SDG 7 Localisation Snapshot

SUBANG JAYA CITY COUNCIL, Malaysia

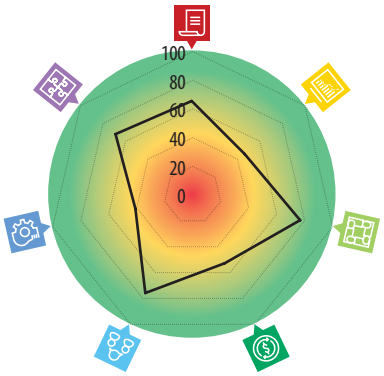
SDG7 Localisation Snapshot provides a brief overview of the key areas related to implementation of the Sustainable Goal 7 (SDG7) to 'Ensure access to affordable, reliable, sustainable and modern energy for all' at the local level based on the answers provided by the jurisdiction to the SDG7 Localisation 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	SUBANG JAYA CITY COUNCIL
Country of the jurisdiction	Malaysia
Population of the jurisdiction	968,000 people
Area of the jurisdiction (in km²)	161.8
Predominant climate	Equatorial

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

66	46	77	53	76	41	68
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

65 Energy access	42 Renewable energy	16 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.

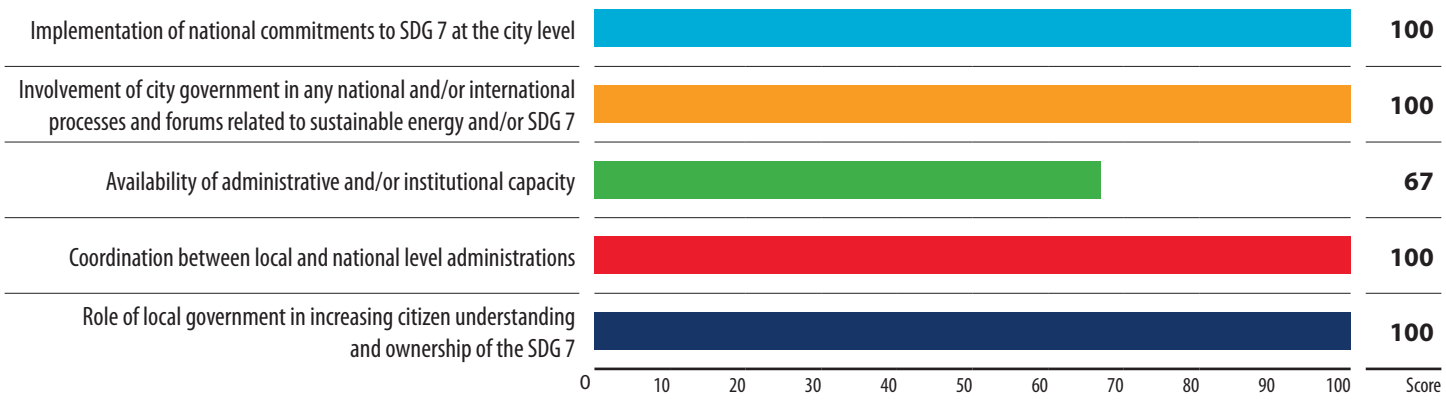
Sub-indicator score

52 SDG3. Good health and well-being.	72 SDG6. Clean water and sanitation.	85 SDG11. Sustainable cities and communities.	67 SDG12. Responsible production and consumption.	67 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.

