

Air Pollution Series

Actions on Air Quality in West Asia

Executive Summary

Context

Like most countries in the world, the countries of West Asia are facing the consequences of air pollution at the expense of their inhabitants' present and future health and livelihoods. In addition to anthropogenic emissions mainly derived from the energy, industry and transport sectors in most cities, the West Asia region is strongly impacted by the natural emissions of the Arabian and African deserts that surround it. As such, air quality monitoring and prevention programmes are considered some of the top priorities for West Asian countries.

In response to the growing global threat of air pollution, in June 2014, the United Nations Environment Assembly adopted resolution 1/7: Strengthening the role of the United Nations Environment Programme in promoting air quality. In line with paragraphs 4 and 7 of the resolution, which called on the United Nations Environment Programme to compile an overview of the actions taken by governments to improve air quality, this report details such actions for countries in West Asia as an update to the 2016 Actions on Air Quality report.

This report follows a similar approach to the previous version in identifying the policies and actions adopted by

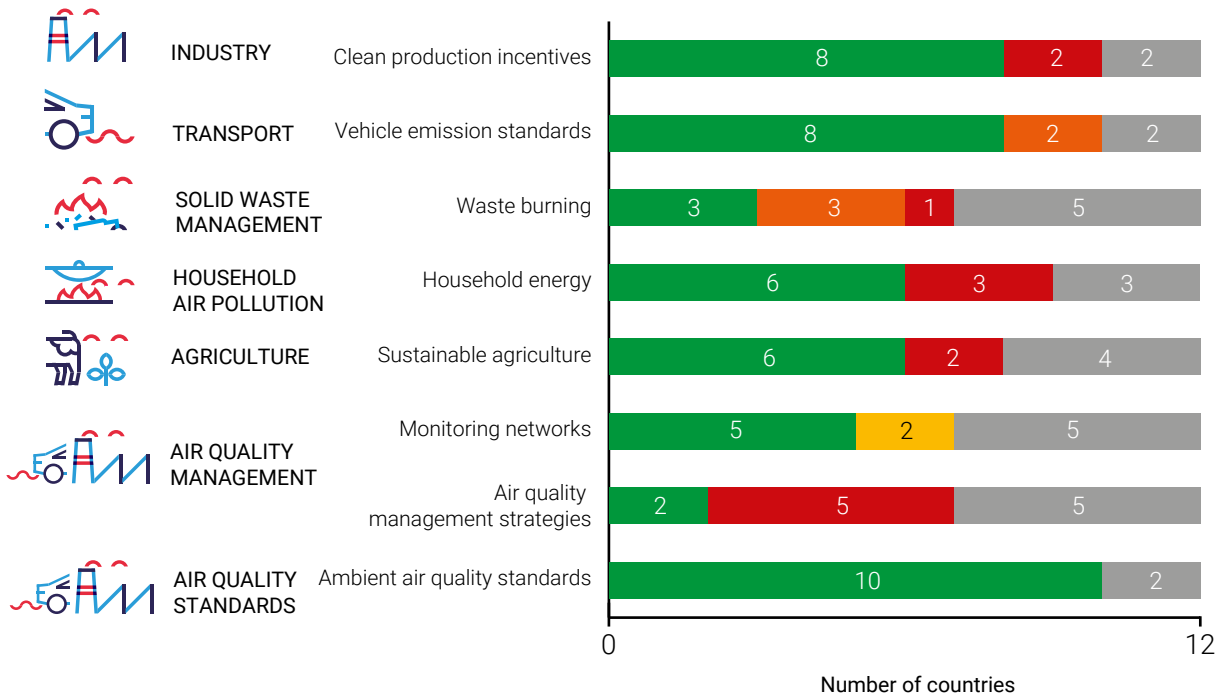


Car-free day. woman riding bike on a road in desert.
Photo credit: © Shutterstock/ Mila Supinskaya Glashchenko

West Asian governments to address five sources of air pollution: energy and industry; transport; the open burning of waste; indoor air pollution; and agricultural emissions. It also discusses general legislative efforts in the region, such as the implementation of national ambient air quality standards, the constitutional right to clean air and the continuous monitoring of air quality in the countries in question.

Figure 1. Progress towards adoption of key actions that can significantly improve air quality

Where is the West Asia region in taking action to improve air quality?



