

Annual Project Progress Report

Project title: "Sustainable Cities in Turkmenistan: Integrated Green Urban Development in Ashgabat and Avaza"

Award ID: 00081872

Project ID: 00091000

Implementing partner: Ministry of Agriculture and Environment Protection of Turkmenistan

Period covered in this report: January-December 2021

Date of last Annual Report: 29.12.2020

Date of the last Project Board meeting: 12 October 2021

Date of last Quality Assurance and rating:

1. Project Performance

Please state the expected Output of the Project, set indicators and corresponding CP Outcome (as per project document/AWP):

Project Output 1: Sustainable urban development in Ashgabat

Output indicators:

- 1.1 Reduction by 3 percent (180 million passenger-km per year) of private car travels via increased use of alternative modes of transportation and carpooling
- 1.2 Reduction of electricity consumption from public outdoor lighting by 1.5 million kWh per year in Ashgabat and 8 million kWh per year in whole Turkmenistan, compared to baseline
- 1.3 Reduction in landfill waste in Ashgabat and Avaza relative to baseline of recycling and waste reduction programs. Increase in recycling volume by 10 percent and increase in use of secondary raw materials by 25%

Output targets:

- 1.1. Energy-efficient street lighting implemented in Ashgabat and technical justification prepared
- 1.2. Sustainable urban transport solutions in Ashgabat developed and applied
- 1.3. City plans for sustainable development is developed and approved
- 1.4. Volumes of waste is reduced and recycling increases in Ashgabat

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

1.1. Project continuously attempts to find common grounds of interest with "Turkmen Transport" Agency for implementation of project activities. However, the Agency insists on signing an official document before commencing to implement joint activities. Regardless of prepared drafts of MoU between the Agency and UNDP Project, the Agency still lacks the interest to cooperate with the Project. As this issue was also raised during the conducted Project Midterm Review, International Consultant recommended to hire a national consultant to interact with the "Turkmen Transport" Agency who will promote the implementation of project activities with Agency.

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

1.2. Project procured and installed power transformers with a capacity of 630 KVA (20 sets) and a capacity of 400 KVA (40 sets) which contributed to saving the electricity for 38 068 682 kw/h in Ashgabat and which in turn furthered reduction of greenhouse gas emissions of 21 468 tons. As a result of the received positive experience, Ministry of Energy plans to procure more of the transformers for other cities of Turkmenistan.

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

1.3 Within the implementation of project activities on waste collection and management, project continued second campaign on waste collection which resulted in collection and processing of 80 tons of plastic, paper 25 tons, glass 15 tons from Ashgabat city. However, due to travel restrictions imposed by the Government to Avaza prevented project specialists to make field trip and assess the situation and meet with the relevant officials in order to install waste containers and bags.

Project Output 2: Sustainable Tourism Infrastructure and Management Practices in Avaza.

Output indicators

2.1 Improved capacities and enabling conditions in Avaza for integrated low-carbon and climate-resilient tourism development

2.2 Reduced GHG emissions and other negative environmental impact through interventions involving tourism facilities and infrastructure in Avaza.

Output targets:

2.1 Practice on reducing energy consumption, water use, and waste implemented by hotels in Avaza

2.2 Demonstration and replication of solar-powered public lighting

2.3 Optimally efficient surface transportation implemented in Avaza

2.4 Managerial and technical capacity of planners, officials, and facility managers in Avaza enhanced via training.

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

2.1. Due to ongoing travel restrictions, project couldn't conduct energy audit in hotel of Avaza however, it received the consent of the Ministry of Foreign Affairs for implementation of above-mentioned activity in „Grand Turkmen“ hotel in Ashgabat.

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

2.2. Within the implementation of the project activities, project procured equipment on conducting energy audit of buildings which were needed during the energy audit in project pilot hotel "Grand Turkmen". Together with the National Consultants, project specialist conducted energy audit of the selected hotel which identified shortcomings, areas to improve, equipment to be replaced, relevant recommendations on energy-saving that will save water consumption, electricity saving, possibility of using solar panels.

b) Were the indicators and output achieved? Yes No Partially

c) If no or partially, please explain why?

