

# Sustainable developments goals in the Arab region

Abdesslam Boutayeb<sup>1,2</sup>

<sup>1</sup> University Mohamed Premier, Oujda 60050, Morocco; x.boutayeb@gmail.com

<sup>2</sup> Emirates Aviation University, Dubai 23215, UAE

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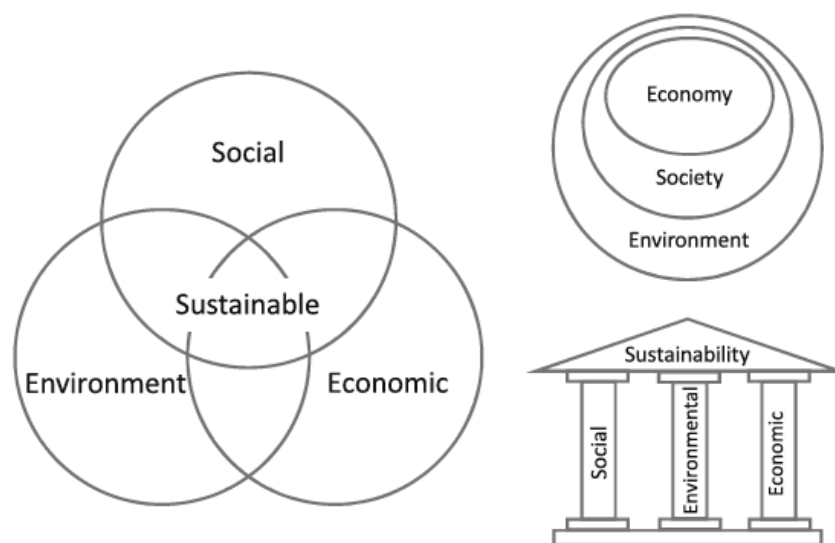
**Abstract:** This paper is devoted to the sustainable development goals in the Arab region. The author explored the most recent data provided by the Sustainable Development Report 2024, using the SDG index score to track the achievement progress in each Arab country and for each of the 17 goals. The results show that the Arab region achieved an overall SDG index score of nearly 62, less than the world average SDG index score (66.3). The low performance of low-income countries is obviously explained by conflicts, drought, the Covid-19 pandemic, economic crises, and political instability. Unexpectedly, however, high-income countries also contribute to the low performance in terms of SDG's achievement. Zero hunger (SDG2) is one of the most important SDGs that Arab countries can't reach by 2030, but Arab countries are facing significant and major challenges in many other essential SDGs like no poverty (SDG1), good health and wellbeing (SDG3), quality education (SDG4), gender equality (SDG5), clean water and sanitation (SDG6), decent work and economic growth (SDG8), and peace, justice and strong institutions (SDG16).

**Keywords:** sustainable development goal; target; Arab region; index; score; achievements

## 1. Introduction

Following the report of the United Nations World Commission on Environment and Development published in 1987 (also known as the Brundtland report) [1], a large number of publications were dedicated to sustainable development during the last three decades. Authors from different disciplines (economy, health, education, agriculture, ecology, sociology, health, epidemiology, statistics, ect.) dealt with "sustainability" in terms of definition, conceptualization, dependence on different contexts, frameworks, achievements, assessment, etc. [2–10].

Sustainable development is obtained through the interaction between economical, social and environmental components, often called the "three pillars of sustainability". In 2019, Purvis et al. [11] carried out a review exploring the conceptual origins of the three pillars of sustainability. They reviewed more than 130 references from the historical literature dealing with sustainability yielded by the interconnection between economical, social and environmental components. They stressed that sustainability, which is ubiquitous, is often represented by three circles (intersecting or concentric) or by three lateral pillars (**Figure 1**) and concluded that: "Nowhere have we found a theoretically rigorous description of the three pillars. This is thought to be in part due to the nature of the sustainability discourse arising from broadly different schools of thought historically. The absence of such a theoretically solid conception frustrates approaches towards a theoretically rigorous operationalization of 'sustainability'."



**Figure 1.** Sustainability is represented by three intersecting or concentric circles and by three lateral ‘pillars’.

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The most used definition of sustainable development was given by the United Nations as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”. This definition appeared for the first time in the Brundtland report, which stressed the link between economic growth, poverty and the environment [1].

Extending their commitments towards the achievement of the Millennium Development Goals (MDGs), which covered the period 2000–2015, the United Nations Member States unanimously adopted in 2015 the 2030 agenda of “Sustainable Development Goals (SDGs)” aiming at ending poverty, improving people’s health at all ages, reducing all kinds of inequalities (“no one is left behind”), ensuring human well-being and encouraging economic growth that creates decent jobs for men and women, especially in developing countries, while protecting the environment and limiting waste. The agenda 2030 set 17 goals to be achieved by 31 December 2030 (**Table 1**) [12].

