SDG 7 Localisation Snapshot

QUEZON CITY, Philippines

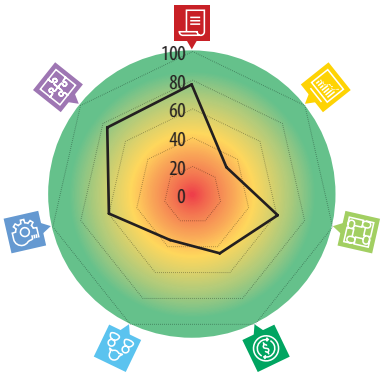
SDG7 Localisation Snapshot provides a brief overview of the key areas related to implementation of the Sustainable Goal 7 (SDG7) to 'Ensure access to affordable, reliable, sustainable and modern energy for all' at the local level based on the answers provided by the jurisdiction to the SDG7 Localisation questionnaire.

Questionnaire allowed to collect the assessments from the local officials regarding the situation on the implementation of SDG7 in their jurisdiction. SDG7 Localisation Snapshot is a part of the collaborative project of United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and United Nations Environment Programme (UNEP) to support city and sub-national governments in accelerating their efforts in the field of sustainable energy.

General information

Name of the jurisdiction	QUEZON CITY
Country of the jurisdiction	Philippines
Population of the jurisdiction	3,112,436 people
Area of the jurisdiction (in km²)	161
Predominant climate	Wet and Dry season

SDG7 Localization score



Score
0–33 34–66 67–100

Scores for each SDG7 Localisation indicator are calculated between 0 and 100 to show the assessment of the status in the jurisdiction in each of the respective areas.

Indicators score

77	31	61	45	35	59	76
Available policies and institutions for SDG localization	**Energy data monitoring**	**Cooperation with national and international stakeholders**	**Use of financial resources**	**Awareness raising and capacity- building**	**Implementation**	**Linkages to other SDGs**
Availability of specific policies and institutions focused on supporting the SDG 7 implementation.	Accessibility and penetration of energy monitoring and smart metering.	Efficient communication and collaboration between local stakeholders and various stakeholder groups at the national and international levels.	Availability of various financial resources and instruments for supporting SDG 7 implementation actions.	Availability of policies or actions to increase the understanding among citizens and build the capacity of professionals for SDG 7 implementation.	Presence of policies and actions to implement SDG 7 targets.	Availability of policies or actions with linkages between SDG 7 and other SDGs.

Sub-indicator score

55 Energy access	83 Renewable energy	40 Energy efficiency
Policies or actions taken by cities on energy access.	Policies or actions taken by cities on renewable energy.	Policies or actions taken by cities on energy efficiency.

