

The influence of the landslides on the dam projects of the Çoruh River Turkey

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Çoruh River is the most important river of the northeastern Turkey. Preliminary studies aimed at determining its energy potential have resulted in selection of eleven damsites, namely Laleli, Kilicci, Ispir, Gullubag, Cetinbogaz, Uzumlu, Yusufeli, Inanli, Artvin, Borcka and Muratli. These early studies have also shown that landslide possibilities require major modifications in some of the proposed damsites. It has been found out that there is a high landslide possibility at the Ispir, Uzumlu and Inanli reservoirs. This has lead to cancelling or relocating these damsites.

For instance the Norgah damsite, located at the upstream side of the Ispir landslide zone, has been proposed instead of the Ispir damsite. As a result the reservoir could be saved from a likely landslide effect. However, a landslide could still effect the power station that would be built at Norgah. Therefore, the power station has been proposed to be built downstream side of the landslide zone. Consequently, a power tunnel has been projected between the Norgah damsite and its hydroelectric power station.

Similarly, the Karakale damsite has been selected instead of Uzumlu, since it allows a solution of the landslide problem, similar to that is employed at Norgah. A power tunnel has also been projected between the damsite and the power station located at the upstream and downstream sides of the Yokuslubag landslide zone respectively. Finally, Inanli damsite has been relocated to avoid the possible landslide problems at the Havuzlu and Demirkent villages.