Source: UNEP survey data¹

¹ From the analysis of UNEP data, a set of key policy actions were identified that, if adopted, would significantly improve air quality. The figure indicates how many countries have adopted these policies (green), are on their way to adopting them (orange/yellow) or have yet to adopt or implement them (red). Grey indicates that no data were available.

Sectoral measures

Industry

Eight of the 12 countries in West Asia use incentives to promote cleaner production, energy efficiency and pollution abatement. The remaining countries either lack such incentives or have no available data on the issue.

Transport

The implementation of vehicle emission standards is required to decrease emissions from the transport sector. In West Asia, two countries have standards at a higher level than Euro 4, six have standards equivalent to Euro 4, and the remaining four countries have less stringent standards or have not provided any data in this regard.

Figure 2. Countries with incentives or policies promoting cleaner production, energy efficiency and pollution abatement for industries



Source: UNEP survey data

Box 1: Examples of actions adopted by countries to address industrial emissions

Jordan's 2020–2030 National Energy Strategy proposes to reduce the country's carbon emissions by 10 per cent and improve energy efficiency in various sectors by 9 per cent. It also plans to increase renewable energy's share of the entire energy mix from 11 per cent in 2020 to 14 per cent by 2030, in continuation of its growth from 2 per cent to 11 per cent between 2015 and 2020.

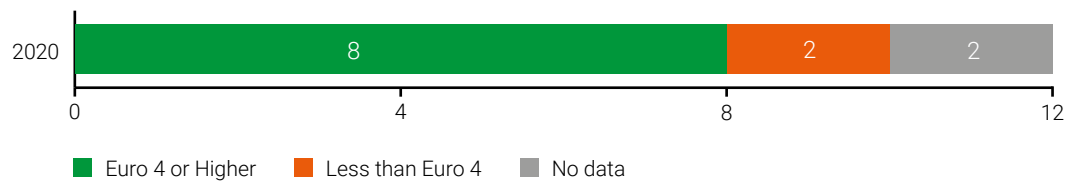
Qatar has adopted a Clean Development Mechanism in the industrial sector that includes the Qatar Fuel Additives Company and the Qatar Fertiliser Company.

Lebanon provides financial incentives in the form of loans with close-to-zero interest rates under the Lebanon Environmental Pollution Abatement Project. These loans are granted to industrial enterprises, allowing them to implement industrial pollution abatement interventions. A second financial incentive programme in Lebanon, known as National Energy Efficiency and Renewable Energy Action, provides funding for green energy projects. Finally, Decree 167/2017 establishes tax reduction benefits for industry activities that meet all environmental standards and conditions. Unfortunately, most of these incentives are on hold due to the current financial crisis affecting the Lebanese economy.

The **United Arab Emirates (UAE)** has adopted several strategies, such as the Dubai Energy Efficiency Program, the Green Growth Strategy, the Abu Dhabi Demand-Side Management and Energy Rationalization Strategy, and the UAE Energy Strategy 2050, which aims to increase renewable energy's share of the entire energy mix to 50 per cent.

Saudi Arabia has launched its National Renewable Energy Program, through which it aims to generate 30 GW of renewable energy by 2025 and 60 GW by 2030. Saudi Arabia's Energy Minister, Prince Abdulaziz bin Salman, has set out the country's intention for 30 per cent of its power to be produced by renewable energies (with the remaining 70 per cent from gas), but no date for achieving this target has been announced.

Syria has released some incentives to promote the use of alternative energy sources and increase energy efficiency. At the same time, the energy sector has been hit hard by the crisis and there is an urgent need to enable the transfer and localization of technology to increase energy efficiency.

Figure 3. Countries meeting Euro 4/IV vehicle emission standard

Source: UNEP survey data

Box 2: Examples of actions adopted by countries to address transport emissions

The **United Arab Emirates** has adopted an updated vehicle inspection standard, expanded to cover hybrid vehicles, and will implement it in 2021.

In 2018, **Lebanon** incentivized electric mobility through customs and registration cost reductions for hybrid and electric vehicles (Article 55 of Law 79/2018).

Saudi Arabia has adopted Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles, which target an improvement in the overall fuel economy with an average of 4 per cent annually. This would increase the country's fuel economy for light-duty vehicles from its current level of 12 km per litre to 19 km per litre by 2025.

Improved vehicle emission standards must be coupled with fuel quality standards. Six countries in West Asia have implemented fuel quality standards limiting the amount of sulphur in petrol and/or diesel. Of these, sulphur is limited to 50 parts per million (ppm) in both petrol and diesel in five countries, and in diesel only in one country. Another country, which does not regulate fuel standards, has petrol and diesel sulphur content exceeding 500 ppm, and the remaining countries had no available data. Four countries have implemented both vehicle emission and fuel quality standards.

