

Enhancing Multi-Hazard Early Warning System to increase resilience of Uzbekistan communities to climate change induced hazards

Stakeholder Consultations and Engagement Plan

The proposed GCF proposal will support the Government of Uzbekistan in enhancing the Multi-Hazard Early Warning System aiming at increasing the resilience of Uzbekistan communities to climate change induced hazards. The project also puts a strong focus on strengthening the “last mile” delivery of disaster-related communication and interaction with end users, in particular, with vulnerable communities through well-designed engagement and training activities. This project will respond to a critical need of Uzbekistan to modernize its early warning system into a MHEWS, an essential element of the country’s climate risk management framework. In the face of increasing climate risks, the MHEWS will serve to enhance climate resilience of 33,9¹ million people of Uzbekistan, including the most vulnerable and poor rural communities living in remote desert and mountainous areas currently at risk from climate-induced hazards.

During the project development phase, extensive stakeholder and beneficiary consultations have been conducted as presented in Section 2 of this document, and a plan for engaging with various institutional stakeholders has been prepared which will be further reconfirmed through the consultations during the project Inception Phase.

1. Stakeholder Engagement Plan

In order to transform the current EWS in Uzbekistan from a reactive system to one based on preventive warnings ahead of an event, it is necessary to:

- i) improve the efficiency in collecting and generating/forecasting weather and climate information; and
- ii) develop methods and operational systems which translate weather/climate information/forecasts into actionable warnings and disseminate them to users who understand their content and how best to react.

This work will be done through cooperation and coordination with the following key national partners:

- the Ministry of Emergency Situations of Uzbekistan (MES)– national implementing partner of the project
- the Centre for Hydrometeorological Services of Uzbekistan (Uzhydromet) - responsible party of the project.

The proposed MHEWS project will contribute to the efforts of the Government in tackling the risks associated with increase in occurrences of dangerous hydro-meteorological phenomena, accompanied by social and economic damages, and sometimes human loses. To ensure country’s preparedness and establishing preventing measures for adaptation to changing condition, a State Emergency Warning and Response System (SEWRS) was established in 2011, combining the administrative bodies, resources and facilities of the country. SEWRS coordinates the bodies of administration, forces and resources of the state and public service bodies, local authorities, and other organizations empowered to resolve the matters of protecting population and territories from emergency situations, and set to organize and implement actions on warning and liquidating emergency situations, in case of emerging threat ensuring the safety of population, protecting environment and reducing the damage to the state economy.

The members of SEWRS will also be co-partnering inter-alia with the proposed project, among which are the following:

- The Ministry of Health (MOH) of Uzbekistan
- The Ministry of Water Resources (MWR) of Uzbekistan
- The Ministry of Agriculture of Uzbekistan (MA)
- The State Committee for Ecology and Environmental Protection of Uzbekistan (SCEEP)
- The State Committee on Land Resources, Geodesy, Cartography and State Cadastre (GKZGDK) of Uzbekistan
- The Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan (MHSSE)
- The Ministry of Public Education of the Republic of Uzbekistan (MPE)
- The Ministry of Defence of the Republic of Uzbekistan
- The Ministry of Economy and Industry of the Republic of Uzbekistan (MOEI)
- The Ministry of Finance of the Republic of Uzbekistan
- The State Customs Committee of the Republic of Uzbekistan

¹ <https://stat.uz/ru/2-uncategorised/5222-o-zbekiston-aholisi-ru>

- The State Committee on Geology and Mineral Resources of Uzbekistan
- The Uzbek Agency of Communication and Information
- The National TV and Radio Company of Uzbekistan,
- The Uzbek Agency for Press and Information

The proposed project will also engage national and regional authorities and institutions, local communities, and mahala/community members. The project puts a strong focus on community engagement, training and “last-mile” communication solutions, which will contribute to improved user interaction and ownership by local communities and key stakeholders and further promote the sustainability of this project into the long-term.

In Uzbekistan, the work with population on community levels is going through various sources including the state governing institutions like Khokimiyat (regional or city majors' offices), via regional branches of Uzhydromet or MES, who are also closely connected with Khokimiyats. But in addition, at local community level the work on climate adaptation and provision of risk informed solutions to population, Mahalla committees and their initiative groups serve as an entry point to people on the ground. Mahalla committees are non-government community organizations though closely affiliated with government that support local communities and people to resolve various issues associated with socio-economic development, family problems, access to basic infrastructure (water, electricity), access to jobs, education, etc. People in rural communities are the most vulnerable to climate risks and the project will work with mahalla representatives and local authorities to ensure that no one is left behind and the most remote communities including the mountainous areas under risk are reached.

MES in its turn with its leading role within the SEWRS works with communities on awareness raising to potential risks associated with natural hazards and disasters, according to the Resolution of the Cabinet of Ministers of Uzbekistan #754 (dd. 09/09/19) the country has established a Regulation on building capacity and awareness raising of population of Uzbekistan at all levels including the academic institutions and communities. The project will support national counterparts in this process through focused awareness raising and capacity building activities.

There are number of international development organizations and IFIs that promote climate, smart agriculture and disaster risk reduction initiatives. They include Red Crescent Society, FAO, UNICEF, GIZ, Agence Francaise de Developpement, EU delegation, Embassy of Japan, JICA, KOICA. WHO, Swiss Development Cooperation, Central Asia Regional Economic Cooperation (CAREC), World Bank – the project will establish cooperation platform with them depending on the priorities and mandates. The project will also cooperate with WMO to ensure alignment with reporting to the Global Climate Observing System (GCOS), Global Basic Observing Network (GBON) and Global Telecommunication System (GTS). A connection will then be established between the Forum and WMO's Regional Climate Fora operating in Europe (NEACOF) as well as Asia (FOCRAll).

Concerning public awareness and education, there are some materials prepared for secondary school on Climate box which raises awareness of school children on risks associated with climate change, though education system of the country does not integrate special school programmes or education materials on climate issues. Only MES is working closely with population through mahallas and schools to promote preparedness of population to potential threats like earthquakes, but no comprehensive education programmes exist in the country. The project also aims to build capacity in the area of awareness and education and to establish such programs within the country and local communities.

The project preparatory phase included extensive consultations with state authorities including the Ministry of Emergency Situations of Uzbekistan and its regional branches, Uzhydromet and its regional branches, regional government including the khokimiyats of Andijan, Namangan and Ferghana regions who are the key partners and recipients of the project results. The Ministry of Emergency Situations jointly with Uzhydromet and the MIFT as an NDA were coordinating the process of project design. From MES the First Deputy Minister was in charge of coordination of project proposal preparatory process further transferring this function to the Head of the International Department of MES. From Uzhydromet the process of proposal development was coordinated by the First Deputy Director General of Uzhydromet.

During the internal coordinated consultations among MIFT, Uzhydromet and MES it was agreed that MES as the main coordinating entity for SEWRS, responsible for collection of data from the field into once system – CMC - will be the main implementing partner, while Uzhydromet will be the main responsible party of the project.

- MES will be responsible for establishing a functional Multi-Hazard Early Warning System based on innovative impact modelling, risk analyses, effective regional communication and community awareness; this will include integration and development of ICT systems to use the hydro-meteorological hazards, and combining of the latter with vulnerability data to identify risks and provide information for planning and mitigating their impacts.
- Uzhydromet will be responsible for the work related to up-grading and modernization of the meteorological and hydrological Observation System; Upgrading national capacity to store, process and develop hazard products, as well as to communicate hydrometeorological data to regional divisions; retraining and advanced training of Uzhydromet staff on monitoring and forecasting technologies and procedures.

Other agencies and ministries stated above will be important stakeholders depending on their mandates. The MoH will be involve on building capacity of population on preventive measures on situations related to natural disasters, safety and risks to health. MWR will be involved on activities related to water management and associated risks in the target areas, while MoA will be engaged on the issues related to potential threats from climate related hazards to agriculture and local farmers. MPE and MHSSE will be involved in development of education materials and capacity building of population with special focus on youth. For awareness raising among the population, local communities the project will involve National TV and Information agencies to ensure that targeted information reaches its audience.

On grass root and community levels, mahalla level UNDP has extensive experience of working with community initiative groups and mahalla leaders. This experience will be used to ensure that local population are fully engaged in the project implementation and realize the importance of the project results for the target areas and the people; this engagement and interest and contribution through national practices of “Hashar”, engagement and contribution of people to the process, will ensure the ownership and sustainability of the project results. Local NGOs and women’s association having experience at grass root levels will be engaged in community-level participatory risk planning and management.

The project will also facilitate through Activity 3.3. establishment of Community Forums engaging target communities and representatives of vulnerable groups to support awareness-raising on DRR and EWSs issues and ensure the involvement of local communities in planning risk reduction measures at the earliest stage and increase their ownership on the process. The Community Forum will be established to enable community dialogue and mobilization. Such forum will be organized at least once a year promoting information exchange on DRR issues and EWS approaches and benefits for communities, identifying lessons learnt, successes and impediments. Through this Forum the project will organize community based competitions and awards on advocacy around structural and non-structural measures with a purpose of their inclusion. Participants of the Forum might also represent local government, academic institutions, NGOs, CBOs, etc.

The Project Board will serve as a major institutional mechanism for key stakeholder engagement. It will be composed of high to mid-level representatives of the MES and Uzhydromet, UNDP, all responsible parties and, regional authorities, khokimiyats and target community representatives.

Multi-stakeholder Technical Advisory Working Groups (TAWG) will also be established to provide inputs to and endorsement of the design and quality of the project outputs. The TAWG members will represent the government, private sector, academia and civil society to provide guidance and technical advice on the project.

Local stakeholders and community members have a key role in implementing and monitoring the project. It is planned to work with the most vulnerable communities in order to establish community-based multi-hazard early warning systems there and enhance communities’ resilience to climate induced natural hazards. Target communities will be selected based on climate vulnerability of communities’s activeness of mahallas and initiative community groups, history of community engagement and development, etc. Community members from selected communities will be mobilized to form consultative community groups and will be engaged in establishing and operating MHEWSs there as well as in participatory planning and implementation of the project activities.

The project will target the most vulnerable groups including women and youth under the third component on strengthening climate services and disaster communication to end users. Work with women will be done jointly with Women Committee and Mahalla committees who has full awareness on the needs of women and community challenges. “Yoshlar Ittifoqi” and other youth associations working at regional level will be

engaged to raise interest among youth on issues of climate change and associated risks; competitions and climate change specific clubs will be organized among youth to raise their interest and participation.

Letters of Agreements and project specific documents specifying concrete activities/sub-activities will be signed with MES and Uzhydromet that will create a legal basis for participation of selected government authorities in project activities. Other key means for stakeholder engagement will be project board meetings, working groups meetings, stakeholder workshops, trainings/ToT, communication in mass media including the social media like, Facebook, twitter, ect.

During the inception phase of the project, the MES and Uzhydromet working together with UNDP, will consult with all stakeholders, including vulnerable community members, CBOs/NGOs and local government, etc. and facilitate an understanding of the roles, functions, and responsibilities within the project's decision-making structures, reporting and communication lines, and conflict resolution mechanisms. On basis of regional authorities/khokimiyat, there will be a local coordination committee established to ensure coordination of work of the project at local level, so responsible focal points of all responsible parties are assigned. At such review committees the project Logic Framework (indicators, means of verification, assumptions) will be reviewed and the quarterly and annual plans will be refined engaging the communities from the targeted districts. The stakeholders will also be engaged during the mid-term and final evaluations to assess the progress of the project and enable adaptive project management in response to the needs and priorities of the communities.

Below is the detailed stakeholder engagement plan, with indication of outputs, activities, stakeholders, their roles and means of their engagement.

Output	Activity	Stakeholders	Stakeholder Role	Means of Stakeholder participation
Output 1: Upgraded hydro-meteorological observation network, modelling and forecasting capacities	1.1 Upgrading and modernization of the meteorological and hydrological Observation System. including upgrading/automation of 25 meteorological observation stations and equipment (software, workstations etc), modernizing the ground-based infrastructure (telemetry processing, hydrogen generators etc) for 2 upper-air stations, installing 2 online C-band doppler radar systems and upgrading of 90 hydrological stations, establishing benchmarks and up to date equipment for instrument calibration (vacuum chambers, mobile laboratory etc).	1. Uzhydromet	Responsible party	Participation in the project board, signing letter of agreement and implementing activities within this framework , stakeholder consultations/workshops/trainings/ToTs
		2. Regional branches of Uzhyromet	Responsible for installation and O/M of H.M. network	Participation in project board, participation in TWG, stakeholder consultations/workshops/trainings/ToTs
	1.2 Upgrading national capacity to store, process and develop hazard products, as well as to communicate hydrometeorological data to regional divisions. This involves establishment of an operations centre, ICT servers and networking equipment to integrate data streams (hydrometeorological and satellite-based observations) and automate processes	1. Uzhydromet	Responsible party	Participation in the project board, stakeholder consultations/workshops/trainings/ToTs
		2. Regional branches of Uzhydromet	Responsible party	Participation in project board, participation in TAG, stakeholder consultations/workshops/trainings/ToTs



	and analyses (including hazard forecasts).			
	1.3 Retraining and advanced training of Uzhydromet staff on monitoring and forecasting technologies and procedures; refresher courses and advanced training will be provided for new software and equipment, including the introduction of new methods for the analysis and prediction of hydrometeorologically important variables and climate hazards	1. Uzhydromet,	Responsible party	Participation in the project board, stakeholder consultations/workshops/trainings/ToTs
		2. Regional office of Uzhydromet	Key stakeholder for work in the field	Participation of project board, participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		1. MHSSE 2. MPE	Data providers, providers of expert's opinions, beneficiaries	Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		4. National NGOs	Data providers, providers of expert's opinions, beneficiaries	Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		5. Academic institutions	Data providers, providers of expert's opinions, beneficiaries	Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
2. A functional Multi-Hazard Early Warning System is established based on innovative impact modelling, risk analyses, effective regional communication and community awareness	2.1 Developing and installing a modernised and efficient system for assessing climate risks based on dynamic information on both hazards and vulnerabilities, including socio-economic risk models for decision making and prioritization of resilience building long-term/future investments.	1. MES	Implementing partner	Co-charing in the project board, signing letter of agreement, stakeholder consultations/workshops/trainings/ToTs
		2. MOEI	Stakeholder/beneficiary	Participation in project board and TWG, stakeholder consultations/workshops/trainings/ToTs
		3. Regional governments- khokimiyats	Stakeholder/beneficiary	Participation in project board and TWG, stakeholder consultations/workshops/trainings/ToTs
		4. Mahalla committees	Stakeholder/beneficiary, co-funding the activity	Participation in project board and TWG, stakeholder consultations/workshops/trainings/ToTs
		3. Women/youth associations	Data providers, providers of expert's opinions, beneficiaries	Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		6. National NGOs	Data providers, providers of expert's opinions, beneficiaries	Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
	2.2 Developing and introducing technical guidance, institutional and coordination frameworks to increase the efficiency of: i) data collection and archiving ii) hazard mapping and modelling; iii) risk assessment iv) dissemination of information to RCMCs	1. MES	Implementing partner	Participation in the project board, signing letter of agreement and implementing activities within this framework stakeholder consultations/workshops/trainings/ToTs
		2. Central CMC	Responsible party for establishment and O/M of MHEWS	Participation in project board, participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		3. Uzhydromet	Responsible party	Participation in project board, signing letter of agreement and implementing activities within this framework, participation in TWG, stakeholder consultations/workshops/trainings/ToTs
	2.3 Designing and implementing a system for information dissemination to RCMCs and area specific mobile alerts including an information visualization system for RCMCs with software	1. MES	Implementing partner	Participation in project board, signing letter of agreement and implementing activities within this framework, participation in stakeholder consultations/workshops/trainings/ToTs
		2. Uzhydromet	Responsible party	Participation in project board, signing letter of agreement and implementing activities within this framework, participation in TWG, stakeholder consultations/workshops/trainings/ToTs
		3. Satellite/mobile companies		Participation in TWG, stakeholder consultations/workshops/trainings/ToTs
3. Strengthened climate services and disaster	3.1 To establish National Framework for Climate Services for Uzbekistan	1. Uzhydromet	Responsible party	Participation in the project board stakeholder consultations/workshops/trainings

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communication to end users	the project undertake a baseline assessment of climate services in Uzbekistan, followed by multi-stakeholder consultations and the participatory development of the country's NFCS concept and Action Plan	2. WMO	Responsible partners/Global platform	Participation in project board, stakeholder consultations/workshops/trainings/ToTs
		3. Group of international and national NGOs	Responsible party/contractor for supervision/facilitation of CBMHRM processes	Signing contract with UNDP and implementation of activities under this contract stakeholder consultations/workshops/trainings/ToTs
		4. Local governments	Data providers, provision of expert's opinion	Stakeholder consultations/workshops/trainings/ToTs
	3.2 To establish a sustainable value chain-based business model for disaster-related information and agree with the key stakeholders, and the necessary legal and organizational changes to be outlined and planned on the national (adjustment of legislation) and the inter-institutional levels	1. MES	Implementing partner	Participation of project board, signing letter of agreement and implementing activities within this framework, stakeholder consultations/workshops/trainings
		2. Uzhydromet	Responsible party	Participation of project board, signing letter of agreement and implementing activities within this framework, participation in TWG, stakeholder consultations/workshops/trainings/ToTs, media/public information campaigns
		3. MIFT	Data providers, providers of experts' opinions, beneficiaries	Participation of project board , Participation in stakeholder consultations/workshops/trainings/ToTs, media/public information campaigns
		4. MOEI	Beneficiaries	Participation in stakeholder consultations/workshops/trainings/ToTs, media/public information campaigns
		5. MOF	Participation in outreach and information campaigns	Participation in stakeholder consultations/workshops/trainings/ToTs, media/public information campaigns
		6. Education and academic institutions	Participation in education activities	Participation in stakeholder consultations/workshops/trainings/ToTs, education programs
	3.3. Strengthening disaster-related communication and interaction with end users. Within the 15 RCMCs, outdoor communication boards will be set up in identified communities at highest risk to alert and inform the population in real time about threats or emergencies	1. MES	Implementing partner	Participation in project board, signing letter of agreement and implementing activities within this framework stakeholder consultations/workshops/trainings
		2. Uzhydromet	Responsible party	Participation in project board, signing letter of agreement and implementing activities within this framework, participation in TWG, stakeholder consultations/workshops/trainings/ToTs,
		3. Target communities	Data providers, providers of experts' opinions/feedback, beneficiaries	Participation in stakeholder consultations/workshops, monitoring of construction activities, participation at Community Forums annually
		4. Red Crescent Society	Responsible party	Participation in stakeholder consultations/workshops
		5. Mass media	Support in development distribution materials.	Participation in stakeholder consultations/workshops, monitoring of construction activities, support with media/public information campaigns
		6. Private sector	Input and guidance on business model development	Participation in stakeholder consultations/workshops

2. Stakeholder consultation process during the project design

During the preparatory phase of the project: **Enhancing Multi-Hazard Early Warning System to increase resilience of Uzbekistan communities to climate change induced hazards** consultations were conducted with all relevant national authorities, local governments, where priority measures will be implemented and donors working in climate adaptation and DRR areas, on project architecture, budget, stakeholders' on-going activities and their potential roles in the project. At the initial stage of the project

development the Uzhydromet as GCF NDA was coordinating the process. From September 2019 this function was transferred to the Ministry of Investments and Foreign Trade (MIFT) of Uzbekistan. More specifically, larger group and vis-a-vis meetings were organized, and e-mail communications established with representatives of following stakeholders:

1. The Centre of Hydrometeorological Service at Cabinet of Ministers of the Republic of Uzbekistan (Uzhydromet)
 - a. Deputy Director General of Uzhydromet
 - b. Deputy Head of Environmental Pollution Service
 - c. Leading Engineer
 - d. Secretariat representatives
2. Ministry of Foreign Affairs of Uzbekistan
 - a. Head of Department
 - b. Specialist for environmental issues
3. Ministry of Emergency Situations (MES)
 - a. Deputy Minister of MES
 - b. Head of Information Analytical group
 - c. Head of International Department
 - d. Heads of Units
 - e. Senior officers
4. Ministry of Economy and Industry of the Republic of Uzbekistan
 - a. Head of Unit
5. Ministry of Investments and Foreign Trade of the Republic of Uzbekistan
 - a. Deputy Minister
 - b. Head of Departments
 - c. Specialists
6. Ministry of Finance of the Republic of Uzbekistan
7. Ministry of Construction of the Republic of Uzbekistan
8. Fund for Reconstruction and Development of the Republic of Uzbekistan
9. Joint-Stock Commercial Bank "HAMKORBANK"
10. Center for Economic Research and Reform under the Administration of the President of the Republic of Uzbekistan
11. Ministry of Agriculture and Water Resources of the Republic of Uzbekistan
12. State Committee for Architecture and Construction
13. State Committee of the Republic of Uzbekistan on Statistics
14. State Service of the Republic of Uzbekistan on Monitoring of Hazard Geologic Processes
15. State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection:
16. Agency of the International Fund for Saving the Aral Sea for the implementation of projects of the Aral Sea Basin and GEF Alternative Fuels Association:
 - a. Representative of Uzbekistan in EC-IFAS
 - b. Chief Specialist
17. STC JSC Thermal Power Plants (Uzbekenergo):
 - a. Chief Specialist
18. SIC ICWC:
 - a. Head of the programme for improving water productivity
19. International Institute of Solar Energy
 - a. Head of Photovoltaic Systems
20. Institute for Forecasting and Macroeconomic Research
 - a. Principal Researcher
 - b. Leading Researcher
 - c. Junior Research Fellow
 - d. Senior Research Fellow
 - e. Project Manager
 - f. Deputy Project Manager

In addition to national-wide consultation on project architecture, budget, management arrangement and stakeholders' roles in the project, consultations on the potential environmental and social impact and communities' general attitudes towards planned structural measures were held with local government target community representatives. Specifically, a study including the focus group discussions on cost of climate hazards and economic appraisal of climate information in Uzbekistan and specifically in target regions of the project was held in the process of proposal development. The study was aimed at assessing the damage from climate hazards illustrated by the example of selected communities (in districts).The

information collected and accumulated during the discussions with the focus groups on damage caused by climatic hazards helped to determine their economic impact and used to develop a project proposal. As a result of the study and focus group discussion the following was revealed: i) Uzbekistan has some systemic approach of state support to protect the population from various climate hazards; MES is the responsible entity for provision of early warning on possible onset of climate hazards, ensuring rescue operations and developing measures to prevent and eliminate the consequences of disasters; also, the relevant state services ensure the provision of various medical, financial and other assistance to the population during natural disasters. In addition, there are various non-governmental non-profit organizations engaged in charitable activities; ii) there are certain shortcomings and flaws in the functioning of this system due to unseemliness of actions of local authorities, the lack of consistency in the activities of various government agencies in preventing the consequences of emergency situations, the low level of legal awareness of citizens, etc.; iii) the hazards prone territories are located far from economically developed centers, which, in turn, has a negative effect on living standards of the residents in these areas. In many cases, natural disasters lead to deterioration of living conditions there; iv) there are certain difficulties in assessing the scope of damage caused by climate hazards to economies of districts, regions and the country as a whole. For example, with the passage of a flood flow, the damage to a household can be minor or critically significant (destruction of houses, death of people). The differences between these two extremes are incomparably great. Also, it is impossible to group together economic entities that suffer relatively similar losses. Based on this, it can be concluded that in many instances average statistical indicators of losses caused to the economy remain inaccurate. On attitude of target communities towards the proposed MHEWS project, it was very positive with notion that it is in line with the state priorities and is very needed for local population, farmers and communities. For more details pls see the report from the study (Annex 1 to this document).