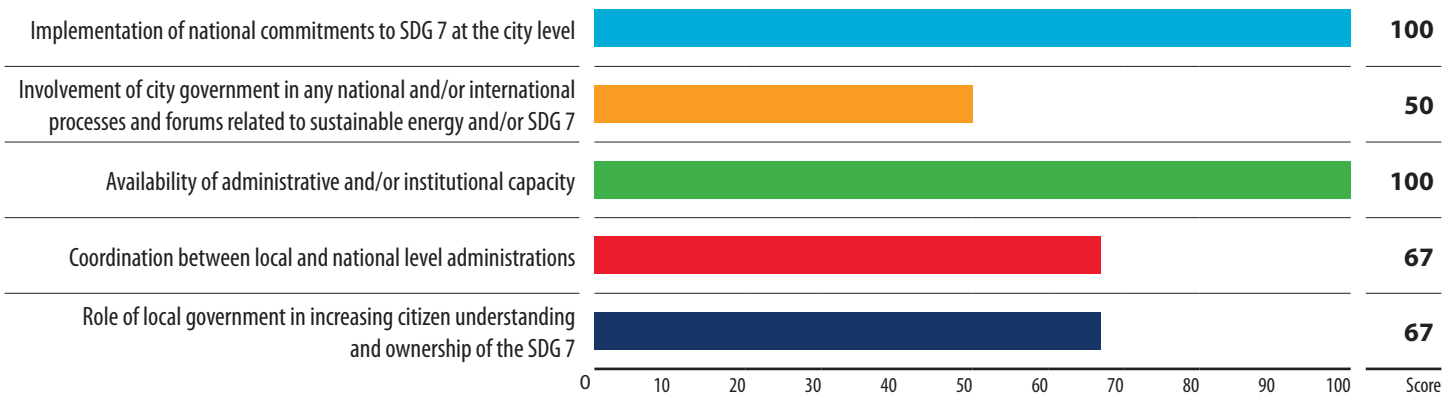
Sub-indicator score

84 SDG3. Good health and well-being.	80 SDG6. Clean water and sanitation.	51 SDG11. Sustainable cities and communities.	67 SDG12. Responsible production and consumption.	100 SDG13. Climate action.
The presence of energy-related activities or measures that support the health sector.	The presence of energy-related activities or measures that support water and sanitation.	The presence of energy-related activities or measures that support development of sustainable cities and communities.	The presence of energy-related activities or measures that support responsible production and consumption.	The presence of energy-related activities or measures that support climate action.

It is important to note that these indicators are qualitative and should not be used for assessing cities' achievement of quantitative targets under the SDG 7. The results for these qualitative indicators are based on cities' self-assessment of their current conditions, efforts, resources and capacity in relation to supporting SDG 7 localization process and can serve the role of the evidence base for constructing recommendations tailored to the local context, as well as the baseline results for tracking cities' progress of their SDG 7 localization efforts.

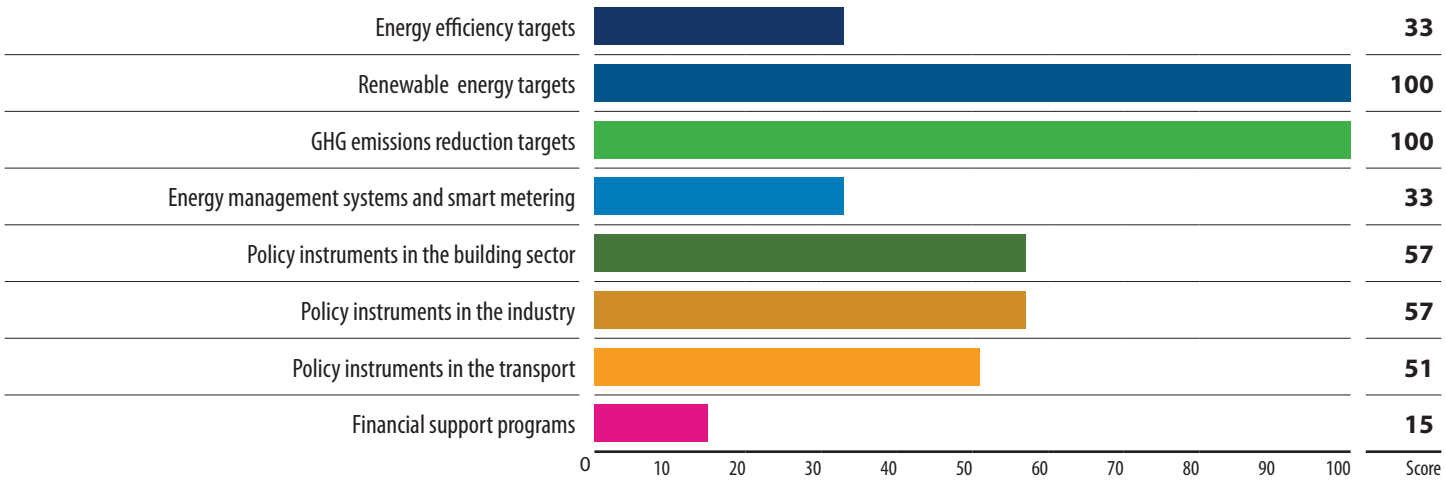
The results for each indicator are presented as a nominal score from 0 to 100 (where 100 is the maximum possible score, that can be achieved for each indicator or sub-indicator based on the aggregation of all answers of the questionnaire attributed to this particular indicator or sub-indicator).

