



WATER RESOURCES

THE RECONSTRUCTION OF WATER RESOURCES IN LOGAR PROVINCE IS ONE OF THE MOST ESSENTIAL PROJECTS OF DEVELOPMENTAL COOPERATION. SINCE THE MAJORITY OF THE POPULATION IN THE PROVINCE SUBSISTS ON AGRICULTURE, WATER IS VITALLY IMPORTANT.

Over the past 30 years the traditional irrigation systems suffered severe damage. The karezes, probably originating from the time of the Persian Empire, are simple underground tunnels carrying water from the mountains into cultivated areas in need of water. In the past, every karez was watched over by a designated person in charge of cleaning and maintenance. The civil wars have broken these traditional roles and structures and today the karezes are clogged by sediment and falling apart. Yet one functioning underground canal can irrigate anywhere from 10 to 200 hectares of land.

Water use is ineffective also due to a lack of modern technology. Afghan weirs are built in a simple manner by leveling up rocks, branches and sand bags on the bottom of the river. There is a risk of heavy flooding each spring as water disrupts the destabilized

riverbanks, floods the fields and washes away the nutrients.

The whole province has only one functioning reservoir, the Surkhab Dam. It was built before the Second World War and since then has been neglected. Due to erosion, the basin has accumulated a layer of eight meters of sedimentation which burden the damming, clog up the drainage system and significantly reduce the capacity of the reservoir. Yet Surkhab Dam needs to serve as a water resource for thousands of farmers from the surrounding villages.

“We are happy that the PRT operates here and that the Czechs are helping us. Without water, our local farmers couldn’t grow anything.” Abdul Wahab Ahmadzai, principal of a school near the Sukharb Dam



The rehabilitation of Surkhab Dam was the largest project of the Czech team in the Logar province. The main part consisted of excavating the decades-old layer of sediment. In the estuary of the river, which supplies water to the reservoir, the team has also built a retention wall to prevent further sedimentation, especially in the spring season.

The projects of the Czech team in Logar further focus on water the systems' reconstruction where it can significantly contribute to the irrigation of agricultural land. This means largely replacing the improvised weirs with solid constructions. To this day six weirs have been either built or reconstructed, and in the center of the province an entire irrigation canal was completely reconstructed. Furthermore, the Czech PRT builds protection walls and solidifies river basins in order to prevent the flooding of the fields.

In cooperation with Logar communities the Czech PRT is working on reconstruction of karezes. This involves solidifying the entrances to the revision shafts, which are the entries into the underground canal system enabling the control of water permeability. Local communities are included in the project in order to re-learn the maintenance of the system and to avoid clogging the canals with sedimentation in the future.

Among the many problems in Logar is a lack of climatological, hydrological and hydro-geological data. The Czech PRT assists the provincial Ministry of Water and Power in keeping track of data collected by newly acquired measuring stations. In the future it should be possible to measure precipitation, temperature, wind speed, current speeds or seasonal changes of underground water levels. The main objective is to gain an overall perspective about water conditions in the province and of the possibilities of water resources for supplying the local population with drinking, service and irrigation water.

- More than 11 thousand farmers have better conditions for their subsistence.

- More than 200 jobs were created during the process of reconstructing water resources.