**Table 1.** Sustainable development goals to be achieved by 31 December 2030.

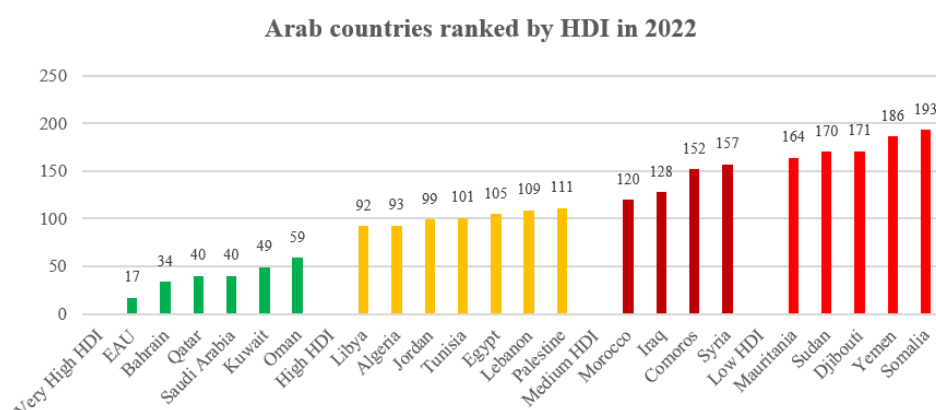
No	Goal	No	Goal
1	No poverty	10	Reduce inequality
2	Zero hunger	11	Sustainable cities and communities
3	Good health and wellbeing	12	Responsible consumption and production
4	Quality education	13	Climate action
5	Gender equality	14	Life below water
6	Clean water and sanitation	15	Life and Land
7	Affordable and clean energy	16	Peace, justice and strong institutions
8	Decent work and economic growth	17	Partnerships for the goals
9	Industry, Innovation and Infrastructure		

Pragmatically, achievement of the 17 SDGs is monitored through 232 indicators related to 169 SDG targets. For example, the SDG 3 hoping “to ensure healthy lives and to promote wellbeing for all ages” requires that all countries achieve the following targets [13]:

- Maternal mortality: Reduce the global MMR to less than 70 (deaths per 100,000 live births).
- Neonatal and child mortality: End preventable deaths of newborns and children under 5 years of age by reducing NMR to < 12 (deaths per 1000 live births) and U5MR < under 25 (deaths per 1000 live births).
- Infectious Diseases: End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases.
- Non communicable diseases: Reduce by 1/3 premature mortality from NCDs through prevention and treatment, and promote well-being and mental health.
- Substance abuse: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
- Road traffic: Reduce by 50% the number of global deaths and injuries caused by road traffic accidents.
- Sexual and reproductive health: Allow universal access to sexual and reproductive health-care services, including family planning, information and education, and the integration of reproductive health into national strategies and action programs.
- Universal health coverage: Achieve UHC, including access to the main health-care services and to affordable, effective, safe, and essential medicines and vaccines for all.
- Environmental health: Reduce significantly the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

In 2023, the Arab world or more precisely, the League of Arab States had a total population of around 473 million gathered in the following 22 countries: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the UAE and Yemen. Arab countries have many dissimilarities and similarities. On the one hand, populations living in these countries share religion, language and culture; on the other hand, they present social, economic and political differences [14]. For instance, the Human Development Report published by UNDP in 2024 shows huge gaps between the 22 countries (**Figure 2**). Indeed, the rich Arab countries of the Gulf Cooperation Council (GCC) (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Oman) are ranked in the world’s top 60 countries with a very high HDI, while the low-income countries (Djibouti, Mauritania, Somalia, Sudan and Yemen) are at the bottom with a low HDI (Somalia being the country with the lowest HDI among 193 countries). Moreover, the inequality-adjusted HDI (IHDI) shows that Arab countries are characterized by high inequalities in terms of human development and its components. The overall loss due to inequality in HDI is between 20% and 30% in Algeria (21.1%), Tunisia (21.6%), Egypt (22.9%), Iraq (22.9%) and Morocco (27.2%), while Yemen (32.8%), Sudan (35.9%), Mauritania (35%), and Djibouti (33.8%) lose one-third or more of their HDI due to inequality. Finally, the greatest rate

of loss due to inequality in HDI components is registered in Comoros, which loses nearly half of its HDI (43%) [15].



**Figure 2.** Arab countries subdivided into four sub-groups according to the HDI rank.

Note: In the first (green) group, countries have very high HDI and they are ranked in the top 60 countries, while in the last (red) group, countries have low HDI and they are ranked at the bottom. Source: UNDP [15].

As indicated by UNESCWA, although many Arab countries made significant progress in terms of primary and secondary school enrolment, there are still barriers hindering the achievement of universal education in the Arab region [16]. Substantial problems are raised by the inequalities between boys and girls, rural and urban children, as well as between children living in rich and poor families. Gaps in primary school enrolment show a gender inequality of 11%, 10% and 8% in Iraq (98% for boys vs. 87% for girls), Yemen (88% for boys vs. 78% for girls), and Djibouti (61% for boys vs. 53% for girls) respectively. Similarly, primary school attendance rates indicate large differences between the richest and poorest children living in Sudan (94% vs. 48%), Yemen (90% vs. 56%), Comoros (95% vs. 72%), Morocco (97% vs. 77%) and Iraq (98% vs. 79%). Finally, in most Arab countries, urban children are more likely to highly attend primary school than their counterparts living in rural areas. For instance, the low primary school net attendance rate in Somalia is exacerbated by the huge difference between urban (38.6%) and rural (11.2%) areas [16]. Moreover, in addition to the problems of school enrolment and attendance, Arab countries also suffer from a bad quality of education. Indeed, the results of well-known international surveys show that Arab countries perform very badly [17–19]. For instance, (1) the “PISA 2022 Worldwide Ranking” published the average score obtained in mathematics, science and reading by 15-year-old students from 81 countries worldwide. Of the six Arab HDI countries that participated in PISA 2022, none was ranked in the top group; the UAE (426.7) and Qatar (414) were placed in the mid-score group, while Saudi Arabia (387.3), Palestine (361.3), Jordan (359.3) and Morocco (356.3) were at the bottom of the list [17]. (2) Similarly, TIMSS (Trends in International Mathematics and Sciences Study) is an international survey that compares the performance of primary and secondary school students in a large number of countries worldwide based on the results obtained in mathematics and science (physics, chemistry and natural sciences). According to TIMMS 2019 results, Lebanon, Jordan, Egypt, Oman, Kuwait, Saudi Arabia and Morocco (the last country among the 39 participating countries) were ranked among the eight least performing countries in

