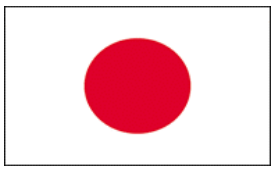

Empowered lives.
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United Nations Development Programme
in the Kyrgyz Republic

FINAL NARRATIVE REPORT ON UNDP PROJECT: "STRENGTHENING INTEGRATED RISK GOVERNANCE CAPACITIES OF THE KYRGYZ REPUBLIC AND REGIONAL COOPERATION IN CENTRAL ASIA", FUNDED BY THE GOVERNMENT OF JAPAN

Bishkek, 2023

CONTENT

Abbreviations

ADRC – Asian Disaster Reduction Center

CESSRR – Center for Emergency Situations and Disaster Risk Reduction

DPC – Data Processing Center

ES – Emergency situation

GIS – Geographic Information System

KR – Kyrgyz Republic

MES – Ministry of Emergency Situations

PIWS – Public Information and Warning Systems

RSTCES – Regional Scientific and Technical Council on Emergency Situations

SHS -software and hardware system

UDDS – Unified Duty Dispatch Service

UIMS - Unified Information Management System

USIMF – Unified System for Integrated Monitoring and Forecasting

VNII GOChS – All-Russian Scientific Research Institute on Problems of Civil Defense and Emergencies of Emergency Control Ministry of Russia

SUMMARY

This report presents the outcomes achieved through the implementation project “Strengthening Integrated Risk Governance Capacities of the Kyrgyz Republic and Regional Cooperation in Central Asia” (hereinafter referred to as Project). The project, funded by the Government of Japan from 2017 to 2022, focused on several key areas to enhance disaster risk management capacities in Kyrgyzstan and promote regional collaboration in Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan).

Building upon the successes of the first phase, which took place from 2013 to 2015 and funded by the Government of Japan, this second phase aimed to consolidate and expand the achievements made in emergency and crisis management. The initial phase focused on establishing a Unified Information Management System (UIMS), developing the existing 9 fire and rescue units, and fostering regional cooperation.

During the implementation period of the project, significant progresses were made in various areas. Key achievements include:

- Establishment of the Unified Integrated System for Disaster Monitoring and Prediction. The establishment and expansion of the Unified Information Management System have resulted in a strengthened early warning system, ensuring timely dissemination of critical information to the population and enabling efficient emergency management in the targeted regions.
- Strengthened capacity of responsible parties involved in avalanche risk reduction along mountain roads. The implementation of the avalanche stations "Dolon" and "Chapchyma" has resulted in enhanced safety measures, timely risk assessment, and the protection of lives and infrastructure along the main transport corridors. These measures have effectively reduced the risk of avalanches, ensuring safer travel and safeguarding the well-being of the communities residing in Naryn oblast and Chatkal rayon.
- Expansion of the UIMS components, such as the System 112 (unified emergency number) and the Nationwide Integrated Informing and Warning System, covering three oblasts of the country. Additionally, the hardware and software system of the Crisis Management Centre underwent modernization. The establishment and expansion of the Unified Information Management System have resulted in a strengthened early warning system, ensuring timely dissemination of critical information to the population and enabling efficient emergency management in the targeted regions.
- Improved capacity of disaster response services through the procurement and transfer of 22 emergency-equipped vehicles (pickups) to the Ministry of Emergency Situations (MES). This extension of emergency response facilities and capacity strengthening has ensured an enhanced ability to respond effectively to disasters and provide essential support to vulnerable populations in need.
- Development and regular implementation of regional cooperation initiatives. The achievements in regional cooperation, including the improved framework, establishment of the Regional Forum, Scientific and Technical Council, Regional Coordinating Mechanism, Regional Register of Forces, and the regulatory framework for early warning, have fostered a stronger collaborative environment in Central Asia. These developments have enhanced the region's collective ability to mitigate risks, respond to emergencies, and protect populations from the adverse impacts of disasters

Despite encountering challenges related to changes in senior management and shifting priorities within the beneficiary organization (KyrgyzHydromet), the project successfully achieved its targets. The construction of avalanche stations faced delays due to requests for location changes, resulting in an extension of the project until the end of 2022. However, despite these challenges, two avalanche monitoring stations were built and put into operation.

By December 2022, the project had achieved 99.7% of the total grant amount provided by the Japanese government (5,373,811.39 USD). Furthermore, UNDP made an additional contribution of 266,114.25 USD to the project, which was not initially planned in the Project Document/Agreement. The total value of the project, including the UNDP contribution, amounted to 5,639,925.64 USD. The remaining grant fund balance of 155,333.63 USD will be returned to the donor.

Context and a brief description of project goals and objectives

The Kyrgyz Republic, in view of its geographical location, is a country vulnerable to numerous natural disasters. Serious geological, climatic threats and global climate change problems have a constant negative impact on the population and economy of the republic. Over the past three years (2015-2017), the average annual damage from these disasters, excluding economic losses, amounted to approximately 1.44 billion soms (around 20.1 million US dollars). *Moreover, according to the Asian Development Bank project: the average annual modelled loss associated with flood is over $73 million and earthquake is $72 million, which together yield an aggregate annual average loss of nearly $146 million. Kyrgyz Republic's aggregate loss as a percentage of gross national income is the highest among all countries in the CAREC region*[1].

Recognizing the severity of these challenges, the Government of the Kyrgyz Republic has taken measures to reduce the vulnerability of the country. Efforts are underway to improve the regulatory framework, enhance logistics equipment, and technical equipment, and implement infrastructural measures for risk reduction, etc.. However, given the challenging economic situation, ensuring comprehensive disaster resilience remains a formidable task for government agencies. The support and assistance of development partners are crucial in addressing this issue effectively.

In response to this context,, the project on "Strengthening Integrated Risk Governance Capacities of the Kyrgyz Republic and Regional Cooperation in Central Asia" was launched in 2017.

The goal of the project is to enhance the capacity of the Kyrgyz Republic for integrated disaster risk managementand promote regional cooperation of Central Asian countries in this domain. To achieve these goals, the project focuses on implementing specific following outputs:

Output 1: An enabling environment for National Risk Assessment Framework created to apply innovative tools;

Output 2: National Disaster Risk Monitoring and Early Warning systems, as well as avalanche-risk reduction capacities strengthened alonggside transport corridors;

[1] https://www.carecprogram.org/uploads/CAREC-Risk-Profiles_Kyrgyz-Republic.pdf

Output 3: Disaster response and early warning capacities strengthened;

Output 4: Increased regional cooperation of Central Asian countries Disaster Management Authorities facilitated under the "Central Asia plus Japan" Dialogue

The planned project implementation period was 3 years (2017-2019) however, due to implementation challenges including COVID-19, changes in government prioritization (at the location of one of the avalanche stations that were built as part of the project) the project was completed by December 2022.

