Spatial and Descriptive Documentation of Land Parcels in Hellenic Cadastre: the case of Mati and Kokkino Limanaki Areas

Dionysia - Georgia Ch. Perperidou, Greece

Key words: property rights, spatial & temporal documentation, Land Registries, Cadastre

SUMMARY

The 2018 Greece faced the second-deadliest wildfire event in the 21st century, in Mati and Kokkino Limanaki Attica Prefecture Costal Areas. In 2009 Black Saturday bushfires in Australia killed 173, while in Mati and Kokkino Limanaki the death toll reached 102, the highest in Greece.

On the following days, after the wildfire, residents of those two areas, were treated as participants to many years of public forest trespass, since the destroyed areas had mixed discontinuous urban fabric and forest characteristics.

By thorough photo-interpretation of the official historical orthophoto maps, year 1945, provided by Hellenic Cadastre web page, both Mati and Kokkino Limanaki have pure agricultural characteristics, composed by non-irrigated arable land, irrigated land and vineyards.

Both those coastal areas are part of the Hellenic State since 1831, the Spata Operative Cadastral Office of Hellenic Cadastre (operative since 05.09.2017 for Mati and Kokkino Limanaki), has no historic background, deriving from the traditional deeds registry offices (operative until 05.09.2017). Furthermore there is no correlation between the deeds registered all over the years in the traditional deeds registries and in the cadastral books, sheets and diagrams.

After a year of intensive research in traditional Land Registries, notaries' archives, the General State Archives, Ministries' Archives and the current cadastral data, the findings were more than impressive. The Mati and Kokkino Limanaki areas where monastery property, of the Byzantine Penteli Monastery, officially recognized by the Hellenic State. In 1921 the wider area had been precisely surveyed by the Ministry of Agriculture, while in 1929 the Cabinet had officially approved the sale of 4500 acres in total, from the Penteli Monastery to two groups of local farmers according to then applicable agricultural law. The sale had not been finalized until the year 1931. The total sold area was in detail surveyed, but also decreased by more than 2000 acres, compared to Cabinet's approval.

In this paper the first findings of this research are being presented, mainly in spatial level. A case study is also included, depicting the complex, complicated and time consuming documentation of a land parcel, as it is today, to the original bought area in Mati region.

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1. Introduction

French revolution's aftermath was the abolishment of the feudal system and its replacement by the *numerus clausus* of absolute rights according to civil property law and those rights can be created, modified, transferred and extinguished (Sjef, 2003). In this new era unmovable property, land, became fungible, acquiring economic value and thus turning into a transaction product.

In Europe in the late 18th century and early 19th the first land registries appeared, recording only properties encumbered with mortgage (Wilsch, 2012). Soon afterwards land registries recorded not only mortgages, but also kept records on the property, the ownership and the mortgages and any other encumbrances (López, 2017). Land registries are more legal binding systems, whereas they emphasize on legal aspect of the property, which is owned, usually by titles, and this property can be subjected to mortgages or other encumbrances and are under the "Public Faith" (Moerkerke, 2017), thus land registries legal institutions (Alonso, 2015). Nonetheless due to various classification of properties, like plots or pieces of land or buildings or part of buildings, plot or property has a broader meaning (López, 2017).

This broad meaning of plots or properties, with strong bond to legal documentation of the right imposed to plots or property, but not specific and detailed geometrical and spatial information, soon led to the need of precise and detailed cadastral survey. In a Cadastre System properties are record in detail, with respect to the boundaries of plots, on which buildings and other manmade construction are situated, while rights imposed on those properties and their various encumbrances are recorded in detail.

Cadastral records were (and still are) used for fiscal purposes, for taxation like in Netherlands (Wakker, van der Molen, & Lemmen, 2003) or juridical and multipurpose cadasters (Williamson, 1985). In many cases, land registries and cadastral functions co- exist, but the complexity of land registries in the aspect of achieving legal security of right holders, challenges their integration and their interoperability (Zevenbergen, 2004), (Femenia-Ribera & Mora-Navarro, 2018).

