

# **Cadaster and Land Registry Harmonization in the Federation of Bosnia and Herzegovina**

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**Keywords:** Cadastre, Land Register, Real Estate Registration, Common Database

## **SUMMARY**

The cadastre and land registry in Bosnia and Herzegovina were established over the period between 1879 and 1911. They have ever since been on a long evolutionary journey, interspersed with many drastic changes (e.g., five different political regimes, with social systems ranging from feudalism through capitalism to socialism and eventual reinstatement of capitalism in early 1990s). This paper discusses evolution of the cadastre and land registry since their inception to date, focusing especially on the causes that led to their divergence. This divergence is manifested through the presence of two completely different systems of records in most of the territory of the Federation of Bosnia and Herzegovina. This is a serious impediment to economic development, resulting in the steps being taken as of late to harmonize the cadastre and land registry. These steps are described in this paper on the level of methodology and on the level of activities that are undertaken.

# Usklađivanje Podataka Katastra i Zemljišne Knjige u Federaciji BiH

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**Ključne riječi:** katastar, zemljišna knjiga, registracija nekretnina, zajednička baza podataka

## SAŽETAK

Katastar i zemljišna knjiga u Bosni i Hercegovini uspostavljeni su u razdoblju od 1879. do 1911. godine. Od tada su prošli dugi put promjena, državni okvir promijenio se pet puta, oblik društvenog uređenja se mijenjao od feudalizma, preko kapitalizma do socijalizama, te povratka u kapitalizam početkom 90-tih godina prošlog stoljeća. U radu se govori o razvitku katastra i zemljišnih knjiga od uspostave do danas, s posebnim osvrtom na razloge njihove neusuglašenosti. Ta neusuglašenost, se na najvećem dijelu teritorija Federacije BiH manifestira kroz postojanje dvaju potpuno različitih sustava podataka. Ovakvo stanje predstavlja veliki problem za ekonomski razvitak, stoga se u posljednje vrijeme poduzimaju koraci ka usklađivanju podataka katastra i zemljišnih knjiga. Ti koraci, na razini metodologije i na razini aktivnosti koje se poduzimaju su opisani u radu.

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## 1. HISTORIC DEVELOPMENT

The beginning of organized registration of real estate and rights to real estate is commonly associated with Austro-Hungary's arrival to Bosnia and Herzegovina. True, there had been certain activities in this field even before, but establishment of a land cadaster and land registry in their present form started with Austro-Hungarian rule in Bosnia and Herzegovina. In December 1879, a special commission was established within the Ministry of Finance in Vienna comprising 7 military and geography experts and court advisors. Task of this commission was to explore the cadastral survey of Bosnia and Herzegovina. The Commission worked during the month of January 1880, and upon completion of their work, they identified technology of the survey as well as the form and content of the product that will be obtained by the survey. For this purpose, special instructions were elaborated on 223 pages, with 58 attachments containing specific instructions on how to carry out all future work. The survey field work started on 15<sup>th</sup> of August 1880. Over the following years, the works continued at increased intensity, with the field work being done during the summer months and the office work in winter. Field works were completed at the end of summer season 1884, and all office works was done at the end of May 1895; with this, the whole territory of Bosnia and Herzegovina had been surveyed. The survey had been done using geographic method, geodetic/ plane table ("*kipregl*"), the polyhedron projection; in this method, the area covered 30' by parallel and 15' by meridian was copied onto the map "*degree sheet of the map*" where each "*degree sheet*" (polyhedron projection) had its own coordinate system. During the survey, 3,128 cadastral municipalities with total of 3,379,987 cadastral units and 622 "*pradiums*" (large state owned forest areas) were measured in detail. Based on this survey, a land cadaster was established primarily for taxation purposes.

The land registry was developed during the period 1885-1909. Land registry is based on legislation passed on 13<sup>th</sup> of September 1884. This legislation introduced in Bosnia and Herzegovina the same legal norms that had been in force in other areas of Austro-Hungarian Empire at the time. The said legislation remained in force until 1931, when the then Yugoslavia published their own land registry legislation.

During the period between two world wars, maintenance of the land cadaster was carried out by cadaster service, while the land registries were maintained by the land registry offices of the county courts of the time. During this period, the two bodies were under obligations to notify each other on all changes in their records. Therefore, one may say that the two records maintained a quite good level of harmonization between themselves, but also with the situation in the field, with certain exceptions that were primarily result of geodetic experts' work on surveying Serbia, Macedonia and Montenegro.

