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Item 6 of the provisional agenda



## **Round-table discussion**

## Sustainable transport in the Arab region: towards a decade of action

#### **Summary**

The High-level Meeting on Sustainable Transport, held at the United Nations Headquarters in New York on 17 April 2024, provided the first opportunity for the full membership of the United Nations to provide ideas and inputs on the implementation plan of the United Nations Decade of Sustainable Transport 2026–2035. The meeting formed part of the Sustainability Week organized by the President of the General Assembly. A side event (New York, 11 July 2024) at the High-level Political Forum on Sustainable Development provided a more informal opportunity for all stakeholders to consider how the implementation plan could best advance sustainable transport and the implementation of the Sustainable Development Goals.

In this context, and following previous work on sustainable transport submitted to the Committee on Transport and Logistics at its twenty-fourth session, held in Cairo on 10 and 11 January 2024, in document E/ESCWA/C.5/2023/9 entitled "Sustainable transport development in Arab countries", the secretariat of the Economic and Social Commission for Western Asia (ESCWA) has prepared the present document as a background paper for a round-table discussion that will be held as part of the twenty-fifth session of the Committee to celebrate World Sustainable Transport Day. The round-table discussion will gather the views of Arab countries of the priorities, mechanisms and requirements to achieve sustainable transport in the Arab region. The ESCWA secretariat will convey the outcomes of this round table to the working group tasked with drafting the United Nations Global Action Plan for a Decade of Sustainable Transport, to be implemented during the period 2026–2035.

Member State representatives are invited to submit their proposals on the action plan in writing before, during and after the current session of the Committee on Transport and Logistics, and are encouraged to participate actively in the round-table discussion.

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#### Introduction

1. In recent years, global attention towards the transport sector has intensified, particularly regarding its role in sustainable development. Sustainable transport plays a critical role in driving economic growth, while enhancing accessibility across various regions. By fostering a more integrated economy, sustainable transport not only supports environmental protection, but also improves social equity, public health and the resilience of cities. It strengthens the connections between urban and rural areas, boosting productivity in rural regions and contributing to more inclusive development outcomes.

2. According to the United Nations Interagency Report entitled "Sustainable transport, sustainable development", global progress towards achieving the sustainability of transport has been insufficient. Over a billion people still lack access to reliable roads, and only around half of the global urban population enjoys convenient access to public transport. The Sustainable Development Goal (SDG) of halving global road traffic deaths and injuries by 2020 was not met, with road crashes remaining the leading cause of death for young people aged 15 to 29.

3. Moreover, transport plays a pivotal role in global carbon dioxide emissions, contributing approximately 20 per cent of total emissions worldwide. When focusing specifically on emissions from energy use, this figure increases to 24 per cent. Among various modes of transport, road travel emerges as the most significant contributor, responsible for about 75 per cent of emissions within the transport sector. This substantial impact is predominantly driven by passenger vehicles, including cars and buses, which account for 45.1 per cent of road transport emissions, while freight trucks contribute an additional 29.4 per cent. Consequently, road transport alone is responsible for around 15 per cent of global carbon dioxide emissions.<sup>1</sup>

4. The Arab region boasts an extensive regional road network of over 41,000 km that connects its countries. However, it faces a significant shortfall in railway infrastructure, with about 60 per cent of necessary rail links missing. Reliance on road transport for land connectivity in the region leads to several sustainability challenges, including higher transport costs, increased air pollution, environmental damage, and substantial social and health costs from road traffic accidents.<sup>2</sup>

5. To promote sustainable transport in the Arab region, it is essential to strengthen the capacity of ministries of transport and their affiliated agencies in long-term strategic planning. This should include support for innovative solutions in the development and operation of rail and other clean energy transport modes, while taking into account the fiscal constraints faced by many Arab Governments and their competing development priorities.

## I. Sustainable transport

## A. What is sustainable transport?

6. Sustainable transport involves creating transport systems that reduce environmental harm, boost economic efficiency, and support social fairness. It includes adopting practices and technologies that cut greenhouse gas emissions, decrease energy use, and mitigate negative impacts on health and the environment. Examples of sustainable transport solutions are utilizing renewable energy, enhancing public transit, promoting electric and hybrid vehicles, and developing infrastructure that supports walking and biking. These strategies collectively work towards a more eco-friendly and balanced approach to transporting people and goods.

<sup>&</sup>lt;sup>1</sup> Hannah Ritchie, Cars, planes, trains: where do CO2 emissions from transport come from, 6 October 2020.

<sup>&</sup>lt;sup>2</sup> United Nations Regional Commissions, Messages from the United Nations regional commissions on sustainable transport, 2023.

