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

UN environment programme

SDG 7 Localisation Snapshot

BORONGAN CITY, Eastern Samar. Philippines

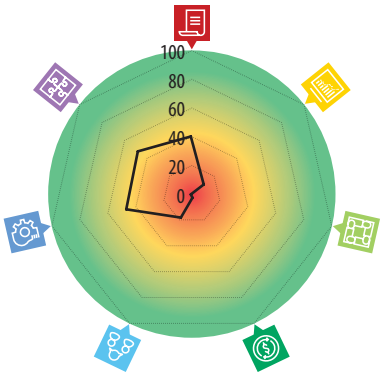
SDG7 Localisation Snapshot provides a brief overview of the key areas related to implementation of the Sustainable Goal 7 (SDG7) to 'Ensure access to affordable, reliable, sustainable and modern energy for all' at the local level based on the answers provided by the jurisdiction to the SDG7 Localisation 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	BORONGAN CITY, Eastern Samar
Country of the jurisdiction	Philippines
Population of the jurisdiction	69,297 people
Area of the jurisdiction (in km²)	582.89
Predominant climate	Type II Coronas, this climate is characterized by the absence of dry season with substantial rains occurring during the months from November to January.

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

40	11	0	3	18	47	48
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

56 Energy access	8 Renewable energy	46 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.

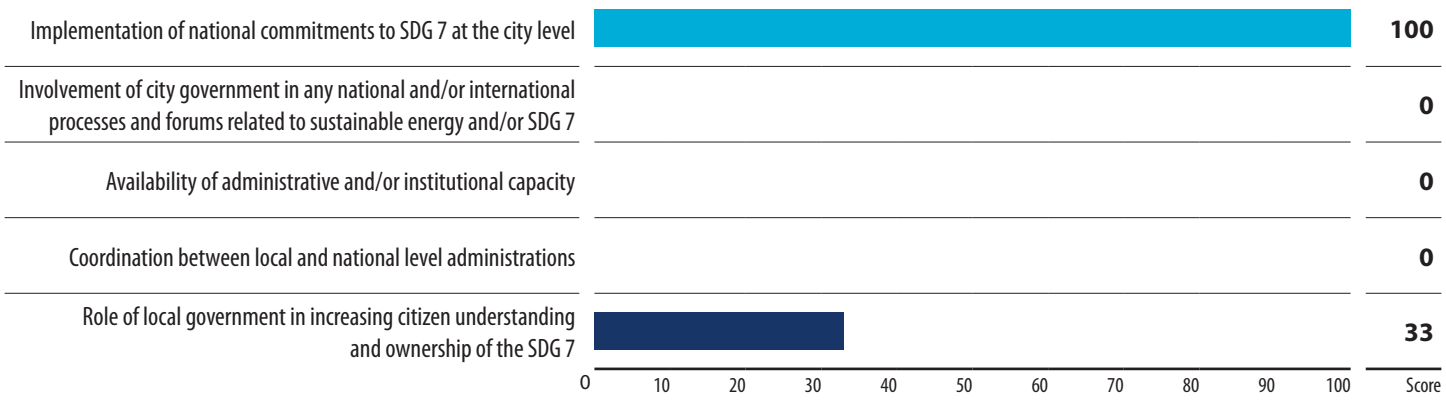
Sub-indicator score

0 SDG3. Good health and well-being.	8 SDG6. Clean water and sanitation.	66 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.

