



## Current Situation in Ukraine of Urban and Rural Land Development (Practice and Education)

*Olga Petrakovska, Ukraine*

### 1. New social and economic conditions demand the Reorganization of the education system

Land reform is continuing in Ukraine. It is accompanied by a transformation of property rights, development of the land market, formation and improvement of the cadastre systems. That generates a need for radical reforms in land management.

The fundamental changes which induce a necessity for improvement and adjustment in the practise of the approaches towards land management for variable conditions are:

- The new conception of property right declares various kinds of rights for land ownership and land use.
- Substitution of the only one owner by means of production to unlimited number of owners both public and private;
- Develop small-scale and middle-scale business and an appearance of a large quantity of entrepreneurs;
- Monopolistic centralized system of financing of land development from state budget orientated towards a greater number of independent investors;
- Declaration of local self-government rights transferred management mechanisms to local level and has made relations between different levels of authority more complicated.

Furthermore land use right and the right to build are separated. It produces supplementary problems and claims for land management and development.

The land policy reorganization and land reform are closely connected with land market formation and development. In spite of land ownership being established in 1991, the reality is that the market started to form and develop at the beginning of this century after the adoption of a series of statutes. The most important key to efficient development of property markets is adequate provision by qualified specialists. Those specialists have to be able to solve complicated comprehensive tasks both technical and juridical

concerning land transformation. Moreover functioning of land markets requires the creation of updated land registration systems. These systems have to indicate clearly various kinds of legal land ownership and keep information about land and different improvements.

It necessitates training for new professions in the fields of land management and real estate development under the influence of new circumstances. One of those trades is cadastre specialist.

### 2. Particularities of The educational system

The land reform which was executed in Ukraine and the new conditions are the cause of changes of the higher education system. Ukraine has a complicated system of higher education. This system has remnants of soviet heritage and changes under the influence of the present-day demands of labour market. Those demands are changing very fast. It could be explained by a retrospective review of land reform and the modification of legislation during the last ten years. Heritage of soviet times is evident in the strict standards of education. These standards regulate the structure of curricula and percentage of different disciplines for various specialties and must be approved by the Ministry of Education and Science, further "Ministry". Approximately 70% disciplines are obligatory and can't be changed without Ministry agreement. For technical specialties, obligatory disciplines include next modules: the humanities, social and economic studies, nature and science, profession and practice studies for concrete professional spheres. Other disciplines are determined by university decision. It influences the making and changing of curricula greatly.

From 2004, education in Ukraine is realized according to fixed educational fields which are accepted and approved by Ministry. Each of these educational fields combines specialties of a similar nature. For example, educational field "Construction" combines specialties like "industrial and civil engineering", "sanitary engineering" etc. Cadastre activity is a part of education field

“Geodesy, Cartography, Surveying’. Curriculum for different specialities within the field must have an equal obligatory part. That makes an impact on the curriculum structure very greatly as well and restricts the possibility of its transformation.

Education institutions accrue a right of teaching activities for different qualification levels and education fields and specialities in accordance with domestic accreditation and licensing. The accreditation and licensing is implemented according to claims of education standards and state requirements for staff, scientific, methodical, material support.

### 3. Adaptation to Bologna process

Worldwide globalization of education and integration of Ukraine with the world community requires that the educational system should be adapted to new social and economic conditions. At the beginning this century Ukraine accepted Bologna model of education. Adoption of this model has demanded essential reorganization of Ukraine's system of education and science. By now ESTC has been put into practice at Ukrainian universities and teaching is carried out in agreed modular units.

Before acceptance of the Bologna model of education we had the qualification levels engineer or specialist. By the law “About higher education” (2002) there are qualification levels bachelor, specialist, master. Thus degree of specialist has been kept from previous system and degrees of bachelor and master have been taken according to the European experience. As a result there is unawareness about what kind of expert students who have different diplomas are. According to law, the degree of bachelor corresponds to “basic higher education”. The degrees of specialist and master are declared as levels of “complete higher education”. The teaching of bachelors has been realised for ten years but the population has not understood and has not given credence to this degree till now. The same attitude exists from employers. It is difficult for graduates who have a bachelor diploma to get a job. As a rule they get a job under the condition that they will continue their education and will get a degree as a specialist or a master. It is a tricky question of also what is the difference between a specialist and a master. In this situation some universities turn to teaching bachelor and master degrees without the specialist degree. This approach keeps up to date inasmuch as it corresponds to long-rate government plans. But factually that decision

leaves still more uncertainty about the specialist degree which is accepted by legislation.

