

SYSTEM OF PLANNING AND PHYSICAL PLANNING AND THE TASK OF SURVEYING

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Abstract

The article describes briefly the spatial planning theory and the resulting surveying tasks and directives for further development of planning as well as surveying.

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1. INTRODUCTION

In the introduction of this article I would like to go through the main tasks of surveying and how they are reflected in the activity of planning and physical planning. A view into history clearly shows how surveying has had an important role within physical planning already some thousands of years before. From that times there exists a map of the city of Babylon and maps of agricultural land on clay tablets (Informationsschrift ... 1993). The present tasks of surveying remain the same as in the past but methods of work have changed radically. Nowadays outer galactic radio signals can be received, electromagnetic waves to artificial Earth's satellites are sent, and laser light is used for determining the distance among continents or position of points on the surface of the Earth; by measurements we determine movements of the continents, by satellite methods altimetric movements of the oceans are determined, and likewise climatic changes can be recorded. Contents of maps and charts may be stored in a computer digital form prepared in such a way to be automatically reproduced with various contents and at various scales. Surveyors get the data for maps and charts elaboration with the help of cameras or by electronic sensors in airplanes or Earth's satellites. The evaluation and interpretation of the contents of the image is automated. We, the surveyors cooperate in planning and realization of infrastructure objects construction, in planning and furnishing individual urban zones, in provisions for environment and nature protection, in managing rural land, and least but not last the task of surveyors is the settling of proprietorship relations on parcels where a new usage of land is planned.

The enumerated tasks of surveying are nowadays closely connected with physical and spatial planning although neither the planers' nor the surveyors' branch may be aware of it. The share of the surveying profession within the planning and physical planning may sometimes be difficult to be measured since it is dependent on the degree of the development of the system of physical and spatial planning in an individual state and above all it depends on mutual cooperation and adequate

coordination among individual professions. Nowadays the role of the surveying profession in physical planning grows more and more important since one of its fields of work is also to study natural and social environment which comprises measurements of available land and water sources and their exploitation and usage of the gained data for developmental planning of urban, rural, and regional areas (FIG Publikations No. 7 in Informacija o študiju geodezije 1994).

2. PLANNING AND PHYSICAL PLANNING

Planning is an activity with which individuals and society help themselves settle their lives in the present for the future. There exist different notions of planning such as e.g. economic, social, spatial, regional, city planning, landscape planning, planning of individual sectors, and alike. In personal and public life a set of structural factors gets more and more intertwined and with the development of the society these connections get ever more diverse and co-dependent. This is the cause the development of individual activities on various territorial levels has to be coordinated and planned. The whole complex of activities may be divided into economic, social, and spatial activities. The term spatial planning stands for physical planning and displacement of activities bound to space. Nowadays integral or wholesome planning is gaining on importance since it should create somewhat harmonic social, economic, and spatial development taking into account the given characteristics of the geographical environment and seeking for a harmony with the environment.

In 1973 in Strassbourg European states have accepted the following components for physical planning: physical planning, regional planning, and planning space organization (Naprudnik 1985). The term physical planning stands for better and supervised usage of land for settling, agriculture, forestry, transport routes, recreation, and alike. Regional planning is nowadays the basis for coordinating the development on the regional and local level with the aim to raise the level of life in the whole area; its conception is no longer physical but land functional. Planning space organization is a policy of physical planning and it should lead to such space organization and human dwellings to create the best living conditions for people. The aim of a good planning is a creation of a new space order, a tendency to settle stability, social solidarity, and integration of mankind, and natural conditions (Glikson 1971). These aims and tasks of the spatial planning change as to the level of planning and the extent of space processing. In connection with this there are: local (communal), regional, and state and international planning and along with these spatial managing may be divided into spatial and town planning. Urban planning is a professional and social activity, which plans growth of settlements, their restoration and creates optimum conditions for dwellings, work, traffic, and recreation. Here the construction-technical, technological, architectural, and designing aspect actually expresses itself (Pogačnik 1980). Regardless of the enumerated hierarchy of plans or their definition and timely plan determination planning is divided into individual phases based on a usage of databases and information systems. Therefore some authors (Hoisl 1982) regard planning a return-closed process based on data acquisition, processing, and application.

Nowadays spatial planning is ever more regarded as planning spatial ecology since it comprises nature and society, with it we try to achieve perfect integration of social economic development, population flow, urban e.g. settling, industrial, and agricultural development, and landscape reconstruction. Further the task of spatial planning is a priority fulfillment of social functions such as: dwellings, work, supply, education, recreation, moving and living in an environment which has ecologically and structurally divided available use of land with minimal conflicts, and, in which damage prevention is assured. The basis of economic spatial development guidance are ecosystems such as usage production basis therefore at physical planning protection and an even production of the ecosystem has to be achieved along with minimum damage (Buchwald, Engelhard 1980). Emerging from these tasks as a basis worldwide a spatial protection planning has developed, its aim being the treatment of natural environment and its components as the goods which are limited and can not be substituted when exhausted or destroyed. Ecological or protecting orientation of planning means adding ecological components into a system of physical planning, integration of ecological planning into integral and sector planning. Resulting this orientation landscape planning has been formed and besides global environment protection it has comprised some forms of taking care for the natural environment (Prosen 1993). A preparation of any kind of spatial plan is on the one side a technical, professional, and scientific task, and on the other it is also an artistic one (Košir 1993) the latter being valid as such for urban settlements in particular. The above presentation of the theory of spatial planning should form a foundation for the in the following text explained rough division of tasks the surveying profession could take over in the new emerging system of planning and physical planning.