Below is the detailed list of stakeholder consultation process, held during the project preparatory phase (Table 1) with indication of names, titles, institutions and contacts of stakeholders consulted, date/venue of communications, means of communications and issues discussed/results achieved. Tables 2 contains a list of stakeholders consulted on importance and relevance of the project for respective regions and environmental and social impacts of planned structural measures.

Table 1. Stakeholder consultations on project architecture and co-funding commitments

	Name of stakeholder/group of stakeholders met	Title	Institution	Contact	Date and Venue	Type of communications	Brief summary of issues discussed/resulted achieved
1.	Sardor Ergashev	Head of Information analytical group	MES	+998 71 234 11 56	30 July 2018 MES building, Kichik halqa yo'li, 4	Vis-à-vis meeting	The meeting was aimed at discussion of the context of the project development, its relevant to government priorities, planned areas of support and GoU view
2.	Peter Volkov	Deputy Head of MES	MES	+998 71 234 11 56	30 July 2018 MES building, Kichik halqa yo'li, 4 8 November 2018 MES building, Kichik halqa yo'li, 4	Vis-à-vis meeting	Discussion of RCMC operations to assess IT/software and communication facilities, communication facilities, Standard operating procedures for receiving and distributing warnings, equipment for responding to warnings
3.	Jahongir Isaev	Head of International Relations Department	MES	+998 71 234 11 56	30 July 2018 MES building, Kichik halqa yo'li, 4	Vis-à-vis meeting	The meeting was aimed at discussion of the context of the project development, its relevant to government priorities, planned areas of support and GoU view
4.	Zafar Irisbaev	State water supervision	MES	+998 71 234 11 56	30 July 2018 MES building, Kichik halqa yo'li, 4	Vis-à-vis meeting	The meeting was aimed at discussion of the context of the project development, its relevant to government priorities, planned areas of support and GoU view
5.	Elyor Ahmadaliev	Senior officer	MES	+998 71 234 11 56	30 July 2018 MES building, Kichik halqa yo'li, 4	Vis-à-vis meeting	The meeting was aimed at discussion of the context of the project development, its relevant to government priorities, planned areas of support and GoU view
6.	Komilzhon Aripov	Deputy Minister	MES	(+99871) 239 16 85	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of national system of monitoring and support required from the project.
7.	<i>Shukhrat Dadahanov</i>	Head of Department	MES	+99871 234 56 40;	Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion to update on proposal status, explain GCF requirements, identify missing information and where/how it can be obtained.
8.	Bahriddin Nishonov	First Deputy General director	Uzhydromet	+99871 233-83-72, +99871 150-86-02	30 July 2018 Uzhydromet building,	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of

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					Bodomzor yoli-1 street, 72		national system of monitoring and support required from the project.
9.	Natalya Agaltseva	Deputy Head of Environmental Pollution Service	Uzhydromet	natalya.agaltseva@gmail.com +998 71 2357393 +998 90 1758461	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of national system of monitoring and support required from the project.
10.	Azim Narzullaev	Chief Specialist	Uzhydromet	+99871 150 86 50	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of national system of monitoring and support required from the project.
11.	Novikova Victoria Anatolyevna	Head of the department of preparation and monitoring of projects	Uzhydromet	+99890 9122214	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of national system of monitoring and support required from the project.
12.	Arakelova Irina Anatolyevna	Leading specialist of the financial department	Uzhydromet	+998 90 132 11 41	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion of tasks, activities and outputs planned within the project. Summary of site visit results and findings. Gaps of national system of monitoring and support required from the project.
13.	Nadejda Gavrilenko	Expert/Engineer	Uzhydromet	+99894 617 0459	30 July 2018 Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Expert opining was request to understand the structure and operational mechanisms for data collection, monitoring and analysis and sending the information to decision makers.
14.	Nazarov Sharofiddin	Director	Center for Economic research	+998 90 1787967	Chilanzar district, novza street 6	Vis-à-vis meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
15.	Latifjon Umurzakov	Representative	State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection	99871 207-07-70	31 July 2018 Goscomecology building, To'ytepa street, 2a	Vis-à-vis meeting	Discussion meeting with projects and SDC staff. Discussion of tasks, activities and outputs planned within the framework of this assignment. Summarizing of site visit results and findings
16.	Khabibullo Husanov	Head of the department for coordination and organization in the field of sanitary cleaning and chief specialist	State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection	99871 207-07-70	25 September 2018 Goscomecology building, To'ytepa street, 2a	Vis-à-vis meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement

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17.	Yunusov Nodirjon	Head of the Department of International Relations and Programs	State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection	+99871 207-07-70 +998-93-540-54-45	31 July 2018 Goscomecology building, To'ytepa street, 2a	Vis-à-vis meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
18.	Kuvandikov Nabizhon	Head of Ecology and Environment Unit	Ministry of Foreign Affairs	+99871 2335748	31 January 2018, Goscomecology building, To'ytepa street, 2a	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
19.	Avaz Abzalov	Chief Specialist	Agency of the International Fund for Saving the Aral Sea for the implementation of projects of the Aral Sea basin and GEF	+998 71-255-39-34 info@aral.uz	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
20.	Zafar Saipov	Representative	Associations of Alternative Fuels and Energy	+99871 291 85 81	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
21.	Ibragim Abduganiev	Chief Specialist	STC JSC Thermal Power Plants	+99871 2025001	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
22.	Guzelbaeva Ramilya Radikovna	Engineer	JSC Uzbekenergo	+998 93 377 01 59 uzbekenergo@exat.uz	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
23.	Shuhrat Muhamedjanov	Programme Manager	Improving water productivity, SIC ICWC	+998 93 377 01 59	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
24.	Makhmud Malikov	Head of Photovoltaic Systems	International Institute of Solar Energy	+99871 235 03 44	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
25.	Sergey Chappel	Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of

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							MHEWS for the country and its current development processes
26.	Sergey Voronin	Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
27.	Dilfuza Kurbanova	Chief Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	14 June 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	IWG meeting	Discussion on project development stages for GCF projects, requirement, development of ToC, importance of MHEWS for the country and its current development processes
28.	Elvira Bikeeva	Chief Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
29.	Jahongir Djurabaev	Senior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
30.	Fozil Dodiev	Senior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
31.	Nailya Ibragimova	Deputy project manager	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
32.	Muzaffar Karimov	Senior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
33.	Ziyodulla Muhitdinov	Project Manager	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement

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34.	Nizomiddin Muradov	Senior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
35.	Sherzodbek Otaboev	Junior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
36.	Elnorakhon Yakubova	Senior Principal Researcher	Institute for Forecasting and Macroeconomic Research	+99871 237-26-32	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
37.	Lana Tsai	Chief Principal Researcher	Institute for Forecasting and Macroeconomic Research	+998 97 410 11 22	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
38.	Shukurov Shukhrat Zakirzhanovich	Deputy Head	Institute for Forecasting and Macroeconomic Research	+99893 501-52-26 sh.shukurov@ifmr.uz	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
39.	Ulugbek Dedabaev	Project Manager	UNDP Uzbekistan	ulugbek.dedabaev@undp.org +998 93 501 5484	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
40.	Hurshid Rustamov	SDG Cluster Head	UNDP Uzbekistan	hurshid.rustamov@undp.org +998 71 1203450	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
41.	Elvira Izamova	SDC Programme Associate	UNDP Uzbekistan	elvira.izamova@undp.org +99871 120 3450	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
42.	Farid Garakhanov	Resident Representative	UNDP Uzbekistan	farid.garakhanov@undp.org +375 17 227 4876	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement

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43.	Zarif Djumaev	Project Coordinator	UNDP Uzbekistan	zarif.jumaev@undp.org +99871 120 3450	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
44.	Abdumalik Sidikov	Project Manager DRR	UNDP Uzbekistan	+99871 120 3450	31 January 2018	Multi-partner, government/round table meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
45.	Natalya Olofinskaya	Regional Technical adaptation Specialist to climate change	UNDP Istanbul	nataly.oloofinskaya@undp.org +908502882137	31 January 2018 () 30 July, 3 August 2019 UNDP Country Office 4, Taras Shevchenko str., Tashkent	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
46.	Ravshan Yunusov	Finance Assistant	UNDP Uzbekistan	ravshan.yunusov@undp.org +998 90 3277711	30 July, 3 August 2019 UNDP Country Office 4, Taras Shevchenko str., Tashkent	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
47.	Fotimakhon Mahsumova	PR Specialist	UNDP Uzbekistan	+99878 1203450	30 July, 3 August 2019 UNDP Country Office 4, Taras Shevchenko str., Tashkent	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
48.	Naira Inogamova	Project Assistant	UNDP Uzbekistan	+998/909798751	30 July, 3 August 2019 UNDP Country Office 4, Taras Shevchenko str., Tashkent	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
49.	Alexandr Merkuskin	Project Manager	UNDP Uzbekistan	+99890507792	30 July, 3 August 2019 UNDP Country Office 4, Taras Shevchenko str., Tashkent	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
50.	Sergey Myagkov	Deputy Director	Research hydrometeorological institute	+998909327344 sergik1961@yahoo.com	8 February 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Meeting on discussion of the relevance of the project to national priorities, development of ToC for the project, elaboration of the Concept for the project

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							and future potential and impact of the project, potential for co-financing
51.	Alexander Pak	Engineer	United city military commissariat	+99890 806 2349	8 February 2018, Uzhydromet building, Bodomzor yoli-1 street, 72	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
52.	Namozov Abdumalik	Head of the Department for Foreign Investment and Project Monitoring	Ministry of Agriculture and Water Resources of the Republic of Uzbekistan	+99871 241-46-58, +99871 2603617	31 July 2018 Goscomecology building, To'ytepa street, 2a	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
53.	Sherzod Umarov	Specialist	Ministry of Agriculture and Water Resources of the Republic of Uzbekistan	+99871 241-12-14 sh.umarov@qsvx.uz	31 July 2018 4 Navoiy shoh str.	Vis-à-vis meeting	Discussion on potential and importance for project development, opportunities for co-financing from the government, potential partners, procedures and steps for project development and discussion with stakeholders
54.	Mark Tadross	Technical Specialist of early warning system	International Consultant	+27216504687 mark.tadross@undp.org	31 January 2018	Multi-partner, government/roundtable meeting	Discussion on project outline and identification of the government position to the project, proposing objectives of the project and garner suggestions for future development/improvement
55.	O. Usmanov	Namangan	Regional city hall	+99891 352 8000	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed.
56.	N. Khodjaeva	Namangan	Head of Yangiobod city hall committee	+99891 361 3560	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
57.	Dildora Alieva	Namangan	City committee Xalqlar Dostligi	+99899 322 0571	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the

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							country and communities. The issues of social and economic impact of project on communities was discussed
58.	Abdughani Khaidarov	Namangan	City hall charity fund	+99899 172 0025	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
59.	Lolakhon Alimatova	Namangan	Head of Navbahor city hall committee	+99894 503 4063	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
60.	Farida Osmanova	Namangan	Head of Orzu city hall committee	+99893 915 9119	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
61.	M.F Dadamirzaev	Namangan	Namangan Institute of construction engineering	+99897 252 7573	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
62.	M.M Sabirov	Namangan	Namangan Institute of construction engineering	+99893 566 6807	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
63.	Abdusattor Rahimov	Namangan	Head of city hall committee of Minbulak region	+99899 320 0258	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed

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64.	Khusanbai Xolmirzaev	Namangan	Head of city hall committee of Kasansai region	+99890 260 7733	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
65.	Ubaydullaev A	Namangan	Deputy head of city hall committee of Chartak region	+99890 219 2886	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
66.	F.Ibragimov	Namangan	Head of city hall committee of Yangiyul region	+99894 274 3385	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
67.	F.Alihanov	Namangan	Head of city hall committee of Uchkurgan region	+99893 776 0752	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
68.	SH. Mahkamov	Namangan	Head of city hall committee of Baynapminal region	+99891 363 12 13	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
69.	A.Muhitdinnov	Namangan	Head of city hall committee of Kadamjo region	+99893 407 4812	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
70.	A.Rashidov	Namangan	Head of city hall committee of Elobod region	+99891 343 5645	20 December 2019	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and

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					Namangan city, "Youth center" small conference hall		objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
71.	A.Sodikov	Namangan	Head of city hall committee of Bog lis region	+99890 553 4138	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
72.	S.Abdurakhimov	Namangan	Head of city hall committee of Tarakiyot region	+99897 231 0079	20 December 2019 Namangan city, "Youth center" small conference hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
73.	M.Suyonov	Andijan	Deputy Manager at Norin Karidarya	+99894 560 6655	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
74.	Mirzaev	Andijan	Andijan reservoir	+99893 250 3414	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
75.	Ulugbek Kodirkulov	Andijan	Environmental inspection of Hanabad city	+99897 996 8949	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
76.	Sh.Mamajonov	Andijan	Kurgantepa DSNM	+99891 175 6350	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of

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							social and economic impact of project on communities was discussed
77.	S.Davronov	Andijan	Deputy director of regional environment	+99890 526 0500	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
78.	U.Akbarov	Andijan	Head of ecological inspection of Jalaquduk region	+99890 541 8238	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
79.	X.Musurmonov	Andijan	Head of ecological inspection of Kurgantepa region	+99894 382 0070	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
80.	A.Tashmirzaev	Andijan	Specialist at regional environmental management	+99894 387 7474	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
81.	M.Israilov	Andijan	Farmers committee of Jalaquduk region	+99893 060 5252	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
82.	F.Anarbaev	Andijan	Farmers committee of Jalaquduk region	+99891 605 6006	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed

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83.	U.Tohirjanov	Andijan	Head of farmers committee	+99890 525 2929	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
84.	M.Moitov	Andijan	Farmers committee Ulugqudratsohib of Jalaquduk region	+99897 831 8413	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
85.	N.Tuhtasinov	Andijan	Expert at Obodvodi, Jalaquduk region	+998 91 175 2262	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
86.	H.Yunusov	Andijan	Yorkin Mashal committee, Jalaquduk region	+99890 148 9080 +99893 706 9080	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
87.	E.Abdullaev	Andijan	Farmers committee Besh karam, Jalaquduk region	+99894 389 1666	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
88.	O.Zokirov	Andijan	Farmers committee Qoshbeka yer fayzi, Jalaquduk region	+99897 272 8580	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
89.	D.Ahmedov	Andijan	Farmers committee Musaffo tong, Jalaquduk region	+99891 175 0078	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and

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							objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
90.	I.Makhmudov	Andijan	Andijan Hydromet Center	+99897 730 7091	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
91.	T.Islomjonov	Andijan	Farmers committee Abu Rayhon Bogi	+99897 346 1981	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
92.	D.Komoldinov	Andijan	Farmers union, Jalaquduk region	+99893 692 4464	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
93.	Abdumuhtar Homrokulov	Andijan	Farmers committee Mirjohon Asliddin Dalasi, Jalaquduk region	+998 91 607 1706	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
94.	A.Umarov	Andijan	Farmers committee Chashma gulchiroy fayzi of, Jalaquduk region	+99899 917 1440	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
95.	Dilshodbek Alihanov	Andijan	Farmers committee Beshten Sardori, Jalaquduk region	+99890 385 9030	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of

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							social and economic impact of project on communities was discussed
96.	Mansurbek Tursunov	Andijan	Farmers committee Mansurbekov Mahmudjon, Jalaquduk region	+99891 174 8222	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
97.	Mansurbek Ziyaddinov	Andijan	Farmers committee Nuravshanobod dargoh, Jalaquduk region	+99891 477 8877	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
98.	Abdulaziz Mukunjanov	Andijan	Farmers committee Komil ishonsh sari, Jalaquduk region	+99891 489 2368	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
99.	Olimjon Urinbaev	Andijan	Farmers committee Olmozor Shodligi, Jalaquduk region	+998 90 625 9041	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
100.	Ulugbek Ergashev	Andijan	Farmers committee Pahtakor bahti, Jalaquduk region	+99890 624 1400	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
101.	V.Khodjaev	Andijan	Farmers committee Mahoratli Farohiddin of Honobod city	+99893 785 0747	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed

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102.	Islomjon Anubjanov	Andijan	Farmers committee Sahovat Islomjon Mezomi of Honobod city	+99899 909 0041	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
103.	V.Makhsutaliev	Andijan	Farmers committee Zarniyur of Honobod city	+998 94 560 0510	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
104.	B.Dadabaev	Andijan	Farmers committee Foziljon Bogi Fayzi of Honobod city	+99893 426 1210	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
105.	K.Azimov	Andijan	Regional DSNM	+99891 484 5808	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
106.	K.Atabaev	Andijan	Honobad DSNM	+99893 250 1078	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed
107.	A.Kholmatov	Andijan	Jalaquduk DSNM	+99890 380 4005	21 December 2019 Andijan city, Honobod district, City Hall	Round table discussion	Round table discussion on presentation of the project proposal, background for project formulation, project goals and objectives, activities, and impact for the country and communities. The issues of social and economic impact of project on communities was discussed

Table 2. List of Stakeholders in target regions consulted on project relevance and its environmental and social impact

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6	Farida Osmanova	Head of Orzu city hall committee	+99893 915 9119
7	M.F Dadamirzaev	Namangan Institute of construction engineering	+99897 252 7573
8	M.M Sabirov	Namangan Institute of construction engineering	+99893 566 6807
9	Abdusattor Rahimov	Head of city hall committee of Minbulak region	+99899 320 0258
10	Khusanbai Xolmirzaev	Head of city hall committee of Kasansai region	+99890 260 7733
11	Hasanbai Olimov	Deputy head of city hall committee of Chartak region	+99894 277 7788
12	Ubaydullaev A	Head of city hall committee of Yangiyul region	+99890 219 2886
13	F.Ibragimov	Head of city hall committee of Uchkurgan region	+99894 274 3385
14	F.Alihanov	Head of city hall committee of Baynapminal region	+99893 776 0752
15	SH. Mahkamov	Head of city hall committee of Kadamjo region	+99891 363 1213
16	A.Muhitdinov	Head of city hall committee of Elobod region	+99893 407 4812
17	A.Sodikov	Head of city hall committee of Bog lis region	+99891 343 5645
18	S.Abdurakhimov	Head of city hall committee of Tarakiyot region	+99890 553 4138
19	E.F. Umrbekov	Regional MES	+99891 495 7533
20	A.Sh. Chulponkulov		+99899 975 6539
21	M.N.Turaev	Local Committee of Narin region	+99893 440 5166
22	E.H.Abdulhatov	Regional management of hydrometeorology	+99891 294 4494
23	S.Yu.Suleyonov	?	+99890 554 6383
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26	O.Haydarov	Namangan avto	+99894 500 0644
27	D.Hoshimova	Head of city hall committee of Bunyodkor region	+99893 401 7765
28	R.Yusupov	Head of regional committee	+99894 156 9990
29	Fayzullo Umrzakov	Regional management of veterinary science	+99894 270 2497
30	Kamoliddin Ibrohimov	Social fund of city hall of Yangikurgan region	+99899 979 3343
31	Holmirzaev Husanbay	Head of city hall committee of Kassinsarai region	+99890 260 7733
32	Shobir Kasimov	Head of city hall committee Yakasoz	+99893 264 3002
33	Umida Amurova	Namangan region, Chust community member	+99891 367 7505
34	Farkhod Madaminov	Namangan region, Chust community member	+99890 533 1207
35	Khabibullo Saydullaev	Namangan region, Chust community member	+99894 578 2552
36	Ahmadjon Sobirov	Namangan region, Chust community member	+99891 659 1949
37	Fayzullo Boltaev	Namangan region, Chust community member	+99890 533 3263
38	Mavluda Toshbaeva	Namangan region, Chust community member	+99893 409 9247
39	Sarvinov Inamova	Namangan region, Chust community member	+99891 360 4718
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48	Kasimjon Kholmirzaev	Namangan region, Turakurgan community member	+99894 307 2664
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50	Mamanazar Mahkamov	Namangan region, Turakurgan community member	+99893 373 4125
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53	Pattivoy Ortikov	Namangan region, Turakurgan community member	+99897 375 2420
54	Ulfatoy Kazalbaeva	Namangan region, Turakurgan community member	N/A
55	Shokir Khujaahmedov	Namangan region, Turakurgan community member	+99893 677 6577
56	Ijobat Kholmirzaeva	Namangan region, Turakurgan community member	N/A
57	Gaffor Samatov	Namangan region, Turakurgan community member	N/A

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13	N.Tuhtasinov	Expert at Obodvodi, Jalaquduk region	+99891 175 2262
14	H.Yunusov	Yorkin Mashal committee, Jalaquduk region	+99890 148 9080 +99893 706 9080
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16	O.Zokirov	Farmers committee Qoshbeka yer fayzi, Jalaquduk region	+99897 272 8580
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24	Mansurbek Tursunov	Farmers committee Mansurbekov Mahmudjon, Jalaquduk region	+99891 174 8222
25	Mansurbek Ziyaddinov	Farmers committee Nuravshanobod dargoh, Jalaquduk region	+99891 477 8877
26	Abdulaziz Mukunjanov	Farmers committee Komil ishonsh sari, Jalaquduk region	+99891 489 2368
27	Olimjon Urinbaev	Farmers committee Olmozor Shodligi, Jalaquduk region	+99890 625 9041
28	Ulugbek Ergashev	Farmers committee Pahtakor bahti, Jalaquduk region	+99890 624 1400
29	V.Khodjaev	Farmers committee Mahoratli Farohiddin of Honobod city	+99893 785 0747
30	Isломjon Anubjanov	Farmers committee Sahovat Isломjon Mezomi of Honobod city	+99899 909 0041
31	V.Makhsutaliyev	Farmers committee Zarniyur of Honobod city	+99894 560 0510
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7	V.G Vedernikova	Uzhydromet	+99890 176 9280
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10	K.A Zahidov	Uzhydromet	+99897 480 1772
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EVALUATION

**OF THE COST OF CLIMATE HAZARDS AND ECONOMIC APPRAISAL
OF CLIMATE INFORMATION IN UZBEKISTAN.**

The survey and assessment were prepared by the research group of consultants within the framework of the United Nations Development Program "Green Climate Fund (GCF) Readiness Program for Uzbekistan" implemented with the support of the Center for Hydrometeorological Services (Uzhydromet) under the Ministry of Emergency Situations of the Republic of Uzbekistan, and the UN Environment Program (UNEP).