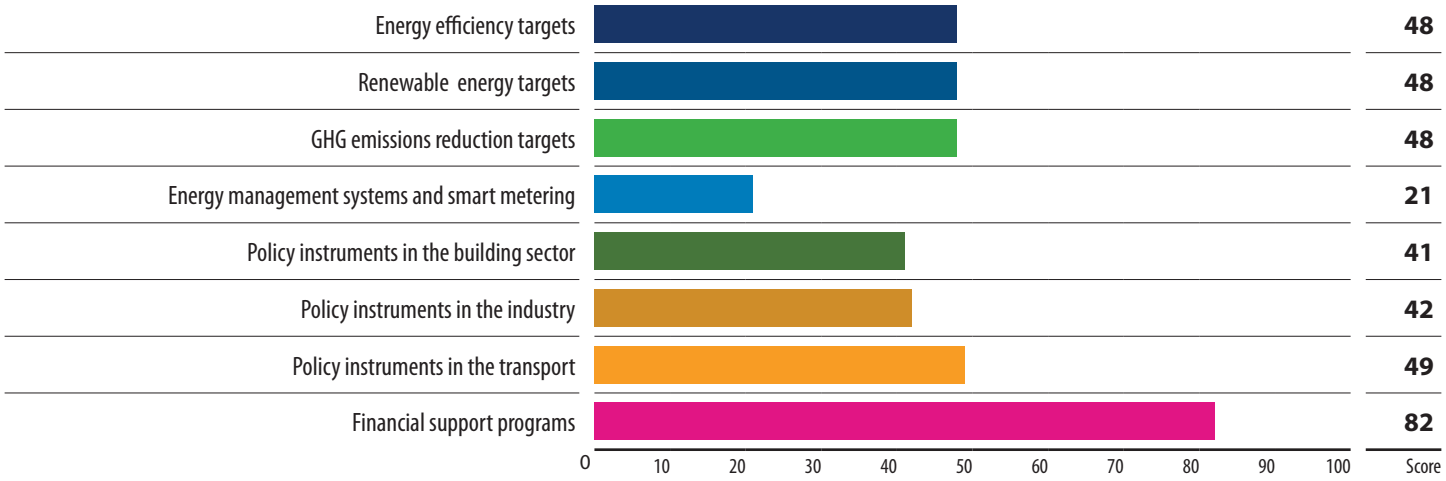
It is important to note that these indicators are qualitative and should not be used for assessing cities' achievement of quantitative targets under the SDG 7. The results for these qualitative indicators are based on cities' self-assessment of their current conditions, efforts, resources and capacity 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).

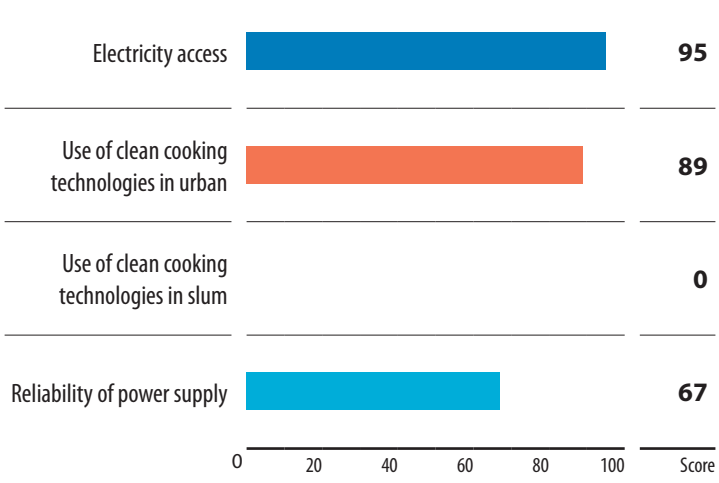
SDG 7 commitments and institutional capacity of Subang Jaya City Council



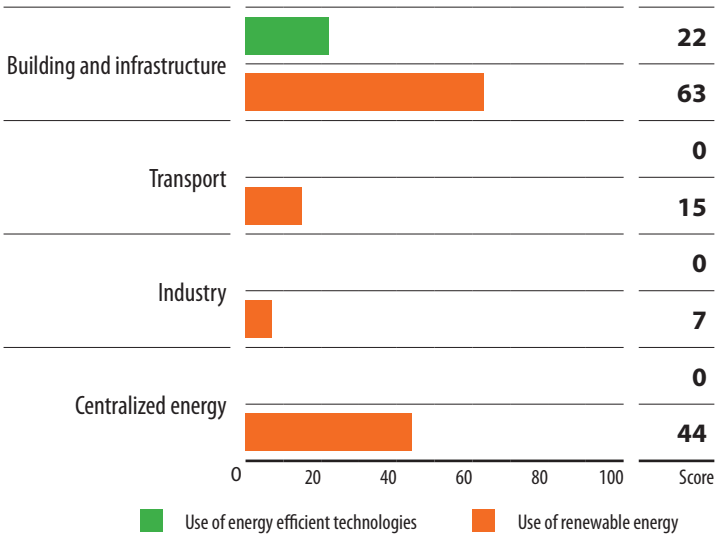
Implementation of SDG 7 support targets and regulations in Subang Jaya City Council