During the World War II, land cadaster and land registry records suffered significant degree of destruction. Out of 67 cadastral counties in Bosnia and Herzegovina, the cadaster records

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were completely destroyed in 24 (both maps and descriptive documentation – the “*operat*”), on the total area of around 1,700,000 ha. In addition to destroying the land cadaster records, the land registry records were also destroyed for around 1,100,000 ha. On top of this, one must stress the fact that the cadaster and land registry records in other areas had not been maintained either during the period 1945-1953 as they had been considered capitalistic developments. During this period of time the taxation based on real income was introduced, which was determined by special commissions. It very quickly proved ineffective and impossible to implement, which had led the then authorities to pass decision on taxation on the basis of cadastral revenue, thereby giving back the importance to the land cadaster records they once had. Because of this, for those areas where the cadastral records were destroyed but land registry records were kept, the cadastral review was done in the period 1948-1952, while for those areas where both cadastral and land registry records were destroyed, the so called cadastral listing (“*popisni katastar*”) was produced in 1952-1953. From 1953 and 1954 tax collection started based on cadastral revenue. All these developments have left the land registry aside; it was not kept up to date even in those areas where it was still preserved. The above described situation, as well as low level of accuracy of Austro-Hungarian maps and their inapplicability for technical purposes, forced the then government to start new survey of territory of Bosnia and Herzegovina in 1953 by using aerial photogrammetry. That year the massive survey begun based on which the topographic maps were produced in Gauss-Krüger projection in scales: M=1:500, M=1:1000, M=1:2500, M=1:5000; in addition, a new land cadaster was established. At the same time, the land registry was completely neglected – it had not been revised. This decision of the then government had catastrophic consequences. Namely, we have a situation now that the land cadaster records and land registry records are not any more related by a common graphic registry; instead, the land cadaster is based on the new survey maps, while the land registry is still based on the old Austro-Hungarian maps, which had been put out of force with the new survey. This behavior of the then authorities was very strange – primarily because all legislation of that time that concerned real estate transaction still confirmed the role of the land registry. At this time, the third registry of real estate was established – the so-called Registry of Socially Owned Real Estate, as a result of the incessant addition of socially owned real estate through processes of expropriation, nationalization, confiscation and other processes characteristic of the time. This registry was supposed to be maintained by municipal real property departments; however, in majority of municipalities, this registry had never been established.

Already in early 70-ies it became clear that this practice was not good and measures were taken to find a better solution. Since the problem of registration of real estate and rights to real estate also existed in other republics of former Yugoslavia, major discussions were held on this topic at the time. The proposed solution introduced the concept of “cadaster of real estate” as a single registry of real estate and rights to real estate. This concept was best accepted in Bosnia and Herzegovina, Serbia and Montenegro.

The draft “Law on Land Survey and Cadaster of Real Estates” (“*Zakon o premjeru i katastru nekretnina*”) had been prepared for almost a whole decade, with full participation of all stakeholders. Based on results of public debates, as well as debates in expert circles, the proposal of the Law was drafted and then adopted at the session of Assembly of SR of Bosnia and Herzegovina on 30<sup>th</sup> of May 1984. The main new thing introduced by this Law was the transfer of responsibility for maintaining land registries from municipal courts to the newly

established bodies of local self-administration, who were in fact expected to maintain unified records of land cadaster and land registry in the form of cadaster of real estate.

By the end of 1983, new survey was completed on approximately 60% of territory of Bosnia and Herzegovina. After the law had been passed, the survey activities gained additional momentum, and this was supposed to result with completion of the survey and establishment of the cadaster of real estate on the whole territory within the next 10 years. During the initial years of implementation of the law, the land survey activities managed to keep up with the planned deadlines; however, the results in terms of establishing cadaster of real estate were delayed. Some steps to improve this situation were taken in 1990 and 1991, when the Law was slightly changed to reflect the experiences gained during its implementation to date, and finally, most of the implementing legislation (rulebook) prescribed by the law were finished at the time. The amendments to the Law extended the time for completion of the works by 2000, and additional regulation secured financing necessary for completion of that goal.

However, when the preconditions for better progress in terms of project implementation were ensured, the war started. All activities stopped; at the time, around 92% of the territory of Bosnia and Herzegovina had been surveyed, and cadaster of real estate had been established at approximately 10% of the territory. During the war, the geodetic and cadastral documentation had not sustained significant damage.