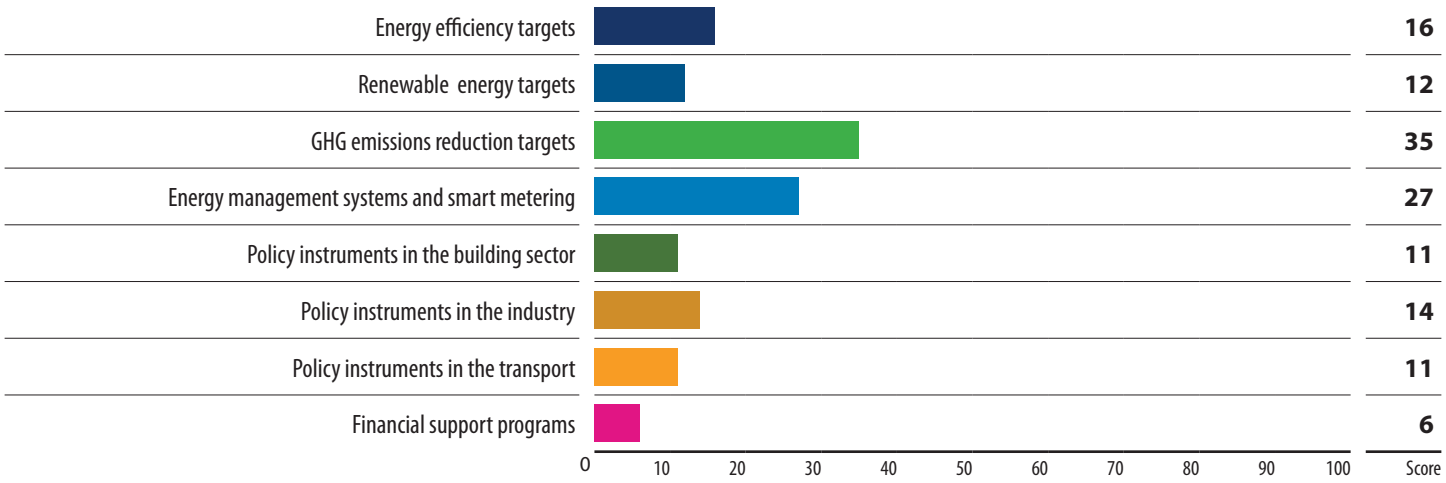
The results for each indicator are presented as a nominal score from 0 to 100 (where 100 is the maximum possible score, that can be achieved for each indicator or sub-indicator based on the aggregation of all answers of the questionnaire attributed to this particular indicator or sub-indicator).

SDG 7 commitments and institutional capacity of Borongan City

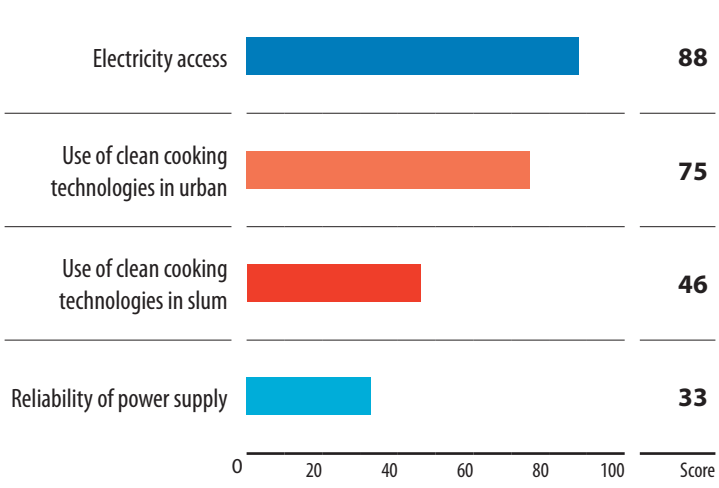


Note: The jurisdiction has no information/is not aware of the coordination between local and national administrations.

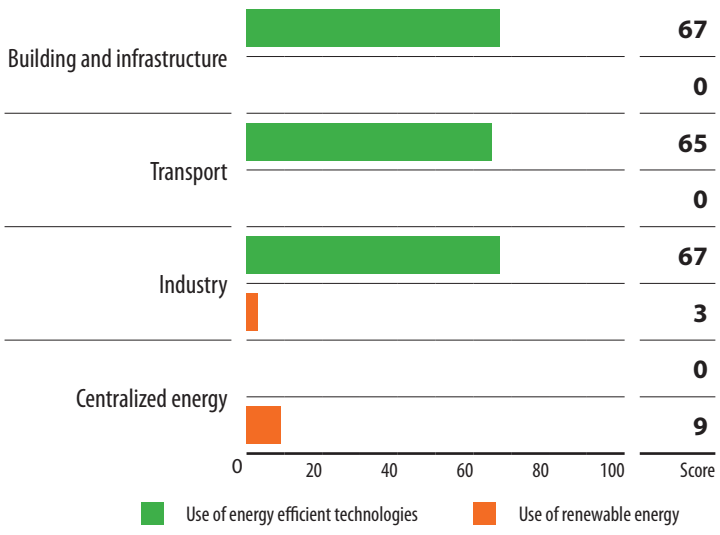
Implementation of SDG 7 support targets and regulations in Borongan City



Assessment of Energy Access in Borongan City



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



Energy consumer is not present; energy source is not available/available but not used or not widely use in the jurisdiction for the use of renewable energy in building and infrastructure and transport sector as well as the use of energy efficient technologies in centralized energy.

