

## DISCERN CONSTITUENTS INFLUENCING THE INTEROPERABILITY OF SPATIAL DATA IN RELEVANCE TO THE NATIONAL SPATIAL DATA INFRASTRUCTURE (NSDI) OF SRI LANKA

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### Abstract

A spatial data infrastructure (SDI) provides a operational framework for geographic data, metadata users, and associated tools that are interactively connected to use spatial data efficiently and flexibly. A National Spatial Data Infrastructure (NSDI) concerns on improving data sharing and utilization ability, so that decision-makers can easily make use of spatial data for their functions. The Sri Lankan NSDI (SL NSDI) is mainly concerned with integrate and optimize the development and sharing of fundamental geographical and statistical information across all government agencies and institutions. The design, build, implement and maintain a National Spatial Data Infrastructure (NSDI) requires involvement of various disciplines and examination of numerous issues and challenges. The main objective of this study is to identify the challenges of interoperability of spatial data between different government departments and agencies, which were mainly created for a unique organizational purposes. The Key issues and challenges associated with data interoperability between organizations are framed through expert opinions and the same are evaluated through structured questionnaire. . It has found that even though spatial data creators use their own local data standards for spatial data, they need to be improved to the international standards in order to improve the interoperability. The Metadata Availability, poor knowledge, inadequate human resources & training, and organizational level legal policies that hinder the sharing of spatial data among other institutes are other major challenges to overcome. It is recommended to follow ISO TC211 and OGC standards as much as possible to create and convert existing spatial data. Metadata handling policies also should be implemented in order to enhance the spatial data interoperability.

**Keywords:** *Interoperability, Spatial Data, National Spatial Data Infrastructure, Spatial Data Infrastructure*