3.1. Project frequently holds various trainings and seminars with government officials on capacity building of the specialists of the Ministry of Energy and its subdivisions, laboratories of the Ecological Control Service of the Ministry of Agriculture and Environment Protection, representatives of hotels in Avaza.

2. Progress Reporting

Please summarize the main achievements during the project cycle:

Project Output 1: During the reporting period significant documents were prepared and developed with the help of Cities Project which include the draft of the national strategy for the development of renewable energy for 2030 which was later approved on December 4, 2020 by the Decree of the President of Turkmenistan. Moreover, the development of such important document which is considered as promising for the country in development of renewable energy laid the basis for the development of the draft of a new law of Turkmenistan on renewable energy sources and this law was adopted by the Mejlis of Turkmenistan on March 13, 2021. Currently, the project is developing regulatory legal acts on the implementation of the law on renewable energy and on the development of the implementation of the national strategy for renewable energy.

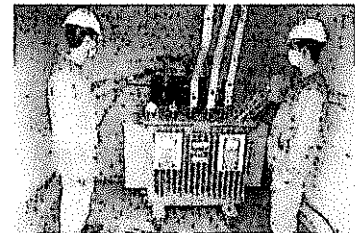


Furthermore, Cities project has contributed to the development of the draft national strategy of Turkmenistan on waste management. During the development of this document, a number of national meetings and consultations with various departments were held and at present it is under consideration of the Ministry of Agriculture and Environment Protection. In addition to the abovementioned document, the specialists of the project actively started the development of the new waste Classifiers, Waste Classification Codes in Turkmenistan and criteria for determining the hazard of waste, which were also sent for consideration to the Ministry of Agriculture and Environmental Protection of Turkmenistan. Besides, specialists of the Cities

project developed the Program for improving the environmental monitoring and control system in Turkmenistan which is currently top viewed as top agenda for Government. This document covers such topics as air pollution, reduction of dust particles in the air, reduction of greenhouse gas emissions. In addition, two regulatory legal acts developed with the support of the project on monitoring of atmospheric air pollution and accounting of greenhouse gas emissions which will become the basis for the further development of the implementation of the national greenhouse gas inventory system in Turkmenistan.

The project within the reporting period procured below mentioned equipment for the national partners:

- * The third stage of the procurement of equipment for the Environmental Control Service
- * Equipment for energy audit of street lighting
- * Equipment for energy audit of buildings
- * Transformers (60 pcs.) for departments of the Ministry of Energy



LED lamps and street lighting systems are currently being purchased for the Smart Grid system at the project pilot site of street lighting and new cable products for electrical networks of the city of Ashgabat. The above-mentioned equipment will contribute to the reduction of GHG. Moreover, containers and special garbage bins along with the two small-truck for waste transportation are also begin procured in order to ensure timely waste collection from households in the city.

Apart from the procured equipment and developed legal documents, the Cities project was also active in organizing and holding trainings for the related government organizations. On March 3 and April 30, 2021, training sessions were held on the development of renewable energy and the operation of LED



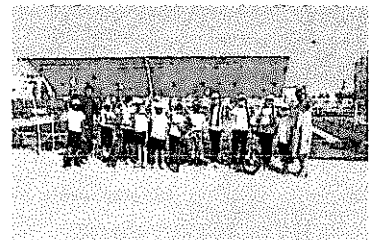
lamps for specialists of the Ministry of Energy of Turkmenistan and for students of the State Energy Institute of Turkmenistan (GEIT; Mary). The purpose of the webinar was to inform the participants on possibility of application of city street lighting systems, modern LED lamps, energy efficient innovative technologies, street lighting smart grid management, non-volatile lamps that operate through generation of renewable energy sources as well as study of operational peculiarities of abovementioned equipment and technologies in climatic conditions of Turkmenistan.



