The Glacio-Geomorphological Study of the Glaciers of the Central Caucasus on the Background of Modern Climate Change and Evolution of Glaciations Late Pleistocene and Holocene
(On the example of Mulkhura and Zopkhito River Basin)

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Studying of climate change and dynamics of glaciers in Caucasus region is very important, because Caucasus is one of the significant mountain systems of the Eurasia. Rise of rate of glaciers retreat will (which is evident in all glaciers of the world) aggravate runoff problem and will cause huge problem as for population as well as for state. For that reason monitoring and searching of glaciers is very important and interesting. It worth to mention, that investigation of glaciers is the best natural indicator of climate change.

Investigation of glaciers of Southern slope of Caucasus has a great history In Georgia. Investigation of Glaciers of Svaneti, Apkhazeti, Racha and Khevi Caucasus was held in a continuous mode up to 90-th of 20-th century. In archives of Vakhushti Bagrationi Institute of geography there are a lot data about them, which helps us in determination of exact picture of glacier dynamics.

Expedition was held on Racha Caucasus in 2009-2010, but in 2011 investigation was moved on the Svaneti Caucasus. Observations were implemented on meteorological elements, glacier run off and ablation. Snow survey was done in May of each year. Present-day dynamics of glaciers and glacier evolution in upper Pleistocene and Holocene were studied during the expedition by using of different methods.

Digital models of the Glacier river gorges of Caucasus will be created in the Geo-Information Systems (GIS). It is supposed both, to create its relief's models of different scales and GPS-survey of the most important geomorphological and glaciological object or phenomena with their affixation on the digital model. Also, with the help of the obtained model of the relief the retreating scales of the glaciers and the distribution areal of the old moraines will be identified since Late Pleistocene until the present. Scales of the latest stage glaciations will be reconstructed, the moraines of the same age will be surveyed and their distribution areal will be affixed on the digital model. Respectively, the glacier's retreating index of the length and area will be specified from this period. Within the Project the of current and available aero-space and aerial photo images of the period from 1950s to present days will be decoded and thus the glaciations dynamics of the last 70 years will be specified in more details.

During the research implementation we will get in contact with our international colleagues and hold the Workshops (as far as possible), thus they will be interested in such researches in Georgia; the obtained field data will be exchanged with the world's different Scientific Centers of glaciological profile.

My experience gained as a result of participation in the expeditions conducted in the high mountainous zones (in the individual glaciers) in the last period (2004-2012), as well as knowledge of modern technologies of field and office researches, gives me the opportunity for Project's real implementation.