3. PARTICIPATION OF SURVEYING IN PHYSICAL PLANNING

Among the tasks the surveying profession already executes within the activities of planning and physical planning two issues must be clear: either the surveying profession offers certain basics and data or else it is the carrier of these activities. With the set up of geographic and land information systems e.g. information systems on the whole the role of surveying within the complex of planning and physical planning has intensified greatly. From the original task of supplying basics e.g. maps and plans surveying is nowadays capable of much more, namely:

- maps, plans and air photographs in digital technique
- data on natural and built-up environment
- data on protected and endangered areas
- data on present use, and alike.

In the 1970's much thought was given to procedures and methods of planning (Sedlar 1970, Naprudnik 1985) and to dividing the latter to individual phases namely inventarization (data collecting and processing), valorization (data evaluation and analysis), and plan elaboration (variant solutions). At present these considerations are in many ways different yet they do not deviate from this concept of work methods though it is true that geographic information systems resulting from the concept and methodological approach to an individual planned act may save much time at data collecting, evaluating and analyzing.

Databases and information systems for urban planning and project making are at present more and more based on data basics which are connected with the state of the parcels e.g. the land information system. This means the setting up of a cadastral real condition in a digital form. The setting up of information systems for the needs of planning and physical planning onto a land information system is a necessity since to realize plans and maps adequate land has to be provided and land-legal relations settled.

The intensity and level of the cooperation of the surveying profession in the activity of spatial and physical planning depends among other things on the level of planning. There surely is a difference of a profession cooperation at an elaboration of a state plan from that one of a local community plan or even from an elaboration of an urban area development plan. The examples from Germany (Seele et al. 1982) show the surveying profession may also be a carrier of tasks from the field of physical planning. In the previous century the surveyors in Germany began to be educated also for the need of agricultural land managing ("Kulturtechnik") which today means managing and development of rural areas. These tasks have been developed within the complex of a planning subdivision e.g. land consolidation which has begun through centuries began to develop as a means of physical planning and with which plans of the state, regional, and local level are realized. In our environment the regrouping of parcels is still treated as an agricultural operation though it is the professional technical procedure with which technically, ecologically, and legally land is reorganized and a possibility of putting into force various usages of land parcels and with it to cover the society's need for building sites are ensured. This means such a plan for regrouping of parcels considers integral needs of a certain area and planners-methodological demands as well as ecological and designing-managing ones. The coordination of planning and executing spatial important measures should be a help to an expedient realization of these measures with one spatial construction plan and no longer with partial sector approaches. The principles of land consolidation may be used also in managing a settlement or its parts and above all the land consolidation may be used as a method of gaining building sites.

The term land consolidation is used more or less for managing agricultural parcels e.g. countryside and is an agrarian technical operation which main task is collecting dispersed property on which there is an agricultural production of the same legal person with coincident disposal right into a whole or at least a few round-up areas (economic effects). The term planning subdivision is used more or less for managing land-legal relations in realizing urban documents on areas intended for dwellings construction or trade and production. On a voluntary basis land owners put their parcels into a land consolidation fund from which under a certain procedure shares are allocated to an individual investor according to the urban act and according to the value of the deposit. From the stated it is evident that sooner or later also our society is bound to give support to our profession and entrust us with these tasks. To our regret this kind of need and trust is not present yet.

4. CONCLUSION

The review of our legislation from the past and from it arising planning methodology after the second world war shows that this distinctly interdisciplinary activity has had

its major ups and downs. The same goes for the surveying profession and the support it has had from politics and society. The new social system and the way to Europe demand a different approach of spatial planning and managing, and in general quite different concern about the environment. All stated demands from all of us a different attitude towards the planners' as well as the surveying profession. For our social planning heritage neither the profession nor the state may take pride in so with sufficient professional seriousness and using European methods a new system of planning and decision-making about spatial intervention and usage of land on the whole should be set up. Just now we witness strategic decisions about a new usage of land in our state yet this state has no state plan of its own. Worldwide spatial development and protection are based on high quality regional plans but we know nothing of a regional planning. One wonders who benefits from blind forces?

In Slovenia there are some attempts at setting up geographic information systems though it seems there is no real connection with the origin of methodology of planning. One has a feeling the surveying profession is sometimes deliberately pushed off the planners' profession to be more easily taxed with being the out-of-date and obsolete. We are aware of these shortcomings and they are consciously done away with. It is regrettable but in our society sector planning still dominates over the complex one and this is the cause some individual professions dominate in the system of planning while others are being set aside. The answer why so is not known! The role of the surveying profession in physical planning and countryside and village development is clear enough especially in Germany whereas in our environment some institutions regard this activity not part of our line of work. Even more could be said about shortcomings we feel in the field of the development of the surveying profession as to physical planning and managing. The Geodetic workshop may be a good opportunity for new work tasks.

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