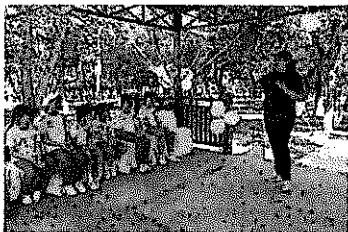
Cities project conducted another stage of training on operating the new equipment for monitoring of environment and soil condition for employees of laboratories of the Environmental Control Service and the provincial departments of environmental protection of the Ministry of Agriculture and Environmental Protection of Turkmenistan. As part of the project, the purpose of the training is to implement measures for the development and implementation of a plan for a modern system for monitoring the ecological condition of the cities of Turkmenistan.

Within the framework of the Cities project the joint implementation of the Climate Promise initiative with the UNDP Regional Office for the preparation of a Nationally Determined Contribution (NDC) project under the Paris Agreement is completed and submitted to the relevant government bodies. Moreover, the project actively coordinates the development of the Fourth National Communication of Turkmenistan on Climate Change and promotes cooperation with the Ozone Center in Turkmenistan in supporting the implementation of the obligations under the Kigali Amendment to the Montreal Protocol on Ozone Layer Depleting Substances. In addition, Cities project with the British Embassy in Turkmenistan has initiated and completed First Phase of Preparation and Development of the National System of Inventory of Greenhouse Gas Emissions (GHG) in Turkmenistan. The introduction of a national inventory system will allow national and international organizations to constantly receive reliable data on GHG emissions by agencies/organizations in Turkmenistan. This will allow the government and international organizations to more specifically plan actions related to the reduction of the GHG emissions. The implementation of the system will enhance accuracy and transparency, increase the country's credibility, and help increase the inflow of investments into the national economy.

On the occasion of the World Bicycle Day on June 3, declared by the UN at the initiative of Turkmenistan, as well as World Environment Day, celebrated annually on June 5, the project conducted environmental events aimed at contributing to the sustainable development of Ashgabat. In one of the city's secondary schools, UNDP together with the Environment Protection Society of Turkmenistan, successfully implemented the activity on installation of bike racks and



bought bicycles for children to promote "green" transport among the younger generation. The project goes beyond its limits to reach and promote gender equality in its activities where it established firm cooperation with the "BOSFOR" NGO. Apart from exchange of consultations with the NGO, project also assisted in procurement of bike spare parts in which most of the employees for assembling bikes are females. At present Cities project and NGO are working on creating of website for the NGO that will reflect bike promotion and will serve as basis for the easy access to get information on daily/monthly bicycle use of city dwellers.



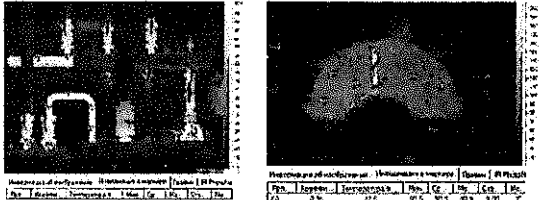
The Educational session in a summer camp was held in the framework of the World Environment Day campaign, launched by the UN Agencies on 14 May 2021, and was organized by the UNDP Turkmenistan/Ministry of Agriculture and Environmental Protection project "Sustainable Cities in Turkmenistan: Integrated Green Urban Development in Ashgabat and Avaza" in partnership with other UN Agencies, Ministry of Education of Turkmenistan, Society of Nature Protection of Turkmenistan and young SDG Ambassadors. The activity aimed to raise ecological awareness among children and help them to start caring about nature, water resources and flora and fauna, as well as develop understanding and promote the behavioral change in relation to rational consumption and waste minimization and management.

