

Progress on Sustainable Consumption and Production in the Arab Region – Summary of Baseline Assessment Report¹

1. Introduction

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, sustainable consumption and production (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 (10YFP) provides the framework for action to accelerate the shift towards SCP in both developed and developing countries. However, it does not include specific numerical targets and indicators for SCP and recommends that these should be set at regional and national scales. The *2030 Agenda for Sustainable Development* and the Sustainable Development Goals (SDGs) adopted by countries in 2015 include a standalone goal on SCP (SDG12) as SCP-related targets across 11 other goals. The clearer targets and indicators of the SDGs provide a complementary evidence-based framework for the 10YFP which promotes target-setting and monitoring of progress on SCP indicators.

At the regional level, a key milestone was the adoption in 2009 of the *Arab Regional Strategy for Sustainable Consumption and Production (ARSSCP)*. The strategy identifies priority areas for SCP in the region (e.g. energy, water, waste and rural development and eradication of poverty) along with policy objectives and measures. Importantly, the strategy signals the importance of indicator-based monitoring of progress on SCP in the region and provides a list of 42 indicators. However, the strategy does not set out specific target values for the region to aim towards and there has not been any previous assessments of progress for the Arab region across these SCP indicators.

In September 2017, the Council of Arab Ministers Responsible for the Environment adopted the *Guiding Framework for the Environmental Dimension of the SDGs for the Arab Region* (the '*Guiding Framework*'), which sets out a framework of 43 environmental SDG targets and 56 indicators for the Arab region. It also provides 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.

At the national level in the Arab region, clear progress is evident in terms of national planning for SCP. Arab countries are taking SCP objectives seriously, seven countries have adopted national SCP action plans², and several countries have mainstreamed SCP-related targets and indicators into their national development strategies. The setting of clear objectives and targets is crucial to the success

¹ This document provides a brief summary of a more comprehensive baseline assessment undertaken on SCP in the Arab region. Refer to the full report for more detailed charts, figures and analysis. Allen, C (2017) *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*. Report prepared for UNESCWA November 2017.

² Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine and Tunisia.





of any national SCP plan or program. The SDGs provide the opportunity for better formulation of numerical SCP targets and for mainstreaming of these targets into national action plans and overarching development strategies and visions. There is evidence that this is occurring in the Arab region. For example, both Egypt and Jordan have relatively good coverage of SCP targets in their national vision documents, including targets on water, energy, waste and pollution. This is promising progress in the region and these national efforts should be commended.

2. Summary of Results from the SCP Baseline Assessment

The baseline assessment of progress on SCP in the Arab region focused on four thematic areas (energy, water, waste and materials, and poverty and livelihoods) and a set of 21 SCP-related indicators which aligned with both the ARSSCP and the SDGs. The regional baseline assessment reviewed progress and trends at the Arab regional level as well as for each of the four Arab sub-regions³. Progress on each indicator was benchmarked against global averages and the favourability of trends were also assessed using available timeseries data. However, methA national-scale baseline assessment for each of the 22 Arab countries was also completed for a sub-set of 11 indicators which had more comprehensive data coverage. In the national assessment, clear numerical target values were used to assess national progress towards SCP and the SDGs, and to highlight gaps and challenges. The full results from the regional assessment, including detailed analysis, charts and figures are available in the comprehensive baseline assessment report ([annexed to this document](#)).

2.1 Arab regional and sub-regional baseline assessment of SCP trends and progress

The regional baseline assessment explored progress and trends across 21 SCP indicators and identified areas with good regional progress as well as where progress was lagging behind. The results of the assessment are compiled and summarised in **Table 1**. 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 <i>and</i> unfavourable trend  + (↘, ↘)
2. Requires attention	Baseline worse than benchmark <i>or</i> 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 <i>and</i> favourable trend  + (↗, ↗)

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 1; 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

³ 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.

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.

Table 1 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 CO₂ 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 1**). For these indicators, the region has made little progress and is going backwards, and breakthroughs are needed to turn the situation around.

Overall, the majority of SCP indicators showed mixed progress in the region (approximately 60%) and require further attention (**Figure 1**). 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.

