Identifying the Infrastructural and Digitalization Development of Jemua Village as a Smart Village

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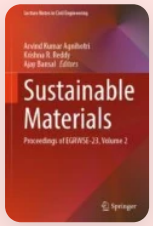

Sustainable Materials

(EGRWSE 2023)

Kotal Amit, Roy Shovan, Dutta Subhajit, Prasad Mondal Rohit & Kumar Ritwick

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Abstract

Smart village is the concept of rural area development. The modern idea of a "Smart Village" serves as a catalyst for advancement in areas such as environment, environment, health, education, and security. These advancements in turn encourage further advancement. The purpose of sustainable development is to achieve human development goals while allowing natural systems to continue providing humanity with essential natural resources and ecosystem services. The main issues in rural areas are widespread poverty, a lack of education, and restricted access to technology. The village of Jemua is situated at the Faridpur block of the Durgapur subdivision in Paschim Bardhaman district of West Bengal, India. Jemua village is proposed as a smart concept to develop its rural area and digitalized connection to the government. In this paper, it was identified the various gaps between Jemua village and the proposed smart village. To develop a happy society, a special emphasis has been put on increased resource efficiency, local self-government, access to basic facilities, and responsible individual and group behavior. After various literature studies, it is proposed to make a smart village by making smart decisions using smart technologies and services. Therefore, in this work, the global positioning system (GPS), remote sensing, and geographical information systems' (GISs) technologies were used. Using GIS software, it was proposed a plan for Jemua as a smart village in which we planned a solar power station, RO plant, solar street light, solid waste management plant, biogas plant, and a communication tower for better network coverage. This study demonstrates that many things are still incompletely

mapped since using traditional methods requires a lot of time and money. However, this study shows that creating a map using geoinformatics approaches needs very little time and less money.

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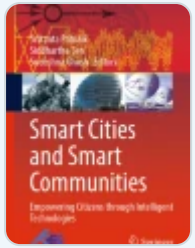

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