

Reporting Agency: UNDP
Country: Kazakhstan

PROJECT PROGRESS REPORT

No. and title: 00091328 : Nationally Appropriate Mitigation Actions for Low-carbon Urban Development
Reporting period: 2019

I. PURPOSE

The Project is aimed at supporting identification, design and implementation of nationally appropriate mitigation actions (NAMAs) in the urban sector in Kazakhstan. The NAMAs, consisting of investments in the infrastructure, supported by capacity building, awareness raising and technical assistance, will contribute to achieving of the country GHG emission reduction voluntary targets, while improving urban services and living standards in towns and cities in Kazakhstan.

UNDAF Outcome: Environmental Sustainability. By 2015, communities, national and local authorities use more effective mechanisms and partnerships that promote environmental sustainability and enable them to prepare, respond and recover from natural and man-made disasters.

UNDP Strategic Plan Primary Outcome:

Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.

Outcome 1.4. Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented

Expected CP Outcome(s): The Government, industries and civil society take steps to adapt to climate change and mitigate its impact through energy efficiency measures and climate change adaptation policies.

Expected CPAP Output(s): Government and energy consumers are better equipped with knowledge, policies and pilot cases on energy efficiency in sectors with high carbon dioxide emission levels.

Implementing Partner: Ministry of Industry and Infrastructural Development of the Republic of Kazakhstan

Implementing Entity/ Responsible Partners: Ministry of National Economy, Ministry of Energy, City Municipal Administrations (Akimats)

II. RESOURCES

Total allocated resources: 71,319,094 USD

Regular: GEF- 5, 930, 000 USD

UNDP-60, 000 USD

Donor: GEF-5,930,000 USD

In-kind contributions: Other- 33,435,659 USD

UNDP-1,000,000 USD

Government-30,893,435 USD

III. TARGETS vs. RESULTS

Component 1 – «Low carbon urban planning, targets and prioritization for urban infrastructure actions». Within this Component, 15 cities (regions) are supported in

collection, processing and analysis of data relating to low carbon urban planning. In the selected cities priority actions in the urban sector, which are contributing to energy saving and energy efficiency, are being identified.

By the end of the project greenhouse gas emissions inventories should be made for 15 pilot cities. Besides, investment plans should be discussed with the key stakeholders. Also, the GHG emission targets should be approved on the city levels.

In 2019 discussion of the investment urban plans continued with the akimats:

- Since the start of the project in 15 pilot cities the inventory of greenhouse gases by sectors in municipal services has been made, using the international methodology. Investment plans for low-carbon urban modernization are has been made for the pilot cities.
- The total cost of the urban plans is 90.26 million US dollars. The total cost, allocated for the activities, exceeds 54.1 million US dollars.
- The activities were listed in the officially approved regional plans and programs. For 3 cities (Taraz, Lisakovsk, and Temirtau), GHG reduction targets have been established and officially adopted as part of their Sustainable Energy Action Plans (SEAPs) or other relevant strategic documents;
- For the city of Nur-Sultan, targets for reducing GHG emissions are included in the Strategy for the low-carbon development of the capital, as well as in the “Comprehensive Action Plan for Improving the Environment of the City of Astana for 2018-2020”. The comprehensive plan was already officially approved in 2018, the Low Carbon Development Strategy is currently being discussed and agreed.
- For 11 cities (Aktobe, Uralsk, Shymkent, Kostanay, Kapshagai, Semey, Satpayev, Kokshetau, Petropavlovsk, Pavlodar, Stepnogorsk), short-term (up to 2030) and long-term (up to 2040) targets for reducing greenhouse gas emissions were established, which are officially discussed with partners and stakeholders.
- The regional investment plans will be financed from the budget, as well as by the private sector through the mechanism of public-private partnership (PPP) or ESCO. Bidding documents for PPP in Temirtau, as well as in the other pilot cities, are at different stages of preparation, as described in detail in the relevant sections on indicators of Component 2.
- In some cities the process for approval of the investment plans and the GHG targets is quite challenging due to lack of required funds in the akimats for implementation of these plans. Also, the local administrations are not willing to attract non-budgetary funds to the CO2 emission reduction projects (for instance, PPP projects). Besides, the organizational procedures to implement low carbon urban projects (especially, in the housing sector) are not put in place and the akimats have no leverage to make influence on housing associations so that they would hold activities aimed at energy efficiency in privatized apartments.
- One more barrier that makes difficult for the akimats to undertake obligations on CO2 emission reduction is connected with the fact that local administrations do not keep records of GHG emissions (only on the country level such records are available). The local administrations will be obliged to keep records of pollutants in their regions and develop low carbon strategies once the ecological code is adopted. The UNDP-GEF project worked out relevant recommendations.