Donor: Government of Japan,

Implementing Partner: UN Development Programme.

The official ceremony of signing Exchange Notes and Grant Agreement

The Project was launched on March 7, 2017, with the signing of Exchange Notes and Grant Agreement with the Embassy of Japan, UNDP and the Ministry of Emergency Situations of the Kyrgyz Republic. The event took place in Governmental House with the participation of the following high officials:

- H.E. Mr. JEENBEKOV Sooronbay, Prime-Minister of the Kyrgyz Republic
- H.E. Mr. ISAKOV Sapar, Head of President's office of the Kyrgyz Republic
- H.E. Mr. YAMAMURA Yoshihiro, Ambassador Extraordinary and Plenipotentiary of Japan in the Kyrgyz Republic
- H.E. Mr. BORONOV Kubatbek, Minister of Emergency Situations of the Kyrgyz Republic
- H.E. Ms. KUDAIBERDIEVA Gulmira, Minister of Education and Science of the Kyrgyz Republic
- H.E. Mr. SHAMKANOV Kumushbek, State Registration Service Chairman a.i. under the Government of the Kyrgyz Republic
- H.E. Mr. AVANESSOV Alexander, UN Resident Coordinator / UNDP Resident Representative in the Kyrgyz Republic

In photo: Signing ceremony (from left to right)
Mr. YAMAMURA Yoshihiro, Ambassador Extraordinary and Plenipotentiary of Japan in the Kyrgyz Republic

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Mr. JEENBEKOV Sooronbay, Prime-Minister of the Kyrgyz Republic
Mr. BORONOV Kubatbek, Minister of Emergency Situations of the Kyrgyz Republic
Ms. MOKUO Yukie, UNICEF Representative in the Kyrgyz Republic

Description of implemented activities

Output 1. An enabling environment for National Risk Assessment Framework created to apply innovative tools

Under this output, the project aimed to establish institutional mechanisms and methodological frameworks for assessing and predicting potential damage and losses from possible/future extreme events. This facilitated effective planning of disaster prevention and vulnerability reduction measures.

The project successfully assisted in the creation of the Unified System for Integrated Monitoring and Forecasting of Emergency Situations, which had no analogue in Kyrgyzstan before.

The development of the Feasibility Study for the establishment of the Unified System for Integrated Monitoring and Forecasting of Emergency Situations was carried out in 2015-2016 under the UNDP Project funded by the Russia-UNDP Trust Fund, with the involvement of international experts.

The creation of a new System for Integrated Monitoring and Forecasting of Emergency Situations yielded significant benefits:

1. Integration of Efforts: The Unified System brought together governmental, scientific, and educational organizations involved in monitoring environmental changes and hazardous industrial processes that may lead to emergency situations. It also encouraged the participation of civil society in monitoring and forecasting emergency situations.
2. Innovative Technologies: The system provided a platform for the application of innovative technologies (such as GIS, automation of data collection and processing, modelling, etc.) in monitoring, warning, and response to natural disasters.

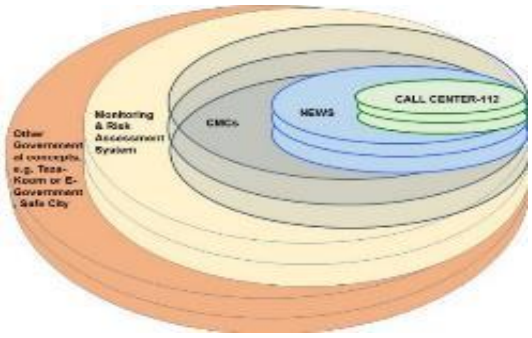


Chart 1: Architecture of UIMS integrated with Comprehensive Monitoring and Forecasting System and other Governmental concepts

To lay the foundation of the Unified System, the project procured equipment and software for the Data Processing Centre (DPC)of the Unified Integrated Disaster Monitoring and Forecasting System. The DPC facilitated automated collection and processing of monitoring information, analysis and data visualization for disaster forecasting.

As the Unified System evolves, additional specialized elements and subsystems for monitoring and forecasting various emergency situations will be integrated with the DPC (e.g., landslides monitoring and forecasting subsystem).

To enhance the capacity of the USIMF, consultations between the Ministry of Emergency Situations (MES), UNDP, and the World Bank resulted in an agreement to create an "Internet portal." This portal, developed within the World Bank project on data collection and exchange with external organizations, will complement the DPC as an integral component of the software and hardware system of the Unified System.

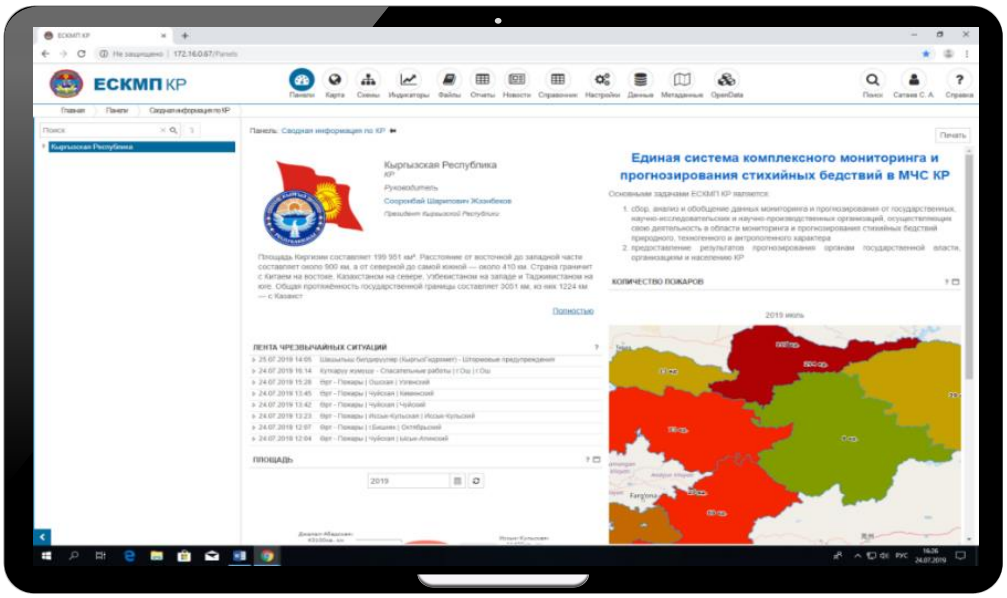


Figure 1. Web portal of USIMF (developed with the assistance of the WB project)

The DPC (Data processing Center) was established on the basis of the Department for Emergency Situations Monitoring and Forecasting of the MES of the Kyrgyz Republic (KR) and it closely collaborates with existing automated information collection and transmission systems in the MES KR such as the Unified Information Management System.