Assessment of Energy Access in Subang Jaya City Council



Assessment of utilization of energy efficiency and renewable energy technologies in Subang Jaya City Council



Note: There are no slums in the jurisdiction.

Recommendations

66 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. However, the existing technical and/or administrative capacity to support sustainable energy projects is limited. It is important to evaluate whether staff qualifications and capabilities are adequate enough to carry out the work on SDG 7 implementation. It is recommended that consideration be given to allocating some resources towards capacity-building and professional training of appointed staff to ensure that they have sufficient knowledge of SDG 7-related issues and solutions.

Some sustainable energy policies for the building sector have been adopted at the national level. However, only a limited number of related initiatives have been implemented at the local level. It is recommended that work be undertaken on the implementation of nationally supported policy instruments at the local level, such as energy efficiency policy for retrofit, net-metering regulations, use of ecological standards (ISO 14001 or similar), use of energy management standards (ISO 50001 or similar) and mandatory connection to the district energy source, in case of availability. This implementation may start with selected national policy instruments, and/or cover specific sector or energy end-users in the jurisdiction. Monitoring and verification of the results, achieved after this 'pilot' implementation of selected policy instruments, are needed for possible fine-tuning and adaptation of the policies to the local conditions and requirements. It is also recommended working towards expanding and refining the policy framework in order to arrive at an effective mix of regulatory measures, incentives and information instruments.

Various sustainable energy policies for the transport sector have been implemented or are currently under implementation in the jurisdiction. 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 LPG or similar gas type engines use, regulations on biogas engines use, and policies on integration of transport low emission zones and timing limits.

46 Indicator. Energy data monitoring

The Jurisdiction has established data collection and monitoring systems in the following areas: energy access, sustainable energy/ SDG 7, and other SDGs. Nevertheless, some of the sustainable energy development targets still do not have reliable verification mechanisms, such as. 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, industry, 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.

77 Indicator. Cooperation with national and international stakeholders

Jurisdiction has been involved in a few multi-stakeholder city initiatives. Further development of national and international cooperation 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 is actively involved in national and/or international processes and forums related to sustainable energy. Active sharing of achieved results and lessons learnt as well as continuous benchmarking of current SDG 7 implementation status should be considered, in order to disseminate success stories and good practices and to gain visibility at the regional and international levels. This can help to unlock opportunities for further project replication and financing.

Coordination mechanisms between the jurisdiction and other levels of governance (e.g., national Government) regarding sustainable energy issues and/or SDG 7 implementation are already in place. They are supported by respective institutional set-up and budgetary frameworks as well as by jointly implemented activities on sustainable energy. It is recommended ensuring that the results of these joint projects are well-monitored and documented in such a way that stimulates dissemination of good practices, peer-to-peer learning with other jurisdictions as well as benchmarking and gap analysis for future projects on sustainable energy.

53 Indicator. Use of financial resources

Various financial programmes for supporting sustainable energy policies and projects have been adopted at the local level for different energy-consuming sectors. Nevertheless, it is recommended that additional financial incentives be provided to the following sectors for which national-level support is available.

The jurisdiction has access to international financial support for limited energy efficiency and renewable energy technology implementation in the area of the water management system. Further development of cooperation is required, including conducting technical- and financial-oriented capacity-building training for local specialists as well as presentation of the results achieved by the first pilot facilities.