SDG 7 commitments and institutional capacity of Quezon City

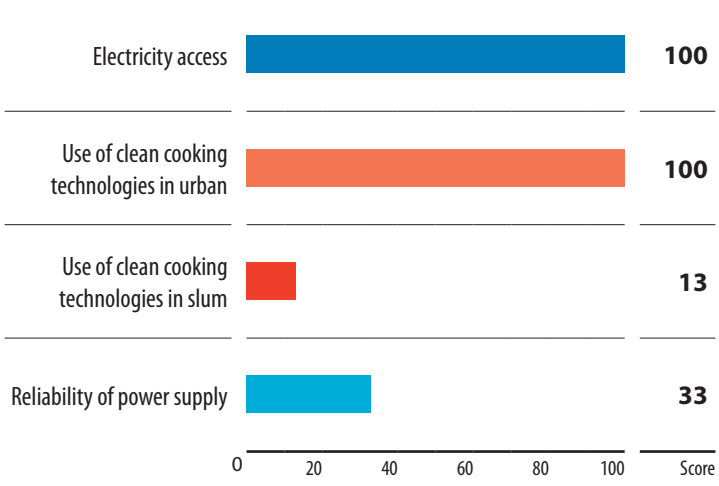


Note: The jurisdiction has no information or is not aware of coordination between local and national level administrations.

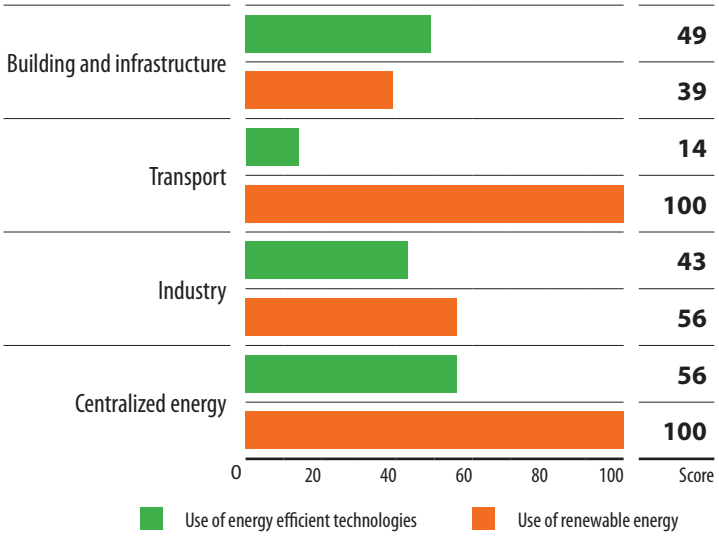
Implementation of SDG 7 support targets and regulations in Quezon City



Assessment of Energy Access in Quezon City



Assessment of utilization of energy efficiency and renewable energy technologies in Quezon City



Recommendations

77 Indicator. Available policies and institutions for SDG localization

The jurisdiction is implementing policies and projects that take into account existing national SDG 7-related commitments. Ensuring that local efforts on SDG 7 implementation are aligned with the national commitments and plans. Exploring the ways to apply Multi-Level Governance (MLG) approach to implementing SDG 7 is recommended in order to enhance the efficiency of coordination between national and local levels of governance.

The jurisdiction has already established the necessary institutional set-up and appointed dedicated staff to support SDG 7 implementation. It is important to keep monitoring staff qualifications and capacity to ensure that they are sufficient to carry out the work on SDG 7 implementation. It is recommended that consideration be given to allocating budgetary resources for continuous professional training of appointed staff to ensure that they have sufficient knowledge of SDG 7-related issues and solutions.