Description of the implemented activities:

Activity 1.1: Creation of the unified disaster monitoring system that applies satellite and Geographic Information System (GIS) and remote sensing techniques.

Action 1.1.1: *Conduct technical assessments by the experts from Japanese Disaster Management Structures to identify possible solution packages in applying innovative tools such as GIS and remote sensing techniques in Disaster Risk Reduction*

In the second quarter of 2018, international experts from Japan and Spain conducted a technical assessment to recommend solution packages for applying GIS and remote sensing techniques in disaster monitoring and forecasting. The assessment involved analyzing existing plans, programs, and technical solutions, evaluating current tools and equipment, and reviewing working methods. The result was a technical assessment report with recommendations on acceptable innovative technologies for disaster monitoring and forecasting. These recommendations formed the basis for developing the structure of the Data Processing Centre (DPC) and defining the equipment and software requirements for data collection and processing..

Action 1.1.2: *Procurement of hardware and software to establish a unified disaster monitoring system that applies satellite and Geographic Information System and remote sensing techniques*

To initiate the procurement process, the DPC contracted the All-Russian Scientific Research Institute on Problems of Civil Defense and Emergencies of the Emergency Control Ministry of Russia (VNII GOChS). The Terms of Reference (TOR) were developed based on the feasibility study and international experts' recommendations. The TOR included functional and technical specifications, testing and quality requirements, and technical characteristics of the equipment and software. The institute was previously the developer of the feasibility study for:

- The Unified Information Management System in emergency and crisis situations, which is currently functioning;
- A Unified System for Integrated Monitoring and Forecasting of emergency situations (as an integrated subsystem in UIMS).

Following an competitive open international tender process, INCOM LLC (Russia) was selected as the supplier for the DPC equipment and software. In 2019, the purchased equipments and software were delivered and installed at the central level in Bishkek and 15 structural subdivisions of Ministry of Emergency Situations (MES). Successful testings of the equipment and software were conducted with the participation of international technical consultants. The Data Processing Center was officially presented to the Department for Disaster Monitoring and Forecasting of MES Kyrgyz Republic on July 25, 2019, with the participation of the Embassy of Japan, MES, and UNDP.

The Media Coverage of the monitoring system can be found in the following links::

http://kabar.kg/news/v-kr-sozdadut-tcentr-obrabotki-dannykh-edinoi-sistemy-monitoringa-i-prognozirovaniia-chs/
http://ru.mes.kg/2019/07/26/v-mchs-kr-provedena-prezentaciya-sozdaniya-centra-obrabotki-dannyx-edinoj-sistemy-kompleksnogo-monitoringa-prognozirovaniya-chrezvychajnyx-situacij/
http://kg.akipress.org/news:1558643?from=mportal&place=last

Parallel to the equipment procurement, UNDP and the World Bank project supported the development of the regulatory framework for the Unified System for Integrated Monitoring and Forecasting (USIMF).

In October 2019, the Government of the Kyrgyz Republic approved the Legal Acts / Regulation on the UDMFS (http://cbd.minjust.gov.kg/act/view/ru-ru/157217), which included provisions on the system, the list of participants, information interchange procedures, monitoring and forecasting information requirements, and risk assessment procedures. The Legal Acts provided a necessary regulatory framework for the USIMF.

Action 1.1.3: *Training of MES staffs to use GIS and remote sensing techniques*

In June and July 2019, training sessions were conducted to train the staffs of the MES Department for Disaster Monitoring and Forecasting in Osh and Bishkek on how to use the equipment and software provided. These trainings included online testing of the equipment in collaboration with representatives from INKOM and MES.

Furthermore, additional training on GIS and remote sensing techniques was conducted by national experts in September 2019. The training took place in Osh and Bishkek and was extended to include the staff of the MES Department for Disaster Monitoring and Forecasting and Avalanche Service of the Agency on Hydrometeorology.

The training module developed in cooperation with partners was used during the training sessions. Participants received practical assignments and were introduced to the demo version of ArcGIS Desktop, which allowed them to gain skills in visualizing geographical data, mapping, querying GIS databases, and conducting analysis. Due to the

inclusion of theory and practical assignments, participants expressed a desire to extend the training duration.

For media coverage of the staff training on the use of GIS technologies and remote sensing, please refer to the following link::

http://ru.mes.kg/2019/09/25/sotrudniki-mchs-proshli-obuchenie-po-ispolzovaniyu-gis-texnologij-i-texnologij-distancionnogo-zondirovaniya-i-osnovam-programmnogo-obespecheniya-arcgis/

Output 2. National Disaster Risk Monitoring and Early Warning systems as well as avalanche-risk reduction capacities strengthened alongside transport corridors

The output is aimed at capacity building for monitoring and forecasting avalanche danger by construction and equipping two avalanche stations and improving the equipment of the Hydrometeorological Agency's avalanche service under the MES KR in order to reduce disaster risks and ensure security along the country's transport corridors.

These activities are included in the Capacity Building and Development Programme of the Hydrometeorological Agency under the MES KR, approved by the Government Regulation of September 23, 2011 No. 572.

During the implementation of this component, the Project faced some challenges that affected the project timeline and were the reasons for extending the project until the end of 2022 (instead of the planned completion in 2019):

Construction of two avalanche stations Dolon and Chapchyma are stipulated in the ProDoc; Construction of an avalanche station at the Chapchyma Pass in Chatkal during the preparation phase of the project was defined as a place for construction of Chatkal avalanche station, which was agreed with all project stakeholders.

However, Agency on Hydrometeorology (hereinafter - "Hydromet") in September 2017, prior to development of design and estimate documentation, addressed to UNDP a formal request (letter №12/2129 as of 18/09/2017) to shift the place of construction of the avalanche station from the project document envisioned Chapchyma Pass to a new spot in the same Chatkal district, and namely the Bashky-Terek village. It was suggested as a most suitable place to cover two avalanche hazardous passes (located at the southern and northern extremities of the area). UNDP, based on this request, had conducted negotiations with the project's donor and received its consent. Then, UNDP as per the request received from Hydromet, was working during November 2017 and August 2018 on obtaining the required title documents and the design-estimation documentation for construction of avalanche station in Bashky-Terek station.

In the spring of 2019, following the development of the necessary technical design and estimate documentation and its approval by the state authorities, the construction of two stations at the Dolon Pass (Naryn region) and in the village of Bashki-Terek in Chatkal district were initiated.

