

# Higher Education in the Field of Land Use Planning and Cadastre in Russia

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## Key words:

## ABSTRACT

Initially land surveying activity and land surveying education was a family concern. In the time – span of independent principalities and in the times of Moscow State of XVIc. preserved information indicated that land surveying works were made by members of famous principality and boyar families. As a rule land surveying activity for many families was a hereditary business. As there were no special land survey schools in the state land surveying habits, skills and abilities were passed on from one generation to another from father to son. According to the historical data surnames of some land surveyors who took part in “state land concern”, such as the Velyaminovs, the Beklemishevs, the princes Zagryazskis, Zvenigorodskis and Pushkins, Plecsheevs, Shakhovskis, Zherebzovs, Zabolotskis etc. are used to repeat for the period of 100 – 150 years.

The first land surveyors had to learn reading and writing, land surveying laws and to master elementary skills of geodetic measurements.

Since the end of the XVIc. in Russia the system of professional educational has formed. The most significant state establishments of those times were orders, which were in charge of diplomatic, trade, military, land and other affairs. For training persons being able to serve at them were set up schools for giving special secondary basic education. Children of stewards, ambassadors, subdeacons, land surveyors, strelets and doctors learned at these schools. More educated deacons and subdeacons (main officials in state departments of the XVI – XVIIc.) used to work at Ambassador, Land, Mystery orders as well as at the order of Print. The necessity in putting things right for defining state boundaries, in papers on composition and value of Russian territories as well as land areas of landowners and land users in other land registration data called into life the development of land surveying activity and land surveying (land use planning) education.

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Initially land surveying activity and land surveying education was a family concern. In the time – span of independent principalities and in the times of Moscow State of XVIc. preserved information indicated that land surveying works were made by members of famous principality and boyar families. As a rule land surveying activity for many families was a hereditary business. As there were no special land survey schools in the state land surveying habits, skills and abilities were passed on from one generation to another from father to son. According to the historical data surnames of some land surveyors who took part in “state land concern”, such as the Velyaminovs, the Beklemishevs, the princes Zagryazskis, Zvenigorodskis and Pushkins, Plecsheevs, Shakhovskis, Zherebzovs, Zabolotskis etc. are used to repeat for the period of 100 – 150 years.

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The first special land surveying school in Russia was opened attached to the Land order. By the beginning of the XVIIc. it has numbered up to 400 subdeacons. This school has existed since the 70s of the XVIIc.; in different times from 35 to 100 learners were trained in it. The learners were separated between tables (departments) of the order and were tied to experienced subdeacons who were at the head of them. The training lasted from two to three years depending on the previous preparation. The learners were trained mathematics, grammar, so called “plough” writing (including land surveying, techniques of land quality evaluation, land area calculation), drawing, cartography.

When Peter I came to power in the second decade of the XVIIIc. the Land order was abolished and the main land surveying establishment in Russia became Patrimonial board. It's duties were to make land surveying works and to register papers on the property assignation by the order of the Senate.

The main educational establishment in Russia where it was possible to get professional land surveying training became the School of Mathematical and Navigational Sciences founded by Peter I in Moscow.

School leavers as geodesists – cartographers, land surveyors – drawers, navigators took an active part in all the expeditions of the XVIIIc. for the research of the great territory of the Russian state and with the purpose of making the first geographical maps as well as land surveying of Ingermannland (it was the name of the terrain between the Ladoga, the Neva, the Narva, Pskov and Novgorod counties, these were Baltic lands).

The works on general land surveying in Russia which started in the middle of the 60s of the XVIIIc. generated the obvious shortage of land use planning experts. For lack of special land surveying educational establishments in that time the training of land use planners became the prime concern of land surveying establishments - Land Surveying Expedition of Ruling Senate and Land Surveying Office.

The nominal edict of the Senate issued on 8 October 1765 (law # 12488) and the subsequent edicts of Land Surveying Expedition issued on 7 April 1768 (law # 13093) declared for all being able to do land surveying works and having a desire to become a land use planner to announce about it to Land Surveying Expedition and Land Surveying Office. Land surveyors were charged to teach land surveying the learners who were taken into service from the learners of garrison schools.

