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Thematic maps in the information system of the town and country planning

Abstract. The paper presents the subsystem of 16 types of thematic maps to the scale of 1:1000, 1:5000 (1:10 000) and 1:25 000, divided into 4 problematic groups. The 1st group concerns documentary maps (2 types), the 2nd group — maps of utility and implementation of lands (3 types), the 3rd group — maps of technical infrastructure (7 types) and the 4th group — maps of the spatial function's structure (4 types). This paper also presents general characteristics of particular types of thematic maps, including: the goal and purpose of maps, the maps scales, general ranges of the content, the form of cartographic presentation as well as information and source data necessary for editorial elaboration of thematic content.

Introduction

The current town and country planning is impossible to perform without genuine information allowing to properly recognize and estimate the state of area implementation. Maps are a very important information material, being an independent form of presenting the area's characteristics. They can be applied next to statistical information, resulting from urban stock-taking listing and various specialistic elaborations, presented, in general, in tabular form, card-indexes, descriptions stemming from study investigations, etc.

In town and country planning maps are the most common next to plans form of recording and presentation of data concerning the existing state. Apart from that the cartographic presentation as no other source information is suited for giving such clear characteristics and such exact location of objects and phenomena.

Up till now, thematic maps drafted for town and country planning needs were cartographically not uniform while their content, usually determined by defined elements of spatial implementation, was limited to the narrowly understood urban stock-taking listing.

Considering the afore-mentioned state, the Institute of Shaping the Environment, jointly with the Institute of Geodesy and Cartography, undertook investigations aimed at determining and uniforming both the contents as well as the form of thematic maps drafted for the local town and country planning. The main assumptions for elaborating the problem

of thematic maps were the outcome of the adopted by the Institute of Shaping the Environment (IKS) method of a comprehensive consideration of problems concerning the characteristics of areas covered by the local regional planning. According to these assumptions, the thematic maps, due to the graphic presentation of primary information should be also the source of secondary information, of a new quality. This information was created by composing and correlating primary information. The content of particular maps should be defined as to create logical correlation with the general system of the area's characteristics. It should be also one of the elements of the area's characteristic and it should ensure uniform identification of the collection of cartographic information and information coming from other sources.

The subsystem of thematic maps was elaborated at the Institute of Geodesy and Cartography in close cooperation with the Institute of Shaping the Environment and branch experts. This subsystem is an integral part of the general information system of the local town and country planning where types of thematic maps, detail range of content and the form of cartographic presentation have been determined.

Types of thematic maps

Considering practical reasons and, above all, the possibility and purposefulness of combining problems in defined thematic groups as well as the necessity of including information presented in cartographic form which comes from other sources into an uniform system of the area's characteristic it was decided to adopt as the subject of elaboration of the IGiK a collection of thematic maps, embraced within 4 thematic groups.

GROUP 1 — DOCUMENTARY MAPS

1. Documentary map of spatial structure to the scale of 1 : 1 000, 1 : 5 000, 1 : 25 000.
2. Map of selected elements of the restricted disposability of land to the scale of 1 : 5 000, 1 : 25 000.

GROUP 2 — LAND UTILITY AND LAND IMPLEMENTATION MAPS

1. Land implementation map to the scale of 1 : 1 000.
2. Land utility map to the scale of 1 : 5 000, 1 : 25 000.
3. Map of the distribution of services to the scale of 1 : 5 000, 1 : 25 000.

GROUP 3 — MAPS OF TECHNICAL INFRASTRUCTURE

1. The water supply map to the scale of 1 : 5 000, 1 : 25 000.
2. The sewage disposal map to the scale of 1 : 5 000, 1 : 25 000.
3. The heating system map to the scale of 1 : 5 000, 1 : 25 000.

4. The gas network map to the scale of 1 : 5 000, 1 : 25 000.
5. The electric-energy network map to the scale of 1 : 5 000, 1 : 25 000.
6. The telecommunication system map to the scale of 1 : 5 000, 1 : 25 000.
7. The transportation system map to the scale of 1 : 5 000, 1 : 25 000.

