



POLICY BRIEF #22

ACHIEVING SDG7 IN ARAB REGION

Developed by:

UNESCWA

In Collaboration with:

FIA Foundation and IRENA

12TH FEBRUARY 2018

DRAFT FOR PUBLIC CONSULTATION

This document is a part of a series of Policy Briefs being developed to support SDG7 review at the UN High-Level Political Forum to be held in July 2018. The objective is to inform intergovernmental discussions by providing substantive inputs on SDG7 and its interlinkages with other SDGs prepared through inclusive multi-stakeholder consultation processes. The development of these Policy Briefs is coordinated under the auspices of the Ad Hoc Informal Multi-stakeholder Technical Group of Advisors on SDG7.

If you want to provide comments on this Policy Brief, please visit:
<https://sustainabledevelopment.un.org/EnergyConference/documentation>

KEY MESSAGES

Progress towards achieving SDG 7

The development of sustainable energy systems is a crucial priority for all economies across the Arab region. It is a highly relevant objective to any one Arab country whether it stands on a high or low growth economic path. Progress in SDG 7 is a critical contributing factor to implementing the transition towards such energy systems, which will help in managing the multi-faceted challenges faced by Arab countries over the coming years and decades. Indeed, the transition towards more sustainable energy systems is a key resolution to be made to allow Arab countries to move towards a more sustainable resource management, particularly, in terms of improving energy efficiency and reducing the overwhelming reliance on fossil fuels for virtually all energy needs in the region. War, political instability, and consequent displacement and migration, particularly in low- and lower-middle-income countries, further accelerate pressure on the urban living spaces and resources. As populations and economies grow, so do their overwhelmingly young people's expectations for economic opportunities and improving living standards, for which the availability of an ever-increasing pool of natural resources and its sustainable management will be of pivotal importance.

Access

Overall, access to electricity is close to universal in cities across the Arab region but remains fixed at approximately 80% in rural areas. Planned and unplanned service disruptions in many countries in the region, on the other hand, are a challenge for electricity users, irrespective of the urban–rural divide or indeed income divide. This situation is inducing certain gaps in the provision of energy services in the region that need to be addressed.

Efficiency

While the Arab region has historically not been one of the most energy-intensive region in the world, it has been the only one to achieve no fall in its energy intensity over the past 25 years with energy consumption more than doubling since 1990. This growth is tainted with wide spread energy inefficiencies across all economic sectors that need to be urgently addressed to produce immediate impacts that can slowdown, or reverse, the growth rates recorded in energy consumption. Earnestly, and rapidly, improving energy efficiency will increase energy productivity in the region and contribute to its economic and social developments.

Renewables

Despite a considerable potential of modern renewable energy technologies that is available throughout the Arab region, such as wind and solar power, renewable energy still plays a marginal role in most Arab countries. Its overall low contribution to the energy mix reflects the region's globally unparalleled reliance on non-renewable sources. A realistic deployment strategy, for renewable energy, needs to be developed in each Arab country based on their specific needs and the required pace to mobilize this largely untapped renewable energy potential.

Priority actions

Over the next four years

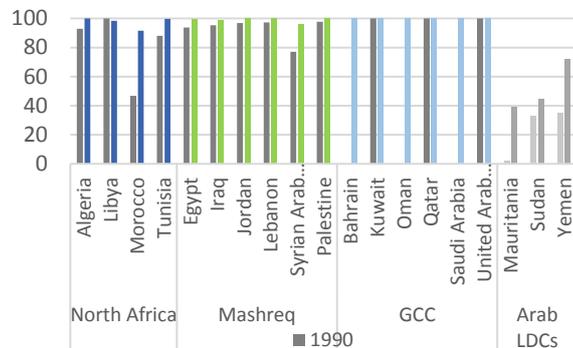
- Take advantage of the relatively low international oil prices that are still in place to develop and implement suitable policies and institutional frameworks to boost energy efficiency measures and practices, and to address the various barriers preventing progress in energy efficiency and renewable energy deployments, including inadequate market and energy-pricing incentives.
- Building institutional capacity, transparency and accountability, monitoring and data collection systems, dissemination and information-sharing between institutions and a stronger role for science and research.
- Strengthening local governance and communication between government, financial institutions and the public and private sectors and reinforcing the role of civil society.

