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USE GEOGRAPHIC INFORMATION SYSTEM FOR SUPERVISION AND DEVELOPMENT OF WEB MAP BASISABSTRACT

The use of geographic information systems to track and develop a web map base has become increasingly popular in recent years. These systems provide a variety of functions for creating, analyzing, and sharing geospatial data, and are used for a variety of purposes including disaster response, climate resilience, and sustainable development steady. This article provides a brief overview of the current situation regarding the use of geographic information systems for web mapping in Uzbekistan, as well as some of the popular software options and factors that may be used key players in this field.

Key words: Geo-information systems, Web-maps, Uzbekistan, ArcGIS, QGIS, Google Earth, Mapbox, OpenLayers, Open Geospatial Consortium, UN-GGIM, Humanitarian OpenStreetMap Team, World Bank GFDRR, Global Forest Watch.

INTRODUCTION

Geographic information systems have become an important tool for monitoring and developing the web map base with the increase in the amount of geospatial data, the use of geographic information systems to manage, analyze and visualize this data becomes necessary, In this article, we explore the use of geographic information systems to track and develop a web map base, and discuss their potential benefits and limitations. Uzbekistan has made significant progress in the development and implementation of geospatial information systems in recent years. The government has recognized the importance of geospatial data for effective decision making and has invested in the development and modernization of geospatial infrastructure. In 2018, the State Commission of Land Resources, Geodesy, Cartography and Cadastre of Uzbekistan developed a new geospatial data infrastructure, including the creation of a national geographic portal and the development of a new geospatial data infrastructure national geospatial data standard declaration.

This infrastructure is intended to provide open access to geospatial data and services to government agencies and the public. In addition, there is growing interest in the development of web mapping applications and services in Uzbekistan. For example, the Information and Communications Technology Development Authority of Uzbekistan has developed a web-based map portal that allows access to a wide variety of geospatial data, including topographic maps, satellite imagery, and geospatial data. and administrative boundaries. However, despite these efforts, there are still challenges and limitations in using geographic information systems for monitoring and developing a web map base in Uzbekistan. These include the need for awareness and capacity building, the need for standardized data and metadata, and the need to improve data quality and accuracy. Overall, although the use of geographic information systems for monitoring and developing web map databases in Uzbekistan continues to grow, the importance of geospatial data for decision making Effective determinations are increasingly recognized and efforts are underway to develop and modernize the country's geospatial infrastructure.

METHODS

To explore the use of geographic information systems for monitoring and developing a web map base, we conducted a literature review of relevant publications, including articles, conference proceedings, and other relevant publications. recommendations and reports. We also analyze case studies and examples of the use of geographic information systems for web mapping and consult with experts in the field. There are several popular software options for using geographic information systems to track and develop a web map base. Some of the most used software include:

1. ArcGIS:ArcGIS is a geographic information system (GIS) software suite developed by Esri. It is widely used for creating, analyzing, and sharing geospatial data, including the development of web-maps. ArcGIS provides a range of functionalities, including data management, data analysis, and visualization

2. QGIS:QGIS is a free and open-source cross-platform desktop GIS software application that supports viewing, editing, and analysis of geospatial data. It can be used for creating customized web-maps and web-GIS applications.

3. Google Earth:Google Earth is a web-based mapping application that provides access to satellite imagery, aerial photography, and other geographic data. It is widely used for creating interactive web-maps and visualizations.

4. Mapbox:Mapbox is an open-source platform for creating custom maps and web-maps. It provides a range of APIs and tools for developers to create, manage, and publish maps and geospatial data.

5. OpenLayers:OpenLayers is an open-source JavaScript library for creating web-maps and web-GIS applications. It provides a range of functionalities, including support for multiple data sources, interactivity, and animation.These are just a few examples of the popular software options for the use of geo-information systems for monitoring and development of the basis of web-maps. The choice of software will depend on the specific needs and requirements of the project.