Recommendations

40 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 does not have sufficient institutional capacity or special appointed specialists responsible for supporting SDG 7 implementation. It is critically important to have a dedicated technical unit and/or staff in charge of development, implementation and support of activities on sustainable energy. It is recommended more attention be given to raising awareness about sustainable energy and building respective capacity among local Government officials.

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 new construction, energy efficiency policy for retrofit, awareness raising, education and information campaigns on sustainable energy, use of energy management standards (ISO 50001 or similar), and energy efficiency action planning. 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.

Some sustainable energy policies for the transport sector have been adopted at the national level. However, only a limited number have been implemented at the local level. It is recommended that work be done on the implementation of nationally supported policy instruments at the local level, such as regulations on use of high standard liquid fuel (petrol and diesel EURO-5 or higher), hybrid, electric LPG or similar gas type engines. This implementation may start with selected priority policy instruments, and/or cover specific sector or energy end-users in the jurisdiction. Monitoring and verification of the results, achieved after implementation of selected policy instruments, should be performed for possible fine tuning and adaptation of the policies to the local conditions and requirements. Work is also recommended on expanding the scope and refining the policy framework in order to arrive at an effective mix of regulatory measures, incentives and information instruments.

11 Indicator. Energy data monitoring

The jurisdiction has made no or very limited efforts on data collection and monitoring of SDG 7-related impacts. 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. Relevant administrative, policymaking, and implementation activities should be put in place in order to support rapid roll-out of data collection and monitoring systems.

An 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 for specific industry sectors (wood and other processing industry, agriculture and farming) as well as for the public transport and buildings. It is recommended that the necessary administrative and regulatory support is provided, starting with the appointment of a 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 that are still not covered by both national and local level programmes, the same steps for establishment of an energy management system could be taken, with additional development of primary documents.

0 Indicator. Cooperation with national and international stakeholders

The jurisdiction is not a member of any multi-stakeholder city initiatives, networks or associations. It could benefit from participation in such initiatives and organizations, as they often provide opportunities for capacity-building, peer-to-peer learning, unlocking finance and disseminating knowledge on best-practices and solutions. It is recommended that the jurisdiction initiate dialogue with such initiatives and organizations (for example, ICLEI and CityNet and UCLGASPAC) and consider becoming a member of the ones most relevant to the jurisdiction's priorities.

The jurisdiction is not involved in any 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 the opportunities for technical staff to participate in such forums be identified, and that collaboration with relevant national and international stakeholders be established.

There are no coordination mechanisms between the jurisdiction and other levels of governance (e.g., nation Government) regarding sustainable energy issues and/or SDG 7 implementation. The local Government is encouraged to initiate the establishment of relevant coordination mechanisms, such as steering committees/councils/other institutions. This should include participation by representatives from the national, provincial and local levels of governance in order to align efforts and explore opportunities for extra-budgetary financing for SDG 7- related projects more efficiently.

3 Indicator. Use of financial resources

Some financial programmes to support sustainable energy policies and projects have been adopted at the national level. 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 does not have access to international support for energy efficiency and renewable energy water treatment project implementation. It is recommended that the level of cooperation between local administrative representatives and international development organizations be increased. Discussion and development of clear financing guidelines could streamline the process of project identification, preparation and implementation.

18 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 analyze available data, and track and report on progress for SDGs at the local level.

The local Government recognizes the importance of increasing citizens' understanding and ownership of the SDG 7 targets but has not yet implemented respective awareness-raising campaigns. It is recommended that a series of information campaigns and awareness-raising materials be designed and implemented to educate citizens on the importance of their actions in line with the different SDGs. It is recommended that the local Government also conduct outreach activities on its on-going and planned actions, and how they align with SDGs. Different SDG 7-related issues should be covered in the educational materials for various target groups, such as educational programmes for schools, colleges and universities, public awareness-raising events, the promotion of success stories for all citizens and training courses for professionals.

37 Indicator. Implementation

56 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.