mathematics grade 8, and similar results were registered for mathematics grade 4 and science grade 4 and grade 8 [18]. (3) Finally, the results on reading published in 2021 by PIRLS (Progress in International Reading Literacy Study) indicate that Oman, Jordan and Egypt were among the last 4 countries at the bottom of the list covering 43 countries worldwide [19].

According to a report released by UNESCWA in 2022 on “Inequality in the Arab region: A Ticking Time Bomb”, the Arab region ranks as the most unequal region in the world [20].

In 2023, Boutayeb showed that territorial disparities, health inequities and social inequalities exist within and between Arab countries in terms of wealth, health and education measured by different indicators such as the Gini index, human development index (HDI), maternal mortality ratio (MMR), under-five mortality rate (U5MR), life expectancy, nutritional status, employment rate, gender index, literacy rate, schooling years and others [21]. For instance, the GDP per capita in current prices (USD) in Qatar (USD72760) is 160 times higher than in Yemen (USD 455) [22]. Similarly, the maternal mortality ratio is less than 10 deaths per 100,000 live births in Kuwait (7), Qatar (8) and UAE (9) while it reaches hundreds in the following low-income countries: Somalia (621), Mauritania (464), Sudan (270), Djibouti (234), Comoros (217) and Yemen (183) [23]. These unbelievable gaps are illustrated by a multitude of other indicators [21].

## **2. Materials and methods**

This paper is based on data provided by the United Nations on tracking achievements and trends of Sustainable Development Goals in all UN member States. The progress towards SDGs achievement is monitored by the SDG index score which has a value between 0 and 100. On this scale, a SDG index reaching the value 100 means that the corresponding SDG is completely achieved while the gap between a country’s SDG index and 100 indicates the challenges remaining to reach the SDG optimal value desired. A comparison can be made between two countries for individual SDGs and for an overall performance over the 17 SDGs. However, precaution is needed when interpreting the overall ranking of countries according to their SDG index score. Our analysis is based on the SDG index scores provided by the UNDP Sustainable Development report 2024 [24]. Data provided by governments may suggest some limitations related to missing, unreliable or biased data.

## **3. Results**

### **3.1. Trends and progress in achieving SDGs in each Arab country**

The rate of SDG’s achievement by each of the 193 UN Member States is regularly updated and published online by the UNDP Sustainable Development report [24]. As summarized in **Table 2**, the most recent (available) data provided by the Arab countries are presented according to 4 levels of achievement: (1) SDGs achieved; (2) challenges remain; (3) significant challenges remain; and (4) major challenges remain. It is regrettable to see that data on poverty (SDG1), inequality (SDG10) and peace,

justice and strong institutions (SDG16) are not available in all countries belonging to the GCC, except the UAE.

**Table 2.** Tracking the rate of SDGs achievement by Arab countries.

Country	SDGs Achieved	Challenges Remain in SDGs	Significant Challenges remain	Major challenges remain	Information unavailable	SDG Index score	Index Rank /166
Tunisia	1	4, 11, 12, 13, 17	3, 6, 9, 10	2, 5, 7, 8, 14, 15, 16		72.53	60
Morocco		1, 12, 13, 17	2, 4, 6, 9, 10, 11	3, 5, 7, 8, 14, 15, 16		70.85	69
UAE	1, 4, 10	3, 9	5, 7, 16, 17	2, 6, 8, 11, 12, 13, 14, 15		70.52	70
Algeria	1, 10	12, 13, 17	2, 6, 9, 11, 14	3, 4, 5, 7, 8, 15, 16		70.47	71
Egypt		1, 12, 13	4, 5, 6, 7, 9, 10, 17	2, 3, 8, 11, 14, 15, 16		69.10	83
Jordan	1	12, 13, 14	7, 9, 10, 16, 17	2, 3, 4, 5, 6, 8, 11, 15		69.06	85
Oman		8, 17	3, 4, 9, 14, 15	2, 5, 6, 7, 11, 12, 13	1,10,16	66.11	100
Qatar		3, 4, 9, 16	5, 11, 14, 17	2, 6, 7, 8, 12, 13, 15	1,10	64.93	102
Saudi Arabia		17	3, 4, 6, 8, 9, 16	2, 5, 7, 11, 12, 13, 14, 15	1,10	64.91	103
Iraq		1, 10	4, 9, 12, 13, 14, 17	2, 3, 5, 7, 8, 11, 15, 16		64.18	108
Lebanon	1	4, 9, 10	6, 12	2, 3, 5, 7, 8, 11, 13, 14, 15, 16, 17		63.89	110
Kuwait		3	4, 5, 7, 8, 9, 15, 16, 17	2, 6, 11, 12, 13, 14	1,10	63.76	111
Bahrain		3,8	4, 5, 7, 9, 17	2, 6, 11, 12, 13, 14, 15	1,10,16	63.56	113
Syria	13	1, 10, 12	6, 11	2, 3, 4, 5, 7, 8, 9, 14, 15, 16, 17		60.60	127
Mauritania		10, 12, 13	1, 17	2, 3, 4, 5, 6, 7, 8, 9, 14, 15, 16		58.17	132
Comoros	13		11, 17	1, 2, 3, 4, 5, 6, 7, 9, 10, 14, 15	8,12,16	52.38	153
Djibouti		11, 13	1, 12	2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15, 17	16	51.58	157
Sudan	13	12	7, 10	1, 2, 3, 4, 5, 6, 8, 9, 11, 14, 15, 16, 17		49.91	159
Yemen	12, 13		10, 17	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15, 16		46.87	163
Somalia	12, 13		11	1, 2, 3, 5, 6, 7, 8, 9, 14, 15, 17	4,10,16	45.42	164