Specialist teaching can be received only after a bachelor degree and takes one year. A Master's program takes from one to two years at different universities. Students can be accepted for a master's program if she/he has a bachelor or a specialist degree. Teaching of specialist and master implementation is parallel at some universities. Their programs don't have very big differences. So in the last few years more and more students want to get a master's degree without going to the trouble of a specialist one.

Comparative analyses of the different approaches have to be done for the successful transformation of the existing educational system. The necessary changes and the ways to realize them could be defined and appreciated only after this comprehensive analysis. All new methods should be applied consecutively and after preliminary discussion and substantiation.

### 4. Teaching of surveying and cadastre specialists

The training for surveying and cadastre specialists started in the middle of the 90s and the first of them were introduced into the labour market at the beginning of this century. The teaching of these specialists began at both technical and agricultural universities. The program for geodesy training formed the basis of this speciality at technical universities and teaching has focused towards engineering sciences. The education at agricultural universities has been oriented towards solving problems and tasks of agricultural land management. The leading technical universities in Ukraine which realize this teaching are Kiev National University of Architecture and Construction, Donetsk National Technical University, Lviv Polytechnic University. The agricultural ones are Kiev National University of Biological Resource and Nature Recourse Use, Lviv National Agriculture University, Kharkov National University of Agriculture, National University of Water Management and Nature Recourse Use (Rivne). By now the departments which have put into practice the teaching of new specialists have a unified name “department of surveying and cadastre” at both technical and agriculture universities. But this name doesn't correspond with education tasks which are decided in full measure.

The standards for cadastre education have been established for the bachelor degree. Curricula have been transformed to European

credit transfer and accumulation system (ECTS). All disciplines which are oriented to professional education (profession and practice studies for concrete professional field) aggregate approximately 100 European credits in the curriculum. This part of the curriculum can be divided into five modules: technical, GIS, economical, juridical and planning. The technical module is the biggest part (50%) and geodesy disciplines average almost 80 %. In second place is the GIS module (28%) and then economical (14%), juridical (6%) and planning (2%). These figures speak for themselves. In other words sometimes the graduates of surveying and cadastre could be named "modernized geodesist". In practical situations each of them could work as a geodesist if she/he wants.

Such a situation has been amended by means of disciplines which are determined by a university's decision in practice. The teaching in the surveying and cadastre department at Kiev National University of Architecture and Construction is oriented towards urban land and in practical situations includes land management and development. So disciplines which are determined by the university enlarge the knowledge in urban legislation and planning, formation territory infrastructure, land and improvements valuation, engineering services etc. There is the same situation at other technical universities. Agriculture universities focus on teaching about soil conservation, protection of natural resources etc.

Cadastre activities have been determined by new Land Code in 2001. In according with that, the important points are: property delimitation, formation and juridical registration, property valuation, state control and preservation. That has defined new qualitative demands for cadastre specialists. As a result the curriculum has been corrected. However geodesic disciplines take the greater part of them until now.

Surveying and cadastre is the new scope of activity for Ukraine. We don't have the necessary and sufficient experience to make decisions about land problems which are natural for market connections and cooperation. Teaching such experts was not realized until the end of the 90s. Consequently, teaching staff are formed from experts from adjoining professional areas who extend and improve their knowledge in the new field. This is problematic for new trades and creates extra problems in education. In addition the former academic degree system is kept: candidate of science and doctor of science.

One more problem creates troubles for teaching in this field. This is a deficit of some forms of teaching materials. Practice methods and mechanism of land management and registration are closely connected with domestic legislation. So some kind of teaching materials have to be modified very often according to land, registration, planning and other policies.