GROUP 4 — THE MAPS OF THE SPATIAL FUNCTIONS STRUCTURE

1. Map of living places considering the age of the housing resources to the scale of 1 : 5 000, 1 : 25 000.
2. Map of the standards of housing resources to the scale of 1 : 5 000.
3. Map of the distribution of population as compared with the population density to the scale of 1 : 5 000, 1 : 25 000.
4. Map of the distribution of working places to the scale of 1 : 5 000, 1 : 25 000.

Below are the general characteristics of particular types of thematic maps, containing: the goal and purpose of each map, the scale of the map, general range of contents, the form of cartographic presentation as well as information and source data necessary for editorial elaboration of thematic content.

GROUP 1 — DOCUMENTARY MAPS

1. Documentary map of spatial structure

The objective of this map is to graphically present the hierarchical system of spatial structure on the area covered by local planning which is based on the current territorial division system (administrative, urban, ground register and statistical).

The content of the map to the scale of 1 : 1 000 includes: state frontiers, borders of voivodships, communes, borders and symbols of an urban region, ground register district and statistical district, plot borders.

The map to the scale of 1 : 5 000 (1 : 10 000) does not include the numbers of plots and buildings, while the map to the scale of 1 : 25 000 does not present borders of census regions and their symbols, the borders of plots and their numbers and the numbers of buildings.

The map can be of a mono- or multi-colour elaboration containing linear elements and numerical descriptions. Information and source data for elaborating thematic content are obtained from the basic map, the ground register map, the map of urban division (available at the office for town and country planning), the map of statistical division (at the Main Statistical Office, local statistical offices).

2. Map of selected elements of the restricted disposability of land

This map presents the position and distribution of such elements of the implementation which in some way or another limits the liberty of

land disposability during the elaboration of projects of spatial implementation.

The content of the map to the scale of 1 : 5 000 and 1 : 25 000 includes: areas of protected soils, property areas (state, cooperative, private, etc.), nature protected areas, monuments and protected sites and systems, sites and network systems of land armament, the range of protection and noxiousness zones, viewpoints and zones of special urban value, scientific research areas, slopes water, bushes, trees, etc.

The map is a multicolour elaboration whose particular content elements are presented by conventional point and linear symbols, colourfull areas, signatures and alphanumeric descriptions.

The information and data necessary for elaborating the map's content are obtained from: the basic map, the ground register map, topographic maps, maps of geodetic listing of land armament, documentation from offices for town and country planning, lists of monuments (from the voivodship conservator).

GROUP 2 — LAND UTILITY AND LAND IMPLEMENTATION MAPS

1. Land implementation map

The land implementation map to the scale of 1 : 1 000 is a detail, stock-taking map. It enables to estimate the existing structure of land implementation on the area covered by plans and to define directions of eventual changes.

The map's content includes information concerning the method of implementation and distribution of functions with respect of the division into: industry, storage areas, building industry, agricultural and forestry economy, housing, administration and activities of institutions, services, green areas, transport and telecommunication, water-sewage economy, energy, disposal of sewages, waste lands and others.

The thematic map is illustrated by a uniform system of alphanumeric symbols and colourfull areas, which extend the symbols utilized in local planning. Within this system the literal symbols point to functions or the leading function of particular plots, while the alphanumeric symbols point to functions of buildings and installations of a plot. The function of buildings, being the fundamental build-up of a plot, is presented by a colourfull areas while all ancillary buildings functionally connected with the main buildings (sheds, dustbins, etc.) are shown by the contour of the same colour.

The graphic form of the map consists of three basic types of conventional symbols — linear, colourfull areas and alphanumeric description.

The map is drafted by means of a colourfull technique on the basis

of information and data obtained from: the basic map, the ground register map, the topographic map, other cartographic elaborations concerning thematic content and inventory documentation of offices for town and country planning and records of various local authorities.

2. Land utility map

The map's content includes information concerning the ways of utilizing the area with respect to the division into: industry, storage areas, building industry, agricultural and forestry economy, housing, administration, services, green areas, transport and telecommunication, water-sewage economy, energy, disposal of sewages, waste lands and others.