Reliable information about land and its resources is essential for sustainable development, thus cadastral systems (as well land registration systems) should give effect to it (UN-FIG, 1999). Once titles and rights to a property are granted cannot easily be withdrawn (Payne, 2001), cadastral systems must include legal rules defining rights on properties, thus lawyers must understand technical rules, while surveyors must understand law by defending their decision in a legal dispute (Navratil, 2008). The in depth and scientific investigation of the cadastral boundaries is essential and necessary (Wakker, van der Molen, & Lemmen, 2003) Most cadastral systems use 2D parcels, describing the boundaries of parcel on which rights are imposed, but this record cannot include the vertical aspect of an ownership or more complex situations (Stoter & Ploeger, 2003), while geometrical validation for 3D cadastral objects must be developed (Shojaei, et al., 2017).

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2. Land registry and Cadastral System in Greece: an overview

Greece is located in south-east European Continent, in the east part of the Mediterranean Basin and is the southern state of Balkan Peninsula. By early 19th century Continental Greece was occupied by Ottomans while north Aegean Island were also occupied by Ottomans, the Ionian Islands were occupied by British and the South Aegean Islands and the Cyclades Islands either by Ottomans or Latins (later in the 20th century Italians).

The Modern Greek State was formed gradually, officially from 1832 to 1947. After the Hellenic Revolution of 1821, the first Hellenic Republic was officially formed in 1832 following the provisions set on London Convention (06-07-1827), Protocols of London Conferences (21-01/03-02-1830 04-06/16-06-1830 and 19-06/01-07-1830) "About Greece's Independence" and Treaty of Constantinople (27-06/09-07-1832) including Attica, Peloponnese, Sterea Ellada, Regions and the Islands Complexes of Sporades and Cyclades (Figure 1).



Figure 1: Greek Territorials Gains.

According to the Ottoman Empire legal system, all properties were possessions of the Ottoman Emperor, who granted rights to its citizens. In early 17th century the Chiflik System emerged, according to which the Ottoman Emperor granted tenure right for land cultivation, 6-12 ha, to his high ranked military officers, and this tenure right could be passed to their sons after their death (Lampe & Jackson, 1982). The basic land categorization of the late Ottoman Empire is

- a) Mulk/ Mulki Land: Private Land, consisting only from buildings or wineries, right subjected to free and informal conveyance, surface land right
- b) Mirrie Land: Public Land consisting of fields (for cultivation), meadows/ pastures and forests. A limited right of tenure was granted, tessa-ruf
- c) Vakuf Land: Land granted to Monasteries and other religious bodies, its use and exploitation served charity purposes, not eligible for property transactions
- d) Metrouke Land: Common Land granted to settlements and villages for common use like roads, squares, etc.
- e) Mevat Land: Waste Land like mountains, mountainous and stony places, for which the Ottoman Empire had both tenure and ownership.

The newly formed Kingdom of Greece was Ottoman Empire's successor in Merrie Land, Metrouke Land, Mevat Land and abandoned Mulk Land. Chiflik Land, Merrie Land with tessafuf and Mulk Land were recognized as private properties, eligible for transactions. Vakuf Land was recognized as monasteries property, but only for active monasteries (when the

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Constantinople Treaty was signed). Abandoned monasteries' Vakuf Land was recognized as Public (State) Land.

2.1. Byzantine-roman Law - Civil Law and property rights

For the newly formed State, the need for a minimum legal framework enactment was imperative. Civil Law drafting was a priority for the State, but until its successful completion the provisions of the Byzantine-roman Law, as those discribed in Harmenopoulos' Hexabiblos, were enacted (Papagianni, et al., 2015). According to the Byzantine-roman Law ownership of immovable property is a absolute property right, while other property rights are: easement, pledge, mortgage, plantantion right, surface right, separate ownership right, ownership right accquired by adverse possession. Limited ownership rights are recognized on mines and healing springs and although land could be private ownership, the exploitation rights are granted by the state. Monasteries properties are subjected to restrictions and their management, including sale or rent, is administrated by Chuch of Greece Organization. Restrictions to property rights are imposed by urban plans legistlation, building code, agricultura code, forest code and land redistribution legislation.

All those property rights, are discribed in bonding legal titles, and their transcription at Land Registries is obligatory, under the Law "About ownership on immovable property transcription etc." (1856).

It was only until 1946, right after the end of WWII, that Civil Code was introduced, replacing the Byzantie-roman legal framework. Property Law, Book 3 Civil Code, determined four property rights: ownership, easement, pledge and mortgage. The rights are absulute, but subjected to restrictions defined by pubic law concerning common good, like securuty, sanitation, social economy, tranpsort etc (Balis, 1951), forming a sphere of public power exercise. Plantantion right, surface right, separate ownership right are no longer property rights, but existing ones, discribed in titles, are concidered in force.