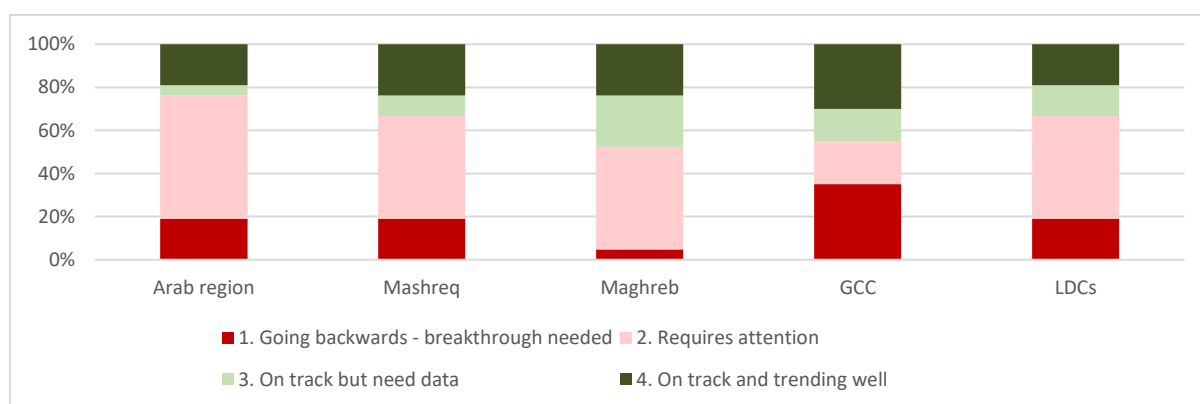


Figure 1: Proportion of indicators in each category – Arab region and four sub-regions.

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 1: Summary of the baseline assessment of SCP indicators for the Arab region and four sub-regions⁴.

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	●	-	■

⁴ 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.

Table 1 and **Figure 1** also show that progress, challenges and priorities varies considerably between the Arab 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. 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 CO₂ 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 (7.2.1). 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 (95% coverage and improving trend). Similarly, the sub-region has comparatively good population coverage for municipal waste collection which could be linked to the high 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) (**Table 1** and **Figure 1**). 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 CO₂ 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 CO₂ 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 (7.2.1), 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.

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 (**Table 1** and **Figure 1**). 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 (8.4.1/12.2.2), high per capita CO₂ 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), CO₂ 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 (11.6.2.ALT) 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 the environmental impacts often associated with such development.

2.1 Highlights of Arab regional progress and trends on SCP thematic areas

2.1.1 Energy

Figure. Proportion of population with access to electricity (7.1.1)⁵

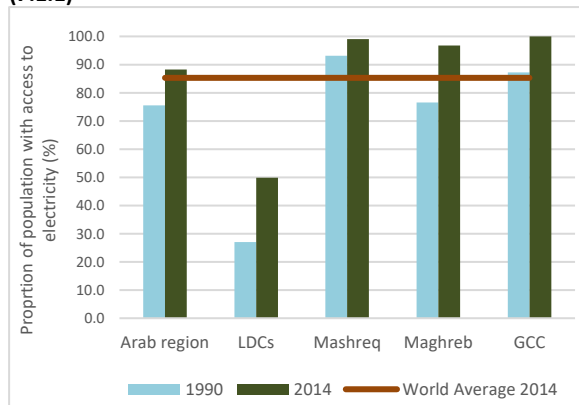


Figure. Renewable energy consumption, % of total final energy consumption (7.2.1)⁶

