

## SUMMARY

**Abibulayev D.E., Khaytovych A.B., Kapitanova I.N. GIS in studying the natural locus's of tularemia in Ukraine // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 3-8.**

In article the results received by help ArcGIS for the analysis of distribution of the natural locus's of a tularemia in territory of Ukraine on ecoregions and on administrative areas are resulted. The estimation of a role of vectors, infection carrier and waters in maintenance of the natural locus's of a tularemia for different ecoregions the countries is given.

Keywords: GIS, tularemia, ecoregions, vectors, infection carriers.

**Bazarnova N., Dodojenko T., Kutsenko T., Lelyukh S., Chernov V. The Institute of Applied Geoinformation Science // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 9-13.**

A new method of town-planning interpretation of high resolution space images. A new improvement in interpretation of space images of built-up areas, based on the sub-pixel image analysis and full use of image metadata for planned geometrical correction is offered.

We use the QuickBird Panchromatic images, multispectral and both together. At the same time multispectral data is used for accurate definition of the objects' borders on panchromatic images, using the principles, applied in IMAGINE Subpixel Classifier (ERDAS) and our own algorithms. Another word, we say about high accuracy definition (0.05 -0.2 m) of not nature (anthropogenesis – man-made) lineaments. Our approach is the using theory of fuzzy sets. This is the next step of defining new physical fusion methods.

Satellite metadata (satellite azimuth and elevation, solar azimuth, solar elevation and the sensor angle of nadir) is used for ground objects' height, especially buildings and houses and also for range and direction of their roofs' shift definition, visible on the image to shift roofs back to the foundation to produce a correct map. At that there's no necessity in the usage of traditional photogrammetry.

Our experience in producing maps of 3 Ukrainian cities allows us to state that, with the usage of such technologies an interpretation accuracy of 20 cm. in plane (x; y) and 50 cm. in height (z) (with the image resolution 61 cm./pix.), i.e. the maps scaled 1:2000 is easily achieved. Moreover, on the basis of these maps during relatively easy work in field the layouts scaled 1:500 can be received. The evidence of this is our own experience.

Key words: Image processing, QuickBird, Subpixel

**Baran P.I., Oleksij I.I., Prymak O.V., Plyska L.V., Puryk T.I. Krinzhgedesiya's experience in digital large-scale mapping for GIS-users // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 14-17**

Technology of digital large-scale mapping in „Ukrinzhgedesiya” is described. The role of structure and accuracy of maps was underlined during the GIS-analysis. The problems which the enterprise faces during large-scale mapping were pointed out.

Key words: GIS-analysis, mapping, stereophotogrammetry

***Barladin A., Busol I. Development of electronic ecological atlas of Ukraine*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 18-21

On the basis of synthesizing and systematization of electronic editions creation experience the basic approaches to development of Electronic ecological atlas are illustrated. Some functional possibilities and structural content of the edition, and also scope of tasks, which can be solved using represented CD, and spheres of social life, where this product can be used, are examined.

Key words: ecological atlas of Ukraine, electronic maps, tool panel, environment, antropogenic burden.

***Vakhrushev I.B. Estimate of seismoekologic situation with using GIS-mapping (on market South coast of Crimea)*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 22-33

The article consist the methodology of estimating of seismoekologic situation on base GIS-mapping. The estimate of seismoekologic situation are getting for South coast of Crimea.

Key words: GIS-mapping, estimate of seismoekologic situation, ecological risk

***Danchenko A., Zorin S., Kosovec A., Tokarenko V. Creation of system for air pollution modeling and control in Kyiv city*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 34-36

This article describes creation of air pollution modeling and control in Kyiv city. It describes system's structure, content of controlled information, ways for heterogeneous system's integration, developed software and it's interface.

Key words: Air control, GIS, data transferring, integration

***Epikhin D.V. Geoinformation supply of implementation urban forests cadastre*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 37-43

The methods of creation and implementation urban forests cadastre in medium-sized city are revealed in this article

Key words: urban forest, cadastre, geoinformation systems, data base

***Eryomuskin A., Zorin S., Kovnacky P., Saryan V. GIS Using in modeling and investment effectiveness' appraisal*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 44-47

This article describes new ways and possibilities for using GIS in investment effectiveness' appraisal. Also describes GIS using in connection with space images and laboratory research of environment state.

Key words: GIS, investment effectiveness, complex appraisal, 3d-modelling

***Efimov S.A., Ugarov S.G., Selezneva O.A., Timchenko L.V. Geo-informational statistical atlas "Education in the Autonomous Republic of Crimea: development and making"*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 48-56.

Electronical geo-informational statistical atlas "Education in the autonomous republic of Crimea" was developed by association "Technokhimkomplekt". The atlas includes 44 thematic maps, 18 tables, 8 diagrams. For the first time there was created a geo-informational database of educational institutions in AR of Crimea. The atlas presents an analysis of spatio-temporal changes, that take place in various indices of work in educational institutions in the Crimea.

The information, presented in the Atlas gives a tool to draw the conclusions about the level, prospects and priority development directions of education in the Autonomous republic of Crimea.

Key words: educational institutions, geo-informational statistical atlas

**Ischuk O. Problems and prospects of geoinformation technologies introduction to oil-and-gas branch of Ukraine** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 57-61.

Primary factors which stir to effective introduction of geoinformation technologies in the oil-and-gas industry of Ukraine are shown in this article. Also recommendations on their elimination and examples of successful GIS application the Ukrainian experts in oil-and-gas projects of Ukraine and Russia are given.

