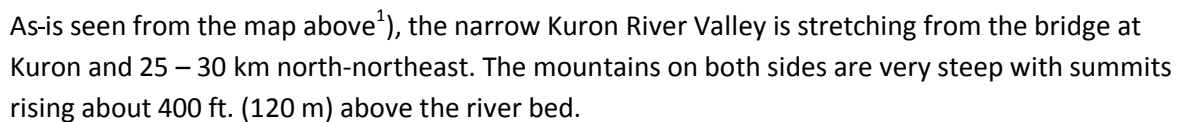


Initial proposition to build a dam in Kuron River Valley for collection of seasonal water.



Kuron River is normally flowing 10 months of the year, which is a considerably longer period than the length of average rainy season in East Kapoeta area. The reason is that the water in Kuron River originates in the mountains on the Ethiopian side of the border. The precipitation in these areas is unknown. The flow of water passing Kuron Bridge during a year is also unknown. These data are of cause fundamental to obtain in order to calculate the necessary height of the dam. By studying the map above and a satellite photo from Google Earth (next page) it is seen that there is a gorge in the valley approximately 1 km upstream the Kuron Bridge. Find also photos from the valley and the gorge on next page.

The estimated distance across the valley is 250 meter from bottom of hillside to the opposite side. This estimated distance is then in a line some 10 meter above the bottom of the riverbed. Both sides of the riverbed are sandy or of soft soil. Building of a dam of concrete should be possible as the bottom of the river is filled with sand transported by the water. This sand is suitable for concrete construction. Depth of layer of sand is not estimated. Cement has to be imported from Kitale in Kenya.

¹⁾ (Excerpt from a map issued by Federal Department of Foreign Affairs, Switzerland. www.cde.unibe.ch)



Kuron River Valley from satellite



Imagine a dam in the bottom



Part of Kuron Valley that could become a lake

Transportation distance is around 500 km. Currently this transportation is normally possible only in the dry season, i.e. from December to March due to poor road conditions from Narus to Kuron.



northview



southview

Benefits from construction of a dam in Kuron River Valley

It is assumed that a water reservoir behind the dam should have several positive effects for the whole region: Irrigation of the cultivated areas below the dam throughout the whole year. In this area water could give opportunities for several harvests in one year. The reservoir could be source of water both for people and cattle in the area, fish farming in the lake and possibilities for generating hydropower electricity before the water goes to irrigation and free flow. The fish farming needs probably to be arranged inside separate reservoirs due to crocodiles and other carnivores. It is assumed that a power plant will have potentialities to deliver power for pumping water for irrigation purposes at least. But the potential for power production need to be studied by qualified agencies. The water in the reservoir will improve in quality due to settling of eroded soil before piping for fish farming, irrigation or other purposes.

Will there be water enough to all these purposes?

It is apparent that during the rainy season the river flows very high into the swamps and evaporates for no use. All this water could now become a resource for indicated purposes especially through the dry seasons of the year. The key will be to find a balance for how much water can be taken for the described purposes.

Conflicts on use of the flooded area in the basin?

People who are living in this area are telling that there are no settlements in the potential basin. And as no people are settled in the potentially flooded part of the valley there will be no need for relocating people. To some extent Kuron River Valley is used as a route for migrating of cattle by the Murle tribe settled up to the Ethiopian border. Current use of the flooded area for grazing purposes by the Toposas need to be looked into too.

Investigations and decision of political and judicial issues in addition to ownership, calculation of cost, financing, selection of constructor and operation are all issues to be investigated.