Towards 2030

- Enforce proactive and integrated policies that manage natural resources more sustainably, especially the water-energy-food nexus in order to address these multidisciplinary energy-related issues.
- Develop a more rational use of the region's valuable fossil fuel resources by boosting their productivity and optimizing their inputs into the energy mix in conjunction with the exploitation of the economic potential of energy alternatives, particularly renewable energy. A comprehensively developed panoply of energy options, rationalizing the supply and demand sides, should be put in place through supportive legislative and policy settings to allow the implementation of sustainable national energy systems.

Energy Access

Access to electricity, as well as to clean cooking fuels and technologies is now near-universal in North Africa, the Mashreq and the Gulf Cooperation Council¹ – an impressive achievement, allowing the Arab region to stand out from other regions with a high share of developing economies.



Share of population with electricity access in the Arab region, 1990 and 2014 (%)

Despite very positive developments in electricity access since the 1990s, some significant gaps in access to energy remain in the Arab region. Overall, access to electricity is close to universal in cities across the Arab region but remains fixed at approximately 80% in rural areas with a total of around 36 million Arabs did not have any access to electricity in 2014, primarily in the Arab LDCs with small numbers of people without electricity access in North Africa and the Mashreq.

Planned and unplanned service disruptions, on the other hand, are a challenge for electricity users, irrespective of the urban-rural divide or indeed income divide.

War and regional instability present the Arab region with the separate challenge of supplying modern energy access – among other essential services – to the rapidly increasing number of millions of people, with highly detrimental effects on energy access and the environment. Mass migration imposes tremendous material and logistical challenges for host countries and communities, while it deprives millions of refugees of secure access to energy in addition to other essential services such as clean water, sewerage, food and healthcare.

Through its multifaceted links to different fields of socioeconomic development, the lack of access to energy is a major stumbling block to national development efforts in the Arab LDCs.

Access to other energy services is also essential to support health, education, water and other infrastructure facilities, and to power economic activities, including agriculture in rural areas.

Access to these other energy services allowing to meet other basic human needs should be the focus of the next steps of insuring universal energy access.

One of the key challenges the Arab region faces as a whole is whether primary energy and electricity should remain what has been effectively a “public good” supplied at low cost by the State to all of its citizens, or whether the region’s emerging economies will need to redefine the way energy is used and

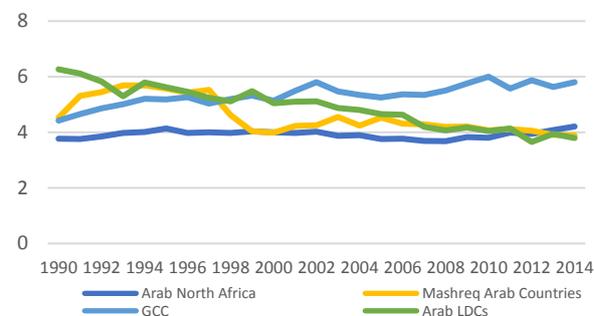
supplied within their domestic market, based on a system that reflects the real costs, but at the same time protects the most vulnerable segments of society and includes mitigation measures for the low to medium amounts of income.

Energy Efficiency

While the Arab region has historically not been one of the most energy-intensive regions in the world, it has been the only one to achieve no fall in its energy intensity over the past 25 years.

Reductions in energy intensity in the Arab region have been lagging significantly behind those in other regions. Between 2000 and 2014, global energy intensity fell by around 1% annually, 2% per year since 2010, while the average intensity in Arab countries rose by around 1% during the 2000s and has since been largely stagnant.

Energy intensity rates differ considerably across the Arab region. Energy net exporters drive the regional trend in rising energy intensity as having based their historical industrial growth on fossil fuels and energy-intensive industries. Net energy importers have seen fairly low and falling energy-intensity rates.



Energy intensity in the Arab region by sub region, 1990–2014 (MJ/2011 PPP US\$)

Taking the region’s aggregate data, we see a moderate trend in more recent years towards falling energy-intensity levels in agriculture and transport, with declining intensity rates in industry in some economies. Transport remains by far the most energy-intensive sector in the Arab region, however, followed by industry and agriculture.