The Land Surveying Expedition having paid it's attention to unsuccessful learning of land surveying learners issued the edict # 439 on 23 April 1779 for establishing a Land Surveying School by Land Surveying Office. This very edict received by the Land Surveying Office on 3 May 1779 is considered to be the foundation of a Special Land Use Planning School. It was opened on 25 May 1779 (14 May by old style) and was called Konstantinovskaya in honor of Cesarevitch Konstantin, the grandson of Catherine II.

Since that time Konstantinovskaya Land Surveying School, the ancestor of the State University on Land Use Planning became the main and unique special land surveying educational establishment in Russia. The first staff members of Konstantinovskaya Land Surveying School approved by Pavel I numbered 100 learners with a salary of 30 roubles a year.

In 1819 on 10 December the State Council made a decision (full comp. of laws of Russian Empires # 28024) to recall Konstantinovskaya Land Surveying School into Konstantinovskaya Land Surveying Collage and to increase the number of learners from 100 to 200 people.

Up the middle of the 30s of the XIXc. works on general and special land surveying in Russia slowed down because of the shortage of land surveyors of high qualification in particular. The leavers of Konstantinovskaya Land Surveying Collage which was under the authority of Land Surveying Office at once started working on land surveying but the level of professional training was not high. That's why on 10 May 1835 the highest edict was issued

for reorganizing the collage into Konstantinovsky Land Surveying Institute (KLSI) – the first higher land surveying institution in Russia.

The institute was under the authority of the Ministry of Justice and it was subordinate to trustee who was at the same time the head of land surveying sector of Russia with the title of a senator. According to it's staff the institute had 200 learners, among them – 150 persons were trained at the state expense and 50 learners – at their own expense, as well as it had a director, an inspector, 8 supervisors, 15 teachers, an economist and a secretary.

Later in 15 counties of Russia attached to district collages were established additional classes of elementary land surveying. Mariinsky Orphan House in Petersburg bringing up children of nobility was reformed into Mariinsky Land Surveying Collage.

In 1849 Konstantinovsky Land Surveying Institute (KLSI) was entitled to the first category higher educational establishment and since that year to 1867 it has had a status of military as Land Surveying Department.

In 1855 was created the Collage of Land Surveying Topographers, which dealt training mainly in the field of geodetic sciences.

The land surveyors requirement rose greatly during the peasant reform after 1861. For conducting land surveying works in the shortest time and on vast areas a great number of experts – land surveyors were needed while the staff members were in the service of Land Surveying Office and the Ministry of State Properties, the number of experts were not big and the staff was not completed. So, under Land Surveying Office 1233 members were envisaged by the plan, but in fact only 1065 were occupied. Actually it was decided to let regular specialists conduct private works on the areas of landowners during the period of six months to one year. Besides officers of the Military Ministry were allowed to take part in land surveying and land measurements by private order.

The edict on 15 December 1858 was issued opening special classes for training private land surveyors and valuers attached to Konstantinovsky Land Surveying Institute and Grigoretzky Land Surveying Institute. “Freely coming” learners from all the free estates were accepted there. But all these measures couldn't provide with needed number of experts. That's why in 1860 – 1861 in 38 counties were opened additional classes of land surveying and valuation attached to gymnasiums, about 900 learners were trained there.

Land surveyors were charged to teach boys from landowners' peasants practical elementary land surveying.

Stolypin land reform (1906 – 1911) gave a powerful incentive to the development of land use planning education in Russia. Only Konstantinovsky Land Surveying Institute in the time-span of 1907 – 1915 increased the total number of learners from 327 in 1907 to 590 in 1915. Entry into the university amounted to 206 persons a year (1910 year). The total number of teachers in the institute increased from 35 to 50 members.

26 December 1916 Konstantinovsky Land Surveying Institute was given the rank of “Imperial” that was the evidence of the significance of this higher educational establishment in the process of carrying out land reform.