Solid waste management

Between 2015 and 2019, countries in West Asia implemented a number of measures to regulate the open burning of solid waste. For instance, six countries developed national or urban solid waste management plans and ran campaigns to promote behavioural change. Almost all of the solutions and policies put in place were launched during the last five years. Some countries face difficulties in implementing such policies as a result of instability arising from political and economic turmoil; as it stands, the open burning of agricultural, municipal and/or other forms of solid waste is still practised by five countries.

Box 3: Examples of actions carried out by countries to address emissions from solid waste

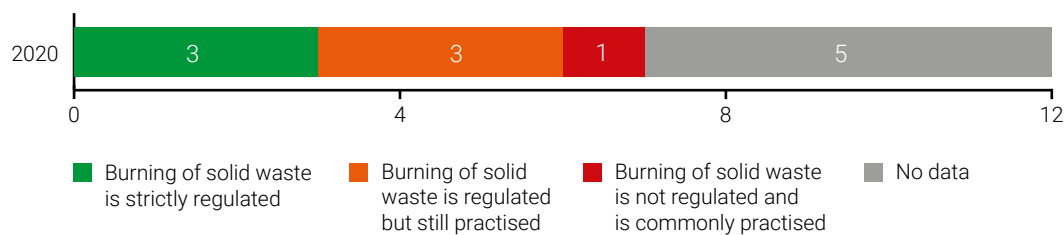
Qatar is implementing a national and subnational solid waste management plan, which includes drawing up and enforcing regulations for the management of solid waste collection and separation, and the ensuring the final disposal of waste in sanitary landfills equipped with gas recovery systems.

The **United Arab Emirates** has established several projects, such as its landfill rehabilitation projects and the Emirates Manjam project, to reduce the amount of waste reaching landfills, increase production of refuse-derived fuel and employ municipal solid waste treatment.

Jordan has implemented a national solid waste management strategy and formulated and enforced solid waste management regulations. It plans to improve its methods for waste collection and separation and adopt a landfill gas recovery system to reduce landfill gas emissions.

Lebanon has prepared a strategy for integrated solid waste management (Law 80/2018) that is under review and awaiting approval.

Figure 4. Countries with solid waste burning regulations



Source: UNEP survey data

Residential

Currently, six countries in the region have national programmes that promote the use of clean energy in households for cooking and heating. Cooking with solid fuels is one of the major contributors to indoor air pollution around the world, but West Asia faces other, more widespread, issues. Although most countries in the region have access to clean non-solid fuels, a fraction of the population still uses wood/biomass, agricultural crop waste and coal.

Box 4: Examples of actions adopted by countries to address emissions from the residential sector

The **United Arab Emirates** is developing green technologies for residential cooling via a regional system for energy-efficient air conditioners in the Gulf Cooperation Council, in cooperation with the Emirates Authority for Standardization and Metrology and the GCC Standardization Organization.

Figure 5. Countries with national clean residential energy programmes



Source: UNEP survey data

Agriculture

The agricultural sector is a major source of ammonia-induced particulate matter and methane (the main precursor of tropospheric ozone) thanks to manure and

the use of inorganic fertilizer. Six countries in the region stated that they have incentives to promote sustainable agricultural practices.

Box 5: Examples of actions adopted by countries to address emissions from the agricultural sector

Lebanon's Ministry of Agriculture released a new strategy that addresses measures to reduce the use of synthetic and phosphate fertilizers and foster the recycling of farm waste into compost.

The **United Arab Emirates** has various programmes that promote organic farming using the latest farming technology, climate-smart agriculture and a sustainable production and consumption plan.

Figure 6. Countries with incentives promoting sustainable agriculture practices (such as livestock manure management and use of organic fertilizers)



Source: UNEP survey data

Non-sectoral air quality management actions

Air quality management strategies

Questionnaire responses indicated that two countries in the region (Qatar and Lebanon) have a national air quality management strategy. In Qatar, the national air quality management strategy that has been developed is to be implemented by the Ministry of Municipality and Environment; in Lebanon, a clean air policy will be put in place after the necessary decrees have been developed by the Ministry of Environment in collaboration with other ministries and stakeholders. Furthermore, the constitutions of both Qatar and Lebanon recognize the right to clean air. In addition, Bahrain is in the process of finalizing the approval of a national air quality management strategy to be enacted in the near future. The remaining countries either do not have a national air quality strategy or have no data available in this regard.