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All results of the research, its conclusions and recommendations expressed in this document solely represent the views of the research group and do not represent the official point of view of the United Nations Development Program in Uzbekistan.

Electronic version of the assessment is available on the website of the United Nations Development Program in Uzbekistan at www.gcf.climatechange.uz

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CHAPTER 1. INTRODUCTION

At the end of the XX - the beginning of the XXI centuries the world scientific community came to a common opinion that significant climatic changes were taking place on Earth, which have a tangible effect on socio-economic development, food and energy security, crop yields, quality of life, population migration, etc.

One of the manifestations of climate change is climate variability and extremes witnessed in many regions. Modern statistics show the growing worldwide impact of dangerous weather and climate events. This suggests that 90.0% of the worst economic losses occur not due such natural phenomena as volcanic eruptions, tsunamis and earthquakes, but due to more “ordinary” ones: floods, river flooding, strong winds, heavy rains, hail, drought and etc.¹

According to the AGCS report, the economic consequences of the growth of the day-to-day variability of weather conditions far exceed the already huge amounts of losses that occur every year due to natural disasters. According to AGCS, the consequences of regular weather changes for the EU economy can be up to 406 billion euros per year. Moreover, there is a significant increase in direct costs of weather instability throughout the world, including Uzbekistan. For example, if Company “Agrosugurta”, which is one of the major players in the insurance market, in 2016 made payments for damages from climate threats in the amount of 19.9 billion sum (or 60.2% of the total amount paid), in 2017 these figures were, respectively, 79.6 billion sum and 82.3%.

In this situation, the assessment and management of weather and climate risks are becoming particularly relevant

1.1. Research objectives

This study was conducted in order to assess the damage from climate hazards in Uzbekistan illustrated by the example of selected communities (in districts). The information collected and accumulated during the discussions with the focus groups on damage caused by climatic hazards will help determine their economic impact and will be used to develop a project proposal aimed at improving the effectiveness and accuracy of workings of the Early Warning System (EWS), thus reducing the number of human victims and property losses.

1.2. Development of the questionnaire and its preliminary testing

Uzbekistan climate hazard impact assessment questionnaire included the following questions:

- To which climate hazards is your community most vulnerable to.
- How will you describe the damages caused by the hazard? Number of lives lost, number of schools affected, number of healthcare centers affected, duration of electricity outage and the magnitude of the reduction in the livelihood of the affected people.

¹<https://meteoinfo.ru/images/media/books-docs/klim-riski-2017.pdf>. Report on climate hazards in the territory of the Russian Federation. Saint-Petersburg, 2017

- Loss of livelihoods, what is the estimated amount of lost possessions/assets? What is the estimate of lost wages? What is the estimated amount of farm/livestock/fishing product lost? Information on household loss on average.
- Disrupted business, what is the monetary equivalent of the disruption caused by the disaster to business activities?
Information on firms
- For health-related costs, what is the average amount spent due to illness from the disaster? What is the estimated amount to repair damaged healthcare facilities.
- For education cost, how many days on average did students stay at home after the disaster.
- What is the estimated cost of the structural damage caused by the disaster.
- For electricity cost, what is the average amount household/firm spent on alternative energy source during the period of electricity outage.
- Firm and household incur clean-up expenses and in some cases evacuation and relocation expenses. What is the average amount firm and household spend on clean-up, evaluating and relocating.
- Think of the following hazards in your community, how long does it normally take for services and facilities to be restored?
- What systems are available in your community - that you are aware of – that can be activated in the event of a disaster? Please mark in the list or add what is missing.
- What systems are available in your community - that you are aware of – that help your community be prepared for disasters and reduce the impact.

The questionnaire was developed by the research team together with an international expert and consists of 20 questions (Appendix 1). A preliminary version of the questionnaire was tested first in the Qoichirchik district of the Tashkent region. The final version of the questionnaire was re-tested to determine its suitability in achieving the objectives, and then it was improved taking into account comments made by local experts during preliminary surveys.

Field studies were conducted in December 2018.

1.3. Regions and participants of the research

When selecting regions for the study, the specific economic conditions, specializations of the regions and their geographical location were also taken into account. Considering that the objective is to establish average scope of losses caused by the hazards throughout the country, the research sites were selected both from areas where natural disasters occur often as well as very rarely (Jambai and Saihunabad districts, etc.).

As part of the study “Estimation of the Cost of Climate Hazards and the Economic Appraisal of Climate Information in Uzbekistan”, the focus groups met from December 6 to December 27, 2018 in 15 selected districts of Uzbekistan. The Appendixes 2 - 16 provide brief information on climate hazards for each district and their consequences. Approximate size of economic damage to certain groups of the population in these areas was also calculated.

Only 183 respondents took part in focus group meetings (Table 1). Of these, 134 (or 73.2% of the total number of respondents) are men, 49 (26.8%) are women. On average, each focus group consisted of 12-13 people. The majority of the respondents are of middle (31-50 years old - 48.6%) and pre-pension (51-60 years old - 27.9%) age. Young people and people of retirement age made up, respectively, 13.7 and 9.8 percent of the total number of respondents.

By education, the majority of respondents are persons with secondary education (62.8%). In addition, respondents with higher education make up 23.5%, secondary special education - 15.7% (Table 1).

The study was conducted by a team of national consultants consisting of two members:

- Zokirov Sayidfozil Sayidakbarovich, candidate of economic sciences, moderator/team lead – general management, planning and coordination of field studies, interviews, processing of the study results, preparation of the final report;
- Yakubov Nurbek Alisherovich, local consultant, recording of respondent answers, processing of the results, preparation of technical reports.

Table 1

General information about Focus Group participants

№	District	Number of interviewed	Gender		Age						Education		
			Male	Female	20-30	31-40	41-50	51-60	61-70	70 and older	Higher	Secondary - special	Secondary
1.	Qoichirchik	15	8	7		2	6	4	3		4		11
2.	Bostanlik	13	8	5	4	1	5	3				4	9
3.	Sirdarya	15	9	6	3	2	4	3	3		7	2	6
4.	Saihunabad	15	15		1	5	4	5			4		11
5.	S. Rashidov	11	5	6		2	2	2	2	3	3		8
6.	Gallaaral	11	10	1	4	2	1	3	1		3	1	7
7.	Bulungur	10	5	5		6	3	1				8	2
8.	Jambai	8	6	2	3	2		2	1			2	6
9.	Koshrabad	16	16		2	4	4	6			9	5	2
10.	Kitab	12	12		3	5	1	3			2		10
11.	Yakkabag	11	9	2		4	2	3	2		3	2	6
12.	Dehkanabad	11	9	2		4	4	3			3		8
13.	Chust	13	7	6	4	2	1	6					13
14.	Turakurgan	13	8	5		4	2	5	2		3		10
15.	Dangarin	9	7	2	1	3	2	2	1		2	1	6
	Total	183	134	49	25	48	41	51	15	3	43	25	115

CHAPTER 2. FOCUS GROUP DEVELOPMENT METHODOLOGY

The focus group method (focused interview) is essentially a subject oriented group discussion, during which participants' opinions are solicited to determine the most painful and acute problems that need to be resolved as well as the existing system level problems pertaining to this study. Focus group format provides for discussions on how participants perceive climate hazards and their consequences, the situation in their respective districts, the state of affected schools and healthcare centers, duration of electricity outages and extent of diminished livelihoods of affected families and so forth.

This method has following characteristics:

- each group consists of approximately 15 participants;
- group is formed based on the objective: research indicators;
- the duration of the discussion, depending on the objectives of the study, ranges from 1 to 3 hours;
- the discussion is moderated by an experienced sociologist - supervisor.

The group discussion envisages the creation of favorable conditions for communication and an atmosphere of goodwill and comfort.

A focused interview suggests:

- **preparation of the program**, where the problem is formulated and justified, and the purpose, tasks, object, and subject of research are determined
- **preparation of a team**, which consists of a moderator and assistants;
- **selection of respondents**, which may be preceded by an interview or preliminary testing;
- **preparation of a guide (organized plan)**, which consists of introductory part, an explanation of the basic rules, the formulation of questions divided into thematic blocks.

Discussions begin with open ended questions that reveal the peculiarities of the participants' character, the diversity of their opinions. Specific questions are usually asked closer to the end of the discussion, which would allow focusing answers towards specific aspects of the problem under discussion (the moderator during the discussion is recommended to avoid judgmental comments both in verbal form (“agree”, “good”, “incorrect”) and non-verbal (nod, shaking head, gesture of denial, etc.).

During the discussion, the moderator discreetly controls the group, using 5-second pauses and “inquiries” of the type: “Can you give more details?”, “Could you please illustrate with an example?”

At the end of the discussion, he/she once again reminds of its goals, summarizes what has been said, thanks the participants and says goodbye to them. Subsequently, the record of the discussion is transcribed and printed. Transcribed material is analyzed and report is prepared.

2.1. Guide on Focus group conduct:

Introductory part (5 min.). Information on the study topic.

General part (20 min.).

Main part – discussions, testing.

Concluding part (5 min.). Respondents' opinions are identified. What action program they can recommend? Then discussion ends. Moderator thanks the group.

In this fashion, **focus group** method represents a process of focused interview and is implemented in the form of a moderated group discussion about a particular problem. Focus group is a qualitative process, i.e. it is rather flexible method of collecting sociological information, allowing to come to reliable conclusions and is not extensively time-consuming in application. The focus group method can be used both independently and in combination with other methods. Often, focus groups are conducted at the final stage of a quantitative research. Focus group analysis allows to introduce qualitative elements into quantitative data, so that the results of the research will be more “alive” and representative.

Questions developed for focus group discussions aimed at obtaining data on the following categories:

2.2. Information about community (region or place of residence)

How do you assess the development of your community during the last year? Why (explain your opinion)? How many businesses are operational in your community? What is the main business in your community? Why (for what reasons did this type of business become mainstream). Describe the overall condition of the drainage system in your community?

2.3. Climate hazards and their consequences

Which climate hazards is your community most vulnerable to? How would you rate the dissemination of information by the Early Warning System (EWS) in your community? How can climate information help prepare for hazards? If you know that the hazard will arise in 48 hours (you can change the lead time to a hazard depending on its type)? To what extent you could reduce damage to you or your business? How do you describe the damage caused by the hazard? Loss of livelihood, what are the estimated losses of property / possessions? Loss of earnings (wages)? Loss of farm / livestock / fish produce?

2.4. Information about aggregate household losses

What percentage of households received compensation for damages caused by these hazards? What kind of compensation did households receive on average from insurance?

2.5. Information on firms

Interrupted or disrupted business, what is the monetary equivalent of a business being disrupted by a hazard? For health care costs, what is the average time spent on treatment due to the consequences? The amount of expenses for repairs of damaged

medical facilities? Expenses related to education, how many days on average did students not attend classes because of a disaster? What is the estimated structural damage caused by a disaster to buildings? Losses due to electricity outages, what is the average amount spent by a household / firm on an alternative source of energy during a power outage? What other damage did hazards cause in your community? Consider the following threats to your community. How much time is spent on rebuilding facilities and restoring operations? How long does it take to recover damage on average?

What are even more acute problems that concern you?

CHAPTER 3. CLIMATE HAZARDS GENERAL INFORMATION

3.1. Types of climate hazards

To the question: "Which climate hazard your community is most vulnerable to?" - respondents living in 12 districts answered: "Flooding". Based on their answers it was established that flooding mostly occurs in spring and summer. In some of the settlements (Vatan settlement in Quichirchik district, settlement Porlok in Turakurgan district), flooding recurred 3-4 times a year.

When interviewing respondents on the subject of the most affecting hazards, no such threats as drought and frosts were noted, which indicates a relatively lesser impact of these factors.

According to the respondents, strong winds is a significant climate hazard in Quichirchik, Sirdarya, Sharof Rashidov, Gallaaral, Bulungur, Chust, Koshrabad, Dehkanabad, Yakkabag, Turakurgan, and Dangar districts.

Landslides often occur in Quichirchik, Saihunabad, Sharof Rashidov, Bulungur, Turakurgan and Chust districts. Sometimes their consequences are very extensive. For instance, the floods that occurred in 2013 in the settlement Vatan in Quichirchik district completely washed away two houses located along the Chirchik river. Currently, these areas became a river course.

According to the respondents, destructive mudflows occur in almost all areas where focus groups are held. Mudflows cause great economic damage, and sometimes loss of life. For example, 7 people were killed in village Ingichka in Bulungur district, as a result of mudflow that occurred on May 27, 2012 (Table 2).

In mountainous areas of Uzbekistan, especially during the winter, avalanches and heavy snowfalls are frequent, which often cause fatalities. For example, 3 snowboarders died in the Beldersay nature area in Bostanlik district as a result of avalanches that occurred on December 24, 2018.

In the course of the focus group discussions, residents of Quichirchik, Saihunabad, Gallaaral, Kitab and Chust districts complained about hails. In their opinion, hailstorm causes serious problems to residents; during large hails, house roofs and vehicles are badly damaged, glasses are knocked out, animals and crops are killed and destroyed. Heavy precipitation as a climate hazard is noted by residents of Quichirchik, Bostanlik, Gallaaral, Bulungur, Koshrabad, Dehkanabad, Turakurgan, Chust districts, and heat waves - by residents of Sirdarya, Sharof Rashidov, Jambai districts.

As was mentioned above, during focus group discussions respondents informed about the death of 10 people in the studied districts during last 6-7 years. Out of which, 7 people died in Bulungur district of Samarkand region as a result of mudflow, 3 people - in Bostanlik district of Tashkent region as a result of avalanche.

Table 2

To which climate hazards is your community most vulnerable to?

Hazard	Frequency	Name of districts were climate hazards take place, number of events leading to loss of more than one life a year?
Flooding	1-4	Qoichirchik, Bostanlik, Sirdarya, Gallaaral, S. Rashidov, Koshrabad, Dehkanabad, Kitab, Yakkabag, Turakurgan, Chust districts
Drought		-
Strong wind	2-3	Qoichirchik, Sirdarya, Gallaaral, S. Rashidov, Bulungur, Koshrabad, Dehkanabad, Yakkabag, Turakurgan, Chust, Dangar districts
Landslide	2-6	Qoichirchik, Saihunabad, S. Rashidov, Bulungur, Turakurgan, Bulungur (7 people ²), Chust districts
Mudflow	3-7	Koshrabad, Dehkanabad, Kitab, Yakkabag, Turakurkan, Chust, Dangar districts
Avalanche	2-3	Bostanlik district (3 people ³)
Hail	2-3	Qoichirchik, Saihunabad, Gallaaral, Kitab, Chust districts
Intense rainfall	3-4	Qoichirchik, Bostanlik, Gallaaral, Bulungur, Koshrabad, Dehkanabad, Turakurgan, Chust districts
Frost		-
Heat waves	1-3	Sirdarya, S. Rashidov, Jabbai districts

² In Spring of 2012, 7 people died in Bulungur district as a result of mudflow.

³ In December 2018, 3 people died in the Beldersay nature area in Bostanlik district as a result of snow avalanche.

3.2. Consequences of climate hazards - number of victims, affected schools and healthcare centers, duration of power outages

Also, according to the statements of the respondents, disasters led to uprooting of trees and collapse of electric poles, removal of roof slates from buildings, broken windows, damage of schools and healthcare centers. During the discussions it was also mentioned that 5 schools (in Qoichirchik, Bostanlik, Koshrabat Dehkanabad and Chust districts) and 2 healthcare centers (in Koshrabat and Dehkanabad districts) were damaged as a result of mudflows. Also, 3 schools (in Bulungur, Dangar and Chust districts) and 2 healthcare centers (in Dangar and Chust districts) were affected during strong winds (Table 3).

Table 3

How will you describe the damages caused by the hazard? Number of lives lost, number of schools affected, number of healthcare centers affected, duration of electricity outage and the magnitude of the reduction in the livelihood of the affected people.

Hazard	Number of victims	Number of affected schools	Number of affected healthcare centers	Duration of power outage
Flooding	7	5	2	2-10 hours
Drought	-	-	-	-
Strong wind	-	3	2	2-8 hours
Landslide	-	-	-	-
Mudflow	-	-	-	-
Avalanche	3	-	-	-
Hail	-	-	-	-
Intense rainfall	-	-	-	-
Frost	-	-	-	-
Heat waves	-	-	-	-

In many of the studied areas, there are frequent power outages, even in the absence of any climate hazards. Duration of power outages after disasters averages from 2 to 10 hours, but sometimes longer. So, in December 2017, after a strong wind that swept through the settlements of Ahchi, Olmos, Gova, Zvutkon, Varzigon, Tashkurgan, and Baymak in Chust district of Namangan region, there was no power for 10 days.

3.3. Estimation of household property losses

According to the answers, in many cases disasters led to the loss of property, i.e. livestock, poultry and crops; filling of houses with clay mud, and sometimes to a collapsing of houses; of carpets, furniture, and clothing becoming non-usable. During a conversation with residents of the studied areas, an attempt was made to determine the average amount of damage caused by various climate hazards. Respondents noted that property loss mainly occurs during floods, strong winds, landslides and mudflows.

The loss of household property from flooding, depending on the flood area, ranges on average from 350 thousand to 4 million sums. Among the studied areas, the most significant damage was observed in Qoichirchik district, where there were cases of flooding of several houses by the rising waters of Chirchik river. The losses of households, according to answers, amounted to 25 million sums.

At the same time, it should be noted that the observed loss of household earnings is not very large. This is due to the fact that many residents in these areas do not have a regular income and a permanent jobs. The respondents noted that the loss of household daily income due to flooding is from 20 thousand to 100 thousand sums.

The extent of damage to households due to flooding by agricultural products, livestock and fish farming varies in different regions, based on the specializations of communities. If, for example, for the studied areas the damage to agricultural crops ranges from 1 to 15 million sums, for livestock products - it is from 2 to 60 million sums, for fish - from 500 thousand to 2 million sums. The analysis shows that the population living in these areas is mainly engaged in the production of meat, milk, hides, wool, and other types of animal derived products.

Strong winds break windows, remove roof slates from buildings, fell trees. According to residents from different regions, damages to households caused by this hazard stands between 200 thousand to 1.5 million sums.

Residents of the studied areas also suffered significant damages caused by landslides and mudflows (Table 4).

3.4. Estimation of firms' property losses

Losses suffered by business are assessed differently based on the specializations of the subject communities. Business disruption caused by flooding was mentioned by entrepreneurs of Qoichirchik (fisheries - 100 million sums), Koshrabat (livestock - 75 million sums), Bulungur (cotton production - 15 million sums), and Dehkanabad (grain production - 15 million sums) districts. A strong wind caused losses worth of 4 million sums to farmers in Dangar district engaged in gardening (Tables 5, 6).

Table 4

Loss of livelihoods, what is the estimated amount of lost possessions/assets? What is the estimate of lost wages? What is the estimated amount of farm/livestock/fishing product lost?

Information on household loss on average

Hazard	Estimation of household property/possessions loss	Estimation of household daily income loss	Estimation of household farm produce (crops) loss	Estimation of household livestock loss	Estimation of household fish stock loss
Flooding	from 350 thousand to 25 million sum	from 20 thousand to 1000 thousand sum	from 1 to 15 million sum	from 2 to 60 million sum	from 500 thousand to 2 million sum
Drought	-	-	-	-	-
Strong wind	from 200 thousand to 1.5 million sum	-	-	-	-
Landslide	from 350 thousand to 25 million sum	-	-	from 300 thousand to 6.0 million sum	from 100 thousand to 1 million sum
Mudflow	From 350 thousand to 4 million sum	from 20 thousand to 1000 thousand sum	from 1 to 15 million sum	from 2 to 60 million sum	from 500 thousand to 2million sum
Avalanche	-	-	-	-	-
Hail	-	-	-	-	-
Intense rainfall	-	-	-	-	-
Frost	-	-	-	-	-
Heat waves	-	-	-	-	-

Table 5

Disrupted business, what is the monetary equivalent of the disruption caused by the disaster to business activities?

Hazard	Name of districts and amount of loss
Flooding	Qoichirchik (fisheries – 100 million sum), Koshrabat (livestock – 75 million sum), Bulungur (cotton crops – 15 million sum), Dehkanabad (grains – 15 million sum).
Drought	
Strong wind	Dangari (orchards – 4 million sum).
Landslide	
Mudflow	
Avalanche	
Hail	
Intense rainfall	
Frost	
Heat waves	

Table 6

Information on firms

Hazard	Firm property/possessions loss	Estimates of additional payments of wages by firms	Firm farm produce (crops) losses	Firm live-stock losses	Firm fish stock losses
Flooding	5 million sum	-	15 million sum	75 million sum	100 million sum*
Drought	-	-	-	-	-
Strong wind	4 million sum	-	-	-	-
Landslide	-	-	-	-	100 million sum*
Mudflow	5 million sum	-	15 million sum	75 million sum	100 million sum*
Avalanche	-	-	-	-	-
Hail	-	-	-	-	-
Intense rain-fall	-	-	-	-	-
Frost	-	-	-	-	-
Heat waves	-	-	-	-	-

* - estimates of losses per respective hazards based on data for "Balikchi" farm in Qoichirchik district

3.5. Cost of recovery of affected healthcare centers and schools

Rough estimation of costs related to healthcare restoration was also carried out: average time and expenses allocated to treatment of victims. However, it must be noted that many of the residents did not wish to provide information on exact figures, considering this type of information as personal. Only in Dehkanabad district 2 residents stated that they spent 400 thousand sum for treatment of injuries caused by mudflow (Table 7).

Amount of expenditures for repairing healthcare centers affected by flooding in Qoichirchik district totaled 20 million sum, in Yakkabag district - 6 million sum; and 3 million sum and 4 million sum for repairing centers affected by strong winds in Dangari and Chust districts, respectively.

As was mentioned above, there were cases, when children had to miss classes due to disaster outbreaks. Based on the answers, it was established that the number of missed school days in Qoichirchik, Bostanlik, S. Rashidov, Bulungur, Koshrobat, Yakkabag, Dehkanabad, Chust and Turakurgan districts averaged from 1 to 8 days (Table 8).

Table 7

For health-related costs, what is the average amount spent due to illness from the disaster? What is the estimated amount to repair damaged healthcare facilities?