By 1916 the number of Land Surveying Collages reached 14. In 1909 were opened Poltava and Krasnoyarsk, in 1910 – Chita, in 1911 – Kostroma, Novochoerkassk, Omsk, in 1912 – Ekaterinoslavl, Zitomir and Simbirsk Land Surveying Collages. They trained up to 2093 persons among them – 122 in the smallest Chita’s, in the biggest Zitomir’s – 199; 174 learners in a collage on an average. Besides the State Colleges before the revolution there existed 3 private Land Surveying Collages in Petrograd, Moscow and Kiev.

For training specialists of a low level, land surveying technicians, were organized courses: since March 1908 300 persons learned at Konstantinovsky Land Surveying Institute, at Land Surveying Collages – 100 and at 26 county drawing collages – 50, the total number is about 2000 persons a year. The training of specialist was successful until the First World War.

It should be noticed that in 1914 the staff of technicians on land use planning and land surveying numbered 7200 members. Besides at State Land Properties, Migrant Office and Independent Department including those who did land surveying works by private order numbered more about 4000 members. So, the total number of land use planning staff was about 11 000 members.

For realization of Land decree after the revolution of 1917 fast training of land use planners was at stake by the government. According to the data of Narkomzem for conducting land reforms in Russia in 1919 – 1921 there needed not less than 4500 – 5000 a land use planners with special education, but in fact in 1919 their number was a bit more than 3000 members.

The average graduation of land surveying engineers in Moscow Land Surveying Institute (the former name was KLSI) was only 17 persons a year that’s why it headed for the development of land use planning education and the institute became the center of it again. By the middle of 1924 the number of experts on land use planning has greatly increased. Land use planning engineers were trained not only at Moscow Land Surveying Institute, and at Voronezh (from 1922) and Omsk Agricultural Institutes (from 1922). The secondary special training of land use planners (technicians - land use planners) was given by 26 collages including 15 Land Use Planning Collages in Russia.

After 1928 for fulfillment of collectivization works and with the purpose of reinforcement of branch institution under the resolution of C.P.K. USSR on 2 February 1930 the Moscow Land Surveying Institute was given under the authority of Narkomzem USSR. The same year it was reorganized. According to the resolution of the Committee C.P.K. USSR on the reform of the higher and the secondary education on the base of land – migrant (land use planning) faculty was founded the Moscow Institute on Land Use Planning (MIZ)). Later, in 1945 it was recalled into Moscow Institute on Land Use Planning Engineers (MIIZ), which trained land use planning experts for agriculture. On the base of the geodetic faculty was founded the Moscow Geodetic Institute (MGI), which later was recalled into the Moscow Institute of

Engineers of Geodesy, Airphoto and Cartography, which trained experts – geodesists for other branches of national economy.

In post-war years since 1945 land use planning education made a progress. So, at the first half of the 50s land use planning engineers were trained at the Moscow Institute on Land use Planning Engineers, Omsk, Voronez, Kharkov, Lvov Agricultural Institutes, Byelorussia Agricultural Academy. In post-war years was opened the training of land use planning engineers in the Baltic republics: Latvia, Lithuania, and Estonia Agricultural Academies. In the 50s land use planners were also trained at Odessa and Perm Agricultural Institutes. Soon land use planning training of specialists in Odessa and Perm was closed but in Tselinogad A.I. in Kazakhstan the land use planning faculty was opened.

For 1966 – 1978 MIIZ and land use planning faculties of agricultural institutions of the USSR trained about 3000 land use planning engineers, 800 architects, 300 engineers – geodesists. At the same time MIIZ, Lvov and Kharkov A.I. also trained 1720 members on program “Land Use Planning” at the extra – mural faculty.

At the middle of the 70s land use planning specialty had the following specializations: land use planning projects, land cadastre, land resources monitoring by airspace methods.

For 1978 – 1981 Moscow Institute on Land Use Planning engineers produced: land use planning engineers – 3607, engineers – geodesists – 338, architects – 518 persons.

The Moscow Institute on Land Use Planning Engineers was chosen as the head institution in the period of land reform (1991 – 2001). According to the Resolution of the Ministry Council of R F on 18 January 1991 # 30 “About the republic program on conducting land reform on the territory of R F” and Law # 129 on 24 March 1992 of the Ministry of Agriculture of the Russian Federation the State University on Land Use Planning (GUZ) was formed on the base of the Moscow Institute on Land Use Planning Engineers.

