

REGULARISATION OF INTERNATIONAL BOUNDARY LINE BETWEEN SLOVENIA AND CROATIA

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Abstract

Described and based with arguments is a suggestion for a boundary survey of a course of the international boundary line between Slovenia and Croatia by the virtue of valid documentation of the Republican boundary line in ex Yugoslavia.

Keywords: cartographic base, Croatia, history, international boundary line, land ownership boundary, organization, procedures, Slovenia

INTRODUCTION

By Slovenia's attainment of independence and statesmanship, the international boundary between the ex Republics of Yugoslavia, Slovenia and Croatia, has been reinstated. By the basic constitutional document of the attainment and autonomy of the Republic Slovenia (Official Gazette of the Republic of Slovenia – Ur.l. RS No. 1-4/91) Slovenia has acknowledged international boundaries of the ex Socialist Federative Republic of Yugoslavia (SFRJ) with Austria, Italy, and Hungary, and the boundary between the Republic Slovenia and the Republic Croatia within the ex SFRJ. Both new states have declared on international level that they do not have any territorial pretensions, and that they respect the existing mutual Republican boundaries.

THE BOUNDARY LINE OF THE REPUBLIC SLOVENIA WITH ITALY, AUSTRIA AND HUNGARY

The boundary line of the Republic Slovenia with Italy, Austria and Hungary was defined, marked on terrain and documented as the international boundary line of Yugoslavia. The boundary documentation comprises also the whole surveying documentation of the land survey of the course of the international boundary marked with numbered boundary stones, a detailed situation of boundary stones, a detailed area boundary survey, and a trigonometric planimetric and altitude network. The whole documentation of the international boundary of the ex Yugoslavia and also of Slovenia is kept at the ex Federal Foreign Office, which was in charge of affairs concerning international boundaries. In the execution of the international boundary survey the ex Foreign Office cooperated with the Military Geographic Institute in Belgrade and with the Hydrographic Institute in Split.

The Slovene Republican Surveying and Mapping Administration has managed to obtain some parts of documentation on the international boundaries in form of copies, yet these as such are not in force. The data on the international boundaries were inaccessible to public. For this reason they were hard to get to and this only for a specific aim. The so far though informal talks with surveying offices in neighboring states are very promising as to obtaining from them without too many difficulties the official data on the international boundaries. In spite of this it is necessary to obtain as soon as possible data on international boundaries and other surveying data for the territory of Slovenia also from the archives of the ex Yugoslavia. These data are important for research work and are part of Slovene national and precious archival material. In this task a larger group of experts from various professional fields of work will have to cooperate with the Slovene Foreign Office.

THE BOUNDARY LINE OF THE REPUBLIC SLOVENIA WITH THE REPUBLIC CROATIA

The boundary line of the Republic Slovenia with the Republic Croatia was defined only according to legal provisions about dividing the People's Republic Slovenia to towns, districts, and communes (Official Gazette of the Socialist Republic of Slovenia – Ur.l. SRS No. 11/52 and amendments 9.7.1982), and by the Article 7 of the Law on Procedures for a Foundation, Integration e.g. a Change of Territory of a Commune (Ur.l. SRS No. 82/80), which determine territories of communes with territories of cadastral communes. In equal general terms the course of the Republican boundary was defined in Croatia by the Article 4 of the Constitution of the Socialist Republic of Croatia: The territory of the Socialist Republic of Croatia is composed of territories of communes defined by law. The territory of the SR Croatia is an integral part of the territory of the Socialist Federative Republic of Yugoslavia. The boundaries of the Socialist Republic Croatia may be changed only by the virtue of law of the parliament of the SR Croatia, and in accordance with the expressed will of the inhabitants affected by the change. The territory of communes in Croatia was defined by Law on Territories of Communes and Arondissements in the National Republic of Croatia (Official Gazette – NN 39/62). Consequently, the external boundaries of cadastral communes towards Croatia and vice versa form at the same time also Republican boundary line between Slovenia and Croatia within the ex Yugoslavia, which both Republics, resulting from the understanding of the attainment declaration, acknowledge. The detailed ascertaining and marking boundaries of cadastral communes is in both Republics regulated by Law on Boundary Survey e.g. Law on Land Cadastre.