But in June 2019 UNDP has received (after the appointment of a new head) a letter from the Hydromet (letter №11/1038 as of 17/06/2019) requesting to stop construction of Chatkal avalanche station in Bashky-Terek village and shift the construction of avalanche station back to Chapchyma Pass in Chatkal. The new head of Hydromet was categorically against proceeding with the works at Bashky-Terek. At the time of the second request, the works at the Bashky-Terek site had been completed at a cost of 67,000 USD. Given the costs incurred and in order to avoid losing them (in case of leaving the construction site) it took a

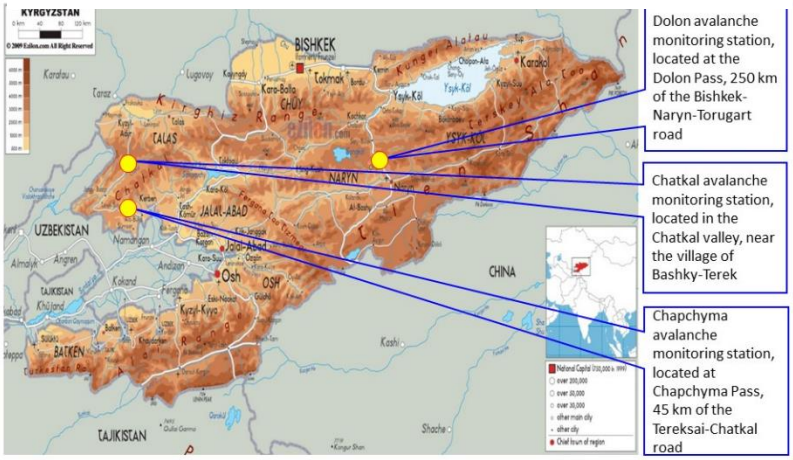
long time for the UNDP to reach a consensus between Hydromet, MoES and the donor's recommendations.

Based on consultations in 2021, it was decided to build a third station at the Chapchyma Pass in Chatkal District and to complete work at the Bashky Terek station in Chatkal District.

At the end of 2022, the Dolon and Chapchym avalanche monitoring stations were fully constructed, equipped and put into operation.

The avalanche monitoring station in the Bashky Terek village, is 70% complete and equipment has been procured. Further completion of the construction works in Bashky Terek station, will be done by UNDP at its own funds.

Figure 1. Map of the locations of avalan 1



<u>Description of the implemented activities:</u>

<u>Activity 2.1: Strengthening avalanche-risk reduction capacities in Kyrgyzstan</u>

<u>Action 2.1.1:</u> *Upgrading the logistical infrastructure of the national avalanche-risk reduction (Kyrgyzhydromet), monitoring and early warning systems*

As part of this action, the project focused on modernizing the material and technical base of the avalanche service of the Hydrometeorological Agency under the MES KR (Kyrgyzhydromet). A list of necessary equipment was compiled and their technical specifications (requirements) for procurement have been developed together with partners. The equipment included meteorological equipment and tools, including an automated meteorological station for the avalanche station on Dolon Pass, meteorological (manual) equipment for Chapchyma station. Additionally, field equipment and tools, office equipment, furniture and household equipment were procured for planned construction avalanche stations and the avalanche control service of Kyrgyzhydromet.

By the end of 2022, all equipment has been purchased and handed over to users - avalanche stations.

Delivered and installed equipment

Action 2.1.2. *Construction of three avalanche stations "Dolon", "Chapchyma" and "Bashky-Terek"*

For the construction of the avalanche stations, , Project developed a design and estimate documentation for the construction of the avalanche stations, a Contract was signed with the design and survey provider selected through a tender process. The design and estimate documentation included various chapters covering different aspects of the construction, such as architectural solutions, construction solutions, heating and ventilation, water pipes and sewers, electricity supply system, site improvements, and cost estimates. The documentation received approvals from territorial divisions of state agencies and underwent necessary expertise in the Department of State Expertise.Construction contractors were selected through an open tender, and the construction process was closely monitored. Technical supervision was carried out by a UNDP engineer, author's supervision was provided by the design organization, and government supervision was conducted by the authorized agency.

Dolon avalanche station in Naryn province

The Dolon avalanche station in Naryn province was fully completed, and the buildings and facilities were scheduled to be commissioned in September 2022 by acceptance of the State Construction Inspectorate. The station consisted of various buildings, including one for work and accommodation, a support building (warehouses, baths, etc.), a building for water storage, a meteorological site, a fire water tank, utilities (power line, roads, and sewerage), and fencing of the territory.

Chapchyma avalanche station in Chapchyma mountain pass of Chatkal district of Jalal-Abad province

Similarly, the Chapchyma avalanche station in the Chapchyma mountain pass of the Chatkal district in Jalal-Abad province was fully completed, and the buildings and facilities were commissioned in December 2022 through acceptance by the State Construction Inspectorate).. This station also comprised buildings for work and accommodation, a support building, a meteorological site, a fire water tank, utilities, and fencing.

General view of the avalanche station in Chapchyma

Supporting building and interior view of the avalanche station in Chapchyma

Avalanche station in Bashky-Terek village of Chatkal district of Jalal-Abad province

Regarding the avalanche station in the Bashky-Terek village of the Chatkal district in Jalal-Abad province, the construction work was initially suspended in June 2019 based on the request of Kyrgyzhydromet to change the construction location. However, construction resumed in June 2022. As of now, the main structures, including foundations, walls, and roofing of the residential and industrial buildings, water lines, and power transmission lines, have been completed up to 70%.

During the idle period of the main building, the UNDP construction supervision engineer revealed the appearance of cracks in the foundation of the building. In order to determine the degree of damage, instrumental studies were carried out by the State Institute of Seismic Construction and Engineering Design. The official conclusion of the instrumental survey was provided in October 6, 2022, which concluded that thewalls and doorways of the service-residential and industrial-economic block should be reinforced with metal frames and welded mesh to make it earthquake-resistant.

Late October 2022 construction works were stopped due to weather condition that not allowed the continuation of the relevant work. The continuation of work is planned to be resumed in late March - early April 2023. Considering the current delays in construction, as well as the climatic conditions of the project area, the preliminary deadline for the completion of the facility is set for September 2023.

Action 2.1.2. *Training of staff of Kyrgyzhydromet to use GIS and on snow survey*

Training on field methods of assessing snow and avalanche hazard forecasting of 15 staffs of KyrgyzHydromet took place in March 2019. Training consisted of theoretical and practical parts, where the staff was taught of making the assessment of avalanche hazards.

Participants learned how to observe avalanche hazards and were provided with practical exercises on how to assess snow density and measure snow compaction and forecast avalanching.

Additional training on use of GIS and remote sensing techniques conducted in September 2019 for the staff of MES (conducted under Action 1.1.2. Training of MES staff to use GIS and remote sensing techniques).

Trainings on avalanche monitoring

Useful links:

https://www.facebook.com/watch/?v=316210032401869

https://www.facebook.com/watch/?v=632623863828422
https://www.flickr.com/photos/undpkg/albums/72157704306969502

Output 3. Disaster response and early warning capacities strengthened

In the framework of this Output, the Activities focused on:

- Improving the equipment of emergency response services to assist in the creation of additional 22 fire and rescue services in the district administrative centers;
- Development of components of the Unified Information Management System in Emergency and Crisis Situations supporting to expand the coverage of UIMS components in Chui, Issyk-Kul, and Jalal-Abad oblasts.