On regional aggregate level, transport is more fuel-intensive than any other region of the world reflecting on the one hand the increasing mobility of many Arab economies’ populations, along with progress in a number of social development indicators, such as access to education and health care, and rising income levels. On the other hand, many Arab countries’ socioeconomic development models have been built around the concept of cheap, personal transport, with a significant lag in the availability of public transport systems which are inadequate in many Arab cities, suburbs and the countryside. In addition, a significant portion of the road transport vehicles, whether for passengers or freight, is made up of aging fleets in many Arab countries, which contributes to worsening the energy performance of this sector. Policy priority should focus on promoting public transport with cleaner energy sources and stringent rules about pollutants emissions from all types of vehicles. A comprehensive review and redesign of the transportation system, in each Arab country, is possibly needed to properly address this sector.

¹ The Arab region here includes North Africa (Algeria, Morocco, Libya, Tunisia) Mashreq (Egypt, Iraq, Jordan, Lebanon, Palestine, Syria),GCC (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates), LDC (Mauritania, Sudan and Yemen).

POLICY BRIEF #22: Achieving SDG7 in Arab region

Residential and service sectors account for a growing share of the Arab region's energy consumption. They are both chief final user groups of electricity, which makes them important driving forces behind electricity demand, in addition to the demand from related sectors that consume primary energy and electricity, water and food. The two sectors combined accounted for at least two third of total annual electricity consumption in the region, of which around 73% was consumed by residential sector alone. Furthermore, all forecasts indicate that electricity demand in these two sectors is set to rise considerably in the near future.

Rising pressure for food production has also driven significant efforts at increasing the energy efficiency of the agricultural sector indirectly. The disperse nature of agriculture, with many small farms spread across geographic conditions and outside the reach of centralized urban policymaking and legislation, further complicates the implementation of energy-efficiency measures in agriculture, while most financial markets in the Arab region lack financial products suited to the needs of farmers particularly.

Very low, subsidized prices for energy, electricity and water, combined with a lack of energy-efficiency regulations in different economic sectors have resulted in a large increase in per capita water and electricity consumption over time throughout the Arab region.

Where economies and living standards have been growing, market incentives to conserve energy have been lagging significantly behind across the entire Arab region. Measures that help increase energy efficiency and therefore energy productivity over time, particularly on the regulatory side, have in many parts of the Arab region been sketchy and piecemeal. Even in high-income countries in the Arab region, policy focus and hands-on reform efforts differ markedly between countries, with historical priority having been given to fast-rising development and quick improvements in living standards. Typical market structure of the energy industry in the Arab region further affects incentives for energy efficiency. In the absence of corrective measures, this will lead to a loss in revenues, slowing down of development efforts, increasing vulnerability to international energy price fluctuations and a weakened energy situation across the region.

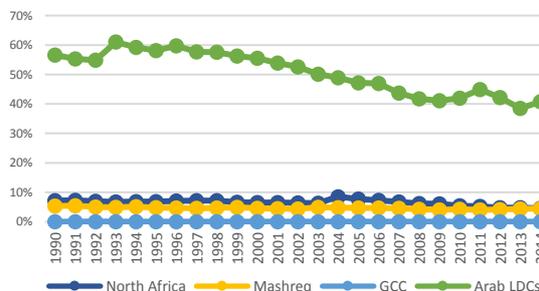
A recent study from the world bank estimates potential for savings from energy efficiency at 21 percent of projected total primary energy supply in Middle East and North African countries by 2025. Nearly three-quarters of these savings are from greater efficiency in end-use sectors, including industry, residential, commercial users, transport and public services.

Therefore, there is a need to operate a change of scale in achieving energy efficiency in the building sector (residential and non-residential) and appliances and commercial equipment. Earnestly, and rapidly, improving energy efficiency will increase energy productivity in the region and contribute to its economic and social developments.

Renewable Energy

Renewable energy is still a largely untapped resource in the Arab region, despite recent efforts involving several Arab countries to boost renewable energy contributions in their energy mix. In 2014, renewable energy, including biomass, accounted for some 4% of the region's final energy

consumption. Similar trend still up to now despite the implementation of successful renewable energy projects in some Arab Countries. This contrasts with the considerable potential for renewable energy, in particular modern technologies such as wind and solar power, offered by the region's favourable geography and climate conditions.



Share of renewable energy in total final energy consumption in the Arab region by sub-region 1990–2014

Over two-thirds of the region's consumption of renewable energy is based on biomass, accounted for by a small number of countries whose primarily rural populations continue to use biomass.

In most parts of the Arab region, conventional fossil fuels have for many decades underpinned the systematic expansion of modern energy access, leading to near-universal access rates of electricity and clean cooking fuels.