## **B.** Why is sustainable transport important?

7. Sustainable transport is crucial due to its far-reaching impact on sustainability, health and quality of life. According to the World Bank, transport is the fastest-growing source of energy-related carbon emissions globally.<sup>3</sup> It also contributes significantly to urban air pollution at between 12 and 70 per cent, depending on the region. Addressing these challenges through sustainable transport solutions can yield numerous benefits.

8. From a health perspective, reducing emissions and pollution enhances air quality, which can lead to fewer cases of respiratory and cardiovascular diseases. Economically, transitioning from private cars to mass transit can alleviate traffic congestion, prevent urban sprawl, and positively affect land values and carbon footprints over time. This shift not only fosters more liveable urban areas, but also provides equitable access to jobs and education, thus supporting upward mobility. Moreover, moving towards electric vehicles can reduce reliance on imported fossil fuels, thereby promoting energy independence. Overall, sustainable transport tackles a range of interconnected issues, making it crucial for improving both urban environments and public health.

### **C.** Guidelines for sustainable transport

9. The United Nations High-level Advisory Group on Sustainable Transport has issued the following 10 recommendations for mobilizing sustainable transport for development:<sup>4</sup>

(a) Make transport planning, policy and investment decisions based on the three sustainable development dimensions—social development, environmental (including climate) impacts and economic growth—and a full life cycle analysis;

(b) Integrate all sustainable transport planning efforts with an appropriately-balanced development of transport modes: integration vertically among levels of government and horizontally across modes, territories and sectors;

(c) Create supportive institutional, legal and regulatory government frameworks to promote effective sustainable transport;

(d) Build technical capacity of transport planners and implementers, especially in developing countries, through partnerships with international organizations, multilateral development banks, and governments at all levels, to ensure equitable access to markets, jobs, education and other necessities;

(e) Reinforce efforts toward preventing road traffic deaths and injuries;

(f) Foster an informed, engaged public as a crucial partner in advancing sustainable transport solutions;

(g) Establish monitoring and evaluation frameworks for sustainable transport, and build capacity for gathering and analysing sound and reliable data and statistics;

(h) Promote diversified funding sources and coherent fiscal frameworks to advance sustainable transport systems, initiatives and projects;

(i) Increase international development funding and climate funding for sustainable transport;

(j) Promote sustainable transport technologies through outcome-oriented government investment and policies that encourage private sector investment and action through various incentive structures.

<sup>&</sup>lt;sup>3</sup> Vivian Foster and others, How can we explain the rise in transport emissions... and what can we do about it?, 2021.

<sup>&</sup>lt;sup>4</sup> High-level Advisory Group on Sustainable Transport, Mobilizing Sustainable Transport for Development, 2016, pp. 7–8.

## **D.** Examples of sustainable transport

#### 1. Consumer sector

(a) Electric mobility: the growing use of electric cars, motorcycles and bicycles is reducing dependency on traditional fuels. Companies like Tesla, along with electric scooter manufacturers, are leading this change;

(b) Eco-friendly public transport: electric buses and metro systems powered by clean energy sources are becoming more prevalent. For example, cities like Shenzhen, China, are adopting electric buses, and Australia has introduced solar-powered trains;

(c) Cycling: this is a cost-effective and eco-friendly transport option that offers both environmental benefits and exercise, with lower purchase and maintenance costs compared with cars;

(d) Shared mobility: ride-sharing and carpooling services encourage fewer vehicles on the road, thus minimizing environmental impact.

### 2. Freight sector

(a) Electric delivery fleets: major logistics companies are utilizing electric delivery vehicles for more eco-friendly urban deliveries;

(b) Rail transport for cargo: shifting freight from road to rail cuts down emissions, and electrified rail networks offer a greener solution for long-distance goods transportation;

(c) Sustainable packaging practices: using lighter, environmentally friendly packaging materials helps to reduce fuel consumption and emissions during transport.

### 3. Maritime sector

(a) Electric ferries: battery-powered ferries, such as Ampere in Norway, represent a greener alternative to traditional diesel-powered ferries;

(b) LNG-fuelled ships: liquefied natural gas (LNG) offers a cleaner alternative to conventional maritime fuels. Companies like Maersk are investing in LNG-powered ships to reduce environmental impact.

## 4. Logistics and supply chain sector

(a) Efficient routing: logistics companies are using advanced route optimization tools to lower fuel consumption;

(b) Energy-efficient warehousing: companies are implementing energy-saving measures in warehouses by using solar power, LED lighting, and electric vehicles.