Various sustainable energy policies for the building sector are implemented or currently under implementation in the jurisdiction. The jurisdiction should aim to arrive at an effective mix of regulatory measures, incentives, and information instruments. Further increase of local level implementation needed for following policy framework, which are currently not supported at the national level.

Various sustainable energy policies for the transport sector have been implemented or are currently under implementation in the jurisdiction. It is recommended that further work be undertaken towards expanding and refining the policy instruments. Additional capacity-building training could be conducted for the relevant administrative personnel and transport sector experts, with the focus on the development of action plans and unlocking access to financial support, and disseminating lessons learnt. The jurisdiction should aim at arriving at an effective mix of regulatory measures, incentives and information channels. A further increase of local level implementation is needed for following up the policy framework, with support from the national level: regulations on hybrid engines use.

31 Indicator. Energy data monitoring

Some of the sustainable energy development targets still do not have reliable verification mechanisms, such as energy efficiency, renewable energy, energy access, smart systems/smart city/smart districts, and sustainable neighborhoods/eco districts. Establishment of a comprehensive data collection system for the local energy sector and areas related to other SDGs is a crucial foundation for the development and implementation of SDGs-related projects. Consulting existing guidelines on SDG indicators for further improvement of existing systems is recommended.

Energy management system and smart metering are currently under development. This covers a limited number of energy end-users in the jurisdiction, and its implementation at the local level is lacking supporting policy instruments: residential sector buildings, public sector buildings, commercial buildings, slums and informal settlements, food and beverages, chemical and synthetic products, glass, cement and non-metals, iron and steel, pulp and paper, textile, leather and leather products, machinery and transportation equipment, wood and other products, agriculture and farming, other processing industry, electricity generation, district cooling systems, district Heating systems, passenger car, motorbike, taxi, auto rickshaw, bus, tram, tractor, mini bus, freight transport, landfills, waste recycling, street lights, architectural and buildings lights, centralized water supply, and centralized sanitation systems. It is recommended that the necessary administrative and regulatory support is provided, starting with the appointment of responsible energy manager (or department), development of the Energy Action Plan and the implementation strategy. Transparent energy data collection and analysis is required for enabling access to extrabudgetary financing of SDG 7 oriented projects. For sectors which are still not covered by both national and local level programmes, the same steps for establishment of energy management system could be taken, with additional development of primary documents.

61 Indicator. Cooperation with national and international stakeholders

Jurisdiction is a member of limited amount of multi-stakeholder city initiatives. It is recommended to increase and the level of with city initiatives, networks and associations is recommended in order to benefit from the opportunities for capacity building, peer-to-peer learning, unlocking finance and disseminating knowledge on best-practices and solutions in the field of sustainable energy and SDG 7 localization.

The jurisdiction has limited involvement in national and/or international processes and forums related to sustainable energy. Improved communication and cooperation with national and international stakeholders are required in order to promote knowledge sharing and peer-to-peer learning with other jurisdictions across the region. It is recommended that more opportunities for participation in such forums be identified, and that there be more proactive assigning of relevant technical staff to participate and share knowledge.

Coordination mechanisms between the jurisdiction and other levels of governance (e.g., the national Government) regarding sustainable energy issues and/or SDG 7 implementation are in place and are supported by respective institutional set-up and budgetary frameworks. It is recommended that the jurisdiction and its local Government lead by example, and proactively initiate collaborative dialogues with the national Government and other jurisdictions in the country in order to identify, develop and implement joint activities on sustainable energy and jointly seek access to their financing.

45 Indicator. Use of financial resources

Some financial programmes to support sustainable energy policies and projects have been adopted at the national level and supported on local level. However, additional measures should be considered for implementation at the local level clean fuels, clean cooking and other types of SDG 7 projects for all sectors. Focus on further strengthening the local level implementation of these mechanisms is recommended, in order to enable access to available extrabudgetary options that could be used to support execution of local-level projects. Additional capacity-building training for responsible administrative personnel, and the development of guidelines on accessing finance, are important steps towards establishing the framework for local procurement and financing procedures.