Some of the key challenges hindering more accelerated penetration of renewable energy are the absence of targeted policy initiatives, as well as the prevalence of state-owned energy utilities and widespread use of fossil-fuel subsidies, which have traditionally discouraged the use of new non-fossil fuel-based technologies. However, this rationale has started to change in recent years in some parts of the region, and the share of modern renewable energy stabilized in 2012–14 and keeps increasing, since, in several leading countries in the region. Renewable energy costs have been also dramatically falling, making investments, particularly in wind and solar power, more attractive, with some of the lowest auction results obtained in the region for solar PV, as well as competitive prices for wind technologies.

Although the Arab region is still at an early stage of investing in renewable energy technologies, there is potential for strong growth over the next decade, in particular for solar energy. Nonetheless, there are still policy and regulatory obstacles hindering a more accelerated deployment of renewable energy. On the other hand, new initiatives such as competitive auctions and public-private partnerships, have been successfully implemented in several countries in the region, and hold considerable potential for the future of the energy sector. Such business models would need to be considered in other parts of the region.

While the Arab region's recent trend in solar- and wind-power energy deployment is currently driven by few countries, more dedicated policies to establish these technologies could substantially increase the level of deployment over the coming decades. This includes allowing markets to establish a business case for alternative technologies. In a market that remains dominated by fossil fuels – more than any other region – this will require more systematic reform to open up utility sectors.

POLICY BRIEF #22: Achieving SDG7 in Arab region

Also, many energy services can be directly provided by dedicated RE systems, without the need for producing electricity, as an intermediary step. Mature renewable energy solutions for thermal applications, whether for domestic, commercial, recreational, industrial or agricultural uses, exist and offer much more efficient solutions for providing these services than renewable energy power generation.

Grid-connected individual systems, mainly PV, can offer an immediate and cost-effective alternative for increasing power generation capacities in the Arab region. These types of systems can be deployed gradually, with a high participation from energy consumers in covering their costs, offering an additional relief to state budgets.

Micro-, mini- and off-grid renewable energy options can also offer a cost-effective alternative for improving access to energy services in remote areas.

Developing such renewable energy small-scale applications will require the implementation of enabling tools and measures, through specific and appropriate dissemination and financing mechanisms that need to be developed based on each country's conditions.

Interlinkages with other SDGs

“Energy is crucial for achieving almost all of the Sustainable Development Goals, from its role in the eradication of poverty through advancements in health, education, water supply and industrialization, to combating climate change”²

Progress in sustainable energy can no longer be seen as separate from, and conditions progress in, other socioeconomic development goals in the Arab region. The fragile natural resource balance in many parts of the region, coupled with rapid and rising economic expectations by the region's young and increasingly educated populations, means that managing the natural assets of Arab countries takes centre stage in ensuring that future generations can lead stable and successful lives.

Energy is crucially interconnected with a whole range of other factors for developmental success – It plays a major role in insuring the security of water and food supplies, and in enabling key development goals such as universalizing access to modern health services and education, gender equality and women empowerment, the creation of sustainable living spaces, technology innovation and critical progress in regional mitigation of, and adaptation to, climate change.

Policy implications & Recommendations

Efficient natural resource governance and policy should play a pivotal role in driving the Arab region's energy transition. Existing market mechanisms provide insufficient incentives for a change in production and consumption patterns in the region. Future efficiency savings resulting from near-term policy changes can provide significant reductions in the rate of growth in energy demand and near-term financial savings as well. Over the longer term, such changes can provide significant savings to national economies and the reduction of deadweight loss to economies through resource waste.

Initiating proactive policymaking approach towards sustainable energy in the Arab region.

This could involve the following:

Strengthening the link between sustainable energy and environmental management to social and economic development goals. This includes a more rational use of the region's valuable fossil-fuel resources but also the exploitation of the economic potential of energy alternatives, in particular renewable energy, and the reinforcement of legislative settings that promote sustainable consumption and production patterns.

Using innovative policy approaches. The deployment of renewable energy in the Arab region in recent years illustrates this positive learning curve in Arab countries that have registered positive progress in the deployment of renewables. Public-private partnerships in this context are becoming an increasingly attractive solution for Arab countries aiming to attract private finance for sustainable-energy projects whilst retaining a public hand in energy projects.

Ensuring that new policies, plans and targets are stringent and, where voluntary compliance is concerned, mandatory. This is of particular importance in contexts where various economic interests are involved, such as in regulatory efforts to improve energy efficiency.

