ENHANCING MULTI-HAZARD EARLY WARNING SYSTEM

to increase resilience of Uzbekistan communities to climate change-induced hazards

PARTNERS:
Ministry of Emergency Situations of the Republic of Uzbekistan, Uzhydromet

FUNDING:
Green Climate Fund

PROJECT DURATION:
2021 - 2027

PROJECT BUDGET:
USD 9,999,455

PROJECT COVERAGE:
7 regions | 15 districts | 44 communities

SDGs

Overview

The project aims to strengthen Uzbekistan's Multi-Hazard Early Warning System for climate-induced natural hazards. By improving forecasting, risk assessment and timely public warnings, the system helps save lives, protect livelihoods and reduce economic losses.

Main Project Objectives:

1. Strengthen hydrometeorological observation, modelling and forecasting capacities
2. Establish an integrated Multi-Hazard Early Warning System
3. Improve climate services and disaster communication to communities

Key Results

Strengthening Hydrometeorological Observation

Multi-module climate risk assessment platform under development for avalanches, mudflows, landslides and hydrological droughts. Landslide risk assessment model completed.

600+ Uzhydromet specialists were trained in the operation and maintenance of the equipment provided under the project, as well as in risk assessment approaches related to hydrological droughts, mudflow and flash flood hazards, avalanche activity, and other climate-related topics.

Strengthened Uzhydromet's technical capacity through the provision of:

- **25** automated weather stations;
- **10** solar-powered units for remote installations;
- **45** electromagnetic flow velocity and discharge sensors;
- **10** video wall systems for an integrated information-sharing network with regional departments;
- **9** non-contact Doppler water discharge measurement systems;
- IT equipment for Uzhydromet's situation center;
- **3** Acoustic Doppler Current Profilers (ADCPs) for riverbed mapping;
- **2** upper-air sounding systems for atmospheric observations;
- **2** X-band weather radars for improved forecasting of severe weather events.

Modernization of the Multi-Hazard Early Warning System

Project-developed National Standard for Multi-Hazard Early Warning Systems (O'zMSt 520:2025) adopted, providing a unified technical framework for public warning and emergency information systems.

- **6** Territorial Operational Management Centres equipped with video wall systems;
- **272** mosques across 7 regions equipped with automated public warning systems
- **6.5 million** people covered through the mosque-based early warning system.
- **7** autonomous VHF/FM broadcasting units installed to ensure emergency alerts can be disseminated during disasters;
- **3** electronic sirens installed in Shohimardon, a disaster-prone community, to strengthen local early warning capacity.
- A **GIS-based emergency management system** was developed and introduced at the Ministry of Emergency Situations to enhance real-time disaster monitoring, forecasting and emergency response. To support its operation, the project provided modern ICT equipment and specialized software.

Improving Climate Services and Disaster Communications

National Framework for Climate Services (NFCS) concept and implementation roadmap developed to strengthen climate service delivery in Uzbekistan. Business model developed to support the integration of climate services into Uzhydromet's operations.

STRENGTHENING COMMUNITY PREPAREDNESS AND DISASTER COMMUNICATION TO COMMUNITITES

3700+ **people,** including community members and representatives of government agencies, participated in disaster simulation exercises conducted in Namangan, Kashkadarya, Samarkand, Jizzakh and Tashkent regions.

The exercises aimed to raise public awareness and equip communities with practical skills to respond effectively during emergencies.

1500+ **mahalla activists** participated in training sessions on disaster risk reduction, early warning systems and basic first aid.

28 **outdoor LED screens** were installed across seven target regions of Uzbekistan to strengthen public warning and information dissemination.

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