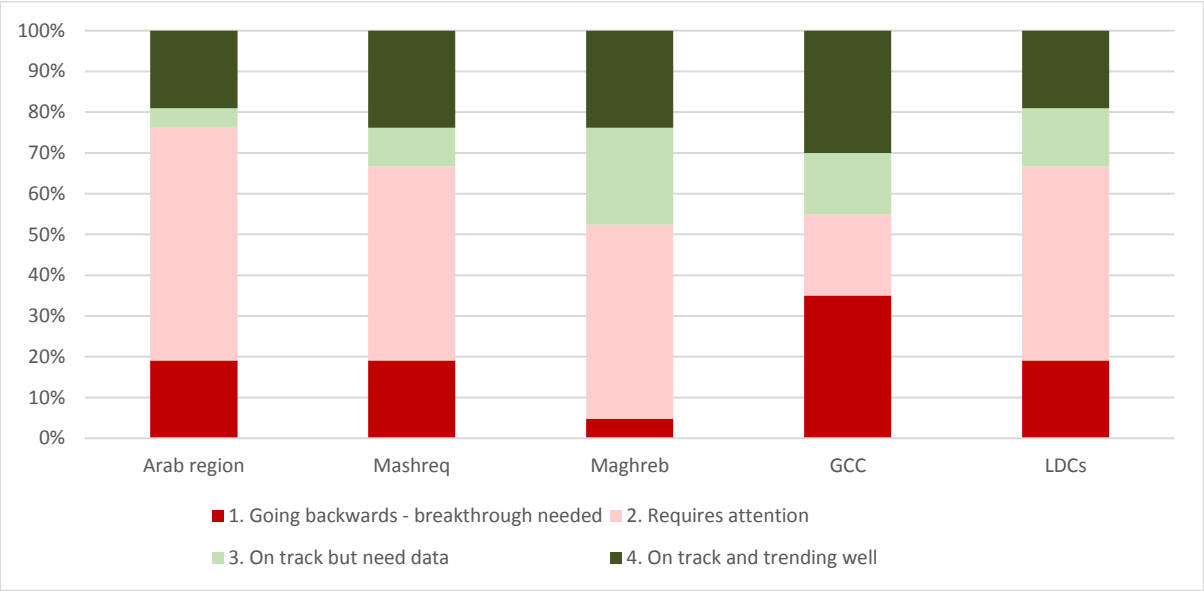


Figure 2: Proportion of indicators in each category – Arab region and four sub-regions.

Indicators that had baseline values that were better than the global benchmark but had an unfavourable trend included energy intensity (7.3.1), energy consumption (7.3.ADD), carbon emissions per unit of GDP (13.2.ADD-1), material footprint (8.4.1), and municipal waste (11.6.ADD). The assessment highlights that for these indicators, the region is currently performing better than the global average. However, the negative trend in these areas shows that the region is currently moving in the wrong direction. Policies and programs that decouple the worsening trends in resource and energy consumption from development efforts are needed to turn these trends around and ensure that the region doesn't slip backwards in these areas.

Table 4 and **Figure 2** also show that progress on SCP indicators varies considerably between the region and the four Arab sub-regions. For the **Mashreq** sub-region, the results are similar but slightly better than the Arab region as a whole as outlined above. An additional area of good progress and favourable trends relates to access to safe drinking water (6.1.1). However, progress is also going backwards in some additional indicators, namely per capita water consumption (6.4.ADD) and per capita municipal waste (11.6.ADD). These areas also require urgent attention in the Mashreq region as they fall below global benchmarks and the trends are worsening. The worsening trend in water consumption in the sub-region is possibly linked to the good progress in terms of access to safe drinking water, which is showing strong progress with 94% coverage and an improving trend. Similarly, the sub-region has comparatively good population coverage for municipal waste collection which could be linked to the poor progress in per capita municipal waste. This highlights the interlinkages between the different SDG targets and indicators.

The **Maghreb** sub-region also shows better progress overall than the Arab regional averages (**Figure 2**), with baseline values for air pollution (11.6.2.ALT) and CO_2 emissions per capita (13.2.ADD-2) both assessed as better than the global average. However, the trend for both of these indicators is

worsening and attention is needed to turn this around. The region has several indicators where baseline levels are better than global benchmarks, however no trend data is available including food insecurity (2.1.2), mortality rate from water and sanitation (3.9.2) and slum populations (11.1.1.ALT). Collection of timeseries data for these indicators is needed. The region is also progressing well in CO_2 emissions per GDP (13.2.ADD-1) as well as waste generation (11.6.ADD), which are both on track and trending well.

The **GCC** sub-region has both the largest number of indicators that are going backwards and require a breakthrough, as well as indicators that are showing good progress and are on track (**Figure 2**). It is interesting to note that four out of six of the indicators that are on track correspond to increasing access to services and living standards, while all of the seven indicators that are going backwards correspond to unsustainable energy and resource consumption, waste and pollution. In addition to those priorities identified at the regional level, additional indicators that require urgent attention in the sub-region include: increasing the share of renewable energy (7.2.1), reducing energy intensity (7.3.1), reducing per capita energy consumption (7.3.ADD), and reducing per capita material footprint (8.4.1) (**Table 4**).

Finally, the **Arab LDC** sub-region is generally performing worse on indicators relating to social development outcomes such as poverty (1.1.1), access to safe drinking water (6.1.1), access to electricity (7.1.1), population covered by municipal waste collection (11.6.1.ALT), and mortality related to water and sanitation (3.9.2) (**Table 4**). Additional environmental areas for concern include CO_2 emissions per capita (13.2.ADD-2) and per GDP (13.2.ADD-1). However, the baseline values for indicators for the LDCs were benchmarked against the LDC average rather than the developing country average or world average which was used for the other sub-regions. The results show that the Arab LDCs are often performing better than the LDC average. For example, the proportion of population below the international poverty line (1.1.1) is better than the global average for LDCs, however the negative trend is concerning and requires attention. It is the only Arab sub-region showing a negative trend in poverty over time. On the positive side, indicators relating to air pollution (11.6.2.ALT) and energy intensity (7.3.1) are both on track and trending well in the sub-region.

3.3 Thematic review: Summary of progress and remaining gaps and challenges

This section further explores trends and progress across each of the four priority SCP thematic areas, providing charts that plot the most recent baseline value for each indicator as well as a historic baseline value (generally the earliest historic value available from the 1990s or 2000s) where these are available. A chart is produced for each of the 21 SCP indicators and provides values for the Arab region and each Arab sub-region, and also includes the global average benchmark to provide an indication of where the region and each sub-region compare against global averages (where available).

To provide some additional national-scale analysis, additional charts are produced for selected indicators that have good data coverage for all or the majority of Arab countries. The charts provide baseline values for each Arab country and also include Arab regional and sub-regional averages and global benchmarks from **Table 4**. In each chart, country baseline values are shown in blue, Arab regional and sub regional averages in green, and global averages in orange.

In terms of overall data availability, **Figure 3** provides some analysis of data gaps across each of the four thematic areas. The percentages were calculated based on the availability of data for all 22 countries for each of the indicators, where 100% coverage means that data was available for all 22 countries for each indicator. Overall, it can be seen that there is good coverage of data for the nine

indicators under the energy theme, while there are considerable data gaps for the four indicators in the waste and materials theme and, to a lesser degree, the five indicators in the poverty and livelihoods theme. These could be important areas for further data collection to support monitoring of SCP and the SDGs.

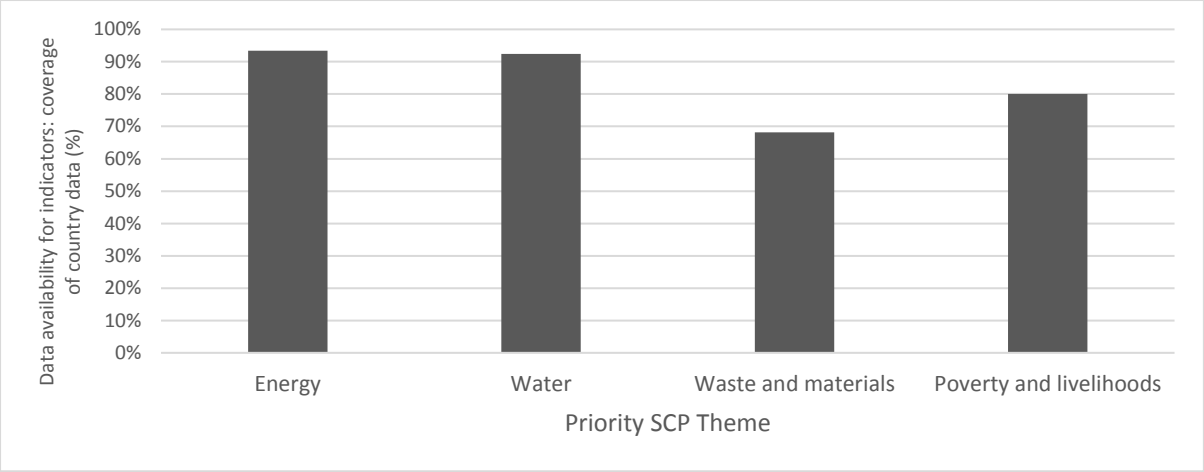


Figure 3: Data availability for indicators across the four SCP themes

3.3.1 Energy

The energy theme included the largest number of indicators (9) and had the best coverage of data compared with other thematic areas. Overall, a total of 93% of desired baseline data was available for the assessment (**Figure 3**).[9] This shows that considerable effort has been made in the Arab region to collect and produce energy statistics and indicators. In terms of trends and progress at the Arab regional level, six of the nine indicators reviewed were experiencing unfavourable trends, while seven indicators fell below the global benchmark values. Indicators relating to exposure to air pollution and per capita CO_2 emissions were assessed as below benchmarks and going backwards, while good progress and a positive trend were evident for only one indicator (access to electricity).

Figures 4 to 17 below show the outcomes from the baseline assessment for the nine energy-related SCP indicators. The regional charts includes a recent baseline value (e.g. 2014 or 2015) alongside a historic baseline value (e.g. 1990 or 2000) which provides an overview of the trend over recent decades. Values in these charts are provided at the Arab regional level and for each of the four sub-regions. A world average for the most recent baseline year is also included to provide an average benchmark to review the current status for each indicator. Additional national-level charts are also included for some indicators to support the analysis.

In terms of the population with access to electricity (**Figure 4**), it can be seen that the Arab region is doing comparatively well with around 88% coverage which is slightly higher than the global average. At the sub-regional scale, the GCC has 100% coverage while the Mashreq (99%) and Maghreb (96.8%) are not far behind. However, the LDCs are well behind the other sub-regions with only around 50% of the population with access to electricity. While this is low and draws down the regional average, it is still significantly higher than the average for global LDCs. **Figure 5** shows that a total of 16 Arab countries were above the world average of 85% in 2014, while all six LDCs fell below this average. The SDGs set a clear target to ensure universal access to electricity by 2030, which would correspond to a 100% coverage. Three of the four sub-regions appear to be on track to achieve this target, however considerable investment would be needed in the LDCs over the next 10

[9] This was calculated based on the availability of data for all 22 countries for each of the nine indicators.

years to ensure that the target is met. A more realistic target of 80% coverage may be more relevant for several LDCs where progress is lagging behind.

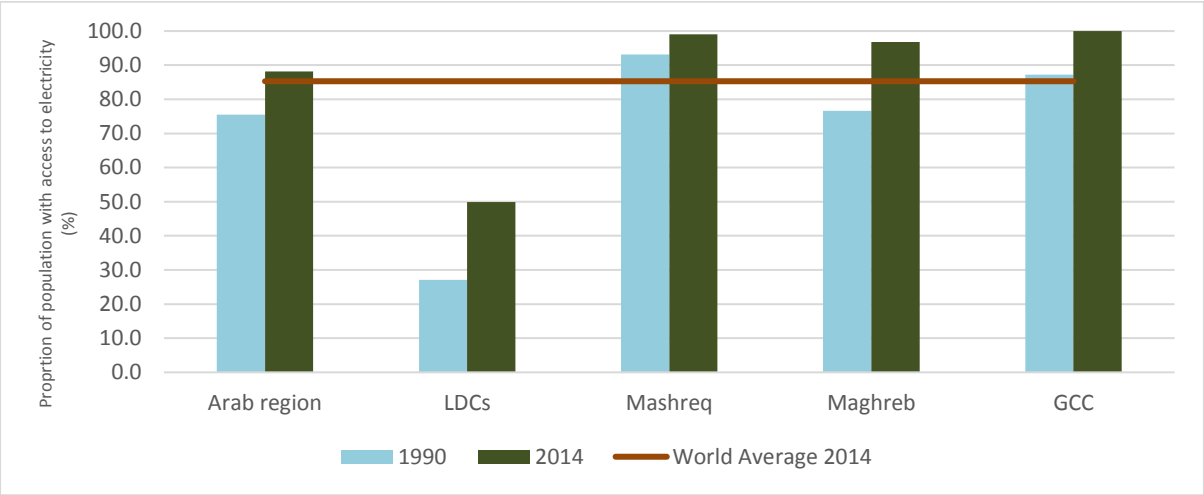


Figure 4: Proportion of population with access to electricity (7.1.1)[10]

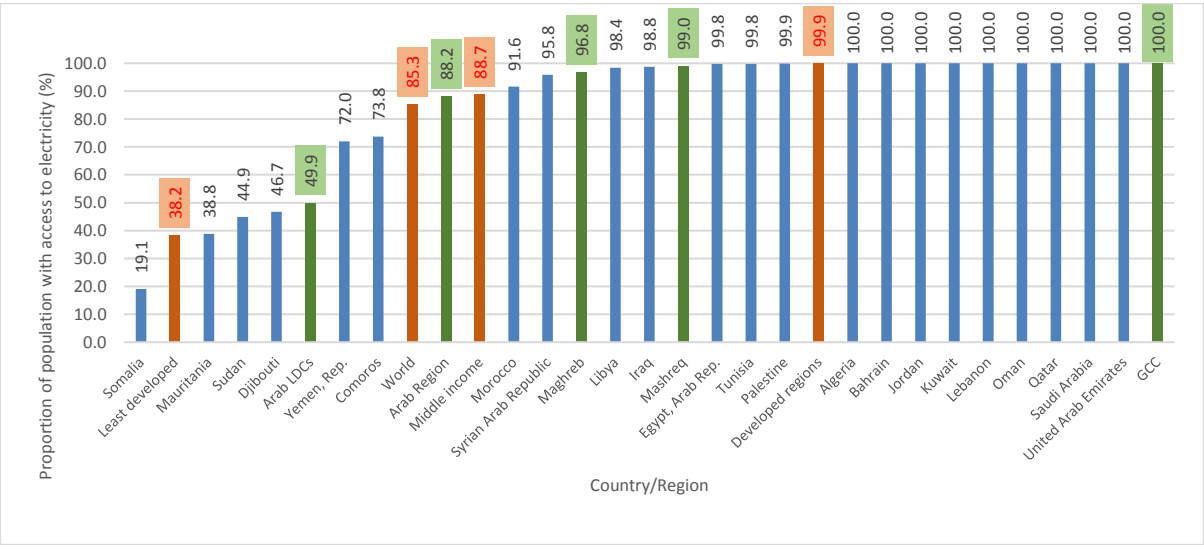


Figure 5: Proportion of population with access to electricity, by country (2014)[11]

With regard to the proportion of renewable energy in final energy consumption, at only 4% renewable energy, the region is currently very far behind the global average of 18.9% (**Figure 6**). While there has been an improvement since 1990 (when renewable energy barely registered), this progress has clearly been slower than in other regions. In 2014 at the sub-regional level, both the Mashreq and Maghreb sub-regions had just over 4% renewables in the energy mix, while the GCC had less than 0.1%. The LDCs had over 50% renewables in the energy mix, however this does not have a significant impact on the regional average as their overall energy consumption is small compared to other sub-regions. **Figure 7** highlights that a total of 17 out of 22 Arab countries performed worse than the global average in 2014.

The SDGs set a target to 'increase substantially' the share of renewable energy in the energy mix, however they do not set a clear target value. At the regional level, the ASDRE sets a high scenario of doubling the growth rate of renewable energy to 9.4% by 2030. However, this also seems low

[10] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.
[11] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.

compared against the global average. The *Guiding Framework* proposes a few potential target values that could be adopted depending on the level of ambition, and the global average provides a useful benchmark in this regard. If the Arab region is to achieve and ambitious target of around 20% renewables in final energy demand, then it has considerable progress to make and considerable investments in renewables would be needed over the next 10 years, particularly in the GCC as well as in the Mashreq and Maghreb sub-regions. For the LDCs it would be logical to ensure that efforts to improve access to electricity adopt renewable energy technologies.

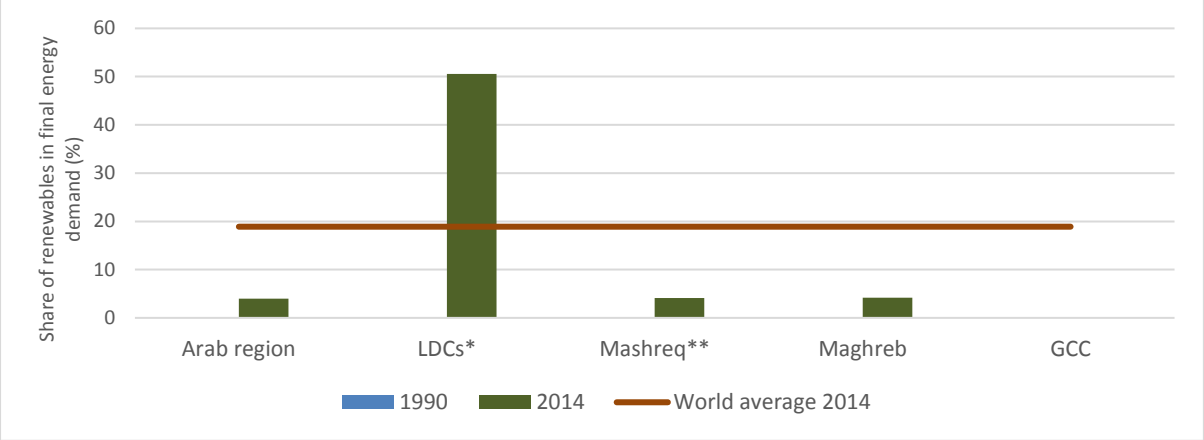


Figure 6: Renewable energy consumption, % of total final energy consumption (7.2.1)[12]

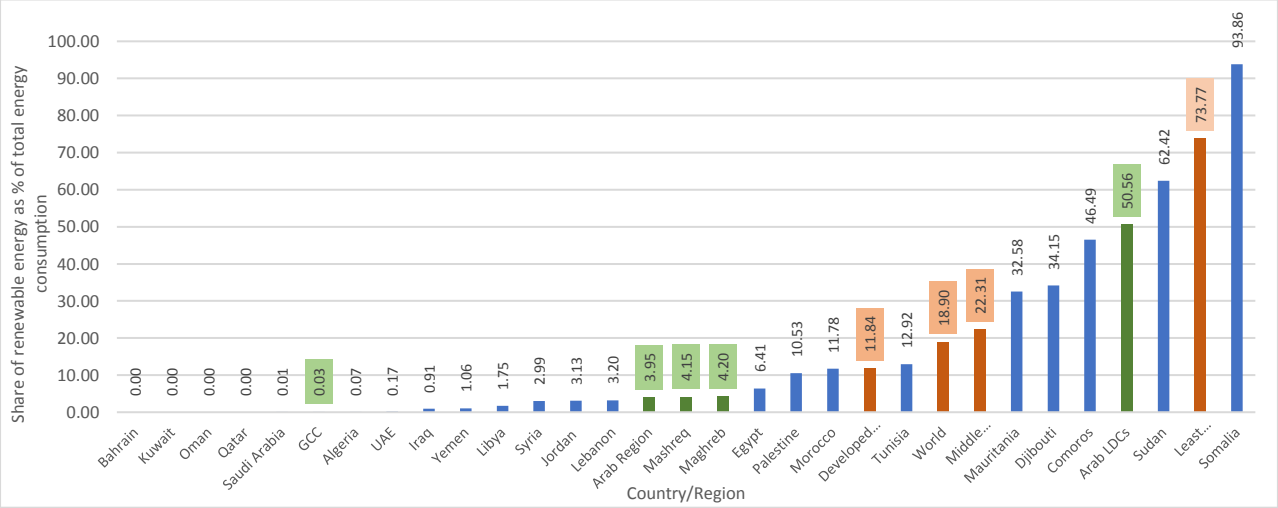


Figure 7: Renewable energy consumption, % of total final energy consumption, by country (2014)[13]

With regard to energy intensity (**Figure 8**) as well as per capita energy consumption (**Figure 10**), the Arab region was positioned slightly better than the global average in 2014. At the national level, of the 22 Arab countries, 14 were better than the global average for energy intensity in 2014 (**Figure 9**). The trend in energy intensity has remained relatively stable over the past decade or more, however per capita energy consumption is on the rise, increasing by around 75% over the past two decades. This trend has been driven by a substantial increase in GCC countries, and to a lesser degree in the Maghreb and Mashreq sub-regions. If this trend was to continue, it will likely surpass the global average before long, and measures to address increasing energy consumption are clearly needed to turn this trend around.

[12] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.
[13] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.

Energy consumption per capita is not included in the SDGs, however they do set a clear target to double the global rate of improvement in energy efficiency by 2030. The SDG indicator for this target is energy intensity (**Figure 8**), however it is difficult to translate the target into a specific value for this indicator. At the global level, the historic annual rate of reduction in energy intensity has been around 1.3% per annum. A doubling of this rate by 2030 would correspond to global reduction in energy intensity of 2.6% per annum by 2030. **Figure 8** shows that while there has been a considerable reduction in energy intensity in the LDCs, the region as a whole is not currently on track to achieve this target, with a slight (2%) increase in energy intensity over the past decade or so. Achieving the SDG target would require efforts to increase energy efficiency in the region, particularly in the GCC, Mashreq and Maghreb sub-regions. At the national level, Egypt has set a target of a 14% reduction in energy intensity by 2030 which could be used as a benchmark for the region.

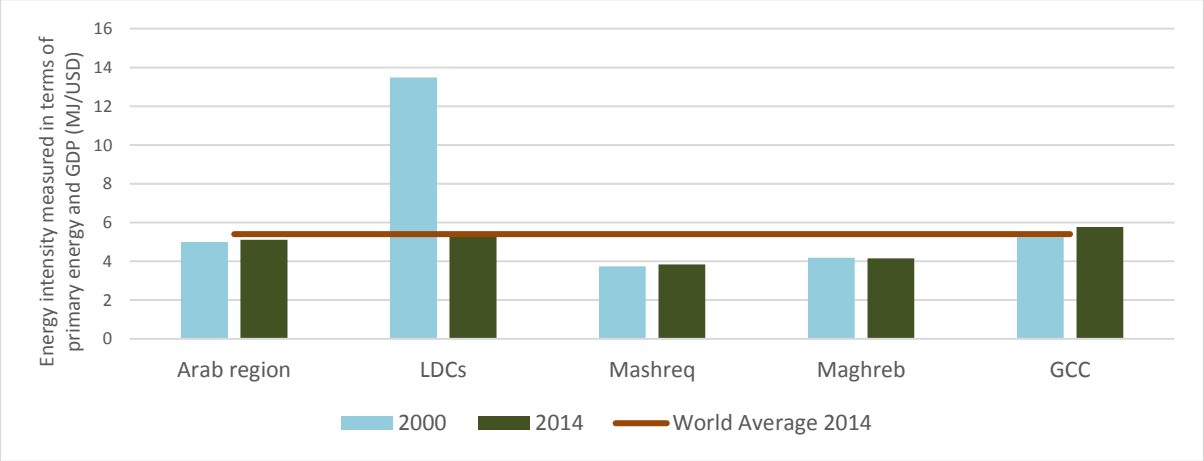


Figure 8: Energy intensity measured in terms of primary energy and GDP (7.3.1)[14]

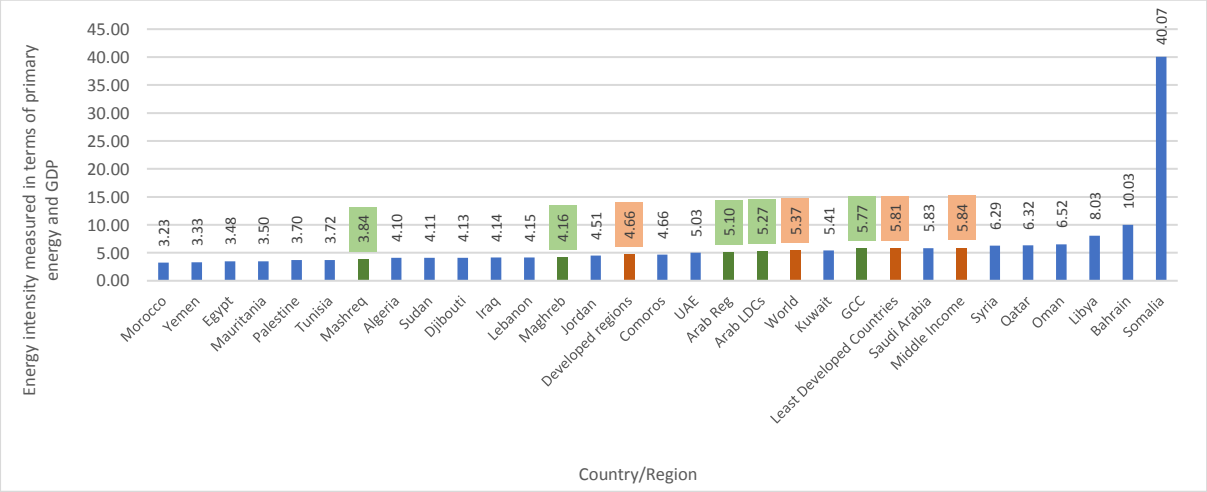


Figure 9: Energy intensity measured in terms of primary energy and GDP, by country (2014)[15]

[14] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 6 July 2017.
[15] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 6 July 2017.

