

# Improving Monitoring and Evaluation of Performance using spatial Data: Case Study GWL

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**Key words:** Spatial planning; Monitoring and Evaluation; KPI; Spatial data

## SUMMARY

Monitoring and evaluation (M&E) plays a crucial role in assessing the effectiveness and sustainability of utility operations. However, the impact of development work has often been inadequately measured and evaluated due to the lack of quick and simple spatial data visualization tools within Geographic Information Systems (GIS) integrated with statistical analysis capabilities. This paper explores the potential of combining M&E and GIS to enhance communication and decision-making processes within the context of Ghana Water Limited (GWL).

M&E is primarily focused on monitoring changes and results over time, while GIS is spatially oriented, determining the geographic distribution of outcomes. By integrating these two perspectives, a powerful tool can be created to visualize and analyze relevant project or operational data, supporting project success evaluation.

The paper traces the historical development of M&E-GIS integration, highlighting early pioneers like Dr. John Snow, who used maps to analyze the cholera outbreak in London in 1854. This seminal work paved the way for the integration of cartographic techniques and thematic mapping in studying geographically dependent phenomena.

The objective of this paper is to address strategies for incorporating GIS into the M&E processes of GWL, enhancing effective communication and decision-making. GIS provides an interface between databases and digital maps, enabling spatial analysis and delivering information efficiently to stakeholders. By tying data to specific locations, GIS empowers organizations to answer the 4W questions (What, Where, When, and by Whom) effectively.

Through a case study of GWL, the paper explores the benefits of integrating GIS into M&E

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processes, such as improved data visualization, spatial analysis capabilities, and enhanced communication of project outcomes to diverse stakeholders. The paper aims to contribute to the development of a comprehensive M&E-GIS framework for effective monitoring, evaluation, and communication within the water sector in Ghana.

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