Hazard	Amount of expenditures related to care due to hazard	Cost of repairs of affected healthcare centers
Flooding	2 persons (Dehkanabad) – 400 thousand sum	Qoichirchik (1 healthcare center – 20 million sum), Yakkabag (1 healthcare center – 6 million sum)
Drought		
Strong wind		Dangari (1 healthcare center – 3 million sum), Chust (1 healthcare center – 4 million sum)
Landslide		
Mudflow		
Avalanche		
Hail		
Intense rainfall		
Frost		
Heat waves		

Table 8

For education cost, how many days on average did students stay at home after the disaster?

Hazard	Number of school days missed by students due to hazards
Flooding	Qoichirchik (8 days), Bostanlik (4 days), S. Rashidov (1 day), Bulungur (2 days), Koshrabat (5 days), Yakkabag (5 days), Dehkanabad (6 days), Chust (3 days), Turakurgan (6 days)
Drought	
Strong wind	
Landslide	
Mudflow	
Avalanche	
Hail	
Intense rainfall	
Frost	
Heat waves	

3.6. Structural damage caused to buildings by hazards

To the question: What is the estimated infrastructural damage caused to buildings by disasters? – respondents answered that amount of losses caused by flooding was from 400 thousand to 20 million sum, and by strong winds - from 300 thousand to 3 million sum. Total number of structures affected by flooding was 458, and the number of affected unauthorized structures was 193; and 84 and 32 structures respectively affected by strong winds.

3.7. Electricity related costs

To the question: What is the cost of damages related to electricity, what is the average spending on alternative sources of energy by households due to power outages? - the respondents answered that there are no alternative sources of energy in their area, and residents had to remain without any source of energy and wait until power supply was restored (Table 10).

3.8. Households expenditures on cleanup and repair of structures

According to answers, expenses related to cleaning up averaged from 50 thousand to 4 million sum. There were no respondents, who had to evacuate during disasters, however there were some residents, who had to relocate. According to their statements, cost of a household relocation was anywhere between 2 to 6 million sum (Table 11).

According to respondents, it takes minimum 3 months to restore structures after flooding, on average it takes 1 year, and maximum 5 years. One elderly respondent mentioned that he still did not complete restoration of a structure that was damaged during mudflow 5 years ago. To restore a structure affected by mudflow it takes minimum 1-2 days, on average it takes 1 week, maximum - 1 month (Table 12).

3.9. Potential climate hazard warning system

To the question: What systems are available in your community - that you are aware of – that can be activated in the event of a disaster? - residents of Saihunabad district answered that they have a siren installed on the roof of the school building at the center of the village. In case of a threat this siren will warn residents of Urikzor village. In the past 5 years it was used only once to test run it.

Clearly indicated escape routes are available almost in every district. In 2013, residents of Vatan settlement in Qoichirchik district were put on evacuation alert. Bases were made ready to evacuate people.

Table 9

What is the estimated cost of the structural damage caused by the disaster?

Hazard	Damage to households due to hazard			Damage to business due to hazard		
	Average cost of repairs	Total number of affected structures	Number of damaged unauthorized structures	Average cost of repairs	Total number of affected structures	Number of damaged unauthorized structures
Flooding	400 thousand - 20 million sum	458	193			
Drought						
Strong wind	300 thousand - 3 million sum	84	32			
Landslide						
Mudflow						
Avalanche						
Hail						
Intense rainfall						
Frost						
Heat waves						

Table 10

For electricity cost, what is the average amount household/firm spent on alternative energy source during the period of electricity outage?

Hazard	Amount spent by households on alternative energy source	Amount spent by firms on alternative energy source
Flooding		
Drought		
Strong wind		
Landslide		
Mudflow		
Avalanche		
Hail		
Intense rainfall		
Frost		
Heat waves		

Table 11

Firm and household incur clean-up expenses and in some cases evacuation and relocation expenses. What is the average amount firm and household spend on clean-up, evaluating and relocating?

Hazards	Household expenditures on cleanups	Household expenditures on evacuation	Household expenditures on relocation	Firm expenditures on clean-ups	Firm expenditures on evacuation	Firm expenditures on relocation
Flooding	from 50 thousand to 4 million sum		2-6 million sum			
Drought						
Strong wind						
Landslide						
Mudflow						
Avalanche						
Hail						
Intense rainfall						
Frost						
Heat waves						

Table 12

Think of the following hazards in your community, how long does it normally take for services and facilities to be restored?

Hazards	Minimum	On average	Maximum
Flooding	3 months	1 year	5 years (Koshrobat district)
Drought			
Strong wind	1-2 days	1 week	1 month (Dangar district)
Landslide			
Mudflow	3 months	1 year	5 years (Koshrobat district)
Avalanche			
Hail			
Intense rainfall			
Frost			

Heat waves			
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None of respondents answered positively to the question about availability of emergency shelter in their community.

Almost all of the asked confirmed that they receive SMS messages that inform about possible climate hazards.

According to residents of Koshrabat district, local shepherds grazing livestock in mountains regularly inform their countrymen about approaching disasters (Table 13).

3.10. Available systems allowing communities be prepared to possible natural disasters

When asked, what systems are available in your community - that you are aware of – that help your community be prepared for disasters and reduce the impact, all of the respondents answered "yes", "no", "don't know". (Table 14).

20 respondents living mostly in Samarkand and Jizzah regions know about the Red Crescent Society as a nonprofit organization responsible for disaster assistance.

3.11. Issues raised by communities outside of the questionnaires

When asked, what are the other problems in this field, people living in different areas answered differently. For example, residents of settlement Vatan in Tashkent region mentioned that some entrepreneurs engaged in fishing by excavating ground at riverbank slopes without any consideration to stability of slopes, sometimes, because of it, rivers change their course and cause damage to settlements.

According to residents of Kamolot community in Sirdarya district, the main problem is constant extraction of macadam by entrepreneurs. Similar concerns were voiced by the residents of Yakkabag, Qoichirchik, Saihunabad, Turakurgan, and Dangar districts.

Residents of Urikzor village in Saihunabad district were worried by the fact that one side of riverbank was recessing compared to the other side. The other side of the river (in the territory of Akkurgan district of Tashkent region) is 10 meters higher. This difference is growing by the year. It means that during river flooding water will be overflowing this bank facing the settlements and cause hazards to lives and property of residents.

Residents of Hairobod village in S. Rashidov district stated that there are still cases of ongoing construction on mudflow prone zones that obstructs the efforts on putting up flood protection structures there.

Table 13

What systems are available in your community - that you are aware of – that can be activated in the event of a disaster? Please mark in the list or add what is missing:

	Available (yes/no)	Used in last 5 years (Yes/No)
Sirens	Yes (Saihunabad)	Yes (once as a test run)
Clearly identified evacuation routes	Yes (almost in all districts)	In 2013 residents of Vatan community in Qoichirchik district were put on readiness status for evacuation. Buss column was prepared.
Emergency shelter	No	No
SMS messages	Yes (in all districts)	Regular updates on possible climate hazards
Media broadcasts (for example, radio and TV)	No	No
Verbal warnings by local shepherds	Yes (in many districts)	Yes

Table 14

What systems are available in your community - that you are aware of – that help your community be prepared for disasters and reduce the impact?

	If available?			Used in last 5 years (Yes/No)		
	Answered "Yes"	Answered "No"	Answered "Don't know"	Answered "Yes"	Answered "No"	Answered "Don't know"
Non-profit organizations responsible for dealing with natural disasters	20	81	82	20	81	82
Disaster readiness and response plans	87	36	60	87	36	60
Community based plans for Climate hazard management	93	29	61	93	29	61
Regular budgets/Climate hazard management activities (for example, cleaning river bed from debris and trash, slope stabilization...)	34	78	71	34	78	71
Rain gauges for river/stream water level control	33	61	89	33	61	89
Announcement boards	28	67	88	28	67	88
Hazard/threats maps	31	58	94	31	58	94
Emergency/evacuation exercises	2	89	92	2	89	92
Trainings and information on readiness and response in educational institutions (schools, kindergartens) and public institutions	51	43	89	51	43	89

As it is well known, according to the Resolution of the President of Uzbekistan "On additional measures to ensure social support to the citizens and conduct one time nationwide action on declaration of property rights to residential accommodations built without proper permission", No.VII-5421 of 20 April 2018, one-time nationwide action on declaration of property rights to residential accommodations of individuals built on unauthorized land plots or without construction permits. Paragraph 2 of this resolutions states that up to 1 May 2019, the right of property to residential accommodation built before the adoption of this Resolution on a land plot not designated for such purposes or without obtaining construction permit will be granted to persons openly and uninterruptedly owning these objects as of one's own property, under the following conditions:

this land plot (part of it) is not situated on the land, which, according to the legislation, cannot be allocated to the individual for housing construction;

unauthorized construction does not breach the requirements of city planning norms and rules, as well as its retention will not violate rights and protected by the law interests of other persons or pose threats to lives and health of citizens.

Despite of this, unfortunately, as a result of negligence on the part of relevant authorities, there are cases of issuance of permissions for construction of real property on land situated on the course of mudflow routes.

Similar issues were mentioned not only by the residents of Hairabod village in S. Rashidov district, but also by the residents of Korisoch village in Dehkanabad district, Porlok village in Turakurgan district and others.

Residents of Ahcha village in Chust district consider as the most pressing issue the fact that the residents of other villages bring their garbidge and dispose of it on adyrs. During floods, this garbage is washed off and spread through streets of the village. There is a threat that this garbage may become a source of infectious diseases. When this concern was brought to the attention of the employees of Namanagan Regional Department of Emergency Situations, they said that they do not possess any information on the issue and that such threat did not exist. The same was also confirmed by the regional health authorities. Despite this, they recognized the need to restore order and informed that they would help to solve this problem in cooperation with the relevant authorities (the same problem was noted by the residents of the Kamolot community in Sirdarya district).

In order to reduce the negative consequences of mudflows, residents of this settlement proposed to build a new small water reservoir.

Residents of Saihunabad, Dangar, Dehkanabad, Jambai, Koshrabat and Yakkabag districts complained that artesian water used for domestic consumption is not suitable for irrigation of agricultural crops.

In many areas, residents complained that bridges and roads were destroyed during floods and mudflows, and local authorities did not always provide timely assistance in solving such problems.

The analysis shows that one of the main barriers to obtaining state support is the low level of legal awareness of citizens. During focus groups discussions it was

revealed that many of the respondents did not have cadastral documentation and insurance policy on their real estate holdings.

CHAPTER 4. CONCLUSIONS

In general, meetings held with residents of the communities that frequently experienced various climatic hazards resulted in the following conclusions:

1. Uzbekistan has a system of state support to protect the population from various climate hazards. The regional units of the Ministry of Emergency Situations are engaged in providing early warning on possible onset of climate hazards, providing rescue operations and developing measures to prevent and eliminate the consequences of disasters. Also, the relevant state services ensure the provision of various medical, financial and other assistance to the population during natural disasters. In addition, there are various non-governmental non-profit organizations engaged in charitable activities.
2. There are certain shortcomings and flaws in the functioning of this system due to unseemliness of actions of local authorities, the lack of consistency in the activities of various government agencies in preventing the consequences of emergency situations, the low level of legal awareness of citizens, etc.
3. As a rule, the territories prone to often hazards are located far from economically developed centers, which, in turn, has a negative effect on the standard of living of the residents in these areas. In many cases, natural disasters lead to deterioration of living conditions there.
4. There are certain difficulties in assessing the scope of damage caused by climate hazards to economies of districts, regions and the country as a whole. For example, with the passage of a flood flow, the damage to a household can be minor or critically significant (destruction of houses, death of people). The differences between these two extremes are incomparably great. Also, it is impossible to group together economic entities that suffer relatively similar losses. Based on this, it can be concluded that in many instances average statistical indicators of losses caused to the economy remain inaccurate.

FOCUS GROUP DISCUSSION QUESTIONS

1. Overview of the community

- i. How will you describe the development in your community over the last one year?
Why (reason for your description)?
- ii. How many businesses are in operation in your community?
- iii. What are the prominent businesses in your community? **Why (What are the factors responsible for the prominence of the named businesses)**
- iv. Describe the general condition of the drainage system in your community?

2. Climate hazards and its effects.

- i. Which of these climate hazards is your community most vulnerable to?

Hazards	Frequency	How many of these events results in more than one lives lost annually?
Flooding		
Drought		
Strong wind		
Landslide		
Mudflow		
Avalanche		
Hail		
Intense rain-fall		
Frost		
Heat waves		

- ii. What do you think, which of these climate hazards are women the most susceptible (it is necessary to find out which of hazards women are exposed the most/least, to identify where gender factors play more or less role) in your area? In the district and region as a whole? It is necessary to ask the same question about other vulnerable groups of the population: elderly, young people, people suffering from various diseases or people with disabilities (poor hearing, vision, etc.), as well as other vulnerable groups (it is necessary to ask what other vulnerable groups are exist there)
- iii. How do women and men perceive the risks associated with each hazard? Are there any differences? If so, what exactly? What kind of risks do women see, and which are men? What is associated with the risk? What are the consequences? Are there differences in priority or degree/severity of risks?
- iv. How will you describe dissemination of early warning system (EWS) information in your community? (Probe for positive / negative feedbacks)
 - a. The use of climate information is important for preparing for hazards by government and communities.
 - i. How can climate information help you prepare for hazards?
 - ii. Are there any differences in obtaining information between women and men through various communication channels? Are women in a more vulnerable position, by virtue of their roles in the family or community, as

opposed to men, in the speed or priority of receiving information through the specified communication channels? It is necessary to get an answer about gender differences in each of the communication channels: TV, radio, warning systems (push notifications) on a mobile phone, other channels specific to this community (information board in a mahalla office, etc.).

- iii. If you know that a hazard will happen in 48 hours (you can edit based on hazard the lead time)? How much of the damages to you or your business can you reduce? (Probe for percentages – you can do it based on the hazards that affect them)
- iv. Assuming Total percentage damage – building and inventory (without EWS) is 100%, then in your district, on average can you indicate during the major hazard:
 - The amount of total assets (inventory) = x% of total damage
 - Moveable inventory damage = xy%
 - People receiving warning and act = xyz%
 - < 8 hours warning lead time = abc%
 - >8 hours lead time = abcd%
- v. How will you describe the damages caused by the hazard? Number of lives lost, number of schools affected, number of healthcare centres affected, duration of electricity outage and the magnitude of the reduction in the livelihood of the affected people.

Hazards	Number of lives lost	Number of schools affected	Number of healthcare centres affected	Duration of electricity outage
Flooding				
Drought				
Strong wind				
Landslide				
Mudflow				
Avalanche				
Hail				
Intense rainfall				
Frost				
Heat waves				

- vi. Are there any differences in the damage caused, its perceptions and consequences for different groups of the community, in particular for vulnerable groups such as women, the elderly, the disabled (poor hearing, vision, etc.), youth, etc.? In particular, what percentage of the victims are different groups of communities - women, youth, the elderly, the sick and disabled people (poor hearing, eyesight, etc.).
- vii. Loss of livelihoods, what is the estimated amount of lost possessions/assets? What is the estimate of lost wages? What is the estimated amount of farm/livestock/fishing product lost?
 - a. Information on household loss on average

Hazards	Estimate of lost possessions/assets by household	Estimate of daily wage rate lost by household	Estimate of farm (crop) product lost by household	Estimate of livestock product lost by household	Estimate of fishing product lost by household
Flooding					
Drought					
Strong wind					
Landslide					
Mudflow					
Avalanche					
Hail					
Intense rainfall					
Frost					
Heat waves					

- What percentage of households were reimbursed for these hazards?
- How much on average did the households get reimbursed by insurance?

b. Information on firms

Hazards	Estimate of lost possessions/ assets by firm	Estimate of extra salaries paid by firm	Estimate of farm(crop) product lost by firm	Estimate of livestock product lost by firm	Estimate of fishing product lost by firm
Flooding					
Drought					
Strong wind					
Landslide					
Mudflow					
Avalanche					
Hail					
Intense rainfall					
Frost					
Heat waves					

- viii. Disrupted business, what is the monetary equivalent of the disruption caused by the disaster to business activities?

Hazards	Amount
Flooding	
Drought	
Strong wind	
Landslide	
Mudflow	
Avalanche	
Hail	
Intense rainfall	

Frost	
Heat waves	

- ix. For health-related costs, what is the average amount spent due to illness from the disaster? What is the estimated amount to repair damaged healthcare facilities?

Hazards	Amount spent due to illness from the disaster	Cost of repairing damaged healthcare facilities caused by the disaster
Flooding		
Drought		
Strong wind		
Landslide		
Mudflow		
Avalanche		
Hail		
Intense rainfall		
Frost		
Heat waves		

- x. For education cost, how many days on average did students stay at home after the disaster?

Hazards	Number of days students stay at home due to the disaster
Flooding	
Drought	
Strong wind	
Landslide	
Mudflow	
Avalanche	
Hail	
Intense rainfall	
Frost	
Heat waves	

- xi. What is the estimated cost of the structural damage caused by the disaster?

Hazards	Damages to households by disaster			Damages to businesses by disaster		
	Average cost of repair	Total number of structures affected	Number of illegal structures affected	Average cost of repair	Total number of structures affected	Number of illegal structures affected
Flooding						
Drought						
Strong wind						
Landslide						
Mudflow						

Avalanche						
Hail						
Intense rainfall						
Frost						
Heat waves						

- xii. For electricity cost, what is the average amount household/firm spent on alternative energy source during the period of electricity outage?

Hazards	The amount a household spend on alternative source of energy.	The amount a firm spend on alternative source of energy.
Flooding		
Drought		
Strong wind		
Landslide		
Mudflow		
Avalanche		
Hail		
Intense rainfall		
Frost		
Heat waves		

- xiii. Disaster could force household and firm to relocate to a new location if the damage caused by the disaster is much, which also involves evacuation, while in some cases when the disaster is minimal, the disaster could make the environment dirty due to the movement of waste products associated with moving water. Thus, firm and household incur clean-up expenses and in some cases evacuation and relocation expenses. What is the average amount firm and household spend on clean-up, evaluating and relocating?

Hazards	Cost of clean-up incurred by household	Cost of evacuation incurred by household	Cost of relocation incurred by household	Cost of clean-up incurred by firm	Cost of evacuation incurred by firm	Cost of relocation incurred by firm
Flooding						
Drought						
Strong wind						
Landslide						
Mudflow						
Avalanche						
Hail						
Intense rainfall						
Frost						
Heat waves						

- xiv. What are the other damages the hazard caused your community?

- xv. Think of the following hazards in your community, how long does it normally take for services and facilities to be restored?

Hazards	Minimum	Mean	Maximum
Flooding			
Drought			
Strong wind			
Landslide			
Mudflow			
Avalanche			
Hail			
Intense rainfall			
Frost			
Heat waves			

- xvi. How long does it typically take for the damage to be repaired? Explain using a typical example.
- xvii. What capacity does your community have to respond to emergencies. Do you have community based organisations, structures or committees responsible for disaster preparation or response? Would you please provide brief details?
- xviii. Is your community interested in participating in a pilot phase project that would identified community needs regarding disaster risk management and reduction and improve communication about these needs and warnings about disasters?
- xix. What systems are available in your community - that you are aware of – that can be activated in the event of a disaster? Please mark in the list or add what is missing:

	Exist (Yes/No)	Have been used over the past 5 years (yes/no)
Sirens		
Evacuation routes marked clearly		
Evaluation shelter		
SMS communication		
Media broadcasts (e.g radio and tv)		

- xx. What systems are available in your community - that you are aware of – that help your community be prepared for disasters and reduce the impact?

	Exist (Yes/No)	Have been used over the past 5 years (yes/no)
Community organisations responsible for disasters		
Community disaster preparedness and response plans		

Community climate risk management plans		
Regular CRM budgets/activities (e.g. cleaning riverbeds from debris, stabilization of slopes...)		
Rain gauges to control water level in streams/rivers		
Information boards		
Hazard maps		
Test emergency evacuation drills		
Training and awareness sessions on response and preparedness at educational institutions (schools, kindergartens) and public offices		

.....

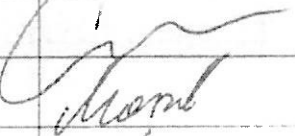
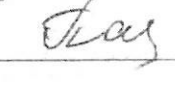
To finish the discussion, ask if anyone has any questions and thank everyone for their time. Remember that sometimes the best comments come once the focus group is ended, so stay to chat for a short while and then record your impressions and any good quotes

Совместный проект ПРООН, ООН Окружающая среда и Узгидромета «Программа подготовки Узбекистана к доступу к ресурсам ЗКФ»

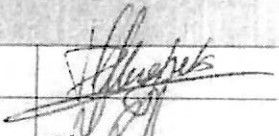
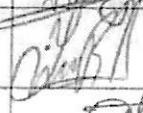
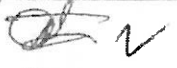

**Список участников пресс-конференции и круглого стола на тему
«Оценка климатической уязвимости»**

Место проведения: г. Ташкент, Бизнес-центр "Пойтахт", зал "Учкудук"

Дата: 31 января 2018 г.