#### 5. Alternative fuels

(a) Biofuels: these fuels, made from organic materials, are used in aviation and road transport to cut greenhouse gas emissions. Some airlines are incorporating biofuels into their operations;

(b) Hydrogen: hydrogen fuel cells are increasingly used in vehicles, including hydrogen-powered buses in various cities, to offer a zero-emission alternative;

(c) Natural gas: both LNG and compressed natural gas (CNG) are used in freight and public transport to reduce emissions. Examples include LNG-powered ships and CNG buses in urban areas;

(d) Electricity: electric vehicles, from cars to heavy trucks, are becoming more widespread.

## **II.** A decade of sustainable transport

10. General Assembly resolution 78/148 proclaims the United Nations Decade of Sustainable Transport 2026–2035, invites the Secretary-General to consider convening the third United Nations Global Sustainable

Transport Conference, and marks 26 November as World Sustainable Transport Day. Member States have also tasked the United Nations Department of Economic and Social Affairs (DESA) with creating an implementation plan for the Decade of Sustainable Transport, in consultation with the United Nations system and other stakeholders. Events including the High-level Meeting on Sustainable Transport (New York, 17 April 2024) and a side event (New York, 11 July 2024) to the High-level Forum on Sustainable Development have provided opportunities for member State input and discussion on advancing sustainable transport and the SDGs.

## A. Implementation plan

11. The global community is working towards drafting an implementation plan<sup>5</sup> for the Decade of Sustainable Transport 2026–2035. This plan will outline steps for countries to align their transport policies, investments, infrastructure and practices with sustainability principles. It will also serve as a platform to share lessons learned from past United Nations decades, and examples of sustainable transport initiatives from various Member states. To address the needs of developing countries, a consultation mechanism is proposed to collect their views and identify necessary actions for achieving sustainable transport.

12. The implementation plan is expected to serve as a strategic framework to coordinate action, mobilize resources, and monitor progress towards sustainable transport worldwide. The plan is also expected to be global and non-binding in nature, allowing for more detailed regional, national and local plans, strategies and ways of collaboration, as suitable. The plan can also provide global visibility for sustainable transport in SDG discussions, and allow for improved monitoring and evaluation of progress towards sustainable transport goals and of transport's contributions to the SDGs.

13. While the SDGs have a target year of 2030, sustainable transport decisions made today will have much farther-reaching impact. Identifying policies that will result in sustainable transport systems is a major challenge for policymakers, since the planning process involves a high level of complexity in designing policy packages combined with significant infrastructure investments, which span years or even decades from inception, to operation, to financial returns. As the timeline of the Decade of Sustainable Transport 2026–2035 surpasses the SDG end date, the Decade provides a useful opportunity to provide continuity and visibility to global collaboration on sustainable transport. With escalating climate extremes, rapid technological advances and uncertain societal dynamics, the world faces a multitude of possible, probable and preferable futures that should be anticipated. The implementation plan can support such long-term planning for more sustainable transport pathways.

## **B.** Key components of the implementation plan

- 14. The implementation plan may encompass several critical components, as follows:
  - Vision and aims: define a clear global vision for ensuring that transport fulfils its potential as an enabler for sustainable development, while reducing its negative externalities by 2035 through actions by all relevant stakeholders.
  - Strategic pillars and policy actions: identify and elaborate on the main pillars of sustainable transport and related policy options.
  - Stakeholder engagement/partnership mapping: outline key roles and potential actions for engaging all relevant stakeholders, including Governments, international organizations, the private sector, civil society and academia, in the implementation of the plan.

<sup>&</sup>lt;sup>5</sup> As articulated in a concept note (unpublished) developed by the United Nations working group tasked with drafting the United Nations Global Action Plan for a Decade of Sustainable Transport.

- Support for implementation: identify potential funding sources and innovative financing mechanisms to support the implementation of the plan, and propose measures and partners for capacity-building, technical assistance, and knowledge sharing.
- Monitoring and evaluation: map out potential elements for monitoring follow-up, building on existing models, to track progress and showcase transport's contributions to sustainable development.

## C. Process and methodology

15. As guided by the General Assembly, DESA will develop the implementation plan for the Decade of Sustainable Transport, in collaboration with the United Nations regional commissions and in consultation with member States, the United Nations system and other stakeholders. The process of developing the implementation plan can be an effective tool for bringing together all stakeholders to highlight the significance of sustainable transport for the attainment of sustainable development, to strengthen existing partnerships, and to foster new collaboration.

16. A drafting group, consisting of representatives of DESA and the regional commissions, including ESCWA, will support the substantive preparations of the plan, and facilitate its consultations and review. DESA and the regional commissions will nominate focal points to support this work.