After the end of the war, in the conditions of new territorial and political organization of Bosnia and Herzegovina, activities were taken towards completion of the project. However, in the situation of undeveloped new administrative structures that followed from the new organization of Bosnia and Herzegovina, completely destroyed economy and population displacement, these activities were very slow. The work to established cadaster of real estate continued in a number of municipalities, mostly in those areas where such work had been near complete before the war.

A new change followed in 2002, when the then High Representative to BiH imposed the Law on Land Registry. This law has brought back in BiH the classic Germanic system of land registry, and as of that time, the land registry has been maintained by responsible municipal courts. The real estate cadaster could not have been established any longer because the provisions concerning registration of the rights to real estate, which used to serve as basis for implementation of a single procedure of public disclosure of the real estate data and data on rights to real estate were abolished. Because of this, the large survey projects that had started before the war could not have been completed by establishment of the real estate cadaster.

This situation has produced a whole series of practical problems that had added complexity to already complicated situation regarding the cadaster and real estate registry. In the fragmented cadaster and land registry system, a period of continued divergence and growing discrepancies between the cadaster and land registry data followed. In fact, a new model of land administration was introduced, which legally covered some 50% of actual realistic needs of land administration in BiH. So we had provisions that enabled maintenance of the land registry, establishment of the land registry in individual cases, replacement in those cases where the land cadaster and land registry had been established in line with the new survey, but precise provisions on organized establishment of land registry were missing, and also missing was the procedure for registration of real estates in the cadaster of real estates.

Over the past ten years efforts were made to legally rehabilitate this situation. Unfortunately, the efforts have not produced expected results due to complex political situation in the Federation of BiH. In such circumstances, the Federal Administration for Geodetic and Real

Property Issues (FGA), which is responsible for cadaster, turned towards digitalization of Real Estate Cadaster Data Base (RECDB), and towards introduction of a single software package for maintenance of cadaster “Katastar.ba”. During this period, some significant changes were made to the land registry too (digitalization of land registry data and reestablishment of the LR offices under the “Land Registration Project” financed by a World Bank loan). Since 2009, the pilot projects of data harmonization between the land cadaster and land registry data were started under the same project. Implementation of these pilot projects has yielded with experiences very much needed in order to improve legally defined procedures, as well as experiences related to general prerequisites for implementation of such projects.

## 2. CURRENT STATUS OF CADASTER AND LAND REGISTRIES

The current status of official registries, in terms of cadaster and land registry data sets, has been thoroughly examined and documented in the study titled “Development of Technical Standards for Creating Land Information System Data” that was financed by the European Commission in 2006. On the basis of existing four types of cadaster (listing, Austro-Hungarian, cadaster of land and cadaster of real estates) and on the basis of existence or non-existence of land registry, as well as some other technical aspects, such as:

- whether there was a new survey done;
- whether the public disclosure for real estate cadaster had begun;
- whether there was a digital cadaster plan (DCP),

this study recognized 20 baseline situations, shown in the following table:

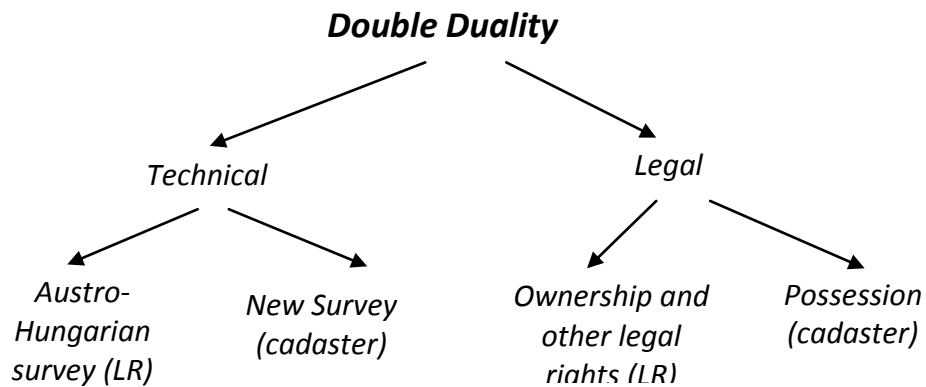
Code	Baseline situation	Represented
1.1	AH cadaster with land registry	145 CM
1.2	AH cadaster with land registry and with completed new survey	205 CM
1.3	AH cadaster with land registry, new survey completed, and disclosure of the real estate cadaster started	173 CM
2.1	Listing cadaster with land registry	16 CM
2.2	Listing cadaster with land registry and with new survey completed	43 CM
2.3	Listing cadaster with land registry, with new survey completed, and real estate cadaster data disclosure started	6 CM
3.1	Cadaster of real estate based on new survey, with DCP	387 CM
3.2	Land cadaster based on new survey, with land registry, without DCP	1375 CM
4.1	Real estate cadaster with land registry, with DCP	126 CM