№	Ф.И.О.	Организация	Роспись
1	Исаев Жахонгир	Начальник отдела Международного сотрудничества Министерства по чрезвычайным ситуациям	
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3	Волков Петр	Министерство по чрезвычайным ситуациям	
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5	Хуршид Рустамов	Руководитель отдела устойчивого развития ПРООН в Узбекистане.	
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8	Байханова Раъно	Специалист по изменению климата ПРООН Узбекистан.	
9	Абдумалик Сидиков	ПРООН Узбекистан.	
10	Мягков Сергей	Зам.директора НИГМИ	
11	Пак Александр	Инженер 1 кат. ОГВК	
12	Нарзуллаев Азим	Вед.Специалист Узгидромет	
13	Плотницкая Юлия	Нач.ОГМО	
14	Хайдаров Махмуд	Ведущий инженер, Узгидромет	
15	Гавриленко Надежда	Начальник СГМО	
16	Ирисбаев Зафар	Госводхознадзор при МЧС	

[illegible]

	Сотрудники проекта		
	Дедабаев Улугбек	Руководитель проекта	
	Равшан Юнусов	Административный\Финансовый Ассистент	
	Фотимахон Махсимова	Специалист по связям с общественностью	
	Наира Иногамова	Ассистент проекта	

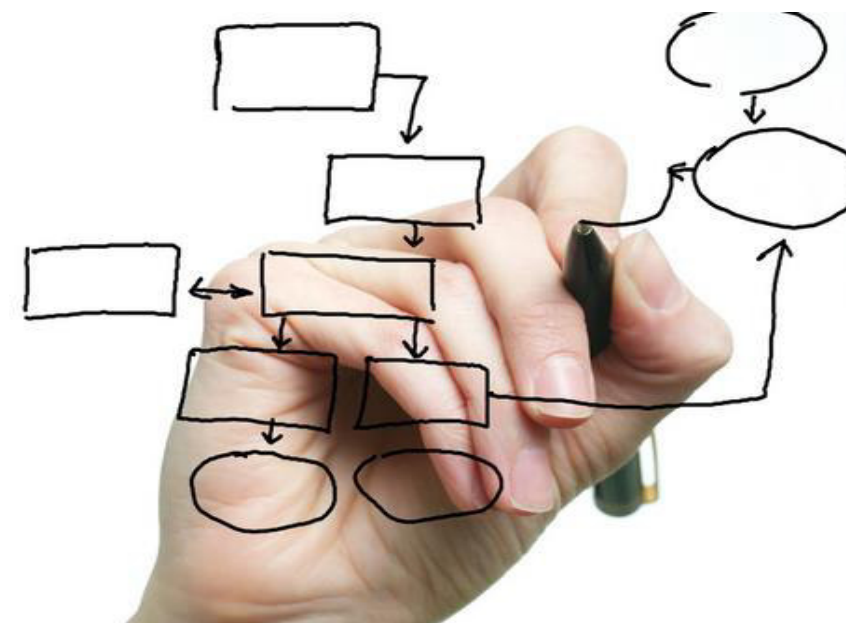
Разработка проекта Зеленого климатического фонда

Программа развития ООН (ПРООН)

31 января 2018 г., Ташкент



*Empowered lives.
Resilient nations.*

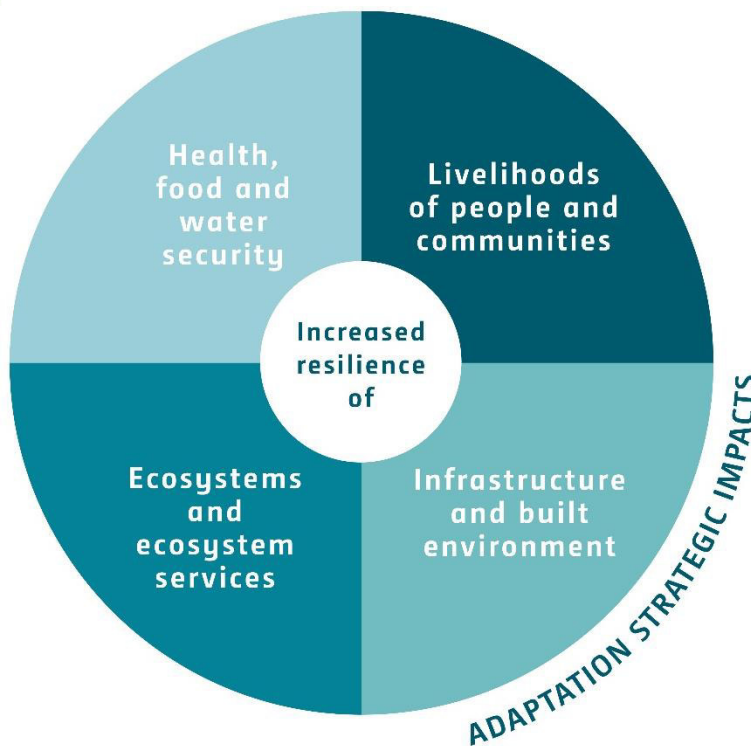
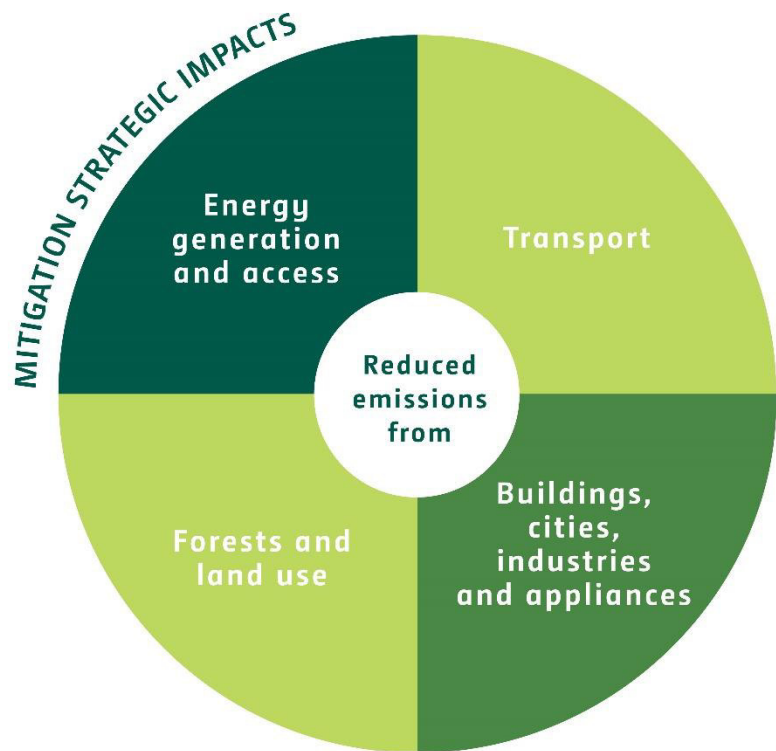


Проектный цикл



Тематика проектов

Инвестиционные критерии



Условия для разработки проектов

- ✓ Требования ЗКФ по минимальному уровню субсидирования и со-финансированию: целесообразность грантового финансирования должна быть доказана (экономический контекст страны, сектор, финансовый анализ, потребности страны)
- ✓ Инвестиционные критерии ЗКФ – климат, масштабный трансформационный эффект
- ✓ Со-финансирование – новое и дополнительное: тип, объем, партнеры
- ✓ Доступность данных и информации => сроки подготовки проекта
- ✓ Эффективность предлагаемых решений

Для проектов по адаптации

Климатическая проблема:

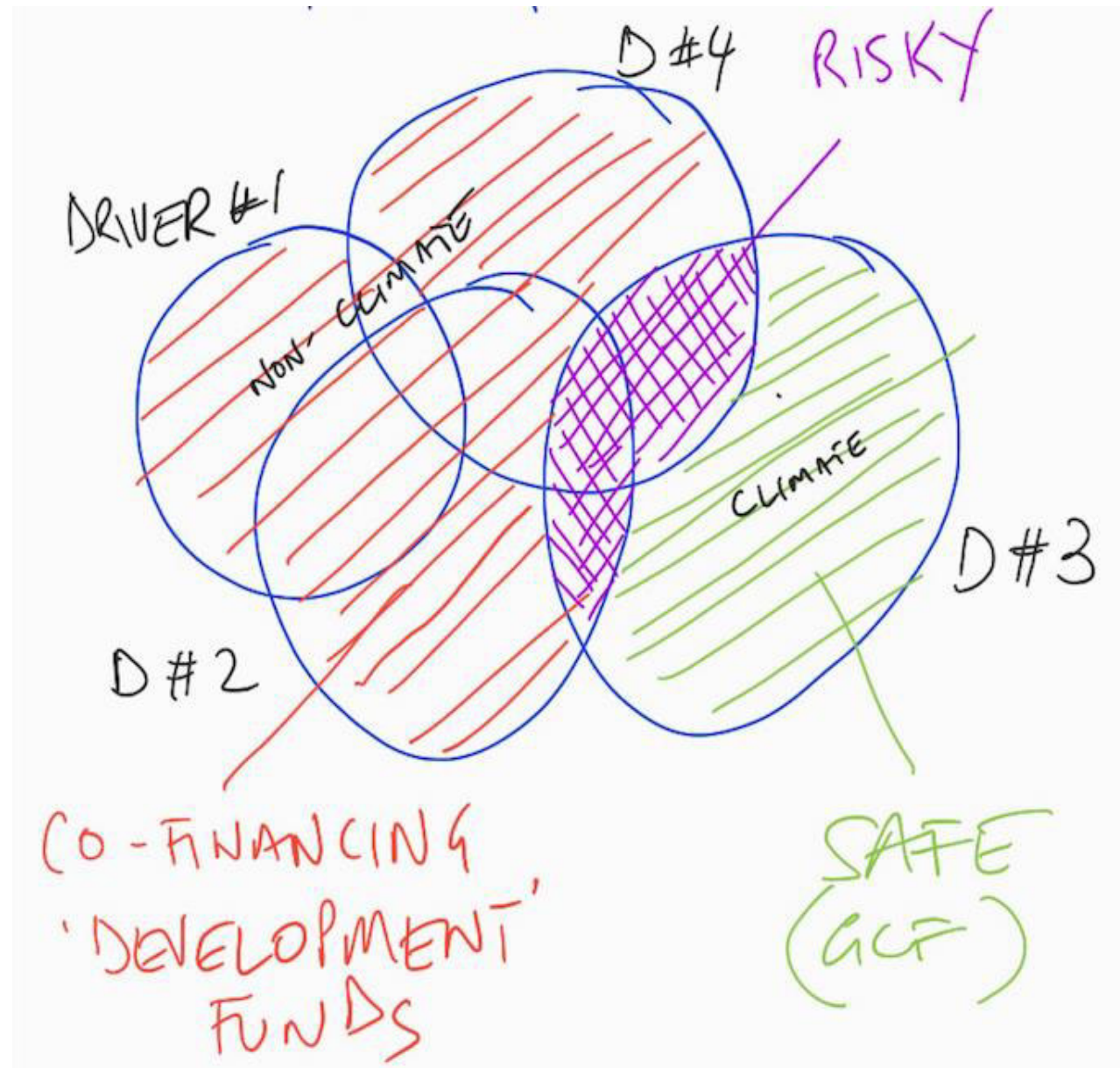
- Конкретная, четко обозначенная проблема
- Научное обоснование / данные
- Качественные климатические модели

Что финансирует ЗКФ?

- Решение долгосрочных задач, связанных с изменением климата
- ЗКФ не финансирует задачи социально-экономического развития, операционные издержки, текущую деятельность
- Что финансируют другие партнеры? ЗКФ финансирует дополнительные расходы, сверх текущих инвестиций в развитие

Дизайн проектов

- Простая структура
- Долгосрочная устойчивость результатов
- Минимальное субсидирование
- Инновации, потенциал для масштабных изменений



Идея проекта – структура

- Постановка проблемы, связанной с изменением климата
- Анализ базовой ситуации и текущих инвестиций
- Партнерские проекты / апробированные решения
- Ожидаемый результат
- Барьеры
- Цель и компоненты проекта
- Обоснование гранта ЗКФ
- Трансформационный эффект
- Приоритеты страны
- Со-финансирование

Идея проекта

1. Система прогнозирования и раннего предупреждения для снижения уязвимости перед опасными гидрометеорологическими явлениями и использование климатической информации
2. Обоснование: прогнозируется рост числа и интенсивности климато-зависимых опасных явления (данные есть). Требуются данные о динамике уязвимости и рисков (оценка динамики ущербов и потерь)
3. Охват системы: засухи, сели, наводнения, лавины, оползни, экстремальный ветер...? Требуется решение.
4. Пилотные проекты/апробированные решения: проект АФ (DEWS)
5. Партнерские проекты: WB, WMO...
6. Государственное со-финансирование: МЧС (новое!)
7. Результат: комплексная система управления климатическими рисками, основанная на новых технологиях и подходах, снижение уязвимости населения

Пример проектного предложения в ЗКФ от Грузии

1. Название: Комплексная система раннего предупреждения
2. Обоснование: прогнозируется рост числа и интенсивности климатозависимых опасных явления (данные есть). Продемонстрирован рост ущербов и потерь от климатозависимых ЧС + модель уязвимости при ИК
3. Охват системы: наводнения, засуха, сели, лавины, оползни, экстремальный ветер, град

Компонент 1: Расширение сети гидрометеорологических наблюдений и потенциала моделирования = информация о рисках

Компонент 2: Система прогнозирования и раннего предупреждения и услуги климатической информации + нормативная и институциональная база

Компонент 3: Снижение уязвимости населения

Климатическая информация и управление бассейнами

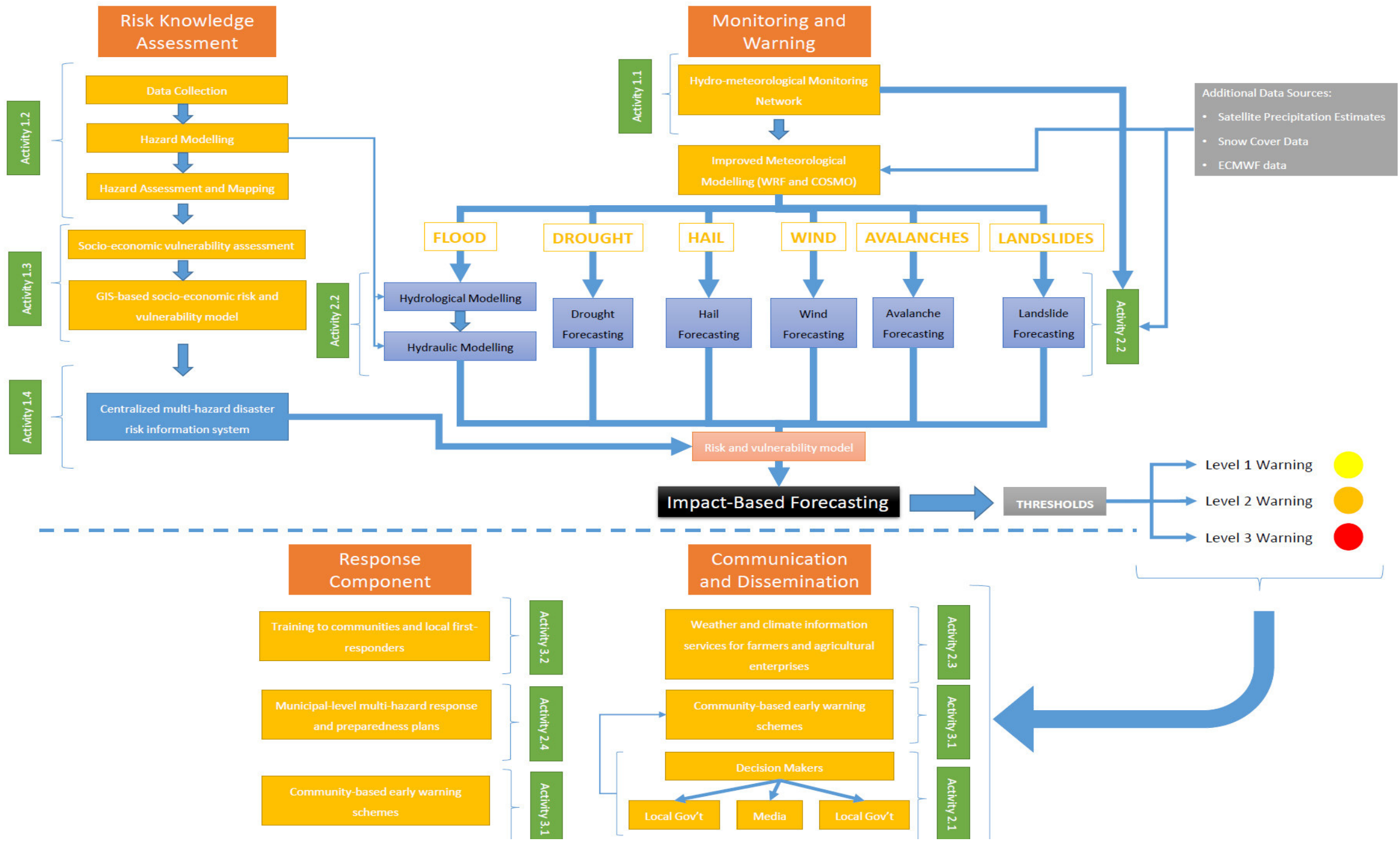
Мониторинг и СРП

Система раннего предупреждения

- Оборудование сети наблюдений
- Зонирование и планирование развития пойменных территорий
- Моделирование и прогнозирование
- СРП
- Меры по снижению риска

Грузия Снижение рисков наводнений в бассейне Риони







Uzbekistan

ОЦЕНКИ УЩЕРБА ОТ КЛИМАТИЧЕСКИХ УГРОЗ И ЭКОНОМИЧЕСКАЯ ОЦЕНКА КЛИМАТИЧЕСКОЙ ИНФОРМАЦИИ В УЗБЕКИСТАНЕ

Исполнители проекта:
С.ЗОКИРОВ
Н.ЯКУБОВ

ТАШКЕНТ 2019

Цель исследования

Определить экономический ущерб и способствовать разработке технологий, которые повысят эффективность и точность работы Систем раннего предупреждения (СРП), таким образом, снижая число человеческих жертв и ущерб имуществу.

Объект исследования

-Ташкентская область:

Куйичирчикский и Бустанлыкский районы;

-Сырдарьинская область:

Сайхунабадский и Сырдарьинский районы;

-Джизакская область:

Галляаральский и Шараф Рашидовский районы;

-Самаркандская область:

Булунгурский, Кошрабатский и Джамбайский районы;

-Кашкадарьинская область:

Китабский, Дехканабадский и Яккабагский районы;

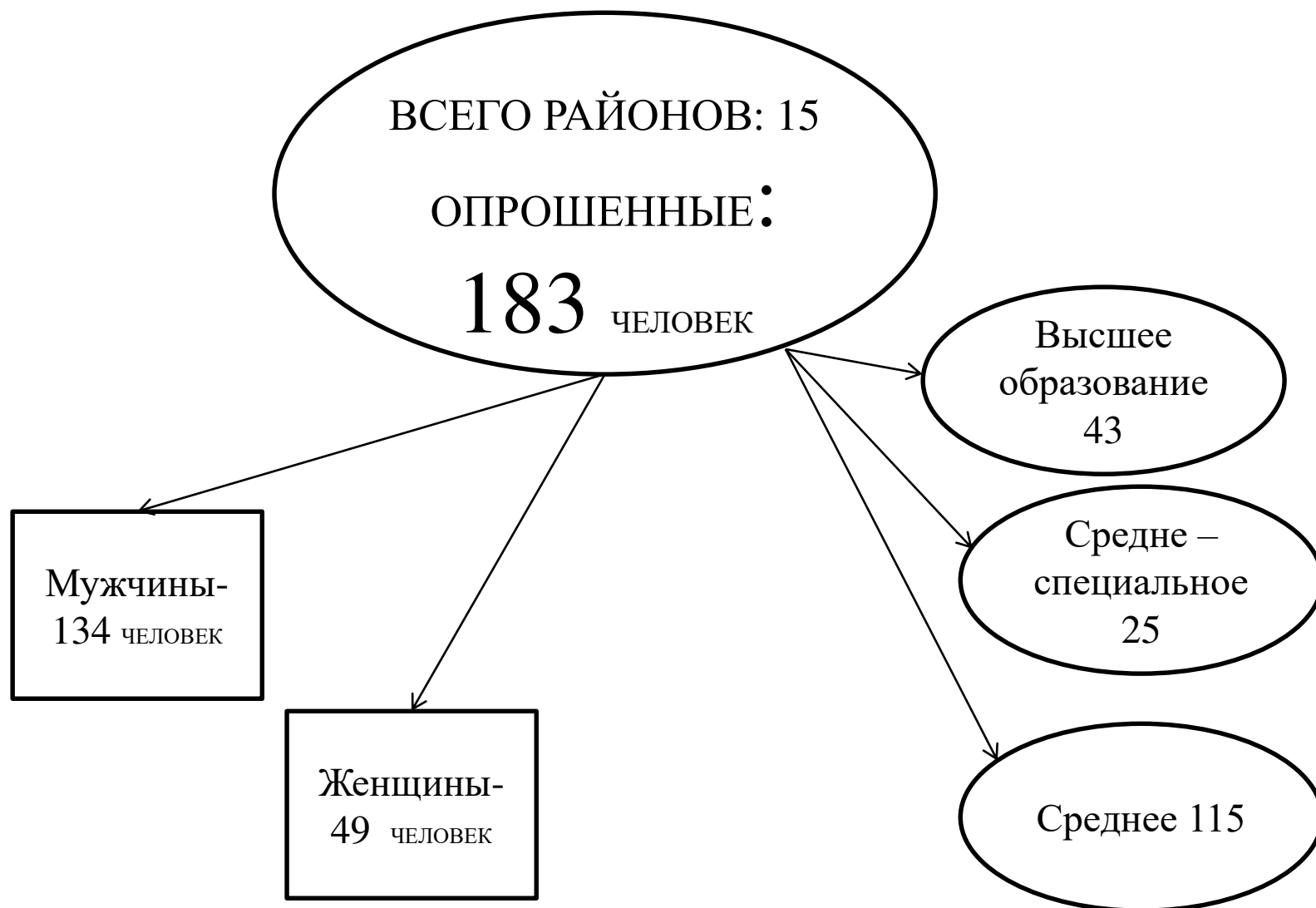
-Наманганская область:

Чустский и Туракурганский районы;

-Ферганская область:

Дангаринский район.