Key words: geoinformation systems, the pipeline, a tank farm, information-analytical system, risk assessment.

**Karpenko S.A. Informational geographical basis for strategic planning of development in Crimea** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 62-73.

The article presents an approach to numerical characteristic of informational – geographical basis for system of strategic planning of development in Crimea.

It characterizes the structure and functions. The proposed theoretical construction was approved in terms if methodological substantiation of realization of the social-economic development strategy of Crimea.

The article characterizes the approaches to creation of territorial database.

Key words: informational –geographical basis, strategy of social-economic development

**Kartavtsev O. The use of high quality spatial resolution RS for the assessment of air pollution from stationary industrial sources for human health risk** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 74-76

The necessity of use of high quality spatial resolution RS for the assessment of air pollution from industrial sources is connected with the general low quality of the sources for special data materials of the checking of stationary sources of pollution. The geodatabase of stationary sources of pollution and the landuse on the territory of the town of Zaporizhzhya was formed with the help of software ArcGIS and the materials of Quick Bird. It was used while assessing the air pollution for human health risk.

Key words: RS, human health risk assessment, air pollution

***Kiriyakova L.S., Hajtovich A.B., Shvarsalon N.K. Cholera as pandemical infection*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 77-83.

By means of geographical information technologies, distribution of cholera to the world is studied. Features of the seventh pandemic of cholerae are certain. On cholera in the world and risk of occurrence of cholera, the modern epidemic situation is reflected in territory of Ukraine.

Key words: cholera, pandemic, distribution, features.

***Kozlova I.J., Kaydanskiy V.V. Application of geoinformation technologies in an estimation of prospects of use of solar power at the industrial enterprises of Simferopol*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 84-91.

In clause(article) use GIS for an estimation of perspectivity of use of solar power at the enterprises of Simferopol is described. In a basis of an estimation the ecological and economic substantiation of use of solar power according to a time typical methodic of economic efficiency of realization of security actions and estimations of ecological damage for national economy.

Key words: GIS-technologies, solar power, a solar collector, system of solar hot water supply (SSHWS).

***Krisenko S.V., Voedilova O.Y., Vakulenko A.G. Automation of calculation of ecological agrochemical rating on materials certification of soils of the last years*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 92-97.

This article considers the ways of the decision of a problem of automated calculation of ecological agrochemical rating on basis GIS-technologies with use of the structural approach of the analysis and modelling.

Key words: automated calculation of ecological agrochemical rating, GIS-technologies, the structural approach of the analysis and modelling.

***Lychak A.I., Bobra T.V., Lementa A.A. Information and geographical bases of the construction of the spatio-temporal models of the mountain forests for the purposes of management (ON the example of the Crimea)*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 98-104.

The article touches upon the geoinformation modeling of the landscape-geophysical factor of the environmental. The author reasons necessity of the GIS-technologies implementation for identification, calculation and analysis of fictional conditions of the geographical complex.

Keywords: landscape, landscape geophysics, GIS-modeling, landscape-geophysical conditions.

***Lyalko V.I., Azimov O.T., Sakhatsky O.I., Hodorovsky A.Ya., Shportyuk Z.M., Sybirtseva O.M. Application the satellite data and GIS-technologies for the ecological state and fire risk assessments of the Chernobyl Exclusion Zone forest stands*** // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 105-117.

In this paper the investigation results of state of the Chornobyl Exclusion Zone natural growth on the basis of using RSE/GIS-technologies are described. The radioecological conditions were determined, the growth was classified, fire risk was estimated.

Key words: space images, Chornobyl accident, ecology, forest, fire risk assessment

**Nikolaev V. M., Toporova E. A. Supporting the Russian government coordinate system 1995 in ArcGIS // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 118-122.**

The questions of conversion spatial data from coordinate system 1995 to coordinate system 1942 and opportunities of work with spatial data under coordinate system 1995 discussion in the article. The developed ArcGIS 9 Desktop extension for widening ArcGIS facilities for spatial transformations and work with coordinate system 1995 also discussion in the article.

Key words: ArcGIS, coordinate system 1995, coordinate systems transformations methods.

**Palekha Y.N. The methodical approaches to GIS-technologies application in a monetary estimation of Ukrainian cities // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 123-130.**

The summary: in article described the general methodology of GIS-technologies application in a monetary estimation of Ukrainian cities at its three basic stages: to preparation of a cartographical material, analysis both generalization of the initial data and publication of results.

Key words: GIS-technologies, monetary estimation of lands, cities of Ukraine

**Pashkovska L.V. Application of GIS-technologies usage in geographical researching transporting-communications network in territorial planning of Ukrainian regions. // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 131-133.**

The summary: in the article the general laws of transporting-communications axis influence on territorial development of Ukrainian regions. The economic-geographical factors influencing formation of transporting-communications network are investigated.

Key words: GIS-technologies, transporting-communications axis, territorial planning.

**Shvarsalon N.K., Khaytovych A.B., Kiriyakova L.S., Khaytovych A.G. Some Aspects of highly pathogenic avian influenza distribution in the world and Ukraine // Uchenye zapiski TNU. Series: Geography, 2006. – Vol. 19 (58). №.1 – P. 134-141.**

By results of the research work with use of GIS-technologies stages of distribution of highly pathogenic avian influenza (HPAI) and the most significant for the further distribution of (HPAI) in the world and Ukraine migratory routes of wild birds are certain. The epizooty of HPAI among poultry in Crimea is analysed, and her territorial belonging to Sevash Lake and Northwest Black Sea Coast areas is established.

Key words: avian influenza, distribution, flyways.