

A review of Nepal's Spatial Data Infrastructure : Status and Future Prospects

Shristi Paudel (Nepal) and Tina Baidar

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SUMMARY

Spatial Data Infrastructure (SDI) provides a foundation for the collection, integration, and dissemination of geospatial data, supporting effective decision-making and sustainable development. This paper examines Nepal's SDI, focusing on its technical, policy, legal, and organizational aspects, as well as the availability and quality of data and metadata. By assessing Nepal's progress in comparison with international practices, the study identifies both strengths and areas needing improvement. □□The technical analysis explores challenges such as data standardization, interoperability, and accessibility, while also highlighting opportunities to incorporate emerging technologies. Policy and legal frameworks are reviewed to identify gaps in enabling collaboration and ensuring equitable access to geospatial information. Organizational structures are analyzed to evaluate coordination between key stakeholders, including government institutions, private sectors, and academia. □□The paper draws on examples of successful SDI implementations from other countries to provide recommendations tailored to Nepal's context. Key focus areas include fostering partnerships, improving data sharing mechanisms, and building technical and institutional capacity. The study emphasizes that an inclusive and well-coordinated SDI is vital for addressing challenges related to climate resilience, resource management, and equitable development. □□Through this evaluation, the paper aims to contribute to the enhancement of Nepal's SDI, ensuring it supports national priorities while aligning with global trends. A robust SDI will not only strengthen Nepal's geospatial ecosystem but also play a significant role in fostering resilience and sustainable practices in the face of current and future challenges.

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