Component 2 – «*Establishing institutional framework for urban infrastructure projects*». The focus of the component is to assist in creation/transformation of the institutional scheme of attracting investments to the urban infrastructure, including public sector facilities and units in communal ownership (through public-private partnerships) and

also to multi-family housing (through ESCO models).

By the end of the project technical assistance in the development of the institutional framework should be provided to all 15 pilot akimats and also project documents to be considered for bank financing should be prepared.

In 2019 the UNDP-GEF project continued to assist the pilot akimats and the companies involved in preparation of the institutional framework for low carbon urban projects:

- Technical assistance and support to the PPP projects were completed. The results of these activities were summarized at the regional workshops for local executive authorities and private companies and relevant recommendations on how to apply technical documentation in implementation of energy-saving investment projects were given.
- The technical assistance in preparation of 10 PPP projects, provided in Aksu, Atbasar, Satpaev, Aktobe, Kokshetau, Stepnogorsk and Kyzyl-Orda, included the following aspects:
 - Selection of the site to be upgraded jointly with the akimats and potential business units (BU) which are ready to act as private partners in the energy saving project.
 - Presentation of benefits to the akimats and business representatives.
 - Consultation support to the akimats and business representatives in adaptation of standard solutions to the PPP.
 - Consultation support to carrying out of approval procedures for the PPP project.
 - Conducting bidding procedures etc, prior to signing of the contract between local executive authorities and private companies.
- Technical assistance to the following projects in the energy saving sectors:
 - street lighting (3 PPP projects in Aksu, Atbasar and Satpaev),
 - the heat supply system (2 PPP projects in Temirtau and Kostanay);
 - indoor lighting (3 PPP projects in Aktobe, Kokshetau and Stepnogorsk);
 - water supply (1 PPP project in Satpaev);
 - the boiler equipment (1 PPP project in Kyzylorda) – the PPP service contract for the modernization and maintenance of the boiler equipment, the contract is signed, assistance is provided in the technical survey implementation.
- As a result of the work done capacities for the energy service contracts under the PPP mechanism were identified; how much the government and the private partner are interested in the planning and implementation of such projects; hidden barriers to practical implementation and opportunities, and gaps in the new legislation on PPP, which are currently in the process of finalization were clarified.
- Ultimately, the model documentation package of energy-saving PPP projects was developed for further common use. Up to date under the project for the modernization of boiler facilities in the Kyzylorda region the PPP contract for the modernization of 9 educational units was signed and required funds are provided. The remaining projects for the modernization of lighting, installation of AHS (automatic heat supply stations) and the pumping equipment are at the stage of signing and relevant documents will be subsequently submitted to the UNDP-GEF Project with the request for financial assistance.

- The Project faces the following specific barriers in providing technical assistance to the akimats and business companies in preparation of investment projects on urban energy saving:
 - The akimats do not have reliable data on energy consumption and therefore baseline data is not available;
 - No competent personnel who will be able to create financial and economic models for PPP projects;
 - Too frequent rotation of the personnel in the regions and lack of continuity in priorities and decisions made;
 - The local administrations are inclined to promptly use the budget (while the development of PPP projects is usually a time consuming process);
 - The legislation relating to development and approval for PPP projects is ineffective (no distinct regulations).
- The UNDP-GEF Project made recommendations based on the outcomes of cooperation with the akimats and business units within Component 2. They were presented at the First International Forum on PPP projects (Nur-Sultan, October, 2019), and the 2nd International Forum on Energy Efficiency (Nur-Sultan, November, 2019).

