INTERNATIONAL BULLETIN OF APPLIED SCIENCE AND TECHNOLOGY

 $UIF = 8.2 \mid SJIF = 5.955$



SYSTEMS BASED ON THE DEVELOPMENT OF GEOGRAPHIC INFORMATION ON LAND RESOURCES AND **ENVIRONMENTAL MONITORING**

Patualieva Qurbangul Begalievna

Department of Geodesy, Cartography and Natural Resources, Karakalpak State University, assistant teacher: https://doi.org/10.5281/zenodo.10314171

Abstract: This article provides a lot of information about the systems based on the development of geographic information on land resources and environmental monitoring based on the state of the natural geographic environment in the territory of the Republic of Uzbekistan. These data are described in detail about research, cartographic and geodetic analysis of geographical objects. On the basis of these analyzes, there are opportunities to depict the changing state of the object and land resources on topographic maps on a higher scale based on cartographic dimensions and analysis.

Keywords: Geoinformation, geographic information, geographical point, geographical object, ecological monitoring, cartographic analyses, geographic information system(GIS),

Introduction

Geoinformation method of studying land resources and environmental monitoring in the Republic of Uzbekistan includes an analysis of the ecological situation. (For example: minerals in the water level of the Aral Sea and the Ustyurt plain in the territory of the Republic of Uzbekistan). To geographic information on land resources and environmental monitoring the entire spectrum of relevant available information based on a specific geographic point or object. Mainly now it is spatial in the monitoring of modern geographical objects geoinformation from geographical data on a large scale we can have and collect information about the studied areas, the objects located in it and the natural and anthropogenic phenomena that are occurring. Geoinformation analysis of geographic data, including monitoring data it creates opportunities for cartographic representation of the approximate form of processes in which objects and events are distributed over time. This is the state-ofthe-art geoinformation monitoring is needed to create models and make predictions implement a specific scenario creates many opportunities for monitoring changes in environmental conditions. Non-spatial geoinformation consists of regulatory documents and information based on them, general information specific to the class of objects under consideration, events and specific analyses. Ecological analysis using the geoinformation method of research covers the following tasks: Monitoring the environmental status of geographic information on land resources and environmental monitoring natural and manmade emergency situations, assessment man-made environmental impacts and their consequences, ensuring environmental safety it is necessary to implement research results based on the cartographic analysis of the considered objects in the considered area. Regional and network planning and industry, transport, agricultural and energy objects should be reflected on maps in cartographic analyses.Land resources and environmental monitoring mapping should include integrated and field-specific data collection. Creation and updating of thematic maps and atlases in cartography must have knowledge of maps, fast mapping.



