

THE CADASTRE IN ITALY: EXAMPLE OF THE ACTUAL CADASTRE IN THE AUTONOMOUS REGION OF TRENTINO – SOUTH TYROL /ALTO ADIGE ITALY

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HISTORY AND IN GENERAL

In ancient times the secret of the numbers and of geometry was reserved only for the priesthood. The enlargement of the Roman Empire and the connected needs caused the transition of the surveying techniques from the priesthood to the civil society. It is supposed, that this happened about 450 BC thanks to Caius Terentilius Harsa, a Roman tribune, elected to protect the interests and rights of the plebeians in front of the patricians. He was the author of the law of the 12 tables and created the base of the famous Roman Right. First everybody was allowed to survey, soon schools for surveyors – “agrimensores” - were built in the main cities of the Empire, so in Rome and Constantinople. The agrimensores were organised in councils and had only the permit to survey. The real cadastral surveyors in the ancient Roman Empire were the “gromatici veteres”, so called because of their instrument: the “groma”.(*) The importance of the cadastre for the Romans can be seen, in the figure of their God Terminus – the God of the boundary-stones. There is a legend written by Ovid: all the Gods were assembled on the Capitol hill to consecrate a new temple in honour of Jupiter. When Jupiter arrived, all the Gods bowed in front of him and set the way free, only God Terminus stood firm.

The oldest cadastre of Europe is probably the cadastre of the city of Milan, published in the year 1248 (**). In 1427 the community of Florence decided to introduce a new taxation system, which is very similar to today's. Every head of family had to produce a declaration, in which he listed his properties, debts and credits, and his family members. This information served to calculate his income for taxation purposes.



**Ancient Roman land surveyor
with the groma**

(*) De Caterini, R. (1995). « Gromatici Veteres » I Tecnici Erariali dell'Antica Roma .*Rivista DdT* 2/1995

(**) Lego, K. , *History of the Austrian Ground Cadastre*. BEV-Vienna, p.2

In the 15th century the “gabella possessionum” was introduced, a kind of ground taxation on land and buildings as a base of a continually renewed cadastre. In 1728 the first king of Piedmont, Victor Amadeo II, decided to create a geometric parcels cadastre for the 630 communities of the Savoy county. In 1798 a provisional cadastre was introduced in the republic of Liguria. At the same time in Milan the “Antico Censo Milanese” came into being, better known as “the cadastre of the Empress Maria Therese”. The maps were scaled 1:2000 and based on a field survey, in which all the boundaries of the parcels were measured. The parcels were ordered, classified, and after that valued, and the capital was taxed.

In 1807 Emperor Napoleon ordered to create a unique cadastre for the whole territory of the Italian kingdom. Eight years later the “Nuovo Censo Milanese” was introduced in Milan, taxation was by this imposed on the profit and not on the capital. In 1816 a cadastre was created in the State of the Church. King Victor Emanuel II of Piedmont ordered to create a new cadastre in 1855. For the first time the field survey was combined with a geodetic triangulation net. The Minister of Finances Count Camillo Benso di Cavour created special schools, in which cadastral technicians were trained.

In 1860 twenty-five different cadastral systems existed in Italy (*). In the “censo milanese” the estimations were made on a middle-value, so who neglected his land had to pay more taxes than those who worked diligently making more profits. So proprietors were encouraged to produce a lot, and they had not to fear an increasing tax. The cadastre of Tuscany excluded farm houses from the evaluation. The cadastre of the State of the Church taxed the capital with no regards for the profit, while taxation in the Parma cadastre was based on it.

In 1871 a commission was created with the task to register all the existing cadastres of the Italian kingdom and to work out a project to put them together.

The base of a unified cadastre was formed by law n. 3682 of March 1st, 1886 (law Messadaglia) (**). A ground cadastre (Catasto Terreni) and a Buildings cadastre (Catasto Edilizio Urbano) were introduced, in which all the parcels of the communities had to be registered as land or building parcels.