Component 3 - *«Development of the financing system for the urban infrastructure projects». The component is aimed at creating the system which enables to attract investment to energy saving projects from private organizations and banks.*

By the end of the project the financial facility for low carbon urban projects should be created and piloted. Investments of about 45 mln USD should be attracted to the pilot projects and 275 thousand tons of CO₂ are reduced. Also, the strategy on their diversification should be developed.

In 2019 the UNDP-GEF Project continued to take actions in achievement of the following indicators:

- Since the launch of the enabling mechanism (Q4 2017), 120 proposals from private companies have been considered, of which 100 (83%) were approved for obtaining preferential loan terms and 7 projects received the partial guarantee terms. The total value of the supported investment proposals amounted to \$ 42 mln USA, including the bank loan of \$ 18 mln USA, that enables to reduce 55 thousand tons of CO₂ eq. annually or 1.1 mln tons of CO₂ eq. within the life cycle of the projects. The size of the contribution of the UNDP-GEF project to create preferential conditions is equal to \$ 2.7 mln with lower bank rates and \$ 0.3 mln for guarantees. UNDP-GEF raised \$ 14 US investments in green technology and achieved one ton reduction of CO₂ that required \$ 0.8 US subsidy.
- By the end of 2019 35 projects out of those approved by PMC with the total investment of 3.6 bln KZT received bank financing of 2.0 bln KZT; 14 projects with the total value of investments and bank financing of 1.0 bln KZT are at the stage of obtaining the bank financing. 23 projects with the total investment value of 0.3 billion KZT are funded by the sources alternative to banks; 17 projects with the total investment value of 4.8 bln KZT, including 1.2 bln bank financing were unable to sign ESCO or PPP contracts, 11 projects with the total investment value of 8.8 bln KZT, including 2.0 bln KZT, of bank financing did not pass the procedure for obtaining bank financing.
- The strategy of diversification of the enabling facility for low carbon projects was developed and presented to the beneficiary in the Ministry. The draft strategy proposes the continuation of the mechanism for supporting energy efficiency projects at the

expense of the state budget. The strategy reflects estimates of direct and indirect benefits to the state, within the support of NAMA projects. Project support from the state budget is proposed to be ensured by developing a separate special program aimed at encouraging investment in NAMA projects.

- The promotion of the energy efficiency revealed that the market is interested in assistance programmes. Also, it showed that there are local financial agencies which are ready to use such schemes. The government is also willing to integrate these mechanisms. The approved state conception of the law on energy efficiency adopted in the process of making amendments to this law incorporates the experience of the UNDP-GEF project for further replication with the funds from the republican budget.
- To replicate the piloting of new enabling tools, investment subsidizing of projects of up to 40% of the main debt, which are profitable only with compensation for the part of the investment costs was launched. A draft institutional framework and terms within the scope of the guarantees provided to the first 7 projects are being discussed.
- However, the piloting of the mechanism revealed barriers for preparation of investment proposals specific for small and medium business and for city administrations. As the survey shows these gaps are connected with the weak experience of applicants in the documentation preparation, the selection of an appropriate implementation model (PPP, ESCO, the Trust Management), the interrelation of the technical and financial parts of the request in the implementation of high potential projects to reduce CO₂ emissions. To overcome this barrier, a training module with specific cases for municipal staff and financial and technical specialists who jointly complete requests for financing, starting from justification of the cost effectiveness to transferring it to financial cash flow was developed.

Component 4: *Implementation of the integrated pilot urban infrastructure project to demonstrate the economic feasibility of urban greenhouse emissions for further replication.* As part of the component, one pilot urban project is being implemented - a comprehensive modernization of the microdistrict in Nur-Sultan (Astana) (the location is selected on a competitive basis), including the modernization of buildings, structures, utilities, waste management systems and transport infrastructure. In this component, it is proposed to test the combined financing of a low-carbon urban project. As a pilot area, the residential block in Nur-Sultan (Astana) with apartments at Pushkin Str., 7; Zhubanov Str. 1; 3; 3/1; 3/2 was selected.

By the end of the UNDP-GEF Project it is expected that about 4750 tons of direct CO₂ emissions in the pilot residential building block will be reduced as a result of energy saving activities planned.