From the above said we can state that the boundary in ex Yugoslavia between Slovenia and Croatia was defined and documented by official land cadastre maps of both republics and by the documentation of ascertainment and delimitation of boundaries of cadastral communes, although today on terrain the boundary marks no longer exist. Eventual later mutually agreed on and correctly on the republican level acknowledged changes of boundaries of bordering cadastral communes remain to be ascertained. The international boundary on land between Slovenia and Croatia will therefore not be defined on terrain as a new border on the basis of international principles and regulations by taking into consideration natural boundaries of rivers and other in nature characteristic lines or political international agreements as it

usually was the case in history in defining boundaries among states. The international boundary has to be ascertained on terrain, delimited on the course of the current republican boundary on the basis of the documentation of this boundary, which are valid land cadastral maps. Corrections on terrain so ascertained boundary to the natural boundary may then be the issue for an agreement between the two states. The boundary at sea which has so far not been defined, has to be defined anew. A very important starting-point for defining the boundary at sea is the final point of the land boundary, and because due to small area of the Slovene sea probably also very important and decisive is functionality of the territorial Slovene sea. Due to given cartographic foundation of the boundary and its technical characteristics, an agreement between Slovenia and Croatia is needed and in all particulars prepared regulation about the mode and technology of the execution procedure of ascertaining and delimitation of the ex republican and now international boundary between Slovenia and Croatia is also needed.

CARTOGRAPHIC BASIS OF THE BOUNDARY COURSE WITH THE REPUBLIC CROATIA

The detailed land cadastre survey for the territory of Slovenia was executed in years 1818 till 1829; till 1864 the land cadastre maps were renovated (reambulated), and gradually till 1890 used for the set up of the land register for land ownership records keeping and were also in use as the basis for agriculture tax assessment (fiscal, tax cadastre). After 1890 the cadastral records are regularly maintained by the surveying service. Land cadastral maps for the territory of Croatia were made later – from 1853 till 1863 by the same technology and procedures.

The territory of a cadastral commune comprised land property of settlement inhabitants, which was included in individual cadastral communes. The delimitation procedure was regulated by „Instructions for County Land Survey“, issued in 1824 for the ex Austria-Hungary. The boundary line of a land cadastre commune was delimited by numbered boundary stones; about the delimitation a detailed description was made. Unfortunately, the majority of cadastral stones is ruined. The whole documentation was carefully stored; when making use of the maps special care was taken not to damage any maps. During World War II much was destroyed and after 1945, due to inattentiveness much damaged and lost, whereas the whole documentation for the territory of Slovenia was not even taken into possession from the archives of the ex Austria-Hungary.

ASCERTAINMENT AND DELIMITATION OF THE INTERNATIONAL BOUNDARY LINE

On terrain, the boundary line between the Republics is not marked. In practice the Republican boundary was treated as an administrative boundary, the actual course on terrain was not known, what has resulted in a series of trouble and surprises at the set up of a boundary regime. Above all there occurred a difference in boundary course interpretation, which has to be settled by talks on diplomatic level.

The land cadastral maps were elaborated on the basis of calculated and condensed graphical triangulation in Soldner Projection for the territory of Slovenia in 3 unlinked systems. The majority of triangular points is destroyed; how many of them are preserved on the boundary area with Croatia is not known. However, we did find

out that to some extent the boundary stones of the delimitation of the county boundary in the Ptuj Commune still exist. The detailed land survey was executed using technology of graphical line intersections of direction to detailed points (plane table survey). The detail survey was executed for individual areas by sheets in each commune. The result is that at commune borders, on edge comparison and on borders of individual areas of the detailed survey discrepancies occur. It is impossible to lay out individual sheets continually into a cadastral commune and cadastral communes can not be laid out within the area of the coordinate system. Discrepancies occur also on edges among coordinate systems.

The result of the technology elaboration analysis and accuracy of the plane table survey of the land cadastre maps is that due to the stated ascertainments the transfer of the position of border points from a map into terrain with the calculation of coordinates of points by transfer into terrain, from trigonometric and surveying network would be – as regards time and expenses – highly exacting piece of work and professionally unreliable, e.g. irrational, since the results would not justify the expenses. As we know technology of plane table survey of land cadastre maps ensures relative accuracy of the form, surface of parcels and position of parcels, and parcel boundaries form smaller areas of land table survey in the same area of the basic detail survey. The regulations for the maintenance of land cadastral maps of land table survey have foreseen a survey technology appropriate mode of maintenance e.g. insertion of contents of parcels' boundaries. The new parcels' boundaries or the transfer of the existent contents into terrain is executed by graphical coordination of measured parcels' situation within the frame of a divided parcel and exceptionally for neighboring parcels for insertion of linear objects or larger surveys. The orientation of the position of parcels' boundaries are on terrain measured existing marked and identified ownership boundaries. On the basis of the stated issues ascertained accuracy, technology of additional insertion during maintenance and in practice on terrain, a possibility is given, in Slovenia and also in Croatia, that according to law land owners may find out the ownership boundaries by actual course of the boundary on terrain and that in a legal procedure in which the participants are land owners of bordering parcels. The boundary is ascertained and delimited by signing a statement, which has the status of an agreement.