Integration and interaction of object-oriented geoinformation will also depend on resources. Thus, environmental audit with the help of geographical system information modern information systems (GIS) perform two functions: They are being considered provides information about the state of objects and the environment and helps to create a modeling system. Management decisions can be made as a result of environmental audit studies using GIS. Their goal is stabilization and improvement ecological situation in the area below is to record and collect geoinformation data of land resources. The research area in the Ustyurt region of the Republic of Karakalpakstan is experiencing a large anthropogenic impact. During the field and the results of research of minerals, oil and gas wells were carried out in laboratory studies. Currently, in the part of the Ustyurt Plain, polyethylene and polypropylene granules are extracted from the methane gas of the Kungrad Soda Plant and Uzbekistan-Korea joint venture "Uz-Kor gas chemical" under the influence of high pressure and temperature. The processes of oil well construction, oil and water collection, primary treatment and transportation are reflected based on geographic information on land resources and environmental monitoring. The auxiliary production zone includes the production area support base, shift camp, water treatment plant, oil loading and unloading point, fossil pit, mine pipelines, roads (line means of communication) can be viewed in the geoinformation system. Such contaminated land parcels are the size of one administrative area and larger than the implementation of ecological or other functional zoning of the area. The existing register, as well as locations of local accidents (incidents) on pipelines can be located and through new systems of geoinformation are depicted on the zoning map only in the form of point objects. In the first stage of creating a cartographic model of the project plan for the local environment development of a general map of the area of the objects to be researched together with geographic information about the hydrological network, groundwater, anthropogenic influence, as well as the geoinformation system geodetic analysis is carried out as linear connections of large man-made objects and neighboring areas. These are the analyses geotechnical systems are shown on the map, operational trunk, pipelines inside the mine, exploration wells and other industrial facilities are described. Then, a general map with the location of land resources in the natural geographic environment of the sampling points for the components was created. Based on the results of cartographic and geodetic analysis, the use of Earth resources affects land cover and changes in land cover affect land use. Based on the changes I believe that land cover with land use is not always a reasonable decision. Still, very mobile land use designs cause land cover changes in resource locations for a variety of social reasons the geographic information system made it possible to process a very large amount of data and analysis and required information can be known through remote sensing. In the geographical environment the necessary functionality of mapping and periodic verification of natural resources is a very complex process. Intermediate and final results of monitoring of environmental land resources are traditionally presented in the following form. They are topographical tables, mapping graphics, dimensions and diagrams, various types and cartographic models can be analyzed. The second is essentially the organization of cartographic support of geoinformation monitoring creates the necessary opportunities for the formation of a geographic information system based on the environment. They can be based on different sizes of thematic maps of geoecological content. They are geographical maps are classified according to their content. These maps are designed with the end user in mind, primarily to explore natural resources serves to provide the territory and help to



IBAST | Volume 3, Issue 12, December

INTERNATIONAL BULLETIN OF APPLIED SCIENCE AND TECHNOLOGY

 $UIF = 8.2 \mid SJIF = 5.955$

IBAST ISSN: 2750-3402

eliminate various negative trends in the use of nature. It ensures compliance with a set of conditions for providing geo-informational monitoring of environmental conditions on the basis of cartography. Building such a GIS-based system using full-featured software is mainly used as land resources monitoring a multi-level system and each of its territorial levels should differ in summarizing the initial. This ground resource monitoring base should be comprehensively remote, based on systematized data in relational databases. In this underground observations of the state of nature and dynamics of development management facilities; it is recommended to pay attention to indicators of the state of the natural and manmade environment. This is the data obtained by different methods, must be compatible with each other. Frequency of observations in research results should depend on the intensity of natural and anthropogenic processes, the stronger it is, the more correct it is to choose smaller intervals of observations. Land resources are geographical the operation of the monitoring system is based on continuous data, which are systematically observed and developed using the modeling method. Map image updating in the geoinformation system is a map-based analysis that displays the results of the processed data analysis in various ways. Mapping units by providing integrated information based on different approaches and methods opportunities to evaluate events and processes are created. Such maps are designed for decision making at different times based on the exact dimensions of the object depicted on the maps at regional levels. They actually track different variants of the state of the phenomena being studied and is essentially a logical progression of assessment maps. The last link of using the cartographic method in the implementation of geographic information environmental monitoring - creation of forecast maps showing the condition of the studied area and accurate analysis results taking into account the measures taken. That is, these collected maps-summaries and in strengthening the final knowledge about the object of study based on data analysis and synthesis it is intended to use the dimensions obtained on the basis of the available theoretical data.

Conclusion

In conclusion, the implementation of regulations based on systems based on the development of geographic information on land resources and environmental monitoring, in general, allows the creation of various types and completeness on the basis of cartographic dimensions, defines the basic principles of understanding their nature and content. This mapping defining their place and role in geographic information monitoring, as well as the necessary information about methodological rules defining the application of the content and principles of GIS is given in the article. These are the principles it also allows to determine the reliability and relevance of monitoring studies. The principle of scientific expediency also includes the use of such systems based on experience gained in mapping. Earth resources it is necessary to use known and proven methods for creating maps. For this you have to choose creating appropriate information support for qualified personnel and methods already in use, techniques, algorithms, programs and results are recommended. Cartographically, this can be done to update surveys by, for example, displaying points or features that focus on objects...

