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9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



Advancing SDG 9 in times of crisis: a focus on infrastructure in the Arab region

Background note

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The present background note was developed by the United Nations Economic and Social Commission for Western Asia (ESCWA) in collaboration with the Food and Agriculture Organization of the United Nations (FAO).

Air passengers
927.2 billion
 passenger-kilometres in 2024,
 a 26% increase
 from 2017

Maritime freight
1.6 billion tons
 in 2024,
 rising by 23%
 from 2015

Official flows for infrastructure
 dropped 12%
 between 2015
 and 2023

Strong mobile broadband coverage
 for 3G,
 but gaps in
 4G and 5G

Infrastructure is a critical enabler of economic growth, social inclusion and regional integration, particularly in the Arab region where geography, trade corridors and energy systems link national development trajectories to global markets.

— Following a sharp drop during COVID-19, air passenger volumes strongly recovered, reaching 927.2 billion passenger-kilometres in 2024, an almost 26 per cent increase from 2017 levels.

— Maritime freight volumes have shown a moderate increase over the past decade, rising by 23 per cent from their 2015 value to reach 1.6 billion tons in 2024.

— Total official flows for infrastructure to the region dropped by 12 per cent between 2015 and 2023.

— Mobile broadband coverage is high for 3G but drops for newer technologies, revealing a gap in access to 4G and especially 5G compared with global averages.

Baseline assessment

Develop quality, reliable, sustainable and resilient infrastructure (target 9.1)

Air passenger volumes (indicator 9.1.2) in the Arab region, measured in passenger-kilometres, declined sharply in 2020 to around 263 billion,¹ down from 818.2 billion in 2019, because of COVID-19 travel restrictions. This contraction was followed by a strong but uneven recovery across Arab countries from 2022 onwards, with

passenger-kilometres reaching 927.2 billion in 2024, largely owing to the rapid resumption of international air routes.² Significant rebounds were observed in several Gulf Cooperation Council (GCC) countries, which account for close to 90 per cent of total air passenger-kilometres for the region. Overall, passenger-kilometres in GCC countries increased from 729.9 billion in 2019 to 818.6 billion in 2024. Arab middle-income countries³ also experienced notable

1 . [SDG Indicators Database](#) (accessed on 14 April 2026). Calculated by ESCWA based on available country data. Arab countries with no available data are the Comoros, Djibouti (for 2017, 2018, 2019, 2020, 2021 and 2022), Somalia (for 2020, 2021, 2022 and 2024), the State of Palestine and Yemen (for 2018 and 2019).

2 . United Nations, [The Sustainable Development Goals Report 2024](#), 2024.

3 . Covered middle-income countries (excluding countries in situations of conflict or instability): Algeria, Egypt, Jordan, Morocco and Tunisia.

recoveries. Egypt, which accounts for the largest share of air passenger volumes among middle-income countries (around two-fifths), saw passenger-kilometres rise from 26.4 billion in 2019 to 41.8 billion in 2024, and Morocco from 20.4 billion to 24.8 billion, while Jordan slightly exceeded its pre-pandemic levels. In contrast, least developed countries and countries affected by conflict or instability⁴ generally recorded lower air passenger volumes, slower recoveries and continued data gaps.

Maritime freight volumes (indicator 9.1.2) in the Arab region rose from 1.3 billion tons in 2015 to 1.6 billion tons in 2024,⁵ reflecting post-pandemic recovery and the region's continued centrality in global markets. In 2024, the region accounted for around 13 per cent of global maritime freight volumes from a global total of 12.1 billion tons. Disruptions to traffic through the Suez Canal and escalating insecurity in the Red Sea during the period 2023–2024 led to the rerouting of vessels onto longer routes around the Cape of Good Hope, reducing transit volumes through key regional chokepoints while increasing voyage distances and costs.⁶

Complementing trade-based measures, **freight loaded and unloaded** (indicator 9.1.2) reached approximately 2 billion metric tons in the Arab region in 2023, increasing from 1.8 billion tons in 2015,⁷ highlighting the scale

and intensity of port infrastructure use rather than unique trade flows.