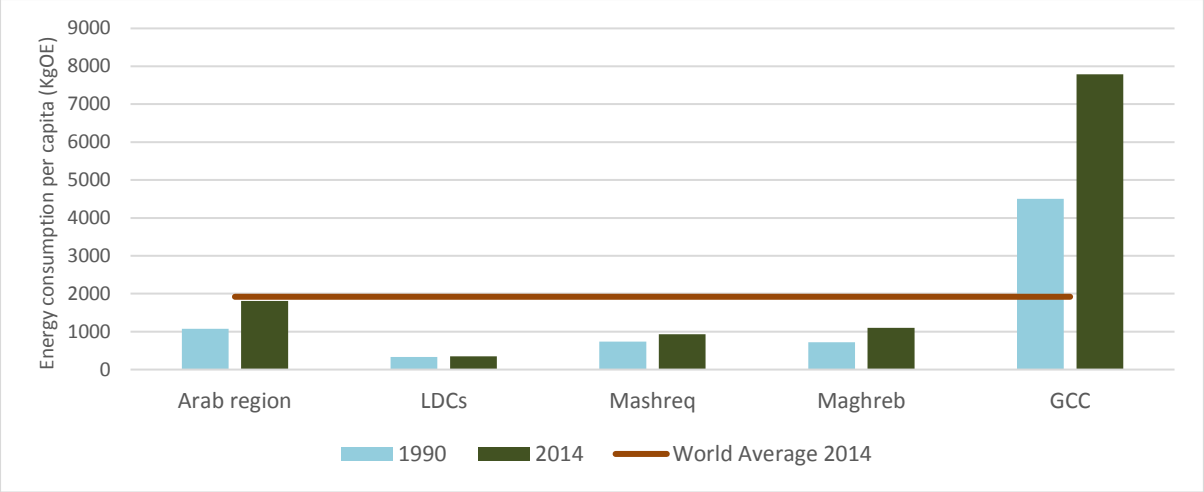


Figure 10: Energy consumption per capita (kilogram of oil equivalent) (7.3.ADD)[16]

In terms of CO2 emissions, the set of SCP indicators include three relevant indicators which use different metrics to provide an indication of progress in addressing greenhouse gas emissions. **Figure 11** shows the CO_2 emissions per unit of value added. The region has seen an improvement of close to 30% in this indicator since 2000, however the 2014 baseline value was over 75% above the global average. The SDGs do not set a clear target value of this indicator, however the *Guiding Framework* proposes the global average of 0.77 or the OECD average of 0.4 as potential 2030 target values. The regional trend is currently heading in the right direction (except for the Maghreb sub-region), and this target may be achievable with continued efforts to retrofit industries and increase resource-use efficiency.

In terms of CO_2 emissions per dollar of GDP (**Figure 12**), levels have remained relatively stable since 1990 at around 0.31 kg/$. This baseline value falls just below the global average of 0.34 kg/$ but is above the OECD average of 0.25 kg/$. At the sub-regional level, the LDCs have seen a considerable increase in this indicator, however this has marginal impact on the regional value as it has a small proportion of regional GDP. Of the other sub-regions, only the Maghreb appears to be heading in the right direction, with around a 7% reduction since 1990, while the GCC has remained relatively steady and Mashreq has increased marginally. There is no SDG target value for this indicator, however the *Guiding Framework* proposes a 10-14% reduction in CO_2 emissions per dollar of GDP by 2030, compared against a 2015 baseline value. At the regional level, this would correspond to a regional target value of around 0.26 to 0.28 CO_2 emissions per dollar of GDP by 2030. This would require additional measures to reduce the consumption of carbon-intensive energy in economic activity, for example through energy efficiency measures or greater use of renewable energy.

The final indicator relating to carbon emissions is per capita CO_2 emissions (**Figure 13**). The Arab region has seen a considerable increase in this indicator of 50% since 1990 with the 2013 baseline value on par with the global average of around 5 tons per capita and well below the OECD average of 9.7 tons per capita. At the sub-regional level, all four sub-regions have seen an increase in this indicator since 1990. However, the Mashreq (2.9 tons) and Maghreb (3.1 tons) remain well below the global average while the per capita emissions of Arab LDCs (0.7 tons) are high compared to the global LDC average (0.3 tons), however are marginal overall. Per capita emissions in the GCC sub-region have increased by around 28% since 1990 and are the highest for the region at almost 20 tons per capita, which is nudging up the regional average. At the national level, seven Arab countries are above the global average, six of which are from the GCC region (**Figure 14**). The SDGs do not set a

[16] Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.

clear target for this indicator, however the *Guiding Framework* proposes a moderate target of between 2 to 4 tons or a high target of less than 2 tons by 2030. Based on these values, a considerable reduction would be needed in the GCC sub-region, while the Mashreq and Maghreb sub-regions would need to explore options to turnaround the current increasing trend and hold per capita emissions steady.

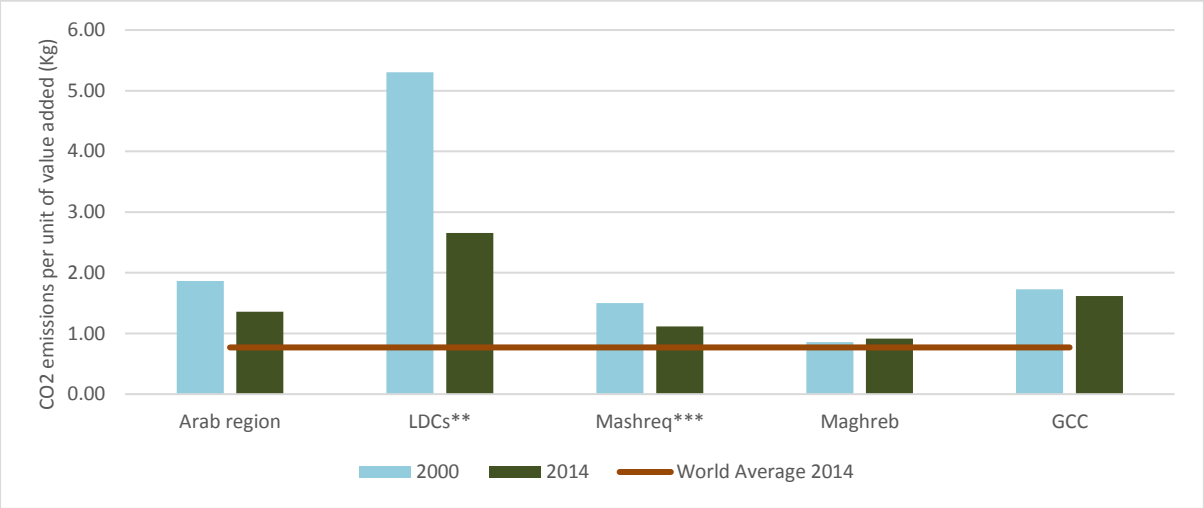


Figure 11: CO_2 emissions per unit of value added (9.4.1)[17]

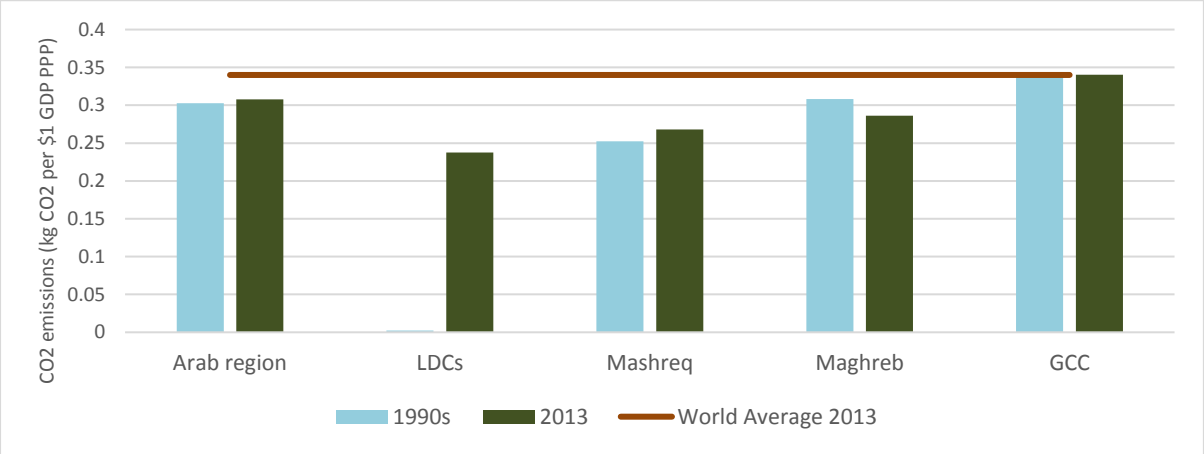


Figure 12: CO_2 emissions per $ of GDP (13.2.ADD-1)[18]

[17] Source: UN Statistics Division SDG Database, data from International Energy Agency and OECD; accessed on 20 May 2017.
[18] Source: UN Statistics Division MDG Database; accessed on 6 July 2017.

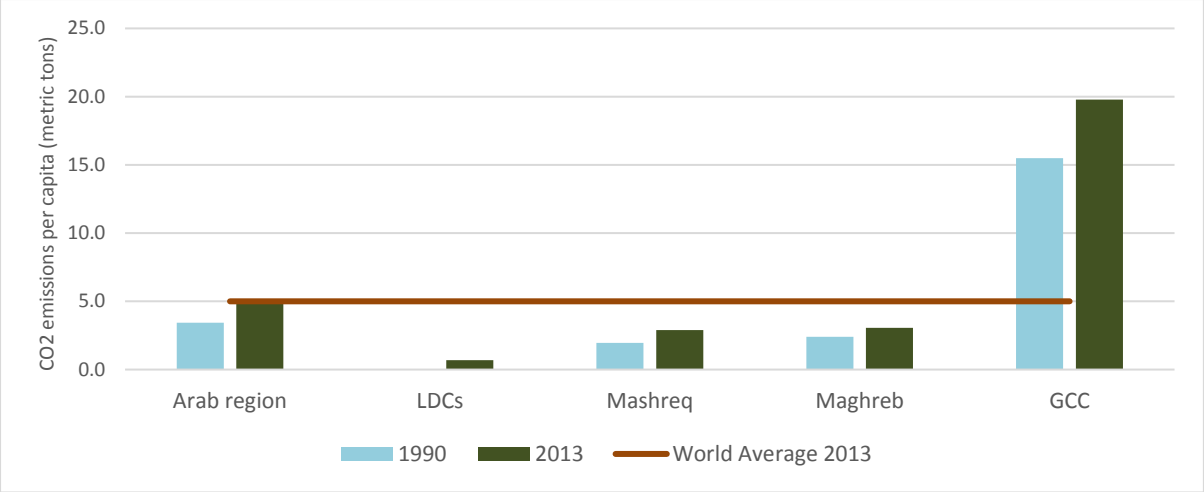


Figure 13: CO_2 emissions per capita (13.2.ADD-2)[19]

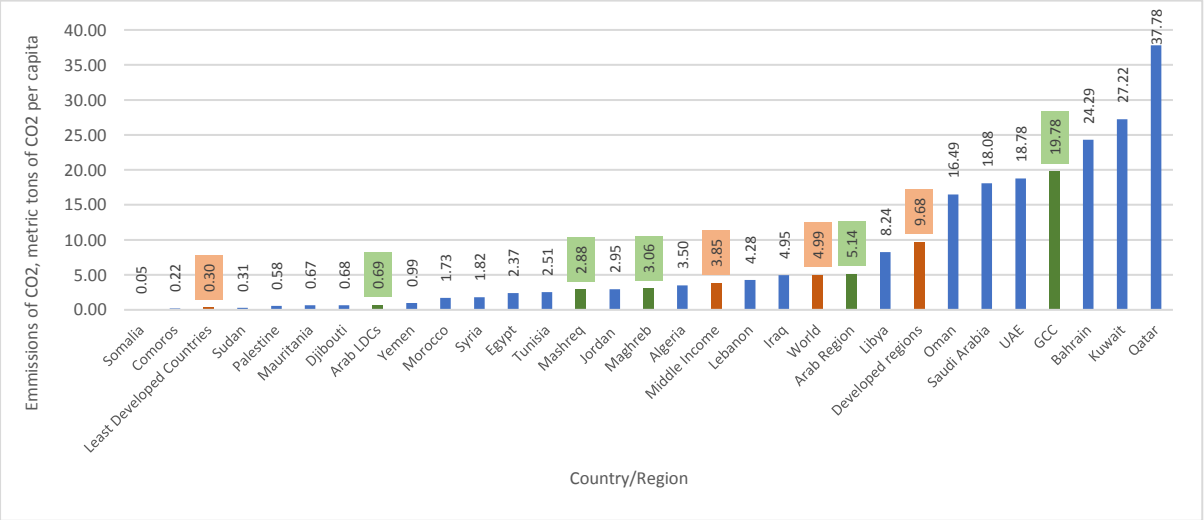


Figure 14: CO2 emissions, metric tons of CO2 per capita, by country (2013)[20]

Exposure to fine particulate matter (PM2.5) air pollution in the region (**Figure 15**) has increased by around 18% since 2000, with the 2015 baseline value of 62 ug/m^3 well above the global average of 44 ug/m^3 as well as the OECD average of 15 ug/m^3. At the sub-regional level, only the Maghreb has levels that fall below the global average, while the highest levels are in the GCC which were twice the global average in 2015. The Mashreq sub-region has seen the largest increase in fine particulate air pollution over the past decade. At the national level, 14 Arab countries have levels well-above the global average (**Figure 16**). The SDGs acknowledge that countries should aim to reduce air pollution, however they do not set a specific numerical target. The *Guiding Framework* proposes a moderate target in line with the global average (i.e. 44 ug/m^3) or an ambitious target in line with the WHO guideline or OECD average in the range of 10 to 15 ug/m^3.

[19] Source: UN Statistics Division MDG Database; accessed on 6 July 2017.
[20] Source: UN Statistics Division MDG Database; accessed on 6 July 2017.

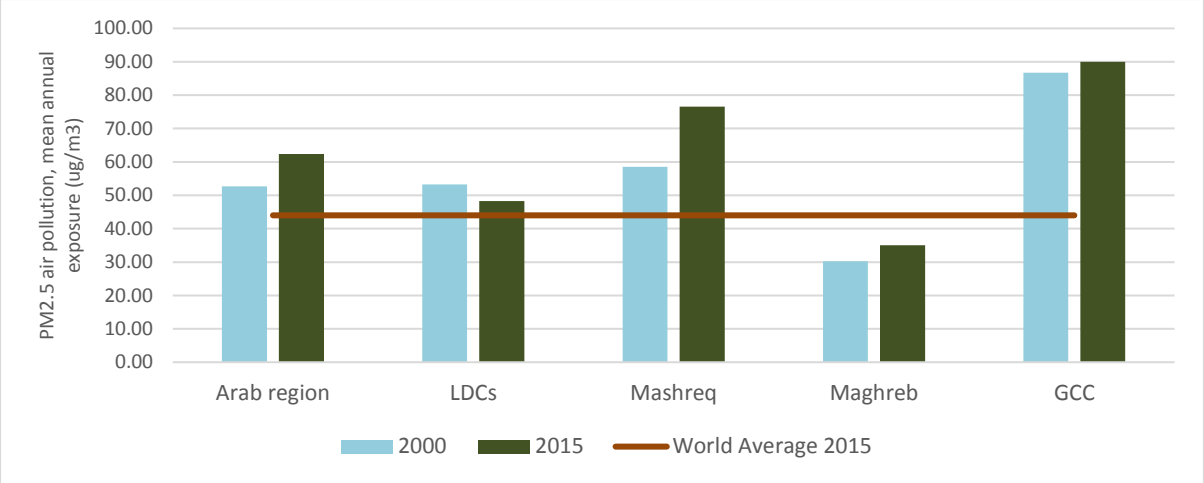


Figure 15: PM2.5 air pollution, mean annual exposure (11.6.2.ALT)[21]

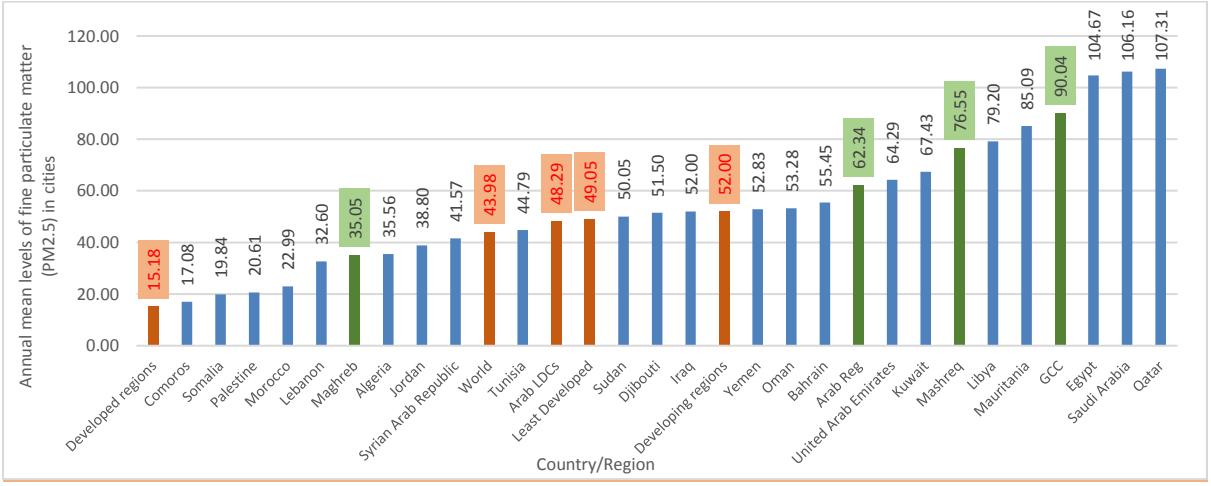


Figure 16: PM2.5 air pollution, mean annual exposure, by country (2015)[22]

Finally, in terms of energy subsidies as a proportion of GDP (**Figure 17**), the 2015 baseline level for the Arab region of 8.3% of GDP was around 25% above the global average of 6.6% of GDP and considerably higher than the OECD average of 1.9%. However, at the sub-regional level, both the Mashreq (6.7%) and Maghreb (6.8%) are similar to the global average, while the LDCs (1.7%) are well below both the global average and the LDC average (4%). Only the GCC sub-region is significantly higher than the global average at 10% of GDP, which pushes up the regional average. The SDGs set a clear target of phasing out fossil-fuel subsidies in line with national circumstances, which would represent a 2030 target value of 0% for this indicator. Several Arab countries have also adopted this target, including Jordan and Egypt.

[21] Source: World Health Organisation data, World Development Indicators; access on 20 May 2017.
[22] Source: World Health Organisation data, World Development Indicators; access on 20 May 2017.

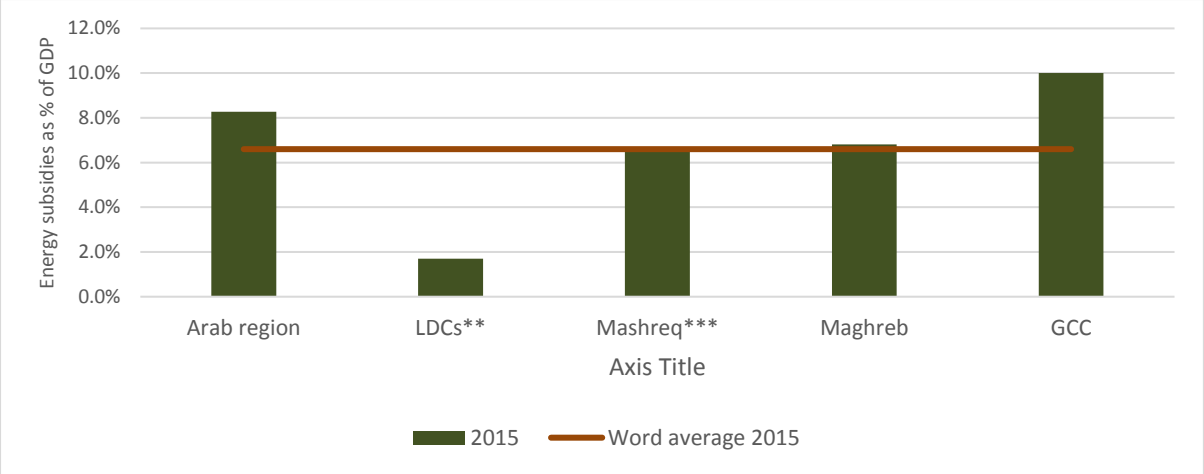


Figure 17: Energy subsidies as % of GDP (12.c.1.ALT)[23]

3.3.2 Water

The water theme included only three indicators due to poor data availability for a range of other potential indicators relating to water quality and water-use efficiency. However, there was relatively good data coverage for the three indicators selected, with 92% of desired baseline data available for the assessment (**Figure 3**).[24] This shows that effort has been made in the Arab region to collect and produce some water statistics, however considerable additional effort will be needed to collect data for a broader range of water-related SDG indicators. Overall, progress on the water theme is mixed. Favourable overall trends in per capita water consumption are unable to offset the worsening trend in water security across the region.

Figures 18 to 21 below show the outcomes from the baseline assessment for three water-related SCP indicators. As with the energy indicators, each chart includes a recent baseline value (e.g. 2014 or 2015) alongside a historic baseline value (e.g. 1990 or 2000) which provides a comparison of the trend over recent decades. Values are provided at the Arab regional level and for each of the four sub-regions. A world average for the most recent baseline year is also included to provide an average benchmark to review the current status for each indicator.

The level of water stress in the region (**Figure 12**) has worsened considerably since 1990, with an increase of 65% in annual freshwater withdrawals as a proportion of available water. As the region is comparatively water scarce, it is difficult to compare the regional average against global benchmarks, however the 2014 baseline level of 298% is well above natural recharge levels and is considered unsustainable in the long term. However, due to data gaps the assessment is an amalgamation of UN and World Bank data which have some inconsistencies in terms of historic data values. In addition, while the GCC sub-region is consuming nearly 1350% of natural water availability, it is assumed that the gap is filled through desalination. Withdrawals also include water from desalination plants in countries where they are a significant source. Withdrawals can therefore exceed 100 percent of total renewable resources where extraction from non-renewable aquifers or desalination plants is considerable or where there is significant water reuse. **Figure 19** shows that water stress for countries in the Arab region are significantly larger than global averages, highlighting the priority for most countries in the region.

[23] Source: International Monetary Fund; accessed on 7 October 2017.
[24] This was calculated based on the availability of data for all 22 countries for each of the three indicators.

All sub-regions have experienced worsening trends in water security over the past two decades which is an ongoing challenge and concern. The SDGs do not include a specific target for this indicator, however they do target a substantial increase in water-use efficiency as well as ensuring sustainable water withdrawals. In this regard, the *Guiding Framework* proposes a moderate regional target of 80% and an ambitious target of 30-40% annual freshwater withdrawals as a proportion of available water. Based on recent benchmarks, none of the sub-regions are close to these levels and a breakthrough would be needed to turn the worsening trend around.