## 5. Demands of present-day labour-market

Demands of the labour market have been changing permanently for the last seventeen years. There are some reasons and explanations for it. When the cadastre speciality was established the main tasks for the economy were land unit delimitation and land registration for taxation. So it defined the needs of market. At first university graduates worked mainly at state bodies.

At the beginning of this decade, about 50% of the built-up land had been transferred to private property. Formation and development of urban land market has determined new requests. New tasks have to be solved: land and construction valuation for selling and mortgage, improvement of the cadastre system for guarantee of title and insurance, determination of more effective land use under existing juridical and technical conditions. Subsequent evolution of the land market brings up questions like compulsory purchase, entitlement payment, division of right in time and space. Land disputes emerge more frequently and are more complex. All those points could be joined into one trade – land management. But there isn't such a speciality in academic education in Ukraine till now.

University graduates generally work at both state and private bodies in the present day. State institutions usually are cadastre, land and urban planning committees and bodies at national, region and local levels. Private organizations are: survey services, property sale and valuation agencies, insurance companies, mortgage bank and development companies. They work also at other bodies which are responsible for land management and development.

It is the entrepreneur's opinion today that determination of more effective land use, search of juridical and technical implementation methods are the most prevalent and the most intricate question today. Public employers focus on the development and improvement of the structure registration system, provision for their reliability and credibility. So it is evident that the current situation where there is a need for land market and

land management requests specialist, who is able to solve problems on basis of complex interdisciplinary approaches, is approaching. Analysis of practice tasks which cadastre specialist now has to solve proves a necessity of knowledge extending into the fields of urban planning, economy, legislation (civil, land, urban, construction, environmental law) and modern GIS technology. An increase in part of these disciplines can be implemented at the expense of the decrease of geodesy disciplines. As it is obvious from the foregoing improvement, the surveying and cadastre curriculum should be based on integration with humanities, economy, juridical and engineering sciences taking into account European standards for specialists in this area.

## 6. Conclusions and Propositions

The reasons for the main problems which exist in the Ukrainian education system can be determined both general for education system as a whole and for the surveying and cadastre field in particular.

The general problems are:

1. Transformation of the curriculum is very difficult in connection with existing standards and Ministry obligatory agreement.
2. Lack of understanding and recognition of the bachelor's degree as a qualification level of expert and non-claiming of them by the domestic industry. As a rule an open admission to university is put into practice according to specialities.
3. The similarity between the teaching program of specialist and master and the result unwarrantable confusion with comprehension of those degrees.
4. The system of scientific degrees awarding is more complicated than in Europe. It makes preparation for scientific and teaching staff very difficult.
5. The weakening of cooperation between academic institutes with scientific and industrial ones.

The problem of the surveying and cadastre field are:

1. Plenty of geodesy disciplines and shortage of planning, economy and jurisprudence disciplines in the curriculum.

2. Provision by qualified teaching staff is difficult because of multidisciplinary approach of education.
3. Formation of Master program for surveying and cadastre field is difficult in connection with permanently changing of legislation and labour market demands.
4. Necessity of permanent modification of teaching material and their deficit.

Take into account foresaid the nearest improvement of surveying and cadastre education could be achieved by next methods:

1. There should be a defined difference between bachelor and specialist and between specialist and master. It should be made by introducing a difference in the curriculum in such a way that if the specialist degree is denied, the bachelor and master curriculum could be easily transferred.
2. The percentage should be amended for different disciplines in the curriculum. To increase planning, economy and jurisprudence disciplines and decrease geodesy ones. Fundamental knowledge of classic academic science to give an opportunity for grounded decision making under permanently changing social and economy conditions.
3. A system of retraining and raising the level of professional skills should be developed for teaching staff in base industrial organisations.

More long-term methods are connected with the transformation of the system of education and science, and stabilisation of the political and economical situation in the country.

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### Contact

Ms. Olga Petrakovska, Professor, doctor of science, Kyiv National University of Construction and Architecture, Department of surveying and cadastre, 31, Povitroflotsky Ave, Kyiv, 03680 Ukraine, Tel. +380674469862, Fax +380442432671; E-mail: petrakovska@gmail.com 