

KOSOVO

Delivering spatial data for Kosovo's economic development strategy

Activities for land administration, cadastral mapping and registration of real property rights are one of the priority components of Kosovo's economic development strategy.

The Kosovo Cadastral Agency (KCA), together with a team from the World Bank, have used unmanned aerial vehicles (UAV) for systematic cadastral registration to support the national cadastral reconstruction program. The work also plays key role in the development of a national spatial data infrastructure (NSDI) for which cadastral information is a core dataset, and helps to highlight transparency.

The UAV programme covered three diverse areas: Rural – cadastral zone Krusha e Madhe in southern Kosovo; Urban – part of cadastral zone Ferizaj; and Road Corridor – part of a new highway that it is under construction. Benefits include the ability to quickly observe surface areas at low flying altitude while still meeting accuracy requirements and standards. For example, orthoimagery with high accuracy was produced in just 24 hours for around 293 hectares of the Ferizaj cadastral zone. By comparison, surveying and processing the same area using GNSS technology could take up to 10 working days in favourable atmospheric conditions.

Following the discovery of an archaeological site near the construction of a new road, the team was also able to respond to a request for assistance by the highway authorities.

As the aerial imagery available provided no evidence of the site, a UAV was mobilised to produce a high resolution 3D map of the area in less than 24 hours. This provided new and accurate information for re-routing the road, additional land acquisition, cultural heritage preservation and other important decision-making issues.

Another advantage of using UAV technology is that it is easily transferred to local experts, enabling the local processing and production of orthophotos. In addition, the technology is flexible and has the potential for multiple uses across diverse sectors and produces richer data for creating Digital Elevation Models (DEM) and 3D models for the NSDI.

In the future, UAVs will be used when high accuracy and rapid data capturing is required to provide significant opportunities for the development of cadastral surveying.

Orthophoto (3 cm image Resolution, 3 cm accuracy)