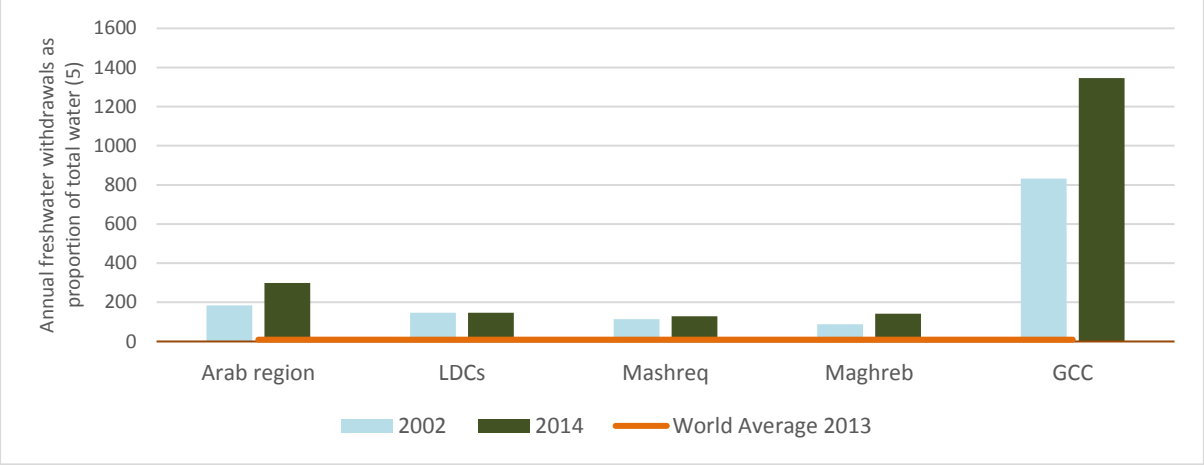


Figure 18: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (6.4.2)[25]

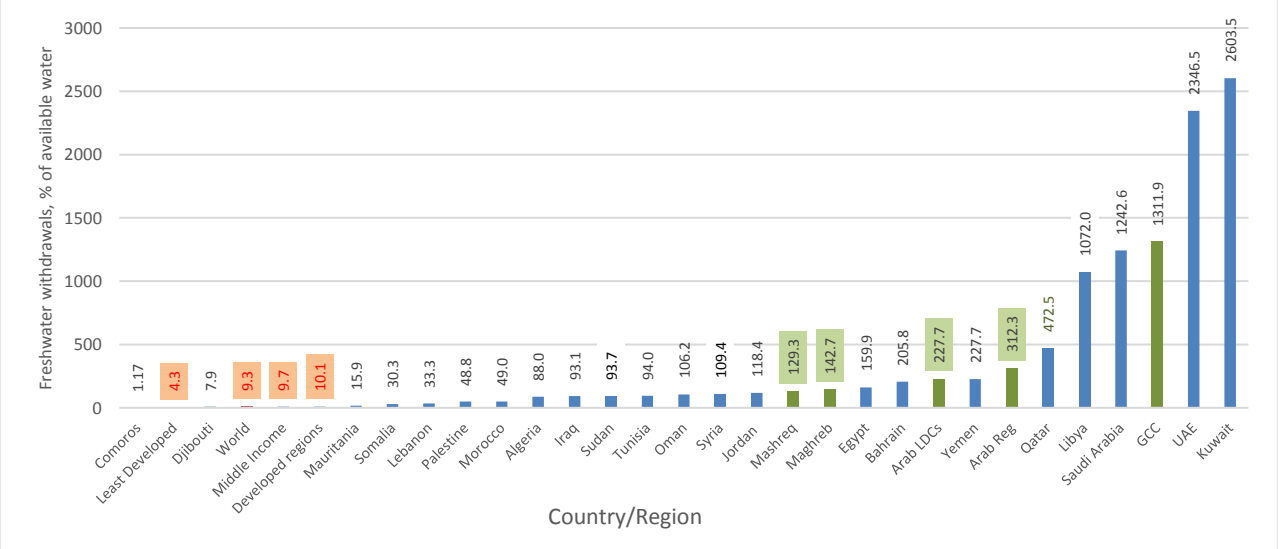


Figure 19: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources, by country (2014)[26]

Another indicator of water-use efficiency is domestic water consumption per capita (**Figure 20**), which shown a favourable trend in the region, reducing by nearly 10% to 6,600 m^3 per capita which is just above the global average of 6,300 and substantially below the OECD average of 12,580. Three of the four sub-regions have seen a favourable trend in this indicator, with the GCC experiencing the largest reductions, followed by the Maghreb. Only the Mashreq sub-region has increased slightly over the last two decades. The SDGs do not include a specific target for this indicator, however they do target a substantial increase in water-use efficiency. If the current favourable trend continues in

[25] Source: UN Statistics Division SDG Database and World Development Indicators; accessed on 21 August 2017.
[26] Source: UN Statistics Division SDG Database; accessed on 21 August 2017.

the region, it could be expected to fall below the global average in the coming years. While this represents positive progress for the region, it also needs to be considered in the context of the region's water resources and stress levels which are intolerably high. In this context, considerable advances in water-use efficiency and reductions in domestic consumption will be needed to achieve SDG targets relating to the sustainable withdrawal of water resources.

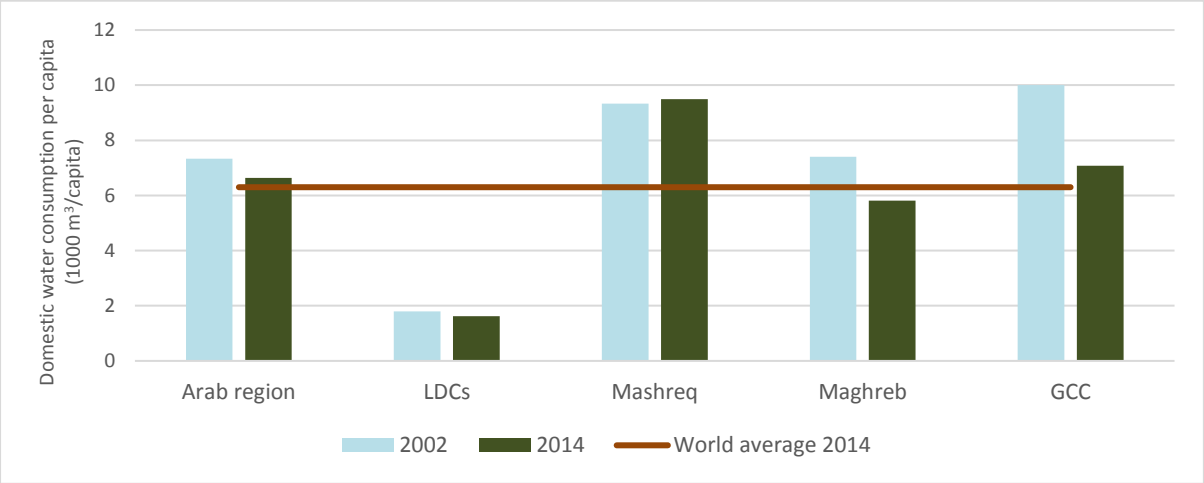


Figure 20: Domestic water consumption per capita (6.4.ADD)[27]

In terms of overseas development assistance (ODA) for water and sanitation (**Figure 21**), the Arab region has done comparatively well with a 2014 baseline value of USD80.6m compared with the global average of USD47.8m, and a 40% increase compared against the 2000 historic baseline value. Assistance has been the largest in the Maghreb and Mashreq sub-regions, which received almost 90% of assistance to the region in 2014. These high levels of assistance have likely contributed to the considerable improvements made in access to safe drinking water (6.1.1) and sanitation over the last couple of decades. However, assistance to the Arab LDCs is lagging behind both the global average and the global LDC average, and the sub-region also performs poorly on the indicator for access to safe drinking water. The SDGs target the expansion of international cooperation in support of water- and sanitation but do not set a specific numerical target. Based on the performance in the Arab region on this indicator, additional assistance should be focused on the LDCs sub-region to address accelerate progress on water- and sanitation-related indicators.

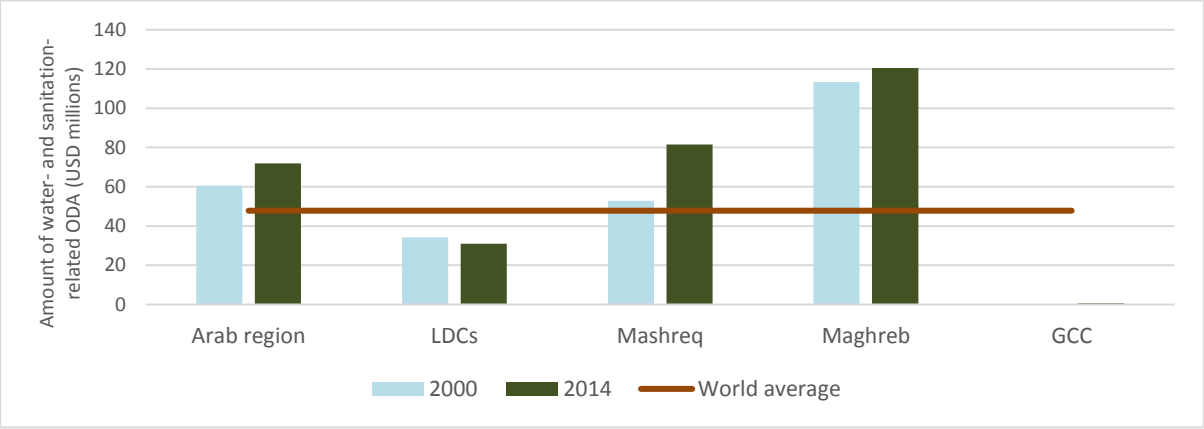


Figure 21: Amount of water- and sanitation-related ODA (6.a.1)[28]

[27] Source: World Development Indicators; accessed on 9 November 2017. Indicator calculated from data on total water consumption, % domestic consumption, and total population.
[28] Source: OECD Database; accessed on 20 May 2017.

3.3.3 Waste and materials

The waste and materials theme included four indicators due to a lack of data availability for a range of other potential indicators, particularly relating to waste and hazardous waste. For the four indicators used in the analysis, there was relatively poor data coverage, with only 68% of desired baseline data available for the assessment (**Figure 2**).[29] This highlights the considerable data gaps and also underscores that the results from the assessment should be interpreted with caution, particularly indicators relating to waste. Further effort is needed in the Arab region to collect and produce waste statistics to effectively monitor and report on the SDG indicators. Overall, progress on the materials and waste theme is mixed, with favourable trends in increasing the proportion of the population with access to municipal waste collection as well as reducing food losses, and unfavourable trends in material consumption and waste production.

Figures 22 to 26 below show the outcomes from the baseline assessment for four material- and waste-related SCP indicators. As with the previous indicators, each chart includes a recent baseline value (e.g. 2014 or 2015) alongside a historic baseline value (e.g. 1990 or 2000) which provides a comparison of the trend over recent decades. Due to chronic data gaps, values for the generation of waste are averaged for several years to produce two values for the '2000s' and '2010s'. Values are provided at the Arab regional level and for each of the four sub-regions. A world average for the most recent baseline year is also included to provide an average benchmark to review the current status for each indicator.

The per capita material footprint in the Arab region (**Figure 22**) increased by around 20% over the two decades from 1990 to 2010, however the current baseline value of 6.6 metric tons per capita falls well below the global average of 10.1 and the OECD average of 20.4. At the sub-regional level, material footprint has increased in the Mashreq and Maghreb, however current baselines are comparatively small. However, the material footprint for GCC countries is over three times the regional average and twice the global average at 19.4. **Figure 23** highlights that seven Arab countries are above the global average for material footprint, six of which are from the GCC sub-region plus Lebanon. The SDGs include a target to improve global resource efficiency and decouple economic growth from environmental degradation. However, they do not specify a target level for material footprint. The region could focus on turning around the negative trend, with concerted efforts in the GCC sub-region to reduce in line with the global average.

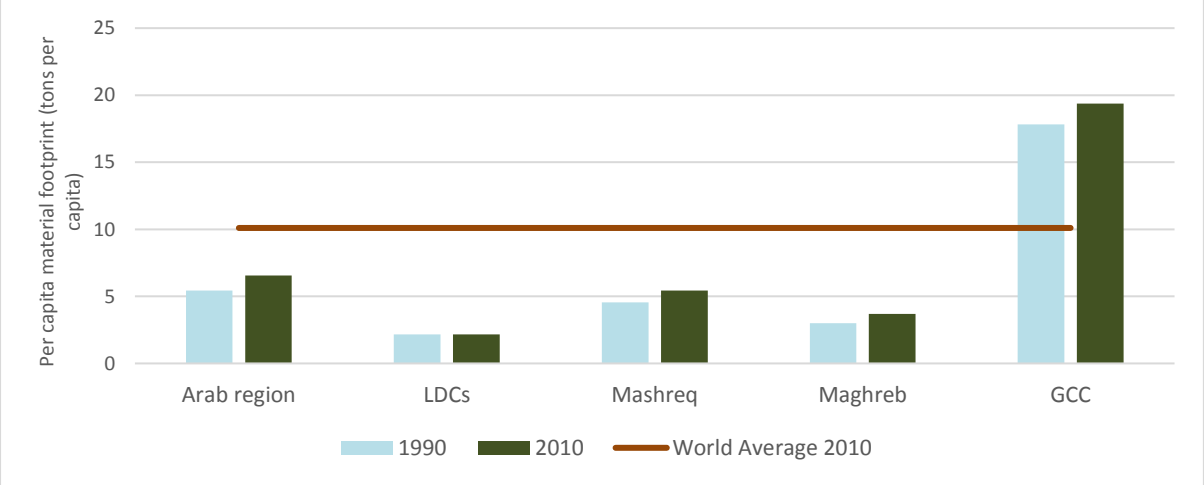


Figure 22: Material footprint per capita (8.4.1 and 12.2.1)[30]

[29] This was calculated based on the availability of data for all 22 countries for each of the four indicators.
[30] Source: UNEP live data from UN Statistics Division SDG Database; accessed on 20 May 2017.

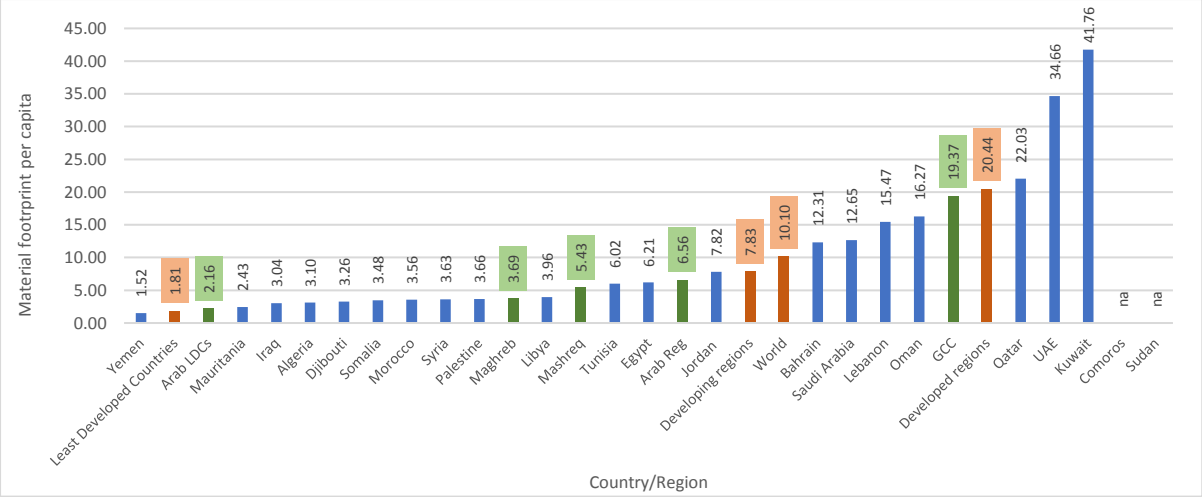


Figure 23: Material footprint per capita, by country (2010)[31]

The proportion of the population serviced by municipal waste collection (**Figure 24**) has shown a favourable trend in the region, with a 6% increase between 2002 and 2014. The current baseline value of 75.3% is comfortably above the global average of 65.2. While in the LDCs the population serviced has remained steady at around 67%, this is well-above the average for global LDCs of 39.3%. Coverage in the GCC sub-region is comprehensive at 100% of the population. The Maghreb sub-region has seen the largest increase with a baseline value of 76.7% which is slightly above the Mashreq average of 75.7%. The SDGs include a target to reduce the adverse environmental impacts of cities including waste, but do not include a specific target value for this indicator. However, Egypt includes a specific target of 80-90% by 2030 which could be used as a guideline for the region. This would appear to be achievable with some additional investment in municipal waste collection. A more ambitious target could be set at 100% of the population, which has already been achieved by GCC countries.

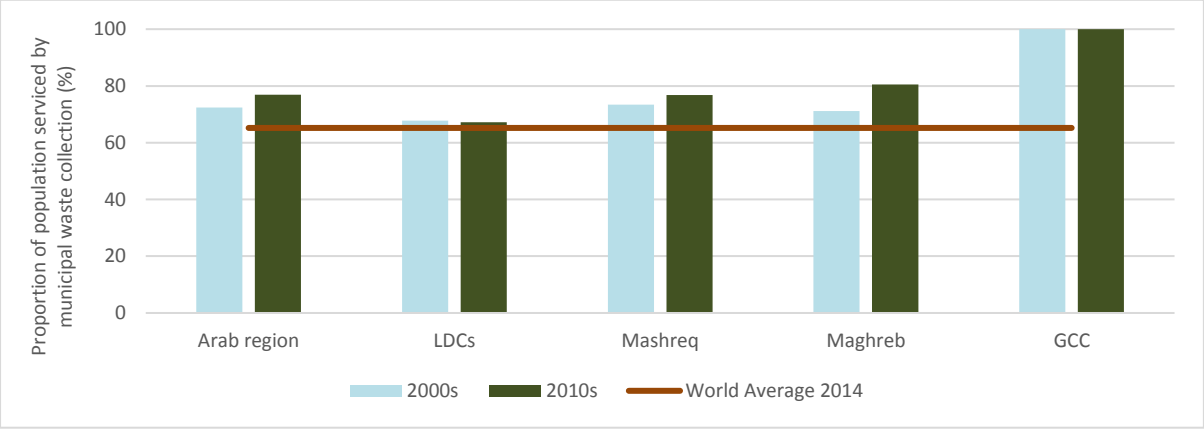


Figure 24: Proportion of the population serviced by municipal waste collection (11.6.1.ALT)[32]

The generation of waste in the region was measured using municipal waste collected per capita per day (**Figure 25**), which has seen a considerable increase of around 85% in the Arab region over the past decade. The average value calculate for the region of 1.88 kg/person/day is well above the global average of 1.19, and is close to the OECD average of 2.15. This has been primarily driven by a substantial increase in the Mahsreq sub-region where waste collected has more than doubled over

[31] Source: UNEP live data from UN Statistics Division SDG Database; accessed on 20 May 2017.
[32] Source: UN Statistics Division environmental statistics and UN-Habitat; accessed on 9 November 2017. World average from UN Statistics Division SDG Database data for 2017; accessed on 9 November 2017.

the past decade. The trend has been positive for the Maghreb sub-region which has a recent baseline level well below the global average. The GCC countries have also seen a favourable trend, however the recent baseline value is very high at 3.7 kg/person/day. The SDGs include a target to reduce the adverse environmental impacts of cities including waste, but do not include a specific target value for this indicator.

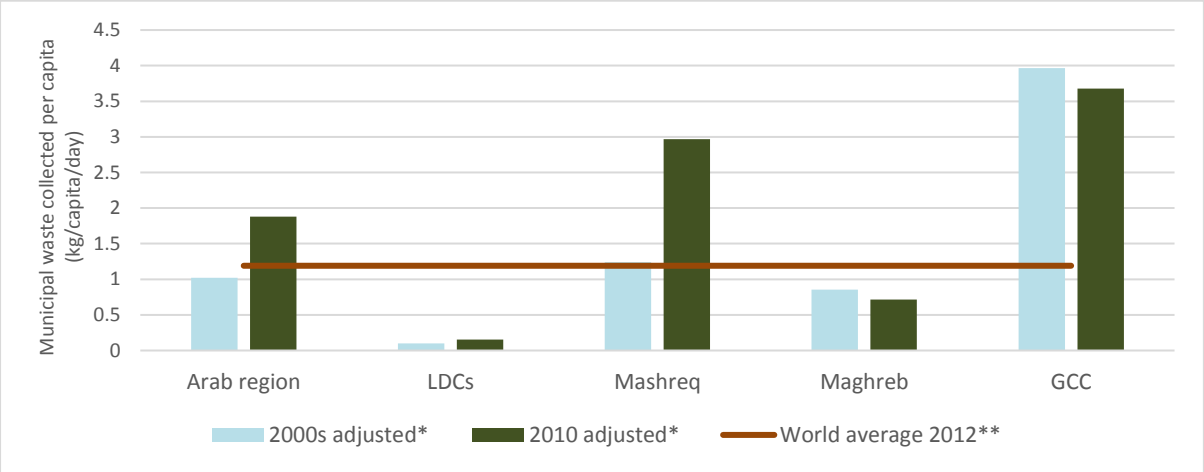
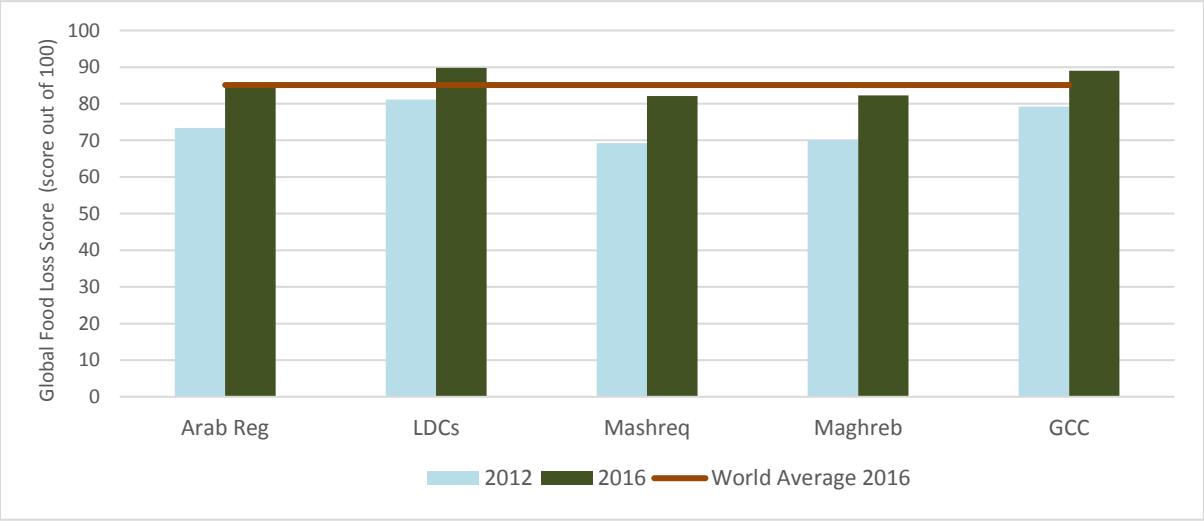


Figure 25: Generation of municipal waste per capita (11.6.ADD)[33]

The Global Food Security Index includes an indicator for food loss which was also assessed for the region (**Figure 26**), however only a limited time series was available from 2012 to 2016. In 2016, the regional score of 84.8 fell just below the global average of 85.1, however the trend over the past four years is improving. This positive trend is reflected across all four sub-regions, with the LDCs and the GCC countries having the highest scores of around 90 points. The SDGs include a specific target (12.3) of halving per capita global food waste by 2030. Based on the current 2016 baseline value of 84.8, this target could be translated into a target of reducing by half the gap between the current score and a perfect score of 100 points, which would give a target value of around 92 to 93 points by 2030. Based on recent progress in the region, this target would appear to be achievable if efforts in this area are continued.



[33] *Values for 2000s and 2010s were calculated based upon UN Statistics Division data on municipal waste collected (in thousands of tons) for each country from 2000 to 2015; accessed on 9 November 2017. This was then converted into municipal waste collected per capita per day and adjusted using data on the proportion of population covered by waste collection to account for the population not covered by waste collection. Regional and sub-regional averages are weighted by population. **Global average is from World Bank data for 2012 on the generation of municipal waste per capita per day.