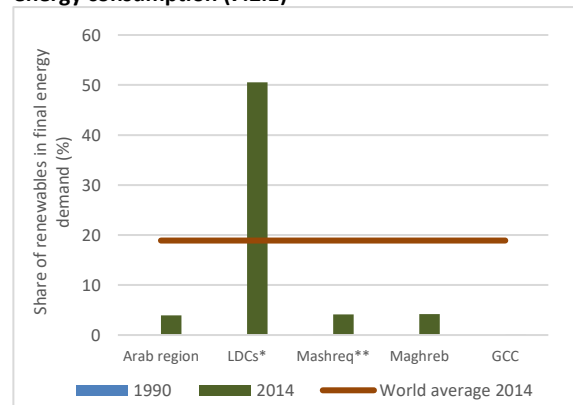


Figure. Energy intensity measured in terms of primary energy and GDP (7.3.1)⁷

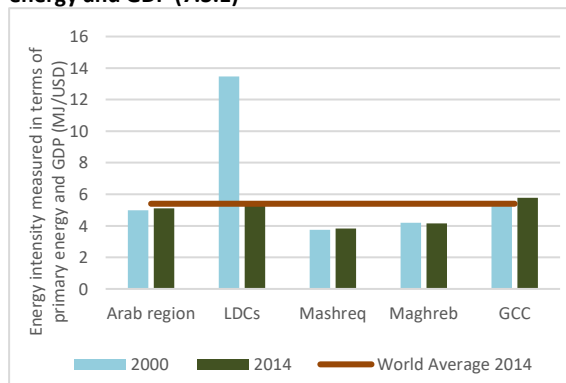
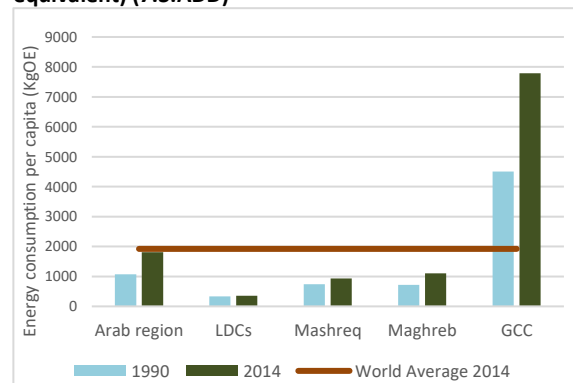


Figure. Energy consumption per capita (kilogram of oil equivalent) (7.3.ADD)⁸



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

⁶ Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.

⁷ Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 6 July 2017.

⁸ Source: International Energy Agency and UN Statistics Division, World Development Indicators; accessed 5 July 2017.

Figure. CO₂ emissions per unit of value added (9.4.1)⁹

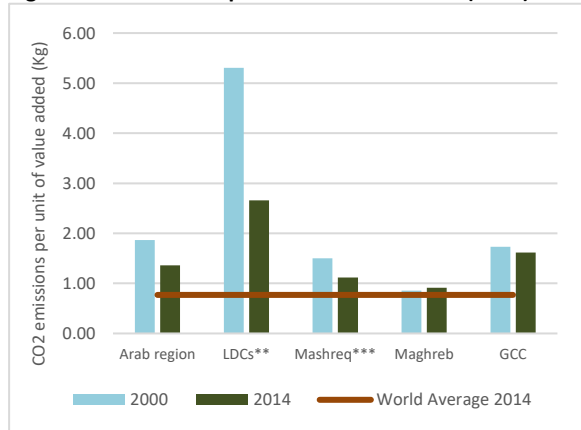
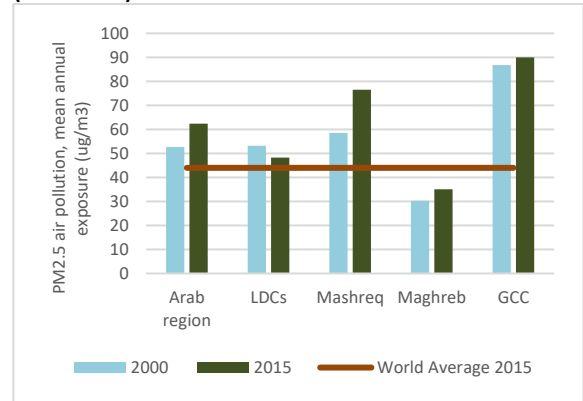


Figure. PM_{2.5} air pollution, mean annual exposure (11.6.2.ALT)¹⁰



2.1.2 Water

Figure. Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (6.4.2)¹¹

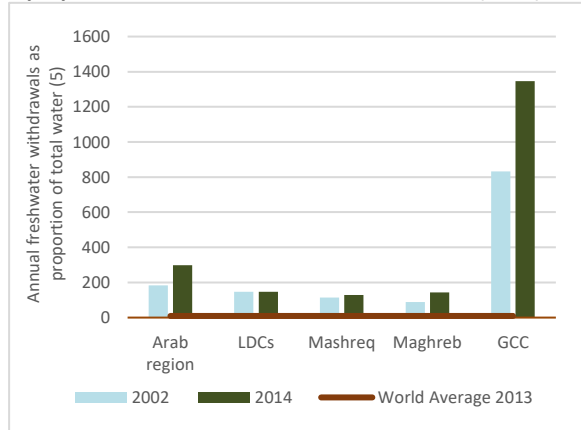
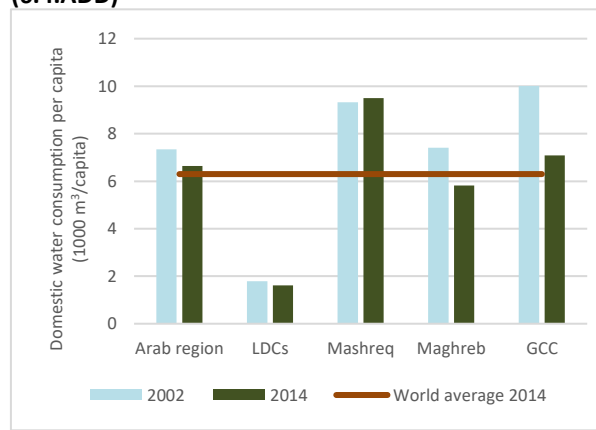


