



Presented at the FIG Working Week 2016,  
May 2-6, 2016 in Christchurch, New Zealand

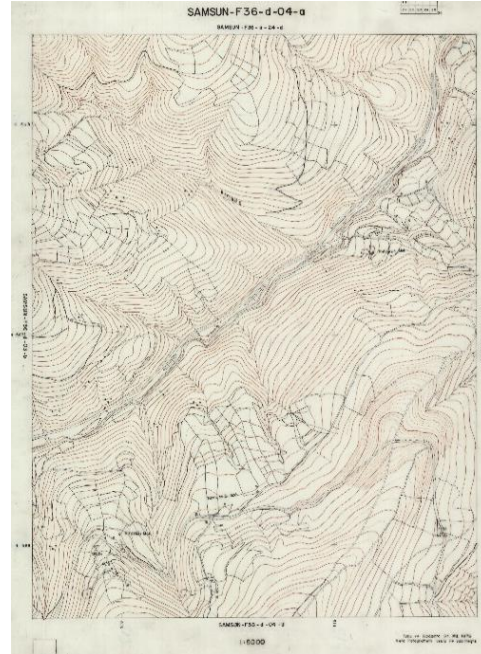
# MULTIPURPOSE USE OF ORTHOPHOTO MAPS FORMING BASIS OF DIGITAL CADASTRE DATA AND THE VISION OF THE GDLRC