The map to the scale of 1 : 5 000 (1 : 10 000) contains information concerning the method of land utility in relation to a plot as the smallest unit of spatial reference.

The diversified method of plot utility is illustrated by appropriate colourfull areas and literal symbols (according to conventional symbols applied in the land implementation map).

The map to the scale of 1 : 25 000 presents information on the method of land utility in relation to the generalized sets of plots which are utilized in an uniform manner. The diversified way of utilizing land is illustrated only by colourfull areas without literal symbols.

The map is a colourfull elaboration, drafted on the basis of information and data obtained from: the basic map, the ground register map and other cartographic elaborations referring to thematic content and materials which can be found in archives of offices for town and country planning as well as in the urban inventory lists.

3. Map of the distribution of services

This map is a graphical illustration of spatial distribution of services on the area covered by local planning.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes information concerning areas, buildings, constructions and built in service installations grouped in 12 branches of services (education, science, art and culture, health protection and social care, retail trade, catering, sport, tourism and holidays, crafts, other services green areas).

Each branch of the services is differentiated in the map by a different colour. The built in service installation is marked with colourfull dots. The type of service is deversified in black alphanumeric dots taken from the land implementation map.

The content of the map to the scale of 1 : 25 000 is illustrated by colourfull areas without alphanumeric descriptions however excluding

services in the countryside. In those areas both basic and overbasic services are presented.

Information and data necessary for editorial elaboration of this map can be obtained from: the basic map, register materials available at appropriate local departments of institutions and inventory materials at the town and country planning offices.

GROUP 3 — MAPS OF TECHNICAL INFRASTRUCTURE

1. The water supply map

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: surface and underground water, water purification stations, equipment for pumping water, devices for storing water, water lines divided into: arterial, transit, main switching stations, switching stations and junctions to buildings, borders of the range of zone pumping stations, borders of water supplying sites, borders of protection zones and alphanumeric information supplying technical characteristics of the installations.

In the map to the scale of 1 : 25 000 switching lines and junctions to buildings are not presented. This map only shows the main technical characteristics of the most important water supply installations.

Thematic content is presented by conventional symbols: point, linear, colourfull areas and alphanumeric descriptions. The map is a colourfull elaboration where the blue colour dominates.

The information and data necessary for elaborating this map are mainly obtained from the land armament maps and their documentation, the ground register map, the basic map, registers and documentation available at enterprises which deal with the exploitation of water supplying systems.

2. The sewage disposal map

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: sewage treatment plants, utilizing fields, retention reservoirs, sites and reception stations of the socio-economic sewages, sewage pumping stations, sewage and melioration systems, collector chambers, sewage switching network and junctions to buildings, rain water and melioration ditches, ordinates of the bottoms of collectors, chambers, ditches and sewage estuaries, borders of the melioration system, borders of the sewage sites, borders of the protection areas, and alphanumeric data characterizing the sewage disposal installations.

The content of the map to the scale of 1 : 25 000 is considerably reduced as compared to the map to the scale of 1 : 5 000 (1 : 10 000). It is limited to the most important sewage disposal installations and their main technical characteristics.

The map's content is presented by conventional symbols: point, linear, colourfull areas and alphanumeric descriptions. The map is a colourfull elaboration where the brown colour dominates.

The information and data necessary for elaborating this map are obtained from appropriate land armament maps and their concurrent documentary materials, from the basic map, the ground register map and from register and documentation material available at enterprises which deal with sewage disposal systems.

3. The heating system map

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: thermal-electric power stations (nuclear, coal, gas and oil), urban industrial heating stations (coal, gas, oil), network pumping stations, chimneys of heating sites, surface and underground heating network, water and steam network, arterial and transit, the main supplying and switching with junctions to buildings, heating chambers, borders of the heating sites, borders of the protection area and alphanumeric data, describing the heating installations.

The content of the map to the scale of 1 : 25 000 is considerably generalized as compared to the map to the scale of 1 : 5 000 (1 : 10 000) and it contains the most important heating installations and their main characteristics. It does not include, among others, the switching network and junctions to buildings as well as the heating chambers.