The jurisdiction has access to international financial support for the implementation of energy efficiency and renewable energy technology projects in the area of the water management system. Detailed performance monitoring and result verification is required to enable further dissemination of successful results from the implemented projects.

35 Indicator. Awareness raising and capacity building

The jurisdiction has not been involved in the reporting activities for tracking the progress on SDG targets. In order to evaluate progress on, and contribution to the achievement of the Sustainable Development Goals, including SDG 7, identify areas of life that require improvement, evaluate project opportunities, access sustainable energy financing and coordinate efforts with the national stakeholders, it is recommended that a visible SDG tracking and reporting process be established in the jurisdiction, and that cooperation Is improved with relevant national level stakeholders. Preparation of Voluntary Local Reviews (VLRs) is one of the ways to analyse available data, and track and report on progress for SDGs at the local level.

The local Government is currently developing and implementing awareness-raising campaigns to increase citizens' understanding and ownership of the SDG 7 targets. It is important to prepare a sustainable long-term plan on awareness-raising activities to cover a wide range of audience interests and to ensure continuity of efforts. Different SDG 7-related issues should be covered for various target groups – e.g., educational programmes for schools, colleges and universities; public awareness-raising events, the promotion of success stories for all citizens and training courses for professionals.

59 Indicator. Implementation

55 Sub-indicator. Energy access

Local government should make efforts to maintain high level of reliable electrification in the jurisdiction, as well as reaching remaining areas that might lack quality electricity supply. Proper monitoring and evaluation of the current power grid operation should be taking place regularly to identify potential efficiency gaps and possible ways for further improvements. Learning from international expertise and best-practices on sustainable electricity will help the local government identify further areas for sustainable energy actions.

Various clean cooking technologies are widely available in the households in the jurisdiction. Further best practice dissemination as well as continuation of the dialogue with national and international stakeholders is required in order to be able to follow low-emission trends and best practices for clean cooking.

Efficient and low-emissions cooking methods are not used, or have very limited use, in slums and informal settlements. Promotion of clean cooking technologies such as: improved wood cookstoves, electric cookers/pressure cookers, induction electric stoves, high efficient natural gas or LPG stoves, solar thermal cooking, solar concentrators, and landfill or biomass methane gas cooking stove and the analysis of cooking technology patterns for different end-users are recommended, in order to identify the most suitable technological solutions and adoption strategies. It is possible to adapt available national and international experience in clean cooking promotion. Large-scale awareness-raising campaigns on clean cooking and its benefits (including improved health and quality of life) should target relevant implementing local agencies and the public. Capacity-building training on assembly and maintenance of clean cooking equipment should be developed and made available to local professionals and low-income communities.

Power outages happen from time to time, which undermines the reliability of the local energy supply. It is recommended that a detailed analysis be made of the local energy generation and transmission system in order to identify key issues and strategies for improvement. Based on the results of the analysis, distributed energy systems and microgrids, with integration of renewable energy sources and energy storage, could be a way to improve sustainability of the energy supply. Implementation of energy efficiency measures in buildings and industry will help to mitigate the problem of peak demand and further reduce the risk of power outages.

83 Sub-indicator. Renewable energy

Renewable energy targets exist at the national level and are being established at the local level. It is recommended that a constructive dialogue be maintained between the relevant national and local-level stakeholders in order to coordinate the efforts and progress towards achievement of these targets. Establishment of a mechanism is advised for tracking progress according to specific key performance indicators and revising them regularly (e.g., every five years).