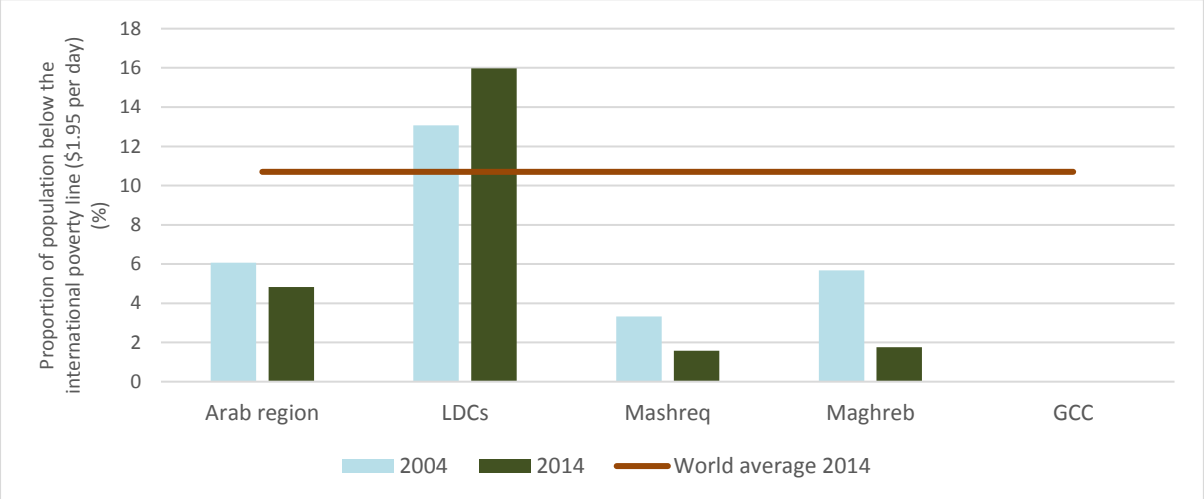
Figure 26: Global Food Security Index – Food Loss Score (12.3.1)[34]

3.3.4 Poverty and livelihoods

The poverty and livelihoods theme included five indicators, with moderate data coverage, with around 80% of desired baseline data available for the assessment (**Figure 3**).[35] However, there are ongoing data gaps with regard to full country coverage of poverty indicators and the proportion of population living in slums. Time series data was also only available for two of the five indicators, highlighting that further effort is needed to produce these core statistics to effectively monitor and report on the SDG indicators. Overall, progress on the poverty and livelihoods theme is mixed, with favourable trends evident in reducing poverty as well as access to safe drinking water, while further progress is needed in terms of addressing food security and housing.

Figures 27 to 31 below show the outcomes from the baseline assessment for the five poverty- and livelihood-related SCP indicators. As with the previous indicators, where possible, each chart includes a recent baseline value (e.g. 2014 or 2015) alongside a historic baseline value (e.g. 1990 or 2000) which provides a comparison of the trend over recent decades. However, due to chronic data gaps in timeseries data, trend data is missing for three of the indicators. Weighted averages are provided at the Arab regional level and for each of the four sub-regions. A world average for the most recent baseline year is also included to provide an average benchmark to review the current status for each indicator.

The region has seen a favourable reduction of around 20% in the proportion of the population below the international poverty line over the period 2004 to 2014 (**Figure 27**). The regional average value for 2014 of 4.85% is well below the global average of 10.7%. Both the Mashreq and Maghreb sub-regions have shown strong progress, with baseline values now below 2%. Poverty in the LDC subregion has worsened by over 20% over the last decade, with levels around 16% of the population which is well above the global average, but below the global LDC average of 45.5%. The SDGs include a specific target (1.1) to eradicate extreme poverty in all countries. The GCC countries have already achieved this target, while Mashreq and Maghreb appear to be on-track for achieving this target by 2030. However, given the worsening trend in the Arab LDCs over the last decade, these countries would need a breakthrough to achieve the eradication target by 2030.



[34] Source: The Economist Global Food Security Index; accessed on 6 July 2017. Global Food Loss scores are from the 'Food Loss' indicator in the Index: score between 0 (complete loss) and 100 (no loss).
[35] This was calculated based on the availability of data for all 22 countries for each of the five indicators.

Figure 27: Proportion of the population below the international poverty line (1.1.1)[36]

The food insecurity experience scale measures the percentage of individuals in the population who have experienced food insecurity at moderate or severe levels during the reference period. The baseline level for the Arab region in 2015 was 28.4% (**Figure 28**), which is high compared against the global average of 18.6 or the OECD average of 5.7. No trend data was available to assess progress over time. Both the GCC and Maghreb sub-regions fell just below the global average with values of around 17% in 2015. While these are better than the global average, they are over three times higher than those experienced in developed countries. Of more concern are the Mashreq and LDCs sub-regions, with values of 31% and 43% respectively. The SDGs include a specific target to end hunger (2.1) by 2030, however they do not set a specific target level for this indicator. The *Guiding Framework* proposes a low target of <7.5% or an ambitious target of 0% by 2030 for this indicator. Based on this target level, the Arab region and all four sub-regions have a long way to go to achieve food security in the region, particularly in the LDC and Mashreq sub-regions.

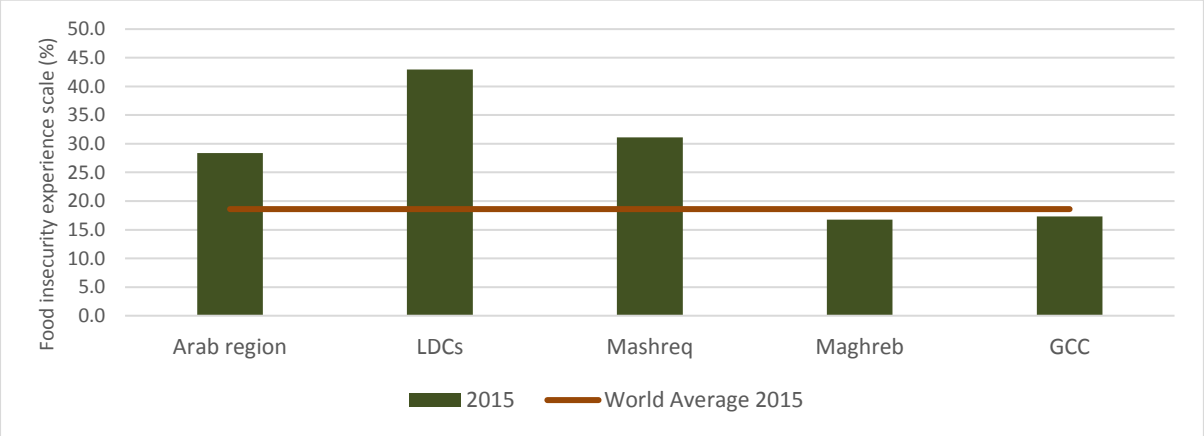


Figure 28: Food insecurity experience scale (2.1.2)[37]

Indicators related to access to safe drinking water (**Figure 29**) and mortality rates attributed to water and sanitation (**Figure 30**) are closely linked, with the former being a determinant of the latter. In terms of access to an improved source of water, the region has seen a small improvement of 2.5% over the past two decades, with a 2014 baseline value of 84%. However, this fell below the global average of 91.1% as well as the average for developing countries of 89.3%, highlighting that the region has further work to do. At the sub-regional levels, both the Mashreq and GCC countries had access levels above the global average, while the Maghreb region was also closing in on the global average. The only sub-region experiencing a negative trend was the LDCs group, with levels declining to only 53% in 2014 which is well below the global average as well as the global LDC average of 69.4%. The SDGs set a clear target for this indicator of achieving universal access by 2030 (6.1). Based on the overall favourable trend, it would appear that the region is heading in the right direction, however it would need to accelerate progress to achieve universal access (e.g. 98-100%) by 2030. For the LDCs, this target seems unrealistic given the current levels and worsening trend. A moderate target of 80-90% could be more realistic for this sub-region.

The mortality rate attributed to water and sanitation in 2012 was around 9%, which was below the global average of 12.4% (**Figure 30**). However, at the sub-regional level, both the Mashreq and Maghreb sub-regions have low baselines of around 2% while the GCC was 0%. This perhaps reflects the favourable progress that the region has made in improving access to safe drinking water.

[36] Source: World Development Indicators; accessed on 9 November 2017.
[37] Source: FAO data from the UN Statistics Division SDG Database; accessed on 20 May 2017.

However, the 2012 baseline value for the LDCs was almost 36% in 2012 and ensuring access to safe water and sanitation clearly remains an ongoing challenge for these countries. The SDGs set a target to substantially reduce mortality related to water and sanitation (amongst other things) by 2030, however they do not set a specific target value. Overall, three of the four sub-regions appear to be progressing well on this indicator, however considerable efforts would be needed in the LDCs to substantially reduce this indicator by 2030.

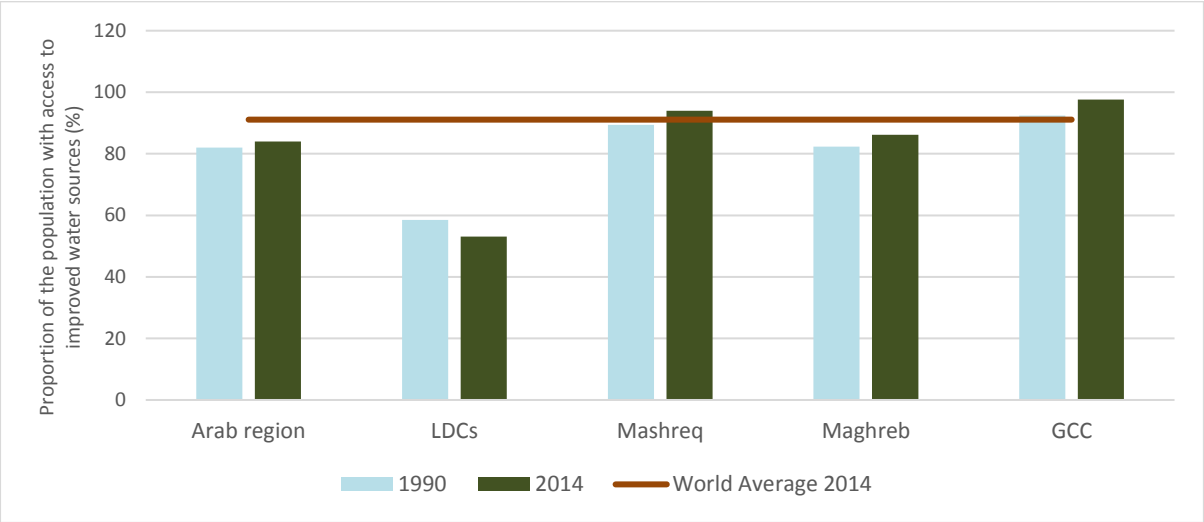


Figure 29: Access to safe drinking water (6.1.1)[38]

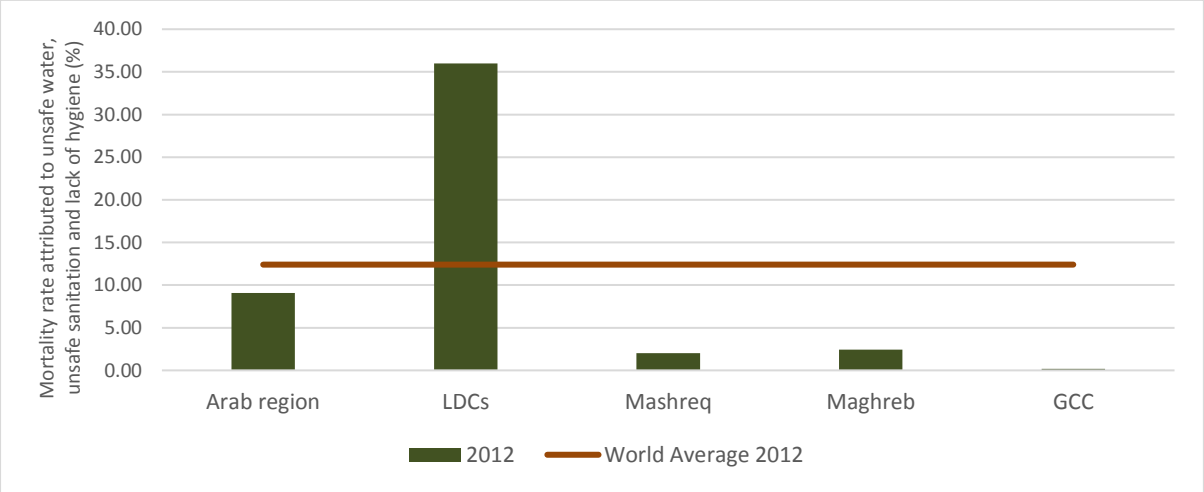


Figure 30: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (3.9.2)[39]

Finally, the proportion of the urban population living in slums (**Figure 31**) was around 34.8% in 2014, which was above the average for developing countries of 27.1%. Levels were lowest in the Maghreb sub-region which at 11.8% were below half the global average for developing countries. Both the Mashreq and GCC sub-regions also came in below this global average. However, proportion of the urban population living in slums in the LDCs is extremely high at 78.5% in 2014, which is nearly three times the average for developing countries and also well above the global LDC average of 62.7%. The SDGs set a target to ensure access for all to adequate safe and affordable housing, however there is no specific target relating to this indicator. The *Guiding Framework* proposes a target of

[38] Source: WHO and UNICEF data from UN Statistics Division SDG Database; accessed on 6 July 2017.
[39] Source: WHO data from the UN Statistics Division SDG Database; accessed on 20 May 2017.

<5% by 2030 which is based on the level set by Egypt. Based on this target level, all four sub-regions would have a long way to go to achieve the target by 2030, and this would appear to be unrealistic in the LDCs sub-region.

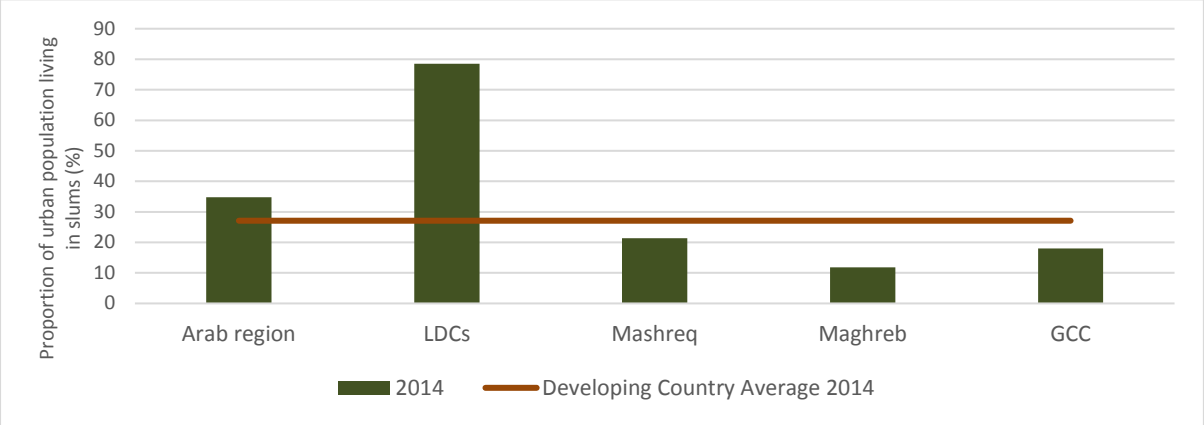


Figure 31: Urban population living in slums (11.1.1.ALT)[40]

4. Assessment of national progress on SCP indicators and 2030 SDG target

4.1 Method for the national assessment: selection of indicators and targets and normalisation of values

The aim of the national-scale review was to provide a complementary national-scale assessment of progress on a selection of SCP indicators and indicative 2030 target values for each of the 22 Arab countries. To undertake the national assessment, a short-list of 11 SCP indicators was selected from the broader list in **Table 4**. These indicators were selected based on data availability (i.e. indicators with data for at least 20 of the 22 Arab countries), as well as indicators that provided a cross-section of all four priority SCP themes. The list of 11 indicators is provided in **Table 5**. For the purposes of the analysis, the indicators are broadly grouped as 'social and health indicators' which focus primarily on access to services and health impacts, and 'environment and resource indicators' which focus more on resource consumption and environmental aspects. National baseline values used in the assessment are included in a table in **Appendix 2.**

Table 5: Short-list of SCP indicators used for national baseline assessment

SCP Indicators	Units	Baseline Year	Indicative 2030 Target Value	Arab Country Maximum Value	Arab Country Minimum Value
Social and Health Indicators					
3.9.2 Mortality-water & sanitation	per 100,00 population	2012	1.5 LDCs: 10	98.81	0.03
6.1.1 access to drinking water	percent	2015; Somalia 2011; Yemen 2012; Sudan 2014	100% LDCs: 80%	100.00	31.71
7.1.1 Access to electricity	percent	2014	100% LDCs: 80%	2603.49	1.17
11.6.2 PM air pollution	Micrograms per cubic meter	2015	40	107.31	17.08
Environment and resource indicators					
6.4.2 Level of water stress	1000 cubic metres per capita	2014	80%	13.31	0.11
6.4.ADD Per capita water consumption	percent	2014	4	100.00	19.06
7.2.1 Renewable energy	percent	2014	20	93.86	0.00

[40] Source: UN-Habitat data from UN Statistics Division SDG Database; accessed on 20 May 2017.

7.3.1 Energy intensity	Megajoules per USD constant 2011 PPP GDP	2014	4	40.07	3.23
13.2.ADD-1 CO2 emissions/GDP	kg CO2 per $1 GDP PPP	2013	0.26	0.54	0.10
13.2.ADD-2 CO2 emissions/capita	metric tons CO2 per capita	2013	2	37.78	0.05
8.4.1 Material footprint	Metric tons (per capita)	2010	6	41.76	1.52

To be able to plot all of the baseline values for all 11 indicators on a single chart for each Arab country, the values were normalised on a scale from 0 to 1, where 1 represents the maximum (or best) baseline value for all countries in the region, and 0 represents the minimum (or worst) baseline value. Through the normalisation process, the 11 SCP indicators were effectively converted into an 'SCP index' with normalised baseline values presented on a single radar chart for each Arab country. A total score for each country on the SCP index was also calculated based on the sum of all of the normalised scores (between 0 and 1) for each of the 11 indicators, which would yield a maximum score of 11 points. This also enabled an easy comparison of performance across the 11 indicators between each of the Arab countries. The formula used for normalising the dataset is as follows:

$$z_i = x_i - min(x) / max(x) - min(x)$$

Where:
x is the most recent baseline value for indicator i
z is the normalised score for the most recent baseline value x for indicator i

To provide some further analysis on overall progress on each indicator in the context of the SDGs, the assessment also included potential target values for each indicator for 2030. The target values selected for the analysis are indicative only, and were taken from the SDG targets (where available) or from potential target values proposed in the *Guiding Framework* and discussed in the previous analysis (see **Section 3**). The target values used in the analysis are listed in **Table 5** above. These values are used in the analysis simply to provide a 2030 benchmark to review progress and gaps. To allow for differences in performance between the LDCs and the other Arab sub-regions, less ambitious target values were chosen for the LDCs and used in the analysis (see **Table 5**). For the purposes of the analysis, the target values were also normalised on a scale of 0 to 1 so that they could be plotted on the country radar charts along with the normalised baseline values. A comparison of each normalised baseline value against the corresponding indicative target value provides an assessment of progress towards achieving SCP-related targets of the SDGs by 2030.

4.2 Interpreting the results of the national assessment: radar charts

The outcomes from the national comparative assessment are provided below, with a separate radar chart prepared for each Arab country including all 11 SCP indicators (see Figures **32 to 53** below). The country results are grouped by Arab sub-region. In each radar chart, the **green shaded area** charts how each country is progressing on each of the eleven indicators when compared against all countries in the Arab region – i.e. *it is an intra-regional assessment of progress*. The values for each indicator are between 0 and 1, with 1 representing the best performance by an Arab country on the indicator and 0 representing the worst performance by an Arab country on the indicator. As such, the closer to 1 that the baseline scores are for each indicator, the better the performance on the indicator when compared with other Arab countries. An 'average score' for each country is also provided, which is the average of the scores for each of the indicators. Again, this score only reflects the country's average performance when compared against other *Arab countries*.

In each radar chart, the **red line** plots the indicative 2030 target levels for each indicator (based on the targets in **Table 5**, which were also normalised to place them on the index). The closer the green shaded area is to the red line, the closer the country is to achieving the indicative 2030 target. Where the green shaded area crosses the red line, the country has achieved the target level for the indicator. Where there is a gap between the green shaded area and the red line, this highlights where further progress is needed to achieve the 2030 target. The larger the gap, the greater the effort needed.

The radar charts can assist in identifying top performers in the Arab region in priority SCP areas, such as renewable energy, energy intensity and water efficiency. Countries performing well on these indicators could provide useful case studies for other Arab countries seeking to make similar gains towards achieving SDG targets. This can assist with information sharing and south-south cooperation.

4.3 Assessment results: Arab country progress on SCP indicators and 2030 targets

4.3.1 Maghreb Sub-Region

The results of the national baseline assessment for the four countries of the Maghreb sub-region are provided in **Figures 32** to **35** below. Overall, the Maghreb sub-region has made strong progress on SCP-related indicators when compared with other sub-regions. Progress is well-balanced across the social and environmental SCP indicators. Access to electricity is generally high in the sub-region, while mortality rates from water and sanitation are low. Morocco and Tunisia have made strong progress on increasing the share of renewable energy in final demand. Per capita resource consumption is generally lower than other sub-regions. However, access to drinking water remains a challenge for most countries in the sub-region, and levels of water stress are also generally high. Overall, more limited progress has been made in Libya compared with other countries in the sub-region.

Algeria has made good progress on several indicators and has reached the indicative 2030 target levels in several areas, including access to electricity (100%), air pollution (35.6 ug/m^3) and material footprint (3.1 tons per capita) (**Figure 32**). Compared with other Arab countries, Algeria is also progressing relatively well in mortality from water and sanitation (2.42 per 100,000), energy intensity (4.1 MJ/USD), and CO_2 emissions per unit of GDP (0.26 kg). The level of water stress is also comparatively low for the Arab region (87.99%), however it is high by global standards. The indicative 2030 target levels appear to be within reach for these indicators with continued efforts. In terms of challenges, the SCP indicators that require the most urgent attention relate access to safe drinking water (83.6%), per capita water consumption (7,700 m^3), renewable energy (0.07%), and to a lesser degree, per capita CO_2 emissions (3.5 tons). Significant efforts would be needed in these areas to progress towards the indicative 2030 target levels.

Figure 33 highlights that Libya has made limited progress across the majority of SCP indicators. Access to electricity (98.45%) is tracking well and sits just below the 2030 target of universal access. Libya's material footprint per capita (3.96 tons) is also low compared with other Arab countries and is below the 2030 target level. Mortality associated with water and sanitation (0.63 per 100,000) is also comparatively low and is well below the global average of 12.4. However, key challenges for Libya include the very high level of water stress (1072%), high per capita water consumption (11,290 m^3), high particulate matter air pollution (79.2 ug/m^3), high CO_2 emissions per capita (8.2 tons), and low levels of renewable energy (1.75%). A breakthrough would be needed in these areas to reach indicative 2030 target levels. Data gaps relating to access to drinking water and CO_2 emissions per unit of GDP limit the comprehensiveness of the assessment.