The map's content is presented by conventional point and linear symbols, the colourfull areas and by the alphanumeric descriptions. The map is a colourfull elaboration where the light violet colour dominates.

The information and data necessary for elaborating the map are obtained first of all from appropriate land armament maps and concurrent documentary materials, from the basic map, the ground register map, register and documentation materials available at the enterprises which deal with the exploitation of the heating installations.

4. The gas network map

The map is a cartographic illustration of the equipment of land with gas installation.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: gas production plants, intakes of gas, gas pumping stations, gas racking places, reduction-measuring stations, gas reservoirs, transit and arterial gas lines, the main switching network, the switching network and junctions to buildings, borders of gas sites, borders of protection areas and alphanumeric data describing gas installations.

The content of the map to the scale of 1 : 25 000 contains only the most important gas installations and their main characteristics.

The thematic content is presented in the map by conventional point and linear symbols, by colourfull areas and alphanumeric descriptions. The map is a colourfull elaboration where the yellow colour dominates.

The information and data concerning the thematic content are obtained from appropriate land armament maps and concurrent documentary materials, from the basic map, the ground register map, from register and documentation material available at enterprises which deal with exploitation of gas installations.

5. The electric-energy network map

The map is a cartographic illustration of the equipment of land with electric-energy installations.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: thermal-electric and electric power stations, industrial power stations (nuclear, coal, gas and oil), transforming-switching stations, transforming and rectifying stations (tractional), power engineering lines (for the highest, high, medium and low voltage), borders of power engineering sites, borders of protection areas and alphanumeric data concerning the characteristics of power engineering installations.

The content of the map to the scale of 1 : 25 000 is generalized and includes the most important power engineering installations and their main characteristics. The map is a colourfull elaboration where the red colour dominates.

The thematic content is illustrated in this map by conventional point and linear symbols, by colourfull areas and by alphanumeric descriptions.

The information and data necessary for elaborating the thematic content are obtained from appropriate land armament maps and concurrent documentary materials, from the basic map, the ground register map and from register and documentation material available at enterprises which deal with the exploitation of power engineering installations.

6. The telecommunication system map

The map illustrates the equipment of land with telecommunication installations.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: exchanges (trunk, local, housing estate, enterprise), coin-telephones, cable-lockers and cable poles, cable lines (trunk, inter-exchange and arterial), wire lines (of trunk and inter-exchange network), cable and wire switching lines, borders of the cable-locker area and alphanumeric data concerning characteristics of telecommunication installations.

The content of the map to the scale of 1 : 25 000 is considerably reduced and limited to the most important telecommunication installations and their main characteristics. The map to the scale of 1 : 25 000 does

not include the switching network, however, it presents junctions to important extra-city sites, for example to State Agricultural Farms, machinery centres, commune or villagemayor headquarters.

The map is a colourfull elaboration where the thematic content is illustrated by conventional point and linear symbols, by colourfull areas and alphanumeric descriptions. The orange colour is dominating.

The information and data required for elaborating the thematic contents are obtained from: appropriate land armament maps and concurrent documentary materials, record and documentation material available at district post offices and at telecommunication offices and from technical documentation being at enterprises which deal with the exploitation of telecommunication installations.

7. The transportation system map

The map illustrates the equipment of land with transportation network and concurrent sites and installations.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: railway lines, railway stations and stops, loading stations, stopping and switching stations, bridges, viaducts, tunnels, technical class of public roads (5 classes), types of pavements due to transportation possibilities (6 types), type of materials of roadway layer (9 types), pedestrian lines and passages, geometric systems of crossroads, tram lines, trolleybus and bus lines, depots (type diversification), parking lots, garages, service and repair stations and alphanumeric data characterizing transportation sites and installations.

The content of the map to the scale of 1 : 25 000 is considerably generalized. It does not present for example types of pavement, types of roadway layer, pedestrian lines and passages, geometrical systems of crossroads, depots, parking lots, service and repair stations. It presents, however, the technical classification of urban streets, depending on their section (4 classes) and speed (4 categories).

The information and data necessary for elaborating the thematic content are obtained from: the basic map, the topographic map, other cartographic materials available at town and country planning offices and from registers of the local authorities.