17. The process for developing the implementation plan will have dedicated channels of engagement to ensure the full participation of the wider United Nations system, member States, civil society and other stakeholders. DESA will utilize its existing collaborations and interagency channels to ensure that all relevant United Nations entities and outside actors working on transport are engaged in the process.

18. The development of the implementation plan will involve a multi-phase approach, as follows:

## Phase 1: Stakeholder consultations (second half of 2024)

- Consultations are held with a wide range of stakeholders to gather input and build consensus.
- Workshops, events, webinars and surveys are used to collect feedback and suggestions.

## Phase 2: Drafting the plan (early 2025)

- Inputs from consultations and research are synthesized to draft the implementation plan.
- The plan is aligned with existing mandates, international agreements and frameworks, such as the outcomes of the SDG Summit and the Summit of the Future, the Global Plan for the Decade of Action on Road Safety 2021–2030, the Paris Agreement and numerous other transport-related conventions and regional agreements.

## Phase 3: Review (second quarter of 2025)

- The draft plan is shared with stakeholders for review and feedback.
- Feedback is incorporated to finalize the plan.

## Phase 4: Launch and dissemination (late 2025)

- The implementation plan is launched ahead of the third United Nations Global Sustainable Transport Conference, potentially at a high-level event.
- The plan is disseminated through various channels, and implementation activities are initiated.

## **III.** Sustainability principles

19. As the world embarks on the Decade of Sustainable Transport 2026–2035, there is a renewed global commitment to transforming mobility systems in alignment with the sustainability principles agreed upon by the global community.<sup>6</sup> The following section outlines the main principles.

#### A. Safety

20. To reduce accidents, injuries and fatalities in transport systems, pursuant to General Assembly resolution 74/299 and SDG 3.6, member States are advised to consider the following.

#### 1. Infrastructure enhancements

(a) Pedestrian and bicycle facilities: creating and maintaining safe pedestrian crossings, sidewalks and dedicated bike lanes to minimize accidents involving non-motorized road users;

(b) Road design: applying design strategies, such as traffic-calming features (such as speed bumps and roundabouts), and conducting road safety audits to reduce high-risk areas and improve overall road safety;

(c) Barrier systems: installing barriers and guardrails in critical areas to safeguard pedestrians, cyclists and drivers from collisions and falls.

## 2. Traffic law enforcement

(a) Speed limits: enforcing speed limits with the help of speed cameras to prevent speeding and decrease accidents caused by excessive speed;

(b) Checkpoints: setting up checkpoints and conducting random tests to deter driving under the influence of alcohol or drugs;

(c) Traffic violations: utilizing automated systems to detect and penalize traffic violations, such as running red lights or disregarding stop signs.

## 3. Education and awareness

(a) Public campaigns: launching educational campaigns to promote road safety, and emphasizing the importance of seat belts, the dangers of distracted driving, and the need for defensive driving practices;

(b) School programmes: incorporating road safety education into school curriculums to instruct children on safe practices as pedestrians, cyclists and passengers;

(c) Driver training: offering thorough driver education and training programmes to ensure new drivers know about and comply with safety regulations.

#### 4. Data collection and analysis

(a) Accident data: gathering and analysing data on traffic accidents to identify patterns, high-risk areas and frequent causes, thus guiding targeted safety improvements and policy adjustments;

(b) Safety performance metrics: developing and tracking key performance indicators related to safety, such as accident rates, injury severity and fatalities, to evaluate the success of safety measures.

<sup>&</sup>lt;sup>6</sup> These principles are set out in several United Nations and other sources, including the 2030 Agenda for Sustainable Development, General Assembly resolution 74/299, the Global Roadmap of Action: Toward Sustainable Mobility of the Sustainable Mobility for All Initiative, and the Green Compact of the International Road Transport Union.

#### **B.** Efficiency

21. To optimize transport systems to maximize performance and minimize waste, as per SDG 11.2, member States are advised to consider the following.

#### 1. Alleviating congestion

(a) Traffic control systems: utilizing smart traffic management systems to adjust signals and manage traffic flow based on real-time data, thus helping to avoid bottlenecks and reduce congestion;

(b) Special lanes: creating dedicated lanes for buses, carpools or bicycles to improve traffic flow and decrease delays for these modes of transport.

### 2. Upgrading public transit networks

(a) Integrated systems: developing comprehensive public transit networks that link various modes of transport (such as buses and trains) for seamless travel;

(b) Reliable services: increasing the frequency and reliability of public transit options to attract more users and lessen dependence on private vehicles;

(c) Real-time updates: providing real-time updates on transit schedules and delays through digital platforms to help users make better travel choices and minimize waiting times.