Effective government communication and strategy-making. Ultimately, the most effective way of promoting a positive energy transition is the creation of complementary policies between different government bodies that integrate individual policy changes such as in areas of regulation with a wider policy strategy that targets the most efficient use and management. Such policies are those which promote energy efficiency and renewable energy in the national interest, embracing new legislation and regulation from different ministries in coordination with each other, including by: identifying the full cost of a business-as-usual scenario; consulting rather than just informing; and by using quantifiable goals and targets that help the public understand progress. A participatory approach involving all stakeholders implicated in each targeted area of measures is a major condition for a successful implementation of the developed policies and regulations.

Building institutional capacity, transparency and accountability require effective and credible institutions with sufficient access to information and data, skilled human resources and professionalization of the public sector, clear institutional mandates to design, implement and monitor policies, reinforced local governance and the role of cities, greater use of existing competence by strengthening of communication channels between government institutions, financial institutions and public and private companies and strengthening civil society institutions that are able to communicate to their constituencies far more credibly than government institutions. These efforts will require the development of suitable institutional frameworks and effective implementation instruments with the mobilization of adequate financial and human resources necessary to reinforce, or create, the appropriate structures and meet the associated challenges.

² Report of the Secretary General on Progress towards the Sustainable Development Goals, E/2016/75*

POLICY BRIEF #22: Achieving SDG7 in Arab region

Restructuring domestic energy and water-pricing.

The Arab region's slowly changing pricing environment for energy may yet prove to be one of the most important structural drivers of a gradual improvement in energy efficiency. The aspect of wider energy and utility markets regulation and liberalization remains one of the most important areas for further development in the Arab region over the coming decades which may eventually benefit different parties. However, ongoing experiences show that it is highly recommended that the reforms be implemented gradually and be accompanied by mitigating measures for the segments of society that will be negatively affected by these reforms, and the conduction of a well-designed communication campaign explaining the need for such price restructuring.

Preparing financial markets.

Access to finance is a key factor in determining market uptake of more sustainable energy technologies. Several financing solutions have been demonstrated to drive clean-energy deployment in the Arab region, illustrating the diversity of options that can work in different circumstances. These include microcredits for small-scale applications, especially in the off-grid segment and implementation of certain energy efficiency measures; international sources of funding, with an increase in initiatives linked to clean-energy development in developing countries; and locally oriented, national policies and financial instruments specific to each individual country. Arab states may also need to review their existing instruments for implementing sustainable energy solutions and consider certain experiences in the region involving the development of public, or public-private partnership, structures with a certain *critical size*, allowing the mobilization of the required financial and human resources that are necessary to manage the sustainable energy solutions implementations processes and meet the associated challenges.