76 Indicator. Awareness raising and capacity building

The jurisdiction has been involved in some reporting activities for tracking the progress on SDG targets. In order to evaluate that progress and the contribution to the achievement of 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 sound SDG tracking and reporting process be established in the jurisdiction and that cooperation be improved with relevant national level stakeholders. Preparation of 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 has a track record of successfully implemented awareness-raising programmes to increase citizens' understanding and ownership of the SDG 7 targets. It is important to establish proper monitoring and evaluation of awareness-raising results as well as placing the focus on constant improvement of the programmes in order to ensure continuity of efforts. It is also recommended that different SDG 7-related issues and target groups are given coverage, such as educational programmes for schools, colleges, and universities; public awareness-raising events, promotion of success stories for all citizens and training courses for professionals.

41 Indicator. Implementation

65 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.

The jurisdiction has a sustainable energy supply. Power outages are not common. It is important to maintain emergency backup energy generation facilities in operation mode in order to be prepared for immediate reaction to blackouts in the main energy source. Establishment of regular training is recommended for the responsible operation personnel as well as capacity building for responsible engineering staff, as it will facilitate implementation of the best available technologies and solutions for sustainable energy supply, such as integration of renewable energy sources.

42 Sub-indicator. Renewable energy

Renewable energy targets are being established at the local level. However, these targets lack support from the overarching renewable energy policy framework at the national level. It is recommended that a dialogue be initiated with the relevant national-level stakeholders to inform them about the local targets and the progress the jurisdiction is making towards reaching them as well as the importance for establishing such targets at the country level. It is recommended that a study be conducted of the jurisdiction's renewable energy potential to ensure that such targets are tailored to the local context and different energy consumers. The results of this study and the identified targets should be used as a basis for developing a renewable energy action plan for the jurisdiction. 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 for reducing GHG emissions/air pollution are being implemented at the local level. However, these targets lack support from the national policy framework at the national level for informing them about the local targets and the progress the jurisdiction is making towards achieving them as well as the importance of establishing such targets at the country level It is recommended that a regular GHG inventory be conducted and that air pollution monitoring in the jurisdiction to collect the data necessary for updating local 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).

The buildings and infrastructure sectors have moderate level of renewable energy (RE) sources utilization. A strategy for upscaling renewable energy utilization in buildings should be developed; involvement of experienced local or international consultants with the support from the local government will be beneficial for this process. The strategy should include the analysis of potential sources for renewable project finance and investments, as well as outline policy measures that can support renewable energy utilization (e.g. subsidies, tax deductions for renewable energy technologies, etc.). Capacity building and trainings should be conducted for relevant administrative and technical personnel to improve their skills on project development, installation and maintenance of renewable energy technologies.

Renewable and non-fossil fuel energy technologies are not used or have a limited level of implementation in the transport sector of the jurisdiction. Local government should a strategy for promoting renewable energy utilization in the transport sector and analyze potential financing mechanism in cooperation with relevant local and national experts. Feasibly studies for utilization of various RE technologies in different types of transport should be prepared taking into account existing international best-practices to identify the most appropriate solutions and implementation steps. Capacity building and trainings should be conducted for relevant administrative and technical personal to improve their skills on project development, installation and maintenance of renewable energy technologies.

16 Sub-indicator. Energy efficiency

Targets for improved energy efficiency or the reduction of energy intensity are being applied at the local level, although they may only cover a limited number of energy-consuming sectors. However, these targets lack support from the overarching energy efficiency policy framework at the national level. It is recommended that a dialogue be initiated with the relevant national-level stakeholders in order to inform them about the local targets and the progress that the jurisdiction is making towards achieving them as well as the importance for establishing such targets at the country level. It is recommended that a study be conducted of the jurisdiction's energy sector and the opportunities for energy efficiency improvement, with objective of ensuring that such targets are tailored to the local context and different energy consumers. The results of the study and the identified targets should be used as a basis for developing the energy efficiency action plan for the jurisdiction. It is advised that a mechanism be established for tracking progress on reaching these targets 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 of the jurisdiction. However, in most cases the respective equipment and technologies are quite energy-intensive and/or outdated, thus resulting in low levels of energy efficiency. Developing minimum energy performance standards and targets for this equipment is recommended, in combination with the mandatory requirements for regular maintenance and upgrades of energy-consuming technologies. Conducting capacity-building training is recommended for local professionals as well as relevant technical and administrative staff of the jurisdiction on effective deployment, maintenance and financing of renewable energy technologies. Incentive programmes should be provided for further promotion and utilization of renewable energy technologies, where feasible. These measures, among others, should be integrated into the local energy management and clean energy strategy.