Description of the implemented activities (implemented in 2018):

Activity 3.1: Extending the net of emergency response facilities and strengthening their capacities

Action 3.1.1. Purchase of equipment to establish 22 Fire-Rescuing Facilities under the Ministry of Emergency Situations

To enhance the equipment of emergency services of the MES and establish 22 fire and rescue services, procurement action was initiated to delivery the necessary equipment to the MES KR. Based on the needs the MES provided a list of equipment and their technical specifications, based on which the required tender documentation was developed.

During the fourth quarter of 2017 and 2018, the following equipment was transferred to the MES :

- 22 cross-country vehicle (pickups) of "Nissan NP300 HARDBODY" brand, with a total cost of 608,388 US dollars (excluding customs clearance services);
- 22 sets of hydraulic rescue equipment, with a total cost of 235,114 US dollars (excluding customs clearance services);
- Pneumatic rescue, equipment, disk cutters, illumination system, and climbing equipment, with a total cost of 133,525 US dollars (excluding customs clearance services).

Photo 4: Ceremony of the transfer of rescue equipment: The leadership of the Government of the Kyrgyz Republic, the Ministry of Emergency Situations, the Embassy of Japan and UNDP view the transmitted equipment

Additionally, as per the MES request , cars were equipped with special identification marks, light-signal loud-speaking devices, and roll-out metal racks in the luggage compartment for transportation and storage of rescue equipment. The additional equipment and car modifications were not included in the original Project Document, resulting in a delay of 4-5 months in transferring the equipped cars.

The official ceremony for the transfer of 22 vehicles and equipment to the rescue services of the MES KR took place on August 30, 2018 with the participation of the Prime Minister of the KR Muhammedkaliy Abylgaziyev, the UN Resident Coordinator in the Kyrgyz Republic / UNDP Resident Representative in the KR, Mr. Ozonnia Ojielo, the Ambassador of Japan to the KR, Mr. Yoshiro Yamamura and the Minister of Emergency Situations of the KR,

Nurbolot Mirzakhmedov.. The event received extensive media coverage and was highlighted on partner websites:

http://www.kg.undp.org/content/kyrgyzstan/en/home/presscenter/pressreleases/2018/08/rescue-services-of-the-ministry-of-emergency-situations-will-be-.html

http://ru.mes.kg/2018/08/30/mchs-kr-povyshaet-potencial-pozharno-spasatelnyx-podrazdelenij/

https://kg.akipress.org/news:1467152/?from=kgnews&place=maincats

2019 Activities

There were savings in the amount of 225 thousand USD by results of activities done and due to the discount provided by vendors for UN agencies.

It was decided on the Project Board Meeting held in 2019 to use the savings for procurement of additional equipment which was agreed by partners.

The project for that purpose jointly with MES agreed on the list and technical specifications for additional equipment and sent a request to the donor for its approval. However, due to circumstances related to the construction of avalanche stations, as of date, no approval for the use of savings was received.

Activity 3.2: Establishment of Unified Information Management System in additional regions of the country

The implementation of this activity focused on expanding the Unified Information Management System in Jalal-Abad, Issyk-Kul and Chui oblasts, the following work was performed:

- Development of technical specifications: In order to acquire a hardware and software system for the creation of additional points of the Unified Duty Dispatch Service 112 (UDDS) and Public Information and Warning Systems (PIWS), technical specifications of equipment was developed. This process received assistance from an international expert to ensure the specifications were appropriate:

- International tender and agreement with Iskratel company: Following the international tender, an agreement was signed with the Iskratel company, which is the supplier of equipment and software for the first phase of the UIMS construction. The total cost of the contract is 903,388 UD dollars, the completion date of the contract was September 2018.

- Completion of contracted work: The contractor successfully completed all the work stipulated in the contract. This included the delivery of all necessary equipment to Bishkek, installation of software for technical means (hardware), and the installation of 40 siren devices on the territory of Chui, Issyk-Kul, and Jalal-Abad oblasts.

- Acceptance of completed work: After conducting tests, the completed work was accepted from the Crisis Management Center of the Ministry of Emergency Situations of the Kyrgyz Republic. This indicates that the work performed met the required standards and specifications.

Output 4: Increased regional cooperation of Central Asian Disaster Management Authorities facilitated under the "Central Asia plus Japan" Dialogue

Activities under this Output were focused on the further expanding the dialogue in the region, focusing on the following complementary strategic directions:

- Facilitating the conducting high-level forums/dialogues of emergency agencies of Central Asian countries under the "Central Asia Plus Japan Dialogue", as well as the Center for Emergency Situations and Disaster Risk Reduction in Almaty, which plays an important role in expanding coordinated actions. Such high-level dialogues/forums are becoming significantly important in the light of the adoption of the Sendai Framework for Disaster Risk Reduction to discuss implementation mechanisms.
- Providing assistance to the Government of the KR in the implementation of regional priorities identified according to the Framework for strengthening regional cooperation in Central Asia, by providing appropriate advisory services on various topics (for example, on disaster risk monitoring, information sharing, policies, etc.).

The implementation of the Output 4 is implemented jointly with the Center for Emergency Situations and Disaster Risk Reduction in Almaty (CESSRR) by signing an Agreement for providing expert services on cooperation development between UNDP and CESSRR in Almaty.

Description of the implemented activities:

In order to develop regional cooperation in Central Asia during the project implementation, the following activities have been completed:

Action 4.1.1: *Conduct a 3-days training in CDRRR Almaty for the Expert Groups of Disaster Management Authorities of CA countries by involving knowledge and capacity of Asian Disaster Reduction Center in Kobe, Japan (ADRC)*

In May 2018, a three-day training session was held in the Center for Emergency Situations and Disaster Risk Reduction in Almaty (CDRRR) for representatives of the emergency agencies of Central Asian countries. The training aimed to enhance their knowledge and capacity in disaster management by involving the expertise of the Asian Disaster Risk Reduction Center (ADRC) in Kobe, Japan. The training covered various topics, including regional disaster monitoring systems, early warning systems, and innovative technologies in disaster monitoring and forecasting. More information about the training can be found on the CDRRR website: .

https://cesdrr.org/training_2018_ADRC

Photo 5: Training of regional monitoring systems, GIS and warning

Action 4.1.2: *Conduct two times 2-day meetings of the Expert Working Group of CA countries to discuss the implementation of the Framework of cooperation on strengthening regional collaboration in Central Asia (FOC) and agreeing upon with Disaster Management Authorities of CA countries*

Two two-day meetings of the Expert Working Group were conducted to discuss the implementation of the Framework of cooperation on strengthening regional collaboration in Central Asia (FOC) and reach agreements with the Disaster Management Authorities of Central Asian countries.