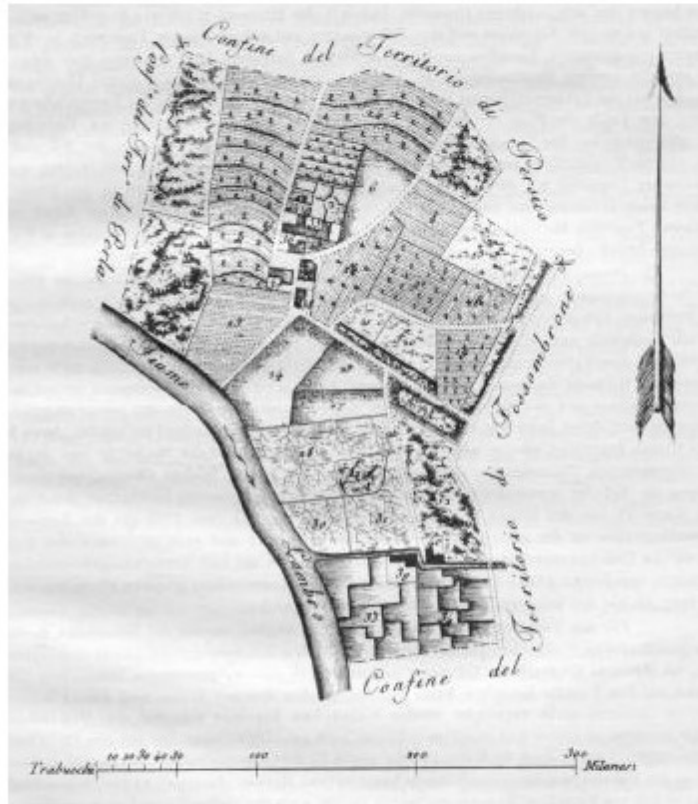
In 1914, at the beginning of World War One, 43% of the Italian territories were registered in the cadastre. The work of the new ground cadastre was completed in 1956.

After World War One some territories of former Austria came to Italy by the peace-treaty of Saint-Germain-en-Laye, September 10th, 1919(***). The Austrian cadastral system was maintained in these territories by decree n. 2323 of the Italian King.

By the law of August 11th, 1939, the New Building Cadastre (Nuovo Catasto Edilizio Urbano) was introduced. Article 1 of the law appointed the State to inquire the proprietor and the profit of a building, so that a building cadastre could be created. Since this time the cadastre of Italy has been led by the General Direction of the Cadastre and the Financial Services with headquarters in Rome.

In 1941 photogrammetric techniques were officially introduced in the field surveys. Since 1934 Nistri and Santoni have used these techniques. In this period photogrammetric cadastre works were produced in the provinces of Terni and Viterbo, but also in Rome, Belluno, Florence, Novara, Pistoia, Sondrio, Udine, and Vercelli. Because of World War Two the planned photogrammetric cadastre, which should be installed for whole Italy, could not be completed.

At the beginning of 1994 the General Direction of Cadastre and Financial Services was renamed “Department of the Territory”. Since January 1st, 2001, the Italian Cadastre has been led by the Agency of the Territory, one of the four agencies, provided by law decree n. 300 of July, 30th in 1999 and operating by decree of the Minister of Finances n.1390 of December 28th, 2000.



Example of cadastral survey in Milan county

(*) Costa A.(1983).*The Ital. Cadastre*.NIS Roma, p.31

(**) Tani, P.D. (1984). *New Ground cadastre*. Maggioli Editore, p.28

(***) Lun, J.M. (1988).*The Introduction of PREGEO*. FIG Commission 7-Proceedings/Brighton 1988, p.580

THE AGENCY OF THE TERRITORY

The Agency of the Territory maintains offices in every province. The offices are co-ordinated by ten compartmental directories, which will step by step become regional directories. The regional offices shall then co-ordinate the relationships between the regions and the local communities. Italy has twenty regions, six of them have a special statute, which gives them legal authority and special autonomies, one of them is the Autonomous Region of Trentino – South Tyrol/Alto Adige. (ARTS/RATAA). 30,118,725 hectare of the Italian territory are registered due to the valid Italian cadastral law, the remaining 1,427,759 suit the ancient Austrian cadastre(*). The registration system of land rights in the old provinces is based on the French law of March, 23rd, 1855. In the new provinces of Trento, Bolzano, Trieste, Gorizia and some communities of Udine, Brescia, Belluno and Vicenza the former Austrian land registration system is still in use.

The cadastral maps in Italy count approximately 300,000 sheets with 65 million parcels and about 17 million proprietors. Only the possession is seized, but the property and the dimension of the parcel is not expressly granted. The normal scale of the cadastral sheets is 1:2000 (212,209 sheets), but also 1:4000 (22,873 sheets), 1:1000 (33,876 sheets) and in individual cases 1:500 (1273 sheets) are in use.

Plans of subdivision for the division of land parcels or the formation of building parcels are submitted to the serving cadastral offices from qualified freelanced technicians (DPR - Decree of the President of the Republic n. 650 from October 26th, 1972), such as the geometers. The same goes for the building cadastre registrations, which deal with new buildings or variations of existing units.

For the ground cadastre the program PRGEO is in use in the whole territory of the state, while the program to register new or to change existing building units is called DOCFA. Both programs were created by SOGEI (Società Generale di Informatica SpA) under commission of the Ministry of Finances and are available free of charge for all authorized technicians. The cadastral offices are equipped with special programs of DOCFA and PRGEO, so that they are enabled to control the incoming plans of subdivision and registrations of building units.