Container port traffic (indicator 9.1.2), measured in twenty-foot equivalent units (TEU), expanded with Arab ports handling 58 million TEU in 2023, up from 49.4 million TEU in 2015.⁸ These indicators point to the importance of resilient maritime infrastructure in the Arab region, while also underscoring its exposure to geopolitical shocks affecting critical maritime corridors. Regional crises have impacted port traffic, increasing volatility, congestion and costs, thus reshaping traffic patterns and port utilization.⁹

Facilitate sustainable and resilient infrastructure development (target 9.a)

In 2023, the Arab region received 7.7 per cent of **total official international support to infrastructure**, namely official development assistance and other official flows (indicator 9.a.1). However, that total decreased from \$6.6 billion in 2015 to \$5.8 billion in 2023.¹⁰

At the country level, change has not been uniform and is highly context-specific. The sharpest decline was observed in official flows for infrastructure to the Sudan, falling from a peak of \$392.5 million in 2021 to less than \$0.5 million in 2023, reflecting the impact of conflict, institutional disruption and the resulting inability to plan and implement

4 . Least developed countries and countries in situations of conflict or instability: the Comoros, Djibouti, Iraq, Lebanon, Libya, Mauritania, the State of Palestine, Somalia, the Sudan, the Syrian Arab Republic and Yemen.

5 . Calculated by ESCWA using the [SDG Indicators Database](#) (accessed on 15 April 2026).

6 . United Nations Conference on Trade and Development (UNCTAD), [Review of maritime transport 2025](#), 2025.

7 . Calculated by ESCWA using the [SDG Indicators Database](#) (accessed on 15 April 2026). The total includes estimate values for some countries.

8 . Ibid. For the 2023 total, values were available for 10 Arab countries versus 15 countries in 2015.

9 . UNCTAD, [Suez and Panama Canal disruptions threaten global trade and development](#), 2024.

10 . Calculated by ESCWA using the [SDG Indicators Database](#) (accessed on 15 April 2026).

infrastructure projects. A reduction of around 74 per cent was recorded in Iraq between 2015 and 2023, signalling shifts in financing modalities and changing donor engagement. Contrastingly, in other countries affected by crisis, official flows increased, such as in Libya and the Syrian Arab Republic that recorded a significant percentage increase over the same period, albeit from relatively low baselines. Egypt also saw a notable increase, reflecting alignment between donor financing and the Government's largescale infrastructure and connectivity programmes.

Significantly increase access to information and communications technology (target 9.c)

Mobile-cellular network coverage in the Arab region is nearly universal, reaching

98.1 per cent of the population in 2025 (indicator 9.c.1), in line with the global average. **Mobile broadband coverage**, however, varies by type of technology. Coverage by at least a 3G network is widespread at 95.7 per cent, underlining the importance of 3G for Internet access in parts of the region. Access to higher-capacity networks remains more limited: 4G covers 87.3 per cent of the population, below the global level of 92.7 per cent, while 5G coverage stands at just 12.5 per cent, compared with 55.1 per cent worldwide.¹¹ This highlights a significant gap in access to the latest mobile network technologies, driven by limited or no availability of 5G coverage in non-GCC countries and wide variation in 4G coverage across the region, which is significantly lower in Somalia, the Sudan and Yemen and unavailable in Palestine.

Impact of conflict on infrastructure systems and sectoral over spills

The escalation of conflict in 2026 has had complex and far-reaching implications on civilian and strategic infrastructure in the region, including energy, water, food systems, transport networks, healthcare facilities, housing and education. Direct missile and drone attacks on infrastructure, leading to destruction or suspension of operations, have placed increasing pressure on multiple sectors, with spillover effects on surrounding countries.

Targeting of critical water, energy and strategic infrastructure uncovered vulnerabilities

In some GCC countries, attacks have targeted critical infrastructure, including airports, energy installations, oil fields and water desalination plants, threatening energy production and exposing water security as a significant vulnerability.¹² Concerns have emerged around risk of attacks on nuclear sites, maritime incidents

11 . Data extracted from [Key ICT indicators for the ITU/BDT regions \(totals and penetration rates\)](#) (accessed on 10 April 2026).