The main point is that many individuals and organizations are researching the topic of using geographic information systems to track and develop a web map base. Some of the key players and initiatives in this area include:

- Open Geospatial Association:

The Open Geospatial Consortium (OGC) is an international organization that develops open standards for geospatial data and services. They are engaged in the development of web mapping applications and services, and work to ensure interoperability between different software and systems. - United Nations Global Geospatial Information Management Authority (UN-GGIM):

UN-GGIM is a United Nations initiative to promote the use of geospatial information for sustainable development. They work to develop standards and best practices for the use of geospatial data and support the development of a national geospatial data infrastructure.

-The Humanitarian OpenStreetMap Team: The Humanitarian OpenStreetMap Team (HOT) is a non-profit organization that uses open-source mapping tools to support disaster response and development projects around the world. They work to create accurate and up-to-date maps in areas that have little or no existing map data

.-The World Bank Global Facility for Disaster Reduction and Recovery: The World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) supports disaster risk management and climate resilience in developing countries. They use geospatial data and tools to support risk mapping and disaster preparedness planning.

-The Global Forest Watch: The Global Forest Watch is an initiative that uses satellite imagery and other geospatial data to monitor and track deforestation around the world. They provide interactive maps and tools for visualizing and analyzing forest cover change.-These are just a few examples of the many individuals and organizations working on the topic of the use of geo-information systems for monitoring and development of the basis of web-maps. The field is constantly evolving, and there are many exciting developments and initiatives underway

- The Open Geospatial Consortium (OGC) is a global organization that creates open standards for geospatial information and services. They endeavor to guarantee compatibility across various software and systems and are active in the creation of online mapping apps and services.-The Global Geospatial Information Management of the United Nations (UN-GGIM): A UN program called UN-GGIM seeks to encourage the use of geospatial data for sustainable development. They contribute to the creation of national geospatial data infrastructures and seek to establish standards and best practices for the use of geospatial data

.-The Humanitarian OpenStreetMap Team (HOT): The HOT is a non-profit group that employs open-source mapping technologies to promote development and disaster relief initiatives all around the world. They strive to produce precise and current maps for the places

-The United Nations Global Geospatial Information Management (UN-GGIM): UN-GGIM is a UN initiative that aims to promote the use of geospatial information for sustainable development. They work to develop standards and best practices for the use of geospatial data and support the development of national geospatial data infrastructures.

-The Humanitarian OpenStreetMap Team: The Humanitarian OpenStreetMap Team (HOT) is a non-profit organization that uses open-source mapping tools to support disaster response and development projects around the world. They work to create accurate and up-to-date maps in areas that have little or no existing map data.-The World Bank Global Facility for Disaster Reduction and Recovery: The The Global Facility for catastrophe Reduction and Recovery (GFDRR) of the World Bank promotes climate resilience and catastrophe risk reduction in poor nations. To assist risk mapping and catastrophe preparedness planning, they leverage geospatial data and technologies.

- The Global Forest Watch is an initiative that uses satellite imagery and other geospatial data to identify and monitor deforestation around the world. They provide tools and interactive maps for tracking and analyzing changes in forest cover.These are only a few of the numerous people and organizations researching and developing the use of geo-information systems for the construction and monitoring of the foundation of web-maps. There are many new projects and advances taking place, and the sector is continually changing.

DISCUSSION

In general, using geo-information systems to monitor and enhance the foundation of online maps has the potential to completely change how we handle and interpret spatial data. These systems may aid in decision-making, more effective teamwork, and a greater awareness of the world around us by offering a variety of capabilities and enabling a wide range of applications. But it's crucial to be conscious of the

difficulties and restrictions that come with using these systems, as well as to make sure we have the technological know-how, data privacy and security standards, and quality control systems required.

CONCLUSION

In conclusion, the usage of geo-information systems is a strong tool for organizing and analyzing geospatial data. These systems are used to monitor and construct the foundation of online maps. These systems may aid in decision-making, more effective teamwork, and a greater awareness of the world around us by offering a variety of capabilities and enabling a wide range of applications. To make the most of this technology, we must have the technical know-how, data privacy and security standards, and quality control systems in place. It is crucial to be aware of the difficulties and restrictions connected with using these technologies.

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