References:





AND TECHNOLOGY

1.Allanazarov B. GEODETIC DIMENSIONING STUDIES AND POINT-DIMENSION LOCATION COORDINATE SCHEME CREATION PROCESSES //Евразийский журнал академических исследований. - 2023. - T. 3. - №. 4 Part 2. - C. 21-25.

INTERNATIONAL BULLETIN OF APPLIED SCIENCE

- 2.Otepov P. GEOTECHNICAL REQUIREMENTS AND ADVANCED RESEARCH IN THE FIELD OF CONSTRUCTION IN THE CONSTRUCTION OF MULTI-STOREY BUILDINGS IN THE REPUBLIC OF UZBEKISTAN //Евразийский журнал академических исследований. – 2023. – Т. 3. – №. 6 Part 3. - C. 189-195.
- 3. Patualieva Qurbangul Begalievna, & Sabirova Ziynura Allamuratovna. (2023). Studies on the Analysis of Land Resources Maps in Geographic Information Systems. American Journal of Engineering, Mechanics and Architecture (2993-2637), 1(9), 38-41. Retrieved from http://grnjournal.us/index.php/AJEMA/article/view/1400
- 4. Patualieva Qurbangul Begalievna, & Joldasbaeva Juldiz Saparbaevna. (2023). STAGES OF USING GEODETIC METHODS IN OPEN MINING CONDITIONS. British Journal of Global Ecology Development, 13. 63-70. Retrieved and Sustainable from https://www.journalzone.org/index.php/bjgesd/article/view/235
- 5. Patualieva, Q. (2023). METHODS OF DETERMINING THE COORDINATE DIMENSIONS OF AN OBJECT ON MAPS, CARTOGRAPHY AND GEOGRAPHIC LOCATIONS. Евразийский журнал академических исследований, 3(2 Part 3), 110-115. извлечено от https://www.inacademy.uz/index.php/ejar/article/view/10414
- 6.Jumabayeva G., Allanazarov B., Joldasbayeva A. STAGES OF OPEN PIT MINING. MINING METHODS AND THEIR PROCESSES //Science and innovation. – 2023. – T. 2. – №. A1. – C. 236-240.
- 7.Karamatdin D., Baxitgul D. A. K. Changes in the regime and use of fresh groundwater in the Southern Aral Sea region //Solid State Technology. – 2020. – T. 63. – №. 6. – C. 15884-15887.
- 8.Yeshmuratova A. et al. ENSURING COMPUTER DATA AND MANAGEMENT SYSTEM SECURITY //International Bulletin of Applied Science and Technology. - 2023. - T. 3. - №. 4. -C. 282-287.
- 9.Yeshmuratova A. TECHNOLOGICAL METHODS OF ENSURING INFORMATION SECURITY IN TECHNICAL SYSTEMS //Евразийский журнал академических исследований. - 2023. - Т. 3. - Nº. 4. - C. 188-192.
- 10.Yeshmuratova A. MINE BLASTING PROCESSES OPTIMIZATION STAGES OF DIGITAL TECHNOLOGY OF DETONATORS //Scienceweb academic papers collection. – 2023.
- 11.Jumabayeva G. CONTROL OF UNDERGROUND WATER IN THE MINE, DETECTION AND PREVENTION OF RISKS //Академические исследования в современной науке. - 2023. - Т. 2. – Nº. 5. – C. 159-166.
- 12.Jumabayeva G. PLANNING AND MINE DESIGN IN OPEN-PIT MINING PROCESSES AT MINING ENTERPRISES //Евразийский журнал академических исследований. – 2023. – Т. 3. - Nº. 3 Part 2. - C. 135-143.
- 13.Djaksimuratov K. GROUNDWATER CONTROL IN MINES //Scienceweb academic papers collection. - 2023.
- 14.Abdiramanova Z. STUDIES ON THE CHEMICAL COMPOSITION AND PROPERTIES OF PORTLAND CEMENT //Евразийский журнал академических исследований. – 2023. – Т. 3. - Nº. 3 Part 2. - C. 13-21.