12 . United Nations Development Programme (UNDP) Regional Bureau for Arab States, [Preliminary assessment – Military escalation in the Middle East: economic and social implications for the Arab States region](#), 2026.

that could lead to oil spills,¹³ and damage to submarine fibre-optic cables threatening Internet connectivity.

Disruptions to transport and maritime networks threaten regional connectivity, with sectoral spillover effects

Disruptions to airspace have generated cross-border spillover effects, impacting aviation corridors, country economic activity, and humanitarian relief logistics. Heightened risks have forced airlines to cancel flights or reroute passenger and cargo flights away from conflict zones, leading to longer travel times, higher fuel use and increased operating costs. Given the central role of GCC countries in intercontinental air connectivity, airspace disruptions have amplified pressure on global logistics networks and supply chains. They have also posed direct economic risks to countries

reliant on tourism, weakening revenues and passenger connectivity.¹⁴

Maritime chokepoints emerged as a critical vulnerability disrupting regional and global trade and risking supply chains. The Strait of Hormuz serves as the only exit to open seas for some of the largest producers and exporters of crude oil, liquefied natural gas and petroleum products worldwide, with around a quarter of global seaborne oil transiting each day.^{15,16} In addition, a large share of globally traded fertilizers (around a third of urea exports, 20 per cent of ammonia exports and 20 per cent of phosphate) moves through the Strait of Hormuz.¹⁷ Threats to shipping flows through the Strait have resulted in increased oil and gas prices, increased maritime insurance premiums and shipping costs, and volatility transmitted to the global agrifood system.

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Maritime chokepoints

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Missile and drone attacks

have targeted digital, health and educational infrastructure, disrupting operations

13 . ESCWA, *Conflict and its shockwaves: escalating impacts and risks for energy, water and food systems in the Arab region*, 2026.

14 . UNDP Regional Bureau for Arab States, *Preliminary assessment – Military escalation in the Middle East: economic and social implications for the Arab States region*, 2026.

15 . Food and Agriculture Organization, *Global agrifood implications of the 2026 conflict in the Middle East: impacts on energy and fertilizer trade, and food security*, 2026.

16 . UNCTAD, *Strait of Hormuz disruptions: Implications for global trade and development*, 2026.

17 . International Energy Agency, *Key facts on the Strait of Hormuz, oil and gas markets, and the IEA's response: the Middle East and global energy markets*, 2026.

These oil and gas disruptions have spillover effects in other countries because of fuel shortages. For example, to manage electricity demand, the Egyptian Government has introduced measures to save energy consumption, including early closure of commercial establishments, reduced public lighting and partial remote work.¹⁸ These measures have resulted in economic strains and affected the productivity of some sectors because of reduced operating hours or increased operational costs, with notable pressures on small and medium enterprises.

Attacks on civilian and social infrastructure undermine essential services and livelihoods

Missile and drone attacks have also targeted digital infrastructure, disrupting data centre operations in Bahrain and the United Arab Emirates, causing short-term service interruptions for mobile applications and online banking.¹⁹ In strike-affected areas of Lebanon, damage to landline, fibre and mobile infrastructure has led to persistent interruptions in services. Population displacement has intensified

pressure on mobile networks, causing congestion in relatively safer locations. In the country's southern border areas, intermittent signal disruption and temporary shutdowns further complicate communications for civilians and humanitarian responders.²⁰

Lebanon has also sustained significant damage to housing and transport infrastructure because of airstrikes, and has faced growing pressures from large-scale displacement. Public schools and colleges have been repurposed to host displaced families, resulting in significant strain on educational infrastructure and disrupting learning. Over 37,000 families were hosted in 690 shelters, most of which were operating at full capacity.²¹ In surrounding countries, such as Jordan, falling debris from intercepted attacks have also caused infrastructural damage.

