

Cold War era topographic maps: Soviet influences on Hungarian civil topographic maps

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Abstract:

In the case of state topographic maps, it is almost self-evident that the current political and economic conditions have a serious impact on the survey itself. This is even more true for a politically highly determined period like the Cold War.

In the Austro–Hungarian Monarchy, topographic mapping was strictly controlled by the emperor, and mostly only classified military topographic maps were produced. Hungary was allowed to produce its cadastral maps after the Austro–Hungarian Compromise of 1867. Hungary, as an independent country after World War I, had to produce its own civilian topographic maps. Hungary formed its national topographic map service in the Hungarian Military Mapping Institute, which apparently operated as a civilian institution until 1938. Hungary started its civilian topographic survey using the stereographic projection to conform to the cadastral maps. The institute was already openly a military facility after 1938, when Hungary no longer considered the peace treaty restrictions mandatory. The topographic maps were still made in stereographic projection, although the 1:50 000 war survey in 1940–44 returned to the Third Military Survey projection system.

As Soviet troops approached Budapest in World War II, a significant part of the institute moved to Western Hungary and then to Austria in the fall of 1944, but was later trapped and largely destroyed by allied forces. The temporary Hungarian government enjoying Soviet support only moved to Budapest in February 1945. In this turbulent times, the Allied Control Commission first authorized and then banned the operation of the Hungarian Military Mapping Institute. The institute reopened in February 1946; in the first years, they had to reconstruct the war damage and replace professionals who disappeared in the war, while the Soviet army took control of the country and began to rapidly transform the political system into a Soviet model. The country was essentially Sovietized by end 1949.

The complete transition of the economy to the Soviet system began in 1950, when Soviet-type five-year plans were introduced (Soviet-style 3-year plan was partly completed between 1947 and 1949). This plan has already determined the activities of the Hungarian Military Mapping Institute. They started a 1:25 000 scale military survey of the country in Gauss–Krüger projection, which had to be completed within 3 years. Producing more than 1000 sheets in 3 years (including field survey, compiling, drawing, offset printing) was an impossible mission, but nobody asked if the plan was realistic at all. Soviet consultants did not even inform Hungarian cartographers that they had changed the ellipsoid and orientation of the Gauss–Krüger projection.

Presumably, military cartography under Soviet command could not undertake to supply the civilian sectors with topographic maps. The civilian cartographers had knowledge on topographic mapping, but they only practiced cadastral mapping. It took few years to establish the right institutes and train the professionals – this was a main reason to form the Cartographic Department at my university in 1953.

The survey for the purpose of the national economy was conducted between 1950 and 1980. When it started, the aim was to survey the whole country at 1:5000 scale. The work started using stereographic projection, but soon (1954–55) they had to change to the Soviet system (Gauss–Krüger projection, Soviet datum [Baltic Sea]). Due to the initial slow progress and increased ministerial demands, the scale was changed to 1:10 000. Military cartographers provided increasingly serious assistance to the civilian area, especially concerning stereophotogrammetry.

By the early 1960s, the socialist countries had fully harmonized their civilian topographic mapping with unified symbology. After all it seems surprising that another important change in the history of the survey came in 1964. Contemporary articles do not even mention the change: the projection of the survey become again stereographic and the sheet system also changed. It was only after the change of regime when we learned the reason: the Soviets considered the Gauss–Krüger projection and map sheets to be too accurate, from which the geographical coordinates could be read.

Although even the civilian topographic maps were classified, they had to be modified and the map sheets could not have references to geographical coordinates.

The Hungarian civilian mapping organisations learned the lesson, and when it began developing a new civilian mapping system in 1976 (EOTR, the Unified National Map System), they chose a projection and sheet system that the Soviets would probably not object to. The Hungarian civilian cartography is still using this mapping system, the EOTR.

References

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