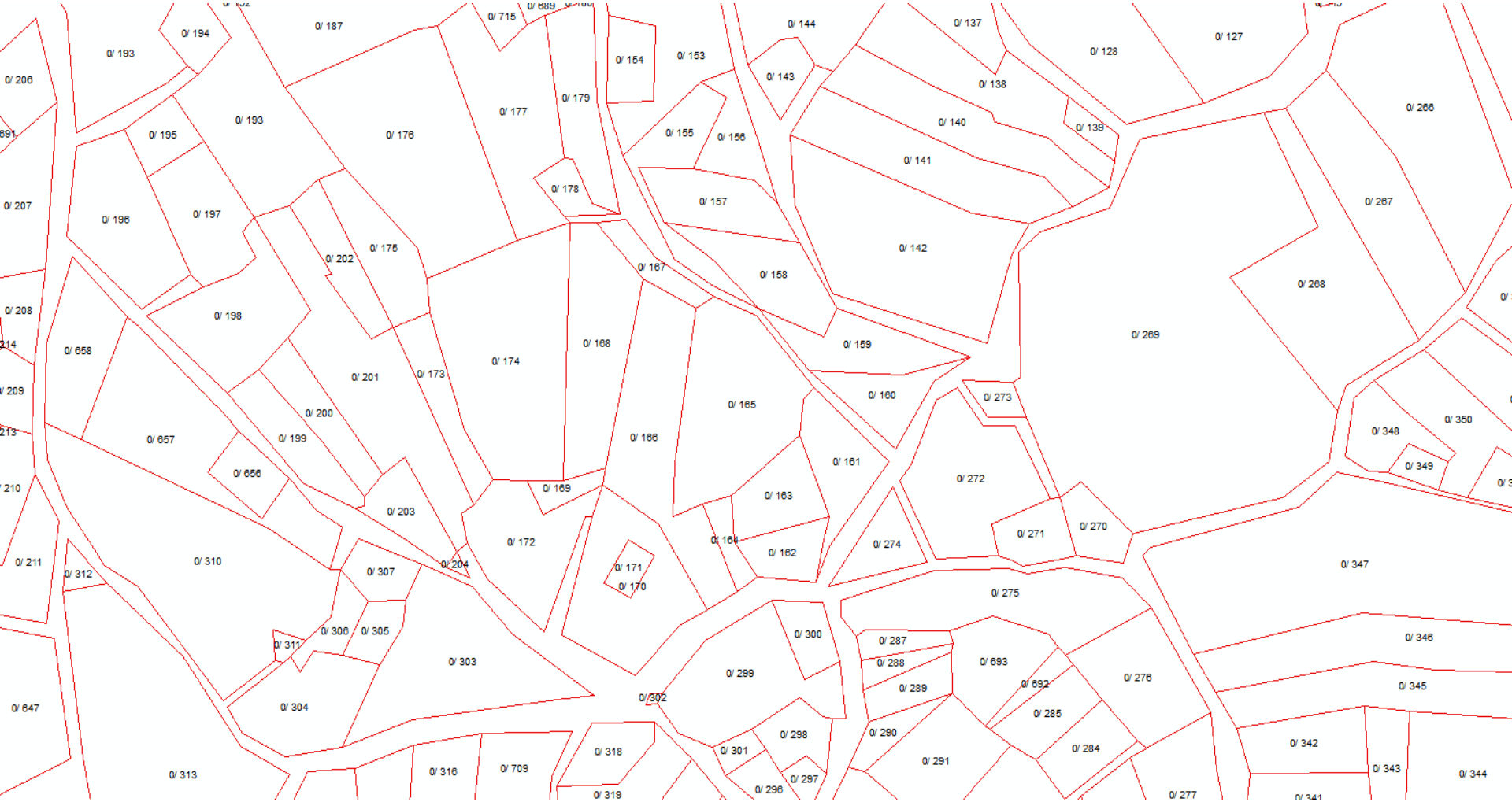
## Base Map Production

In order to complete rural cadastre, 1/5000 scaled base map production has been carried out for 480.000 km<sup>2</sup> area after 1955 by photogrammetric method ...

Digital Orthophoto production has been started after 2007 for kadastral renovation and update works for the purposes of decision-support, quality control and establishing legal basis



# Orthophoto Map – Usage at Cadastre





# Orthophoto Map – Usage at Cadastre





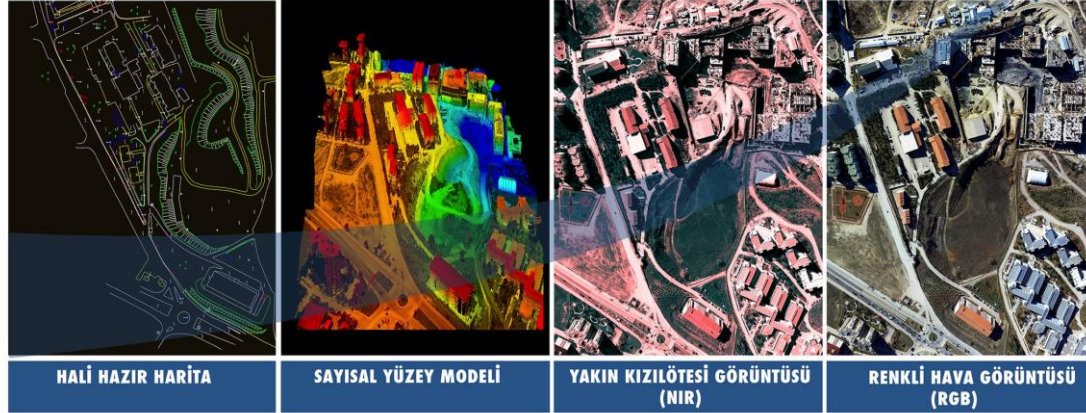
**ORTOFOTO**  
BİLGİ SİSTEMİ

**ORTHOPHOTO INFORMATION SYSTEM**

# Orthophoto Map Production Process



**ORTOFOTO**  
BİLGİ SİSTEMİ



## Aerial Image Acquisition

Aerial photography services for aerial image acquisition are provided by 2 airplanes equipt with digital aerial camera in GDLRC

