

MULTIPURPOSE USE OF ORTHOPHOTO MAPS FORMING BASIS TO DIGITAL CADASTRE DATA AND THE VISION OF THE GENERAL DIRECTORATE OF LAND REGISTRY AND CADASTRE

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The General Directorate of Land Registry and Cadastre (GDLRC) has started 1/5000 scale standard topographic map production by aerial image acquisition and photogrammetry in 1955 in order to complete initial cadastre within a short time in rural areas. Aerial photographs taken and 1/5000 scale standard topographic maps produced since 1955 have made a great contribution to the completion of Turkish Cadastre and have been used by public institutions and organizations at engineering services and applications.

The aerial photographs of approximately 480.000 km² out of 500.000 km² area, whose 1/5000 scale maps are intended to be produced with respect to the development plans, were taken between 1955-2007 and 1/5000 scale standard topographic map production was completed belonging to that area.

The aerial photographs located in the achieve of the General Directorate of Land Registry and Cadastre were taken in an approximate scale of 1/16.000 and with 60% forward & 30% side laps stereoscopically with the purpose of 1/5000 scale standard topographic map production and identification in order to complete initial cadastre rapidly. The aerial photographs covering this 480.000 km² area consist of about 1600 rolls and 150.000 photographs.

The GDLRC is an institution that produces, manages and improves the important parts of Turkish National Geographic Information System's main spatial basis such as geodesy, cadastre, metadata and orthophoto and provides services to another institutions and organizations. In this context, satellite images and aerial photographs forming one of the essential layers of spatial information systems, acquired by remote sensing instruments have a great importance taking the necessity of image base into consideration. The GDLRC, which conducts valuable projects in this area, has actualized the Orthophoto Information System.

The GDLRC follows the latest technological improvements in the world closely and acts as a locomotive in the sector successfully. With the digital aerial camera purchased in 2009, 1/5000 scale digital colored orthophoto map production of an area of approximately 310.000 km² was done throughout the country. These products are to be used for the purposes of decision-support, quality-integrity control and establishing legal basis within the context of renewal and update works.

In this study, the use areas of orthophoto maps produced and the vision of GDLRC related to the production/use of the orthophoto are discussed.

Keywords Aerial Photograph, Orthophoto, Photogrammetry, Decision-Support, Quality-Integrity Control, Geographic Information System