## C. Inclusion

22. To promote equality by ensuring that sustainable transport systems are accessible and safe for all, as per SDG 9.1, member States are advised to consider the following.

#### 1. Accessibility for special needs

(a) Physical accessibility: providing features such as ramps, elevators and low-floor vehicles to facilitate easy access;

(b) Sensory accessibility: offering clear audio announcements, tactile guides, and visual signs for those with vision or hearing impairments;

(c) Assistance services: providing on-demand help for boarding, disembarking and navigating stations, with staff trained to assist individuals with special needs.

## 2. Gender equality

23. Transport systems need to cater to the specific requirements of all genders to ensure both safety and accessibility. For women, this involves creating well-lit and secure transport environments, and offering reliable services around the clock. Moreover, it is essential to include women in the planning, decision-making and operational aspects of transport systems. By involving women in these roles, their insights can help shape more inclusive and effective transport solutions that address their distinct experiences and challenges.

#### 3. *Economic inclusivity*

24. Ensuring transport is affordable for everyone involves the following:

(a) Subsidized fares: providing reduced or free fares for low-income individuals, seniors and students;

(b) Income-based discounts: offering sliding scale fares or subsidized transit passes based on income;

(c) Targeted programmes: providing financial assistance programmes to help marginalized groups access transport, often through partnerships with local organizations.

#### 4. Geographic and social equity

25. Addressing transport disparities means ensuring service expansion, namely extending routes and services to underserved and rural areas to ensure widespread access.

## 5. Safety and security

26. Creating a secure environment in transport systems involves the following:

(a) Preventive measures: using surveillance, emergency response systems, and security patrols to enhance safety;

(b) Inclusive design: ensuring facilities are well-maintained and accessible, with safe routes for all users;

(c) Support services: providing emergency assistance, help desks, and trained staff to support passengers in need.

#### **D.** Environmental strategies

27. To reduce emissions and transition to cleaner fuel sources, as per SDG 7, member States are advised to consider the following:

#### 1. Greenhouse gas emissions

(a) Adopt clean energy technologies: shifting to electric vehicles, hydrogen fuel cells, and biofuels can significantly reduce carbon dioxide and other greenhouse gases produced by transport;

(b) Support renewable energy: incorporating renewable energy sources, such as wind and solar, into the infrastructure for transport, including into charging stations for electric vehicles, can help decrease the overall carbon footprint.

## 2. Air pollution

(a) Promote low-emission public transport: upgrading public transport with cleaner technologies, such as electric or hybrid buses, helps lower pollutants like nitrogen oxides and particulate matter;

(b) Enforce emission standards: implementing stricter emission regulations for vehicles and industries ensures that transport remains within environmentally safe limits.

#### 3. Noise pollution

(a) Adopt quiet technologies: using quieter vehicle designs and soundproofing measures can reduce the impact of transport noise on communities;

(b) Create noise barriers: installing barriers and using low-noise road surfaces can help diminish road traffic noise.

#### 4. Accessibility for clean energy technologies

(a) Increase charging infrastructure: expanding the network of electric vehicle charging stations is vital for supporting electric vehicle adoption. This includes installing stations in urban and rural areas, and along major routes, to ensure widespread access;

(b) Develop hydrogen refuelling stations: building a network of hydrogen refuelling stations is essential for the adoption of hydrogen fuel cell vehicles. Strategically locating these stations helps facilitate the transition to hydrogen-powered transportation.

#### 5. Logistics optimization

(a) Route optimization through algorithm-driven routing: employing sophisticated algorithms and software to find the most efficient routes for cargo can reduce travel distances and time, leading to decreased fuel use and emissions. This involves analysing factors such as traffic, road conditions, and delivery schedules;

(b) Real-time adjustments: using real-time data to adjust routes based on current traffic conditions, weather, and road closures helps avoid delays and inefficiencies, further reducing fuel consumption and emissions;

(c) Load management through efficient cargo loading: optimizing the way cargo is loaded to ensure vehicles are fully and evenly loaded can enhance fuel efficiency. This includes maximizing container capacity and avoiding underloaded trips, which reduces the number of journeys needed;

(d) Freight consolidation: combining shipments from different sources into one load, known as freight consolidation, lowers the number of trips and overall fuel use. This can be facilitated through coordinated planning and partnerships among shippers.

