

## The mathematical foundation for the new Georgian topographic maps

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At the end of the last century, for the introduction of modern satellite technologies in topographic and geodesic activities and for the creation of new Georgian state topographic maps, it became necessary to use an international mathematical foundation.

Upon above-mentioned, In 30 April 1999 was issued Presidential Decree N206 and in order to create a geodetic and cartographic basis for topographic and geodetic work, for topographic maps of modern international standards and a unified geo-information system, were established new parameters of mathematical foundation

1. The International Ellipsoid (WGS-84) was established to project the results of geodetic measurements of general-state purpose.
2. Universal conformal transverse cylindrical projection of Mercator (UTM – Universal Transverse Mercator) was established as Mathematical foundation (cartographic projection) for state topographic maps.
3. The Kronstad tide gauge (St. Petersburg, Russian Federation; the system of the Baltic Sea of heights in 1977) zero point was established As Datum for measuring absolute altitudes from sea level.
4. The following scales and sheet sizes were established for Georgian state topographic maps.

Scales of maps	Sizes of maps lists	
	along the parallels	along the meridians
1:1 000 000	6° 00'	4° 00'
1:5 00 000	3° 00'	2° 00'
1:2 00 000	1° 12'	0° 48'
1:1 00 000	0° 40'	0° 24'
1: 50 000	0° 20'	0° 12'
1:25 000	0° 10'	0° 06'
1:10 000	0° 05'	0° 03°

Parameters of new mathematical foundation and their comparison with old data are presented in this topic.