Targets to reduce GHG emissions/air pollution exist at the national level and are being applied at the local level. It is recommended that a constructive dialogue be maintained between relevant national and local-level stakeholders in order to coordinate the efforts and progress towards achieving these targets. It is advised that a mechanism be initiated for tracking progress on achieving these targets and revising them regularly (e.g., every five years).

Renewable and non-fossil fuel energy technologies are not used in the building sector and infrastructure, or their utilization is very limited. Deployment of renewable energy solutions should start with establishing ambitious, yet realistic targets based on estimation of the renewable energy potential for various sources available at the local level. In case of data unavailability geospatial data can be collected and analysed by GIS experts Implementation strategy for identified renewable energy sources could be developed in cooperation with experienced local or international professionals. The analysis of relevant financing schemes for renewable energy deployment can help to identify potential sources of investment and project implementation.

Renewable energy (RE) sources are widely utilized in the transport sector. Local government should support further efficient operation of the existing RE transport with the focus on securing relevant financing for the equipment maintenance and training of the relevant technical personnel. Local government should develop local targets and key performance indicators for RE use in transport, as well as monitoring and verification mechanisms to make sure that the targets are met and regularly updated.

40 Sub-indicator. Energy efficiency

Targets to improve energy efficiency or to reduce energy intensity exist at the national level, although with a limited coverage of energy-consuming sectors. These targets are currently not being applied at the local level. It is recommended that a dialogue be initiated with the relevant national-level stakeholders to discuss how the jurisdiction can adapt these targets to the local context and receive necessary support for this process. It is recommended that a study be conducted of the jurisdiction's energy sector and the opportunities for energy efficiency improvement, in order to determine relevant targets based on the data analysis of different energy consumers. The results of this study and the identified targets should be used as a basis for developing an energy efficiency action plan for the jurisdiction. It is advised that a mechanism be established for tracking progress according to specific key performance indicators and for revising them regularly (e.g., every five years).

Fossil fuels are used in the building sector and infrastructure; in most cases, the respective equipment and technologies are relatively energy efficient. Setting and regularly increasing the minimum energy performance standards and targets is recommended, in combination with the mandatory requirement for periodic maintenance and upgrades of energy-consuming technologies and equipment. Incentive programmes could be provided to encourage manufacturers and developers to exceed these targets and integrate opportunities for higher utilization of renewable energy through research and development activities, and the identification of suitable best practices from other countries and cities. These measures, among others, should be integrated into the local energy management strategy.

Use of energy-efficient technologies for electricity consumption in the building sector and infrastructure is currently at the moderated level. Enhancing dissemination of energy-efficient technologies is recommended, preferably supported by relevant financial incentives to encourage consumers' choices in favour of more energy-efficient appliances and equipment. Engagement of the private sector and international financial institutions is highly recommended through documentation and dissemination of the impacts and lessons learnt, continuous capacity-building as well as collaboration with international organizations and think tanks.

Fossil fuels are widely used in the transport sector of the jurisdiction, and in most cases it works with moderate levels of efficiency and emissions. It is recommended that a low-emissions transportation strategy be developed, with the focus on strengthening relevant administrative and financial frameworks. To support this process, it is recommended that research be conducted on the implementation of relevant projects and best-practices at the national and international levels as well as improvement of the dialogue with responsible national agencies and international organizations. Public awareness-raising campaigns and promotion of "green" transport may further encourage citizens' behavioral change towards the choices in favour of more sustainable transportation practices.

Utilization of energy efficient renewable energy and non-fossil fuel technologies is limited in the jurisdiction's transport sector. It is recommended that support is increased for monitoring and evaluation of the achieved results of the existing projects, in order to be able to identify the opportunities for scaling up successful solutions for replication across the jurisdiction, including planning and development of relevant infrastructure. Capacity-building training for dedicated administrative and technical staff could be focused on the operation of low-emission transport systems as well as awareness raising about efficient transportation practices that can be integrated into the overall decarbonization strategy of the jurisdiction.