Figure. Domestic water consumption per capita (6.4.ADD)¹²



2.1.3 Materials and Waste

Figure 22: Material footprint per capita (8.4.1 and 12.2.1)¹³

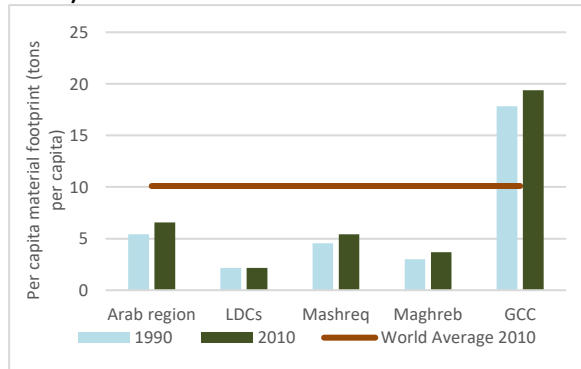
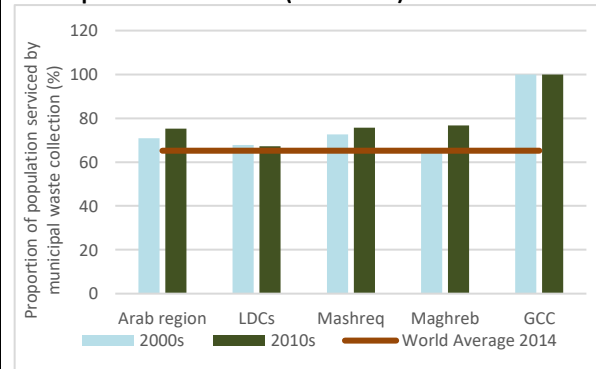


Figure 24: Proportion of the population serviced by municipal waste collection (11.6.1.ALT)¹⁴



⁹ Source: UN Statistics Division SDG Database, data from International Energy Agency and OECD; accessed on 20 May 2017.

¹⁰ Source: World Health Organisation data, World Development Indicators; access on 20 May 2017.

¹¹ Source: UN Statistics Division SDG Database and World Development Indicators; accessed on 21 August 2017.

¹² Source: World Development Indicators; accessed on 9 November 2017. Indicator calculated from data on total water consumption, % domestic consumption, and total population.

¹³ Source: UNEP live data from UN Statistics Division SDG Database; accessed on 20 May 2017.

¹⁴ 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.

Figure 25: Generation of municipal waste per capita (11.6.ADD)¹⁵

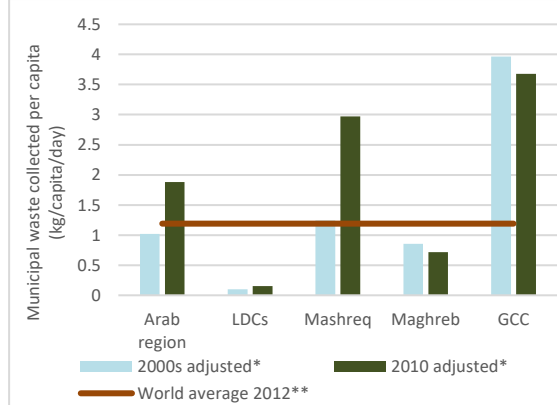
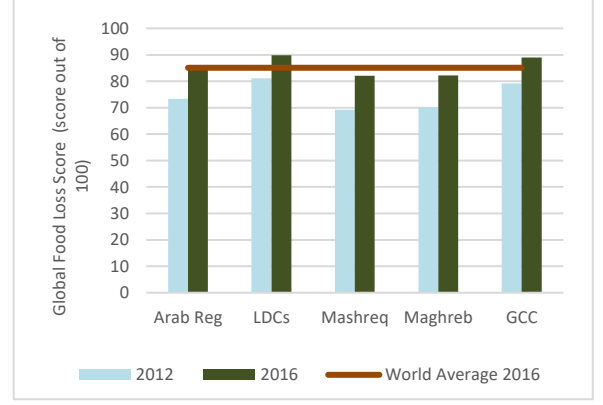