In 2019 году the UNDP-GEF Project performed the following actions to reach this indicator:

- In the reporting period, meetings with the owners of the apartments in two houses on the Zhubanov Str. 1 and 3/1 were organized to discuss their participation in the project (4 general meetings and written surveys were conducted with the participation of the UNDP-GEF project experts, apartment owners and the representatives of the apartment owners' cooperatives. As a result, the apartment owners agreed to take part in the project. Thus, at the moment the owners of all 5 residential buildings in the block confirmed their participation in the project.
- In the reporting period, the preparation of design specifications and estimates (DSE) for all five residential buildings of the pilot block was completed to carry out construction and installation works on the comprehensive modernization of the urban

block, along with the increased energy efficiency of the pilot buildings. The results of the due diligence expertise is positive.

- The developed design specifications and estimates for repairing of the roofs and engineering systems were handed over to Orken Kala LLP to do installation works on insulation and repair of the roofs (to be done in 2020).
- In the reporting year, the following types of work were carried out at the two pilot houses (the same works were done earlier in 2018 in the first three residential buildings in the pilot block):
 1. Illumination lights in common areas replaced - LED lights installed;
 2. Driveway lighting replaced with the installation of efficient LED-lights;
 3. Basements insulated;
 4. Windows in common areas replaced (in the entrances and the basement).
- Repair and construction works on major renovation of external walls in the first three (out of 5) pilot multi-apartment residential buildings at the following addresses: Pushkin #7, Zhubanov Str. #1 and #3/2 were carried out. For the repair works, the UNDP Project hired the company YuKKOM Systems LLP, with the state license No. 12012247. Also agencies for conducting field and technical supervision were engaged. The following repair and construction works were carried out:
 1. Interpanel joints heat-insulated and encapsulated;
 2. External walls painted based on sketch plans;
 3. The blind area restored;
 4. Old wooden balconies replaced with metal-plastic (insulated);
 5. External doors (insulated) installed.
- Due to weather conditions, the following works that involve wet processes were postponed to 2020:
 1. Restoration of canopy over entrances - 12 units;
 2. Restoration of the blind area in two residential buildings: Zhubanov Str.1 and 3/2;
 3. Framing of balcony plates.
- The engineering systems in three residential buildings were upgraded:
 1. Distribution pipes in heating, HWS and CWS systems were replaced;
 2. Automated heat stations with metering stations for heating systems, hot water supply were installed;
 3. The thermal insulation of pipes in engineering systems (heating, hot water supply) in the basements.
- The Astana City Akimat conducted some upgrading works in the engineering infrastructure and improvement of the site, as well as the SMW site.

The construction and installation works in the pilot block area is planned to be completed in 2020. From January 2020, in three residential buildings in which repair works will be finalized, monitoring of heat and energy consumption will be started.

- Important conclusions and learned lessons were formulated based on the activities, conducted within the pilot project:
 - First, the owners of apartments in high-rise residential buildings, as a rule, consider energy saving activities as secondary (the heat power is a fairly cheap service (in Nur Sultan, 1 Gcal of heat costs less than 10 USD (for comparison, in the Baltic countries it is 60-80 USD)
 - Secondly, the owners are inclined to do works on upgrading roofs and utility facilities in their buildings rather than taking energy saving measures).

- Thirdly, owners in the houses, requiring thermo-heating modernization, have relatively low incomes (in old prefabricated buildings mainly retired and poor people live) and can't afford to pay too higher prices for the upgrading even by installments (for instance through a loan facility, leasing or ESCO mechanism);
- The fourth, in most cases ESCO-companies are not ready to take risks and sign contracts on energy efficient modernization of engineering networks (for example, «smart” heating or lighting systems) with condominium management authorities (KSK etc.);
- The fifth, the owners question the estimates of costs of works in the units for modernization.
- Based on the above stated, the UNDP-GEF Project came to the critical conclusion that the regular and consistent communication with the owners is needed so that all aspects of the heat system modernization in the buildings would be explained. It is also necessary to improve the system of common ownership in terms of increasing of responsibility of owners for the condition of their houses. The recommendations are made to submit to the project beneficiary for consideration.