## **E.** Economic integration

28. To increase connectivity within the Arab region, member States are advised to consider the following:

(a) Invest in key infrastructure: focusing on creating and enhancing major transport routes that connect economically varied regions. This includes developing high-speed rail networks, expanding highways, and improving regional airports. Such projects should be strategically planned to link areas with different economic activities, like industrial centres, agricultural zones and urban areas, to ensure efficient movement of goods and people;

(b) Promote economic integration: designing transport projects to bridge the gap between economically disparate regions, thereby stimulating growth in less developed areas. Improved connectivity can attract investment and boost local businesses. For example, constructing a high-speed rail line between a remote industrial region and a major city can support local industries and encourage new business opportunities;

(c) Enhance cross-border connectivity: for regions spanning multiple countries, focusing on developing cross-border transport links that improve international connections. Investments in transnational highways or regional rail networks can enhance economic integration and facilitate cross-border trade, benefiting both local and international economies;

(d) Develop multi-modal transport systems: creating transport networks that integrate various modes of transport, such as rail, road and air, thus providing efficient and flexible connectivity. For instance, transport hubs that connect rail services with buses and bike-sharing options can enhance regional accessibility and support development;

(e) Foster public-private partnerships: encouraging collaboration between public and private sectors in transport planning and development. Public-private partnerships can bring together resources, expertise and investment to enhance infrastructure and services, and promote projects that advance regional development, such as logistics centres and industrial parks.

## IV. Current status in the Arab region

29. The concept of sustainable transport is gaining increasing recognition globally, with countries implementing strategies to achieve it. Arab countries are no exception. Many have made significant strides toward sustainability in certain areas, by adopting targeted efforts across various sectors.

### A. Electric vehicle readiness

30. The global electric mobility readiness index 2023 evaluates 35 countries' readiness for e-mobility, with a scoring system from 0 to 100 comparing internal combustion engine vehicles and electric vehicles. Higher scores indicate a stronger transition towards electric vehicles, with the index analysing five key factors, including market conditions, infrastructure and regulations.



Figure 1. Electric vehicle readiness index, 2023

31. The electric vehicle readiness index shows that Arab countries have performed well by international standards, with the United Arab Emirates and Qatar ranking seventh and ninth, respectively. Robust government support for the private sector in the United Arab Emirates and a strong commitment to advancing green mobility in Qatar are driving these countries towards a thriving electric vehicle market. However, despite the achievements of some Arab countries, others such as Egypt and Lebanon still lag in terms of adaptability to the electric market. Problems such as economic conditions and overdependence on fossil fuels for power generation are impeding the growth of this sector, necessitating further governmental support to address these issues.

#### **B.** Alternative fuel

32. The Arab region is re-evaluating its energy landscape, with nearly every country crafting sustainable energy strategies for 2030 and 2050. In 2018, the region's energy mix was predominantly reliant on fossil fuels, with renewable sources accounting for only 4.6 per cent. Hydrogen production remains limited, but countries like Saudi Arabia and the United Arab Emirates have begun establishing hydrogen production facilities, with others exploring similar potential. Transitioning to a hydrogen-based economy, particularly in the transport sector, would offer environmental advantages while positioning these countries as key hydrogen producers, attracting foreign investment and boosting revenues.

33. There are currently more than 700 hydrogen refuelling stations worldwide. However, progress in the Arab region has been modest, with only three active stations in 2024 in Saudi Arabia and the United Arab Emirates, compared with two in 2023.<sup>7</sup>

Source: Global electric mobility readiness index 2023.

<sup>&</sup>lt;sup>7</sup> H<sub>2</sub>Stations.org, Hydrogen refuelling stations worldwide.

## **C.** Logistics performance

34. The Logistics Performance Index (LPI) is significant to sustainable transport as it measures the efficiency of a country's logistics system, which directly impacts the sustainability of transport networks. Efficient logistics reduce unnecessary travel, fuel consumption and emissions, thus supporting environmental goals. Moreover, LPI can help identify areas for improvement in infrastructure, customs procedures, and the quality of transport services, thus contributing to the optimization of supply chains and promoting cleaner and more sustainable transport practices.

35. Arab countries' logistics performance is reflected in figure 2, summing up their scores from 2014 to 2023. The results show that most Arab nations have seen little to no improvement in their logistics performance. However, Gulf Cooperation Council countries stand out as top performers, while the rest of the region continues to lag behind both regionally and globally.

36. Major logistics deficits in the region include domestic logistics performance, measured by details inside a country, and not limited to gateways such as ports or borders. The indicator is useful to analyse a system's deficits that are impeding the smooth and easy operation of the logistics chain.



Figure 2. LPI score for Arab countries

Source: World Bank, Logistics Performance Index 2023.