The jurisdiction has limited or pilot level electrical vehicle deployment. A further increase in the number of electrical vehicles should be accompanied by the development of supporting infrastructure. This includes charging stations and batteries as well as the overall decarbonization of the electricity supply in the jurisdiction through wider utilization of local renewable energy sources. Financial incentives – such as lower vehicle taxes, lower electricity tariffs for charging, free parking etc., for private electric vehicles – will stimulate consumers' choices in favour of this type of transport, especially once the supporting infrastructure becomes widely available.

76 Indicator. **Indicator 7. Linkages to other SDGs**

84 Sub-indicator. **SDG3. Good health and well-being**

All of the Jurisdiction's existing health-related facilities have sufficient space cooling and are able to satisfy most of the health needs of the local population. It is recommended that consideration be given to further implementation of passive cooling strategies (especially for new buildings) through building design, insultation, shading, white roofs, windows with low-e coating, natural ventilation, where applicable, to reduce the cooling load. Energy efficiency improvement of active cooling systems (i.e., air-conditioning, refrigeration and ventilation), including integration of renewable energy solutions, is also recommended.

The jurisdiction has a sufficient number of mobile vaccine/blood refrigeration facilities to satisfy most of the current needs of the local population. Such facilities are crucial to ensuring people's well-being and adequate responses to a health crisis (such as the one caused by the COVID-19 pandemic). Therefore, it is recommended that a local sustainable health-care strategy be prepared, or the existing one updated, in consultation with the national level stakeholders and in cooperation with international organizations, in order to analyse present and future local health-care needs for related sustainable supply chains and their readiness for emergency response. As further expansion of such facilities and equipment will increase energy use and the need for a reliable electricity supply, it is recommended that consideration be given to the existing energy-efficient solutions available for health cold chain and 'green' vaccines supply (e.g., energy-efficient cooling and refrigeration technologies with better insulation, off-grid direct current-based refrigerators, solar cooling or solar direct drive vaccine refrigerators).

80 Sub-indicator. **SDG6. Clean water and sanitation**

Sustainable practices are applied for treating most of the wastewater generated in the jurisdiction. Further expansion of wastewater facilities, sufficient maintenance and upgrade of existing wastewater treatment facilities, including integration of energy-efficient and renewable energy technologies, are required in order to achieve sustainable water access for all of the citizens. Additional capacity-building training is required for the involved personnel to build their skillset for operating any new equipment. In order to ensure the development of an adequate wastewater treatment system, consultation should be undertaken with relevant national level stakeholders as well as international development organizations working in this area and the private sector.

Water management and sanitation equipment in the wastewater facilities of the jurisdiction is relatively energy efficient. Continuous monitoring of the performance of working equipment is recommended in order to be able to take corrective actions when a decrease is detected in performance. Prioritizing proper maintenance of the wastewater equipment and, where necessary, upgrading it is recommended, starting from identification of existing best practices, and with integration of energy-efficient and renewable energy solutions.

Implementation of Integrated Water Resource Management (IWRM) is a common practice and is widely implemented in the jurisdiction. Conducting detailed monitoring and evaluation of results achieved is recommended after IWRM introduction. The findings should then be presented to the relevant administrative and technical personnel for evaluation and identification of areas needing further improvement, and supported by an analysis of existing IWRM best practices at the national and international levels.

The jurisdiction is using a number of energy-efficient technologies in its IWRM. It is recommended that relevant energy performance monitoring and verification protocol be undertaken in order to identify the corrective measures needed as a result of load profile changes as well as to maintain high operational efficiency of the equipment.