In addition and from the day following to the Property Law's enactment, all successions were subjects of transcription at Land Registries, thus giving an end to the inconcistancy of property rights due to succession.

Official governmental acts like expropriation or identification and delimitation of foreshore and beaches zones, which are common areas exempt from properties transaction, are onny published in the Official Governmental Gazette and not recorded in Land Registries.

Property rights based upon customary law or provisions of other civil codes (eg Ionian Civil Code or Cretan Civil Code) are in force, but any new property transactions based on them, ought to have transcription in Land Registries.

2.2. Cadastre, Land Registries and property rights

The first law regarding ownership rights was enacted in 1833 recognizing the ownership of meadows/ pastures with tessa-ruf and imposing pasture tax for public owned meadows (Royal Decree 1833). In 1836 the private owned forests, even by communes and monasteries, were officially recognized, (Royal Decree, 1836) under the conditions of a) presenting official documents issued by the Ottoman Empire and b) officially presenting those documents to the Secretariat of Finance within a year. On the following day the Royal Decree on Cadaster was enacted (1836), under which all private owned properties (including those of communes, monasteries etc.) should be declared and recorded in cadastral books. Each record should

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include property type (farmland, house etc.), property name, location, boundaries, area and ownership titles. The record would also include information on loans, mortgages or any other encumbrances. The cadastral record did not have reference to a cadastral map. In 1854 the Cadastral Books and records were considered to complicate, difficult and expensive to be undertaken and maintained, thus the Land Registry System was considered as the proper system for property rights legal documentation and in order to ensure Public Faith of property transactions. According to Law "About ownership on immovable property transcription etc."(1856) in each State's geographical region Land Registries, would operate and titles' transcription for transactions on immovable properties, like sale, surface rights, encumbrances, court decisions, were kept in "transcription books". The key element for identification in Land Registries System is the person, natural or legal, recorded in person-registration books. The titles only discribe the boundaries of land parcels, upon which property rights are exircised, but there is no obligation for the use of a specific coordinate system or even for a topographical diagram as title annes. Thus, there is no a map linking land parcels to persons that have property rights on them in Land Registries transcriptions system. Therefore is imposible the spatial correlation of a parcel to its neighboring ones based on Land Registry Records. Permission to conduct research in Land Registries was given only to lawyers, while the

In 1888 Law 1650 "On definition and delimitation of forests" definded forests and forest covered land and determined their delimination process, by public authority. In 1910 Land Map and land inventories creation in official state coordinate system was one of State's priorities (Law 3657). The Topographic Service of the Army, under the instructions and supervision of Prof. Haid (Baden), was responsible for the project. All land parcels, according to their exact boundaries, should be included. This official Land Map would be a geographical inventory for land parcesl, co-existing with the official Land Registries records and archives, but with no direct linkage between them. As by the end of 1913 Epirus and Macedonia regions were ceded to Greece (Balkan Wars), there was an emerge need for agricultural land distribution or even redistribution. But it was only until 1917 that rules for State-owned agricultar land concession to farmers by the Ministry of Agriculturte were set (Law 1072). In order to facilitate and supervise the hole process, the Topographic Service of the Ministry of Agriculture was established.

The first integrated approach of cadastre incomporating land registry informations was foreseen in Law "About temporal cadastral survey of Thessaloniki" (1918). Thessaloniki, Northern Greece, was ceded to Greece in 1913 (Balkan Wars). In 1917 the city was destroyed by the Great Fire (1917). Government's desission to complitelty remodel the city, under the supervision of E. Hébrard, could only be carried out throug a large scale cadastral survey. Law 1122 had been extend for the city and suburbs of Athens (Law 2085, 1920).

After the end of WWI Greece campaigned to Asia Minor, ended by Asia Minor disaster and Greek - Turco population exchange took place. Over 1.500.000 refugees of Greek origin had to be fostered and rehabilitated in Greece's territory (as was formed after Treaty of Lausanne). In 1924 the Agricultural Code was enacted, and thus a large scale redisitribution of agricultural land took place in Greece. In southern Greece all the private owned farmlands (property of monasteries inclyded) were under expropriation status and could not be sold unless an official sale approval was granted by the State. All major private farmlands was expropriated and redistributed to refugees, or to landless citizens, by the Ministry of Agriculture, bassed on detailed cadastral diagrams and cadastral tables. Cadastral data and redistribution proecess was