Renewable and non-fossil fuel energy sources are available and widely used in the building sector and infrastructure, but, utilization of related energy efficient technologies is limited. Larger-scale deployment of energy efficient renewable energy solutions should start with specific pilot projects – for example, at the district level – with subsequent replication of the solutions throughout the jurisdiction, taking into account lessons learnt and the economy of scale. Capacity-building and vocational training are required for the relevant local level professionals to establish the necessary skills and understanding of the installation and operation of respective renewable energy technologies as well as the implementation steps and requirements for renewable energy projects. Seeking technical assistance from national and international experts is recommended in order to enable access to project finance and political support.

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.

Efficient fossil fuels technologies have limited use in the transport sector of the Jurisdiction.
Further promotion of sustainable energy, low-emission solutions in the transport sector is recommended (for example, high- efficiency hybrid and electric vehicles in combination with renewable supply, heavy freight haulage, last mile freight and private transport). Initiating the establishment of a relevant administrative and financial framework is also recommended. Awareness-raising campaigns on "green transport" could also increase understanding of the importance of a low emissions transport system in the modern city infrastructure. Additional capacity-building training is recommended for dedicated administrative and technical staff, with the focus on best practices and lessons learnt from low-carbon transport solutions by other countries and cities. Such programmes could be conducted with the support of relevant national institutions or international organizations.

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.

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

52 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 does not have any available mobile vaccine/blood refrigeration facilities. Such facilities are crucial for people's well-being and for adequate responses to health crises (such as the one caused by the COVID-19 pandemic). It is recommended that a local sustainable healthcare strategy be prepared in consultation with the national level stakeholders and in cooperation with international organizations, in order to find possibilities for financing the purchase and maintenance of related supply chains and their readiness for emergency response. Large-scale deployment of such facilities and equipment will increase energy use and the need for a reliable electricity supply. Therefore, consideration should be given to existing energy-efficient solutions available for the 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).

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

The jurisdiction has well-established sustainable water treatment activities, with almost all wastewater generated in the jurisdiction undergoing good-quality treatment. Continuous and adequate maintenance and upgrading of existing wastewater treatment facilities, including integration of energy-efficient and renewable energy technologies, are required.

Water management and sanitation equipment in wastewater facilities is relatively energy-efficient and is functioning without significant energy losses. It is recommended that proper maintenance of the wastewater equipment be prioritized and, where necessary, upgraded, starting with identification of existing best practices and integration of energy-efficient and renewable energy solutions. Funding options for these activities can be explored through consultations with relevant national stakeholders, international organizations and the private sector. Additional capacity-building training for the operational personnel as well as technical support are required to ensure the availability of adequate skillsets for operating the advanced equipment and systems.

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.

Exploring the opportunities for further integration of energy-efficient and renewable energy technologies into the existing IWRM is recommended (e.g., smart process control systems, automated demand-side water supply regulation, solar energy for water supply and treatment etc.). This should be supported by building relevant technical capacity.

85	Sub-indicator. **SDG11. Sustainable cities and communities**

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 level of air pollution in the jurisdiction is considered low. Continuing to maintain high air quality in the jurisdiction is recommended together with the use of green and pollution-free energy use and generation technologies, with the focus on improving energy efficiency and increased utilization of renewable energy sources.

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.

67	Sub-indicator. **SDG13. Climate action**

Disaster reduction strategies are being developed and/or are under implementation at the local level in line with relevant national strategies. A review of these strategies is recommended to see 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 and 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. Implementing 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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