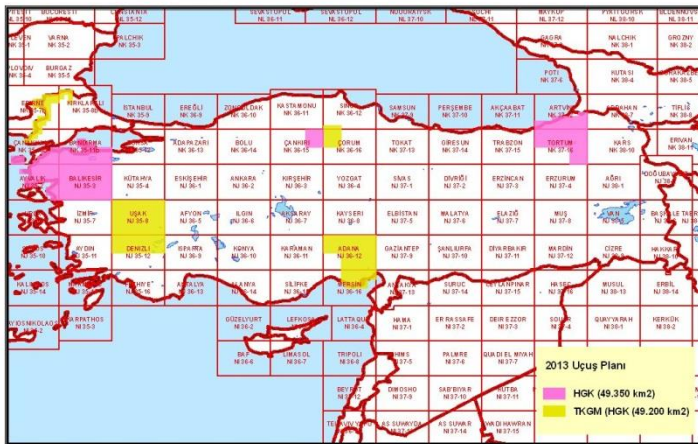




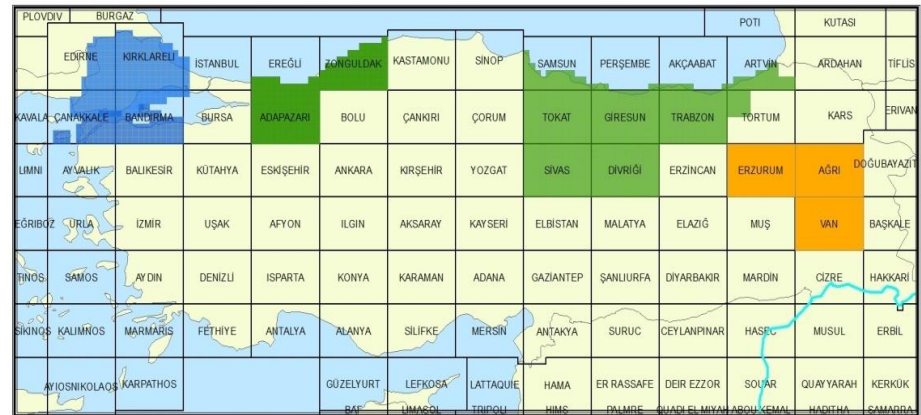
## Orthophoto Map Production - Planning

- Considering requests made by the Department of Cadastre,
- Orthophoto map production areas are determined annually within the context of Joint Map Production Protocol signed with the General Command of Mapping since 2010.