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4.2	Real estate cadaster with land registry, without DCP	200 CM
5.1	AH cadaster without land registry	10 CM
5.2	AH cadaster without land registry, with new survey completed	36 CM
5.3	AH cadaster without LR, with new survey completed and with real estate cadaster disclosure started.	21 CM
6.1	Listing cadaster without land registry	24 CM
6.2	Listing cadaster without land registry with new survey	159 CM
6.3	Listing cadaster without land registry, with new survey completed, and with started disclosure of real estate cadaster	79 CM
7.1	Land cadaster without land registry, with DCP	27 CM
7.2	Land cadaster without land registry, without DCP	346 CM
8.1	Cadaster of real estates without land registry, with DCP	36 CM
8.2	Cadaster of real estates without land registry, without DCP	47 CM
Total:		3465 CM

*Table 1: Catalogue of Baseline Situations*

The legal distinction between various baseline situations is obvious at the first glance. Particularly complex is the legal status in most frequent (51% of total number of cadastral municipalities in BiH) baseline situations 3.1 and 3.2. This legal status is characterized by double duality. First, there is technical duality, since we have mark and description of the real estate according to the new survey (land cadaster) and Austro-Hungarian survey (land registry). This duality is a result of failure to complete the new survey (started in 1953), as it served as basis for establishing cadaster of real estate, while the land registry was left aside. There is also legal duality: land cadaster registers possessors, while the land registry registers owners and holders of other legal rights. Legal duality is a remnant of the past. Over the past 120 years, BiH had so-called tax cadaster. Simply put, it is the type of cadaster that registers possessors of the real estates in order to collect relevant tax from them. In parallel with the cadaster, there was also the land registry, which recorded owners and holders of other legal rights.



*Figure 1: Double Duality*

Each of the baseline situations presented in table has its particularities that could justify lengthy elaboration. However, for the purposes of this article, we shall focus only on the most common situation. The reason for this is because it is so common (51%) and because it exists on economically most valuable territory of the Federation of BiH. For these reasons, this situation has been considered a priority, and the current projects mostly focus on municipalities with such baseline situation.

### 3. DATA HARMONIZATION PROJECTS

Since BiH could not provide funds on its own for financing any major effort to bring some order in land administration, the responsible institutions turned to financing by World Bank loans. First the Land Registration Project (LRP) was implemented, and currently the Real Estate Registration Project (RERP) is under implementation.

The LRP, which had been implemented over the period 2007-2012, largely improved registration of rights in both entities of BiH. Almost all land registry offices (LR offices) were refurbished and reorganized in line with the new operational plans and standards of services. Accumulated unresolved land registration applications have been completed in all offices. Most cadastral plans and land registry records have been digitized. IT systems were developed and standard modern software solutions adopted, and clients have the possibility of on-line access to the records.

Cadaster and land registry real estate data harmonization activities have also been tested and tried during implementation of the LRP. The harmonization process and transfer of data on condominiums from the Book of Deposited Contracts (BDC) to the land registry was tested in four locations in the Federation of BiH (Čapljina, Gradačac, Travnik, Ljubuški).

After having done analytical study of implemented procedures, the FGA decided to apply the most effective method identified. This method did not include field work. The baseline situation varied depending on whether the earlier cadaster work had been finished, partly finished or interrupted by war, or had never started.

The RERP project started in September 2013. Planned implementation period is 5 years. The objective of the RERP is to facilitate proper development of transparent real estate market in Bosnia and Herzegovina by registering rights to real estate, and by prescribing additional

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policies that provide for secure and efficient transactions. The key driving force of real estate registration system will be registration of rights to real estate and mortgages, as well as offering reliable information to facilitate investments, property taxation and spatial planning, and for enabling social monitoring of transactions involving real estate.

Completion of activities planned under the RERP finalizes the work of establishment and replacement of the land registries on the basis of new survey data in urban areas.