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elaborated by the Ministry's Topographic Service. Refugees, and landless citizens, were given solid state titles for agricultural parcels, while transcription to competent Land Registries was mandatory. Allongside landowners, mainly moansteris, prefered to sell their land to refugees groups, after official sate permission by the Minitrsy of Agriculture and the Governmental Council, following the provissions of the Agricultural Law on the agricultural rehabilitation of refugees (and landless citzens), and the titles transcription to competent Land Registries was mandatory. Relevant process for housing rehabilitation of refugees was forseen in series of Legislative Decrees, according to which refugees were given solid state titles, based on detailed urban plans and cadastral tables, with transcription to competent Land Registries. In northern Greece the State disturbuted agricultural or urban public land, according to detailed cadastral pland or urban plans and cadastral tables. The resale of distributed or redistributed urban or agricultural land, without ministerial approuval, was prohibited, aiming the prevation of recreation of private owned large scale farmlands or urban lands. Legislative Decrees on urban planning, "About cities, villages and settlements Plans and building rules" Decree, 1923) and "About completing law on cities plans provisions" (Legislative Decree, 1948) set fundemental legal rules on the acqusition of common space and common areas (like roads, parks and squares), by official municipal or state acts, with compulsory transcription to Land Registries.

From 1920's to 1975 the Agricultural Code allong with the Forstry Code were the main legal intruments for control and managemnt of non urban land, while for urban land the Legislative Decrees on urban plans permited plans initial record and documantation in officila state archives or records. In both cases property rights (on land or immovable properties in general), all kind of encumbrances included, should be refered to detailed titles, conducted either by the state, notaries or court orders/ decisions and transcription to Land Registries was obligatory. In 1975 and under Greece's new Constitution, new legal framework was amended. Forests categorisation, record and protection, as well as complex processes for the recognition, by official authorities, of private owned forests or woodlands was forseen in Laws 248/1976 and 998/1979, while expassion of urban areas was based on detailed cadastral plans and tables, with mendatory transcritpions to Land Registries (Law 1337, 1983). The obligation of annexing a topographic diagram at titles that would have a transcription at Land Registries was enacted with Law 651/1977, while only in 2011 when Law 4014 was enacted, the use of the official State reference system, the Hellenic Geodetic Reference System 1987 (ΕΓΣΑ '87) became mandatory.

In 1995 the creation of Cadastre and progessive operation of Cadastral Offices, which would replace the existing Land Registries, was introduced by Law 2308/1995 and Law 2664/1998. Hellenic Cadastre creation is based upon two axis: detailed cadastral survey of each unic land parcel, regardless parcel's origin (urban or agricultural, etc.) and property rights declaration based upon valid legal titles, mainly of titles with transcription to Land Registries (or published in the Official Governmental Gazette). This new legal framework innovation is that succession property rights, not deriving from valid legal title, could be also declared based on predecessor's title and official State documents for succession line and/ or testamentary disposition during cadastral survey. Further more the declaration of adverse possession is also acceptable (even in case of no court decision), also during the cadastral survey.

The key element for identification in Hellenic Cadastre System is the land parcel. Land parcels deriving from official governmental acts or decissions, eg. agricultural land redistribution,

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expropriation, urban plans, etc, should be precisely entered into the cadastral spatial data base, and interconnected to the cadastral descriptive data base, which incorporates all the valid legal documents (titles, State decissions, court decissions, etc) documenting persons' property rights on parcels. Following cadastral survey complision Land Registries are becoming archives and are replaced by Cadastral Offices. In the integrated cadastral data base not valid legal documents, espacially the Land Registries archive, documenting previous property rights are not included. Thus the temporal documentation of property rights and its intergration to spatial deversifications based on Land Registries is not feasible, while there is no complete intergration between the Hellenic Cadastre System and Land Registries.

3. Mati and Kokkino Limanaki areas and the 23.07.2018 wild fire

Mati and Kokkino Limanaki are located in the north east coast of the Attica Region, 30 Km away from Athens Center. Mati is part of Marathonas Municipality while Kokkino Limanaki is part of Rafina Municipality. The word Mati in greek language stands for "Eye" refering as the "Eye" of the Evian Golf due to to the intense east winds blowing from this Golf.