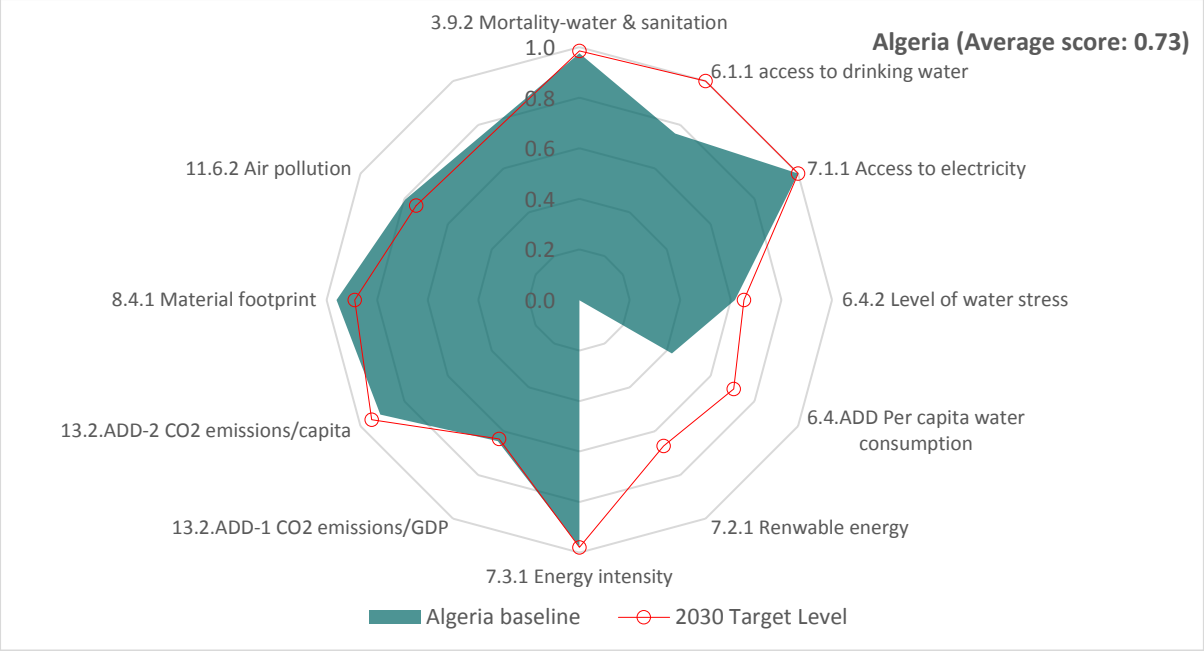


Figure 32: Algeria - Comparison of Progress on SCP Indicators and 2030 Targets[41]

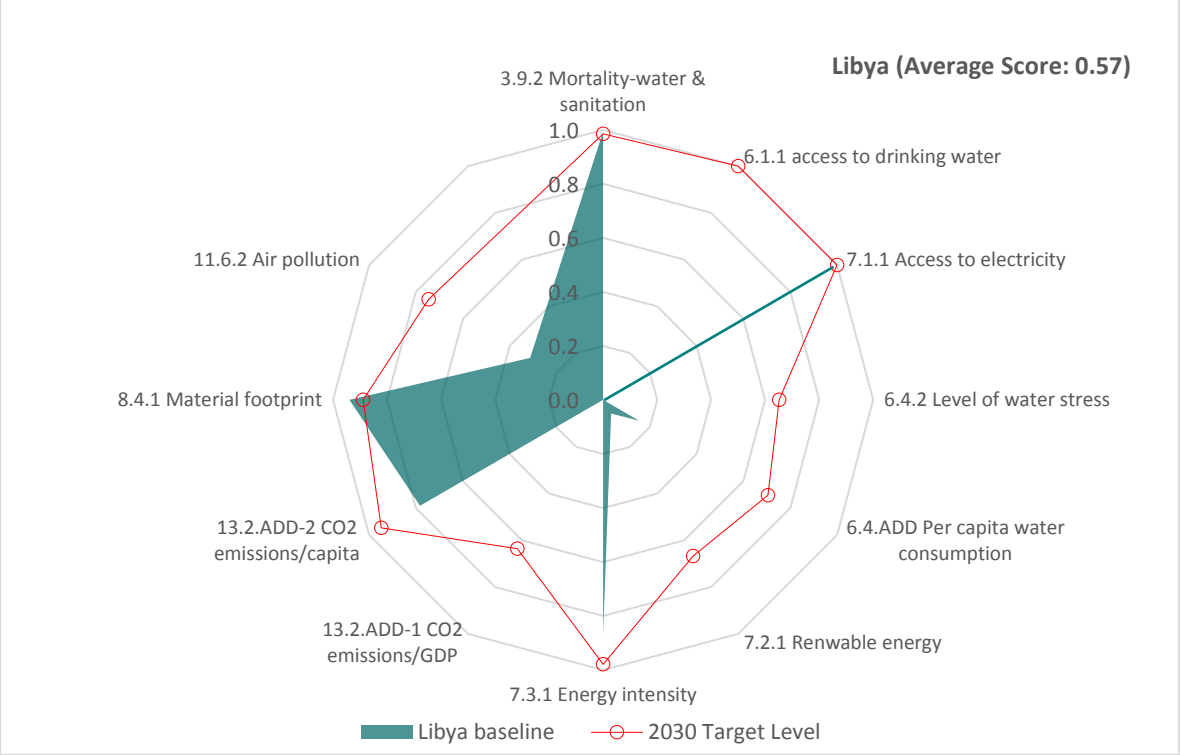


Figure 33: Libya – Comparison of Progress on SCP Indicators and 2030 Targets[42]

Within the Maghreb sub-region and the Arab region more broadly, Morocco is leading the way on progress across the SCP indicators (**Figure 34**). Compared with other Arab countries, Morocco is progressing well in terms of reducing mortality from water and sanitation (3.35 per 100,000), per capita water consumption (3,100 m^3), particulate matter air pollution (23 ug/m^3), energy intensity (3.23 MJ/USD), CO_2 emissions per unit of GDP (1.7 tons), per capita material footprint (3.56), and

[41] In the chart, the green shaded area plots the baseline values for the country across each indicator, with values closer to 1 representing better performance compared with other Arab countries. The red line plots the indicative 2030 target values for each indicator. The closer the green shaded area is to the red line, the closer the country is to achieving the indicative 2030 target.

[42] No data available for indicators 6.1.1 access to drinking water or 13.2.ADD-1 CO_2 emissions/GDP

renewable energy (11.8%). In most of these areas Morocco is tracking better than the global averages and appears to be on track to achieve the indicative 2030 target levels. The level of water stress in Morocco (49%) is less than in other Arab countries, however it is still high by global standards. Overall, remaining SCP challenges include providing access to safe drinking water (85.4%) and access to electricity (91.6%), as well as accelerating progress on increasing the share of renewable energy and increasing water efficiency to address CO_2 emissions and water stress.

Finally, Tunisia has also shown good progress on SCP indicators when compared with other Arab countries (**Figure 35**). Tunisia has good coverage of access to electricity (99.8%) and access to safe drinking water (97.8%), and very low mortality rates associated with water and sanitation (0.84 per 100,000). Overall, material footprint (6.1) is around the average for the Arab region, while energy intensity (4.45 MJ/USD) and CO_2 emissions are per capita (2.5 tons) and per unit of GDP (0.29 kg) are slightly better than the average levels for the region, and are better than global averages. Tunisia appears on track to reach indicative target levels in these areas. Good progress has been made on increasing the share of renewable energy (12.9%) which is the highest in the region (excluding LDCs), however efforts will need to continue to achieve the indicative 2030 target level. While the level of water stress (94%) is comparatively low compared with some other Arab countries, it is high by global standards and unsustainable in the long-term. Per capita water consumption (6,800 m3) is also relatively high for the sub-region and is above the global average, which represents and opportunity. Given the high levels of water stress, reducing per capita water consumption and increasing water efficiency would be a priority for achieving indicative 2030 target levels. Particulate matter air pollution (44.8 ug/m^3) is also relatively high in Tunisia, and could also be a focus of efforts.

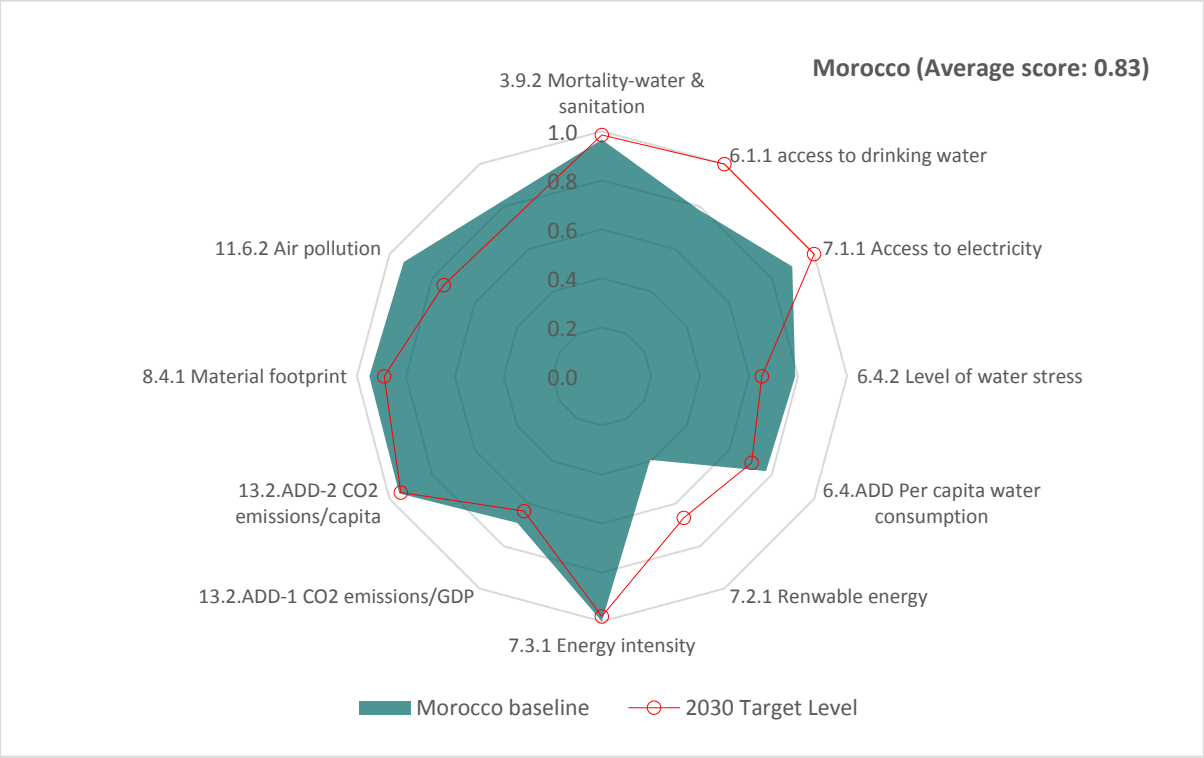


Figure 34: Morocco - Comparison of Progress on SCP Indicators and 2030 Targets

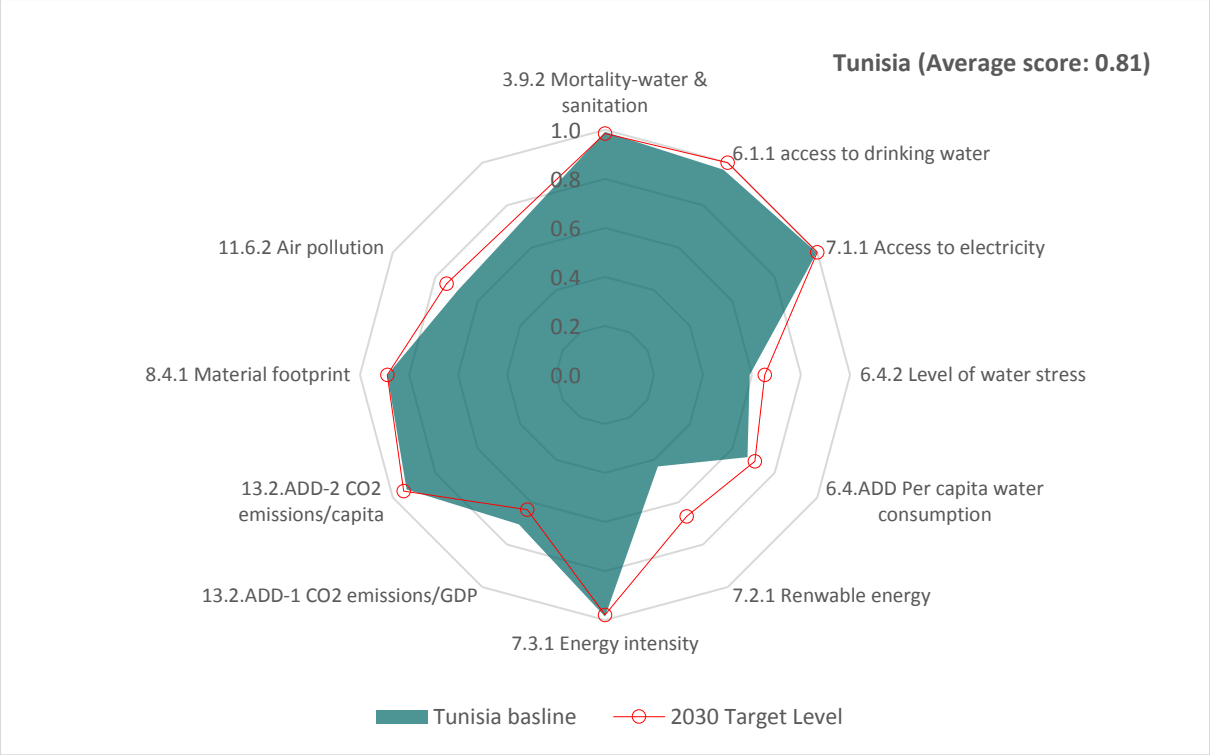


Figure 35: Tunisia - Comparison of Progress on SCP Indicators and 2030 Targets

4.3.2 Mashreq Sub-Region

The results of the national baseline assessment for countries in the Mashreq sub-region are provided in **Figures 36** to **41** below. Overall, the countries in the Mashreq sub-region have mixed results across the SCP indicators. Good progress has been made in most countries on the social indicators relating to access to electricity, drinking water and sanitation. Per capita material footprint, energy intensity and CO_2 emissions are also comparatively low for most countries, however further efforts would be needed in these areas to achieve 2030 target levels. While the levels of water stress are generally lower than other countries in the Arab region, per capita water consumption is high in most countries. Limited progress has been made across the sub-region in increasing the share of renewable energy.

Egypt is progressing comparatively well across indicators relating to mortality from water and sanitation (1.56 per 100,000), access to electricity (99.8%), and access to drinking water (99.4%) (**Figure 36**). Egypt has comparatively lower energy intensity (3.48 MJ/USD) compared with other countries in the region as well as the global average, and the per capita material footprint (6.4 tons) and per capita CO2 emissions (2.4 tons) are around average for the sub-region and both fall below global averages. Egypt would appear to be on track to achieving indicative 2030 target levels across these indicators with continued efforts in these areas. However, challenges are also evident in indicators relating to very high levels of particulate matter air pollution (104.7 ug/m^3), high per capita water consumption (9,800), and high levels of water stress (159.9%). These represent priority SCP indicators requiring urgent attention to achieve indicative 2030 target levels. While some progress has been made on increasing the share of renewables (6.4%), accelerating progress on this indicator would be needed to achieve the indicative 2030 target level.

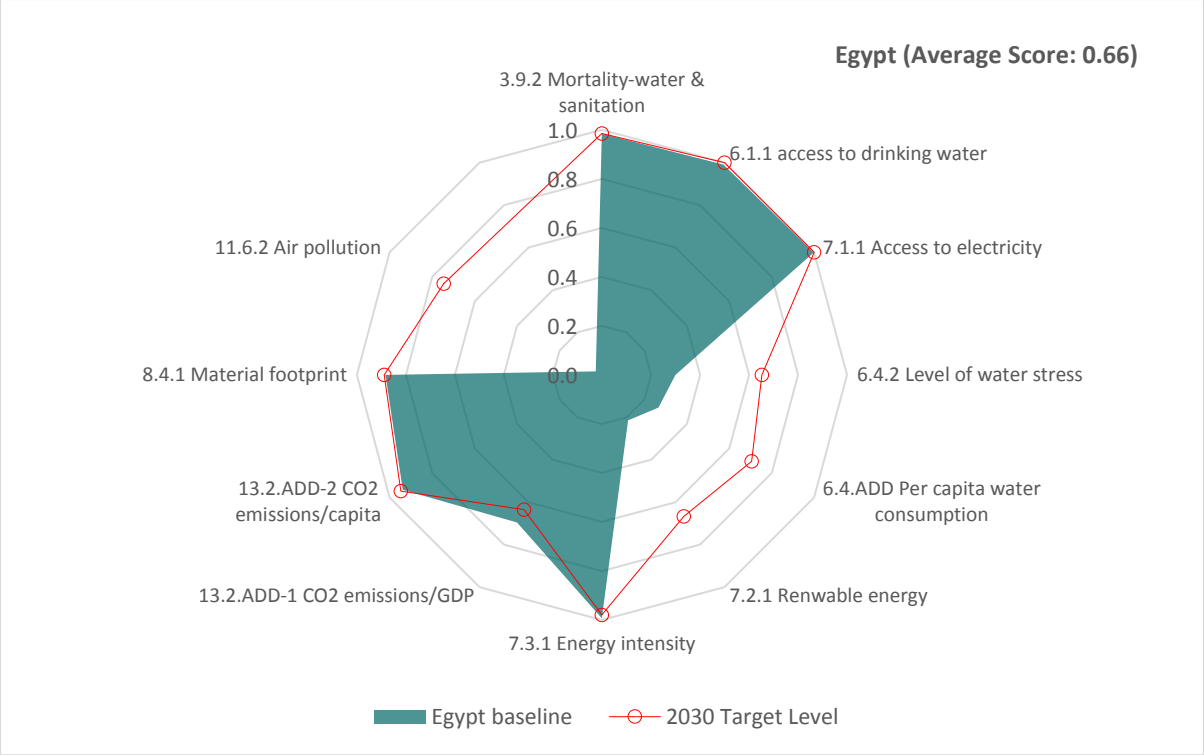


Figure 36: Egypt - Comparison of Progress on SCP Indicators and 2030 Targets

Iraq has also shown progress in ensuring access to electricity (98.8%) and addressing mortality from water and sanitation (3.92 per 100,000) (**Figure 37**). The country's per capita material footprint (3.04 tons) is comparatively low for the region and is well below the global average, and energy intensity (4.14) is also below regional and global averages. Iraq could reach indicative 2030 target levels for these indicators with continued progress. Key gaps and challenges are also evident in terms of the very high per capita water consumption (12,280 m3), high levels of water stress (93.1%), high particulate matter air pollution (52 ug/m^3), access to drinking water (86.6%), share of renewable energy (0.9%), and per capita CO_2 emissions (5.0 tons). Considerable efforts would be needed across each of these areas to reach the indicative 2030 target levels.

Overall, Jordan is progressing well on most SCP indicators compared with other Arab countries (**Figure 38**). The country has universal access to electricity (100%) and per capita water consumption (3,300 m^3) is very low compared with other more developed Arab countries. Jordan is also on track to achieve 2030 target levels in several other indicators, including mortality from water and sanitation (1.04 per 100,000), access to drinking water (96.9%), and particulate matter air pollution (38.8 ug/m^3). However, there are also several areas that would require further attention for Jordan to reach indicative 2030 target levels, including increasing the share of renewable energy (3.13%), reducing CO_2 emissions per unit of GDP (0.33 kg), reducing per capita material footprint (7.8 tons), reducing energy intensity (4.5 MJ/USD), and taking measures to address the high levels of water stress (118.4%).

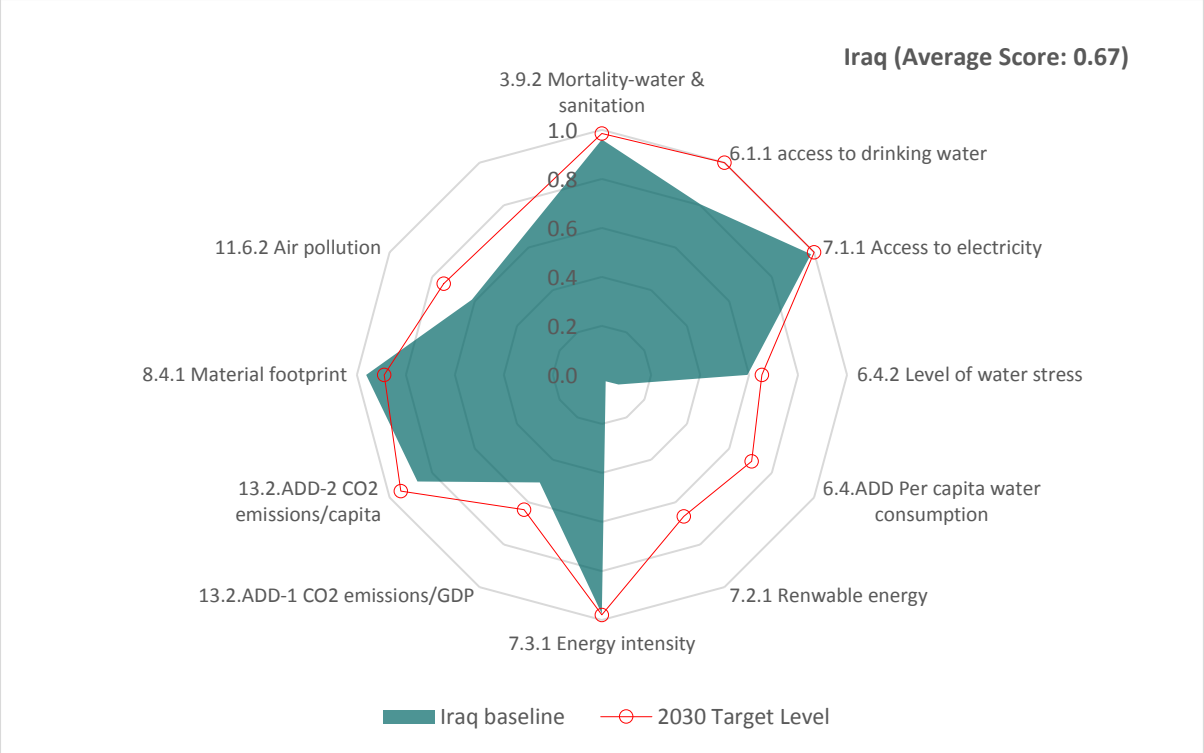


Figure 37: Iraq - Comparison of Progress on SCP Indicators and 2030 Targets

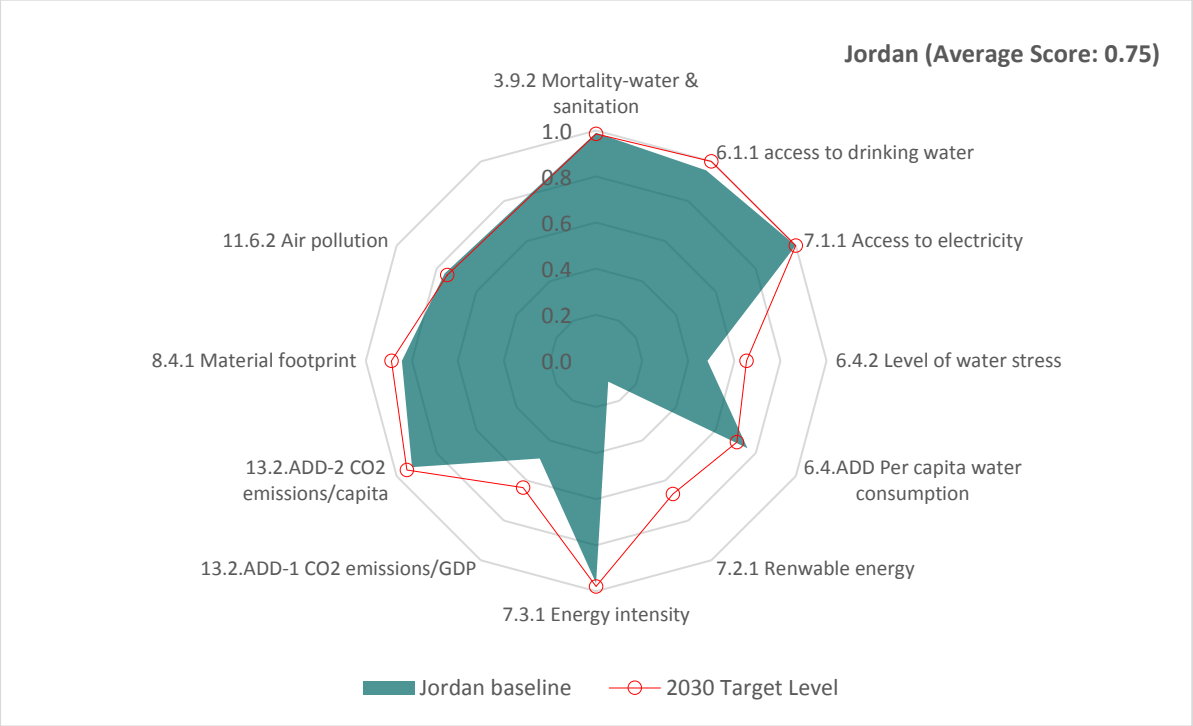


Figure 38: Jordan - Comparison of Progress on SCP Indicators and 2030 Targets

Lebanon is also progressing comparatively well on several SCP indicators, including mortality rates from water and sanitation (0.39 per 100,000), access to drinking water (99%), and access to electricity (100%) (**Figure 39**). The country has comparatively less water stress (33.3%) and particulate air pollution (32.6 ug/m^3) compared with other Arab countries, and is better than the indicative 2030 target levels for these indicators. Energy intensity (4.15 MJ/USD) is below average for the region and appears on track for achieving the indicative 2030 target level with some

additional progress. However, several ongoing challenges remain and will require attention to achieve indicative 2030 target levels, including high per capita material footprint (15.47 tons), per capita water consumption (6,800 m3), per capita CO_2 emissions (4.3 tons), and increasing the low share of renewable energy (3.2%).