In search for a mode of designation e.g. delimitation of the boundary between Slovenia and Croatia on the basis of the course of boundaries in land cadastre maps and taking into consideration all facts, the most appropriate delimitation of the boundary is to delimitate boundaries on parcel ownership criteria on the Slovene side of the border and ownership parcels on the Croatian side (which is at the same time the boundary of the cadastral commune and the boundary between the two states) by the already described procedure. The expected tolerance in use of land parcels is, based on experience, minimal and irrelevant and within limits of accuracy of the elaboration of graphical land cadastral maps. The article deals solely with graphical land cadastre maps, because of the fact that at the border area with Croatia in Slovenia there are no maps in G. K. coordinate system, e.g. in case they should exist, the cadastral commune boundaries would have to be brought into line with the already stated regulations in mutual understanding and on the Republic level.

We know already that the so ascertained boundary at the course of the cadastral commune boundaries will not always be functional and practical. In such cases necessity will arise for coordination and mutual arguments as to the course of the boundary, which is to suit both sides in the greatest possible way, e.g. will run according to its natural boundary. To carry out the delimitation of the boundary on terrain, Slovenia and Croatia are to prepare regulations in which detailed mode and execution procedures will be defined. Appropriate working commissions will have to be formed to conduct the boundary ascertaining and delimitation procedures. It may seem practical to appoint to these commissions surveying experts, operational workers from competent communal surveying administrations and surveying organizations. It will be a necessity to define a mode of dissension solutions as to the course of the boundary among land owners, since these dissensions among land owners must not be a hindrance to ascertaining boundary between two states. As to expenses, a general agreement is already accepted for each state to carry its own expenses, expenses for mutual work are to be shared.

As suggested, the boundary between the states should first be ascertained and marked as the ownership boundary line where agreed designations would be used – probably in the same way as are used already. All characteristic points, all boundary breaking, and at the minimum distance of 250 m, should be marked by marks of an international boundary line with a current serial numberings on condition that marks of the international boundary line can be seen from one to another mark. Designing the execution we have to take into consideration that the boundary area with Croatia is mostly less populated and covered with dense woods, which will intensify difficulties on terrain work and at land survey elaboration, which must be executed right after the delimitation. To measure boundary control points a network of order control points and a triangular points network at the border will have to be developed. In talks the Republican Surveying and Mapping Administration of Slovenia and of Croatia ascertained, that Slovenia possesses an improved network of trigonometric first order points with a network calculation with data of measured geoid points and GPS-points, which were measured this year in the border area in Slovenia and Croatia, by which a possibility was given to improve the accuracy of the network even more. It has been settled that the Slovene trigonometric network, expanded in the border area with Croatia, will be used. Among trigonometric first order points a survey network should be developed. The trigonometric network project and survey network have been prepared by the Surveying Institute of the Republic Slovenia.

CONCLUSION

The Republican Surveying and Mapping Administration of Slovenia has been aware of the importance of accurate ascertainment of the boundary line between the Republics. So in 1970's it gathered cases where dissensions occurred and warned the then government about the need of boundaries regularisation. Again in 1985 the Republican Surveying and Mapping Administration has warned when misunderstandings at the boundary at Dragonja river and at other sections occurred. We thought it our duty to draw attention of the new government to the problems of the boundary; this was done already on July 11, 1990, and again on Dec. 15, 1990. In spite of hindrances and misunderstanding in its own ministry, the Republican

Surveying and Mapping Administration has devoted its full attention and adequate activity to questions of boundary ascertainment and delimitation. It has prepared the systemization for an independent group, the duty of which would be the organization of surveying works at boundary ascertainment and delimitation, boundary line markings, and cooperation in working groups dealing with international boundary issues. It is most likely that this group is to be enlarged in a very short time.

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