51 Sub-indicator. SDG11. Sustainable cities and communities

A notable part of the population live in informal settlements or inadequate housing. This further disrupts the SDG 7 implementation process, as people who live in these areas typically do not have access to sustainable energy services and deployment of energy-efficient and renewable energy technologies. This is challenging due to the lack of the necessary basic infrastructure and adequate living conditions. Integrating such informal settlements in upgrading strategies in local housing policies is recommended. In addition, developing policies on energy access (electrification and clean cooking) in these areas is recommended in combination with support programmes for slum dwellers to use more energy-efficient and renewable energy technologies, such as solar LED lighting, solar mini-grids and efficient cooking stoves. Awareness-raising about the benefits of sustainable energy technologies as well as their proper maintenance is important to achieving effective adoption and long-term use.

The jurisdiction is operating a wide public transport system, and most of the local population has access to public or shared transportation. It is recommended that further improvement of the system be carried out, with the introduction of energy-efficient transport solutions, increased utilization of renewable energy as well as expansion of the supporting infrastructure (e.g., charging stations for e-vehicles).

Pedestrian lanes are common in multiple places in the jurisdiction and most of them are convenient for walking, although some lanes require improvement. Improvement of the situation is recommended by expanding existing territorial planning solutions or by introducing additional ones (e.g., dedicated lanes for pedestrians and cyclists, restricted pedestrian area, etc.) aimed at developing effective walkable neighbourhoods, as well as ensuring proper maintenance of existing pedestrian areas. Such measures can significantly reduce transportation energy use as well as improve air quality and people's well-being.

The problem of air pollution in the jurisdiction is significant and is characterized by high levels of hazardous particle concentration. Primary focus should be on the establishment of a proper air quality monitoring system, which will monitor levels of pollution and its sources as well as dust distribution patterns. Further planning of the air quality improvement measures should be based on: setting a long-term air quality goal; a package of clean air policies for the energy sector; effective monitoring, enforcement; and evaluation and communication. Implementation of these measures requires the collection of reliable data, a continuous focus on compliance and policy improvement as well as timely and transparent public information.

67 Sub-indicator. SDG12. Responsible production and consumption

The jurisdiction is taking steps towards sustainable waste management process implementation with some of the landfills already implementing pilot waste treatment and recycling practices. Conducting a detailed benchmarking analysis of the operational efficiency on the implemented waste recycling facilities is recommended, together with the preparation of a strategy for replication of successful sustainable solutions in other facilities in the jurisdictions. A feasibility study to explore the potential for waste-to-energy projects in the jurisdiction, its cost-effectiveness and ways to gain financing can help to enhance waste treatment as well as offer a local source of sustainable energy. Conducting capacity-building training for local professionals, focused on existing best practices for sustainable solid waste treatment systems, and consideration of possible financing mechanisms is also recommended. Cooperation with relevant national level and international stakeholders is required at this stage in preparing guidelines for large-scale development and implementation of green urban solid waste treatment projects.

Disaster reduction strategies are being implemented at the local level in line with relevant national strategies. Reviewing these strategies is recommended in order to learn whether the synergies between disaster reduction and sustainable energy solutions are being considered. Examples of such synergies may include, but are not limited to materials and technologies that enhance a building's energy efficiency as well as make the building more durable and resilient to threats posed by natural disasters. A sustainable energy supply, co-generation systems, distributed generation and micro-grids can support the recovery process from natural disasters etc. Where such synergies are not considered in the existing disaster reduction strategies it is recommended that relevant adjustments be made based on existing international good practices. Implementation of a public awareness programme on these synergies is recommended in order to influence the adoption and implementation of energy-efficient and resilient designs.

UNITED NATIONS ESCAP
Economic and Social Commision for Asia and the Pacific

About the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

ESCAP serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest regional intergovernmental platform with 53 Member States and 9 Associate Members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aims to support countries' sustainable and inclusive development ambitions.

UN environment programme

About the UN Environment Programme (UNEP)

UNEP is the leading global voice on the environment. It provides leadership and encourages partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. This work is supported by the UNEP-led Integrated Urban Systems Partnership – a public-private initiative launched by UNEP and partners in 2019 that supports an integrated approach to infrastructure development in cities to achieve more sustainable and liveable cities that are more energy and resource efficient.

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