The map is a colourfull elaboration where the thematic content is illustrated by conventional point and linear symbols, by colourfull areas and by alphanumeric descriptions.

GROUP 4 — THE MAPS OF THE SPATIAL FUNCTION'S STRUCTURE

1. Map of living places considering the age of the housing resources

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: areas of family housing (high and low), areas of farmsteads and lodging

houses, housing resources (divided into 4 age groups), number of flats for high and low family housing.

In the map to the scale 1 : 5 000 (1 : 10 000) the map's content refers to areas of statistical districts, and in the map to the scale of 1 : 25 000 — to urban districts.

The content of the map is presented by colourfull areas (housing areas) and by columnar diagrams (number of flats and age of the housing resources).

The information and data necessary for elaborating the thematic content are obtained from the basic map, from statistical data of local statistical offices, registers of housing resources available at municipal economy departments of city councils, State Insurance Office materials and lists of farmsteads.

2. Map of the standards of housing resources

The map presents spatial distribution of housing resources, diversified according to 5 classes of flat equipment.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) and 1 : 25 000 includes the structure of the housing resources (5 classes of equipment — electricity, kitchen sink, W.C., bathroom, central heating) and the size of the living area.

The map is a colourfull elaboration where the thematic content is presented by linear symbols, colourfull areas and circular diagrams.

The information and data necessary for elaborating the thematic content is obtained from: the basic map, statistical data (mainly data of the National Record), registers of the housing resources being available at municipal economy departments of city councils, data of the State Insurance Office and lists of farmsteads.

3. Map of the distribution of population as compared with the population density

The map is an illustration of spatial distribution of population compared with the population density.

The content of the map to the scale of 1 : 5 000 (1 : 10 000) includes: the population density for 1 hectare of the statistical district and the population distribution in particular statistical districts.

The content of the map to the scale of 1 : 25 000 includes the same problems as the map drafted to the scale of 1 : 5 000 (1 : 10 000). However, they are appropriately generalized and referenced to areas of urban districts.

The map is a colourfull elaboration where the population density is diversified by various colourfull areas defining the population density within appropriate intervals, for 1 hectare of the adopted unit of the

territorial division. The population distribution is illustrated by dots, which value is presented by absolute numbers. The number of dots, multiplied by the value of one dot, for example 50 or 100, defines the number of inhabitants within the adopted reference unit.

The information and data necessary for elaborating thematic content is obtained from: the basic map, statistical data and from registers of appropriate local authorities.

4. Map of the distribution of working places

The map presents spatial distributoin of employees in defined economic branches on the basis of the land utility map, covered by the local planning.

The content of the map to the scale of 1 : 5 000 (10 : 000) includes the number of employees in basic economic branches (industry, building industry, agriculture, etc.) in major enterprises and movable teams formally connected with the territory.

The content of the map to the scale of 1 : 25 000 is suitably generalized and presents the number of employees in the appropriately aggregated three economic branches.

The map is a colourfull elaboration, where the basic thematic content is presented on the basis of the multicolour land utility map by means of conventional point and linear symbols and by numerical descriptions. The number of employees is presented by dots in the colour adopted for a given economic branch or sector in reference to the assumed territorial division unit (the value of a dot corresponds to 50 persons in the map to the scale of 1 : 5 000 while in the map to the scale of 1 : 25 000 — to 100 persons).

The information and data necessary for elaborating the thematic content is obtained from the basic map, the land utility map, from statistical data and stock-taking data of town and country planning offices and from registers of appropriate local authorities.

The above mentioned types of maps do not exhaust all types of thematic maps which can be drafted for the needs of the local town and country planning. They only present a collection of necessary maps, which according to needs can be supplemented by appropriate types of thematic maps, classified into one of the problematic groups.

The above collection does not embrace physiographic thematic maps which are classified into a separate subsystem.