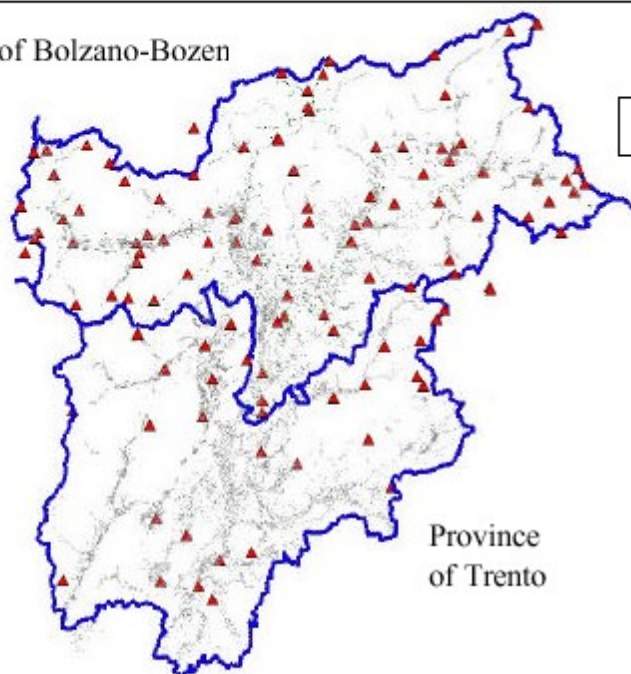
(*) Lun, J.M. (1988). The Organisation of Surveying in Italy. *Austrian Journal of Surveying and Photogrammetry* 2/88: pp.225-242.

THE CADASTRE OF THE AUTONOMOUS REGION OF TRENTINO – SOUTH TYROL / ALTO ADIGE (ARTS-RATAA).



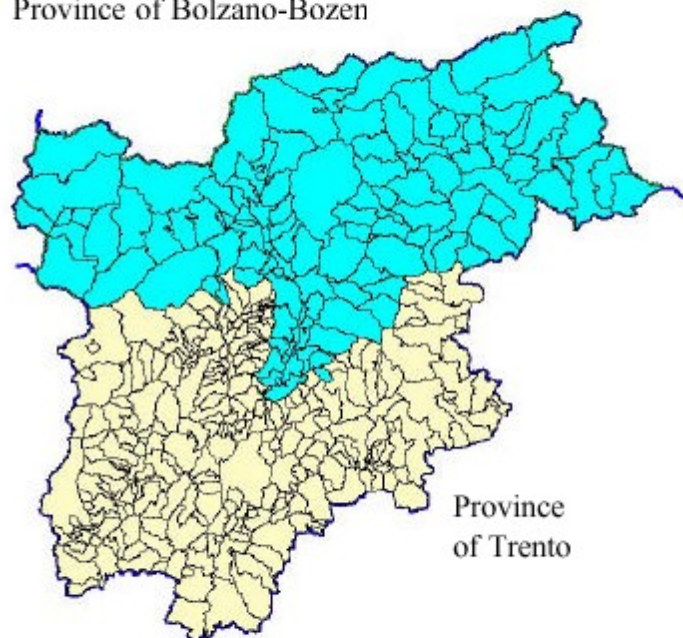
GEODETIC NETWORK AND PF-POINTS IN THE ARTS.

Province of Bolzano-Bozen



CADASTRAL COMMUNITIES IN THE ARTS.

Province of Bolzano-Bozen



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* ACSM-ASPRS 2002 ANNUAL CONFERENCE PROCEEDINGS

THE CADASTRE IN THE ARTS-RATAA AT A GLANCE

	TRENTO	BOLZANO- BOZEN	TOTAL
TERRITORY	2398.8 sq.mi	2857.1 sq.mi	5255.9 sq.mi
CADASTRAL OFFICES	12	10	22
EMPLOYEES	146	114	260
ADMINISTRATED CADASTRAL COMMUNITIES	446	246	692
CADASTRAL MAPS	4,850	4,584	9,434
GROUND PARCELS	1,139,710	487,589	1,627,299
BUILDING PARCELS	224,786	121,688	346,474
BUILDING UNITS	582,000	147,762	729,762
PLANS OF DIVISION / YEAR	4,500	4,533	9,033
NCEU NEW / YEAR	10,500	9,794	20,294
NCEU VARIATIONS / YEAR	10,300	7,395	17,695

The Autonomous Region of Trentino – South Tyrol-Alto Adige has a territory of 13,613 km² (5255.8 sq.mi). It consists of two autonomous provinces named after the two main cities, province of Trento with 6213 km² (2398.8 sq.mi) and Bolzano- with 7400 km² (2857.1 sq.mi). By DPR n. 569 (Decree of the President of the Republic) of July 31st, 1978, the region was empowered by the State to conduct the regional cadastre.

At present Dr. Richard Theiner, regional assessor for cadastre and land register and member of the regional parliament, is appointed as Chairman of the regional cadastre. He has his office in Bolzano-Bozen.