Palestine has also made good progress on a range of SCP indicators when compared with other Arab countries, however data gaps limited the assessment (**Figure 40**). Access to electricity (99.9%) is almost universal, and the country's per capita material footprint (3.7 tons), energy intensity (3.7 MJ/USD), and per capita CO_2 emissions (0.59 tons) are comparatively low compared with both regional and global averages. Palestine experiences a lower level of water stress (48.8%) and particulate air pollution (20.6 ug/m^3) compared with other Arab countries, and is on track to achieve the indicative 2030 target levels for these indicators. Per capita water consumption (4,600 m^3) is around average for Arab countries, and the indicative 2030 target level appears to be within reach with additional effort. Progress has been made on increasing the share of renewable energy (10.5%), however additional efforts will be needed to achieve the 2030 target level. A key challenge for Palestine relates to improving access to drinking water (58.4%), where levels are very low for the region and urgent attention would be needed to address this gap.

Finally, the results for Syria also highlight progress in several areas, however data gaps limited the assessment (**Figure 41**). Material footprint per capita (3.6 tons) is well below the regional and global averages. Mortality from water and sanitation (1.8 per 100,000) as well as CO_2 emissions per capita (1.8 tons) are below the regional averages and also appear to be on track to achieve 2030 target levels with some additional progress. Key SCP challenges relate to high per capita water consumption (7,680 m3), high levels of water stress (109.4%), high levels of energy intensity (6.3 MJ/USD), access to drinking water (90.2%), and increasing the share of renewable energy (3%). However, it is unclear how the ongoing conflict in Syria has affected the indicators and what progress is possible.

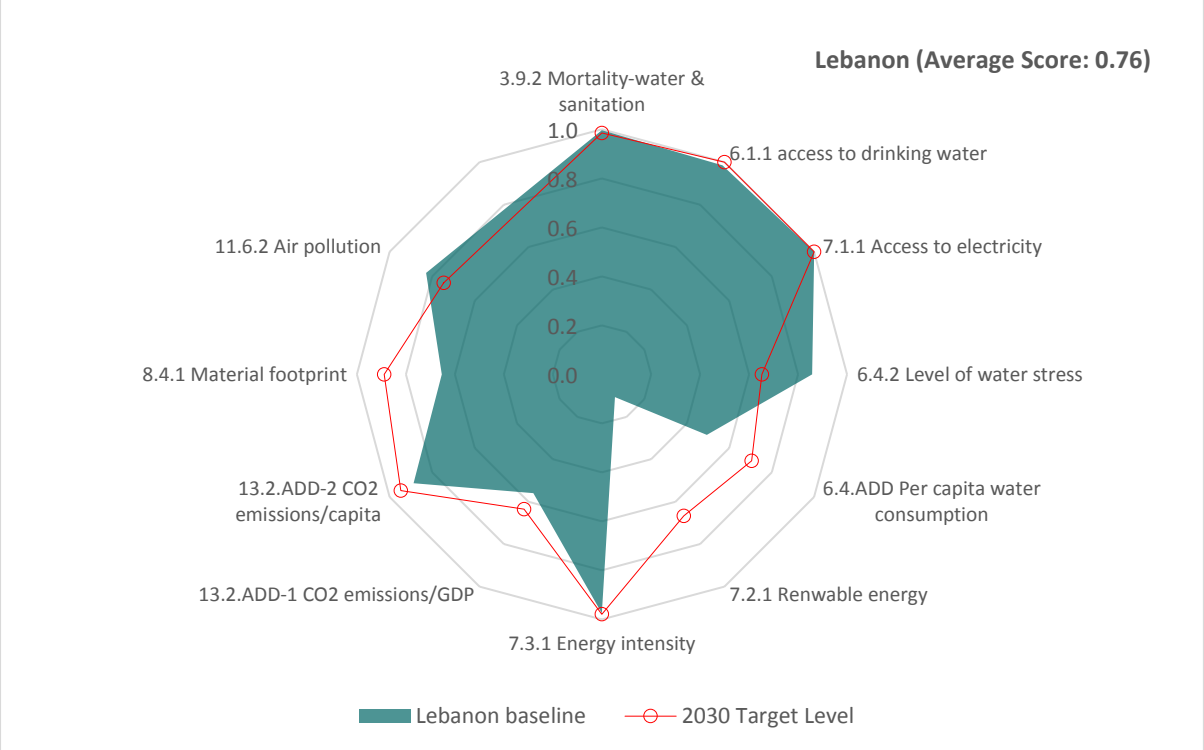


Figure 39: Lebanon - Comparison of Progress on SCP Indicators and 2030 Targets

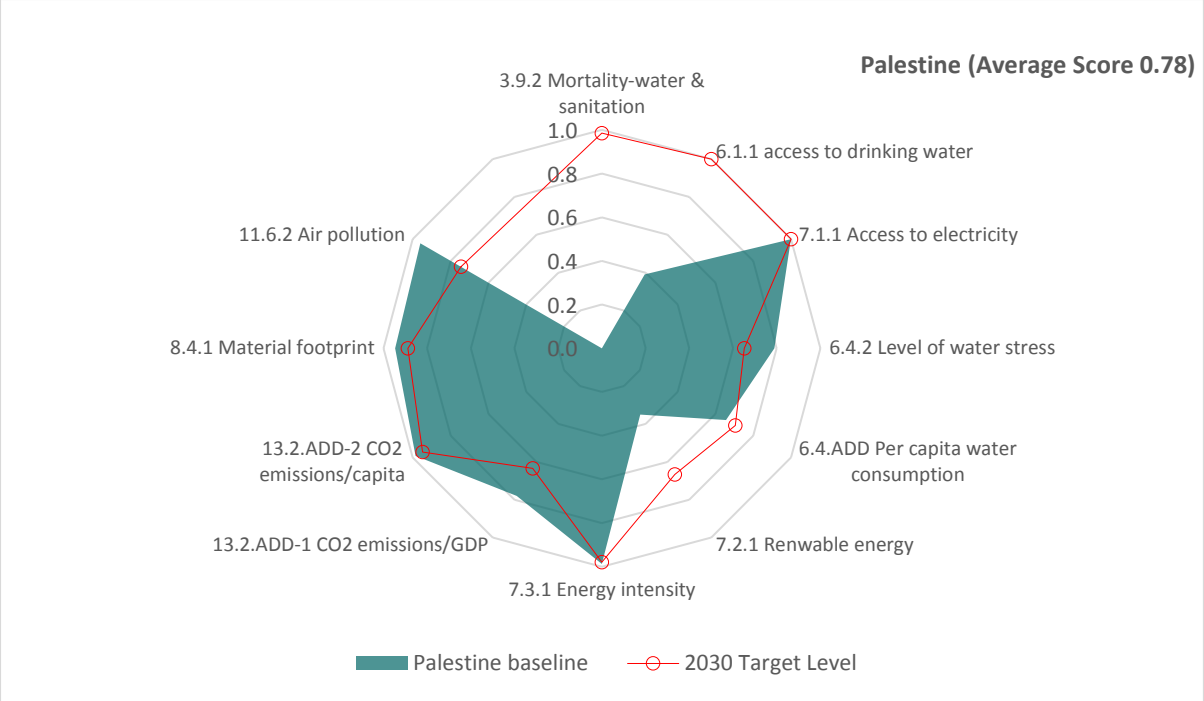


Figure 40: Palestine - Comparison of Progress on SCP Indicators and 2030 Targets[43]

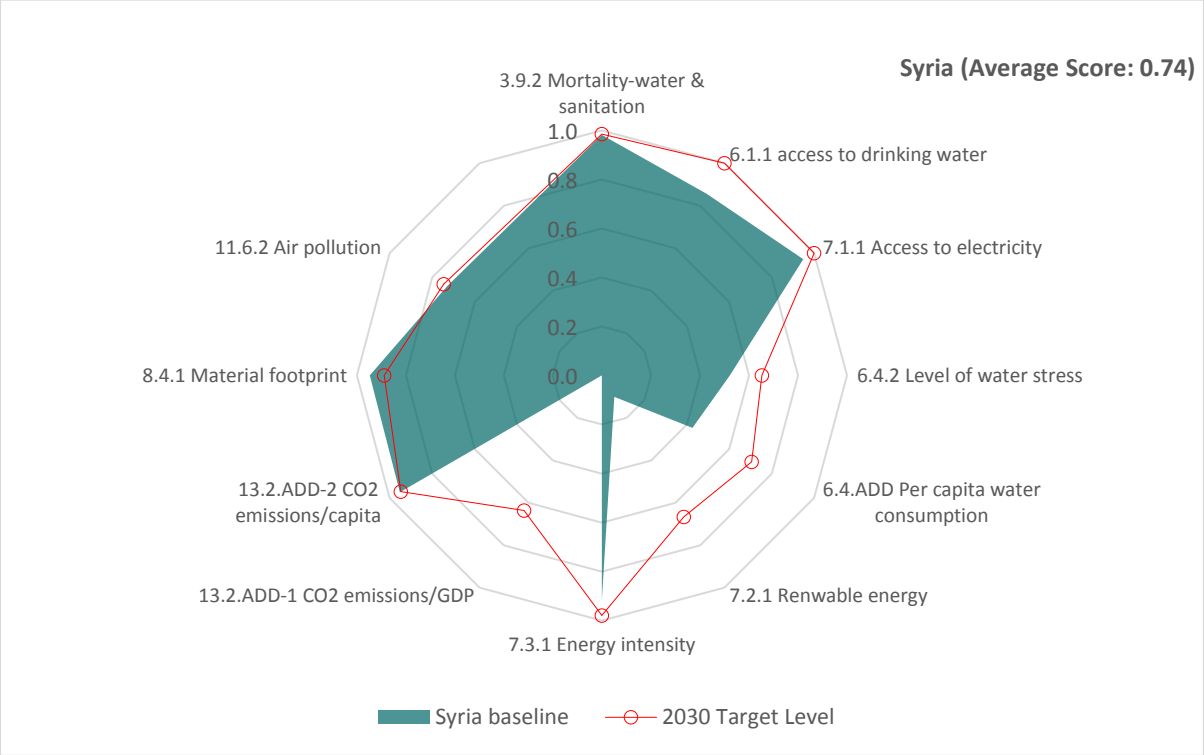


Figure 41: Syria - Comparison of Progress on SCP Indicators and 2030 Targets[44]

4.3.3 GCC Sub-Region

The results of the national baseline assessment for countries in the Mashreq sub-region are provided in **Figures 42** to **47** below. Overall, the countries in the GCC sub-region have mixed results across the SCP indicators. Generally, the sub-region has achieved very strong progress relating to social indicators for access to drinking water and electricity, and reducing mortality from water and

[43] No data available for 3.9.2 mortality related to water and sanitation.
[44] No data available for 13.2.ADD-1 CO_2 emissions/GDP.

sanitation. However, performance is comparatively poor for indicators related to environmental impacts and resource consumption. Levels of water stress are generally very high, and the GCC countries often have high per capita material footprint, high per capita CO_2 emissions, high per capita water consumption, and low levels of renewable energy.

Bahrain has demonstrated good progress on access to electricity and drinking water as well as mortality associated with water and sanitation (**Figure 42**). However, it has the highest per capita water consumption in the region (13,310 m^3) as well as the highest CO_2 emissions per unit of GDP (0.544 kg), and (equal) lowest share of renewable energy (0%). Material footprint (12.3 tons) and energy intensity (10 MJ/USD) are both double the regional average and well above the global average. Air pollution (55.5 ug/m^3) is also high compared with other countries in the region. Achieving the indicative 2030 target levels for these indicators would represent a considerable challenge.

Kuwait also has made good progress on indicators relating to access to electricity and drinking water and mortality rates associated with water and sanitation (**Figure 43**). It experiences some of the highest levels of water stress in the region (2603.5%) and has the highest per capita material footprint (41.76 tons), while the share of renewable energy is equal lowest in the region (0%). The emissions of CO_2 per capita are also high (27.2 tons) at almost three times the OECD average. Baseline levels for these indicators are well below the indicative target values for 2030 and would require concerted action to reduce gaps.

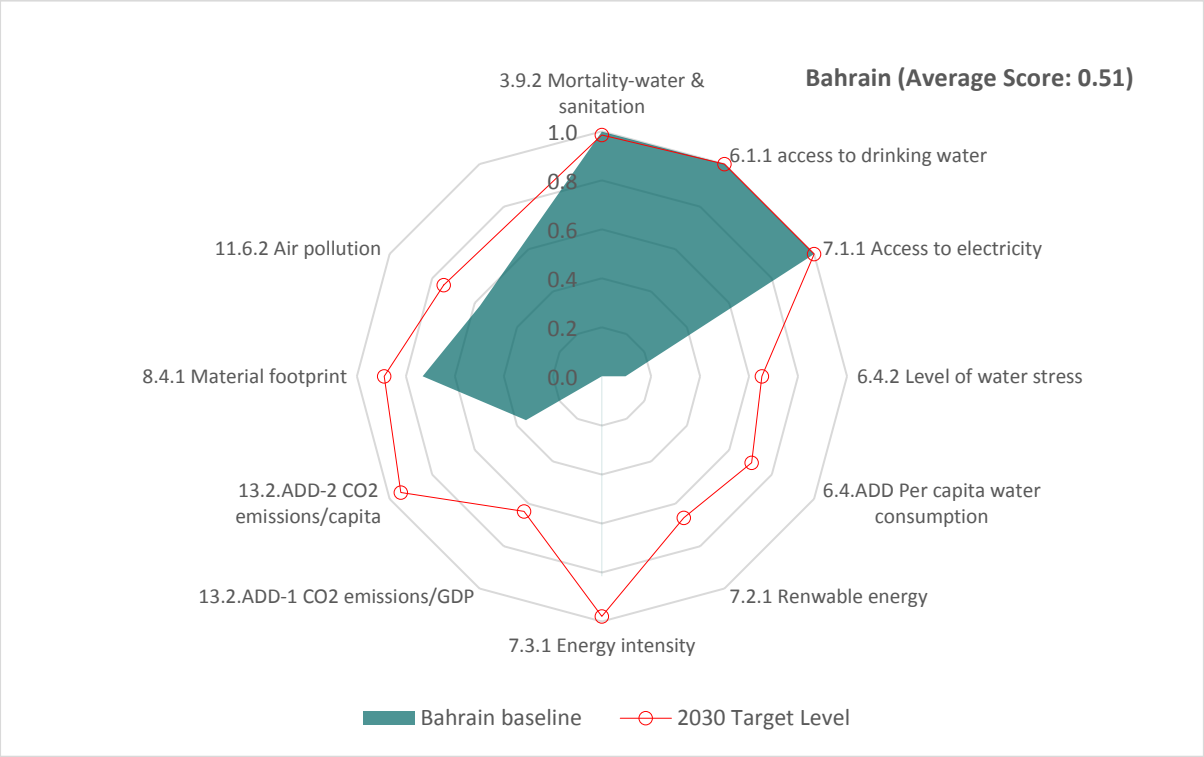


Figure 42: Bahrain - Comparison of Progress on SCP Indicators and 2030 Targets

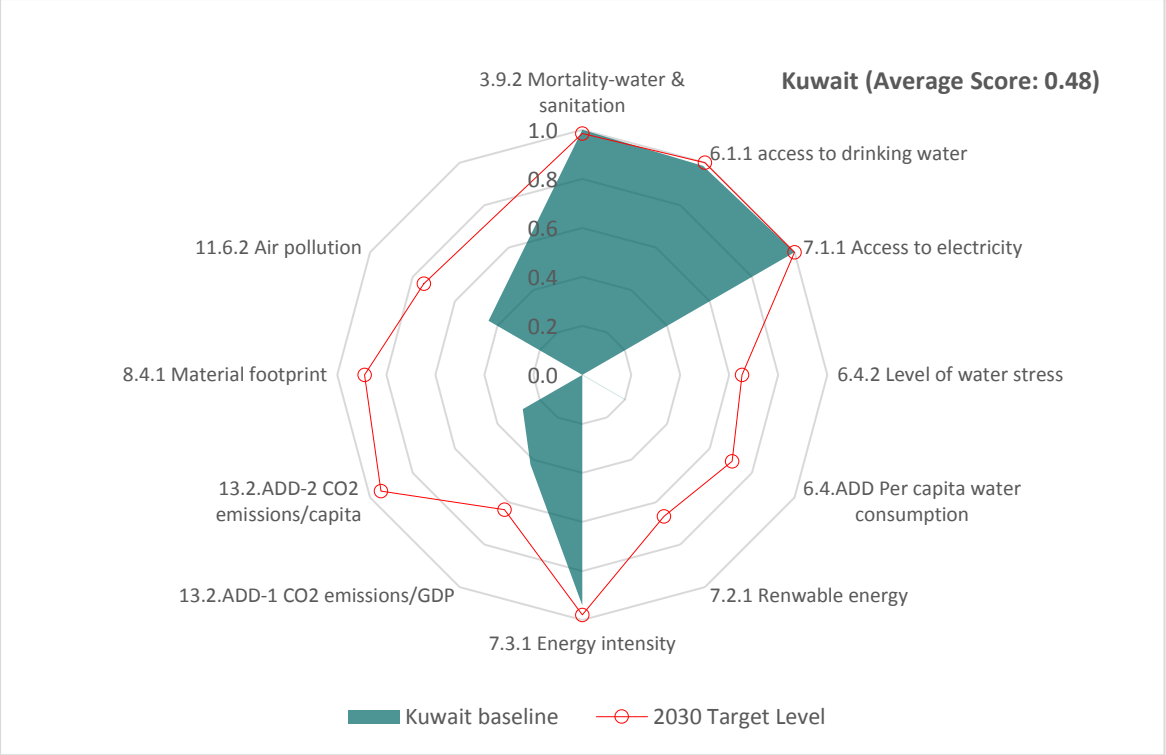


Figure 43: Kuwait - Comparison of Progress on SCP Indicators and 2030 Targets

Of the GCC countries, Oman is performing the best across the SCP indicators reviewed (**Figure 44**). Oman has universal coverage of access to electricity (100%) and very low mortality rates from water and sanitation (0.36 per 100,000). Per capita consumption of water (3,380 m^3) is also comparatively low for Arab countries. Oman is on track to achieve indicative 2030 target levels for these indicators. The level of water stress (106.2%) is lower than other GCC countries, but is high by global standards and exceeds the 2030 target level. The per capita material footprint (16.27 tons) and per capita CO_2 emissions (16.5 tons) are also high compared with regional and global averages, and the share of renewable energy is the equal lowest for the region (0%). Access to safe drinking water (93.4%) is also lower than other GCC countries. These indicators represent SCP challenges for Oman if it is to achieve the indicative 2030 target levels.

Qatar's progress on SCP indicators is similar to other GCC countries, with good progress evident in access to electricity (100%) and safe drinking water (100%) and very low levels of mortality from water and sanitation (0.05 per 100,000) (**Figure 45**). Qatar's CO_2 emissions per GDP (0.3 kg) are below the regional and world averages, however it has the highest per capita CO_2 emissions (37.8 tons) in the region and equal lowest share of renewable energy (0%). Levels of water stress are very high in Qatar (472.5%), and it has the second highest material footprint per capita in the region (22 tons) which is double the global average. Per capita water consumption is high (7,330 m^3), and Qatar has the highest levels of particulate matter air pollution in the region (106.16 ug/m^3). Baseline levels for these indicators are far from the indicative 2030 target levels and would require concerted action to reduce gaps.

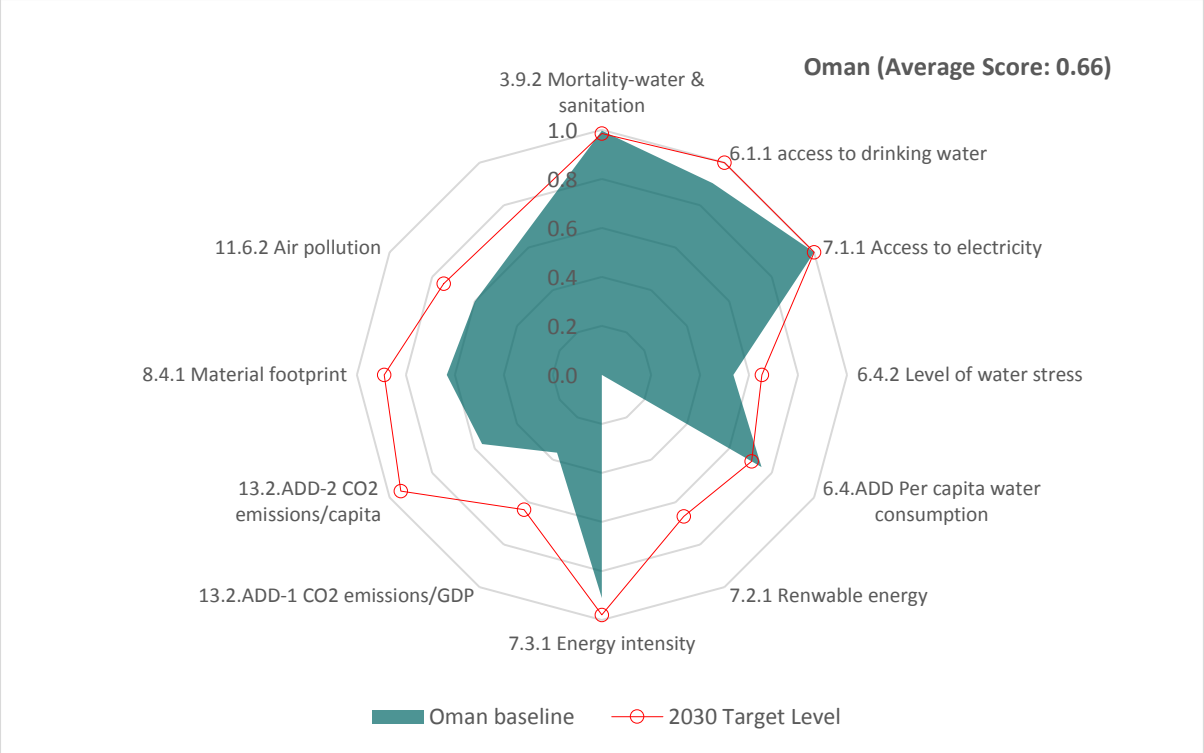


Figure 44: Oman - Comparison of Progress on SCP Indicators and 2030 Targets

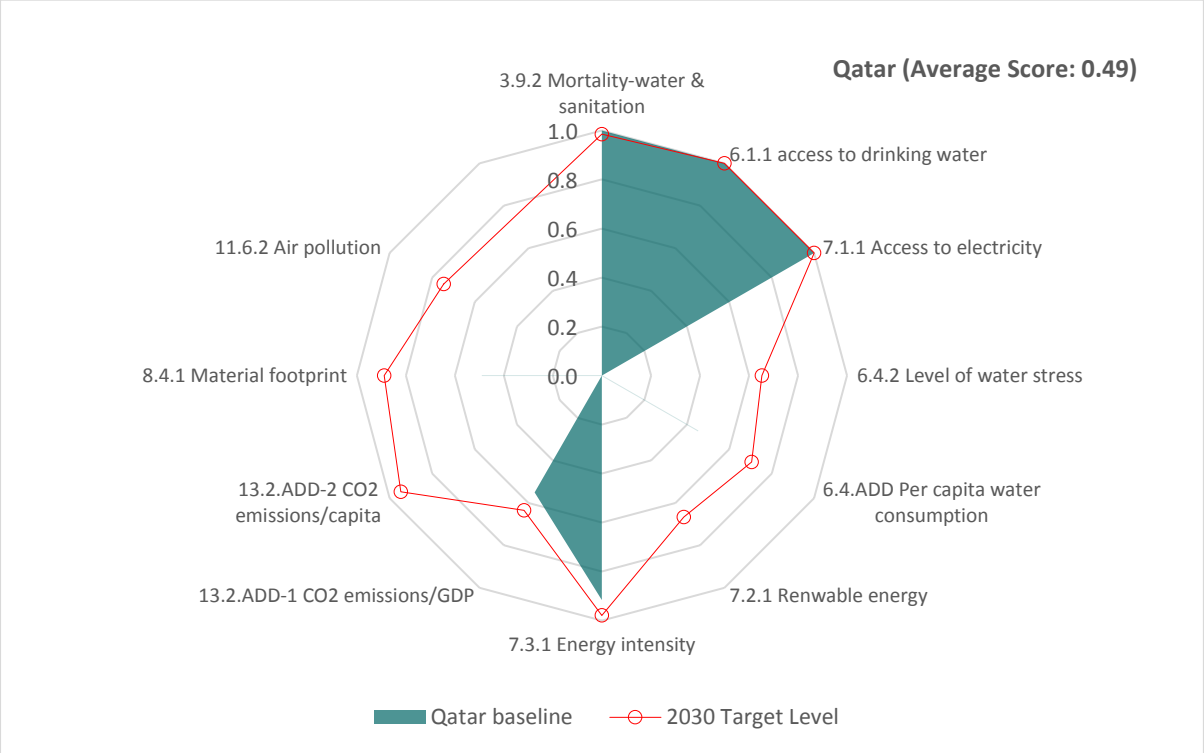


Figure 45: Qatar - Comparison of Progress on SCP Indicators and 2030 Targets

Saudi Arabia also shows similar performance to other GCC countries across the SCP indicators, with good progress on access to electricity (100%) and drinking water (97%), and low mortality from water and sanitation (0.22 per 100,000) (**Figure 46**). Energy intensity (5.83 MJ/USD) is lower than other GCC countries, but is still above the regional, global and OECD averages. Per capita water consumption (6,920 m^3), per capita material footprint (12.7 tons) and per capita CO_2 emissions (18.1 tons) are all high compared with the regional averages, and are also well above global averages. The

level of water stress is very high (1242.6%) and there is a very low share of renewable energy (0.01%). Particulate matter air pollution (106.2 ug/m^3) is the second highest in the region. Baseline levels for these indicators are below the indicative 2030 target levels and would require concerted action to reduce gaps.