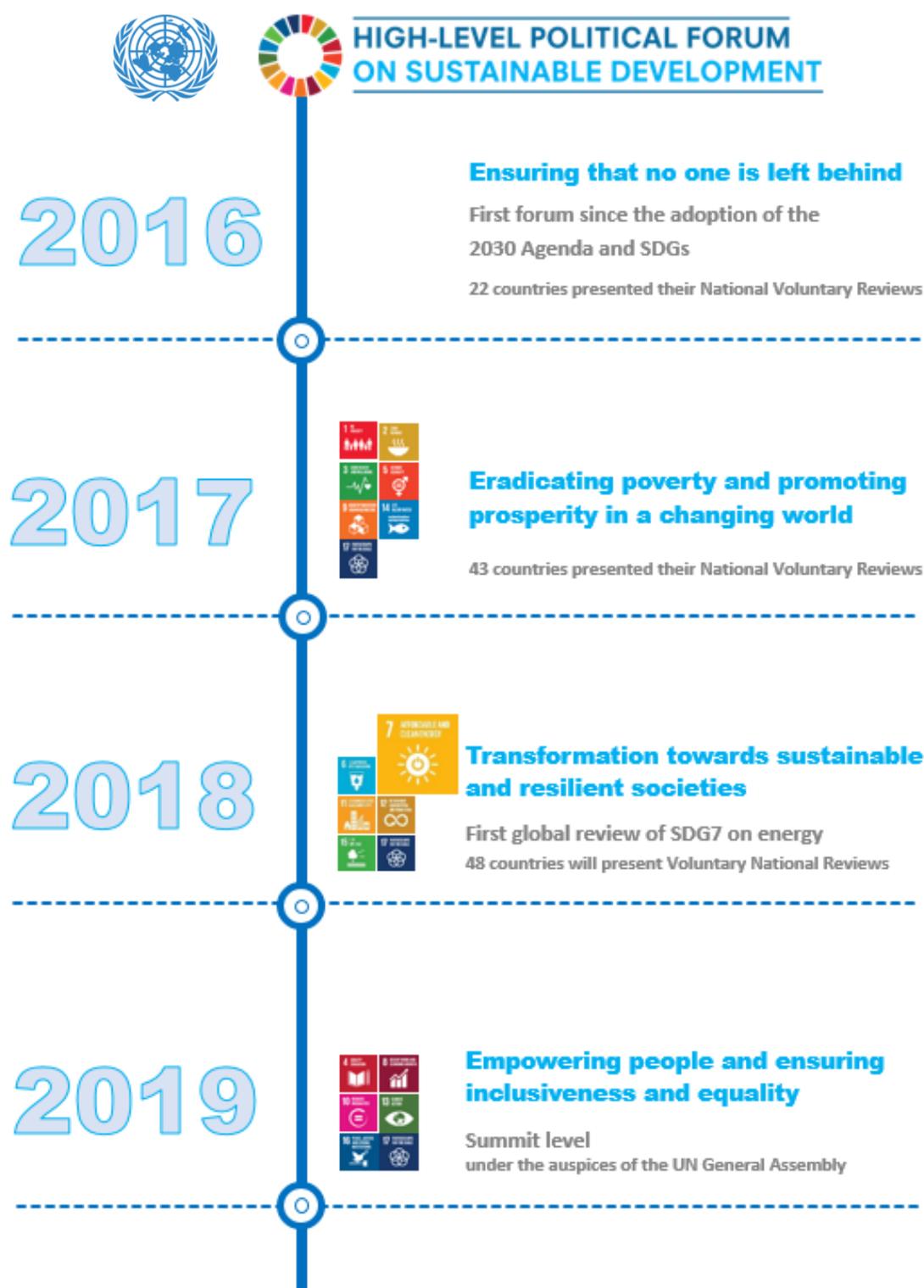
Strengthening information quality and awareness-creation.

Policy trends and their macroeconomic, social and environmental impacts need to be monitored through pertinent macro policy indicators that are based on reliable energy and socio-economic data. These indicators are essential in evaluating the effectiveness of the designed policies in attaining the broad national goals set for the sustainable energy transition. In addition, access to information plays a pivotal role in government and business decisions to invest in and favour one technology over another and in guiding final consumer behaviour. Progress in improving information access in the Arab region will rely on a number of factors, including: Data collection and dissemination. Information-sharing between institutions. Communicating with final consumers, re-prioritizing sustainable energy use and environmental consciousness in the public discourse, stronger role of science, research and Media and depoliticizing data.

In the longer term, achieving sustainable development goals, including in the area of energy, will require a degree of data dissemination and media reporting, empowering civil society to present their interests and help governments to assess society's preferences.

References

- UN ESCWA (2017) Arab Region Progress in Sustainable Energy - Global Tracking Framework Regional Report.**
<https://www.unescwa.org/publications/gtf-regional-report-arab-region-progress-sustainable-energy>
- UN ESCWA (2015): Urbanization and Sustainable Development in the Arab Region, Social Development Bulletin, Vol. 5, No.4**
<https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/social-development-bulletin-urbanization-sustainable-development-arab-region-english.pdf>
- UN ESCWA (2015) Analysis of Energy Policy Trends in the Arab Region**
<https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/l1500568.pdf>
- UN Regional Commissions (2015): Joint Statement of the Executive Secretaries of the United Nations Regional Commissions for the 5th International Forum on Energy for Sustainable Development. Hammamet, Tunisia, 4-7 November 2014:**
<http://css.escwa.org.lb/SDPD/3539/JointStatement.pdf>
- Report of the Secretary General on Progress towards the Sustainable Development Goals, E/2016/75***
<https://unstats.un.org/sdgs/files/report/2016/secretary-general-sdg-report-2016--EN.pdf>
- Delivering Energy Efficiency in the Middle East and North Africa, World Bank (2016),**
<http://documents.banquemondiale.org/curated/fr/642001476342367832/pdf/109023-WP-P148222-PUBLIC-DeliveringEEinMENAMayEN.pdf>



For further information, please contact:
Division for Sustainable Development
Department of Economic and Social Affairs
United Nations
<https://sustainabledevelopment.un.org/>