

Journal of Cleaner Production

Water marginality in rural and peri-urban communities

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<https://ieeexplore.ieee.org/document/9334116>

Abstract

Internet of things (IoT) is an innovative technology that has gained significant research attention in recent years and is still gaining momentum. This technology permits communication between humans and objects or objects with objects to collect and exchange data as well as provide essential services. However, despite the benefits and services it offers, it is faced with several challenges that are dominated by inefficient energy utilization due to nodes' continuous communication and other issues. This challenge affects all existing low power wide area network (LPWAN) technologies such as SigFox, LoRa, Narrow-band IoT (NB-IoT), and so on. Accordingly, several solutions have been offered to address the challenge but yet to achieve an optimum solution. Therefore, this paper conducted a review of existing approaches to minimize energy utilization and high latency during transmission in the NB-IoT and IoT in general. The essence is to comprehend the different techniques, challenges, and technologies used. The analysis revealed the existence of schemes/algorithms which are routing based, sleep/wake, and others. It also shows that NB-IoT is still faced with the challenge of an increase in latency and high energy consumption. Thus, there a need to address the challenge to boost the smooth operation of the technology.