Component 5: *Monitoring, verification and dissemination of knowledge and practices.* By the end of the project within this Component at least one deal of reduced GHG emissions sale in the internal carbon site should be made; the reporting and verification facility for reduced emission units at the city level is developed; low carbon urban development awareness is raised by 50 %.

In 2019 the UNDP-GEF Project has done the following works to reach these indicators:

- The activities on testing trade of GHG emission reduction units in the urban energy efficiency projects are underway.
 - Design documentation and a monitoring plan of five installations of SaproNat LLP in the Pavlodar oblast were validated. The validation was carried out by the accredited JSC “NCA” company, in accordance with Ch. 9-1 of the Environmental Code of the Republic of Kazakhstan and related implementing laws and regulations on GHG emissions, Standard ST RK GOST R ISO14064.
 - The project documentation was approved by the authorized body (the Ministry of Ecology, Geology and Natural Resources)
 - The investor of the internal project on energy saving was trained on the basics of trading of reduced emission units within the workshop in Nur Sultan. The event was attended by the representatives of the Ministry of Industry and Infrastructure Development, UNDP, Kazakh experts on the carbon market, the Zhasyl Damu JSC, companies, implementing energy saving and energy efficiency projects, and validation and verification authorities.
 - The Project implementation report on 5 installations in the Pavlodar oblast by LLP “SaproNat” was verified. The verification was made by the accredited company “NCA” company, in accordance with Ch. 9-1 of the Environmental Code of the Republic of Kazakhstan and related implementing laws and regulations on GHG emissions, Standard ST RK GOST R ISO14064-3-2010. Based on the verification results, the required package of documents was prepared and forwarded to the authorized body (MEG&NR) to register the project and issue emission

reduction units in the amount of 845 units for the 2018-2019 heating season. In 2020, it is planned to sell verified emission reduction units.

- The gradual MRV (Monitoring, Reporting & Verification) process for internal emission reduction projects was worked out.
- Since August 2019, the initiative jointly with the Ministry of Ecology, Geology and Natural Resources, Operator ROP LLP and Jas Ulan RPO, the initiative “ My EcoSchool of Life”, has been undertaken that involves participation of educational institutions in the capital of the country, Nur Sultan, as well as in the pilot cities - Temirtau, Shymkent and Semey. The aim of the ongoing initiative is to organize integrated events (educational and instructional activities), promoting low-carbon development, including the environmental behavior shaping – developing the culture of caring attitude to energy, water and proper sorting of solid wastes, etc. The focus of the project is to develop practical skills and knowledge to make carbon footprint estimates and plan activities on their reduction.
- The initiative “My Eco-School of Life” will be held during the academic year 2019-2020. As of December 2019, training workshops on the calculation of the carbon footprint, the development and implementation of the low-carbon development strategy were held in Nur Sultan and Temirtau. Trainings in Semey and Shymkent will be held in the 1st quarter in 2020.
- The project’s experts took part in the special broadcast on Astana radio “Announcement of a special session “Warm up your home with comfort ”(November, 2018), as well as in the live session on the New TV channel (Karaganda) and gave interviews on the UNDP project -GEF (Karaganda, July 2019) .
- The video film (12 min) and a short video clip (2 min) “Investing in Sustainable Cities” were produced and released following the recommendations given in the mid-term evaluation of the project. The film and the video clip were posted on the project website and were presented at the project events.
- During the sale of the reduced GHG emissions from the project implemented in the Pavlodar oblast the following obstacles. The trading of reduced GHG emissions from the projects implemented in the Pavlodar oblast was fraught with the following challenges: the sale of the reduced emissions is a new process experience (never before such transaction has taken place). Secondly, time periods of received reduced GHG units (the heating season) do not meet the annual value of the reduction required by the rules. Thirdly, the transaction was delayed as a result of the general malfunction in the operation of the carbon unit register which is supposed to be fixed at the beginning of 2020. Due to these conditions the sale is expected in the first quarter of 2020.
- Raising awareness activities on low carbon urban development in educational institutions address several tasks at once: engagement of young people and qualified experts and practitioners among the teaching staff and parents which represent a key target group for energy saving activities in the housing sector. These activities will be continued in 2020. The awareness level will be then assessed.