Finally, the UAE also shows good progress in access to drinking water and electricity, and very low levels of mortality from water and sanitation (**Figure 47**). Energy intensity (5.03 MJ/USD) and per capita water consumption (6,800 m^3) are generally lower than other GCC countries, but are still above the regional averages. The level of water stress is very high (2346.5%) while per capita material footprint (34.66 tons) is the second highest in the region and is over three times the global average. Per capita CO_2 emissions (18.8 tons) are also high at over three times the regional and global averages, and the share of renewable energy is low (0.17%). Baseline levels for these indicators are below the indicative 2030 target levels and would require concerted action to reduce gaps.

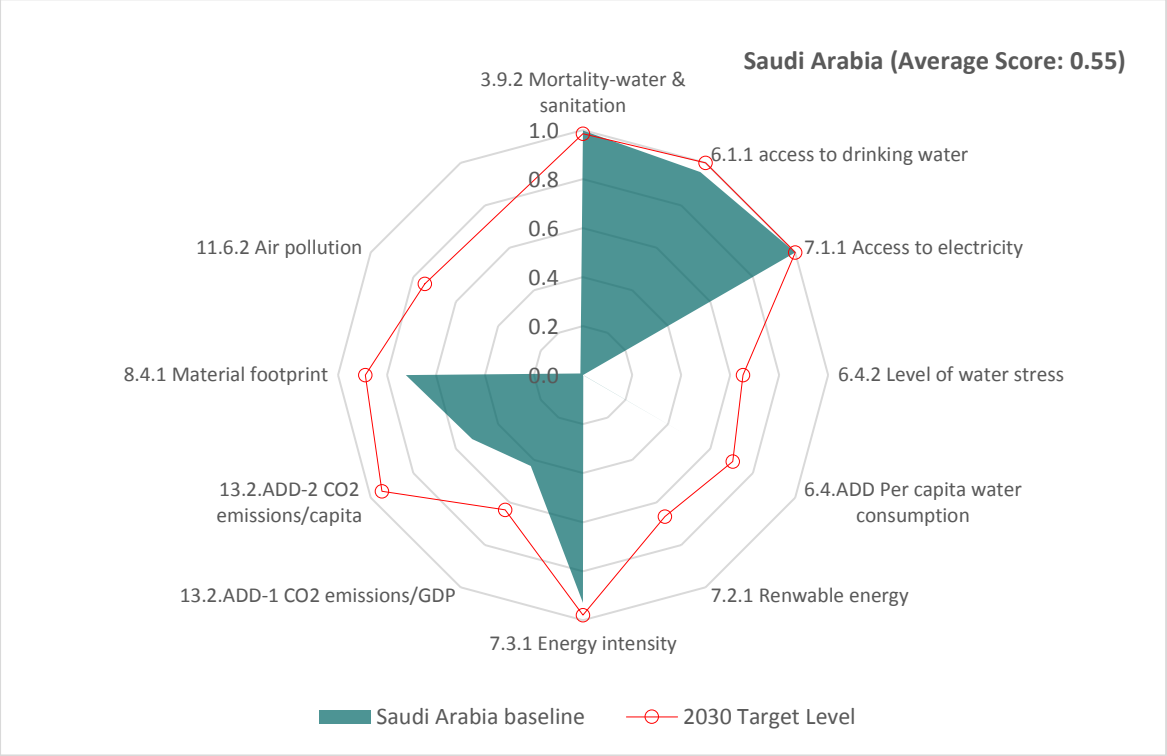


Figure 46: Saudi Arabia - Comparison of Progress on SCP Indicators and 2030 Targets

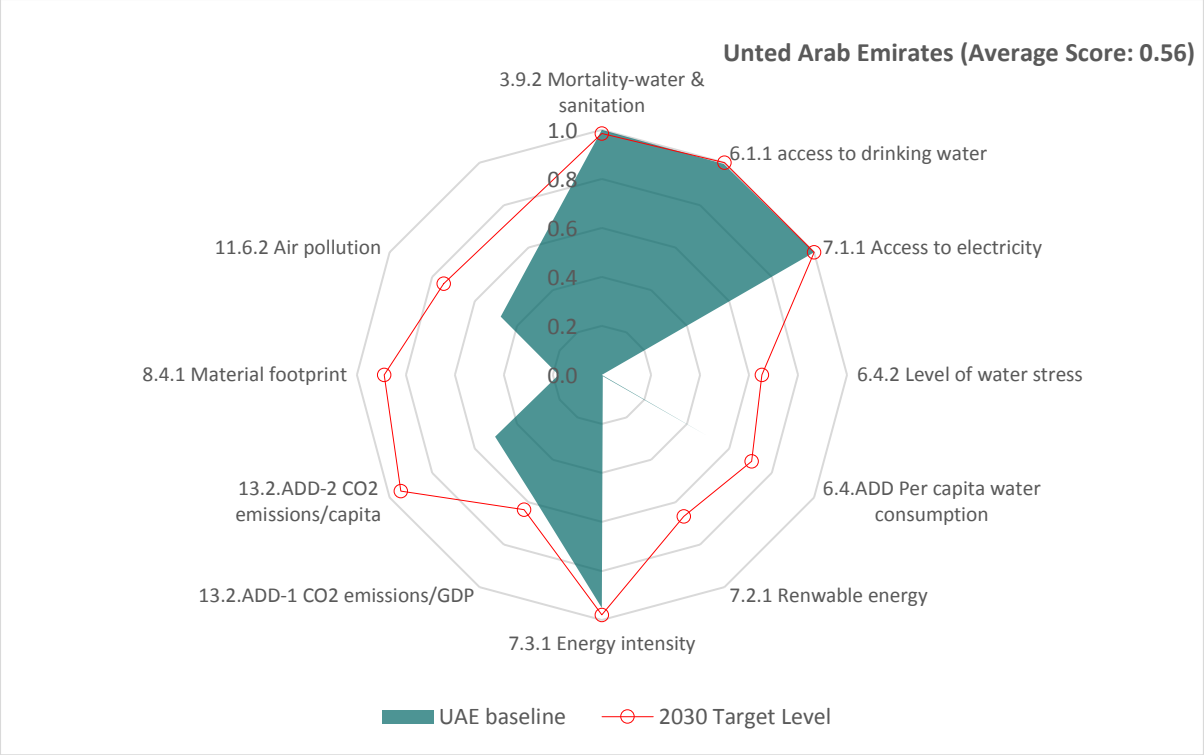


Figure 47: United Arab Emirates - Comparison of Progress on SCP Indicators and 2030 Targets

4.3.4 LDCs Sub-Region

The results of the national baseline assessment for countries in the LDCs sub-region are provided in **Figures 48** to **53** below. Overall, the LDCs have mixed results across the SCP indicators. Generally, the countries show comparatively poor progress on social indicators relating to access to services and mortality from water and sanitation. Less ambitious indicative targets were therefore selected for the analysis of these indicators for LDC countries. However, lower levels of economic development, infrastructure and access to services has also meant that the region has relatively low resource consumption, CO_2 emissions, and energy intensity, and a greater share renewable energy resources as a proportion of the low final energy demand. Levels of water stress, per capita water consumption, and air pollution are also comparatively low compared with other Arab countries. However, this situation is likely to change as countries seek much needed economic development and efforts could be made to adopt more sustainable approaches and technologies to manage environmental impacts.

Within the group of LDCs, Comoros has made good progress on providing access to safe drinking water (90.1%), which is above the regional average and just below the global average of 91.1% (**Figure 48**). Per capita water consumption (630 m^3) and per capita CO_2 emissions (0.218 tons) are also comparatively very low, and the level of water stress (1.17%) is the lowest in the region. The share of renewable energy is also high for the region (46.5%) but is lower than the global average for LDCs (73.8%), and air pollution is also comparatively low for the region (17.1 ug/m^3). No data was available for material footprint. In terms of challenges for achieving 2030 target levels, the main focus areas relate to access to electricity which is currently low for the region at around 74% as well as mortality related to water and sanitation, which is high at around 29 per 100,000.

Djibouti has also made good progress on ensuring access to drinking water (90%), which is above the regional average and close to the global average (**Figure 49**). The country has comparatively low levels of water stress (7.9%), per capita water consumption (1,750 m^3), per capita CO_2 emissions (0.68 tons), per capita material footprint (3.26 tons) and a high share of renewable energy (34.15%).

The main challenges for achieving 2030 target levels relate to access to electricity, which is low at 46.7%, as well as the high mortality rate associated with water and sanitation (26.4 per 100,000). Particulate matter air pollution is also high (51.5 ug/m^3) and is above the global average.

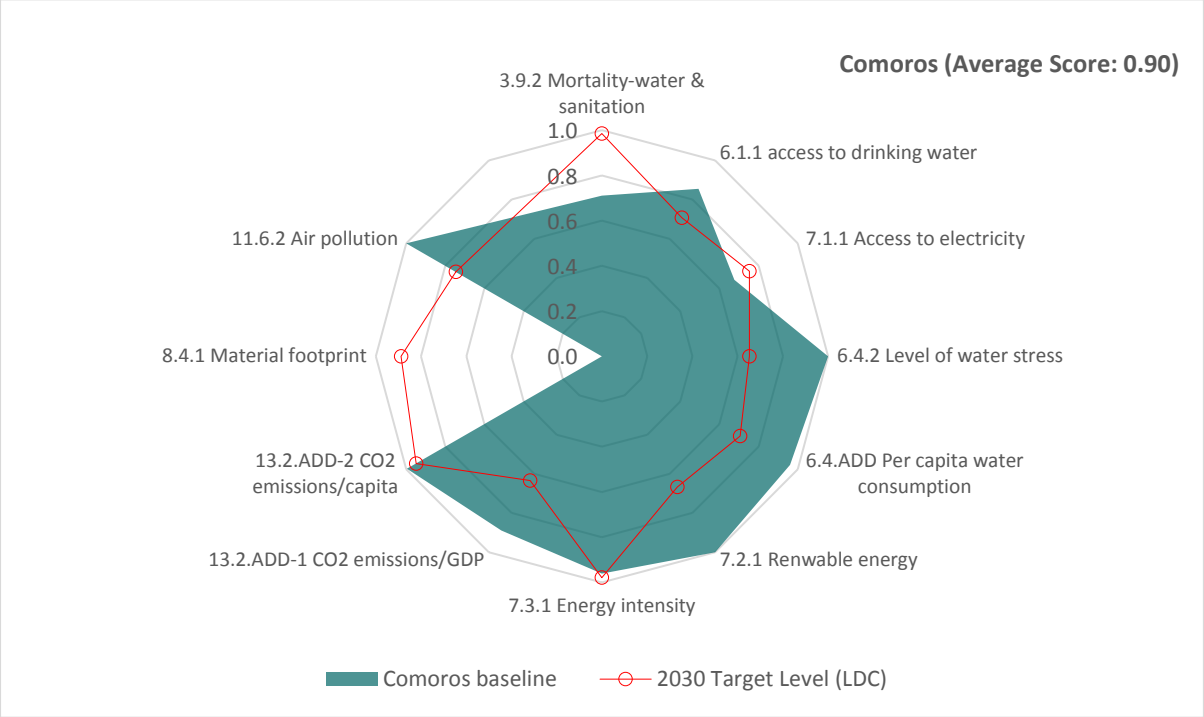


Figure 48: Comoros - Comparison of Progress on SCP Indicators and 2030 Targets[45]

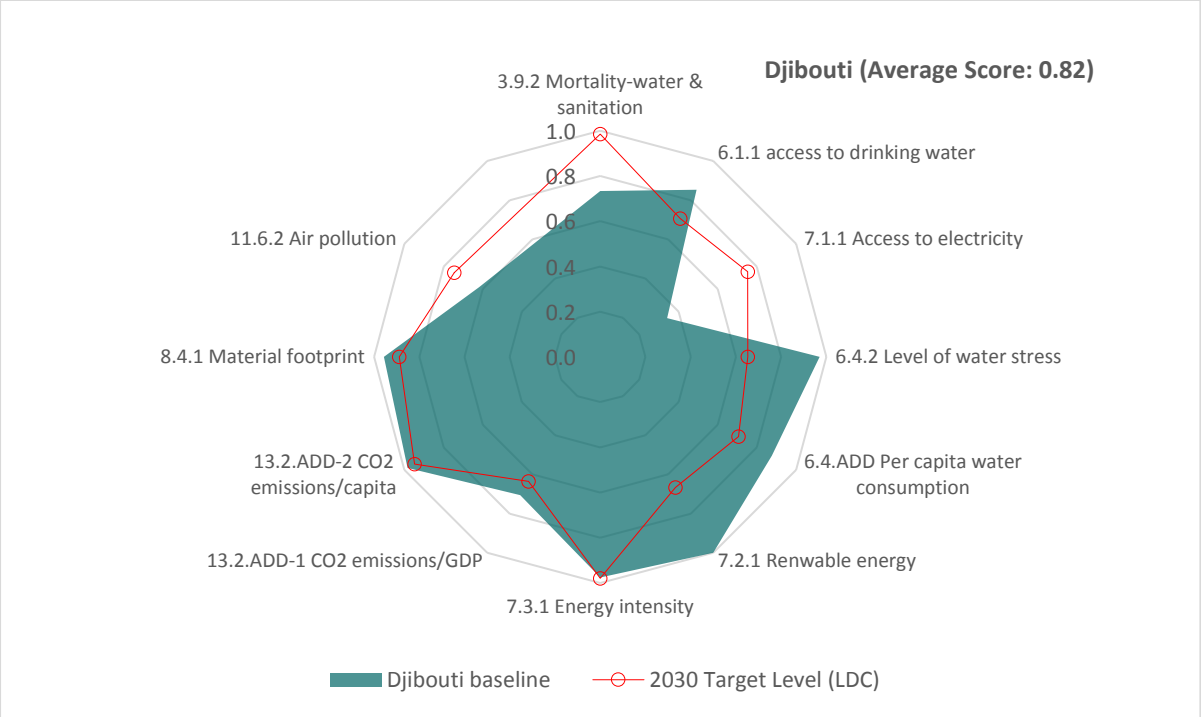


Figure 49: Djibouti - Comparison of Progress on SCP Indicators and 2030 Targets

The results for Mauritania highlight the clear split in performance that is common across the LDCs between the social SCP indicators (which are generally lagging behind) and the environmental SCP

[45] No data available for 8.4.1 Material footprint per capita.

indicators (which generally remain with sustainable limits) (**Figure 50**). With regard to the environment- and resource-related indicators (i.e. refer to the bottom of the radar chart in **Figure 50**), Mauritania is already above the indicative 2030 target levels. For example, the country has low levels of water stress (15.9%), per capita material footprint (2.43 tons), per capita water consumption (2,350 m^3), and per capita CO_2 emissions (0.67 tons). Key challenges for achieving 2030 targets relate to improving access to drinking water (57.9%), access to electricity (38.8%), mortality rates from water and sanitation (28.9 per 100,000), and particulate matter air pollution (85.1 ug/m^3).

Overall, Somalia is experiencing the poorest performance on the social SCP indicators compared with other Arab LDCs, with very low levels of access to drinking water (31.7%) and access to electricity (19.1%), and the highest mortality rate in the region associated with water and sanitation (98.8 per 100,000) (**Figure 51**). In addition, energy intensity is also the highest in the region (40.1 MJ/USD), however this may be associated with low levels of GDP. Data for CO_2 emissions per GDP was not available. As with the other LDCs, baseline levels for environment- and resource-consumption related indicators are not currently posing a challenge in Somalia.

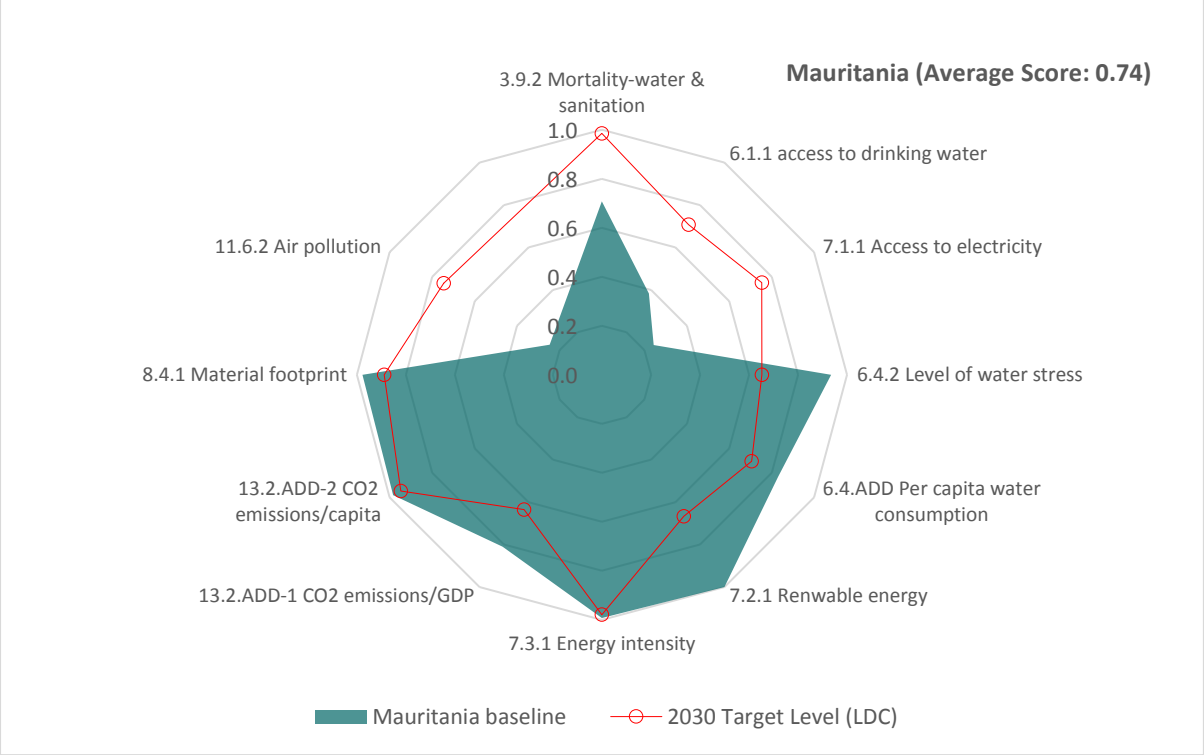


Figure 50: Mauritania - Comparison of Progress on SCP Indicators and 2030 Targets

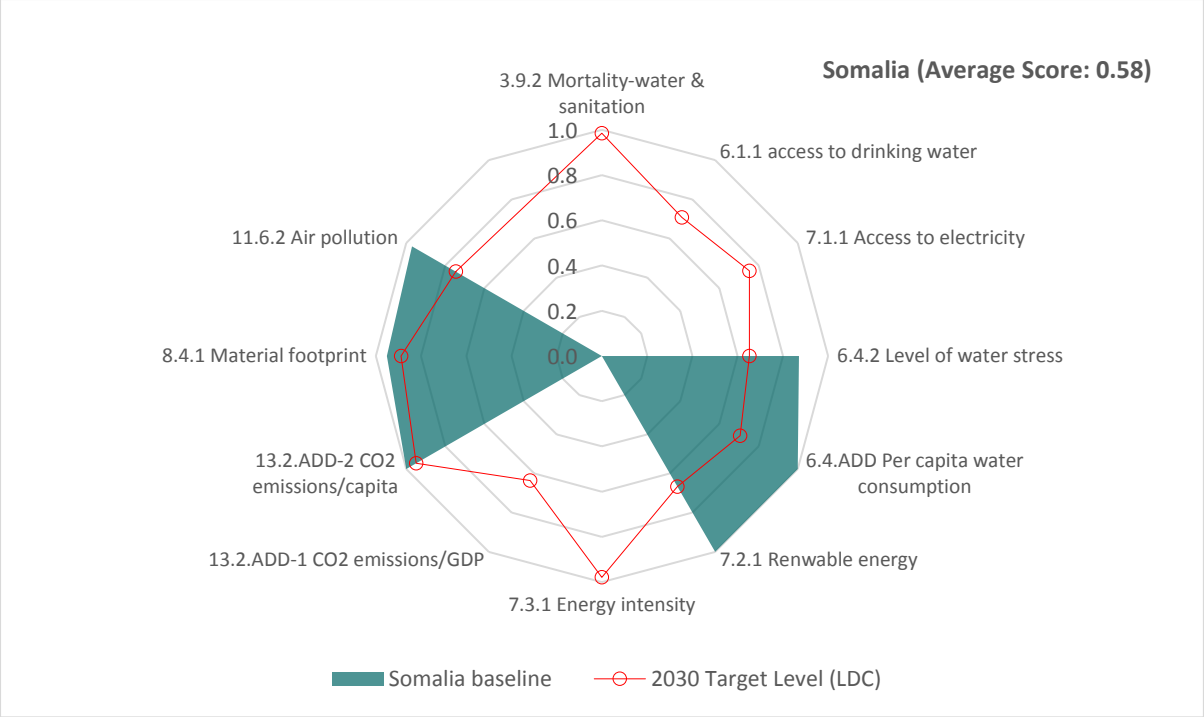


Figure 51: Somalia - Comparison of Progress on SCP Indicators and 2030 Targets[46]

The results for Sudan highlight similar challenges to other LDCs, in particular access to drinking water (55.5%), access to electricity (44.9%), and mortality rates associate with water and sanitation (34.6 per 100,000) which are the second highest for the region (**Figure 52**). Data on material footprint was not available for Sudan, however baseline levels for other environment- and resource-related indicators are not problematic for Sudan.

Finally, the chart for Yemen highlights mixed results across the SCP-related indicators including additional environmental challenges compared with other LDCs (**Figure 53**). In terms of social indicators, key challenges remain in terms of access to water (54.9%) and access to electricity (72%), and mortality rates from water and sanitation are also high for the region, but lower than other LDCs (13.03 per 100,000). In addition, Yemen is experiencing very high levels of water stress (227.7%) and high levels of particulate air pollution (52.8 ug/m^3). Compared with the other LDCs, the share of renewable energy is also low in Yemen (1.06%). However, per capita material footprint (1.52 tons), water consumption (1,010 m^3) and per capita CO_2 emissions (0.99 tons) are all low compared with other countries in the region as well as global averages.

[46] No data available for 13.2.ADD-1 CO2 emissions/GDP.