2013 YILI HGK İLE TKGM TARAFINDAN ORTAK ÜRETİLECEK BÖLGELER İNDEKSİ



2015 YILI HGK-TKGM HAVA FOTOĞRAFI ÇEKİM DURUMU

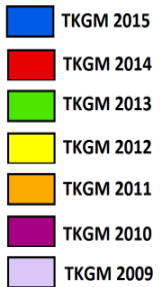
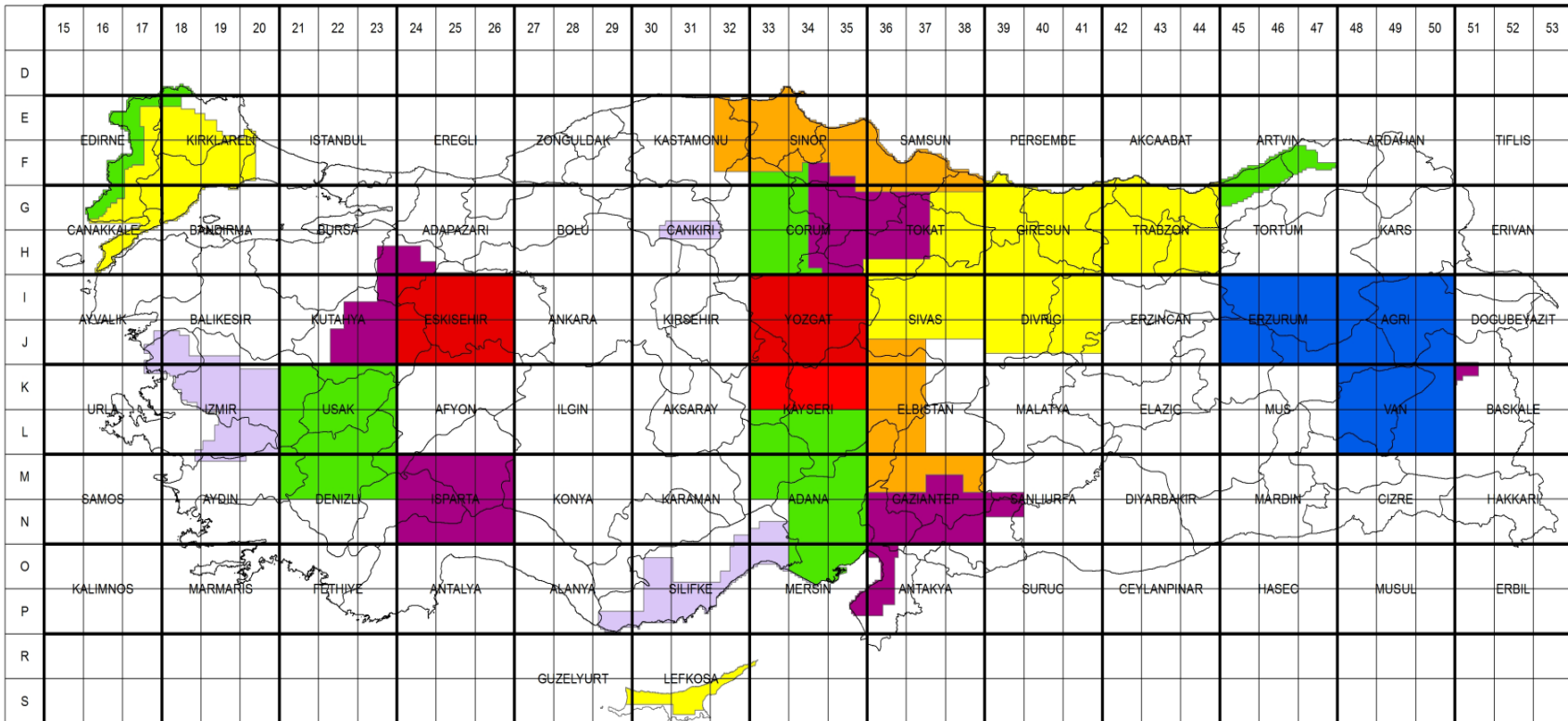