The first meeting, held in 2017, involved representatives from all Central Asian countries and covered various topics related to cooperation development, such as the framework for regional cooperation, regulations for the Regional Forum, and activities planned for 2018-2020, focusing on following:

a) Framework for strengthening regional cooperation in disaster risk reduction for Central Asian countries.

b) Regulations on the Regional Forum - Meeting of the Heads of state bodies authorized in the field of prevention and liquidation of emergency situations of Central Asian countries.

c) Activities plan on implementation of the Framework for strengthening regional cooperation in the area of Disaster Risk Reduction of Central Asian countries for 2018-2020.

d) The concept of creating a "Regional Register of national and international specialists - experts in the field of seismic, environmental, fire, radiation, industrial, hydrogeological and other areas of security."

e) The concept of creating a "Regional Scientific and Technical Council on Emergency Situations" (RSTCES).

f) The concept of creating a "Regional Register of Resources of Central Asian countries" with the aim of conducting rescue operations on their territory in large-scale and cross-border emergencies.

The second meeting took place in November 2018 and resulted in agreements on the responsible country for conducting the next Regional Forum, the agenda for the upcoming Regional Forum in 2019, and draft documents for cooperation development, which were submitted for consideration at the Regional Forum in 2019.

Action 4.1.3: *Conduct Regional high-level event of Disaster Management Authorities in Central Asian countries for increased coordination on implementation of Sendai Framework for Disaster Risk Reduction priorities and of the Framework of cooperation on strengthening regional collaboration in Central Asian countries through providing consultancy services*

A regional high-level meeting of the Heads of Disaster Management Authorities of Central Asian Countries was held on July 12, 2019. The meeting involved the participation of 60 people representing UN agencies and other international organizations.

During the meeting, the Heads of Disaster Management Authorities of Central Asian countries approved the Regulations and signed a Protocol on establishing the following:

- Regional Scientific and Technical Council for Emergency Situations;
- Regional Registry of Experts in the field of civil protection/defense, disaster risk reduction, prevention, and liquidation of emergency situations;
- Regional Register of Forces and Resources of Central Asian countries with the purpose of carrying out rescue operations in their territories in case of emergencies
- Action plan (road map) for implementation of the Framework for strengthening of regional cooperation in disaster risk reduction, disaster prevention, and liquidation for 2019-2021.

Useful links:

http://kg.akipress.org/news:1556651/?from=portal&place=nowread&b=3
http://avesta.tj/2019/07/12/tadzhikistan-prinyal-uchastie-v-forume-glav-chrezvychajnyh-vedomstv-stran-tsentralnoj-azii/
https://for.kg/news-588352-ru.html
https://slon.kg/ru/news/v-bishkeke-glavy-mchs-stran-centralnoj-azii-obsuzhdayut-voprosy-sotrudnichestva-po-snizheniyu-riska-bedstvij/

Action 4.1.4: *Conduct practical/infrastructural measures aimed at reducing risks of transboundary hazards: embankment of the most dangerous areas of the left riverbed of Chu river.*

This action aimed to implement practical and infrastructural measures to reduce the risks of transboundary hazards. The MES recommended selecting the site at the Kara-Ungur river in the Nooken rayon of the Jalal-Abad region for this purpose. The settlements in both Kyrgyzstan and Uzbekistan, with a combined population of over 17,000 people, were at risk of flooding, necessitating the construction of a protective dam.

The construction of the protective dam was divided into two parts. The MES funded the construction of the first part, which covered a distance of 200 meters. The project made commitments to construct the second part, an additional 200 meters, as agreed by all parties involved. The MES recommendation received approval from the Embassy of Japan on October 2, 2019.

To carry out the infrastructure measures, the Jalal-Abad Mechanized Emergency Response Base of the Ministry of Emergency Situations was engaged based on a signed agreement. Construction work on the constraction of protective dam was fully completed in 2019, ensuring improved protection against transboundary hazards in the identified high-risk area site at the Kara-Ungur river in the Nooken rayon of the Jalal-Abad region

Construction of the protective dam

Project overall results and impact

The implemented activities of the project during 2017-2022 have made significant contributions to reducing population vulnerability and enhancing disaster response capacities. The impact can be summarized as follows:

1. **Extension of emergency response facilities and capacity strengthening**:

- By handing over 22 vehicles equipped with rescue equipment to the Ministry of Emergency Situations in 2018, the project significantly improved their disaster response capacity. These vehicles serve as small rescue vehicles during emergency situations and provide crucial assistance to disaster victims
- The project also distributed and handed over vehicles and rescue equipment to fire and rescue services in 20 communities, primarily located in regional centers along major transport routes. As a result, the capacity of fire and rescue services was significantly increased, enabling them to provide timely assistance to a population of over 400,000 people, with particular attention to the needs of females (51% according to statistics).

This extension of emergency response facilities and capacity strengthening has ensured an enhanced ability to respond effectively to disasters and provide essential support to vulnerable populations in need.
*Result**: Enhanced Emergency Response Capacities and Timely Assistance to Vulnerable Populations***.

2. **Establishment of Unified Information Management System in additional regions of Kyrgyzstan:**

- Through the expansion of the Unified Information Management System (UIMS) for crisis and emergency situations in the Jalal-Abad, Issyk-Kul, and Chui regions, the project significantly enhanced the early warning capacity in these areas. This expansion benefited a population of over 2 million people, with a focus on the inclusion of females (51% according to statistics).
- As a result of the UIMS expansion, the population in these regions gained access to essential emergency services through a single number, 112, facilitating efficient emergency response. Additionally, they received vital emergency information through television, radio, and mobile operators. Moreover, the regional authorities were able to automate and improve the efficiency of emergency management through territorial Crisis Management Centers.
- The introduction of new equipment contributed to an increase in operational phone calls received by the UIMS dispatcher services. For example, in 2017, approximately 2.5 million phone calls were recorded, while in 2018, the number rose to over 3 million. This upward trend demonstrates the improved effectiveness of the system in promptly addressing incidents and responding to requests for help.

The establishment and expansion of the Unified Information Management System have resulted in a strengthened early warning system, ensuring timely dissemination of critical information to the population and enabling efficient emergency management in the targeted regions.
*Result: **Strengthened Early Warning System and Improved Emergency Management***

3. **The implementation of the unified disaster monitoring system, integrating satellite and geographic information system (GIS) technologies**, has resulted in significant impacts:

- Collaboration and Unity: The system successfully united governmental, scientific, educational organizations, and institutions involved in monitoring environmental changes and hazardous production processes that could potentially lead to emergency situations. It also actively engaged civil society in monitoring and forecasting emergencies. This collaboration has fostered a collective effort towards disaster preparedness and response.
- Technological Advancement: The introduction of the unified disaster monitoring system created favorable conditions for the application of innovative technologies in monitoring, warning, and responding to natural disasters. By leveraging satellite and GIS technologies, the system has enhanced the capabilities of detecting and assessing potential risks, enabling proactive measures to be taken in a timely manner.
- Improved Emergency Projection: The unified system has significantly increased the accuracy of emergency projection. By integrating diverse data sources and advanced analytical tools, it provides more precise and reliable information on potential emergencies. This improved accuracy enables authorities to make informed decisions and undertake effective planning measures to prevent emergencies and protect the population.