Cities project jointly with the Environment Protection Society of Turkmenistan conducted informative and greening activity at schools №21, №42 and secondary sports school "Olimp" in Ashgabat dedicated to nationwide event on planting trees in March 2021. Project staff, Environment Protection Society of Turkmenistan, Heads and teachers of the schools as well as students of senior classes have participated in the event. During the event, seedlings and trees were planted as well open classes were held on ecology where lively talk took place regarding the importance of environment protection, safeguarding the nature and everyone's involvement in nature protection activities in Turkmenistan.

Cities Project held in 5th Meeting of Project Board on 12 October 2021 with the active participation of all Project Board Members in which decisive and significant decisions were made and approved. Project Strategy Revision and Project Midterm Review were top on the agenda. It was highlighted that bottlenecks and hurdles on the way to implement project activities related to the transportation were revised. Conclusions and recommendations of International Consultant on MTR were presented and discussed with Meeting participants.

Project Output 2:

Due to preventive measures in the country to prevent the penetration of Covid-19 infection into the country, the project could not carry out project activities in Avaza including the conducting of energy audit in pilot hotel in Avaza but the Ministry of Foreign Affairs agreed on a pilot hotel "Grand Turkmen" to conduct an energy audit. As a result of the energy audit conducted in Ashgabat, work has begun on a pilot hotel in Avaza. Cities project works on contributing to the development and application of green standards for operation of existing hotels in Avaza National Touristic Zone (NTZ). Even though the Government has partially lifted the restrictions for short time in summer, generally Avaza



National Touristic Zone throughout 2021 was not open due to imposed Covid-19 preventive measures. However, UNDP conducted energy audit of pilot hotel in Ashgabat and identified shortcomings, bottlenecks such as excess consumption of energy and water, and made relevant recommendations to improve the current condition of the hotel. Ongoing travel restrictions in Avaza prevents making field trips to potential project pilot hotel and conduct energy audit in order to replicate the attained positive result to other hotels.

However, Cities project takes active role in development of regulatory documents such as draft of Regulation on "Rules and procedures of conducting energy audit in residential and public buildings of Turkmenistan" and normative-technical document on "Study of current conditions based on green standards practices in hotels of Avaza". On November 17, 2021 Cities Project conducted webinar on Review of the current practices of using "green" hotel standards in Avaza" to which several hotel representatives, related government institutions and students participated. The webinar objectives included the presentation of international "green" building standards and discussion of the possible introduction of "green" hotel standards in Avaza. The meeting participants discussed the possibility of developing national "green" standards for hotels, which will allow the introduction of efficient use of energy, water and proper waste management in the country's hotels.



3. Project Risks and Issues

The project Risk Log is maintained throughout the project implementation to capture potential risks to the project and associated measures to mitigate risk. The Project Manager shall maintain and update the Risk Log and ensure that risks are identified, communicated and managed effectively.

A number of potential risks are listed below.

Description of risk	Type and category	Risk management actions	Current situation
Government failed to provide co-financing for the Project's initiatives mainly related to transport.	Financial/ Failure of co-financing	The Project has already secured commitment of the Ministry of Energy and Ashgabat city authorities on co-investment into street lighting retrofits and smart city infrastructure (upgraded mid-voltage electricity network transformers). The planned transformer upgrades have already attracted close more than \$1 mln of public co-financing for 106 transformers following the project Team's recommendations. This activity will yield more than 5% of the CO2 emissions reduction target by the end of 2020. Together with the pilot project, this activity will help the project deliver 240,000 tons of CO2 emissions reductions (65% of the target) by the end of the Project. The Project Team will continue to work with the government for a continued co-financing of this activity for its scale-up to achieve all of the target emissions reductions from this measure alone. The current estimates indicate that in case all of planned co-financing is committed by the government, the project will exceed the CO2 emissions target by a margin of 70%.	The Project currently seeking engagement of the government on the transport and waste recycling issues. The project already selected and in final stages of discussions on holding energy audit in Avaza and other project activities still in process and delay is expected in this direction due to precautions taken by the government because of COVID-19. The Project is also engaging the EBRD in the region to understand whether the bank can lend to willing municipalities or national ministries (e.g. to the Ministry of Energy that owns several street lighting systems and other energy consuming assets across the country).
Project activities aren't viewed as a top-priority by the government.	Political/ Political will	Feasibility studies for smart grid upgrades in municipal utilities and the national grid monopoly will articulate benefits of the scale-up activities to boosting export revenue (via increased electricity sales) and will seek solutions with a relatively acceptable pay-back period.	The project has already identified two pilot sites in Ashgabat for reconstruction of power grid that are designed for power supply of street lightening system and installing LED lamps.
The government stakeholders slowly considering of changes to public vehicle import regimes.	Regulatory / Data and information risk	The Project has ensured that no sensitive data is requested by the transport monitors and that a replacement city (such as Turkmenbashi, which includes Avaza in its city limits) is identified early on to carry out the required transport optimization activities. However, the Project team has observed that neither these precautions nor additional pressure applied by the heads of the UNDP and UN offices is able to make transport sustainability a key priority for the city authorities.	In this regards, the project together with the Project Senior Technical Advisor and referring to the International Consultant on MTR has developed project strategy revision in which transport activities of the project is revised and updated.

