HYDROPOWER DAMS IN ALBANIA

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ABSTRACT: This seminar regards the Hydro power dams in Albania and gives a briefly description on some large dams and organization of dams sector in Albania.

Albania is blessed with water. Our country has 39 rivers which discharge on average about 1250 m3/s (40 billion m3 of water per year) in the Adriatic Sea and the Ionian Sea. Albania with a total surface of 28 748 km2 is a highland country where 70% consists of mountains, hills, lakes and rivers.

The hydrographic territory of Albania has a surface of 44,000 km2 or 57% more than national area of our country. In its catchment area it falls about 1 400 mm of rain per year. It snows in the height over 1 000 m. Due to the non-uniform distribution of rainfall during the year, river flows have large changes.

35% of the average water inflows of these rivers are used for hydro power production and approx. 1 billion m3 of water is used for irrigation of about 360,000 ha of land.

A very important role in the management of these waters play the dams built in several rivers of the country which are used for hydro power production, drinking water supply, land irrigation, flood protection, fish farming, water transport and development urban.

According to the National Register of Large Dams prepared and approved by the National Committee of Large Dams (ALBCOLD), in our country there are currently 351 large dams defined by Law No.8681, dated 02.11.2000 "On design, construction, use and Maintenance of Dams and Dams “ and ICOLD recommendations.

24 large dams are used for hydro power production, 325 large dams are used for irrigation, and 2 large dams are used for drinking water supply. In 1957, Dam of HEPP Ulza with height 64 m, was completed as first hydro power dam. The tallest dam is Dam of HEPP Fierza with height 166.5 m. It is rockfilled dam with clay core.

According to the ICOLD Register, Albania is in 19th place in the world for the total number of large dams and is ranked first in Europe for the number of large dams per 1000 km2.

In Albania there are currently 10 very large dams with a height of over 60 m and 3 main cascades built on the rivers Drin, Devoll and Mat which are used for hydro power. At the same time, they are the dams with the highest risk of damage to the economy and loss of people in the event of a catastrophic natural event or possible breakdown of a dam. The main cascade for hydro-power is Drini Cascade. It is unique in Europe in regard to the dam types and their heights, the artificial lakes created, the installed power of the HPPs and their Operational Management. The Drini river in northern Albania has been transformed into a chain of 3 artificial lakes with total water capacity of 3.4 billion m3 which supply water to the three largest Hydro-power plants (HEPP-s) of Albania. The HEPP-s of Fierza, Koman and Vau i Dejes are built in period 1971 to 1986. Their installed capacity is 1350 MW and their average energy production is 4 000 GWh per year.
All hydro-power large dams are objects of special importance and require the taking of all organizational, technical and financial measures to guarantee their normal use, longer life and non-intrusion of third parties in the phase of construction, use and maintenance.

Since 1964, Albania is a full member of the International Commission of Large Dams (ICOLD) where it participates and gives its official contribution actively in all processes of technical and institutional cooperation with international actors in this sector.