Both areas in Mount Penteli foothills and have smooth slope. Their boundary to the west is Marathonos Avenue, to the north and the south two small streams and to the east the seashore, in an average height of 20m. Besides their natural boundary, the "Rafina Mega Rema", is a semi-flowing large stream, the two areas can be easily recognized due to the totally different pattern of road network development: in the case of Mati parallel roads start from Marathonos Av. ending at the seashore, while in the case of Kokkino Limanaki roads are parallel to Marathonos Avenue (Figure 2).

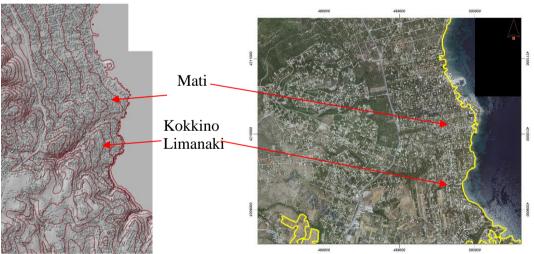


Figure 2: Mati and Kokkino Limanaki topography and aerial imagery (imaginary of Hellenic Cadastre

Both areas are resedential, permanent and holiday homes, while they do not have official approved urban plan and are characterized as areas outside urban plan, even though they have urban characteristics, like their wide road network. Their developemnt started in early 1960 as holiday homes area for Athens residents, became intense in 1980's and 1990's. In 2000's and especialy after operation of Attiki Odos highway and of Athens International Airport (located in the near by area of Spata) both areas became residential areas.

The day of the wild fire disaster, 23.07.2013, was a typical hot summer day. In this morning another wild fire broke out in west Attica Region, Kinetta area (Gerania Ori), close to Greece's

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main refineries facilities, thus all fire forces operated there, in order to prevent fire reaching the refineries and to safely evacuate settlements. According to the official fire department records, as published on press, early in the afternoon (16:50) the fire department receives a call for fire at the area of Daou Penteli (at the ridge of Penteli Mountain). Even though usual winds blowing at the wider area of Daou Penteli and the Mati & Kokkino Limanaki areas are of east direction, on the day of the fire strong winds of west direction, over 100 km/hour, were blowing. The fire was rapidly moving towards Voutsas residential area, while airborne fire-fighting was almost impossible (due to strong wind), and only ground fire-fighting forces could operate. No evacuation order was given because Marathonos Avenue was considered inaccessible and could limit the fire expansion. Due to the extremely intense west winds and the coniferous – pines – area coverage, the fire was raging out of control, overpassing Marathonos Avenue on 18:22. There was no time for organized evacuation, and the fire was actually extinguished only when it reached the seashore in 18:40 (Souliotis, 2018). The fire burned an area of 580.8 Ha, (Decision 42696, 2018, Figure 3)



Figure 3:Burned area perimeter, fire 23.07.2018, (Decision42696, 2018) (Hellenic Cadastre AI)

On the following hours and days the devastating and deadly passage of the fire was reviled: 102 people died, over 180 were injured and over 1500 houses were burned. Almost all the Mati Area was burned and 50% of Kokkino Limanaki. Alongside, following the initial shock caused, residents were blamed for the disaster. They were accused for having trespass public forest lands and having developed two informal settlement with no approved urban plans, thus the minimum requirements, as those are defined by urban legal framework, were not met.

According to references on the web Mati and Kokkino Limanaki were monastery property, of Penteli Holy Monastery, part of Gerotsakouli manor sold in early 1930.

4. The Gerotsakouli property from 1860's to 1920's

Penteli Holy Monastery had bought Gerotsakouli property, consisting of wineries, field for cultivation and forests, by a Karystian Ottoman in 1760. By 1831 the Monastery was active, thus its immovable properties was a Vakuf Land. The official property titles were destroyed, during the Greek Revolution, but Monastery's property was recorded in two Property Codes, conducted in 1836 & 1837, by the Government.

The first official records on Gerotsakouli manor, are listings in Monastery revenues and expenses annual books (General States Archives, 1865). At that time the Monastery was renting part of Gerotsakouli to residents of Chalandri Village (close to city of Athens), for wheat and

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corn cultivation at the lowland and also gave them the permission to collect wood and resin at the mountainous part.

The first official cartographic depiction of Gerotsakouli, mainly as geographical name, can be found at Atlas Von Athen (Curtious & Kaupert, 1878), which had been conducted for the "Kaiserlich Deutchen Archäologischen Instituts", Figure 4. Gerotsakouli is depicted in "Pentelikon – XII" and "Rafina – IX" map sheets. According to map legend, Gerotsakouli lowland land cover is characterized as "land for cultivation, grassland and uncultivated areas, with few pines". Marathonos Avenue, is also depicted along with few residences or small buildings.