Harmonization between cadaster and land registry data in the Federation BiH will focus on municipal centers and border areas in 243 selected cadastral municipalities. All citizens will receive equal treatment, irrespective of their gender, ethnic affiliation or social position by ensuring monitoring of the work in field, raising public awareness, vulnerability mapping and social monitoring.

Development of real estate registration infrastructure shall build on the activities initiated under the LRP. This means continued improvement of working conditions and infrastructure in cadastral and LR offices. Also, implementation of the ICT/IM strategy in land administration will continue. The plan is to procure additional hardware and communication units to meet the needs of the cadastral and LR offices, continued development of functionalities, as well as maintaining and connecting cadaster and land registry information systems, including implementation of new e-services, scanning of the land registries and land registry archive.

Implementation of the RERP in the Federation of BiH will serve as basis for further successful development of land administration.

#### **4. DATA HARMONIZATION PROCEDURES**

In line with the best practices in land administration systems, individual (sporadic) and organized ways of data harmonization between the cadaster and land registry are being implemented in the Federation of BiH. The purpose of the individual approach is to gradually, as a part of everyday work, get closer to the ultimate goal of harmonization of land registry and cadaster data, what would in this specific case mean that the data on real estate are identified by the new survey (land cadaster), while the data on rights to real estate are based on that data. Individual approach is only possible in those baseline situations where the land cadaster exists. In terms of land registration procedures, the individual approach is effected by replacing LR folios where the rights to real estate are established for the real estate described by data of land cadaster. With this sporadic approach, the applications for replacing land registry concern only a small number of real estates (most often only one). Sporadic approach is applied in a small number of LR offices because of certain restrictions imposed by the current legislation, and also because of lack of interest among the employees.

In case of organized approach that is done under World Bank financed projects, land registries replacement is done for the whole cadaster municipality. In order to initiate the process of replacing the land registry, the real estate has to be identified on the basis of data from land cadaster and land registry. Identification of the real estate is done by private geodetic companies, under supervision by local cadastral offices and the FGA. The identification process is a very complex one, and it uses the data from the land cadaster (RECDB) and land registry – land registry data base (LRDB) that are in digital form, as well as the scanned maps of the Austro-Hungarian survey and other documentation produced in the process of



Then follows the process of replacing the land registry and this is done in line with the Law on Land Registries. The procedure starts with publishing an invitation for all interested entities to register their right to real estate that are subject to replacement of land registries within 60 days. This time may be extended by 90 days on the basis of application by the interested party who needs this time to collect relevant information proving their rights. In case that the interested party misses the 60 days deadline due to objective reasons, they may register their rights within 60 days from the day of learning about the process of replacing the land registry. Upon expiration of the deadlines prescribed by law, the LR officials shall, based on received registration applications and documentation available, identify holders of rights on real estate. The process of harmonization of real estate data ends with adoption of decision on establishing right to real estate.

Here one must emphasize the fact that in addition to the activity of harmonization between the cadaster and land registry, the current projects also provide for transfer of data from BDC into the land registry. The BDC was established as a temporary solution for the purpose of registering right to apartments bought in the process of privatization. By transferring this data into the land registry, which was previously harmonized with the cadaster, a single, reliable and up-to-date registry of rights to real estate will be established.

## 5. CONCLUSION

Harmonization of data between cadaster and land registries by applying procedures described above provides prerequisites for development of an effective land administration system. Harmonized data between cadaster and land registry are good basis for faster economic development, and will also greatly contribute to curtailing illegal building. Data harmonization will provide information to the responsible institutions on the actual situation in the field, what is the necessary basis for resolving the remaining unresolved issues related to the policies, such as the scope of property taxation, unused arable land, land fragmentation, outdated urban development plans and buildings without utilization permit. Data harmonization will also serve as solid basis for monitoring real estate market, identifying land for investment promotion and agricultural subsidies. Harmonized information will also enable the citizens and other interested parties to register their rights to real estate in the land registry, which had before been registered only in the cadaster or in the BDC.

The data harmonization is also characterized by an omission that is a result of the existing legislative framework. Namely, after the harmonization, the data will continue to be kept in two separate, unlinked data bases. The cadaster will be kept in RECDB, which is maintained by responsible departments in local self-administration units, while the land registry is kept as LRDB, which is maintained by LR offices of municipal courts. Certain steps to remedy this shortcoming have been taken, and draft legislation that provides for single land administration system has been developed. At this time, the proposed legislation is in the process of being adopted by the Parliament of the Federation of BiH.

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