The creation of the unified disaster monitoring system has not only strengthened collaboration and the application of innovative technologies but also enhanced emergency projection accuracy, facilitating more effective planning to mitigate risks and safeguard the population from disasters.
Result: ***Enhanced Disaster Monitoring and Effective Emergency Planning***

4. **Avalanche-risk reduction capacities strengthened alongside transport corridors**. The implementation of measures to strengthen avalanche-risk reduction capacities along transport corridors has led to significant impacts:

- Enhanced Safety Measures: The construction and operation of two avalanche stations, namely "Dolon" and "Chapchyma," have greatly improved safety along the main transport corridor for Naryn oblast, which is home to approximately 300,000 people, and the Chatkal rayon, with over 22,000 inhabitants. These stations are specifically designed for general meteorological observation, monitoring snow cover, and forecasting avalanche danger.
- Timely Risk Assessment: With the presence of the avalanche stations, there is now a robust system in place to monitor meteorological conditions, assess snow cover, and accurately forecast avalanche risks. This enables authorities to promptly identify areas prone to avalanches, facilitating early warning systems and allowing for proactive measures to mitigate risks.
- Protection of Lives and Infrastructure: By strengthening avalanche-risk reduction capacities, the safety of both the population and infrastructure along the transport corridors has been significantly improved. The timely identification and mitigation of avalanche risks reduce the likelihood of accidents, damage to transportation infrastructure, and potential loss of life.

The implementation of the avalanche stations "Dolon" and "Chapchyma" has resulted in enhanced safety measures, timely risk assessment, and the protection of lives and infrastructure along the main transport corridor. These measures have effectively reduced

the risk of avalanches, ensuring safer travel and safeguarding the well-being of the communities residing in Naryn oblast and Chatkal rayon.
Result: ***Strengthened Avalanche-Risk Reduction for Transport Corridors***

5. The implementation of various activities has resulted in significant achievements in the **development of regional cooperation for disaster risk reduction (DRR) in Central Asia**. These achievements have led to substantial impacts:

- Enhanced Framework and Strategy: The adoption of the Framework for strengthening regional cooperation among the countries of Central Asia marked a crucial milestone. Building upon this foundation, the Framework was further improved, leading to the development and adoption of the Strategy for the Development of Regional Cooperation of the Central Asian Countries in DRR until 2030. This strategic document provides a comprehensive roadmap for coordinated efforts in disaster risk reduction across the region.
- Establishment of the Regional Forum: The creation of the Regional Forum, a platform that brings together the Heads of Emergency Departments from Central Asian countries, has proven instrumental in promoting regular interaction and collaboration. With the International Center for Emergency Situations and DRR in Almaty serving as the Forum's Secretariat, this platform facilitates knowledge sharing, exchange of best practices, and joint decision-making on regional disaster management initiatives.
- Scientific and Technical Council: The establishment of the Scientific and Technical Council for Emergency Situations within the Regional Forum has further strengthened regional cooperation. This expert and advisory body fosters closer collaboration with scientific and educational organizations, leveraging their expertise to enhance disaster preparedness, response, and recovery strategies in the region.
- Regional Coordinating Mechanism: The creation of a Regional Coordinating Mechanism specifically geared towards responding to large-scale and transboundary emergencies has significantly improved coordination and joint response efforts. This mechanism ensures efficient mobilization of resources, expertise, and personnel during emergencies, enabling a more effective and timely response across borders.
- Regional Register of Forces: The establishment of a Regional Register of Forces in Central Asia enables joint response operations during large-scale and transboundary disasters. This register serves as a valuable resource, facilitating rapid deployment of personnel and resources from multiple countries to affected areas, thereby enhancing the overall effectiveness of disaster response and recovery efforts.
- Regulatory Framework for Early Warning: The development of a regulatory framework for the Regional System of Early Warning and Mutual Notification of Threats and Occurrences of Transboundary Emergencies represents a significant achievement. This framework ensures a standardized approach to early warning systems, facilitating timely dissemination of critical information and enabling coordinated response measures across national boundaries.

The achievements in regional cooperation, including the improved framework, establishment of the Regional Forum, Scientific and Technical Council, Regional Coordinating Mechanism, Regional Register of Forces, and the regulatory framework for early warning, have fostered a stronger collaborative environment in Central Asia. These developments have enhanced the region's collective ability to mitigate risks, respond to emergencies, and protect populations from the adverse impacts of disasters.
Result: ***Strengthened Regional Cooperation for Disaster Risk Reduction***

The results of the independent evaluation of the project

The evaluation of the project was carried out by an international independent expert and the following is a short extract from the evaluator's report (the evaluation report is attached as Annex 1):

RELEVANCE

Analysis of the feedback received from the stakeholders complemented with the analysis of the main Project-related reports and documents, resulted in the conclusion that the Project's design, objective, outputs and activities were **highly relevant** in supporting the government of the Kyrgyz Republic in achieving its national development goals, responding to unexpected events, implementing the 2030 Agenda and delivering intended results.. It can be concluded that the Project was a need of the hour.

EFFECTIVENESS

Analysis of the feedback received from the stakeholders complemented with the analysis of the main Project-related reports and documents, resulted in the conclusion that effectiveness the Project's operations was **partially satisfactory**.

Quote from the project evaluation report:

UNDP and its principal national partner, MES, faced a limited challenges in adapting the Project to the effects of COVID-19 pandemic in Kyrgyzstan. As a matter of fact, the majority of the Project activities/actions have been at a very final stage when the COVID-19 health emergency raised to the level of pandemic. The activities delayed by COVID-19 were those related to the construction of the avalanche monitoring stations. UNDP and KYRGYZHYDROMET were not able to adapt the implementation of pending activities to the effects of the pandemic coupled with harsh geographic and weather condition in the construction sites. On a positive side it has to be noted that MES established during the pandemic a new 112 hot line - special line for the Ministry of Health which facilitated a more rapid mapping of a new COVID-19 cases and ensured effectiveness in rapid life-saving responses.