## V. Arab countries' efforts to develop sustainable transport

37. Below are some examples of Arab countries' efforts to develop sustainable transport.

## A. Consumer sector

38. In Bahrain, TIER, a top European provider of shared micro-mobility solutions, has introduced its first e-bike fleet in the Middle East. Bahrain is the first Arab country to receive these e-bikes, which are now available in key areas of Diyar Al Muharraq, complementing existing TIER e-scooter services.<sup>8</sup>

39. In Egypt, the Cairo Monorail, spanning nearly 100 km with two lines, is the world's longest monorail network. Once completed, it will transport 45,000 passengers per hour in each direction. It is part of broader Egyptian efforts to enhance green transport, reduce emissions, and alleviate traffic congestion.<sup>9</sup>

40. In the United Arab Emirates,<sup>10</sup> efforts are being made to ensure that at least 10 per cent of all vehicles on the road are electric by 2030, as part of the country's initiative to promote electric vehicles. The Dubai Roads and Transport Authority has successfully transitioned 50 per cent of the city's taxi fleet to hybrid vehicles, and plans to convert the entire fleet to hybrid and electric vehicles by 2027.

41. The Qatari Ministry of Transport is dedicated to establishing a fully electric public bus system by 2030. Having successfully reached its 2022 goal of converting 25 per cent of its public transit buses to electric, the Ministry now aims to electrify 35 per cent of its total vehicle fleet, and achieve complete electrification of public transport buses by 2030.<sup>11</sup> The electric vehicle charging stations network, which currently has over 200 stations, plans to expand by adding 300 more by the end of 2024 and an additional 600 units in 2025.

42. In Jordan, residents of Amman have access to a new bus fleet supported by the Green Cities initiative of the European Bank for Reconstruction and Development (EBRD),<sup>12</sup> which is investing a significant amount in this project for the Greater Amman Municipality. The fleet features 15 zero-emission electric buses, the first in Jordan, and 136 Euro V diesel buses. The electric buses are funded by contributions from both EBRD and the Green Climate Fund, with the diesel buses being financed through an EBRD loan.

## **B.** Alternative energy

43. Aligned with its 2030 vision and the SDGs, Egypt introduced the 2014 Ageing Vehicle Replacement Initiative to cut fuel imports, lower harmful emissions, and enhance road safety. By April 2023, Egypt had converted 500,000 vehicles to natural gas.<sup>13</sup> Since the start of the Egyptian delivery project in 1980, Egypt has supplied natural gas to 14.2 million housing units across the country.

44. In Morocco, a solar-powered car successfully completed a cross-country journey, showcasing the potential of solar vehicles as a practical and sustainable alternative to fossil fuel-powered cars.<sup>14</sup> This journey demonstrated the car's ability to handle diverse terrains and climates, proving the viability of solar-powered transport. The country's sunny environment provided an ideal setting for this test, highlighting the car's capability to endure long-distance travel using only renewable energy.

<sup>&</sup>lt;sup>8</sup> Zawya, TIER Mobility has Introduced e-bikes for the First Time in the Middle East, 2022.

<sup>&</sup>lt;sup>9</sup> Business Today, Clean transportation era begins: Egypt's major sustainable transportation projects, 2023.

<sup>&</sup>lt;sup>10</sup> International Trade Administration, Smart and sustainable mobility, 2023.

<sup>&</sup>lt;sup>11</sup> The Peninsula, Qatar's sustainability initiatives, 2024.

<sup>&</sup>lt;sup>12</sup> European Bank, Amman to introduce new bus fleet under EBRD Green Cities programme, 2021.

<sup>&</sup>lt;sup>13</sup> State Information Service, Fuel of 500,000 vehicles converted to natural gas till March 2023: Petroleum Ministry, 2023.

<sup>&</sup>lt;sup>14</sup> The Renewable Energy Institute, Solar-powered vehicle completes first off-road journey across the Sahara (n.d.).

45. In September 2022, Saudi Arabia Railways signed a memorandum of understanding with Alstom, a leading French rail transport company, to collaborate on the development of customized hydrogen train solutions for the country.<sup>15</sup>

46. In the United Arab Emirates, the Dubai Electricity and Water Authority and the Emirates National Oil Company<sup>16</sup> have partnered to create hydrogen fuelling stations for vehicles. They will jointly assess the feasibility of a pilot project for hydrogen-powered mobility, utilizing the Authority's green hydrogen production at the Mohammed bin Rashid Al Maktoum Solar Park and the Oil Company's expertise in the fuel market to develop and operate the stations.

