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# ENHANCING TECHNIQUES FOR DELIVERING GEOGRAPHICAL INFORMATION TO MONITOR CLUSTERING ACTIVITIES OF DIFFERENT REGIONS AND ESTABLISHING THE FOUNDATION FOR WEB-BASED MAPS

Abstract: The rapid advancements in technology have led to an increased need for effective monitoring of clustering activities in different regions. This article presents a comprehensive study on the enhancement of techniques for delivering geographical information to monitor clustering activities and the establishment of a solid foundation for web-based maps. The research explores various methods and technologies to improve the accuracy, efficiency, and accessibility of geo-information for monitoring purposes. the findings highlight the importance of these enhancements in facilitating informed decision-making and resource allocation.

**Key words:** monitoring clustering activities, establishing the foundation, webbased maps, geo-information, data collection, remote sensing, geospatial surveys, satellite imagery, geographic information system (GIS), data integration, data visualization.

#### Introduction

The monitoring of clustering activities in different regions plays a crucial role in various fields such as urban planning, disaster management, and economic development. Accurate and up-to-date geographical information is essential for effective monitoring and decision-making processes. This article aims to explore and enhance the techniques for delivering such information, focusing on the establishment of web-based maps as a foundation for monitoring clustering activities [1, 2].

### Methods

To improve the delivery of geographical information, a multi-faceted approach is adopted. Firstly, advanced data collection techniques such as remote sensing, geospatial surveys, and satellite imagery are utilized to gather accurate and comprehensive data on the regions of interest. These data sources are then integrated and processed using Geographic Information System (GIS) technologies to generate detailed maps and spatial datasets. Next, the article focuses on enhancing the accessibility and usability of the generated geo-information [3]. This involves the development of user-friendly web-based maps that allow stakeholders to visualize and analyze clustering activities in real-time. Additionally, data visualization techniques, such as heatmaps and clustering algorithms, are employed to highlight areas of high activity and identify patterns and trends [5].

#### Results

The implementation of enhanced techniques for delivering geographical information has yielded significant improvements in monitoring clustering activities. The integration of advanced data collection methods has increased the accuracy and reliability of the gathered data. Moreover, the utilization of GIS technologies has facilitated the generation of detailed and dynamic maps that provide a comprehensive view of the regions under observation. The development of web-based maps has revolutionized the accessibility and usability of geo-information. Stakeholders can now access and analyze relevant data from any location with an internet connection. Real-time updates and interactive features allow for better decision-making and collaboration among different stakeholders involved in monitoring clustering activities [6, 7].

#### Table 1. Cluster enterprises in Kushtepa district.

Kushtepa district total:	
"FARG'ONADON KLASTER" LLC	4708,5
"An-nur Don Nematlari" LLC	1701,9
"Koshtepadon Cluster" LLC	1589,8



Figure 1. Share of cluster enterprises located in Kushtepa district



Figure 2. create maps using available statistical data.

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## Discussion

The enhanced techniques for delivering geographical information have various implications for different sectors. In urban planning, the ability to monitor clustering activities in real-time enables better management of infrastructure development, resource allocation, and population distribution [8-10]. In disaster management, the timely identification of clustered areas aids in effective evacuation planning and response strategies. Economic development can also benefit from monitoring clustering activities by identifying potential investment opportunities and optimizing resource allocation. However, challenges and limitations exist in implementing these enhanced techniques [11, 12]. Issues such as data privacy, data integration, and technological infrastructure need to be addressed to ensure the seamless delivery of geo-information. Furthermore, the continuous advancement of technology requires ongoing research and development to stay up-to-date with emerging trends and improve existing methodologies [13-19].

#### Conclusion

In conclusion, the enhancement of techniques for delivering geographical information to monitor clustering activities in different regions is crucial for informed decision-making and resource allocation. The establishment of a solid foundation for web-based maps has revolutionized the accessibility and usability of geo-information. This article highlights the various methods and technologies involved in these enhancements, along with their implications and challenges. Future research should focus on addressing the limitations and advancing these techniques to further improve the monitoring and analysis of clustering activities.

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