Source: UNDP Sustainable Development Report: Country profiles. <https://dashboards.sdgindex.org/profiles> [24]. SDGs are either achieved or with remaining challenges or significantly challenging or under major challenges.

### 3.2. Overall achievement of SDGs in Arab countries

In the 20 Arab regions (no data is available for Libya or Palestine), the overall achievement rate in the 17 SDGs varies from a minimum of 45.42 in Somalia to a

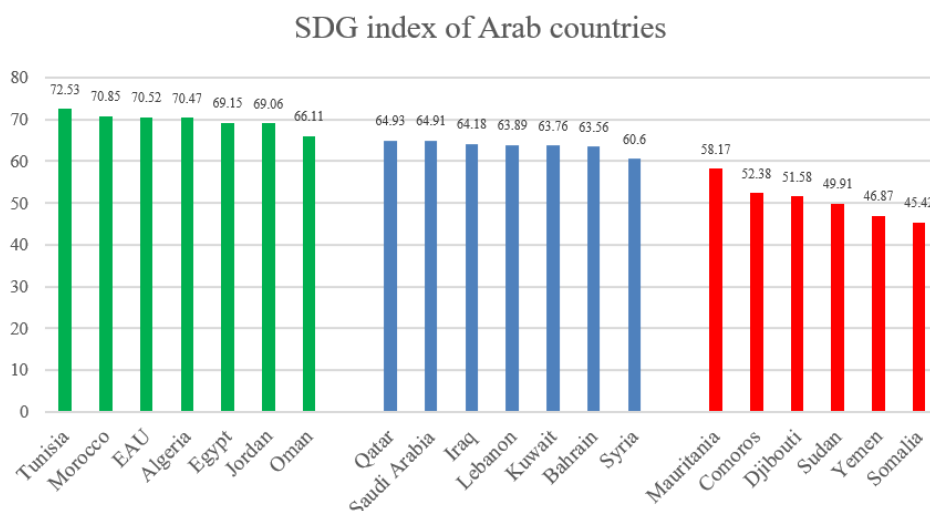
maximum of 72.53 in Tunisia (**Table 3**). None of the Arab countries are ranked in the top 50 performing countries and five Arab countries are in the bottom 14 performing countries. Globally, the Arab region achieved an overall SDG index score of nearly 62, while the world SDG index score is 66.3.

**Table 3.** Arab countries ranked by SDG index score.

Rank /167	Country	SDG index	Rank /167	Country	SDG index	Rank /167	Country	SDG index
60	Tunisia	72.53	102	Qatar	64.93	132	Mauritania	58.17
69	Morocco	70.85	103	S.A	64.91	153	Comoros	52.38
70	UAE	70.52	108	Iraq	64.18	157	Djibouti	51.58
71	Algeria	70.47	110	Lebanon	63.89	159	Sudan	49.91
83	Egypt	69.15	111	Kuwait	63.76	163	Yemen	46.87
85	Jordan	69.06	113	Bahrain	63.56	164	Somalia	45.42
100	Oman	66.11	127	Syria	60.60		Arab world	61.94

Source: <https://dashboards.sdindex.org/> [24].

As indicated by **Figure 3**, the 20 Arab countries can be subdivided into three sub-groups according to the overall achievement rate in the 17 SDGs. A first group gathering seven countries with relatively high regional SDG index scores between 66.11 and 72.53, a set of seven countries achieving SDG index scores between 60.6 and 64.93, and finally a third group bringing together the 6 low-income countries (Comoros, Djibouti, Mauritania, Somalia, Sudan and Yemen) with the lowest regional performance.



**Figure 3.** Arab countries ranked by their SDG index.

Note: The first (green) set is grouping the seven countries with the highest regional SDG index score, while countries with the least regional SDG index score are gathered in the last (red) group. Source: Sustainable Development Report: Country profiles [24].

#### 4. Discussion

Globally, the Sustainable Development report 2024 stresses that the SDG progress was slow before the Covid-19 pandemic and then stagnated since 2020. Consequently, it is estimated that hardly 16% of the SDG targets are on track and

hence, none of the 17 SDGs will be achieved by 2030. Moreover, some SDGs are even showing a reversal of progress [24].