A number of clean cooking technologies are used by households in the jurisdiction, such as: electric cookers/pressure cookers, induction electric stoves, and high efficient natural gas or LPG stoves. In addition to this kerosene and low-emissions stoves are used in the informal settlements of the jurisdiction. Further promotion and support for clean cooking technology dissemination (e.g., capacity-building training on assembly and maintenance of clean cooking equipment for local professionals and low-income communities) are required, in order to achieve replication of efforts and large-scale adoption.

A number of clean cooking technologies are used in slums and informal settlements of the jurisdiction, such as: kerosene, improved wood cookstoves, electric cookers/pressure cookers, high efficient natural gas or LPG stoves, and low emission stoves (using fossil fuels or pellets/charcoal briquettes). Further promotion and support for clean cooking technology dissemination (e.g., capacity-building training on assembly and maintenance of clean cooking equipment for local professionals and low-income communities) are required, in order to achieve replication of efforts and large-scale adoption.

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.

8 Sub-indicator. Renewable energy

Renewable energy targets exist at the national level. However, these targets are currently not being implemented at the local level. It is recommended that a dialogue be initiated with the relevant national-level stakeholders to discuss how the jurisdiction can implement these targets at the local level as well as receive necessary support for this process. It is recommended that a study be conducted of the jurisdiction's renewable energy potential in order to establish such targets tailored to the local context and different energy consumers. The results of this study and 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 have been introduced at the national level but have not been implemented at the local level. It is recommended that a dialogue be initiated with the relevant national-level stakeholders to discuss how the jurisdiction can achieve these targets at the local level and receive necessary support for this process. The jurisdiction can also lead by example and establish its own targets. It is recommended that a regular GHG inventory be conducted and that air pollution monitoring systems are established in the jurisdiction, which will provide the data necessary for determining 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).

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 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.

46	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.

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.

58	Indicator. **Indicator 7. Linkages to other SDGs**
0	Sub-indicator. **SDG3. Good health and well-being**

Existing facilities cannot satisfy the health needs of the local population. A large portion of the population cannot access the jurisdiction's existing health facilities, and most do not have sufficient space cooling. Implementation of passive cooling strategies is recommended. This can be achieved through building design, insulation, shading, white roofs, windows with low-e coating, natural ventilation where applicable, to reduce the cooling load, as well as stimulate energy efficiency improvement of active cooling systems (i.e., air-conditioning, refrigeration, ventilation etc.), including the integration of renewable energy solutions.

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).

8 Sub-indicator. SDG6. Clean water and sanitation

There are no adequate wastewater treatment facilities in the jurisdiction. The situation requires immediate action by the local administration. It is recommended that consultations be conducted with relevant national level stakeholders, and financial assistance be sought from international development organizations that are active in the country of the jurisdiction.

Water management and sanitation equipment in wastewater facilities have relatively low levels of energy efficiency, functioning with significant energy losses. It is recommended that upgrading of the wastewater system equipment be implemented, starting with audits and feasibility studies to identify strategies and technologies for improving the energy efficiency of wastewater treatment in the jurisdiction. In addition, subsequent implementation of the prioritized activities is recommended. Funding options for these activities can be explored through consultations with relevant national stakeholders, international development organizations and the private sector.

There is no implementation of an Integrated Water Resource Management (IWRM) plan in the jurisdiction. IWRM is a process that promotes the coordinated development and management of water, land and related resources, in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. It is recommended that additional efforts be made towards the development and implementation of the IWRM in the jurisdiction. Activities should started with the establishment of a working group that includes representatives from different local thematic departments.

Exploring the opportunities for the 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.

75 Sub-indicator. SDG11. Sustainable cities and communities

A relatively small portion of the local population (less than 5%) lives in informal settlements or inadequate housing. People who live in these areas typically do not have access to sustainable energy services. Deployment of energy-efficient and renewable energy technologies is challenging, due to the lack of basic infrastructure. Integration of upgrading strategies for such informal settlements into local housing policies is recommended. Also recommended is the development of policies on energy access (electrification and clean cooking) and last-mile electrification of these areas 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 benefits of sustainable energy technologies and their proper maintenance are important to ensuring 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 not very common in the city or most of them require substantial improvement. This discourages people from choosing low- and zero-emission modes of mobility, such as walking and cycling; this, in turn, increases the demand for utilization of private cars and other modes of energy-consuming transportation. It is recommended that the situation be improved by introducing various territorial planning solutions (e.g., dedicated lanes for pedestrians and cyclists, restricted pedestrian areas etc.) aimed at developing effective walkable neighborhoods 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.

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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