In the initiative and participation of the State University on Land Use Planning in 1996 – 1997 was developed Complex program of training, qualification improvement and additional training of land surveyors of Russia in perspective till 2005.

According to this Program the number of staff of land use planning service of the country is to increase from 18000 to 30000 members by 2005.

According to the existing organization of the higher professional education in Russia since 1988 educational methodical associations of higher institution of Russia (EMA) head the educational activity in different directions and specialties. As a rule these educational methodical associations were formed under the leading institutions, which head the direction or specialty. These associations develop State Standards, educational professional programs, typical learning plans, academic schedules, give permission for opening directions and specialties at new institutions. They coordinate the edition of textbooks and handbooks as well as take the control of training only by accredited and recommended establishments having license for this kind of learning and educational activity.

In 2001 (EMA) of institutions of Russia on education in the field of land use planning and cadastres consolidated up to 44 higher educational establishments in our country and 12 higher schools of foreign countries.

EMA has the following structure:

Presidium of EMA Council

EMA Council

Educational methodical committees in the direction of training diploma specialist

Educational methodical commissions at specialties: land use planning, land cadastre, urban cadastre.

Besides, in Russia EMA acts in the field of geodesy and cartography.

In 2000 the entry of students on land use planning specialties into the institutions of Russia was: on land use planning – 1216 members, land cadastre – 150, urban cadastre – 536, on geodesy and geoinformatics – 1000 members. It is three times more than in 1999.

In 2000 25 higher institutions graduated 1009 land use planning engineers.

Qualification improvement and additional training of staff members of Goskomzem and Rosniizemproect was conducted on the base of qualification improvement faculties of GUZ (Moscow), Voronez, Omsk, St. Petersburg State Agrouniversities, Novocherkassk Engineer – Reclamation Academy as well as regional centers of qualification improvement and additional training: at the Russian Academy of Management (Moscow), Main Scientific Methodical Center (Krasnogorsk), Novosibirsk branch of the Federal Cadastre Center, Novgorod, Training Center attached to Suzdal Gorkomzem. A number of land use planners improved their qualification in board of international educational programs, projects “Tasis”, “Laris” and etc. New training centers on qualification improvement and additional training were created in Taganrog, Krasnoyarsk, Blagoveschensk, Krasnodar and others.

Currently the State University on Land Use Planning is the biggest land use planning higher establishment in Russia. The University trains engineers in the field of land use planning, land and urban cadastres, geodesists, architects, lawyers, economists – managers in specialty “The Enterprise economy and management (real estate operation and investment management)”.

The University trains 5000 students and post – graduates from Russia and 40 foreign countries, it has the graduateship and doctorship. Specialized Council on defense of doctor and candidate dissertations work at the University. It’s educational methodical association in the field of land use planning and cadastres coordinates the educational activity in the country in this direction.

The university keeps close relations with educational establishments of the USA, Canada, Germany, Sweden, Denmark, China, Mongolia, Czech Republic, Poland, Slovakia, Bulgaria and other foreign countries. It takes part in international educational programs. There are 8

faculties (law, land use planning, land cadastre, urban cadastre, architectural, extra – mural, the second higher education and qualification improvement faculty), 23 chairs in it. The Center of Informatics Technologies, International Educational Center on Land Market Problems, International Center of Education, Scientific – Research Institute of Land Relations and Land Use Planning, Regional Center on State Testing, Preparatory Courses are carrying out their kinds of work successfully. Hard work is being done for improving the quality of learning process, mastering programs of multi – level preparation of specialists, new state educational standards. It trains bachelors, diploma – specialists and masters. The University has lyceum classes in schools of Moscow and Moscow region, it conducts the preparation of applicants with technical school and collages together, it takes part in Russian and international educational exhibitions.

The State University on Land Use Planning renders a big educational methodical assistance to institutions of ISC countries and republics of the former USSR, which are training or have lately opened the training of land use planning engineers. It's total number has increased upto 23, the entry from 150 to 1000 persons a year, but the number of students is 10 000.