Figure 4: Gerotsakouli at Curtious & Kaupert map

After 1922 the property was under expropriation status, due to refugees foster and rehabilitation process (see section 2 and section 2.2). In the mid 1920's the Topographic Service, Ministry of Agriculture, conducted an on field detailed topographic survey, issued official tables from landowners' declarations and issued official survey maps. Gerokatsouli was recorded as a separate manor, Penteli Holy Monastery property, bordering with Monasetry's other propertie "Ntaou-Kallisia" landfield to the south and "Xylokeriza" landfield. Marathonos avenue divided Gerotsakouli in two parts: lowland part to the east from the avenue to the seashore and mountainous part from the avenue to the west. The lowland part was given the geographical name "Konakia", that in greek language stands for residence of the landlord. The map did not have any information of the topography of the area nor contours or any other relavant information (Figure 5).

In late 1923, the Monastery rented a part of Gerotsakouli manor to a farmer for 40 years, aequalavent to a long term lease nowadays, under the conditions to develop a fully equiped summer camp (with bungalows, gym, thermal and cold spa, marina), an early type of public private partnership, by private contract conducted by Athens notary Ioanni Nika. The private contract was not registered at Marathonas Land Registry, but was only registered at the official notary's archive. There was no annexed topographic map (or diagram) depicting the rented area, but boundaries were in general described "to the east the sea for 1200 meters, to the north from the line starting from the sea ending at Marathonos Avenue passing in a distasnce of 150 meters from the builidng known as "Lovokomio", to the west Marathonos Avenue and to the north by line starting from the sea ending at Marathonos Avenue, situated at the geographical area known as Agios Andreas". Agios Andreas was a church depicted at Topographic Service's (Ministry of Agriculture) official map, while there is no reference of "Lovokomio Building". This general and vague description of the rented area, the non-inclusion of the greater landfield

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name, Gerotsakouli, could be confusing regarding the rented area, its excact location and its actual relation to Gerotsakouli property.

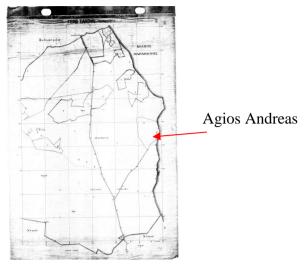


Figure 5:Gerotsakouli map, Topographic Service Ministry of Agriculture, 1929 (Official archive Topographic Service Ministry of Agriculture)

5. The 1930 sale to refugees groups

As all properties in Attica were under expropriation status for refuges rehabilitation and major land owners could not expoloit their properties, in 1929 Pentely Holy Monastery was granted official gevernmental approvals, by the Ministerial Council, to sell a part od Gerotsakouli. Based on Agricultural Code provisions, Monastery had the permission to sell a 250 ha Gerotsakouli part to refuges and residents' group of Chalandri Village (20 persons in total) and a 200 ha gerotsakouli part to farmers group of Spata Village (18 persons in total). Chalandri and Spata groups, would by the two areas as The sale was finalized in 1930, by two consecutive titles, conducted by Athens notary Petros Kavadias, with transcriptions at Marathonas Land Registry (located at Kapandriti).

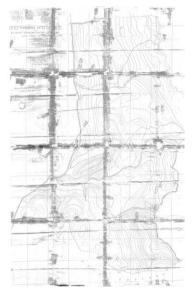
The titles had no official map as annexes, but only a description of the sold areas, identical to the official governmental permissions, "located at the Gerotsakouli region by the "Agios Andreas" geographical area, known location as "Mati or Sithi", Marathon Community and their boundaries were: the 250 ha area to the north the "Zachari stream" natural border between the already sold area to Spata group, to the east the sea, to the west Marathonos Av. and to the north the boundary of "Agios Andreas" field already rented & the 200 ha area to north Rafina land (refugees granted land) from Marathonos Av. to the east the sea, to the west Marathonos Av. and to the north the already sold area to Chalandri group".

The sale would be finalized after 250 ha and 200 ha areas precise topographic survey, by appointed land surveyor, which ought to be carried out within 3 months. It was not until the 1931, that the two areas were in detail surveyed. But the surveyed areas where smaller than those described in 1930 titles: 117.8 ha and 117 ha for Chalandri Group and Spata group respectively. The final titles, based on the topographic survey, were also conducted by the same Petros Kavadias, annexed with topographic map,

Figure 6, and had transcriptions at Marathonas Land Registry (located at Kapandriti).