The conflict has also affected healthcare infrastructure. Following evacuation orders in Lebanon, 49 primary healthcare centres and five hospitals were shut down, reducing the availability of essential medical services at a time of increasing need.²²

Rebuilding Gaza

Around 81 per cent of all structures in Gaza have been damaged or destroyed following more than two years of war, resulting in approximately 57.6 million tons of debris. It is estimated that more than \$70 billion will be needed for reconstruction efforts.

Sources: United Nations, [UNOSAT Gaza Strip Comprehensive Damage Assessment](#), 2025; United Nations, UNDP: [Gaza Debris Management Situation Report](#), 2025.

18 . Alarabiya, [Egypt announces new measures regarding energy consumption, including working hours](#), 28 March 2026 (in Arabic).

19 . Observer Research Foundation Middle East, [The GCC Data Centre Industry: Conflict and Policy](#), 26 March 2026.

20 . Emergency Telecommunications Cluster, [Lebanon: Middle East Escalation – LTC Situation Report \(Telecoms\) #03](#), 15 April 2026.

21 . [Shelter and Displacement Monitoring](#) (accessed on 16 April 2026).

22 . World Health Organization, [Conflict deepens health crisis across Middle East](#), 2026.

Policy responses

Progress on the infrastructure pillar of SDG 9 remains at risk. Continued armed conflict and the destruction of infrastructure facilities are reversing development gains, disrupting multiple economic sectors and increasing humanitarian needs. Achieving SDG 9 therefore requires integrated regional action complemented with strengthened infrastructural resilience at the local level, as follows:



Develop alternative trade routes and contingency logistics by building integrated, multimodal transport and logistics corridors linking production areas, storage facilities and ports across GCC, Mashreq and Maghreb countries, thus reducing reliance on vulnerable critical trade chokepoints. This will secure supply chains for energy, critical minerals, fertilizers, staple foods, agricultural and industrial inputs, and other essential commodities.



Strengthen the resilience of energy infrastructure, including by advancing energy transitions that improve system diversity and flexibility and by expanding cross-border renewable and clean energy projects.²⁴



Enhance the resilience of water infrastructure through strengthened early-warning systems and increased usage of non-conventional water resources.²⁵



Strengthen the resilience of transport, logistics and related infrastructure systems to geopolitical, climate and operational shocks. This includes diversifying routing and gateway options and improving maintenance, asset management and emergency response capacities. Governments should continue to develop risk mitigation strategies for supply disruptions, including maintaining strategic reserves of critical commodities and reinforcing storage and distribution infrastructure.



Adopt digital infrastructure that ensures diversified routing, redundant connectivity and coordinated regional network development, thus reducing single points of failure and regional bottlenecks. This includes national and cross-border connectivity, stronger cooperation among network operators and Internet exchange points, and more resilient systems through backup communication technologies such as terrestrial networks, satellites and submarine cables.



Guarantee the unimpeded passage and protection of humanitarian cargo through various regional corridors to ensure that assistance reaches its destination without delay.²³

²³ . United Nations Office for the Coordination of Humanitarian Affairs, *Escalation in the Middle East and beyond: the humanitarian response*, 2026.

²⁴ . For more details, refer to the [Background Note on SDG 7](#).

²⁵ . For more details, refer to the [Background Note on SDG 6](#).



Invest in sustainable domestic agriculture, industrialization and fertilizer production. Strengthening agro-industrial value chains and the local manufacturing and service ecosystem, while focusing on micro, small and medium enterprises and innovation capacities, can generate added value and decent jobs, particularly for women and young people, thus supporting agrifood system transformation. Moreover, localized fertilizer production, including green ammonia, can decrease dependence on imported fertilizers.



Close infrastructure and digital divides, and support the deployment of integrated technology solutions for agrifood systems transformation. This includes expanding reliable rural logistics (transport and storage), strengthening access to and ownership of natural resources (land and water), ensuring energy and digital connectivity, and improving access to data, rural advisory services, technology, finance and markets. Integrated technology solutions include climate-smart technologies, sustainable agricultural mechanization, input-saving technologies, and energy-efficient and circular economy solutions along value chains. Their adoption requires an enabling policy environment, strong governance and a responsible private sector.