Graphical form (conventional symbols) of thematic maps

The transmission of information concerning the content presented in a map is carried out by introducing a conventional symbol in place of the real image of objects and phenomena, occurring in the terrain. The

place of the qualitatively and quantitatively diversified structure of the presented objects and phenomena is substituted by a scheme — the conventional symbol. In this situation, it is very important to elaborate not only the picture of suitable conventional symbols, but first of all, to elaborate the entire system of such symbols which would ensure clarity and readability of the presented content.

The recent practice revealed that thematic maps drafted for the needs of local planning were characterized by a large diversification and not uniform cartographic form of presentation. It happened quite frequently that maps of similar or even identical content presented objects and phenomena in a different way and thus were uncomparable.

The designing of conventional symbols, apart from pure cartographic reasons stemming from the fundamental principles of cartographic theory of transmitting information should consider the needs and requirements of local planning and first of all, obligatory norms and rules, as well as customs and specifics of work at the urban project.

Having the afore-mentioned in mind a uniform system of conventional symbols was elaborated assuming that the symbols should:

- ensure clarity and aesthetics of the maps,
- bind to symbols utilized in maps till the present moment, which were thematically connected with maps drafted for the local planning needs,
- consider norms and rules obligatory in the local planning,
- be simple in construction, easy to draft and remember,
- be adopted to traditional and contemporary drafting and cartographic methods,
- ensure uniformity of presenting the content of all thematic maps, necessary for the local planning.

The effect of this elaboration is a catalogue of over 1100 conventional symbols which facilitates the drafting of uniform graphically thematic maps necessary for local planning.

Three basic elements of cartographic presentation were, in general, applied for the construction of conventional symbols: point, linear and superficial. According to needs these elements are additionally diversified by the introduction of various geometric forms, colours (depending on the intensity of colour), alphanumeric descriptions and by the location of these diversification.

The qualitative features are presented by shape, colour and alphanumeric descriptions while the quantitative features are presented by the size of the symbol or by a defined level of colour diversification.

Examples of uniformity and cohesion of the system can be conventional symbols, presenting the map's content which belong to the group of the land utility and land implementation maps. For example, for maps of land armament with identical detail levels, conventional symbols

present linear and point elements of the land armament network. Uniform constructional principles were applied for elaborating these symbols which allow for an explicit illustration of the importance and technical characteristics of particular conduits and concurrent installations. The network types are distinguished by an appropriate colour while the importance of particular conduits — by an appropriate thickness of a line. Constructing symbols characterizing the main technical installations which accompany particular network types, conventional symbols were introduced based on the fundamental geometrical forms allowing to diversify the importance of these installations.

Conventional symbols of land armament were introduced into those thematic maps' contents where the land armament elements were only components of the content.

The elaborated system of conventional symbols fulfils the basic requirements of local planning.

Final remarks

In the forthcoming years there will be a necessity to elaborate successive generations of plans for the town and country implementation of voivodships, cities and communes. In order to implement such a vast task it is necessary to possess an efficient informational system which would improve not only the elaboration of plans but also would facilitate effective control over their implementation. This role should be successively fulfilled by the new informational system elaborated at the Institute of Shaping the Environment. The subsystem of thematic maps is an integral part of this system.

It is forecasted that most of the thematic maps of this subsystem will be drafted only by the geodetic service units, subordinated to the Head Office of Geodesy and Cartography.

This mainly concerns maps of the technical infrastructure, which for the town and country planning are the only source of information located within the geodetic units.

The experimental-implementational works are being carried out already. For example the Regional Geodetic-Cartographic Enterprise in Rzeszów, is elaborating for the town and country planning bureau in Rzeszów a collection of thematic maps of the technical infrastructure and documentary maps of the spatial structure for Łańcut commune.

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JAN CIESIELSKI

CARTES THÉMATIQUES DANS LE SYSTÈME D'INFORMATION DE L'AMÉNAGEMENT LOCAL DU TERRITOIRE

Résumé

En résultat des recherches poursuivies par l'IGiK (Institut de Géodésie et de Cartographie) en proche coopération avec l'IKS (Institut de l'Environnement) et d'autres spécialistes, a été élaboré un sous-système de cartes thématiques qui constitue une partie intégrale du système d'information de l'aménagement local du territoire.