Kuron, 4th December 2010

Åge Antila

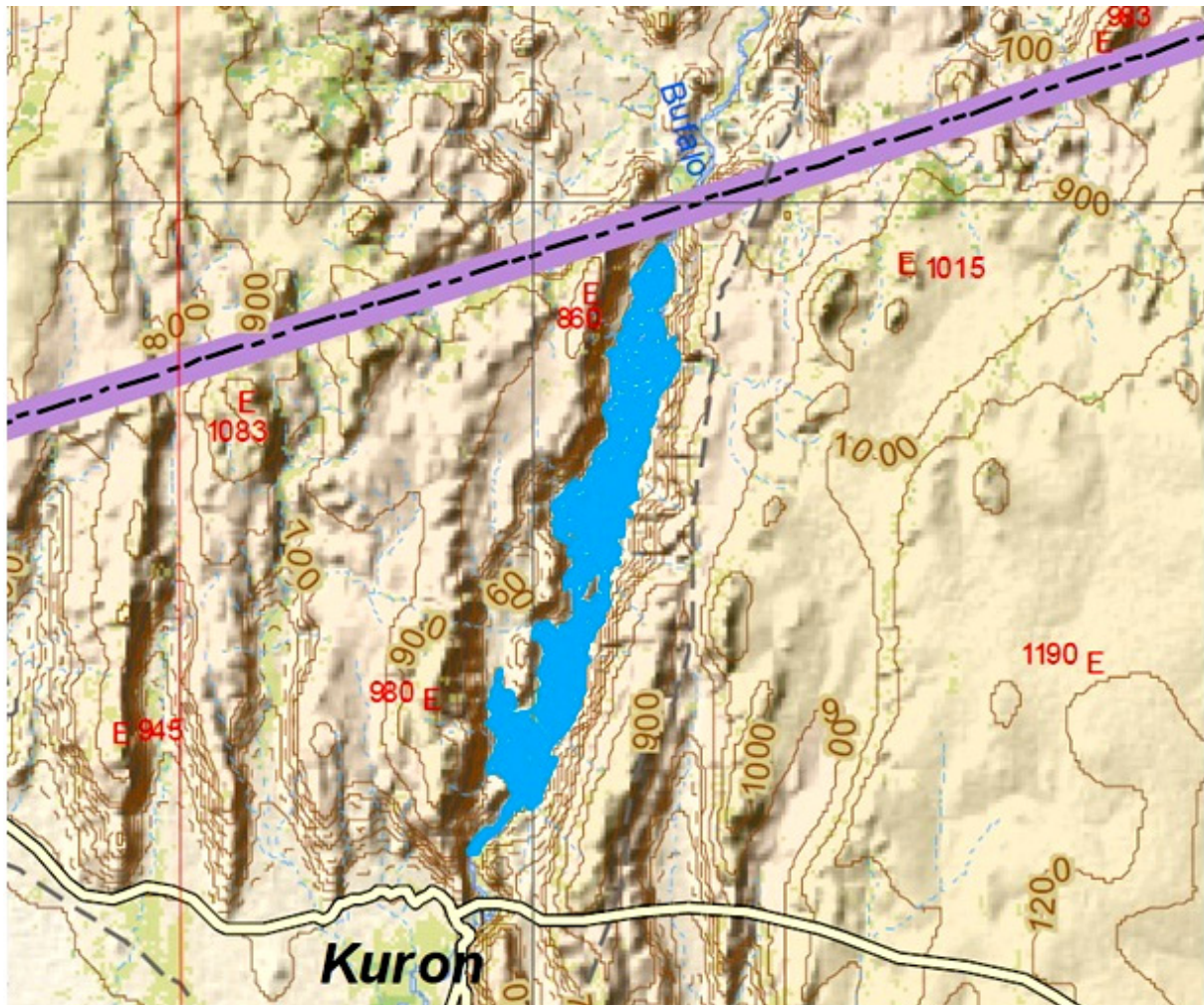
Advisor for Holy Trinity Peace Village Kuron

Later addition:

Map of potential lake
on next page

Additional descriptions

By filling the lowest equidistance curve on the map (published by Federal Department of Foreign Affairs, Switzerland) it will be possible to make a picture of the potential reservoir behind the dam. This exercise is made on the image below. This image is of course not meant to give more than an imagination of the reservoir.



A study of Kuron River on Google Earth indicates that height above sea level in the gorge is 523 meters above sea level and 538 meters in the north eastern end just below the district border which is seen both on the map above and on Google Earth.

By following Kuron River upstream it looks like the river climbs up to the mountains and branches several times. At least one of these branches bends southwards and it is a question if any of the branches ever crosses the Ethiopian border at all. And by following the river downstream on the satellite photo on Google Earth it looks like it becomes narrower and narrower. The explanation to this impression might be that the water evaporates and/or is absorbed by the ground after some distance below the bridge.

Google Earth (version 6.0) is downloadable from
<http://www.google.com/intl/no/earth/download/thanks.html>

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