

Apache 3 USV Used for Bathymetric Surveys in Kazakhstan



The National Center of Space Research and Technology of Kazakhstan is currently implementing digital bathymetric surveys that provide detailed riverbed mapping data, as Berik Rakhymzhanov, deputy director of Space Remote Sensing (SRS), informed a correspondent of Kazinform IAI.

The company has received new equipment – a marine autonomous drone that can be operated remotely. This equipment is an [Apache 3](#) USV, which was acquired under the programme of targeted funding of the Ministry of Education and Science of Kazakhstan called ‘Scientific and Applied Basis of Integrated Flood Management with the Development of an Algorithm for their Prevention for the Basin of Large Rivers of Northern, Central, and Eastern Kazakhstan’.

Flood Modelling

“This type of equipment for hydrographic surveys is being used for the first time in Kazakhstan, and this method can be referred to as ‘precision hydrology’. The collected data is characterized by reliability, accuracy and high efficiency of its acquisition. Now we will be able to use it for editing high-resolution digital elevation models, in combination with radar polarimetry to develop methodologies for determining snow cover density, perform digital bathymetry, complete our GIS data analysis and provide flood modelling with a high level of detail,” said Berik Rakhymzhanov.

With this Apache 3 marine drone procurement, the Kazakhstan National Center of Space Research and Technology, which operates the national remote sensing space system, has gained new expertise using USVs for underwater surveys, which qualitatively enhances the research capabilities in remote sensing, geoinformation systems analysis and hydrology in the Republic of Kazakhstan.

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