Ce sous-système comprend 16 sortes de cartes thématiques classées en quatre groupes de problèmes:

Groupe I — cartes documentaires aux échelles 1:5000 et 1:25 000 de deux sortes: carte documentaire de rapports spatiaux et carte des éléments choisis de limitation de la disponibilité de terrains.

Groupe II — cartes d'aménagement et d'exploitation de terrains, comprend trois sortes de cartes: carte d'aménagement de terrains à échelle 1:1000, carte d'exploitation de terrains aux échelles 1:5000 et 1:25 000 et carte de disposition des services aux échelles 1:5000 et 1:25 000.

Groupe III — cartes d'infrastructure technique aux échelles 1:5000 et 1:25 000 où on a sept sortes de cartes: carte de distribution d'eau, carte d'évacuation des eaux usées, carte du service d'eau chaude et du chauffage, carte de distribution du gaz, carte de télécommunications, carte du réseau du transport en commun.

Groupe IV — cartes de structure de la fonction spatiale aux échelles 1:5000 et 1:25 000, divisé en quatre sortes de cartes: carte de disposition des logements avec leur âge, carte de disposition de la population à base de sa densité, carte des standards de logements, carte de disposition des lieux de travail.

Les caractéristiques générales présentées pour les différentes sortes de cartes thématiques comprennent: le but et la destination de la carte, l'échelle, les étendues générales du contenu, la forme de présentation cartographique ainsi que les informations et les données de sources nécessaires pour la rédaction et l'élaboration du contenu thématique.

Les cartes thématiques discutées dans ce sous-système n'enferment pas toutes les sortes de cartes thématiques qui peuvent être établies pour l'aménagement local du territoire mais présentent seulement un ensemble de cartes indispensables. Cet ensemble peut être complété au fur et à mesure des besoins par les sortes requises de cartes thématiques classées dans le groupe de problème correspondant. L'ensemble en question ne comprend pas de cartes du domaine de la physiographie classées dans un sous-système séparé.

L'on a présenté les principes fondamentaux adoptés pour la mise au point du projet des signes conventionnels qui se trouvent dans le catalogue de plus de 1100 signes.

Le règlement selon lequel le sous système de cartes thématiques devra être pratiquement appliqué dans les établissements locaux de l'aménagement du territoire dans l'ensemble du pays, est en dernière phase de tirage.

Traduit par: M. Bohdan Jakubowski

ЯН ЦЕСЕЛЬСКИ

ТЕМАТИЧЕСКИЕ КАРТЫ В ИНФОРМАТИЧЕСКОЙ СИСТЕМЕ МЕСТНОГО ПРОСТРАНСТВЕННОГО ПЛАНИРОВАНИЯ

Резюме

В результате исследований, проводимых в IGiK в тесном сотрудничестве с Институтом Формирования Окружающей Среды и с отраслевыми специалистами, разработана подсистема тематических карт, являющаяся интегральной частью информатической системы пространственного территориального планирования.

Подсистема содержит 16 видов тематических карт, собранных в 4-х следующих проблемных группах:

Группа I — документационные карты в масштабе 1 : 5000 и 1 : 25 000 — охватывает два вида карт: документационную карту пространственных отнесений и карту избранных элементов ограничений в распоряжении местностью.

Группа II — карты благоустройства и использования местности — охватывает три вида карт: карту благоустройства местности в масштабе 1 : 1000, карту землепользования в масштабе 1 : 5000 и 1 : 25 000, карту размещения обслуживающих в масштабе 1 : 5000 и 1 : 25 000.

Группа III — карты технической инфраструктуры в масштабе 1 : 5000 и 1 : 25 000 — охватывает семь видов карт: карту водоснабжения, карту отвода водостоков, карту теплофикации, карту газоснабжения, карту электроэнергетики, карту телесвязи, карту системы сообщения.

Группа IV — карты структуры пространственной функции в масштабе 1 : 5000 и 1 : 25 000 — охватывает четыре вида карт: карту размещения мест жительства с учетом возраста жилищных ресурсов, карту размещения населения на фоне плотности заселения, карту стандартов жилищных ресурсов, карту размещения мест работы.

