

Features of the Armenian National Spatial Data Infrastructure Development

Vahagn Muradyan ^{a,*}, Anna Karapetyan ^a, Narek Kroyan ^a

^a Cadastre Committee of the Republic of Armenia, vahagn.muradyan@cadastre.am, anna.karapetyan@cadastre.am, narek.kroyan@cadastre.am

* Corresponding author

Keywords: Spatial Data, NSDI, Geoportal, Data Sharing, Data Management, Standards, Integration.

Abstract:

The formation of a National Spatial Data Infrastructure (NSDI) in the Republic of Armenia aims to establish a unified, interoperable environment for the creation, management, sharing, and effective use of spatial data. This system is designed to support informed decision-making and enhance efficiency across state administration bodies, local self-government entities, the private sector, and society as a whole. In recent years, comprehensive systemic reforms have been implemented, within the framework of which a sectoral development strategy has been developed and adopted. In parallel, national standards aligned with international ISO standards have been introduced, aimed at ensuring the unified management, compatibility, and interoperability of spatial data. These efforts contribute to the establishment of a coherent and efficient spatial data ecosystem, facilitating data exchange and integration across institutions while supporting evidence-based decision-making.

The Spatial Data Infrastructure (SDI) of the Republic of Armenia provides a unified and integrated environment for the creation, storage, management, exchange, and effective use of spatial data across state institutions, local self-government (community) bodies, and the broader public sector. Within the framework of the NSDI, basic and thematic spatial datasets have been identified, the creation, maintenance, and regular updating of which are entrusted to the relevant state authorities in accordance with their respective mandates. This approach ensures the availability of reliable, up-to-date, and standardized data, while clearly defining institutional responsibilities and supporting the effective management and interoperability of spatial information. In 2021, a national geoportal was developed and launched, integrating 12 basic datasets and more than 30 thematic layers. The platform ensures centralized data management, facilitates secure and efficient data exchange between government agencies, and enhances accessibility to spatial information for a wide range of users.

With the adoption of an appropriate strategy and the introduction of ISO-compliant standards, it is planned to launch a new, modernized geoportal in 2026. The upgraded platform will enhance interoperability, improve accessibility, and expand information services by integrating the management of both basic and thematic spatial data layers within a single, unified system.