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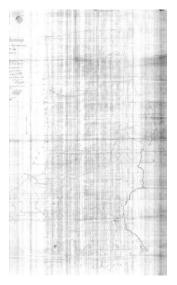


Figure 6: Topographic maps of finally sold areas, annexed at 1931 titles, map annexed at Chalandri group title (left), map annexed at Spata group title (right).

In 1933 Chalandri group members distributed the 117.8 ha among them, in order to facilitate cultivation. The area was divited into 3 sections, by private roads paralle to Marathonos A following the north-south direction: section 0 located between Marathonos Av & private road, section (a) located between the two private roads and section b/c between second private road and the sea. Two more private roads from Marathonos Av. to the sea divated the area following the west – east direction. In total 95 new plots for cultivation were created, average area of 2.5ha for parts (0) & (a) and 0.2 ha for parts (b) & (c), and were distributed to each of the 20 members of the groups, **Fejl! Henvisningskilde ikke fundet.**. The distribution was officially documented in title conducted by Chalandri notary Aristides Koutsos, annexed with topographic map, having transcription at Marathonas Land Registry (located at Kapandriti).

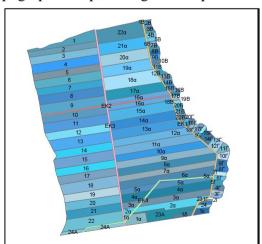




Figure 7: Chalandri group land distribution of 117,8 ha (based on the official topographic map annexed at the title) and Hellenic Cadastre aerial imagery 1945. Color diversification indicates the owners.

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According to the official distribution title, streams were part of the distribution (as they were sold under Byzantine-Roman Law) and all contracting parts were obliged to 1 m passage easement in part b/c plots for common use and to respect the provisions of 1923 Legislative Decree "About cities, etc.". By 1945 the distribution was complete and each one of the 95 new plots had been created (Figure 7).

The Spata group did not proceed to further land distribution and the majority of original group-members had sold their property rights by early 1940's. In 1943 the 24 owners of the 117 ha area, proceeded to land distribution, also in order to facilitate cultivation, by official title conducted by Kropia notary Evangelou Kalachani, annexed with a draft diagram and having transcription at Marathonas Land Registry (located at Kapandriti). Kropia notaries' official archive was been kept, at that time, at Kropia Land Registry, which was destroyed by fire. All notary titles were burned and along with them all annexed items, like diagrams. According to the title the total 117ha are is divided in 5 sections, one of which was the seaside plot. There is not any provision for private roads, while plots boundaries are described as "to the north with Chalandri group land – to the south with Rafina refugees' settlement". Sea side plots boundaries' description is vague. The exact distributed plots boundaries are extremely difficult to be defined.

6. 1950's to 2010's successions and resales – Current status

After intensive research, carried out at Land Registries, notaries archives and other public archives, by mid 1940's the resale process, of the sold areas, had already begun. In 1950's Athens residents, who were looking for a permenent summer holliday place for their families located close to Athens, started purchasing. Prior to the resale the distributed "agricultural" plots, of both 117.8 ha and 117 ha areas, were further subdivided into "agricultural plots part", average area from 300sm to 2000sm. In every new subdivission new "private roads" were created, so as to obtain the minimum 1923 LD's, on urban development, requirement for plots' facade to a road, even though this minimum requirement was explicity referring to official and by state authorities designated roads. Gradually the subsequent resale titles were not referring to Gerotsakouli manor, neither to the original 1930 sale titles, thus any mention to the Ministerial Council permission for the sales was vanishing. Furthermore "Mati" was used as the geographical name of the Chalandri group area and Kokkino Limanaki of the Spata group area. In the case of Chalandri group area, even the succession titles, of the original group members, had no derect mention to the original titles. In addition since 1965 the newly created Spata Land Registry became competent Registry, while all titles until then were Marathonas' Land Registry (located at Kapandriti) official archive. Thus any titles control for a property temporal and spatial documentation was considered extremely difficult and expensive.

