

## Cartometrical and Geographical Analysis of State Border of Georgia

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State border delimitation and demarcation is one of the most important issue for many countries, because it defines state security. This issue is especially actual for Georgia – country which is located in very difficult geopolitical situation. In order to maintain peace, historical justice and the peaceful coexistence of the our country, it is important to resolve a lot of questions concerning with state borders. So, it is necessary implementation of the cartometrical and geographical analyse not only for the modern state border, but also its historical changes. All these data was processed by means of GIS-technologies.

On the basis of historical-geographical and cartographical sources and also on the basis of GIS-analysis was done cartometrical-geographical DB of state border of Georgia. The main cartographic basis of the work is the topographic map of Georgia in scale 1:1,000,000, by which was determined length of the state border according to 2 mm step. Also were used the series of maps in different scales (1:1,000,000; 1:500,000; 1:600,000; 1:200,000; 1:50,000; 1:25,000). The reduced length of state border was determined too. In order to achieve measurement accuracy were used 2 cartometrical methods: mechanical graphical method (measuring with pair of compasses) and measurement on GIS-maps.

On the basis of topographic map in scale 1:1,000,000 was estimated that the length of state border of Georgia is 2114.78 km, including 1802.07 km of land and 312.08 km of sea border. In these borders the area of Georgia occupies 69.7 thousand km<sup>2</sup>, but with taking in account territorial water (6.624 thousand km<sup>2</sup>) the area of country is 76.324 thousand km<sup>2</sup>.

There are some problematic sections along the state border of Georgia. Existence of orographical barriers (mainly the north state border) didn't caused significant historical changes of border, but this section of state border was undergoing sizeable transformation in the soviet period. After restoration of independence of Georgia and also political course of country to achieve integration with Western civilization have been generating new frontier problems and territorial claims.

One of the important results of the study is determination of size of territorial changes according to different historical periods. The borders of Georgia has been changing during many centuries. The most important changes were happened in XIX-XX centureis. The territorial losse is 20 thousand km<sup>2</sup>, almost 1/3 of total territory of Georgia.