Figure 26: Global Food Security Index – Food Loss Score (12.3.1)¹⁶



2.1.4 Poverty and livelihoods

Figure 27: Proportion of the population below the international poverty line (1.1.1)¹⁷

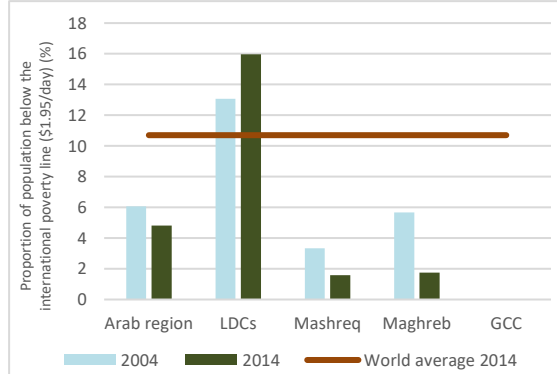


Figure 29: Access to safe drinking water (6.1.1)¹⁸

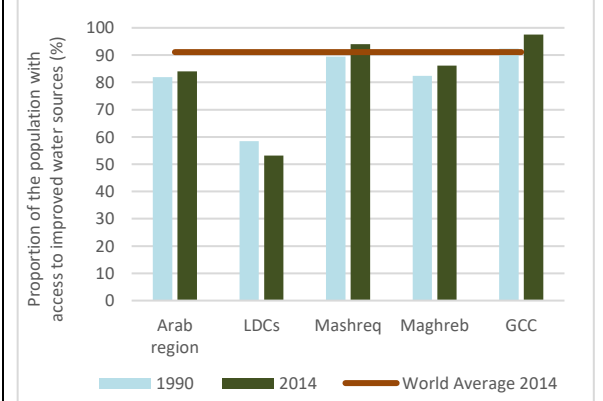


Figure 28: Food insecurity experience scale (2.1.2)¹⁹

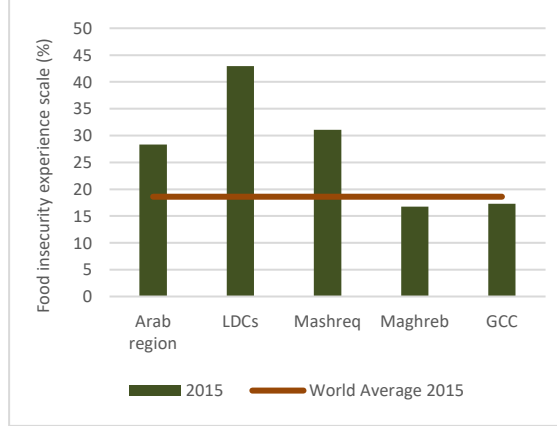
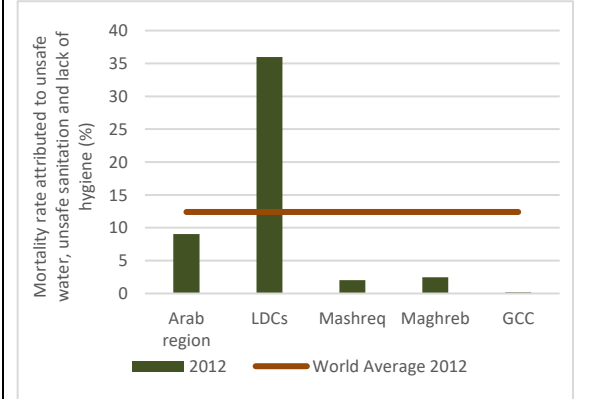


Figure 30: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (3.9.2)²⁰



¹⁵ *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.

¹⁶ 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).

¹⁷ Source: World Development Indicators; accessed on 9 November 2017.

¹⁸ Source: WHO and UNICEF data from UN Statistics Division SDG Database; accessed on 6 July 2017.

¹⁹ Source: FAO data from the UN Statistics Division SDG Database; accessed on 20 May 2017.

²⁰ Source: WHO data from the UN Statistics Division SDG Database; accessed on 20 May 2017.