Regional Stakeholder Consultation on Climate Services for the Third Pole Region

Jaipur, India

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UZBEKISTAN

National capabilities for production, management, delivery and application of climate services

Uzbekistan:

Capacities for provision of climate services (slide 1/2)

•In Uzbekistan there is an institutional framework that allows to develop add-on solutions for effective climate risk management.

•The main institutions involved in provision of climate services in Uzbekistan are: **Uzhydromet , Ministry of Emergency Situations, Ministry of Agriculture and Water Resources, Ministry of Health**.

•The Ministries and Agencies operates within its own institutional and budgetary authority and rights. The organizations have the technical facilities and infrastructur including observation network which however requires modernization and renovati

• Uzhydromet is the main provider of climatic services in Uzbekistan. Its multi-component observation network consist of **83 meteorological stations, 145 hydrological posts** and network for **ecological observations**. It carries out around th clock reception and processing **satellite data** from 3 polar-orbiting satellites , 2 geostationary satellites of the European Space Agency, Meteosat-7 and Meteosat-9 Human and geostationary satellite of the Chinese Space Agency - Feng Yun-3A (FY-3

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Capacities for provision of climate services (slide 2/2)

- Involved Ministries have qualified specialists and educated technical personal but there is a lack (in quantitative terms) human resources;
- Training in hydrometeorology is executed through the internal independent organization **Tashkent HydroMet College**. Education in hydrometeorology is available at the three state universities in Uzbekistan, Uzbekistan State University, Samarkand State University, and Nukus State University. 35 to 40 students enroll annually but not many of them are still working in their specialty. Additionally the training system needs to be improved through the development of new training programs related to climate change issues.
- **The State System of Prevention and Emergency Response (2011)** has been established and developed in Uzbekistan. Provision of Climate services is one of the important part of the System with regard to climate risk management.

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Current status of provision of climate services to sectors and existing user interface mechanisms (slide 1/2)

•Climate services supported by wide range of information produced by Uzhydromet. Among them - meteorological and complex short , medium and seasonal term scale forecasts including hydrological and agrometeorological forecasts, reference papers, reviews, bulletins etc.

•Warnings of hazards are made with a lead time of one to five days. They are published in the daily weather bulletin, posted on the Uzhydromet Internet site (www.meteo.uz), placed in newspapers, radio, television.

•In case of the risk of severe weather events (heavy rains and snowfall, frost during the growing season, drought, gale, hail, mudflows, a breakout of high-mountain lakes, a sharp rise of water flow, floods, ice jams in rivers) experts make storm warnings to be operationally transferred to the state administration bodies, related ministries and agencies. Thereafter a regular round the clock monitoring of hydro-meteorological situation in the disaster area is held and forecasts of the situation development is redefined.

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Current status of provision of climate services to sectors and existing user interface mechanisms (slide 2/2)

- There is a valid, thoroughly organized and detailed warning scheme about extreme hydrometeorological situation. Both intermediaries and end-users of climate information are involved in the scheme realization.
- There is a **Regional Model of Formation of Mountain River Flow** in Uzhydromet, which consists of interrelated model blocks. Realistic simulation results allow to use this system to assess water resources response to possible climate change using climate scenarios.
- In order to assess the possibility of droughts in the basins of Central Asia an **Early Warning Drought System (EWDS)** was set up on the basis of the **Automated Information System of Hydrological Forecasts (AISHF**) .
- Ministry of Health jointly with Uzhydromet and State Committee for Nature Protection developed **"Early warning system for the prevention of climate change sensitive diseases".** In order to facilitate communication with interested parties a user friendly web site was set up http://meteomed.uz/.

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Gaps and challenges (slide 1/2)

- Insufficiently developed basic observation system
- The limited availability and reliability of data and practical information about the climatic situation
- Insufficiently developed monitoring system on the base of high technologies including remote sensing techniques
- The lack of capacity and technical resources for monitoring climate change, impact forecasting, climate risk assessment

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Gaps and challenges (slide 2/2)

- Lack of human resource capacity
- Inadequate public awareness of public and private entities on climate variability and associated risks
- Insufficiently developed platform of interaction with climate information users
- In sufficient technical and institutional capacity of information exchange between NHMS in the Region

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Future perspectives for improved climate services (slide 1/2)

➢Detalization and improving baseline forecasts using remote sensing and integrated data models to address the following issues:

- Monitoring of snow cover and its condition to determine the accumulated water reserves and avalanche risk
- Real-time monitoring high mountain lakes
- Real-time assessment of condition and degree of degradation on agricultural and grazing land
- Coverage of a broad spectrum of drought parameters: vegetation indices, humidity and soil deficiency.

➢Development of the use of NWP products (NWP mesoscale regional model) to improve the quality of forecast services and natural disaster warnings.

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Future perspectives for improved climate services (slide 2/2)

- Development and improving of Early Warning Systems
- Development and improvement of user interaction platform
- Raising public awareness of public and private entities on climate variability and associated risks
- Improved technical and institutional capacity of the information exchange of between NMHS of the Third Pole Region
- Capacity development through improved regional system of education and training in the field of hydrometeorology, climate change and climate risk management

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Thank you