			Congestion in the city is absent and fuel costs are near zero for the city bus company, which makes it difficult to obtain any commitments from the city to consider the matter.	
Global pandemic COVID-19 emerged in early 2020 has started to spread all over the globe	Other/ effect COVID-19 Global Pandemic	The of	With the global spread of the COVID-19 all around the world, Government imposed precautions measure by limiting the passenger transportation within the country. Avaza Touristic Zone was closed for indefinite time since June 2020 where project planned to hold energy audit at pilot hotel in Avaza. Moreover, project discussed the possibility of installing solar panels and garbage bins nearby pilot hotel. All beforementioned activities was frozen after abovementioned measures were taken by the Government. Project started to look and search for alternative ways to realize the activities planned in Component 2. Project decided to shift its activities in Avaza to Ashgabat city and successfully implemented energy audit in Grand Turkmen Hotel in Ashgabat.	Project has taken preliminary consultations and meetings with selected project pilot hote in Avaza and will take real actions as soon as imposed earlier travel restricions will be lifted in Avaza

4. Lessons learned and follow-up steps (if applicable)

a) Please provide the lessons learned and further steps after the project's closure.

N/A

5. Transfer of Assets or other related matter

a) Please state on any past or future transfer of assets made within the project cycle (Attach list of equipment, cooperation frameworks with beneficiaries, etc.)

1. Transfer of laboratory equipment to Ecological Control Service of the Ministry of Agriculture and Environment Protection.
2. Transfer of bicycles and bike racks to secondary school N21 in Ashgabat.
3. Transfer of bike spare parts to "Bosfor" NGO.
4. Transfer of garbage containers to Environment Protection Society in Turkmenistan.
5. Transfer of equipment on energy audit of street lightening to "Ashgabat Energy" State Enterprise.
6. Transfer of equipment on energy audit of street lightening to State Energy Institute of Turkmenistan.

7. Transfer of equipment on energy audit of buildings to State Energy Institute of Turkmenistan.
8. Transfer of transformers (630 kVA and 400 kVA) to "Ashgabat Energy" State Enterprise of the Ministry of Energy.
9. MoU signed between the Project and "Bosfor" NGO
10. Agreement signed between the Project and Environment Protection Society in Turkmenistan.

6. Financial management

Budget item	Total approved in 2021 (in USD)	Expenses + commitments	Budget utilization in % to planned
Component 1	1,118,938.00	795,166.79	71.06%
Component 2	232,565.00	216,601.79	93.14%
Component 3	47,190.00	29,211.55	61.90%
Activity 4	38,050	32,056.47	84.25%
Project management	54,800	52,324.50	95.48%
Total delivery in 2021	1,491,543.00	1,125,361.10	75.45%
In % to total project budget	24.35%	17.94%	

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Date:

Approved by:  Farhat Orunov, Programme Specialist

Date: