



FINAL REPORT

**United Nations Development Programme
Kazakhstan
Almaty irrigation water supply and sanitation improvement
31 December 2024**



Reporting Period	2024
Donor	The Coca-Cola Foundation
Country	Kazakhstan
Project Title	Almaty irrigation water supply and sanitation improvement
Project ID (Atlas Award ID) Outputs (Atlas Project ID and Description) Strategic Plan and/or CPD Outcomes	00125105/00130693 Output 4.1: Solutions developed, and resources mobilized for more sustainable use of ecosystems for the improvement of the well-being of local communities and nature. Country Programme Outcome: 3.2 - By 2025, all people in Kazakhstan, in particular, the most vulnerable, will benefit from increased climate resilience, sustainable management of the environment, clean energy, and sustainable rural and urban development.
Implementing Partner(s)	UNDP
Project Start Date	June 2022
Project End Date	December 2024
[Year] Annual Work Plan Budget	USD 93,453.90
Total resources required	USD 93,453.90
Revenue received	
Unfunded budget	
UNDP Project Manager	Name: Assel Nurbekova Title : Head of Unit Email: assel.nurbekova@undp.org DocuSigned by:  0FD5303AB938497...

Table of Content

I. EXECUTIVE SUMMARY 3

II. BACKGROUND 3

III. PROGRESS REVIEW 3

IV. PROJECT RISKS AND ISSUES 7

V. GENDER RELATED ACTIVITIES..... 7

VI. LESSONS LEARNED 7

VII. CONCLUSIONS AND WAY FORWARD 7

VIII. FINANCIAL STATUS 8

IX. ANNEX 12

I. Executive summary

The Project team visited project sites in Koksu and Eskeldy rayons of Zhetisu oblast, and Enbekshikazakh rayon of Almaty oblast during the reporting period. Several meetings were conducted with local akimats, representatives of RGP “Kazvodkhoz”, and farmers to discuss with all project stakeholders the project planning, make preliminary assessment of existing farm irrigation canals and village schools.

During the field trip meetings, the Akimats of each rayons provided and suggested to the project team necessary information on the selection of farm irrigation canals, pilot farms to organize demonstration plots on water-saving technologies, and pilot village schools to install handwashing stations, etc.

Based on the results of the field trips, the project work plan and other activities were revised, further recommendations were provided by Project Steering Committee.

Cumulative expenses for the implementation were \$94,601.36 from the total budget amount of USD 99,009.00 and the delivery rate was about 95,5% in 2024. *(DPC and GMS expenses are expected)*

II. Background

The formerly fertile agricultural lands of some regions of Almaty have been discarded due to improper land-use practices. Many farms have been affected by a shortage of irrigation water during the irrigation seasons. Both inter-farms and intra-farm canals were not adequately maintained, causing silting and large sedimentation which has reduced the water carrying capacity of those canals and breached the whole hydrological regimes of important water catchments. Thus, large areas of arable lands were abandoned and not being used, hampering the production potential of the agricultural sector in the region.

Moreover, a lack of access to clean water, sanitation, and hygiene (WASH) services in some schools in the Almaty region worsens the health conditions, which negatively affects the learning environment of women and girls at most, because of biological and cultural aspects. Thus, WASH is quite essential to ensure local and regional, health, social, and economic development.

Against these backdrops, the Project aims to introduce resilient practices to expand the area of irrigated farmlands by restoring the abandoned lands, reduce the extent of degraded lands, and enhancing the productivity of the farmlands in targeted regions. Furthermore, the project will pilot effective WASH practices in the district’s secondary schools in the Koksu, Eskeldi, and Akshi districts.

The Project has three outcomes 1. Improved irrigation water supply systems through the introduction of water-saving practices; 2. Improved clean-up and remediation services in the context of COVID-19 and 3. Build land users’ institutional capacity in irrigation water management and enhance the municipal water and sanitation services. Target areas: Koksu and Eskeldy rayons of Zhetisu oblast, and Akshi rayon of Almaty oblast.

III. Progress Review

Expected outputs	Output indicators	Data source	Baseline		Value for the previous year if different from baseline	Target for the reported year	Actual value for the reported year
			Value	Year			
Output 1: Improved access to irrigation water for the farmers, reduced irrigation water losses, operations, and maintenance.	1.1. A number of demonstration plots were established using advanced technology.	Initiation Plan	No demonstration plots with advanced drought mitigation and adaptation agro-technology to showcase.	2022	N/A	Established 2 demonstration plots on the restoration of degraded croplands through the cultivation of alternative cropping systems.	Demonstration plot on water-saving technologies on an area of 2 hectares established, Demonstration plot on advanced crop rotation and drought-resistant crop production systems on an area of 2 hectares established
	1.2. A number of farmers are aware of locally suitable irrigation water-saving technologies.	Initiation Plan	Farmers are not aware of what irrigation water technology is eligible for their watersheds.	2022	N/A		168 farmers are aware of locally suitable irrigation water-saving technologies
	1.3. A number of communities are aware of WASH& COVID-19.	Initiation Plan	No or few communities are aware of WASH in the light of COVID-19. No community or farmers are aware of international water-saving agro technologies and sustainable cropping systems.	2022	N/A		Four target schools: 2 schools in Eskeldy district, 1 school in Koksudistrict and 1 school in Enbekkakh district were covered 80 people among schools management, teachers and parents and 347 students raised awareness of WASH

Output 2: Improving clean-up and remediation services in the context of COVID-19.	2.1. A number of schoolchildren, boys, and girls from local schools, are aware of WASH& COVID-19. 2.2. Number of schools befitted by modern WASH facilities.	Initiation Plan	No or few communities are aware of WASH in the light of COVID-19. No district schools are equipped with contemporary sanitary and hygiene facilities.	2022	N/A	2-3 schools, including 314 students (with equal participation of women and men), improved WASH and facilities. 2-3 schools equipped with contemporary WASH facilities and remediation services in the view of COVID-19.	347 students from 4 schools are aware of WASH 3 schools 1) Nurmolda Aldabergen ov Secondary School in the village of Balpyk Bi, Koksud District, Zhetisu Region (14 sinks, 20 faucets, 20 soap/sanitizer dispensers); 2) Nurmolda Aldabergen ov Hero of Socialist Labor Secondary School in the village of Karabulak, Eskeldin District, Zhetisu Region (5 sinks, 20 faucets, 20 soap/sanitizer dispensers); 3) Sh. Ualikhanov Secondary School-Gymnasium in the village of Karabulak, Eskeldin District, Zhetisu Region (5
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							sinks, 20 faucets, 20 soap/sanitizer dispensers)
Output 3: Build institutional capacity in agricultural water supply agencies and municipal water and sanitation services.	3.1. Number of studies on WASH and COVID-19 underlying causes are conducted. 3.2. Number of training modules and lessons learned are documented on innovative farm business management and irrigated land management.	Initiation Plan	No studies are available on WASH in the context of the women and girls' biological and cultural aspects at secondary school levels. No documented knowledge and training modules on innovative farm business management and irrigated land management.	2022	N/A	One feasibility assessment of the current WASH and practice taking into account the needs of female students. 2-3 schools, including 196 farmers (with equal participation of women and men), are aware of innovative water-saving technologies and access to the contemporary training modules.	One study on WASH and COVID-19 underlying causes was conducted. Two training modules on innovative water-saving technologies were documented.

Finding a right partner for the project has proven to be more challenging than expected. The project team has searched a partner who shares UNDP vision and has the capability to effectively execute the project in line with the project objectives. Also, the project aims for a partner who could bring additional resources to enhance the project's impact and ensure its long-term sustainability. Despite exploring many potential partnerships diligently, none have met UNDP stringent criteria for ensuring the project's success. The project team understands the critical importance of addressing agricultural water and sanitation in schools. Despite the unexpected delay, the project team has been persistent in identifying a suitable partner and securing the necessary resources to kick-start the project.

Several field visits were implemented during the project implementation period: on July 31, 2023 – August 3, 2023, UNDP Programme Analyst and Project Manager visited Akimats of Eskeldy and Koksu rayons of Zhetisu oblast, and Akimat of Enbekshikazakh rayon of Almaty oblast. The meetings were held with local akimats, representatives of RGP “Kazvodkhoz”, and farmers to discuss with all project stakeholders the project planning, make preliminary assessment of existing farm irrigation canals and village schools.



During the field trip meetings, the Akimats of each rayons provided and suggested to the project team necessary information on the selection of farm irrigation canals, pilot farms to organize demonstration plots on water-saving technologies, and pilot village schools to install handwashing stations, etc.

The identified pilot sites and revised work plan were approved by the PSC. Based on the results of the field visits and the discussions of the PSC meeting, the following recommendations were provided by PSC:

- 1) Revision the project document (Initiation Plan – “IP”) is recommended to include project locations: Eskeldy and Koksu rayons of Zhetisu oblast, and Enbekshikazakh rayon of Almaty oblast, due to the division of the Almaty oblast.
- 2) Extension of the project end date from December 2023 to June 2024 recommended to align with field work commencement in spring 2024 and considering the vegetation period on demo-plots. Overall, the project has been extended several times for understandable reasons. The latest a no-cost extension was requested from the donor for the “Almaty Irrigation Water Supply and Sanitation Improvement” project. This extension followed a request from the Ministry of Water to support the piloting of data transfer at the transboundary river level, which involved the installation of water measurement equipment and data loggers to improve water accounting. The project required close coordination with RSE “Kazhydromet,” the main beneficiary, which had been preparing the pre-feasibility study and technical specifications for the equipment procurement. The procurement process, the delivery and installation of the equipment took an additional 90 days.

As a result, the project timeline was extended until December 2024 to ensure the remaining tasks were completed effectively.

3) Modification of activities in Component 1, focusing on strengthening existing water user associations.

4) Adjusting activities in Component 2 by replacing the installation of handwashing stations and automatic sensor taps in Akshi village of Enbekshikazakh rayon of Almaty oblast (they already have new stations) with restoring/repairing equipment (solar collector and water treatment equipment) at the secondary school named after “Bolek Batyr” in Akshi village of Enbekshikazakh rayon, Almaty oblast.

On August 7, 2024, UNDP Programme Associate participated in the workshop/event on Field Day: Experience in introducing water-saving technologies, advanced crop rotation systems and production of drought-resistant crops and visited demo plot at “Shukhrat” farm to check irrigation system installed by LLP Irrigator of Kazakhstan. The workshop was participated by large number of participants. The topic of the workshop was interesting for all participants (acting farmers, scientists from Research Institute of Quarantine and Plants Protection, etc.). The workshop was conducted in Agrobusiness Centre in Shelek. This Center supports farmers of the region by cultivating and testing new species resistant to climate and soil condition. The owner of this Centre is Community Foundation of Yenbekshikazakh district. The director of this Foundation is Mrs. Bakytgul Yelchibayeva, +77055421104. The irrigation system installed on 2 ha as per TOR in “Shukhrat” farm demonstrated good results. The yield of tomatoes increased. As a result the farmer scaled-up this experience across the entire field. The results of demonstration plots on the basis of the farm in Koram village, Enbekshikazakh district, Almaty province on water-saving technologies on the area of 2 ha, as well as on advanced systems of crop rotation and production of drought-resistant crops on the area of 2 ha were presented during the workshop. The director of the farm is Mr. Shukhrat Khelilov, +77057755315

On November 27-December 2, 2024, the water management expert of the Energy and Environment Unit visited four hydro posts to coordinate and agree the installation of the purchased OTT EcoLog 1000 autonomous temperature and water level recorders in Zhambyl oblast on the Shu River - Belbasar village, Shu district (43°28'17.48" N, 73°49'26.86" W), in Turkestan oblast on Dostyk channel - Shugyla aul (40°38'27.00" N, 68°36'12.00" E), in Almaty city and Almaty region on the Turgen river - Tauturgen village, Yenbekshikazakh district (43°20'12.17" N, 77°36'57.82" E), and in Almaty city and Almaty region on the river Kishi Almaty - Almaty city, Medeu district (43°11'24.0" N 76°59'35.9" E). The equipment was transferred to RSE “Kazhydromet”.

On December 11, 2024, UNDP Programme Associate visited the secondary school named after “Bolek Batyr” in Akshi village of Enbekshikazakh rayon, Almaty oblast to check the results of the services provided by IE Nomad. In accordance with the minutes of the consultation meeting with the Akimat of the Enbekshikazakh District dated 3 August 2023, repair works on the water supply system were carried out at the secondary school named after Bolek Batyr.

The repair works were completed in three stages:

1. Dismantling and installation of hot water supply pipes, as well as the installation of a vacuum pump.

2. Connection of risers to the hot water supply system.

3. Maintenance of sensor mixers, including the replacement of coarse filters in a total of 51 faucets.

To ensure the full functionality of the school's water supply system, it is recommended to undertake the following actions, which were identified during the implementation of UNDP-supported activities. These works should be financed by the school and/or the Akimat:

- 1). Replace batteries in 5 sensor mixers.
- 2). Replace control units in 9 sensor mixers.
- 3). Replace mixing units in 13 sensor mixers.
- 4). Address and resolve the issue of flooding in the basement.

Implementing these measures is essential for the uninterrupted operation of the school's water supply system and will contribute to the long-term sustainability of both the system and the UNDP-TCCF project outcomes.

IV. Project Risks and Issues

During the reporting period, the main issue and challenge of the project was related to finding a right partner for RPA. Due to the difficulties in finding a right partner for RPA, the project team decided to shift to the procurement tools. Thus, the tenders were announced for the following cases: rehabilitation of irrigation canals; establishment of demonstration plots; installation of handwashing station at school, workshops. Among all cases the procurement of the rehabilitation of irrigation canals failed due to the high cost of services and limited project budget. This activity was replaced by the most appropriate procurement case the installation of water measurement equipment and data loggers to improve water accounting.

Gender Related Activities

V. Gender related activities

During project implementation, efforts were made to promote gender equality.

In activities aimed at enhancing the capacity of farmers, land users, and representatives of the agricultural sector, women accounted for approximately 46-47% of all participants.

In surveys focused on water, sanitation, and hygiene (WASH), women represented 73.75% of respondents, highlighting their key role in water management and hygiene issues.

Women tend to have a better understanding of their water consumption and show greater concern for preserving natural resources (93.7% of women surveyed expressed an interest in water conservation). Among schoolchildren, girls made up the majority of survey participants (54.9%).

Men and younger individuals generally underestimate their water consumption compared to women and older participants.

Knowledge about waterborne diseases and awareness of the importance of handwashing after using the toilet and before eating demonstrate the need for further work in fostering hygiene practices, particularly among boys.

Issues related to hygiene, sanitation, and water use are traditionally perceived as the responsibility of women, as reflected in their high level of participation in such initiatives.

Women are actively involved both as participants in training sessions and as implementers, indicating a growing trend toward their increased leadership roles in rural communities.

Recommendations on the Gender Aspect

- Develop additional initiatives aimed at engaging men and youth in water, sanitation, and hygiene-related issues.
- Increase women's participation in strategic roles and leadership in water resource management projects.
- Introduce gender-sensitive approaches in education and awareness campaigns to account for differences in needs and perceptions between men and women.

VI. Lessons Learned

1. Close coordination with local Akimats, farmers, and representatives of organizations like Kazvodkhoz was essential for selecting project sites, planning activities, and revising the work plan. This underscores the importance of stakeholder engagement in ensuring project alignment with local needs and priorities.
2. The project team displayed flexibility by revising the work plan and extending timelines in response to delays, such as procurement challenges and seasonal considerations. Adapting to such changes proved critical to maintaining project momentum and achieving objectives.
3. Identifying the right partner for RPA was challenging due to the stringent requirements and limited budget. Switching to procurement tools to address these challenges highlighted the need for pre-emptive strategies for partner selection and contingency planning for resource allocation.
4. Investments in repairing and upgrading the water supply systems at schools (e.g., the installation of a vacuum pump and sensor mixers at the Bolek Batyr secondary school) demonstrated the significance of targeted measures in ensuring the long-term functionality and sustainability of infrastructure.
5. Awareness campaigns on water-saving technologies and WASH practices had a positive impact on local communities, as evidenced by their involvement in workshops and surveys. This highlights the effectiveness of educational initiatives in fostering sustainable practices.
6. Women played a significant role in the project, with a high percentage participating in surveys and training sessions. The project's gender-sensitive focus, such as engaging women in leadership roles and addressing their unique needs, proved valuable in promoting inclusivity and effectiveness.
7. Demonstration plots showcasing water-saving technologies and drought-resistant crops proved to be successful in increasing yields and inspiring local farmers to adopt similar practices on a larger scale, emphasizing the importance of practical, scalable solutions.
8. The challenges related to flooding in the basement and issues with sensor mixers in schools highlighted the need for ongoing maintenance planning and prioritization of infrastructure resilience in project design.

VII. Conclusions and Way Forward

Despite facing challenges such as delays in partner identification and procurement, the project successfully implemented activities in line with the revised work plan. The flexible approach to adjusting timelines and activities ensured progress toward achieving project objectives.

Close collaboration with local Akimats, farmers, and other stakeholders facilitated the effective selection of project sites and implementation of activities, highlighting the importance of strong partnerships.

Key achievements include the establishment of demonstration plots showcasing water-saving technologies, improved WASH facilities in schools, and enhanced awareness of hygiene and water conservation among communities. Gender-sensitive approaches ensured inclusive participation and addressed specific needs, especially those of women and girls.

Moving forward, the focus should be on:

- 1.Strengthening the sustainability of project outcomes, including regular maintenance of infrastructure such as sensor mixers and addressing flooding issues in schools.
- 2.Expanding awareness campaigns on water conservation and hygiene, with an emphasis on engaging men and youth.
- 2.Leveraging successful demonstration plots to scale up water-saving and climate-resilient agricultural practices across the region.
- 3.Enhancing institutional capacity for water and sanitation management to ensure the longevity of project results.

VIII. Financial Status

Activities	Approved budget	Expenditures			Total expenses
		2022	2023	2024	2022-2024
Activity1 Improved access to irrigation water for the farmers, reduced irrigation water losses, operations, and maintenance.	34,852.00	0	934.74	42,869.16	43,812.9
Activity2 Improving clean-up and remediation services.	25,000.00	0	0	26,351.16	26,351.16

Activity3 Build institutional capacity in agricultural water supply agencies and municipal water and sanitation services with a particular focus on girls' education and gender equality, as a necessary complement to the success of water and sanitation infrastructure projects.	6,572.71	0	2,678.19	0	2,678.19
Activity 4 Project management	32,584.29	343.10	1,604.10	19,811.91	21,759.11
Total:	99,009.00	343.10	5,217.03	89,032.23	94,601.36
%					95.5

IX. Annex