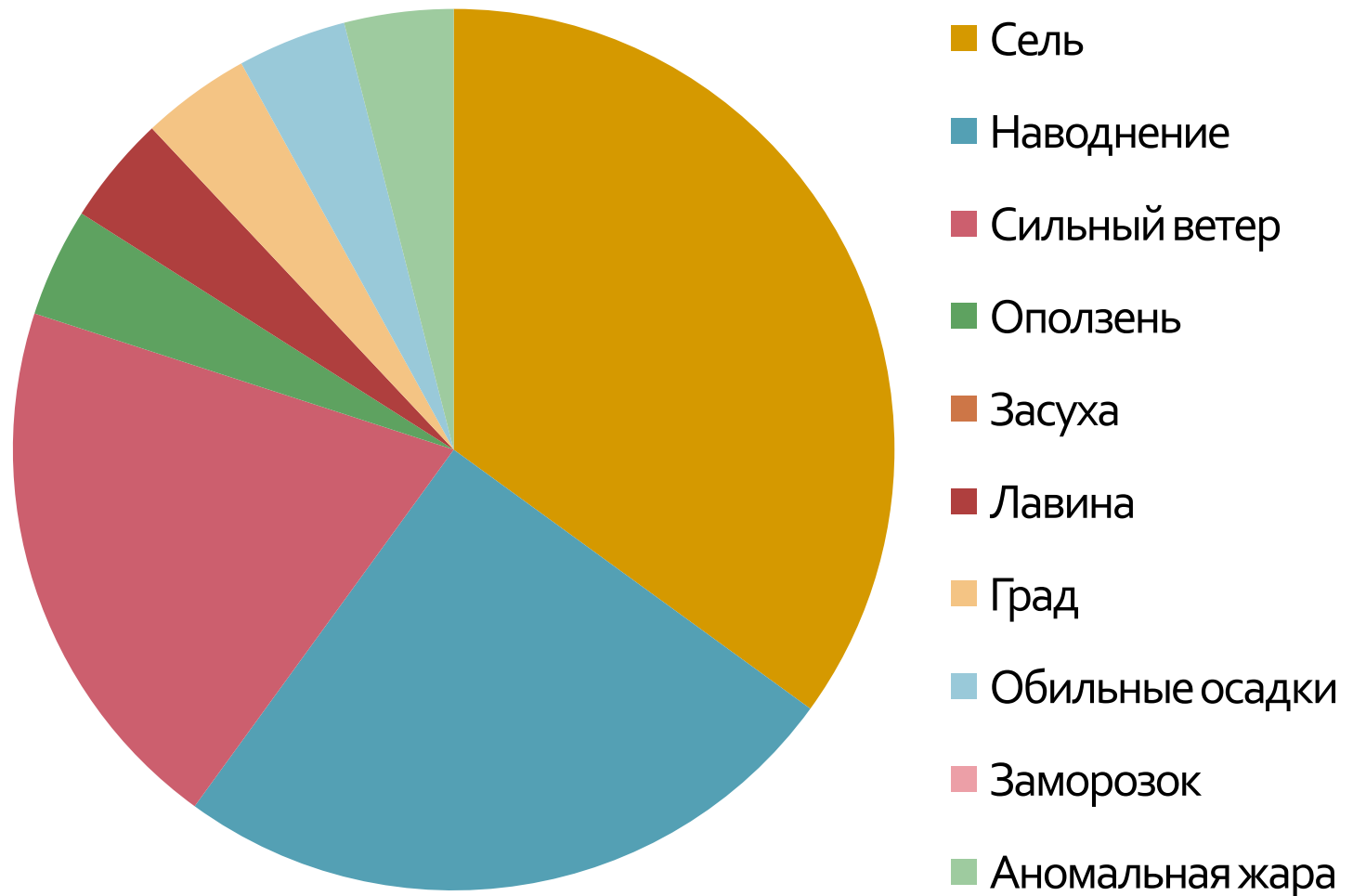
Общая информация об участниках фокус-группы



Районы наиболее уязвимые к климатическим угрозам

Угроза	Частота	Наименование районов, где происходят климатические угрозы, количество событий, ведущих к потере более одной жизни в год?
Наводнение	1-4	Куйичирчикский, Бостанлыкский, Сырдарьинский, Галляаральский, Шароф Рашидовский, Булунгурский (7 человек), Кошрабадский, Дехканабадский, Китабский, Яккабагский, Туракурганский, Чустский районы
Засуха		-
Сильный ветер	2-3	Куйичирчикский, Сырдарьинский, Галляаральский, Шароф Рашидовский, Булунгурский, Кошрабадский, Дехканабадский, Яккабагский, Туракурганский, Чустский, Дангаринский районы
Оползень	2-6	Куйичирчикский, Сайхунабадский, Шароф Рашидовский, Булунгурский, Туракурганский, Чустский районы
Сель	3-7	Кошрабадский, Дехканабадский, Китабский, Яккабагский, Туракурганский, Чустский, Дангаринский районы
Лавина	2-3	Бостанлыкский район (3 человек)
Град	2-3	Куйичирчикский, Сайхунабадский, Галляаральский, Китабский, Чустский районы
Обильные осадки	3-4	Куйичирчикский, Бостанлыкский, Галляаральский, Булунгурский, Кошрабадский, Дехканабадский, Туракурганский, Чустский районы
Заморозки		-
Аномальная жара	1-3	Сырдарьинский, Шароф Рашидовский, Джамбайский районы

Районы наиболее уязвимые к климатическим угрозам



Ущерб по угрозам

Угроза	Число жертв	Число поврежденных школ	Число поврежденных медпунктов	Время отсутствия электричества
Наводнение	7	5	2	2-10 часов
Засуха	-	-	-	-
Сильный ветер	-	3	2	2-8 часов
Оползень	-	-	-	-
Сель	-	-	-	-
Лавина	3	-	-	-
Град	-	-	-	-
Обильные осадки	-	-	-	-
Заморозки	-	-	-	-
Аномальная жара	-	-	-	-

Информация об ущербах по фирмам

Угроза	Оценка потерь имущества //собственности фирм	Оценка дополнительных выплат зарплат фирмами	Оценка потерь продукции фермерства (посевы)фирмами	Оценка потерь продукции животноводства фирмами	Оценка потерь рыбной продукции фирмами
Наводнение	5 млн.сум	-	15 млн. сум	75 млн. сум	100млн.сум*
Засуха	-	-	-	-	-
Сильный ветер	4млн.сум	-	-	-	-
Оползень	-	-	-	-	100млн.сум*
Сель	5млн.сум	-	15 млн. сум	75 млн. сум	100 млн.сум*
Лавина	-	-	-	-	-
Град	-	-	-	-	-
Обильные осадки	-	-	-	-	-
Заморозки	-	-	-	-	-
Аномальная жара	-	-	-	-	-

Расходы связанные с здравоохранением и восстановлением поврежденных медучреждений

Угроза	Сумма расходов, связанных с лечением пострадавших вследствии бедствия	Сумма расходов по восстановлению разрушений медучреждений из-за бедствия
Наводнение	2 чел. (Дехканабадский) – 400 тыс.сум	Куйичирчикский (1 медпункт – 20 млн. сум), Яккабагский (1 медпункт – 6 млн.сум)
Засуха		
Сильный ветер		Дангаринский (1 медпункт – 3 млн. сум), Чустский (1 медпункт – 4 млн. сум)
Оползень		
Сель		
Лавина		
Град		
Обильные осадки		
Заморозки		
Аномальная жара		

Расходы домохозяйств и фирм связанные с эвакуацией и переездом из-за бедствия

Угроза	Расходы домохозяйств на уборку	Расходы домохозяйства на эвакуацию	Расходы домохозяйства на переезд	Расходы фирмы на уборку	Расходы фирмы на эвакуацию	Расходы фирмы на переезд
Наводнение	от 50 тыс. до 4 млн.сум		2-6 млн.сум			
Засуха						
Сильный ветер						
Оползень						
Сель						
Лавина						
Град						
Обильные осадки						
Заморозки						
Аномальная жара						

Существующие системы, которые могут быть активированы в случае бедствия

	Существуют (да/нет)	Использовались в течение последних 5 лет (да/нет)
Сирены	Да (Сайхунабадский)	Да (один раз в целях учебной тревоги)
Четко обозначенные маршруты эвакуации	Да (почти во всех районах)	В 2013 году население махалли Ватан Куйичирчикского района приведено к готовности в случае эвакуации. Подготовлены колонны автобусов.
Аварийное убежище	нет	нет
СМС сообщения	Да (во всех районах)	Регулярно сообщают о возможности климатических угроз.
Медиа трансляции (например, радио и телевидение)	нет	нет
Устное уведомление местных пастухов	Да (во многих районах)	Да

Проблемы и пути их решения

1. Бесперывное извлечение щебня, осуществляемое предпринимателями, занимающихся их дроблением

1. Осуществлять контроль деятельности данных предпринимателей в установленном порядке со стороны государственных органов.

2. Продолжается жилищное строительство прямо в селеопасных зонах, и это в свою очередь, препятствует строительству противопаводковых сооружений.

2. Перед тем, как давать разрешение на жилищное строительство, ответственным лицам следует проверить данное место на опасность в установленном порядке.

3. Возникновения различных инфекционных заболеваний от смывания мусоров водой после селя и разбрасывается по улицам кишлака

3. Местным властям следует содействовать решению данной проблемы в сотрудничестве с соответствующими органами

4. Отрицательные последствия селевых потоков в многих населенных пунктах

4. Построить новые малое водохранилище

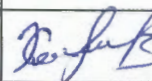
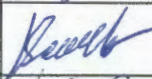
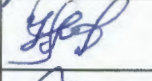
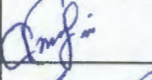
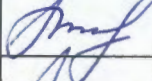
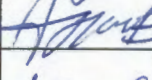
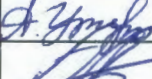
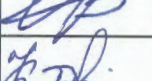
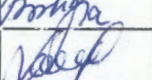
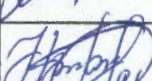
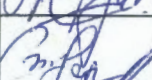
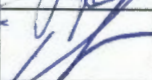
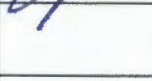
5. Из за отсутствия многих домохозяйств кадастровой документации на недвижимость и страховой полис, государства не покрывает ущерб от бедствий.

5. Ответственным органам по вопросу кадастра и страхования целесообразно часто проводить на местах семинары и мероприятий по оформлению кадастра и страхового полиса.

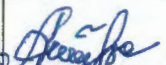


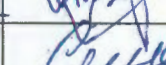
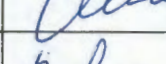

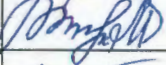
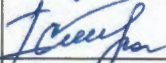

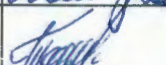





СПАСИБО ЗА ВНИМАНИЯ

25 декабр 2018 йил Тўрақўрғон туманида ўтказилган сўровнома иштирокчиларининг рўйхати

№	Фамилияси	Исми	Ёши	Жинси	Маълумоти	Телефони	Имзоси
1.	Холмирзаев	Расуляжон	58	эркак	Олий	93-402-0642	
2.	Қодиров	Мусоҳон	61	эркак	Олий	94-278-98-81	
3.	Холмирзаев	Қосимжон	50	эркак	ўрта	94-307-26-64	
4.	Ризаев	Наирабжон	51	эркак	ўрта	-	
5.	Махкалеев	Малланазар	33	эркак	ўрта	93-373-41-25	
6.	Авзалов	Ақбаржон	31	эркак	Олий	97-250-78-60	
7.	Ўрмонова	Азиза	30	айёл	ўрта	99-990-42-29	
8.	Ортиқов	Ўаттатов	53	эркак	ўрта	97-375-24-20	
9.	Қазанбаева	Ҳафотой	56	айёл	ўрта	-	
10.	Хўжаахмедов	Шокир	53	эркак	ўрта	93-677-65-77	
11.	Холмирзаева	Имебат	46	айёл	ўрта	-	
12.	Салатов	Ғаффор	61	эркак	ўрта	-	
13.	Исамиддинов	Мурозжон	40	эркак	ўрта	97-915-99-96	
14.							
15.							

26 декабр 2018 йил Чуст туманида ўтказилган сўровнома иштирокчиларининг рўйхати

№	Фамилияси	Исми	Ёши	Жинси	Маълумоти	Телефони	Имзоси
1.	Алиев	Умид	57	аёл	ўрта	91-364 4505	
2.	Мамедов	Рахмон	33	эркак	ўрта	90-533-12-04	
3.	Сайдуллаев	Рабибулло	55	эркак	ўрта	94-578-25-52	
4.	Сабиров	Ахмеджон	40	эркак	ўрта	91-659-19-49	
5.	Боттаев	Рабибулло	42	эркак	ўрта	90-533-32-63	
6.	Томбошева	Навруз	50	аёл	ўрта	93 409 92 47	
7.	Икимова	Сарвишо	20	аёл	ўрта	91 360 47 18	
8.	Мамаралиева	Ҳаратчи	26	аёл	ўрта	—	
9.	Убайдуллаев	Эркин	54	эркак	ўрта	90 979 08 23	
10.	Олимова	Мухтарий	23	аёл	ўрта	—	
11.	Хусанова	Оамма	53	аёл	ўрта	97-568-45-05	
12.	Темуров	Хусан	26	эркак	ўрта	90 530 33 84	
13.	Ҳошинов	Акрамжон	57	эркак	ўрта	94 173 07 33	
14.							
15.							

Иштирокчилар руйхати

Тадбир номи: Ўзбекистонни Яшил иқлим жамғармаси ресурсларидан фойдаланишга тайёрлаш дастури" лойиҳаси бўйича учрашув

Ўтказилиш жойи: Наманган ш. "Ёшлар маркази" кичик магазинлар дони

Ўтказилган сана: 20.12.2019 й

№	Фамилия, исми	Ташкилот номи	Телефон	Имзо
1.	Усуббеков Е.Ф.	Вилоят ФВБ	91-495-75-33	
2.	Чўлпонкулов А.Ш.	Вилоят ДЗОМ	99-975-65-39	
2	Ғураев Д.И	Норин Тушан Ҳақония маркази	93440-51-66	
4.	Абдулхатова Э.В.	Вилоят Гидрометеоро- логия ботаникаси	91)2944434.	
5	Оусейнов С.Ю	Нам ИТЧ	90-554-63-83	
6.	Ширзахмедов Д.	Майдобзичи тоғи	90 597-92-76	
7	Хасанов Шохимжон	Ўзет Тушан молчи иқтисоди	99 970.00 61	
8.	Насриддинов Ҳайдаров О.	Номосахбатчи	945000644	

7	Уманов О.А.	Вилает хотимини	91-352-80-00.	
10	Боджоева Н.У.	"Идробод" МФС раиси	91/3613560	
11	Алиева Дилдора Шариповна	Комитат Дўст- лиги МФС раиси	993220571	
12	Важраев Абдураш.	Маҳалла раёни раиси	98/1720025	
13	Алиматова Лайлохон Мамаиловна	"Навбахор" МФС раиси	94503.40.63	
14	Османова Фариза	"Фазл" МФС раиси	93.9159119	
15	М.Ф. Сахалирзаев	Населонган муҳандис- лик турлими директори	87.252-75-73	
16	М.М. Садилов	Кашанган муҳандислик турлими инспектори	93-566-68-07	
17	Важиев Абдураш Боджоевич	Маҳалла раёни Кенгаши бошқарувчи раиси	99-320-02-58	
18	Халимзаев Аҳмад Юсуф мович	Қўзғолов тумани Маҳалла раёни Кенгаши бошқарувчи раиси	902607733	
19	Олимов Хасанбой Ахлов мович	Қортоғ тумани Маҳалла- лар Кенгаши раиси ва уринбошқару	94 27777 88	
20	Мураев Фатхиддин Махмудович	Ҳисор тумани Маҳалла- лар Кенгаши раиси	93-949-95-50	

21	Исломов модир Усмоновович	Директор ИДП	+93 264 30 02	Исломов
22	Байгумалев А.З	Директор ИДП	-80 219 2886	Байгумалев
23	Ибрагимов.	Узкуртон туман кенгаши раиси	94 274 33 85	Ибрагимов
24	Т. Амиханов	Наманган шаҳар Байкаленинск М.Ф.А	93 776-0752	Амиханов
25	Ш. Маркандов	Наманган шаҳар Ваҳидиё М.Ф. раиси	94-353-12-13	Маркандов
26	А. Муқимов	Наманган шаҳар Завод ИДП раиси	93 407-48-12	Муқимов
27	А. Рашидов	Наманган шаҳар Б.Т. М.Ф. раиси	91-343-56-45	Рашидов
28	А. Соликов	Наманган шаҳар Тараккиёт М.Ф. раиси	90-553-41-38	Соликов
29	С. Абдураҳимов	Наманган шаҳар Бунёдкор ИДП раиси	97-231-0079	Абдураҳимов
30	Д. Хамидов	Узкуртон туман кенгаши раиси	93-401-77-65	Хамидов
31	Р. Босунов	Вет. Ветеринар Босун	94.156-99-90	Босунов
32	Umrzaqov Fagullo	21 - DIMI	94 270 2497.	Umrzaqov

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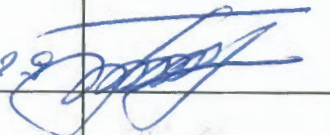

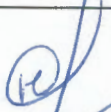
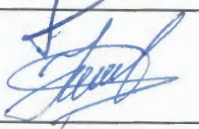
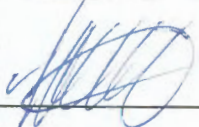
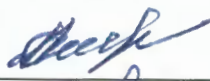
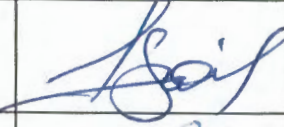
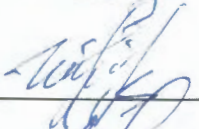
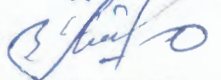
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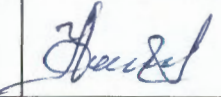






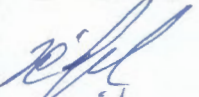

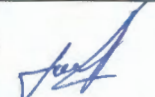
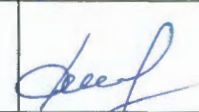
Тадбир номи: Ўзбекистонни Яшил иқлим жамғармаси ресурсларидан фойдаланишга тайёрлаш дастури" лойиҳаси бўйича учрашув

Ўтказилиш жойи: *Аудитон виласи қонобод тумани ҳокимлиги зали*

Ўтказилган сана: *21.12.2019*

№	Фамилия, исми	Ташкилот номи	Телефон	Имзо
1	<i>Султонов Аббасбек</i>	<i>Қорин-Қорағорек СРКБ СРБ бўлими бошқаруви</i>	<i>+998 94 560 66 55</i>	<i>[Signature]</i>
2	<i>Мирзев Рустам</i>	<i>Айни марн СШБ Риелторлиқ</i>	<i>+998992250-34-14</i>	<i>[Signature]</i>
3	<i>Ўдиргулов Урузбек</i>	<i>Ҳонобод шаҳар Экология инспекцияси</i>	<i>+99897996 8949</i>	<i>[Signature]</i>
4	<i>Шаматов Ш</i>	<i>Ўзбекистон ФСНМ,</i>	<i>91175-63-50</i>	<i>[Signature]</i>
5	<i>Давранов С</i>	<i>Вил. Экология байкари маси Ўзбекистон</i>	<i>90-526-05-00</i>	<i>[Signature]</i>
6	<i>Ўкбаров М</i>	<i>Ҳалакудук Экология инс. бошқаруви</i>	<i>90-541-82-38</i>	<i>[Signature]</i>
7	<i>Мусермонов Х</i>	<i>Қўрғонтепа.Б. Экология инс бошқаруви</i>	<i>94-382-0070</i>	<i>[Signature]</i>
8	<i>Тошматова А.</i>	<i>Вил Экология бошқар маси мутахассиси</i>	<i>94 387 7474</i>	<i>[Signature]</i>

9	И. Исраилов	Жалокуду Фермерлар каттаи	83.0605252	
10	Ф. Ахярбаев	Жалокуду Туман Фермерлар каттаи	91-605-60-06	
11	У. Тоҳирмонов	Тоҳирмонов Туман Далачи Ф. Рахбар	90-52529.29	
12	М. Ўмитов	Ўмитов Тоҳир Ф/Х Жалокуду Туман	97 83/84/3	
13	Н. Тухтаев	Жалокуду Туман Одод водий сохилкори	91-175-22-62	
14	Х. Ўқиров	Жалокуду Туман Ёрлик маъмурияти	90-148 90-80 93-706-9080	
15	Э. Абдуллаев	Жалокуду Туман Белкоров Ф/Х	94-389-16.66.	
16	О. Зокиров	Жалокуду Туман Қўйбўёқ ер орали Ф/Х	97-272-85-80	323
17	Д. Ахмедов	Жалокуду Туман Мусаев Тоҳир	91/175 00 78	
18	И. Махмудов	Амударё тумани	97 730 70 91	
19	Амолжонков Т	Абу Райхон Бору Ф/Х	97 346 19 81	
20	Жалокуду Т	Фермер уюми	93 692-44-64	

21.	Хошроқунов Абдуширқат	Малаккудун ту "Ширмаков" Алидун далаи ф/х	91-6071706	
22.	Умаров Абдулхатто	Налокудун туман "Чамма-чугирей фойди"	99 9171440	
23	Амхонков Дилшодди	Налокудун туман "Бешгал Сардор"	90 385-90-30	
24	Абдуллоев Мансурбек	Налокудун туман "Мансурбеков Махмудов"	91-174-82-22	
25	Зиядинов Мансурбек	Налокудун туман Нуратонин олов борол	91-477-88-77	
26	Илҳомов Абдуазиз	Налокудун туман "Колли Шайхон Сулф"	91. 489. 23.68	
27.	Уринов Олимжон	Налокудун туман "Омзор шодон"	90 6059041	
28	Эргашев Улмузбек	Налокудун туман Латифов Бахтиёр	906241400	
29	Назмиев Валиддин	Хонобод шаҳар "Махоратини фойда"	93 785 0747	
30	Алишонов Илкомжон	Хонобод шаҳар Соколов Келомжон	99 809.00 41	
31	Махсудов. В	Хонобод шаҳар Заринор Хонобод ф/х	94-560-0510	
32	Радабев. Б	Фойдагон бот фойда ф/б Хонобод	93-426-12-10	

[illegible]

Minutes of the meeting on working discussion of the project proposal "Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards»

Namangan city

20 December 2019

Attended by:

33 participants representing regional organizations

Agenda of the meeting

1. Opening. Welcome remarks.
2. Presentation of the project proposal «Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards».
3. Discussion of the issues raised in the presentation and social and economic issues related to further implementation of the project.

Meeting progress

1. At the opening of the meeting Mr. Golib Umrbekov, representative of the regional division of the Ministry of Emergency Situations, addressed the representatives with a welcoming speech and told the participants about the purpose of the meeting, as well as about the situation related to climate change. For example, based on observations, only last year, Samarkand and Kashkadarya regions, including Namangan region, were severely affected by mudflows. The damage caused to the population, socially significant objects, agricultural lands exceeds many millions of soums. In this regard, in order to take timely measures to protect and mitigate the consequences, UNDP, in collaboration with Uzhydromet and the Ministry of Emergency Situations, prepared a project proposal for the Green Climate Fund to improve the early warning system for the population related to the effects of climate change, which also involves increasing resilience and adapting to the risks of climate change.

2. Then the floor was given to the head of the joint project of UNDP and CCI of Uzbekistan "Improving Sustainability and Adaptation of Farmers of the Ferghana Valley to the Climate Change Risks". At the beginning of his speech, he briefly talked about the activities of the Green Climate Fund, as well as the reasons for proposing this project, and cited examples of the effects of climate on the socio-ecological and economic situation in Uzbekistan. Despite the fact that large-scale work is being carried out in the field of mitigating the risks of climate change, there are many questions that need to be addressed, in particular, these are the issues related to the country's limited ability to map, monitor and predict climate risks, as well as to analyze and work with relevant information.

Then, detailed information was provided about the new project: the initiators of the project, the legislative framework and its compliance with national priorities, goals and components of the project, as well as planned tasks and approaches to achieve these goals. In particular, the project will: improve methods and data / models used for monitoring and forecasting; develop the capacity of national agencies on climate-related modeling; expand areas and geophysical / biophysical observations using satellite

remote sensing for monitoring and assessment of risks of hazards; create a central depository, which will include improved information management system for monitoring and forecasting hydrometeorological processes; improve the regulatory framework, coordination and institutional mechanisms; improve the provision of “last mile” information on disasters and interaction with end users, especially in the communities with the highest risk of hazardous events.

U. Dedabaev separately noted that the project will benefit more than 11 million people living in high-risk zones of Uzbekistan; and by 2030 this number of people who may potentially suffer from climate risks may reach over 13 million.