In the Arab region, with just six years remaining before the deadline, very few SDGs have been achieved by individual countries so far, while most countries are facing significant and major challenges to reach SDG's goals by 2030. Indeed, each of the 20 Arab countries has eleven or more SDGs with significant or major challenges, and seven countries (Comoros, Djibouti, Mauritania, Somalia, Sudan, Syria, Yemen) are facing eleven or more major challenges. Consequently, achieving the 17 SDGs in the Arab region seems very difficult if not impossible. More importantly, the whole region is far away from achieving essential SDGs like no poverty (SDG1), zero hunger (SDG2), good health and wellbeing (SDG3), quality education (SDG4), gender equality (SDG5), clean water and sanitation (SDG6), decent work and economic growth (SDG8), peace, justice and strong institutions (SDG16).

As indicated by **Figure 3**, ranking the 20 Arab countries by their overall SDG index score leads to three sub-groups. In the first group, seven countries (Algeria, Egypt, Jordan, Morocco, Oman, Tunisia, and UAE) have realized two-thirds or more of the desired achievements for the whole set of 17 SDGs. In this group, the United Arab Emirates has already achieved the three SDGs: “No poverty (1)”, “Quality education (4)” and “Reduce inequality (10)”. Algeria also achieved the two SDGs (1 and 10), while Oman and Tunisia achieved the first SDG. The least developed countries and/or those affected by conflicts (Comoros, Djibouti, Mauritania, Somalia, Sudan and Yemen) constitute a third group seriously lagging in the overall achievement of SDGs. Although four of the six countries have achieved the SDG 13 (Climate action) and two of them have also achieved the SDG 12 (Responsible consumption and production), these low-income countries are facing major challenges in achieving the remaining SDGs. Between the two previous groups, there is an intermediate mixed group containing countries of the Gulf Cooperation Council (GCC) (Bahrain, Kuwait, Qatar and Saudi Arabia) and low- or middle-income countries (Iraq, Lebanon and Syria). In this second group, Lebanon and Syria have respectively achieved SDGs 1 and 13 (No poverty and Climate action), while the seven countries are facing significant and major challenges in 77% of cases.

“Zero hunger (SDG 2)” is one of the most important SDGs challenging the Arab region, which is off-track to meet nutrition targets and food security. Indeed, an alarming report was published in 2024 by the following six UN organizations: Food and Agriculture Organization (FAO), the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the International Fund for Agricultural Development (IFAD), the United Nations Economic and Social Commission for Western Asia (ESCWA) and the World Food Programme (WFP) [25]. This report indicates that the Arab region is suffering from the double burden of hunger-food insecurity and overweight-obesity. Indeed, as illustrated by **Tables 4** and **5**, the following striking statistics were given for the year 2023: (1) More than 60 million people representing around 14% of the population in Arab countries faced hunger; (2) severe or moderate food insecurity affected 186.5 million people (39.4%) of whom nearly 40 million people (15.4%) were severely food insecure; (3) nearly one-third of the population living in Arab countries (151.3 million) were unable to afford a healthy



diet; (4) nearly 20% and 7.1% of children under five years of age were suffering from stunting and wasting respectively; (5) overweight in children under five years of age reached 9.5% in the Arab region, nearly double the world average (5.6%), with Libya, Tunisia and Egypt registering respectively 28.7%, 19% and 18.8%; (6) obesity in adults 18 years old or over was more than twice as high in the Arab region (32.1%) than the global average (15.8%), with Egypt, Qatar and Kuwait registering respectively 44.3%, 43.1% and 41.4%, and finally; (7) anemia affected more than one-third of women aged 15–49 years and living in Arab countries, with the highest prevalence of anemia registered in Yemen (61.5%), Mauritania (43.3%) and Somalia (43.1%).

**Table 4.** Undernourishment, food insecurity and healthy diet affordability in the Arab region.

	Under-nourishment		Severe Food-insecurity		Severe or moderate Food-insecurity		Unable to afford healthy diet	
	Number (Millions)	%	Number (Millions)	%	Number (Millions)	%	Number (Millions)	%
Low-income countries	38.5	31.1	68.5	29.0	84.9	68.5	No data	
Lower-middle-income countries	15.6	7.1	29.5	9.8	65.1	29.5	65.7	30.2
Upper-middle-income countries	10.5	15.2	38.5	15.8	26.6	38.5	16.6	24.3
High-income countries	1.5	2.5	16.7	6.8	9.9	16.7	No data	
Countries affected by conflict	46.5	26.4	44.1	25.0	103.9	58.9	70.6	41.2
Countries not affected by conflict	19.6	6.6	28.6	9.6	82.7	27.8	83.7	28.5
Arab States	66.1	14.0	39.4	15.4	186.5	39.4	151.3	32.6
World	733.4	9.1	28.9	10.7	2325.5	28.9	2826.3	35.4

**Table 5.** Prevalence of stunting, wasting, overweight-obesity and anemia in the Arab region.

	Children under 5 years of age (%)			Adults 18 years old or over (%)	Women aged 15-49 years (%)
	Prevalence of stunting	Prevalence of wasting	Prevalence of overweight	Prevalence of obesity	Prevalence of anemia
Low-income countries	31.1	14.6	3.4	19.7	43.9
Lower-middle-income countries	15.6	5.3	14.2	33.8	30.6
Upper-middle-income countries	13.3	4.1	8.5	39.7	29.0
High-income countries	10.8	5.0	9.5	38.6	27.1
Countries affected by conflict	26.5	10.4	4.8	26.2	39.2
Countries not affected by conflict	14.7	5.0	13.3	34.7	29.9
Arab States	19.9	7.1	9.5	32.1	33.2
World	22.3	6.8	5.6	15.8	29.9

Source: FAO, IFAD, UNICEF, WFP, WHO and ESCWA [25].

