Application of Web based model on land pooling

Ashok Shrestha (Nepal)

Key words: Cadastre; Digital cadastre; e-Governance; GNSS/GPS; Land readjustment; Spatial planning; Land Pooling

SUMMARY

In Nepal, where agriculture constitutes approximately 31% of the GDP and employs over 70% of the population, traditional farming practices are often impeded by fragmented land ownership and challenging topography. This project investigates the application of a web-based model to facilitate land pooling—a method of consolidating fragmented plots for redistribution in a planned manner. Focusing on Ganeshpur village in the Syangja District, the project aims to enhance agricultural productivity by integrating modern tools and addressing infrastructural challenges.

Using a combination of primary data (collected via DGPS and field surveys) and secondary data (from existing cadastral maps and survey departments), the study conducts detailed spatial analyses and planning. The resulting data is processed and visualized through a web-based GIS platform developed using technologies like QGIS, ArcGIS, Django, and Leaflet. This platform serves as a centralized system for managing and accessing land-related information, providing functionalities such as location and attribute querying, administrative data management, and visualization of various base layers.

The innovative web-based model not only streamlines the land pooling process but also connects farmers and stakeholders, enabling efficient data sharing and decision-making. The study highlights the model's potential to support government and private organizations in planning, updating, and visualizing land plots, ultimately contributing to improved land governance and agricultural practices.