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VULNERABILITY OF THE INFRASTRUCTURE: RISK MANAGEMENT AND IMPLEMENTATION OF THE INFORMATION SYSTEMS

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Abstract – This article focuses on a comprehensive view of the connection between infrastructure, risks, and Geographic Information System (GIS). In the context of the current era, where critical infrastructure faces various threats and risks, it is essential to explore new methods and technologies that enable better identification, assessment, and management of these challenges. The first part of the article analyses the current state of critical infrastructure and its connection to risks. Understanding how various threats, from natural disasters to cyber-attacks, affect infrastructure elements is crucial for effective protection and resilience. The second part examines the benefits and uses of Geographic Information Systems (GIS) in the context of risk assessment and management of critical infrastructure. GIS provides tools for collecting, analysing, and visualizing spatial data, improving the ability to identify key risk areas and their interconnections. The results of this paper demonstrate how effectively linking these elements can enhance the resilience of critical infrastructure to various hazards. Overall, this article provides an overview of current trends in connecting infrastructure, risks, and information systems, emphasizing the importance of this comprehensive approach to ensuring the security and sustainability of critical infrastructure.

Keywords – Critical infrastructure; informational system; resilience; risk management

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