Beside the devastating effect of the Israeli occupation, the UNESCWA indicates that “Compared to other regions, the Arab region has been the most conflict-affected in recent years” [26]. It is estimated that 4 out of 10 Arab countries experienced internal conflicts during the period 2009–2013. In the Arab region, conflicts and war are particularly significant drivers of undernourishment and food insecurity. The prevalence of undernourishment in countries affected by conflict (26.4%) is four times

higher than in countries not affected by conflict (6.6%). In 2023, the most affected countries by undernourishment were Somalia (51.3%), Yemen (39.5%), Syria (34%) and Comoros (16.9%). However, the recent conflicts in Sudan and the war in Palestine and Lebanon will undoubtedly increase the magnitude of undernourishment and food insecurity. Gaza is a clear illustrative example. According to the United Nations “Integrated Food Security Phase Classification (IPC)”, during the period November 2024 and April 2025, about two million people, representing 90% of the Gaza population, will be in IPS Phase 3 (Crisis) or above, of which 41% and 16% will respectively be in Emergency (IPC Phase 4) and Catastrophe (IPC Phase 5) [27].

In 2024, Wang et al. assessed the impact of armed conflict on the progress of achieving 17 sustainable development goals [28]. They indicated that, while armed conflicts are particularly affecting development areas linked to SDGs such as education, healthcare and infrastructure, they slow the achievement of all 17 SDGs and delay progress in over half of the SDGs by more than 5% [28]. In the Arab region, a report released by the International Rescue Committee (IRC) and the Overseas Development Institute (ODI) in 2019 showed that “millions of ‘people caught in crisis’—people living in conflict, and/or who are displaced within their own countries or across borders—are in fact being left behind” [29]. They stressed that SDGs will not be achieved and the credibility of the international community undermined unless world leaders are committed to acting urgently so that people caught in crisis are not forgotten [29]. UNESCWA estimated that, in 2022, nearly 2% of people in the Arab region were refugees, almost fivefold higher than the global average [30]. Consequently, conflicts may explain, at least partially, why little achievement in SDG targets is registered in countries like Somalia, Sudan, Syria and Yemen (and also the unavailability of SDG’s data in Libya and Palestine). It is, however, surprising to see that rich countries of the GCC (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE) have not achieved high SDGs scores while they are ranked in the top 50 countries with the highest GDP per capita and the highest human development index (**Table 6**). Indeed, of the 6 GCC countries, 6, 5, 4 and 3 of them are facing (red) major challenges in SDG2-SDG12-SDG13, SDG6-SDG11, SDG14-SDG15 and SDG7 respectively (**Table 2**).

**Table 6.** the rank of GCC countries according to SDG Index, GDP per capita and HDI.

Country	GDP Per capita rank	HDI rank	SDG index rank
Bahrain	19	34	113
Kuwait	23	49	111
Oman	42	59	100
Qatar	5	40	102
Saudi Arabia	20	40	103
UAE	6	17	70

Source : Worldometer [31], UNDP [15], SDG Reports [24].

As indicated in the introduction section, there is an interaction between the “three pillars of sustainability” (economical, social and environmental components) and more generally, between the 17 SDGs in the Arab region and in other regions of the

world. Consequently, Arab policy makers should consider the synergistic effect between different components of sustainable development in order to optimize the overall yield. The relation between different components of sustainable development, like economic growth, health, technological innovation, and environmental degradation was investigated by many authors [32–37]. Recently, Yadav and Asongu [32] used a wavelet-enhanced quantile regression approach to examine the influence of environmental, social, and governance (ESG) scores on the resilience of financially distressed Indian companies. Their findings revealed “that high ESG scores significantly bolster company resilience during financial distress, highlighting the dual benefits of sustainable practices on corporate stability and environmental impact [32]. Hashmi and Alam [33] explored the dynamic relationship among environmental regulation, innovation, CO<sub>2</sub> emissions, population, and economic growth in OECD countries. Khan [34] analyzed the crucial effect of poverty, unemployment, and environmental degradation on the achievement of sustainable development. He focused on ten developing countries in Asia and the Pacific and explored what he called “the three ZEROS” (zero net carbon emissions, zero poverty, zero unemployment). Khan and Awan [36] investigated the link between climate changes and human health expenditures. Saleem et al. [35] examined the impact of government effectiveness and technological innovation on economic growth and environmental degradation in Middle East & North Africa countries. They found a significant and positive relationship between innovation and CO<sub>2</sub> emissions while they indicated a significant and negative impact of government effectiveness on CO<sub>2</sub> emissions. Their study “highlights that synergizing innovation with government effectiveness is essential for attaining sustainable economic growth in the studied are”. Bekun et al. [37] considered a carbon-function framework in Turkey to explore the causality connection between disaggregated energy consumption, environmental tax and economic growth. Their findings show that Turkey’s Load Capacity Factor (LCF) is driven by economic growth, indicating that energy efficiency is linked to economic performance. Nonrenewable energy hinders LCF, while renewable energy boosts it. Furthermore, population growth positively affects energy efficiency, but environmental taxes have minimal impact, suggesting the need for policy reforms. UN experts suggested that “governments must seek win-win synergies by tackling climate and sustainable development crises together” [38].

