AGENCY FOR HYDROMETEOROLOGY - KYRGYZ REPUBLIC (KYRGYZHYDROMET)

Modernization of the Central Asian hydro-meteorological monitoring system

Due to regional geographic diversity, **Central Asia** is facing numerous **natural hazards** which are now being intensified by climate change. These natural risks, which include **landslides, avalanches** and **floods**, are very often aggravated by conditions of widespread poverty and precarious infrastructures.

Funded by the World Bank and approved in 2011, the **Central Asian Hydro-Meteorological Modernization Project (CAHMP)** aims at improving the accuracy and timeliness of hydro-meteorological services in Central Asia, with special attention to the Kyrgyz Republic and the Republic of Tajikistan. The CAHMP will provide positive social benefits by increasing the quantity and quality of hydro-meteorological information, as well as providing an early warning system.

Summary

Location: Kyrgyz Republic

Conclusion: 2021

Focus: Meteorological and hydrogeological risk

Challenges:

- Improving the accuracy and timeliness of hydro-meteorological services in Kyrgyz Republic;
- Modernizing the hydro-meteorological monitoring system

CAE solutions:

- The “turnkey” supply of 23 Automatic Weather Stations (AWS);
- 1 system for the determination of cloud height;
- 13 local data centres;
- System integration and user training.

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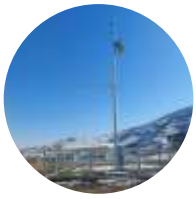
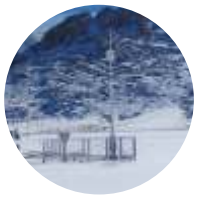
innovation for a safer world.

FEATURES

As part of this project, CAE and its partner completed the contract with the **Agency for Hydrometeorology** under the Ministry of Emergency Situations of the Kyrgyz Republic **(Kyrgyzhydromet)** for the supply and installation of **23 fully equipped Automatic Weather Stations (AWS)** and data centres.



The AWSs were equipped with **the latest CAE datalogger: the Compact Plus**, based on **Linux** embedded operating system; a complete set of sensors including the **THS** sensor for air temperature and humidity, the **ULM30/N** sensor for snow measurement, wind speed and direction sensor, air pressure sensor, etc. A **system for the determination of cloud height** was installed in the capital Bishkek to measure cloud base height and vertical visibility. Due to the GSM coverage unavailability, 3 of the 23 stations were equipped with **satellite data communication**.



CAE was also responsible for the supply all hardware and software for **13 local data centres** and **1 national data centre**, as well as the **integration** of the already existing infrastructure of the Kyrgyzhydromet. Data from AWSs will be transmitted in different programmable modes, such as: Basic function, On-line function, Storm function and Data storage mode in response to emergency situations.

COMPOSITION

The project involves the **"turnkey" supply** of:

- 23 fully equipped Automatic Weather Stations (AWS) with meteorological sensors;
- 1 system for the determination of cloud height;
- 13 local data centres;
- 1 new national data centre, integrated in the existing infrastructure of the Kyrgyzhydromet.

In addition to the supply of equipment, CAE provided a **full range of services** such as site preparation, public works, delivery, installation, preparation of documentation, testing, as well as operator training, warranty service and technical support.

The network was installed throughout the Kyrgyz Republic, often in remote areas, therefore the extreme environmental conditions in which it will operate will be **an excellent test of the quality and durability** of CAE products.