## C. Trade and logistics

47. In September 2021, Bahrain introduced the fastest sea-to-air logistics hub in the region, offering a turnaround time of just two hours for containers. This new hub enables goods to be delivered at double the speed of sea freight, and at just 40 per cent of the cost of air freight.<sup>17</sup>

48. German-Moroccan collaboration on sustainable mobility aims to enhance low-carbon transport in Morocco over the next four years. The project focuses on digitizing transport systems to enable real-time data exchange, better traffic management, and improved passenger experiences through mobile applications and smart services. It also seeks to utilize artificial intelligence to optimize transport operations and boost road safety.<sup>18</sup>

49. In Saudi Arabia, the National Industrial Development and Logistics Program is heavily investing in advanced infrastructure and digital technologies to improve logistics. By incorporating technologies such as Internet of Things devices and data analytics, the initiative enhances supply chain efficiency. Key components include real-time tracking of goods, predictive maintenance for transport vehicles, and smart warehousing systems. This approach not only cuts operational costs but also ensures timely and secure deliveries, boosting the competitiveness of Saudi industries in the global market.<sup>19</sup>

50. The United Arab Emirates is investing in intelligent transportation systems to enhance transport efficiency and reduce congestion. This includes intelligent traffic management, dynamic toll pricing, and smart road infrastructure. Key initiatives include the Smart Traffic System, which uses real-time data for traffic flow management, and the Smart Signalling System, which adapts traffic signals based on current conditions.<sup>20</sup>

## VI. Challenges

51. Transitioning towards sustainable transport in the Arab region faces a variety of challenges, particularly in integrating alternative fuels, developing electric markets, and enhancing green trade and logistics systems. One key obstacle for hydrogen projects is the high production cost, driven largely by electricity prices. Similarly, the electric vehicle market in many Arab countries struggles owing to weak economic conditions, and heavy reliance on fossil fuels for power generation. The current foreign currency shortages further complicate the market, with new vehicles often priced in United States dollars, making them inaccessible to many potential buyers.

<sup>&</sup>lt;sup>15</sup> The Medialine, Saudi Arabia takes first step toward hydrogen-powered trains, 2023.

<sup>&</sup>lt;sup>16</sup> International Trade Administration, Smart and sustainable mobility, 2023.

<sup>&</sup>lt;sup>17</sup> APM Terminals, Global Sea-to-Air Hub cuts customs time and costs at APM Terminals Bahrain, 2022.

<sup>&</sup>lt;sup>18</sup> Changing Transport, Sustainable mobility with renewable energies in Morocco, 2023.

<sup>&</sup>lt;sup>19</sup> The Medialine, Saudi Arabia takes first step toward hydrogen-powered trains, 2023.

<sup>&</sup>lt;sup>20</sup> International Trade Administration, Smart and sustainable mobility, 2023.

52. Infrastructure issues also pose significant barriers. In some developing areas, roads are not pedestrianor cyclist-friendly, requiring extensive investment to accommodate sustainable transport options. Moreover, while cities may be equipped with infrastructure for electric scooters and other green transport modes, rural and remote areas often lag behind, highlighting the need for targeted investments in these regions.

53. Public awareness of sustainable transport also remains limited, with cultural resistance to reducing personal car usage further hindering progress. Convincing consumers to adopt electric or alternative fuel vehicles and use public transport over private vehicles is an ongoing challenge. Financing such initiatives is another hurdle, as securing investments for large-scale projects can be difficult due to high costs and uncertain returns.

54. Many Arab countries are heavily reliant on fossil fuels, both for energy production and as a major source of revenue. Transitioning away from fossil fuels towards cleaner energy sources requires significant policy shifts and economic diversification.

55. The harsh climate and challenging geographical features in certain parts of the Arab region, including deserts and mountainous areas, can complicate the implementation of sustainable transport technologies, such as electric buses or solar-powered vehicles.

## VII. Conclusion

56. The global community is seeking to agree on an implementation plan for Decade of Sustainable Transport 2026–2035. The plan will contain actions to be taken by countries to ensure transport policies, investment, infrastructure and practices, among other things, are in line with the principles of sustainability in general and transport sustainability in particular. The plan will provide a platform to share experiences from other United Nations decades, and selected examples from sustainable transport efforts undertaken by member States to date.

57. To ensure the plan is reflective of the needs of developing countries, a consultation mechanism has been suggested to gather the views and concerns of developing countries, and the actions they deem necessary to achieve sustainable transport in the years to come.

58. The current round-table discussion of the Committee on Transport and Logistics aims to gather the views of Arab countries on the priorities, mechanisms and requirements to achieve sustainable transport in the Arab region. Member States are invited to submit their proposal in writing before, during and after the session, and are encouraged to actively participate in the round-table discussion.

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