IV.MONITORING and EVALUATION

- Within the reporting period, the heads of the UNDP country office with the UNDP-GEF project team participated in monitoring missions on the UNDP-GEF pilot projects and had meetings with the partners:
- July 2019 – the monitoring visit to the pilot facility - children's health center “Parus” (Sail) (Akmolisk oblast, Zerenda);

- September 2019 – the monitoring visit to the pilot city - Satpaev, participation in the Regional Forum;
- October 2019 – the monitoring visit to the pilot facility – the residential apartment building (Akmola region, Atbasar);
- October 2019 – the monitoring visit to the pilot facility – The Kazakh-Russian University (Aktobe), Akvatoriya-Aktobe LLP (Aktobe);
- October 2019 – the meeting with the DAMU Fund (Almaty);
- November 2019 – the monitoring visit to the pilot project - the boiler station and NPF Ergonomika LLP (Karaganda), the residential apartment building (Temirtau);
- December 2019 – the participation in the Regional Forum in Karaganda.

The following recommendations are made to the UNDP-GEF Project following the results of the monitoring missions:

- Enhance cooperation with second-tier banks on providing loans to low carbon projects;
- Work out with the DAMU Fund details of loan guarantees for urban projects;
- Accelerate media relations within the Project;
- Work out new pilot energy saving initiatives in the Karaganda oblast together with project partners;
- Identify and work out gender aspects and initiatives in the implementation of urban low-carbon projects;
- Finalise the approval of a new form of support of the investment subsidy facility;
- Ensure interaction of the UNDP-GEF Project with other projects on energy saving and RES as well as with SDG projects;
- Engage a new technical project advisor in the procedure for extension of the UNDP-GEF project implementation period.

V.GENDER RELATED ACTIVITIES

The project organized monitoring of the number of women and men who could have benefited from the implementation of low-carbon urban projects (at their planning stage), as well as the actual number of women, men and children who benefited from the implementation of these projects (based on the results of their monitoring). For this purpose, relevant indicators have been added to the project reporting forms. For example, when applying for financial support to low-carbon projects, the applicant is also obliged to indicate the expected number of women, children and men who plan to receive benefits in the form of improved comfortable living conditions, etc. At the end of the reporting period - 53,482 women, 51,040 men, 13,391 children benefited from the implementation of projects.

The obtained gender indicators (the number of men and women) as a result of the monitoring show, in general, the same energy saving needs for both genders (the approximate equal number of beneficiaries). The benefits of energy saving and the use of low carbon technologies are equally important for both men and women. There are also no significant differences for males and females in the specifics of urban low-carbon projects being implemented, except for the fact that projects in educational institutions (for example, in schools) bring more benefits to women and children than to men (pedagogical collectives of schools mainly consist of women).

In the reporting period, the UNDP-GEF project, in collaboration with other UNDP-GEF projects implemented in Kazakhstan, carried out a special study on the following topic –

“PROMOTING CLEAN AND AFFORDABLE ENERGY TO EMPOWER WOMEN AND GIRLS IN KAZAKHSTAN AND IN CENTRAL ASIA”. The ultimate goals of this research are: enhancing knowledge of the differentiated access to energy resources and use of energy services by women and men in rural and urban settings;

Mapping gaps in women’s participation in energy-related decision-making and in the energy sector more broadly, including in planning processes;

Developing gender-responsive policy recommendations to ensure gender equality in access to sustainable energy, to increase women’s participation in decision-making and management of the energy and related sectors, and in opportunities for jobs and career development.

An analysis of the lifestyle of men and women in two pilot regions (the study examined two regions of Kazakhstan - one where only coal is available as fuel, that is, the region is not gasified (north of the country), the second is where natural gas can be used and the region is gasified (south of the country)) made it possible to establish that genders have great difficulties in those regions where only coal can be used as a fuel (there is no other fuel). They must manually load coal for heating into the stove, maintain the efficiency of the domestic boiler, take out ash, etc. This is especially harmful for the females’ health. In winter, women and men in such households cannot leave their home for a long time and go, for a vacation, study, etc. (they are forced to maintain the temperature in their homes and consume coal). In those regions where gas is used as fuel, such problems do not arise - automatic temperature support is possible there due to automatic control of the gas supply. And it is safer for health, especially for women. Based on this, both women and men in such regions are freer to choose their own time spent in the winter and can leave their home without fear for its condition.