3. The following issues were raised for discussion: the importance of this project for the government and the population, the impact of the project on the social life of people, the impact of this project on the social aspects of communities and gender issues, infrastructure, as well as environmental risks.

In general, all participants expressed their approval of this project, which will be beneficial for the country in all socio-economic and environmental aspects.

The representative of the Ministry of Emergency Situations mentioned that despite the many issued and signed decrees and resolutions regarding the warning of the population about extreme weather events, the work done is still not enough. For example, of 33 million people living in Uzbekistan, last year only 2 million people were covered by the Ministry of Emergency Situations activities; this year, preventive work will cover 5 million people. Even with this amount of work, coverage can only be increased by 16%. The number of people living in the most dangerous zones is growing every year. Automation of the warning system will help to significantly increase the efficiency and timeliness of the early warning.

The representative of Uzhydromet gave an overview of the causes of climate change, overheating of the earth, infrequent but intense precipitation, causes of the greenhouse effect, due to which the increase in precipitation leads to mudflows, which present the most significant negative effect of climate change consequences. Hence, this early warning project will provide a good solution providing for identifying and preventing climate induced hazards, as well as an opportunity to influence seasonal hydrometeorological processes.

Further, the following recommendations were provided:

- to reduce water flows from mountain areas during floods, it is suggested to consider the creation of reservoirs, which will subsequently protect from drought and water shortages in summer time;
- to reduce the effects of climate change, it is suggested to finance solar power plant projects, which will reduce greenhouse gas emissions, by moving away from generation of electricity by thermal power plants and hydro power plants (*HPP do not work on fossil fuel?*), which run on gas and coal;
- include in the project a proposal on creating a training course (department) at universities for training specialists in hydrometeorology, the profession with a growing demand. To date, hydrometeorology specialists are trained only in one college and in one university of the country, which, taking into account the number of operational and planned facilities, is not enough.

Minutes of the meeting on discussion and assessment of the project proposal "working discussion of the project proposal "Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards"

Khanabad city

21 December 2019

Attended by:

34 participants representing district and regional organizations

Agenda of the meeting

1. Opening. Welcoming remarks.
2. Presentation of the project proposal «Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards».
3. Discussion of the issues raised in the presentation and social and economic issues related to further implementation of the project.

Meeting progress

1. The meeting opened by welcoming speech of Uzhydromet representative, Mr. Isroil Makhmudov, who informed the participants about the project “Green Climate Fund readiness program for Uzbekistan” that is being implemented in accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated July 9, 2016. He also explained the purpose of the proposed project proposal, which is the establishment of automated early warning system and installation of new hydrometeorological equipment.

2. Then the floor was given to Mr. Ulugbek Dedabaev, head of the joint project of UNDP and CCI of Uzbekistan “Improving Sustainability and Adaptation of Farmers of the Ferghana Valley to the Climate Change Risks”. At the beginning of his speech, he briefly talked about the activities of the Green Climate Fund, as well as the reasons for proposing this project, and cited examples of the effects of climate on the socio-ecological and economic situation in Uzbekistan. Despite the fact that large-scale work is being carried out in the field of mitigating the risks of climate change, there are many questions that need to be addressed, in particular, these are the issues related to the country's limited ability to map, monitor and predict climate risks, as well as to analyze and work with relevant information.

Then, detailed information was provided about the new project: the reasons for this project proposal, legal framework and its alignment with national priorities, goals and objectives of the project, including the activities planned under the project/ It was stated that the project will: improve methods and data / models used for monitoring and forecasting; develop the capacity of national agencies on climate-related modeling; expand areas and geophysical / biophysical observations using satellite remote sensing for monitoring and assessment of risks of hazards; create a central depository, which will include improved information management system for monitoring and forecasting hydrometeorological processes; improve the regulatory framework, coordination and institutional mechanisms; improve the provision of “last

mile” information on disasters and interaction with end users, especially in the communities with the highest risk of hazardous events..

U. Dedabaev separately noted that the project will benefit more than 11 million people living in high-risk zones of Uzbekistan; and by 2030 this number of people who may potentially suffer from climate risks may reach over 13 million.

3. The following issues were raised for discussion: the importance of this project for the government and the population, the impact of the project on the social life of people, the impact of this project on the social aspects of communities and gender issues, infrastructure, as well as environmental risks.

In general, all participants expressed their approval of this project, which will be beneficial for the country in all socio-economic and environmental aspects. Training of Uzhydromet services and Ministry of Emergency Situations staff, improving the quality of provided services, raising the awareness of population will also contribute to the relevance of this project. For instance, installation of sonars will allow for advance identification of clouds with potential threat, their trajectories, potential intensity of precipitation etc.

The following proposal were provided:

- to set up production of filters to reduce and treat industrial waste; at present one industrial filter costs from \$5 to \$30 thousand. If this proposal cannot be incorporated to the project, then it could be presented as separate project proposal for GCF review.
- to establish automated Uzhydromet posts for atmospheric observation in each of industrial zones, namely for monitoring of air pollution.

Встреча по обсуждению и оценке проектного предложения «по рабочему обсуждению проектного предложения по «Совершенствованию комплексной системы раннего оповещения для повышения устойчивости сообществ Узбекистана к опасным природным явлениям, вызванным изменением климата»

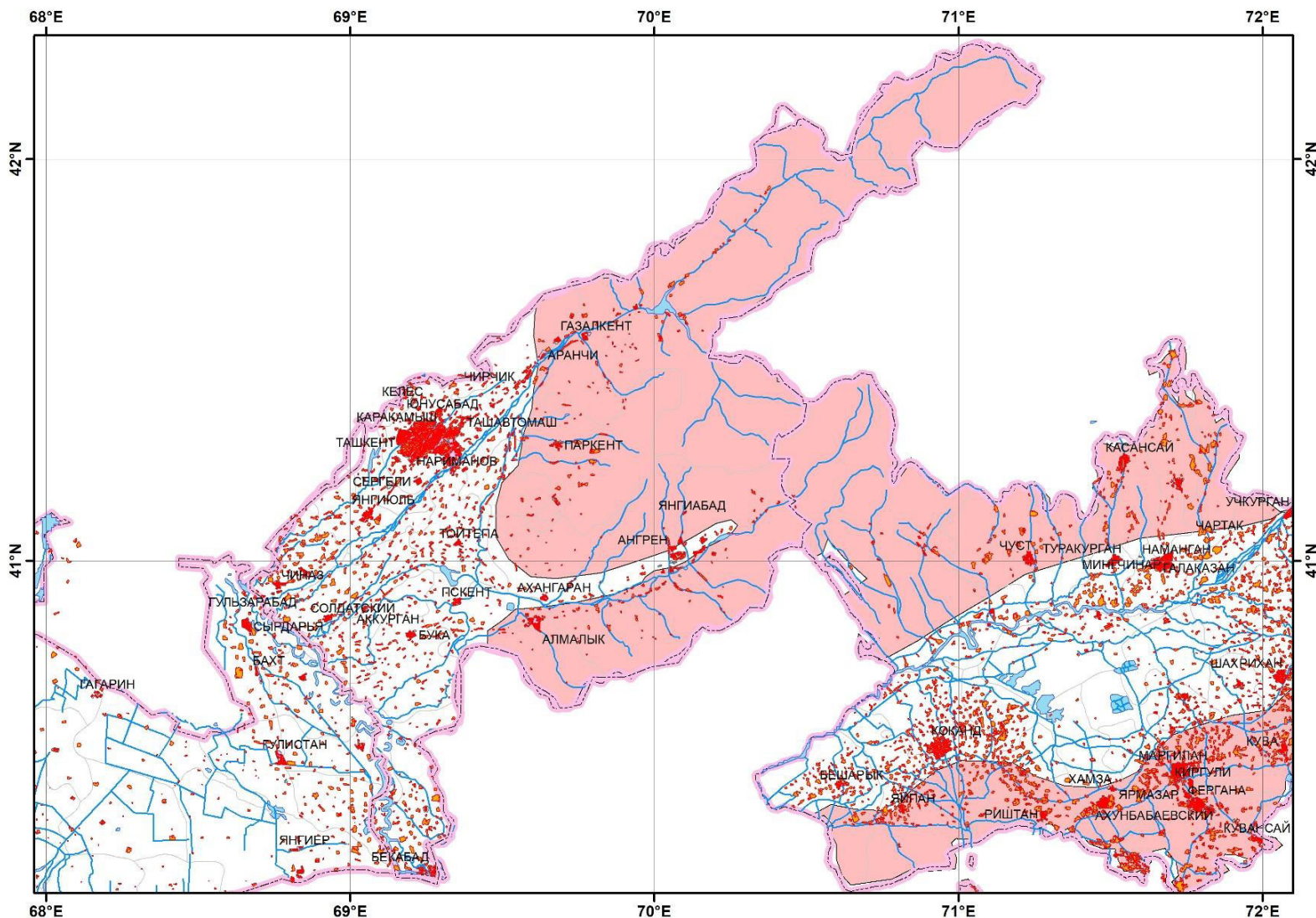
декабрь 2019г., г. Наманган

Краткая информация о ситуации

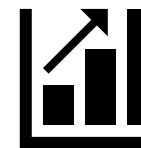
- ✓ Узбекистан – это страна с уровнем доходов ниже среднего, не имеющая выхода к морю, расположенная в самом сердце Центральной Азии;
- ✓ 72% ее территории - это равнинные и крайне засушливые районы;
- ✓ 24-е место в глобальном списке «горячих точек» стихийных бедствий, составленном Всемирным банком;
- ✓ 9,3% всей территории страны находится под угрозой;
- ✓ 65,6% населения проживает в опасных районах;
- ✓ 65,5% национального ВВП (12 млрд. долларов США в год) генерируется из районов, подверженных рискам;
- ✓ НО, возможности Узбекистана по картированию, мониторингу и прогнозированию климатических рисков, а также по работе с этой информацией, крайне ограничены.



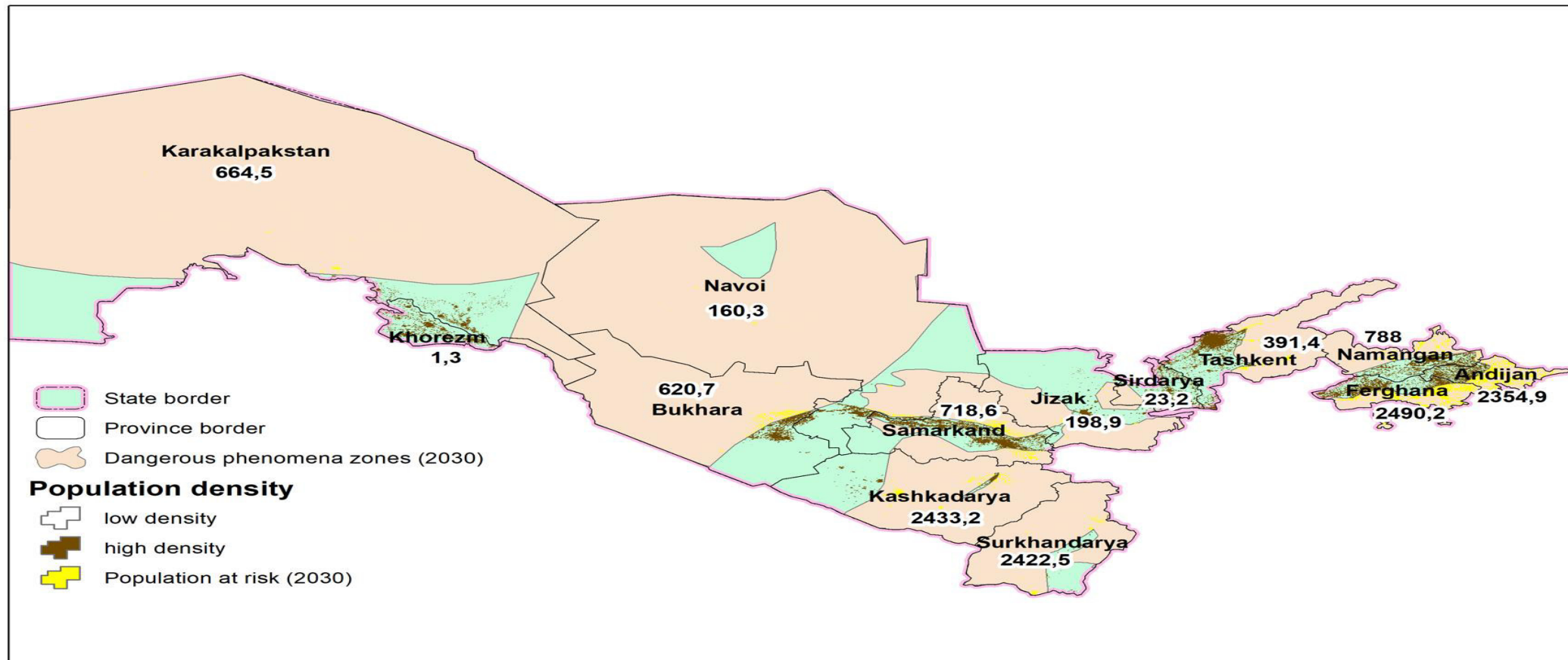
Карта зон, подверженных риску селей (затемненные), и население/населенные пункты (красные точки) в восточной части Узбекистана



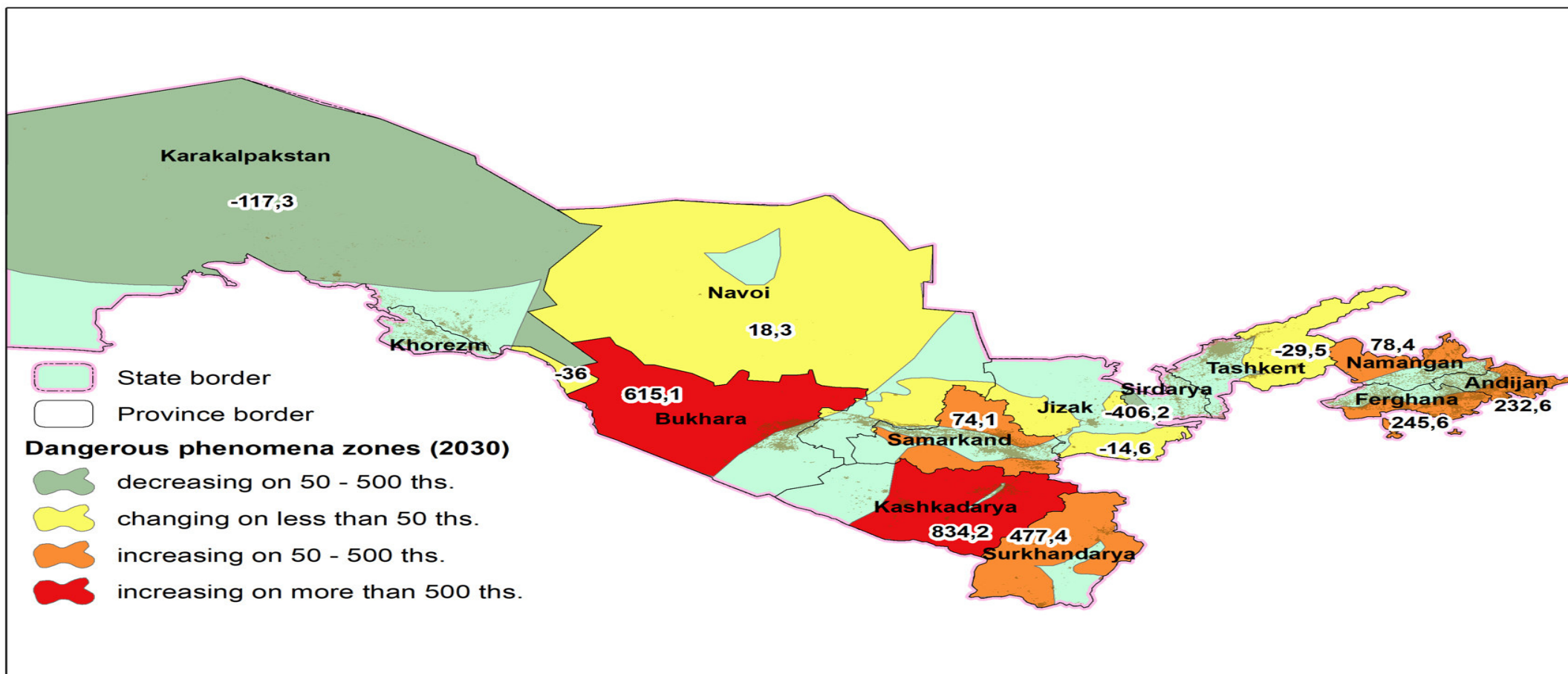
С 1950-х гг. ежегодное повышение средней температуры составляет $0,27^{\circ}\text{C}$ за каждые десять лет



Количество населения (тысячи), подверженного одному или нескольким видам природных опасных явлений (их степень) на 2030.



Изменение количества населения (тысячи), подверженного одному или нескольким опасным природным явлениям к 2030.



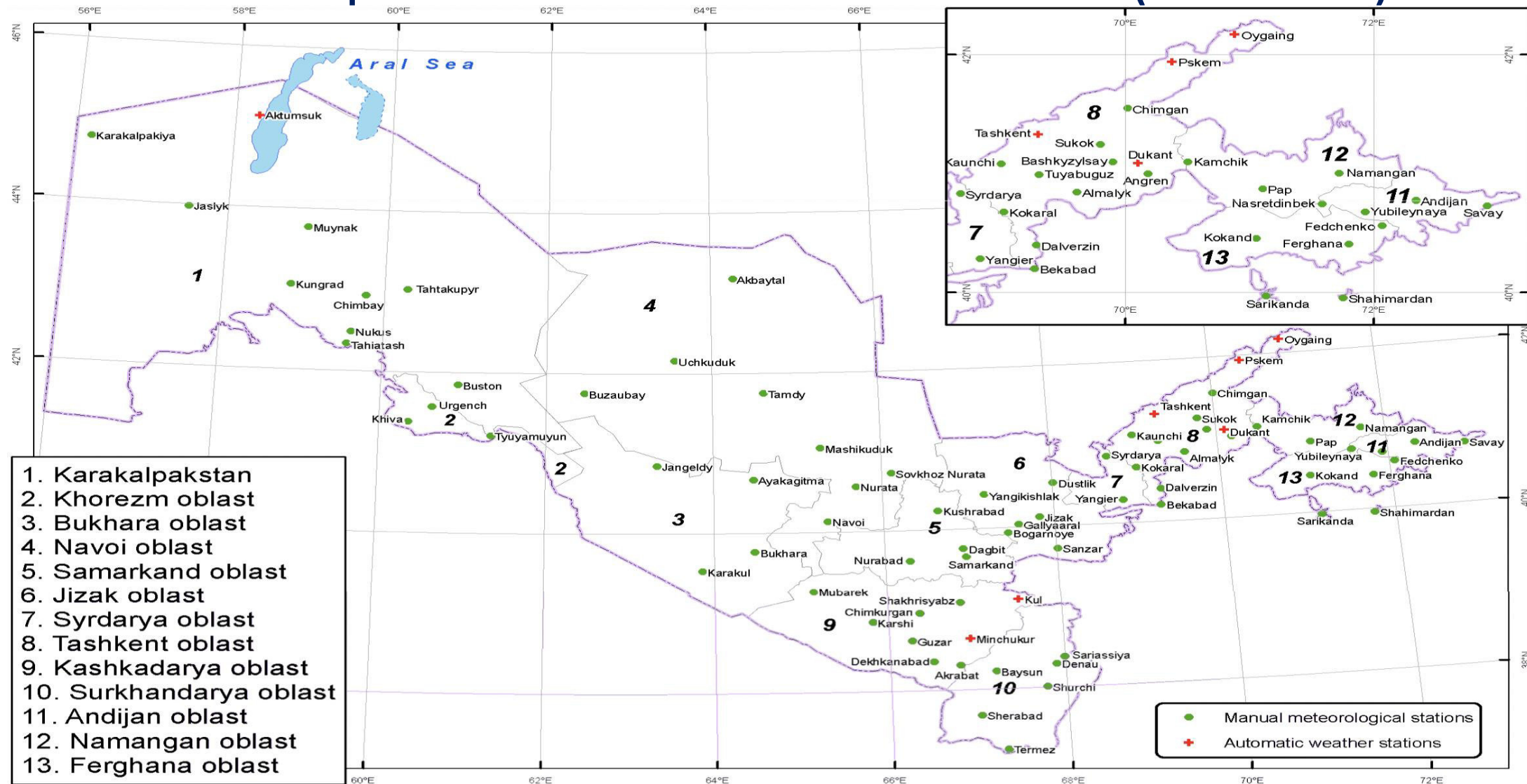
Соответствие проекта национальным приоритетам

- ✓ Узбекистан ратифицировал Парижское соглашение по изменению климата 27 сентября 2018. В первом определяемом на национальном уровне вкладе (ОНУВ) страна определила адаптацию к изменению климата в качестве приоритета в сельском хозяйстве, управлении водных ресурсов, социальной защите и защите стратегической инфраструктуры и производственных активов.

Проект соответствует следующим законодательным документам:

- ✓ “Государственная программа по прогнозированию и предотвращению чрезвычайных ситуаций” #71 от 03.04.2007, которая включает прогнозирование потенциальных чрезвычайных ситуаций, особенно природных бедствий, создание и координацию механизмов управления рисками чрезвычайных событий, создание системы раннего предупреждения и информирования;
- ✓ Постановление Кабинета Министров Республики Узбекистан "О дальнейшем совершенствовании государственной системы предупреждения и действий при чрезвычайных ситуациях Республики Узбекистан" от 24 августа 2011, No. 242;
- ✓ Указ No. 5066 от 1 июня 2017 устанавливает программу по развитию нового подхода к мониторингу и прогнозированию природных опасных явлений, ведущих к возникновению чрезвычайных ситуаций;
- ✓ Указ No. 601 Кабинета министров от 8 августа 2017 содержит структуру национальной системы раннего предупреждения об опасных природных явлениях, включая автоматизированную систему распространения аварийных и предупредительных сообщений. Он также обеспечивает законодательную базу для создания региональных центров управления кризисными ситуациями, а также полномочия МЧС по эксплуатации и техническому обслуживанию оборудования и выделению средств на создание и поддержание систем ИКТ и связи систем, и запросу об использовании частной телекоммуникационной инфраструктуры при чрезвычайных ситуациях; и
- ✓ “Положения Министерства чрезвычайных ситуаций Республики Узбекистан, Центра гидрометеорологической службы и Государственной инспекции по контролю и надзору за крупными и особо важными водными объектами в ведении министерства”, которые указывают, что Узгидромет должен снабжать все государственные институты и население информацией о текущей и прогнозируемой гидрометеорологической ситуации и изменении климата; и проводить исследования по улучшению краткосрочного и долгосрочного прогнозирования погоды и изменения климата.
- ✓ В октябре 2019, решением Правительства, функции национального уполномоченного органа по ЗКФ были делегированы Министерству инвестиций и внешней торговли Республики Узбекистан.