In the 1980's, efforts for both Mati and Kokkino Limanaki for official urban plan elaboration were undertaken, but were always failing. Governmental Forestry Directorate, which according Law 998/1979 was responsible for approval of urban expansions, was repeatedly rejecting the urban expansions. Due to the intense pine - cover of Mati and Kokkino Limanaki and the lack of concurrent owners' titles documentation to the original 1930 sale titles, the Directorate considered the areas as infringement public forest, which was State's property according to 1830's legislation (section 2 and 2.1.).

In June 2008 the Hellenic Cadastre survey began and Mati & Kokkino Limanaki property owners declared their rights, by submitting their valid title, which had no direct documentation to the original 1930 sale titles, thus they could be easily considered as public forest trespassers.

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In both areas Cadastre is operative from 09.2017, Spata Cadastral Office. Cadastral land parcels are depicted as small size parcels, result of timeless multiple subdivisions of the original areas bought in 1930.

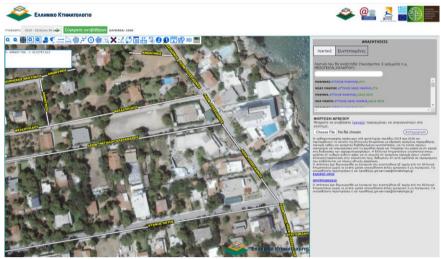


Figure 8: Mati plots, 2015 (Hellenic Cadastre imaginary)

From 2002 to 2019 the Ministry of Agriculture receives requests about ownership documentation for Mati or Kokkino Limanaki. The Ministry only replies that those two geographic defined areas were legitimate sold in 1930 as agricultural areas, part of Gerotsakouli land field, under Agricultural Law provision and the sale, with transcription, titles are valid and strong. However Ministry's competent department "has not the authority to identify weather the concurrent plots are part or not of original sale". The most recent reply is October the 1st 2019 fifteen months after the fire.

7. Conclusions

The 23.07.2018 wild fire of Mati and Kokkino Limanaki was more than a deadly fire. It also reviled the overtime deficiencies in property rights record systems, the weakness of Land Registries System to guarantee "Public Faith" in property transactions and the significant deficiencies of Hellenic Cadastre not only to incorporate current Land Registries Archive, but also to document temporal and spatial changes land and land parcels as an outcome of immovable property transactions.

Even though historic records and archives of various public services and authorities exist, those records and archives have not been intensively studied, have not been analyzed and have not been correlated.

In the case of Mati and Kokkino Limanaki current legal and valid (as having transcription to Land Registry) titles have no direct reference to the original 1930 sale titles, which were conducted after official Governmental permission in 1929. Even though the original sale was governed by Agricultural Legislation, public authorities like Forestry Directorate handles the area as infringement public forest, causing huge delays of Mati and Kokkino Limanaki restoration process. For the last 17 years the Ministry of Agriculture documents the 1930 sales as legitimate, its states that "has not the authority to identify weather the concurrent plots are part or not of original sale".

The research, which is carried out from day one, after the fire, proves that "to identify weather the concurrent plots are part or not of original sale" is as complex, time consuming scientific

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project, that requires in depth analysis of official records and archives. Spatial and temporal correlation, of the various titles, documents, maps, topographical diagrams, is necessary. Furthermore in order to obtain this correlation survey engineers should have not only advanced technical knowledge, but also in depth understanding of the legal framework regarding property rights, while lawyers have to be able to understand technical terms. And this identification is not only necessary, but also crucial for the whole restoration effort and process.

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BIOGRAPHICAL NOTES

Adjunct Lecturer, University of West Attika, Department of Surveying and GeoInformatics Engineering, courses Cadastre, Cadastre and GIS, Urban Planing and Technical Legislation. Over 12 experience in Hellenic Cadastre. Head of Athens Survey Office – 2008/2009 – and Voula/ Vouliagmeni 2014/2016. Currently she is scientific advisor at Hellenic Republic Asset Development Fund – Helliniko project -, Public Properties Company, Independent Power Transmission Operator SA, on integrated technical and legal documentation of large scale properties and properties rights, declaration of property rights on Hellenic Cadastre and large scale correction of cadastral parcels (in operative Cadastral Offices). She is Public Properties Company technical consultant on litigations. After the 23.07.2018 Mati and Kokkino Limanaki wild fire she voluntarily runs an extensive research on property rights documentation.

CONTACT

Dr. Dionysia – Georgia Ch. Perperidou

University of West Attica, Agiou Spyridonos, Aigaleo, Greece

Tel. +306936852526, Email: dgperper@uniwa.gr Web site: https://www.linkedin.com/in/perperidou/

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