The results of the study on the differences in the lifestyle of men and women in the gas supply and non-gas supply (coal) regions of Kazakhstan were used by the project team to organize activities for raising awareness of the benefits of energy efficient technologies and the introduction of cleaner (non-coal) energy sources in households. We tried to motivate households to introduce cleaner technologies in order to get additional benefits, such as freedom of movement and lack of the need for constant temperature control when using conventional technologies (coal, for example).

This increased the efficiency of the organization of the project information campaign, and raised consumer interest in low-carbon technologies. The publication and active spread of the research results on gender differences in the lifestyle of households in the gasified and non-gasified regions of the country created additional incentives for city authorities to take measures to gasify the regions in northern Kazakhstan. According to official information, the construction of the main gas pipeline from the south to the north of the country is being actively carried out, which will allow supplying the northern regions of the country with gas in the next 2 years. This will significantly reduce pollution and emissions of CO₂, which is consistent with the goals of the UNDP-GEF project.

Also, studies have found that women are usually responsible for household needs and pay utility bills in households. Thus, women should be interested in the application of energy-efficient technologies in everyday life, because they daily deal with household, consumption of energy (heat, electricity), other resources and water. Given this circumstance, the project focused on females as a target group to raise awareness of the benefits of low carbon technologies. In a pilot project in the city of Nur-Sultan (low-carbon modernization of the city block), there were residential councils created with the support of the project. These residential councils mainly consist of female housewives. Among the councils, extensive outreach was conducted to raise awareness of low-carbon technologies that will be used in the implementation of the pilot project. The result of this important work carried out by the

project with women was obtaining the consent of the majority of owners to participate in the project. Previously, residents did not agree to participate in the project and did not want to invest part of their money in low-carbon technologies (for example, roof insulation, etc.). Now, the residents' consent was received and the project carried out organizational measures and received permission from the local administration to carry out this project. So it was through women that the project achieved ownership consent for the implementation of a low-carbon initiative in the pilot city quarter and agreement for co-financing of works on the modernization of residential buildings

VI. FINANCIAL IMPLEMENTATION

Budget Overview (*last year of the project implementation*)

Description of activity	Budgeted amount	Spent amount	Balance
Activity 1: Integrated municipal planning, targets and prioritization for urban mitigation actions	6 445 USD	6 445 USD	0 USD
Activity 2: Institutional framework for urban NAMAs	139 299 USD	139 299 USD	0 USD
Activity 3: Financing of Urban NAMAs	501 513 USD	501 513 USD	0 USD
Activity 4: Implementation of pilot projects	498 006 USD	498 006 USD	0 USD
Activity 5: Monitoring, verification and knowledge management	58 861 USD	58 861 USD	0 USD
Activity 6: Project Management	62 000 USD	62 000 USD	0 USD
Total	1 266 124 USD	1 266 124 USD	0 USD

Budget Overview (*entire period of the project implementation*)

Description of activity	Budgeted amount	Spent amount	Balance
Activity 1: Integrated municipal planning, targets and prioritization for urban mitigation actions	400 000 USD	348 867 USD	51 133 USD
Activity 2: Institutional	700 000 USD	511 824, 87 USD	188 175,13 USD

framework for urban NAMAs			
Activity 3: Financing of Urban NAMAs	3 300 000 USD	798 666,2 USD	2 501 333,8 USD
Activity 4: Implementation of pilot projects	700 000 USD	516 508,25 USD	183 491,75 USD
Activity 5: Monitoring, verification and knowledge management	550 000 USD	589 584,22 USD	-39 584,22 USD
Activity 6: Project Management	340 000 USD	309 552,12 USD	30 447,88 USD
Total:	5 990 000 USD	3 075 002,66 USD	2 914 997,34 USD