Метеорологическая сеть Узбекистана (на 2010г.)



Препятствия на пути более эффективной генерации и использования климатической информации для управления климатическими рисками:

1. Недостаточный национальный технический потенциал для гидрометеорологического мониторинга, моделирования, оценки рисков и картирования.
2. Недостаточный институциональный и технический потенциал для своевременного прогнозирования и раннего предупреждения комплексных угроз, а также для эффективного направления и распространения информации, связанной с бедствиями.

Цель проекта - повысить эффективность и охват комплексной системы раннего предупреждения об опасных явлениях, вызванных изменением климата в Узбекистане, с учетом прогнозируемого воздействия изменения климата.

В частности, проект послужит:

1. Улучшению методов и данных/моделей, используемых для мониторинга и прогнозирования переменных данных, необходимых для получения климатических характеристик;
2. Развитию потенциала национальных ведомств по моделированию связанных с климатом опасных явлений (гидрологическая засуха, оползни, сели и лавины) и использованию современных методов погодного и сезонного прогнозирования;
3. Расширению областей и геофизических/биофизических наблюдений с использованием спутникового дистанционного зондирования (включая мониторинг осадков, растительности, снежного покрова и оползней/сходов) для мониторинга и оценки рисков опасных явлений в расширенных районах Узбекистана, особенно в тех регионах, где размещение наблюдательного оборудования не практично;
4. Созданию центрального депозитария/хранилища, включающего в себя усовершенствованную систему управления информацией для контроля, прогнозирования и мониторинга гидрометеорологических процессов;
5. Совершенствованию нормативно-правовой базы, координации и институциональных механизмов для эффективной КСРП и содействию росту регионального сотрудничества для управления трансграничными рисками через существующие и новые региональные координационные платформы; и
6. Усилению предоставления информации «последней мили» о бедствиях и взаимодействия с конечными пользователями, особенно в тех сообществах, где существует наивысший риск возникновения опасных явлений.

Как достичь целей проекта:

Для того, чтобы преобразовать текущую систему раннего предупреждения в Узбекистане из реагирующей в систему, основанную на предотвращающих предупреждениях (до события), необходимо :

- ✓ повысить эффективность сбора и генерации/прогнозирования погодной и климатической информации (компонент 1);
- ✓ разработать методы и операционные системы, которые преобразуют информацию/прогнозы по погоде/климату в действенные предупреждения и распространят их среди пользователей, которые будут понимать их содержание и знать как лучше реагировать.

Компонент 1. Модернизация сети гидрометеорологического наблюдения, потенциала по моделированию и прогнозированию

Деятельность 1.1. Модернизация и обновление системы метеорологических и гидрологических наблюдений будет включать модернизацию/автоматизацию 25 станций и оборудования для метеорологических наблюдений (программное обеспечение, рабочие станции и т. д.), модернизацию наземной инфраструктуры (обработка телеметрии, генераторы водорода и т. д.) для 2 аэрологических станций (Узгидромет/Правительство будут поддерживать создание 2 дополнительных), установка 2 онлайн-доплеровских радиолокационных систем в диапазоне С для покрытия текущих пробелов в горных районах, модернизация и техническое оснащение 90 гидрологических станций, а также установление контрольных показателей и современного оборудования для калибровки приборов (вакуумные камеры, мобильная лаборатория и т. д.).

Деятельность 1.2. Повышение потенциала Узгидромета для хранения, обработки и разработки продуктов, связанных с опасными явлениями, а также для передачи гидрометеорологических данных региональным подразделениям. Это является информационной системой климатического обслуживания (как описано в ГРОКО) и включает создание операционного центра, серверов ИКТ и сетевого оборудования для интеграции потоков данных (гидрометеорологических и спутниковых наблюдений) и автоматизации процессов и анализа (включая прогнозы угроз).

Компонент 1. Модернизация сети гидрометеорологического наблюдения, потенциала по моделированию и прогнозированию

Деятельность 1.3 Переподготовка и повышение квалификации персонала Узгидромет по осуществлению мониторинга и технологиям и процедурам прогнозирования (обучение сотрудников МЧС и геотехнического персонала покрывается Результатом 2 ниже). Международные эксперты будут проводить обучение специалистов по прогнозированию погоды по работе с новыми продуктами модели КОСМО (с разрешением 13 и 2 км). Курсы повышения квалификации и ускоренного обучения будут проводиться по новому программному обеспечению и оборудованию, включая внедрение новых методов для анализа и прогнозирования гидрометеорологически важных переменных и климатических угроз.

Компонент 2: Создание функционирующей комплексной системы раннего предупреждения на основе инновационного моделирования воздействия, анализа рисков, эффективного регионального взаимодействия и осведомленности сообществ.

Деятельность 2.1. Разработка и установка модернизированной и эффективной системы оценки климатических рисков на основе динамической информации об опасностях и уязвимостях, включая модели социально-экономических рисков для принятия решений и определения приоритетов устойчивости, обеспечивающей долгосрочные/будущие инвестиции;

Деятельность 2.2. Разработка и внедрение технических руководств, институциональных и координационных рамок для повышения эффективности: i) сбора и архивирования данных (меры 1.1 и 1.2); ii) картирования и моделирования угроз (деятельность 1.2); iii) оценки рисков (мера 2.1); и iv) распространения информации среди РЦКУ (деятельность 2.3).

Компонент 2: Создание функционирующей комплексной системы раннего предупреждения на основе инновационного моделирования воздействия, анализа рисков, эффективного регионального взаимодействия и осведомленности сообществ.

Деятельность 2.3. Разработка и внедрение системы для распространения информации в РЦКУ и конкретных мобильных оповещений, включая систему визуализации информации для РЦКУ с программным обеспечением. Это включает в себя настройку систем визуализации и анализа информации (видеостены, телекоммуникационные системы, серверы и хранилище ИКТ) в 7 СДУМ, чтобы они могли визуализировать карты и информацию о прогнозе воздействия, предоставляемую через систему анализа рисков и предупреждения (мера 2.1), и комбинировать это с локальной (регионально доступной) информацией о текущих уязвимостях и полевыми данными.

Компонент 3. Совершенствование климатических услуг и информирования о бедствиях для конечных пользователей

- ✓ Предлагаемый компонент повысит эффективность предоставления климатической информации и информации о стихийных бедствиях пользователям в Узбекистане на двух уровнях. На общенациональном уровне, проект инициирует создание Национальной структуры климатического обслуживания в качестве механизма для систематического объединения производителей и пользователей гидрометеорологической и климатической информации и для обеспечения того, чтобы информация и услуги доходили до их конечных получателей, как в различных структурах правительства и общества, так и в разных географических регионах, вплоть до местных общин

Компонент 3. Совершенствование климатических услуг и информирования о бедствиях для конечных пользователей

Деятельность 3.1 Совершенствование национальной системы климатического обслуживания Узбекистана

- ✓ Будет проведена базовая оценка климатического обслуживания в Узбекистане, после чего будут проведены консультации с участием многих заинтересованных сторон, а также будет разработана концепция и план действий страны, которые будут одобрены как заинтересованными сторонами, так и на высшем исполнительном уровне;
- ✓ Будет создана платформа для привлечения конечных пользователей к разработке и тестированию новых климатических информационных услуг и продуктов, связанных с природными бедствиями.
- ✓ Аналогичным образом будет создан и поддержан Национальный форум по климатическим перспективам в качестве единого механизма, который поможет формировать и предоставлять климатическое обслуживание с более длительным временным горизонтом, т.е. с особым акцентом на стихийные бедствия, такие как гидрологические засухи.
- ✓ Будет установлена связь между нац Форумом и региональными климатическими форумами ВМО, действующими в Европе (NEACOF), а также в Азии (FOCRAII)

Компонент 3. Совершенствование климатических услуг и информирования о бедствиях для конечных пользователей

Деятельность 3.2 Установление устойчивой бизнес-модели для связанной с бедствиями информации.

- ✓ Проведение всестороннего анализа и обсуждения вариантов долгосрочного устойчивого финансирования услуг, связанных со стихийными бедствиями, в дополнение к текущей модели государственного финансирования, в частности, на основе возможностей частных инвестиций и государственно-частного партнерства;
- ✓ Разработка и согласование с ключевыми заинтересованными сторонами устойчивой бизнес-модели на основе производственно-сбытовой цепочки для информации, связанной с бедствиями;
- ✓ Планирование необходимых правовых и организационных изменений на национальном уровне (корректировка законодательства) и межинституциональном уровне (Узгидромет, МЧС, пользователи услуг, частные инвесторы).

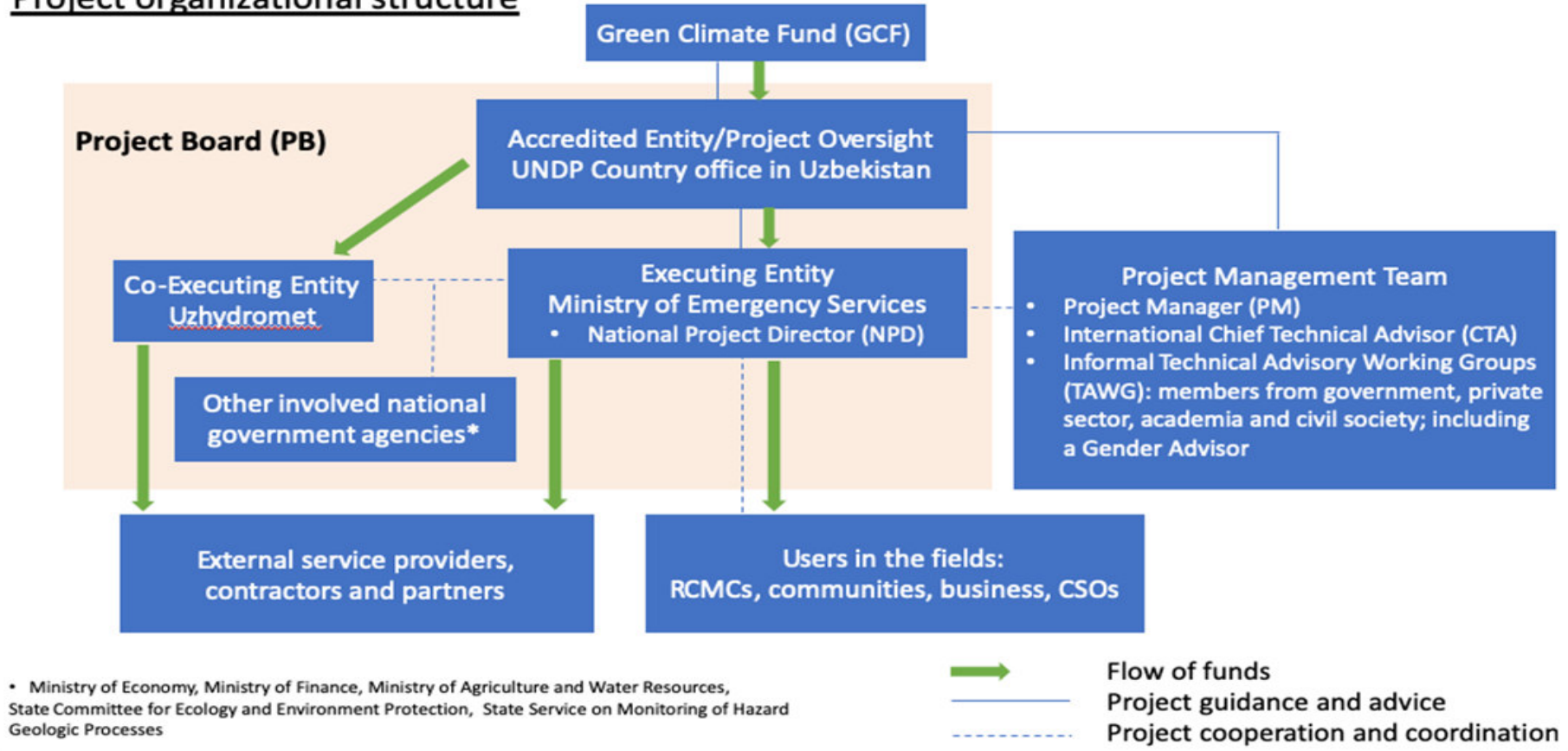
Компонент 3. Совершенствование климатических услуг и информирования о бедствиях для конечных пользователей

Деятельность 3.3. Укрепление коммуникации касательно природных бедствий и взаимодействия с конечными пользователями

- ✓ Укрепление взаимодействия с конечными пользователями информации о стихийных бедствиях в Узбекистане.
- ✓ В 20 выявленных общинах, подверженных наибольшему риску, будут созданы наружные информационные табло для оповещения и информирования населения в реальном времени об угрозах или чрезвычайных ситуациях
- ✓ Сообщества будут обучены интерпретировать и использовать информацию о климатических опасностях и ранних предупреждениях.
- ✓ Печатная информация о климатических угрозах и соответствующие ранние предупреждения будут направляться в РЦКУ и сообществам Узбекистана.
- ✓ Региональные сотрудники РЦКУ МЧС будут дополнительно обучены эффективному использованию этой информации и взаимодействию с сообществом (краудсорсинг и данные опросов);
- ✓ Понятная и наглядная информация будет направляться в средства массовой информации

Организационная структура проекта

Project organizational structure



Польза для людей от проекта

- ✓ Проект принесет непосредственную пользу более 11 млн. человек, проживающим в зонах повышенного риска Узбекистана (34% населения). Из них 7,6 млн. человек в Узбекистане уязвимы к рискам наводнений;
- ✓ К 2030 году это число потенциальных пострадавших может достичь свыше 13 млн. человек;
- ✓ Ряд климатических опасностей (таких как наводнения) нанесли значительный экономический ущерб и привели к гибели людей. Экономическое воздействие наводнений оценивается примерно в 236 млн. долл. США; Эта тенденция будет расти.

Экологическое и социологическое влияние проекта на окружающую среду и население (вопросы для обсуждения)

- ✓ Важность данного проекта для правительства и населения
- ✓ Влияние проекта на социальную жизнь людей
- ✓ Влияние данного проекта и риск для окружающей среды. Ваше мнение?

Благодарю за внимание!

Программа круглого стола по рабочему обсуждению проектного предложения по усовершенствованию системы раннего предупреждения для повышения устойчивости сообществ Узбекистана к рискам, связанным с изменением климата

Дата: 28 декабря 2019 г.

Время: 10:00

Место: Узгидромет, Ташкент

Программа семинара

Время	Мероприятие	Участники
10:00 –10:30	Регистрация участников	
10:30-10:40	Открытие. Приветственная речь. Знакомство с участниками	Представитель Узгидромет и МЧС, ПРООН
10:40-11:00	Презентация проекта. Краткая информация о проектном предложении «Усовершенствование системы раннего предупреждения для повышения устойчивости сообществ Узбекистана к рискам, связанным с изменением климата» для подачи в ЗКФ.	Эльвира Изамова, программный сотрудник, ПРООН
11:30-12:00	Обсуждение представленной информации, а также социально-экологических вопросов, связанных с реализацией проекта	Все участники
12:00-12:15	Заккрытие мероприятия	Эльвира Изамова, программный сотрудник, ПРООН

Minutes of the meeting on working discussion of the project proposal "Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards»

Tashkent city

28 December 2019

Attended by:

17 participants

Agenda of the meeting

1. Opening. Welcome remarks.
2. Presentation of the project proposal «Improving multi-hazard early warning system for increasing resilience of communities in Uzbekistan to climate change induced hazards».
3. Discussion of the issues raised in the presentation and social and economic issues related to further implementation of the project.

Meeting progress

Meeting was opened by welcome address of Mr. Bahriddin Nishonov, representative of the Center of Hydrometeorological Services of the Republic of Uzbekistan, who in his speech told the participants about the goal of this meeting, namely: to discuss the new project proposal on improving early warning system in Uzbekistan, its importance for the country, as well as the social and environmental impact of this project on the lives of population in the target regions. Mr. Nishonov mentioned about the importance of strengthening the capacity of MES and Uzhydromet to improve the activities related to collection of climate information, its processing and analysis, as well as providing such information to agencies, that will be able to make timely relevant decisions about potential hazards, and to population, who will receive timely warning about potential climate related threats.

Then the floor was given to Ms. Elvira Izamova, UNDP program specialist, who thanked the attendees for participation in this meeting and shared few words about importance of this meeting for soliciting the opinions of participants for finalization of project documents before submission to GCF.

Ms. Izmailova gave a brief overview of the activities of the Green Climate Fund, as well as the reasons for proposing this project, and cited examples of the effects of climate on the socio-ecological and economic situation in Uzbekistan. Despite the fact that large-scale work is being carried out in the field of mitigating the risks of climate change, there are many questions that need to be addressed, in particular, these are the issues related to the country's limited ability to map, monitor and predict climate risks, as well as to analyze and work with relevant information.

Then, detailed information was provided about the new project: the initiators of the project, the legislative framework and its compliance with national priorities, goals and components of the project, as well as planned tasks and approaches to achieve these goals.

In particular, the project will: improve methods and data / models used for monitoring and forecasting; develop the capacity of national agencies on climate-related modeling; expand areas and geophysical / biophysical observations using satellite remote sensing for monitoring and assessment of risks of hazards; create a central depository, which will include improved information management system for monitoring and forecasting hydrometeorological processes; improve the regulatory framework, coordination and institutional mechanisms; improve the provision of “last mile” information on disasters and interaction with end users, especially in the communities with the highest risk of hazardous events.

Ms. Izamova separately noted that the project will focus on the Eastern part of the country, which is more prone to significant climate change related risks. The project will include upgrading the network of hydrometeorological stations with support of Uzhydromet, as well as improving activities of regional crisis management centers with support of MES.

Ms. Natalya Agaltseva presented brief information about dangerous climatic events and the current growth of population in the disaster prone regions of the country. The following issues were raised during the discussion: the importance of this project for the government and the population, the impact of the project on the social life of people, the impact of this project on the social aspects of communities and gender issues, infrastructure, as well as environmental risks. In general, all participants expressed their approval of this project, which will help ensuring human security and increasing the sustainability of the target districts of the region and ensuring the socio-economic and environmental safety of the population.

Mr. Alexander Pak, Uzhydromet specialist, raised the issue of developing web-based information platform of the project, pointing out the importance of it in informing the public and providing climate information. Ms. Agaltseva noted that the web platform will be available for different categories of users including children.

The representative of the Ministry of Emergency Situations, Mr. Petr Volkov, proposed to include an interactive method for teaching preschool age children in the form of games or cards, as well as to include the development of mobile applications in English to increase children's knowledge of the climate based on international experience. Mr. Volkov also mentioned about the importance of ensuring synergy with other international projects, and suggested to submit, in the future, the request to World Bank for the allocation of additional funds to expand the project.

Ms. Agaltseva replied that the issue raised by the Ministry of Emergency Situations could be reflected in the GCF national adaptation plan, one of the areas of which is to reduce the risk of natural disasters. Ms. Irina Arakelova, an employee of Uzhydromet, stated that there is a need to raise the budget to attract the best qualified specialists for management of the system.

The representative of Uzhydromet, Ms. Nadezhda Gavrilenko, added that the goal of the project is primarily to educate and benefit people and noted the importance of gaining the trust of the population in the information provided by Uzhydromet. Participants of the meeting pointed out that the geographical coverage of the project may be changed/extended to cover other areas, depending on the results of climate analysis for each region.

Everyone agreed that the early warning system project will be a good solution in identifying and preventing climate hazards, as well as an opportunity to influence seasonal hydrometeorological

processes. The project is needed and important both for the government and for timely decision making, and for ensuring the safety and preparedness of the population for potential climate threats.

Ms. Agaltseva once again emphasized the importance of the project and closed the meeting, expressing gratitude to UNDP for its support and wishing further successful cooperation.

Recommendations:

- include an interactive method of teaching preschool age children to increase their knowledge of the climate in English with the help of international experts
- strengthen community outreach to ensure access to climate information
- consider expanding the geographic scope of the project
- ensure project synergy with other international projects (such as the World Bank projects).

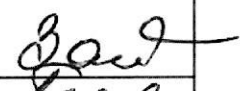

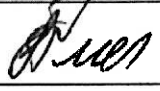
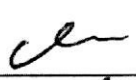

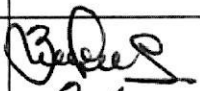
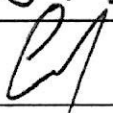
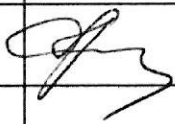
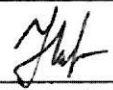
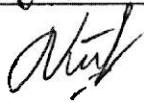

Список участников

предварительного обсуждения проектного предложения ПРООН/ЗКФ/МЧС/Узгидромета

Enhancing Multi-Hazard Early Warning System to increase resilience of
Uzbekistan communities to climate change induced hazards

Совершенствование системы раннего предупреждения об опасных
явлениях, связанных с изменением климата, для повышения
устойчивости к рискам местных сообществ
в Узбекистане.

Зал коллегии Узгидромета, 28.12.2019 г., 10 час. утра

1	Зайцева И.Б. – заместитель начальника СГМО 903512633	
2	Ведерникова В.Г. – ведущий инженер ОПП СГМО 901769280	
3	Плотницкая Ю.А. – начальник ОГМОЭ СГМО 909337450	
4	Лев Н.И. – начальник ОАМП СГМО 946116831	
5	Гавриленко Н.Н. – инженер 2 кат. ГК ОГМОЭ СГМО 946170450	
6	Захидов К.А. – начальник УВКМИ 974801772	
7	Азимов Д.Д. – заместитель начальника УВКМИ	
8	Толибов Н. – и.о. начальник ОМОГЯ	
9	Агальцева Н.А. – заместитель начальника СМЗ 901758461	
10	Сафаров Ф.Б – Начальник	
11	Новикова В.А. – начальник ОПМП 909122214	
12	Мамадалиев Н.Р. – инженер 1 кат. ОМОГЯ УВКМИ 998803874	
13	Тохтамурадов И. – инженер 1 кат. ОМОГЯ УВКМИ	

14	Пак А.В. – инженер 1 кат. ОГВК 90 8062349	Евг
15	Аракелова И.А. - главный специалист финансового управления 90 132 11 41	Арак
16	Васильев А.В. Зам. по маркетингу Исследования МСС	Васильев
17	Шугров В.А. зам. группы Исследования МСС	Шугров
18	Турсунова Юлия Ассистент проекта ПРООН	Турсунова
19	Измайлова Наталья ИИДР.	Измайлова
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Встреча по обсуждению и оценке проектного предложения «по рабочему обсуждению проектного предложения по «Совершенствованию комплексной системы раннего оповещения для повышения устойчивости сообществ Узбекистана к опасным природным явлениям, вызванным изменением климата»

декабрь 2023г. - 1:30