The project has effectively complemented its work with other entities and initiatives to ensure a strategic coherence of approach. Up to the beginning of the Project 1st phase in 2012, the risk governance capacities of the Kyrgyz republic were based on an obsolete and limited focus on emergency response/recovery action. According to the estimation of the MES the effective shift from this "old fashioned" approach to a new "integrated" risk governance capacities, including a continued capacity building and maintenance, would require a minimum of USD 20 million to replace old "soviet time" systems, equipment and procedures. The Project under evaluation was not in a position to cover all these needs. However, thanks to joint UNDP/MES efforts several additional international cooperation were mobilized to complement results of the Project. E.g. MES established cooperation with World Bank, WFP, OSCE, ADB, ADPC and others.

EFFICIENCY

Analysis of the feedback received from the stakeholders' interviews complemented by the analysis of the main Project-related reports and documents, resulted in the conclusion that efficiency the Project in the implementation of its work plan was a **partially satisfactory.**

Quote from the project evaluation report:

The level of the efficiency was negatively impacted by several challenges which were beyond the Project management control, such as:

- *The complexity of the political and social environment in Kyrgyzstan as a country with economy in transition. Political challenge was characterized by significant political and economic changes occurring in the country.*
- *In Kyrgyzstan, the decentralization of responsibilities of disaster risk management to the local level is taking initial roots, however, the city governments, as a rule, are not equipped to collect, analyse and use in the disaster risk management relevant data (institutional and political challenge).*
- *COVID-19 pandemic outbreak created an additional challenge for a smooth implementation of some operations planned by the Project.*

Given the nature and extent of the political and institutional changes, these challenges were overcome partially only.

On a positive side, UNDP was proactive in seeking contributions in kind from other stakeholders to increase the project financing. Additional resources were mobilized from the recipient governments in providing workshop premises, assistance in logistics and information sharing, from the ADRC in providing expert support and from the UNDP country offices in supporting preparation and implementation of national workshops.

The prevailing opinion of the interviewed Project stakeholders confirmed that the UNDP Project management team was highly diligent in seeking out budgetary discipline and cost efficiencies. These efforts resulted in a wise and adequate allocation of resources that facilitated the achievement of the Project objectives within the anticipated budget.

SUSTAINABILITY

Analysis of the feedback received from the stakeholders complemented with the analysis of the main Project-related reports and documents, resulted in the conclusion that the perspectives for sustainability of the Project's outputs and impact in Kyrgyzstan and the countries participating in the activities resulting in achievement of the output 4 was **highly satisfactory.**

LESSONS LEARNED:

1. Natural hazards in Kyrgyzstan and the Central Asia region occur along many lines including earthquakes, landslides, floods, droughts, mudslides, avalanches. This coupled with a high degree of the social and economic vulnerability requires and increased attention to the strengthening of integrated risk governance capacities.
2. Consistent alignment of the Project's disaster risk reduction activities and outputs with the persisting national and regional disaster risk reduction challenges/needs, development goals, UNDP strategic priorities in general and the 2030 Agenda for Sustainable Development boosted its relevance.
3. Well designed and managed programs/projects addressing the strengthening the national risk governance capacities lead potentially to a positive shift of disaster/emergency management authorities and of disaster risk management legislation by reducing focus on provision of disaster relief and rehabilitation and reinforcing disaster risk reduction actions.
4. Unpredictable emergencies such as for instance COVID-19 coupled with very high staff turn-over, often at decision making levels, in the national partner organizations represent a considerable risk for the technical cooperation projects implementation on time and in accordance with the original project design.

5. Sharing of the best practices from the implementation, successes attained and challenges faced by the country-level disaster risk reduction projects through appropriate regional and SSC/triangular cooperation arrangements increases the catalytic impact of projects.
6. The effectiveness and overall impact of capacity development initiatives (seminars, workshops, trainings etc.) is difficult to measure if these events do not include appropriate tools for the event evaluation (questionnaires, quiz, etc.).
7. The presence of the gender mainstreaming and vulnerable groups of population inclusion in disaster risk reduction projects is an important prerequisite for addressing specific vulnerabilities and needs of all segments of the population and implementing the principle of Leave No One Behind. The Project faced several shortcomings in applying gender, rights-based and disability inclusion approaches in the design, with partial results in considering these issues during the implementation activities.
8. Important lesson learned from the COVID-19 pandemic was that the emergency situation can represent, in addition to multiple challenges, also the opportunity to explore new project implementation approaches, but also it means the need to be ready to mitigate the impact of the potential compound emergencies during the project lifetime.
9. Unrealistic design of the project document has a potential to undermine the efficiency of the project implementation phase.
10. The integrated risk governance involves different entry points such as legal framework development, advocacy, knowledge and recognition that development and disaster risk management are closely interconnected.
11. From the evaluator's point of view the main lesson learned is concerning the usefulness of a comprehensive logical framework based on the Theory of Change to be included in the UNDP technical cooperation project documents. The absence of such framework reduces the transparency and efficiency of periodic monitoring and evaluation of the progress achieved by the project.

RECOMMENDATIONS:

1. UNDP to continue interventions in the Central Asia region countries with economies in transition and to maintain regular dialogue with their national authorities responsible for disaster and emergency management, to keep the momentum for maintaining their commitment to developing integrated disaster risk governance capacities.
2. Donors and UNDP know-how and financial support continuation for further strengthening of national disaster risk management systems in Kyrgyzstan will be crucial because government funds are not available for some areas of disaster risk reduction activities.
3. Systematically assess, monitor and document the usefulness and impact of the capacity development workshops/seminars by canvassing feedback from the participants through a well-tailored questionnaire or quiz approach application and internet-based tools as e.g. Survey Monkey. These assessments should include a space for qualitative comments and proposals by participants
4. In the design of the future technical cooperation projects include comprehensive logical framework based on the Theory of Change methodology to promote the transparency and efficiency of periodic monitoring and evaluation of the progress achieved by the project.
5. UNDP to ensure that aspects related to gender mainstreaming, rights-based considerations and vulnerable groups inclusion approaches are sufficiently reflected in the

design of the future disaster risk management projects, as well as integrated during in implementation of activities.

6. National governments in Central Asia need to assume a stronger leadership and demonstrate commitment to developing and implementing adequate disaster risk reduction governance system, mechanisms and concrete activities at all administrative levels and across relevant sectors as well as to ensure that DRR architecture is extended from national to community level.

7. In the follow up to the Project, disaster risk reduction needs to be clearly defined in and conceptualized by national legislative and policy documents including the establishment of standards and criteria of progress for disaster risk governance. This should be achieved in the framework of continued strengthening of governance arrangements for the implementation of the Sendai DRR Framework.

8. The integration of DRR into development is in Central Asia countries at initial stages. There is a need to address disconnect between DRR and development, which is caused by the fact that both require cross-sectorial approached, by mainstreaming disaster risk reduction into development efforts and into key sectors outside the disaster management domain and ensure coordination between those sectors and the disaster management systems.