NATIONAL DEMONSTRATION PROJECT IN TAJIKISTAN:
"IMPROVEMENT OF THE SYSTEM OF CONTROL AND MONITORING OF ELECTRICITY CONSUMPTION IN THE PUMPING STATIONS AND MODERNIZATION OF LARGE PUMPING STATIONS USING ENERGY-SAVING TECHNOLOGIES IN THE SUGHD PROVINCE IN THE REPUBLIC OF TAJIKISTAN"

Objective

To advance the energy efficiency through digitalization of electricity consumption and monitoring at pumping stations and modernization of Golodnosep pumping station (GPS) in Sughd Province.

Implemented by:
National consultants

Beneficiaries:
Local population, public and private sector

Implementation period:
July 2021 – February 2022

Supported by:
European Union project "Nexus Dialogue in Central Asia" and "Laboratory of Innovative Solutions for the Water Sector of Central Asia" (CAWEP)

Location:
Sughd Region of Tajikistan

Over 90% of land in Tajikistan is occupied by mountains, while 50% of irrigated lands require pumping stations to lift the water from rivers and canals.

Golodnosep pumping stations built in 50-70s lack energy efficient technologies and smart metering systems, which makes it difficult to calculate accurate electricity consumption.

Low solvency of farmers and end consumers, high subsidization of electricity tariff, low water usage tariff and fee collection, inefficiency of irrigation systems under rapid population growth make agricultural sector unprofitable and lead to the instability of WEF security.

Activities to be implemented:

Task 1: Review of the operation of pumping stations at the national level (examination of operation of 175 pumping stations)

Task 2: Design concept for implementation of electricity consumption metering at pumping stations in Sughd Region

Task 3: Carry out the energy and water audit at 2 pumping stations (by "Greenline")

Task 4: Develop investment proposal for the modernization of Golodnosep Pumping Station considering the application of energy efficient technologies

Importance of GPS for WEF security

Irrigated land produces about 65% of agricultural products, while agriculture creates jobs for 70% of the population and accounts for 30% of the country’s GDP.

The cost of water exceeds the cost of irrigation water delivery to farms by four times.

Pumping stations in Sughd region use up to 70% of the country’s electricity consumption for pumping stations.

Agricultural sector uses 90% of water resources and 10% of the country’s total electricity consumption for pumping stations.