## **5. Conclusion**

This paper shows that the Arab region achieved less than the world average in terms of SDG targets. Unfortunately, the low level of achievement is not only due to the difficult problems experienced by low-income countries (war, conflicts, the Covid-19 pandemic, drought, economic crisis, etc.), it is also the result of a low performance of the rich countries of the Gulf Cooperation Council.

As recommended by the “UN Sustainable Development Solutions Network for the Summit of the Future” [24], sustainable development is the commitment towards People, Peace, Planet, Prosperity, and Partnerships. First of all, means for good health and well-being should be available to and accessible by all people worldwide, leaving no person or nation behind; secondly, peace and security must prevail at all levels,

including households, countries and world regions, while violence, conflicts and wars must be banned; thirdly, there are hundreds of different nations and billions of people, but our planet is unique and consequently, we must preserve its generous wealth for the present and the future generations; fourthly, the contributions of education and technology must be encouraged for a better world and not for its destruction; finally, the previous points underlined should constitute a platform for a wise and honest collaboration involving individuals, academics, governments and all other possible stakeholders.

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## References

1. United Nations. Report of the world commission on environment and development: our common future. Oxford University Press, Oxford. Available online: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf> (accessed on 30 October 2024).
2. Arushanyan Y, Ekener E, Moberg Å. Sustainability assessment framework for scenarios—SAFS. *Environmental Impact Assessment Review*. 2017; 63: 23-34. doi: 10.1016/j.eiar.2016.11.001
3. Basiago AD. Economic, social, and environmental sustainability in development theory and urban planning practice. *Environmentalist*. 1999; 19: 145-161. doi: 10.1023/A:1006697118620
4. Brown BJ, Hanson ME, Liverman DM, et al. Global sustainability: Toward definition. *Environmental Management*. 1987; 11(6): 713-719. doi: 10.1007/bf01867238
5. Boyer R, Peterson N, Arora P, et al. Five Approaches to Social Sustainability and an Integrated Way Forward. *Sustainability*. 2016; 8(9): 878. doi: 10.3390/su8090878
6. Gibson RB. Beyond the pillars: sustainability assessment as a framework for effective integration of social, economic and ecological considerations in significant decision-making. *Journal of Environmental Assessment Policy and Management*. 2006; 08(03): 259-280. doi: 10.1142/s1464333206002517
7. Lozano R. Envisioning sustainability three-dimensionally. *Journal of Cleaner Production*. 2008; 16(17): 1838-1846. doi: 10.1016/j.jclepro.2008.02.008
8. Pope J, Annandale D, Morrison-Saunders A. Conceptualising sustainability assessment. *Environmental Impact Assessment Review*. 2004; 24(6): 595-616. doi: 10.1016/j.eiar.2004.03.001
9. Schoolman ED, Guest JS, Bush KF, et al. How interdisciplinary is sustainability research? Analyzing the structure of an emerging scientific field. *Sustainability Science*. 2011; 7(1): 67-80. doi: 10.1007/s11625-011-0139-z
10. Tanguay GA, Rajaonson J, Lefebvre JF, et al. Measuring the sustainability of cities: An analysis of the use of local indicators. *Ecological Indicators*. 2010; 10(2): 407-418. doi: 10.1016/j.ecolind.2009.07.013
11. Purvis B, Mao Y, Robinson D. Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*. 2018; 14(3): 681-695. doi: 10.1007/s11625-018-0627-5
12. United Nations. The 17 goals. Available online: <https://sdgs.un.org/goals> (accessed on 15 October 2024).
13. World Health Organization. Targets of Sustainable Development Goal 3. Available online: <https://www.who.int/europe/about-us/our-work/sustainable-development-goals/targets-of-sustainable-development-goal-3> (accessed on 26 October 2024).
14. Boutayeb A, Serghini M. Health indicators and human development in the Arab region. *International Journal of Health Geographics*. 2006; 5(1): 61. doi: 10.1186/1476-072x-5-61
15. UNDP. Human Development Report 2023–2024. Available online: <https://hdr.undp.org/content/human-development-report-2023-24> (accessed on 29 October 2024).
16. UNESCWA. Education in the Arab region: closing gaps to ensure that no child is left behind 2024. Available online: <https://www.unescwa.org/sites/default/files/pubs/pdf/education-arab-region-closing-gaps-no-child-left-behind-english.pdf> (accessed on 29 October 2024).
17. PISA 2021. The State of Learning and Equity in Education. Available online: [https://www.oecd.org/en/publications/pisa-2022-results-volume-i\\_53f23881-en.html](https://www.oecd.org/en/publications/pisa-2022-results-volume-i_53f23881-en.html) (accessed on 5 October 2024).