Для отдельных видов тематических карт даны общие характеристики, содержащие: цель и назначение карты, масштаб карты, общий объем содержания, форму картографического представления, а также исходные информации и данные, необходимые для редакционной разработки тематического содержания.

Рассмотренные в подсистеме тематические карты не исчерпывают всех видов тематических карт, которые могут быть составлены для нужд местного пространственного планирования, а являются единственно иллюстрацией набора необходимых карт, который по мере роста потребностей может быть дополнен соответствующими видами тематических карт, зачисленными к одной из проблемных групп. Вышеуказанный состав не охватывает тематических карт из области физиографии, которые входят в состав отдельной подсистемы.

Кроме того, в статье представлены основные принципы, какими руководствовались при проектировании условных знаков, собранных в каталог, содержащий свыше 1100 знаков.

В заключительной фазе разработки (в печати) находится инструкция, вводящая в практическое применение подсистему тематических карт в единицах местного пространственного планирования на территории всей страны.

Перевод: Róża Tołstikowa

JAN CIESIELSKI

MAPY TEMATYCZNE W SYSTEMIE INFORMACYJNYM TERENOWEGO (MIEJSCOWEGO) PLANOWANIA PRZESTRZENNEGO

Streszczenie

W wyniku badań prowadzonych w IGiK w ścisłej współpracy z IKS i specjalistami branżowymi opracowano podsystem map tematycznych stanowiący integralną część systemu informacyjnego terenowego planowania przestrzennego.

Podsystem zawiera 16 rodzajów map tematycznych ujętych w czterech następujących grupach problemowych:

Grupa I — mapy dokumentacyjne w skali 1:5000 i 1:25 000 obejmuje dwa rodzaje map: mapę dokumentacyjną odniesień przestrzennych, i mapę wybranych elementów ograniczenia dyspozycyjności terenu.

Grupa II — mapy zagospodarowania i użytkowania terenu obejmuje trzy rodzaje map: mapę zagospodarowania terenu w skali 1:1000, mapę użytkowania terenu w skali 1:5000 i 1:25 000, mapę rozmieszczenia usług w skali 1:5000 i 1:25 000.

Grupa III — mapy infrastruktury technicznej w skali 1:5000 i 1:25 000 obejmuje siedem rodzajów map: mapę zaopatrzenia w wodę, mapę odprowadzenia ścieków, mapę ciepłownictwa, mapę gazownictwa, mapę elektroenergetyki, mapę telekomunikacji, mapę układu komunikacji.

Grupa IV — mapy struktury przestrzennej funkcji w skali 1:5000 i 1:25 000 obejmuje cztery rodzaje map: mapę rozmieszczenia miejsc zamieszkania z uwzględnieniem wieku zasobów mieszkaniowych, mapę rozmieszczenia ludności na tle gęstości zaludnienia, mapę standardów zasobów mieszkaniowych, mapę rozmieszczenia miejsc pracy.

Dla poszczególnych rodzajów map tematycznych podano ogólne charakterystyki zawierające: cel i przeznaczenie mapy, skale mapy, ogólne zakresy treściowe, formę kartograficznej prezentacji oraz informacje i dane źródłowe potrzebne do redakcyjnego opracowania treści tematycznej.

Omówione w podsystemie mapy tematyczne nie wyczerpują wszystkich rodzajów map tematycznych, które mogą być sporządzane do potrzeb terenowego planowania przestrzennego, lecz stanowią jedynie ilustrację zbioru map niezbędnych, który w miarę potrzeb może być uzupełniany odpowiednimi rodzajami map tematycznych zakwalifikowanymi do jednej z grup problemowych. Powyższy zbiór nie obejmuje map tematycznych z zakresu fizjografii, które ujęto w odrębny podsystem.

Ponadto podano podstawowe zasady jakimi się kierowano przy projektowaniu znaków umownych ujętych w katalogu zawierającym ponad 1100 znaków.

W końcowej fazie opracowania (w druku) znajduje się instrukcja wprowadzająca podsystem map tematycznych do praktycznego stosowania w jednostkach terenowego planowania przestrzennego na terenie całego kraju.