Air quality standards

Ten countries in the region have established national ambient air quality standards. In most countries, the institutions responsible for enforcing these standards are the national environmental ministries, such as the Ministry of Environment in Qatar, Iraq, Jordan, Lebanon and Oman and the Supreme Council for Environment in Bahrain. The ambient air pollutants regulated in West Asia differ by country.

Air quality monitoring

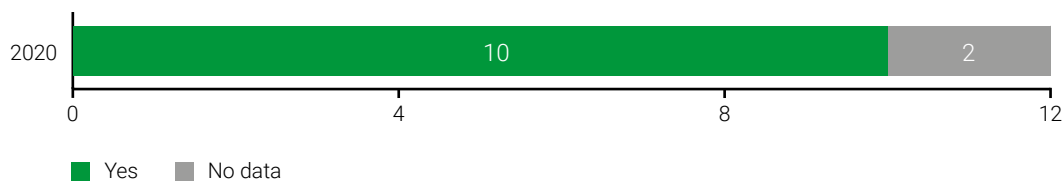
With regard to the monitoring of ambient air quality, five countries (Bahrain, Jordan, Qatar, Saudi Arabia and the United Arab Emirates) have operational air quality monitoring networks, and two (Lebanon and Iraq) have networks that are not operational due to financial limitations and a consequent lack of maintenance. Those countries with an active monitoring network rely on stationary monitors coupled with mobile reference monitors. Furthermore, five countries have subnational air quality monitoring networks; Qatar and the United Arab Emirates, for example, have monitoring networks in place in their major cities.

Figure 7. Countries with a national air quality management strategy, framework or plan of action in place



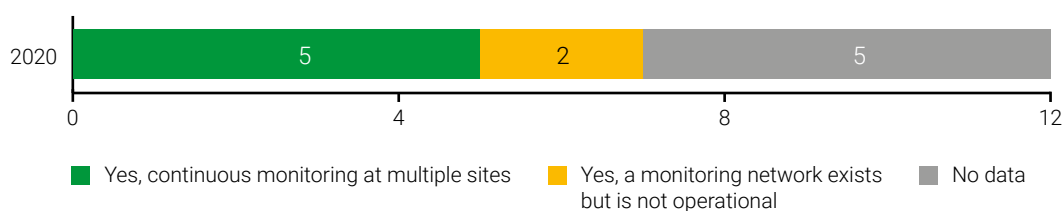
Source: UNEP survey data

Figure 8. Countries with ambient air quality standards



Source: UNEP survey data

Figure 9. Countries with national ambient air quality monitoring networks



Source: UNEP survey data

Conclusion

West Asia has made progress in implementing air pollution solutions for different sectors. However, some countries have only taken action recently and their solutions are still in the preliminary stages, while other countries have yet to commit to any solutions.

The main conclusions to be taken away are that: (1) most countries have seen a general improvement in air quality regulations and/or in developing air monitoring networks; (2) the energy and industry sectors are at the heart of the current emissions and economic models in the region and the most recent policy reforms are starting to address the changes that need to be made through long-term national energy renovation strategies; (3) the transport and residential sectors have improved significantly over recent years, while waste management and agriculture have received less attention; and (4) countries affected by civil war or economic and sociopolitical crises face more challenges when it comes to implementing air quality policies.

Subsequent updates on the actions carried out to improve air quality in West Asia will further evaluate the progress made with those strategies that have only recently been adopted.

Three main recommendations emerge from this report:

- A) Participation in international initiatives such as the Climate & Clean Air Coalition (<https://www.ccacoalition.org/en>) would be beneficial for individual countries and for the region as a whole. This global network could provide significant support and technical assistance to countries in their efforts to regulate air pollution and fight climate change. Three countries in the region have already joined the Coalition.
- B) Integrated approaches should be adopted in response to interconnected climate, environmental and development problems.
- C) In countries still practising open burning, stringent efforts should be made to eliminate these activities. Recommendations to this end include: (1) implementing policies — enforcing bans on burning materials or waste; (2) raising awareness — promoting alternatives to burning, informing the community about sources of emissions and the impact of these practices on health and the environment; and (3) developing integrated waste-management programmes — launching or strengthening waste reduction and recycling programmes and implementing circular economy initiatives.