18. TIMMS. International Results in Mathematics and Science. Available online: <https://timssandpirls.bc.edu/timss2019/> (accessed on 5 October 2024).
19. PIRLS 2021. International results in reading. Available online: <https://pirls2021.org/> (accessed on 5 October 2024).
20. UN ESCWA. Inequality in the Arab Region: A Ticking Time Bomb. Available online: <https://www.unescwa.org/publications/inequality-arab-region-ticking-time-bomb> (accessed on 28 September 2024).
21. Boutayeb A. Social determinants of health and adolescent childbearing in WHO Eastern Mediterranean countries. *International Journal for Equity in Health*. 2023; 22(1). doi: 10.1186/s12939-023-01861-2
22. International Monetary Fund. GDP per capita, current prices. Available online: <https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD> (accessed on 25 October 2024).
23. World Health Organization. Trends in maternal mortality 2000 to 2020. Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. 2023. Available online: <https://iris.who.int/bitstream/handle/10665/366225/9789240068759-eng.pdf?sequence=1> (accessed on 30 September 2024).
24. Sustainable Development report 2024. The SDGs and the UN Summit of the Future. Available online: <https://dashboards.sdindex.org/> (accessed on 25 September 2024).
25. FAO, IFAD, UNICEF, WFP, WHO and ESCWA. Near East and North Africa—Regional Overview of Food Security and Nutrition 2024: Financing the Transformation of Agrifood Systems. Cairo; 2024. doi: 10.4060/cd3550en
26. UN-ESCWA. Protracted Conflict and Development in the Arab Region: Trends and Impacts in Conflict Settings. Available online: <https://www.unescwa.org/publications/protracted-conflict-and-development-arab-region-trends-and-impacts-conflict-settings> (accessed on 3 September 2024).
27. United Nations. Gaza Strip: Acute Food Insecurity and Acute Malnutrition - IPC Special Snapshot - September 2024 - April 2025. Available online: [https://www.un.org/unispal/document/gaza-strip-ipc-report-sep24-apr25/#:~:text=Between%20November%202024%20and%20April,Emergency%20\(IPC%20Phase%204\)](https://www.un.org/unispal/document/gaza-strip-ipc-report-sep24-apr25/#:~:text=Between%20November%202024%20and%20April,Emergency%20(IPC%20Phase%204)). (accessed on 3 September 2024).
28. Wang D, Hao M, Li N, et al. Assessing the impact of armed conflict on the progress of achieving 17 sustainable development goals. *iScience*. 2024; 27(12): 111331. doi: 10.1016/j.isci.2024.111331
29. IRC and ODI. SDG progress: Fragility, crisis and leaving no one behind. Available online: [https://sustainabledevelopment.un.org/content/documents/28329Sara\\_Charles\\_document\\_2July\\_9Part2.pdf](https://sustainabledevelopment.un.org/content/documents/28329Sara_Charles_document_2July_9Part2.pdf) (accessed on 3 September 2024).
30. UNESCWA. Shared prosperity, Dignified Life: Progress towards the Sustainable Development Goals in the Arab region. Available online: [https://www.unescwa.org/sites/default/files/pubs/pdf/progress\\_towards\\_the\\_sustainable\\_development\\_goals\\_in\\_the\\_arab\\_region.pdf](https://www.unescwa.org/sites/default/files/pubs/pdf/progress_towards_the_sustainable_development_goals_in_the_arab_region.pdf) (accessed on 30 September 2024).
31. Worldometer. GDP per capita. Available online: <https://www.worldometers.info/gdp/gdp-per-capita/> (accessed on 30 October 2024).
32. Yadav A, Asongu SA. The Role of ESG Performance in Moderating the Impact of Financial Distress on Company Value: Evidence of Wavelet-Enhanced Quantile Regression With Indian Companies. *Business Strategy and the Environment*; m2025. doi: 10.1002/bse.4118
33. Hashmi R, Alam K. Dynamic relationship among environmental regulation, innovation, CO2 emissions, population, and economic growth in OECD countries: A panel investigation. *Journal of Cleaner Production*. 2019; 231: 1100-1109. doi: 10.1016/j.jclepro.2019.05.325
34. Khan MA. Analyzing three Zeros (zero poverty, unemployment, and carbon emissions) in Asia and the Pacific region: Assessment of sustainable development goals through the STIRPAT model. *Sustainable Development*. 2024; 32(5): 4782-4799. doi: 10.1002/sd.2928
35. Saleem SF, Khan MA, and Tariq M. Moderating role of government effectiveness and innovation in sustainable economic growth relationship in Middle East & North Africa countries. *Natural Resources Forum*; 2024. doi: 10.1111/1477-8947.12397
36. Khan MA, Awan AM. Health is Wealth: A Dynamic SUR Approach of Examining a Link Between Climate Changes and Human Health Expenditures. *Soc Indic Res*. 2022; 163: 505–528. doi: 10.1007/s11205-022-02904-x

37. Bekun FV, Yadav A, Onwe JC, et al. Assessment into the nexus between load capacity factor, population, government policy in form of environmental tax: accessing evidence from Turkey. *International Journal of Energy Sector Management*. Published online December 17, 2024. doi: 10.1108/ijesm-08-2024-0032
38. United Nations Climate Change. Governments must seek win-win synergies by tackling climate and sustainable development crises together, urges expert group report. Available online: <https://unfccc.int/news/governments-must-seek-win-win-synergies-by-tackling-climate-and-sustainable-development-crisis> (accessed on 3 October 2024).