Two cadastral inspectors watch over the main-tenance and continuation of the regional cadastre: for the province of Trento Eng. Paolo Gunther was appointed, and for the province of Bolzano-Bozen Eng. Paolo Russo.

Every province has its own geodetic survey unit. Surveys of PF-points (Fiducial Points – Punti Fiduciali) are taken out with GPS for cadastral purposes. Geom. D'Eletto Tullio (TN) and Geom. Di Girolamo Antonino (BZ) are the current chiefs of the survey units. At present in the province of Trento about 6620, in the province of Bolzano/Bozen 7070 PF-points are measured with GPS and co-ordinated in the Italian Gauss-Boaga system.

Every freelance technician who wants to submit a plan of subdivision to the cadastre is obliged to connect his survey with three PF-points and to use the official PRGEO 7.5 system.

While in Trento everything is in Italian, schedules in Bolzano-Bozen are bilingual: Italian and German. The majority of the inhabitants of this province is of German mother tongue and officially three languages co-exist: Italian, German and Ladin, a Rhaeto-Romanic dialect. All the schedules are bilingual officially, and technicians, who present a plan of subdivision or a registration form for a building unit, can freely choose in which language they want to do it.

In June 2001 the new cadastral program “Open-Kat”, which grants access to cadastral and land register data by the internet, was introduced in the ARTS-RATAA. All cadastral maps of the region will be digitalized until the end of June 2002.

All the Italian geometers are organised in the CONSIGLIO NAZIONALE GEOMETRI, foundation member of the FIG, with headquarters in Rome. In each Italian province free-lanced geometers are organised in the COLLEGIO DEI GEOMETRI (chamber of land surveyors). At present in the chamber of Trento 981 members and in Bolzano-Bozen 606 members are listed.

In the region a free and independent association of free-lancers exists named "tpg", founded in San Michele all'Adige (TN) on the 16th of October, 1982. This association represents about 60 members of topographers of both provinces that are specialised in the sector of geodesy, surveying, cadastre and valuation. The tpg is life member of the SIFET (Società Italiana di Topografia e Fotogrammetria) – Italian Society of Surveying and Photogrammetry, which is a member of the ISPRS.

CONCLUSIONS

In the ARTS-RATAA the cadastre originates from the former Austrian cadastral surveys. After the peace-treaty of Saint-Germain-en-Laye in September 10th, 1919, parts of the former Austrian empire became new provinces of Italy. In Trento a technical cadastral section was founded, which took on the former duties of the former cadastral inspectorate, which had its headquarters in Innsbruck, Austria.

In 1928, by the legislative unification of the new Italian territories, the maintenance of the Austrian land register system appeared as a temporary solution with Art. 2 of the royal Italian decree n. 2325 from November 4th, 1928. This was to be enforced, until new regulations of a general nature for the rights on properties open to the public were published. This temporary regulation became permanent due to the royal Italian decree n. 499 from March 28th, 1929, which determined the regulations of the land registers of the general Austrian law n. 95 from July 25th, 1871. Whereby all other laws and regulations remained in effect only in the new Italian provinces, unless they were compatible with the royal Italian decree and the new text of the general Austrian law from the year 1871.

The executive board of the Italian cadastre ordered by circular n. 9016 from October 13th, 1932, that the direction of the cadastre in the new Italian provinces should follow the former Austrian legislation, law n. 83 from May 23rd, 1883, and the ministerial order n. 91 from June 11th, 1883, which included detailed regulations for the complete implementation of the rules determined by law.

In 1978, July 31st, the ARTS was empowered by the State to conduct the regional cadastre. At the headquarters of the region in Trento a historical exposition of cadastre and land register was established, and has opened to the public since 1995.

The introduction of the cadastral systems PREGEO for plans of subdivision and DOCFA for the registration of building units in Italy was an important step to a modern cadastre. The Autonomous Region of Trentino-South Tyrol/Alto Adige with its inhabitants, which are mostly bilingual or trilingual, plays an important role in the heart of Europe between different cultures. So the ARTS maintains excellent relations with all the cadastral offices of the neighbouring countries (Alps-Adria).

The tpg, regional association of freelanced land surveyors, Italy, is co-organizer with colleagues from Germany, Austria, and Switzerland of the "South Tyrolean Symposium Days". These were first held in Naturno-Naturns (province of Bolzano-Bozen) in 1983 with the subject "The Planimetry as Integral Element of a Land Information System". At the last Symposium days, which were co-organized by the tpg in the castle of count Hendl in Coldrano-Goldrain (province of Bolzano-Bozen) in 1998, the vice-president of the FIG (International Association of Surveyors), the university professor doctor engineer Holger Magel, opened the meeting with a lecture about: "Surveying facing new challenges - chances for the free profession?".