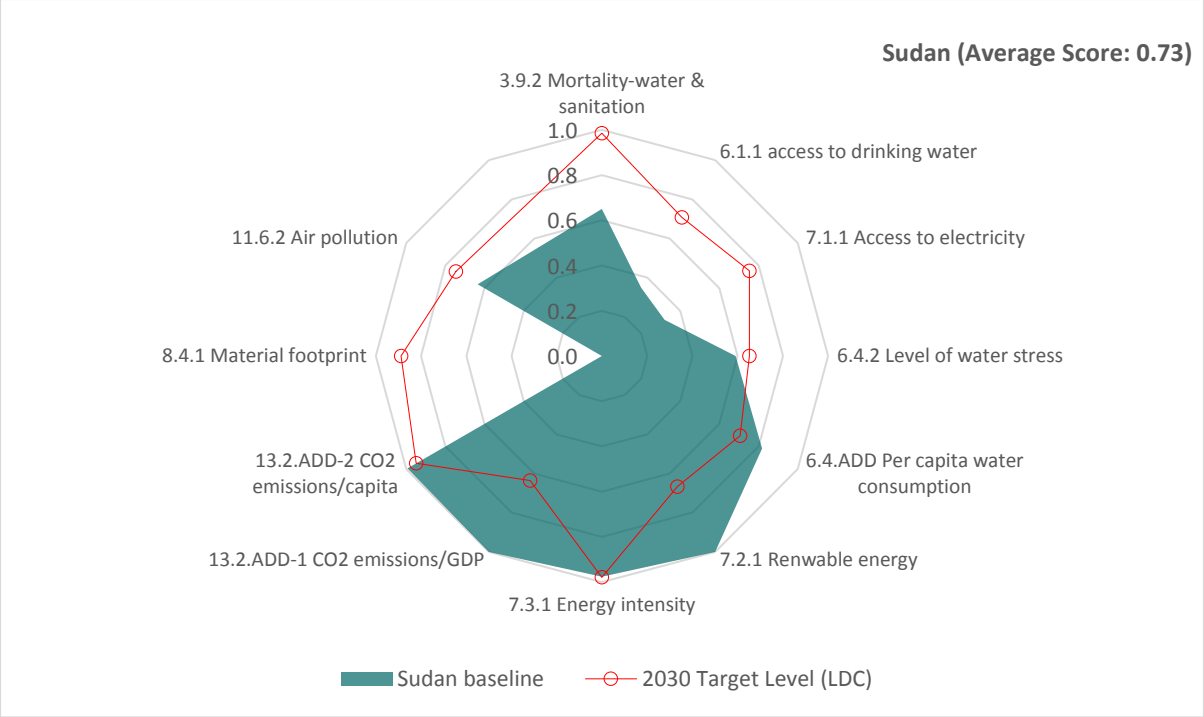


Figure 52: Sudan - Comparison of Progress on SCP Indicators and 2030 Targets[47]

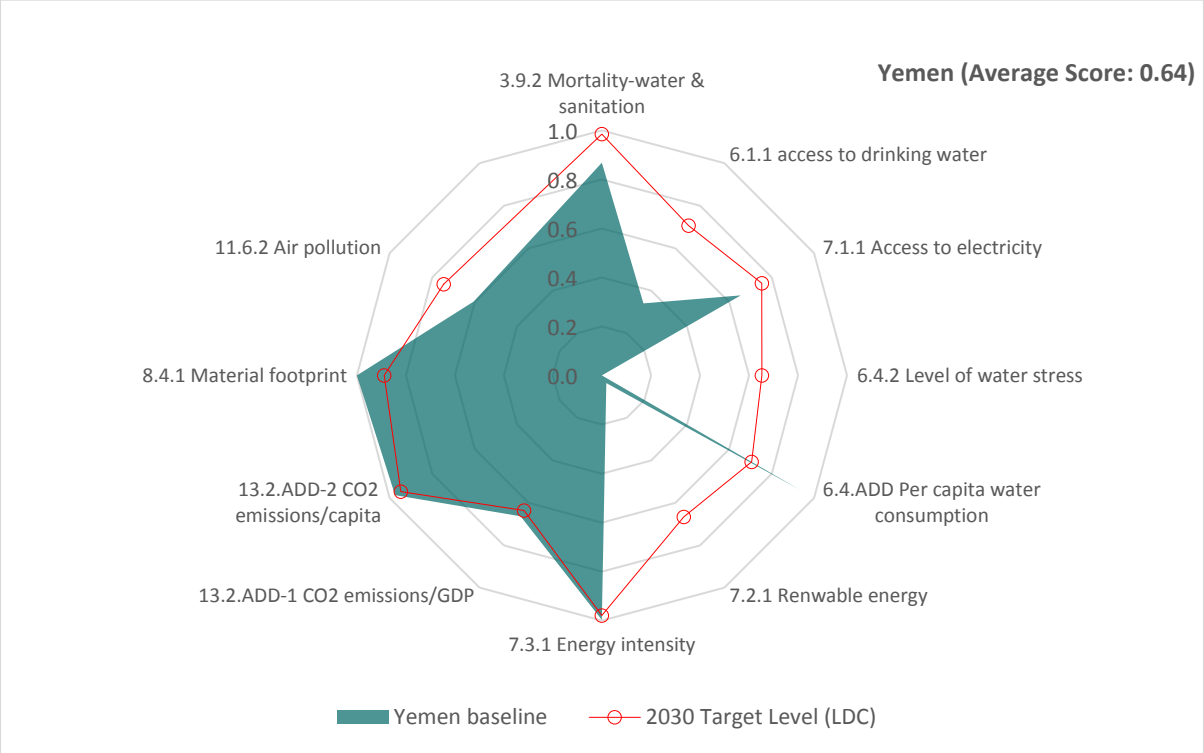


Figure 53: Yemen - Comparison of Progress on SCP Indicators and 2030 Targets

5. Conclusions and priorities for SCP in the Arab region

This report has provided a comprehensive baseline assessment of progress at the regional, sub-regional and national levels across a broad range of SCP indicators as well as related SDG targets for

[47] No data available for 8.4.1 Material footprint per capita.

2030. The Arab region has a regional framework in place through the ARSSCP that supports implementation of the 10YFP as well as monitoring and reporting on SCP progress. However, recent developments at the global level including the adoption of the SDGs mean that the strategy is now outdated. The targets and indicators of the SDGs provide an enhanced evidence-based framework for regional and national implementation of SCP, which promotes target-setting and monitoring of progress on SCP indicators. The SDGs therefore strongly complement the programmes and priorities set out in the 10YFP and the ARSSCP and should be implemented in unison, ensuring alignment of these two global and regional frameworks. The recent adoption by CAMRE of the *Guiding Framework* of environmental SDG targets and indicators provides the opportunity for the region to update its regional SCP strategy to better align with the SDGs and include tangible SCP targets and corresponding indicators for the region that can support monitoring and follow-up.

At the national level, clear progress has also been made in terms of national planning and target-setting to support SCP implementation. At least seven Arab countries have adopted national SCP action plans, which have assisted in raising awareness of SCP, prioritisation of SCP themes and actions, national SCP target-setting, and implementation planning. There is evidence to suggest that the development of these plans have resulted in greater integration of SCP targets and indicators into national development strategies and visions. This is a critical requirement if actions to achieve SCP are to gain the necessary political support and funding. Of the Arab countries reviewed, leading examples included Jordan and Egypt where a broad range of SCP targets had been incorporated into their long-term national visions. Overall, clear progress is evident in the region in terms of national planning for SCP. Arab countries are taking SCP objectives seriously, seven countries have adopted national SCP action plans, and countries are also clearly mainstreaming relevant targets and indicators into their national development strategies.

The baseline assessment of regional and sub-regional progress on a broad range of SCP indicators highlighted areas of good progress, as well as ongoing challenges and gaps. However, there was considerable variation across the different Arab sub-regions and countries, with different challenges and priorities identified.

At the **Arab regional level**, key areas where progress is on track and trending well include access to electricity with over 88% coverage (7.1.1), the proportion of population with municipal waste collection which stands at over 75% for those countries with data (11.6.1.ALT), and the proportion of population below the international poverty line which has fallen below 5% in the region (1.1.1). In addition, the indicator for mortality associated with water and sanitation (3.9.2) also performed better than the global benchmark, however no trend data was available to complete the assessment.

It is important to note that the indicators that demonstrated good progress related mainly to improvements in the supply of services to the Arab population, which are primarily social development indicators. Based on the assessment in this report, the region is making good progress on these indicators and could be considered on track for progressing towards related SDG targets. Efforts in these areas are proving effective and should be continued.

However, the increased provision of these critical services to the population has come at an environmental cost for the region. Key indicators experiencing little or no progress at the regional level and which are currently going backwards include exposure to air pollution (11.6.2.ALT), per capita CO_2 emissions (13.2.ADD-2), level of water stress (6.4.2), and per capita municipal waste (11.6.ADD). For these indicators, the region has made little progress and is going backwards, and

breakthroughs are needed to turn the situation around. They could be considered top priorities for action at a regional scale.

Overall, the majority of SCP indicators showed mixed progress in the region (approximately 60%) and require further attention. Four indicators had baseline values that were worse than the global benchmark but which were improving with a favourable trend, namely renewable energy (7.2.1), carbon emissions per unit value added (9.4.1), domestic water consumption (6.4.ADD), and access to safe drinking water (6.1.1). For these indicators, the region is moving in the right direction and efforts should be made to accelerate progress.

Indicators that had baseline values that were better than the global benchmark but had an unfavourable trend included energy intensity (7.3.1), energy consumption (7.3.ADD), carbon emissions per unit of GDP (13.2.ADD-1), per capita material footprint (8.4.1), and per capita municipal waste (11.6.ADD). The assessment highlights that for these indicators, the region is currently performing better than the global average, however they are experiencing a negative trend and the region is moving in the wrong direction. Policies and programs that decouple these worsening trends in resource and energy consumption from development efforts are needed to turn them around and ensure that the region doesn't continue to slip backwards in these areas.

At the sub-regional level, progress, challenges and priorities vary considerably. In the **Mashreq sub-region**, good progress has been made in most countries on the social indicators relating to access to electricity (7.1.1), drinking water (6.1.1) and sanitation (3.9.2). Per capita material footprint (8.4.1), energy intensity (7.3.1) and CO_2 emissions (13.2.ADD-1) are also comparatively low for most countries, however further efforts would be needed in these areas to achieve 2030 target levels. However, progress is going backwards in some additional areas, namely per capita water consumption (6.4.ADD) and per capita municipal waste (11.6.ADD). Limited progress has also been made across the sub-region in increasing the share of renewable energy (7.3.1). These areas would require urgent attention in the Mashreq region to achieve 2030 target levels. The worsening trend in water consumption in the sub-region is possibly linked to the good progress in terms of access to safe drinking water. Similarly, the sub-region has comparatively good population coverage for municipal waste collection which could be linked to the poor progress in per capita municipal waste. This highlights the interlinkages between the different SDG targets and indicators.

Overall, the countries in the **Maghreb sub-region** have made strong progress on SCP-related indicators when compared with other sub-regions (except for Libya which is lagging behind). Progress is well-balanced across the social and environmental SCP indicators. Access to electricity is generally high in the sub-region, while mortality rates from water and sanitation are low. The sub-region is also progressing well in CO_2 emissions per GDP (13.2.ADD-1) as well as waste generation (11.6.ADD), which are both on track and trending well. Baseline values for air pollution (11.6.2.ALT) and CO_2 emissions per capita (13.2.ADD-2) are both better than the global averages, however the trend for both of these indicators is worsening and attention is needed to turn this around. Morocco and Tunisia have made strong progress on increasing the share of renewable energy in final demand (7.3.1), and these efforts should be accelerated to achieve 2030 targets. However, access to drinking water remains a challenge for most countries in the sub-region, and levels of water stress are also generally high.

Overall, the countries in the **GCC sub-region** have mixed results across the SCP indicators. The sub-region has both the largest number of indicators that are going backwards and require a breakthrough, as well as indicators that are showing good progress and are on track. Generally, the sub-region has achieved very strong progress relating to social indicators for access to drinking water

(6.1.1) and electricity (7.1.1), and reducing mortality from water and sanitation (3.9.2). However, performance is comparatively poor for indicators related to environmental impacts and resource consumption. Levels of water stress (6.4.2) are generally very high, and the GCC countries often have high per capita material footprint (8.4.1), high per capita CO_2 emissions (13.2.ADD-2), high per capita water consumption (6.4.ADD), and low levels of renewable energy (7.2.1). It is interesting to note that four out of six of the indicators that are on track correspond to increasing access to services and living standards, while all of the seven indicators that are going backwards correspond to environmental and resource constraints. In addition to those priorities identified at the regional level, indicators that require urgent attention include: increasing the share of renewable energy (7.2.1), reducing energy intensity (7.3.1), reducing per capita energy consumption (7.3.ADD), and reducing per capita material footprint (8.4.1).

Finally, the **Arab LDC** sub-region has comparatively poor progress on indicators relating to social development outcomes such as poverty (1.1.1), access to safe drinking water (6.1.1), access to electricity (7.1.1), population covered by municipal waste collection (11.6.1.ALT), and mortality related to water and sanitation (3.9.2). However, lower levels of economic development, infrastructure and access to services has also meant that the region has relatively low resource consumption (8.4.1), CO_2 emissions (13.2.ADD-1), and energy intensity (7.3.1), and a greater share renewable energy resources as a proportion of the low final energy demand (7.2.1). Overall, the Arab LDCs are often performing better than the global LDC average. For example, the proportion of population below the international poverty line (1.1.1) is better than the global average for LDCs, however the negative trend is concerning and requires attention. It is the only Arab sub-region showing a negative trend in poverty over time. On the positive side, indicators relating to air pollution (11.6.2.ALT) and energy intensity (7.3.1) are both on track and trending well in the sub-region. Levels of water stress (6.4.2), per capita water consumption (6.4.ADD), and air pollution are also comparatively low compared with other Arab countries. However, this situation is likely to change as countries seek much needed economic development and efforts could be made to adopt more sustainable approaches and technologies to manage environmental impacts.

The national-scale assessment of progress against the 2030 SDG targets provides new and novel analysis of progress, challenges and gaps for each Arab country. The analysis and charts produced in this report can assist in identifying top performers in the Arab region in priority SCP areas, such as renewable energy, energy and water efficiency, or waste management. Countries performing well on these indicators could provide useful case studies for other Arab countries seeking to make similar gains towards achieving SDG targets. This can assist with information sharing and south-south cooperation. Overall, countries such as Morocco, Tunisia and Jordan appear to be leading the way on SCP with strong and balanced performance across a broad range of social and environmental SCP indicators. In many areas, these countries are on track to achieve 2030 target levels with continued investments and these efforts are commendable.

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Appendices

Appendix 1: Review of SCP-related targets and indicators in national development strategies for selected Arab countries.

PRIORITY THEME	Relevant SDG Targets and Indicators	EGYPT	JORDAN	UNITED ARAB EMIRATES	SOMALIA
ENERGY	7.1.1 Access to electricity	Percentage of residential, commercial and industrial buildings connected to electricity. Baseline 99%; 2020 target 100%; 2030 target 100%.			
	7.2.1 Share of renewable energy (final demand)	Percentage of primary fuel mix. Baselines: gas 53%; oil 41%, renewable 1%, coal 2%, hydroelectric 3%. No targets.	% contribution of renewable energy in the energy mix: baseline 1.5%; target 11%	Share of clean energy contribution (renewable, nuclear) in the total energy mix	
	7.3.1 Energy intensity 7.3.ADD Per capita energy consumption	- Percentage change in energy intensity. Baseline 0.65; 2020 target -1.3%; 2030 target -14%. - Efficiency of electricity production. Baseline 41.3%. No targets. - Efficiency of electricity transmission and distributions. Baseline 15%; 2020 target 12%; 2030 target 8%.	- % of total electrical losses: baseline 17.1%; target 11% - Energy intensity (kg/$1000): baseline 208; target 200 - Energy used per billed cubic meter (billed kW/m3): Baseline 7.2; Target 4.6	- ECO11: Energy consumption per GDP (H). Baseline 2012: 0.125 kgoe/$. Ranked 78/133 globally. Ranked 1st in GCC. Trend is improving. No target. - ENV7: Carbon intensity of energy (H). Baseline 2013:600gCO2/kWh (electricity including desal). Trend is stable. No target. - ENV5: Energy consumption per capita. Baseline 2013: 7,536 Kgoe. Ranked 130/137 globally. Ranked 2nd in GCC. Trend is deteriorating. No target.	
	9.4.1 CO_2 emissions per unit value add 13.2.ADD-1 CO_2 emissions per GDP 13.2.ADD-2 CO_2 emission per capita	Percentage decline in GHG emissions from the energy sector. No baseline; 2020 target 5%; 2030 target 10%.	Reduction of CO2 emissions of 14% by 2030	- ENV8: Total GHG emissions. Baseline 2014: 203.67 million tCO2e. Trend is deteriorating. No target value. - ECO13: GHG emissions per GDP. Baseline 2014: 340 gCO2e/$. Ranked 148/187 in the world (2011). Ranked 2nd in GCC (2011). Trend is improving. No target.	
	11.6.2 Exposure to PM2.5 air pollution	- Percentage of decreased pollution caused by fine airborne dust (%). Baseline 157 microgram/m3; 2020 target -15%; 2030 target -50%.	- % of population living in areas whose ambient air is monitored: Baseline (2017) – 80%; Target (2025) – 90%	Air Quality Index (measure of the quality of air, in terms of pollution and the negative effect it may have on human health. Target value of 90% by 2021. Baseline for 2013 was 55%.	
	12.c.1 Energy subsidies as % of GDP	Value of fuel subsidy: baseline value 126.2 billion EGP; 2020 target 0; 2030 target 0.	By the end of 2017, full costs for electricity to be recovered and Treasury will stop subsidising the sector.		
WATER	6.4.2 Level of water stress 6.4.ADD Per capita domestic water consumption 6.a.1 ODA: water & sanitation	Ratio of total water consumption (%). Baseline 107%; 2020 target 100%; 2030 target 80%.	Baseline: Jordan withdraws approximately 25-30% more water than its internal resources can provide. No target.	Water scarcity Index. Target value of Ratio 4.0 by 2021. Baseline for 2010 of 12.79. ENV1: Rate of groundwater abstraction: Baselines 2013 - 13 times the recharge from rainfall. Trend is deteriorating.	

WASTE & MATERIALS	8.4.1 Per capita material footprint	Macroeconomic environment indicator (rank): Baseline 137; 2020 target 100; 2030 target 30		- ECO12: Material consumption per GDP (H): baseline values for 2010: 478 g/$ (domestic material consumption). No target value set, improving trend. - ENV9: Ecological Footprint. Baseline 2014: Ecological footprint per capita – 7.75 global hectares (8% down from 2012); 3rd highest in the GCC. No target. - ENV14: Environmental Performance Index. Baseline 2014: 25th in the world (52 places up from 2013). 1st in the GCC. No target.	
	11.6.1.ALT % population with municipal waste collection 11.6.ADD Per capita municipal waste collected	- Percentage of municipal solid waste regularly collected and managed in a suitable manner (%). Baseline 20% and collection efficiency 60%; 2030 target 80% and collection efficiency 90%. - Percentage of hazardous wastes, safely disposed (treatment, recycling, final disposal) (%). Baseline 7%; 2020 target 30%; 2030 target 100%.	- % of population living in areas whose ambient air is monitored: Baseline (2017) – 80%; Target (2025) – 90% - % of solid waste that is disposed of in landfills: Baseline (2017) – 80%; Target (2025) – 60% - % of treated and re-used solid waste: Baseline (2017) – 20%; Target (2025) – 40% - % of treated hazardous industrial waste: Baseline (2017) – 50% Target (2025) – 80% - % of treated hazardous medical waste: Baseline (2017) – 70%; Target (2025) – 80%	- ENV4: Rate of waste recovery (N). Baseline 2014: 14.08% (municipal solid waste). No trend. Target value of 75% (municipal solid waste). - ENV3: waste generation per capita. Baseline 2014: 1.82kg/day (municipal solid waste). No trend. No target.	
	12.3.1 Global food security index – food loss				
POVERTY & LIVELIHOODS	1.1.1 % population below international poverty line	-			
	2.1.2 Food insecurity experience scale	Composite indicator for child nutrition (%) of 3 sub-indicators: stunting; gantry and anaemia among children less than 5 years.	- Percentage of food poverty: baseline 0.32%; target 0% (2017 - Contribution of agriculture sector in GDP – Baseline 2.9%; Target 3.4% - Growth rate of local agricultural product – Baseline 18%; Target 24%		- Increase in cereal yield by 20 percent by 2019 - Increase in number of households growing and consuming nutrient-dense vegetables from an estimated 10,000 households to 20,000 households by 2019. - By 2021, reduce the number of children who are stunted by 15% from 12% in 2015

					- By 2021, reduce child wasting from 14% in 2015 to less than 10%
	3.9.2 Mortality rate: water & sanitation	Percentage of population with access to sanitation. Baseline 50%; 2020 target 70%; 2030 target 100%. - Ratio of non-traditional water resources to total water resources usage: baseline 20%; 2020 target 30%; 2030 target 40%. - Illegal industrial sewage into the Nile River as a % of the total industrial sewage (%). Baseline 21%; 2020 target 16%; 2030 target 0%. - Sanitation percentage according to the national standards, disposed in the Nile River (%). Baseline 50%; 2020 target 70%; 2030 target 100%.	- Increase population connected to sewage networks from 58% to 75% by 2025 - 84% of wastewater service coverage by 2030 - Increase population connected to sewage networks from 58% to 75% by 2025 - 100% of treated wastewater is used by 2025		
	6.1.1 Access to safe drinking water	- Percentage of population with access to safe drinking water. Baseline >90%; 2020 target >95%; 2030 target 100%. - Ratio of non-traditional water resources to total water resources usage: baseline 20%; 2020 target 30%; 2030 target 40%. - Illegal industrial sewage into the Nile River as a % of the total industrial sewage (%). Baseline 21%; 2020 target 16%; 2030 target 0%. - Sanitation percentage according to the national standards, disposed in the Nile River (%). Baseline 50%; 2020 target 70%; 2030 target 100%.	- Raise per capita domestic water consumption rate over the next ten years to about 115 litres/day, and increase the population connected to water networks to 95%. - 84% of wastewater service coverage by 2030 - Increase population connected to sewage networks from 58% to 75% by 2025 - 100% of treated wastewater is used by 2025		
	11.1.1.ALT Urban population living in slums	- Housing gap indicator. Baseline 2.5 million units (12%); 2020 target less than 8%; 2030 target less than 5% - Percentage of slums. Baseline urban 38%; 2020 target 20%; 2030 target less than 5%.		Time to obtain a loan/house; target value of 2 years by 2021	

Appendix 2: National Baseline Data for SCP Indicators

Colour coding provides a comparison across all 22 countries for each indicator; green colours are better values for each indicator; red colours are worse values for each indicator; yellow is a middle value.

Indicator	Units	Baseline year	Potential 2030 Target	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauritania	Morocco	Oman	Palestine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Yemen
3.9.2 Mortality-water & sanitation	per 100,00 population	Several (2011-14)	1.5	2.42	0.15	28.57	26.41	1.56	3.92	1.04	0.03	0.39	0.63	28.90	3.35	0.36	..	0.05	0.22	98.81	34.58	1.82	0.84	0.03	13.03
6.1.1 access to drinking water	percent		98	83.57	100.00	90.12	90.00	99.43	86.58	96.93	99.00	98.95	..	57.89	85.42	93.40	58.35	100.00	97.03	31.71	55.50	90.15	97.75	99.64	54.89
6.4.2 Level of water stress	percent	2014	80	87.99	205.78	1.17	7.90	159.85	93.06	118.40	2603.49	33.28	1072.00	15.86	49.04	106.23	48.75	472.54	1242.64	30.34	93.67	109.41	94.01	2346.46	227.68
6.4.ADD Per capita water consumption	1000 cubic metres per capita	2014	4	7.72	13.31	0.63	1.75	9.80	12.28	3.31	10.59	6.78	11.29	2.35	3.10	3.38	4.66	7.33	6.92	0.11	2.52	7.68	4.45	6.80	1.01
7.1.1 Access to electricity	percent	2014	100	100.00	100.00	73.76	46.73	99.80	98.79	100.00	100.00	100.00	98.45	38.80	91.60	100.00	99.90	100.00	100.00	19.06	44.90	95.84	99.80	100.00	72.04
7.2.1 Renewable energy	percent	2014	20	0.07	0.00	46.49	34.15	6.41	0.91	3.13	0.00	3.20	1.75	32.58	11.78	0.00	10.53	0.00	0.01	93.86	62.42	2.99	12.92	0.17	1.06
7.3.1 Energy intensity	Megajoules per USD constant 2011 PPP GDP	2014	4.08	4.10	10.03	4.66	4.13	3.48	4.14	4.51	5.41	4.15	8.03	3.50	3.23	6.52	3.70	6.32	5.83	40.07	4.11	6.29	3.72	5.03	3.33
8.4.1 Material footprint	Metric tons (per capita)	2010	6.6	3.1	12.31	..	3.26	6.21	3.04	7.82	41.76	15.47	3.96	2.43	3.56	16.27	3.66	22.03	12.65	3.48	..	3.63	6.02	34.66	1.52
11.6.2 Air pollution	Micrograms per cubic meter	2015	44	35.56	55.45	17.08	51.50	104.67	52.00	38.80	67.43	32.60	79.20	85.09	22.99	53.28	20.61	107.31	106.16	19.84	50.05	41.57	44.79	64.29	52.83
13.2.ADD-1 CO_2 emissions/GDP	kg CO2 per $1 GDP PPP	2013	0.26	0.255	0.544	0.146	0.228	0.234	0.317	0.325	0.355	0.294	..	0.182	0.236	0.380	0.195	0.298	0.353	..	0.097	..	0.229	0.290	0.247
13.2.ADD-2 CO_2 emissions/capita	metric tons CO2 per capita	2013	2	3.501	24.295	0.218	0.679	2.372	4.953	2.949	27.223	4.280	8.238	0.671	1.731	16.485	0.585	37.780	18.081	0.047	0.309	1.821	2.512	18.778	0.991