HGK -1.inci Öncelik

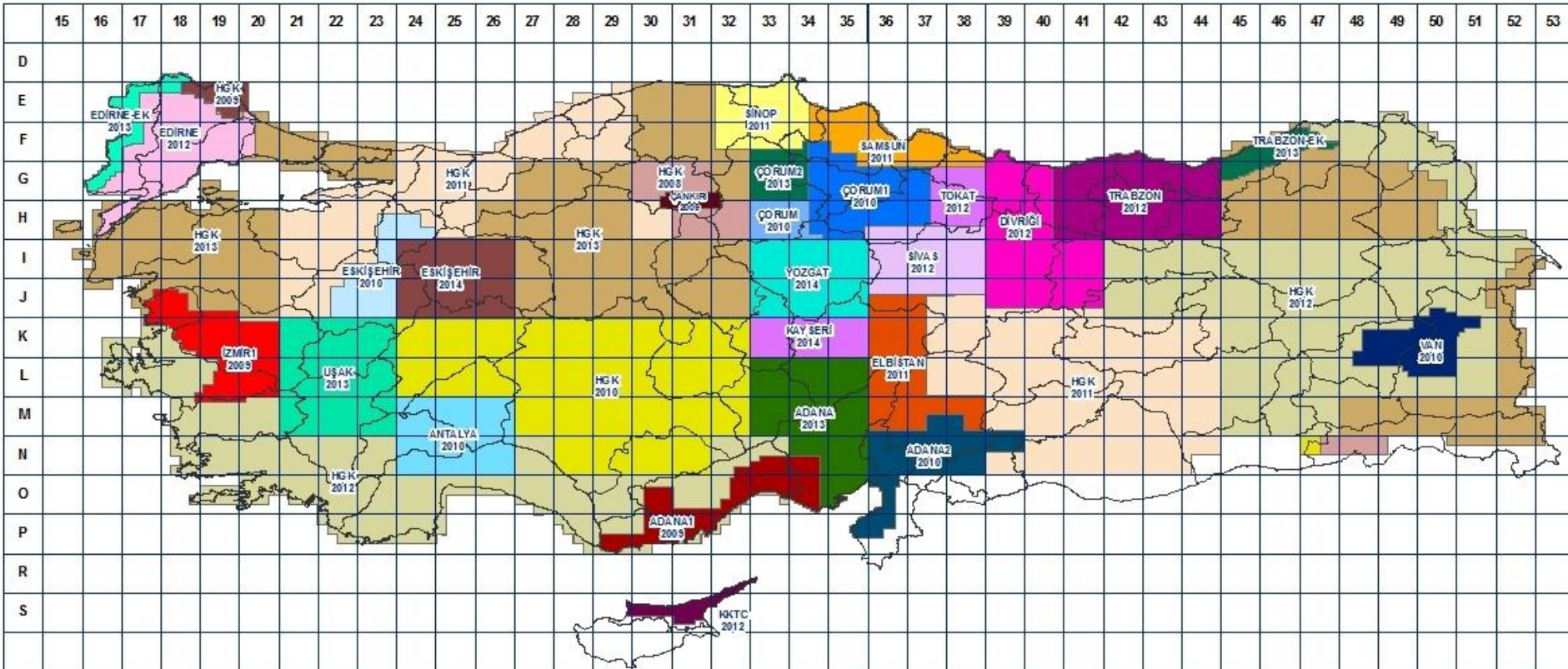
HGK -2.inci Öncelik

TKGM

# Orthophoto Map Production Situation - GDLRC

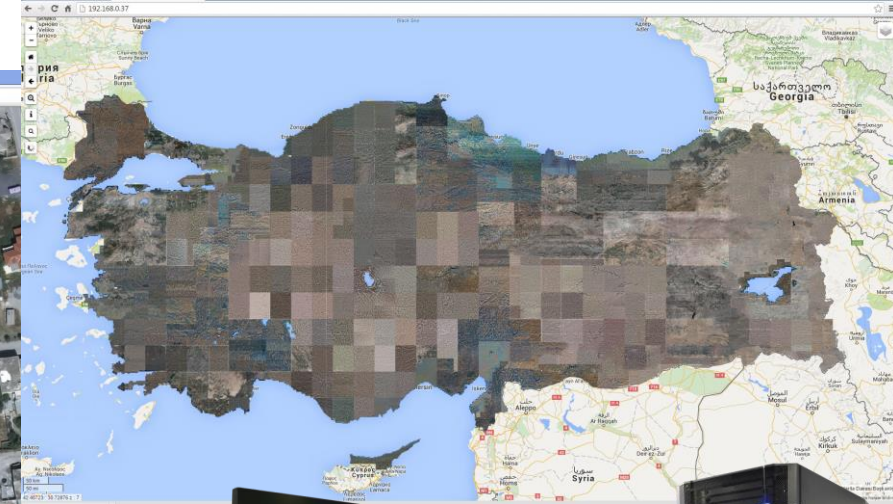


# Orthophoto Map Production Situation – General 15-30-50 cm GSD



# Orthophoto Maps - Web Services (WMS)

<http://harita.tkgm.gov.tr>



Ortho image – Softcopy Delivery



1.75 USD / Km<sup>2</sup>

# WMS - Images taken from Airplane and Satellite

http://212.156.70.86/ortofoto/ - Microsoft Internet Explorer provided by Tapu ve Kadastro Genel Müdürlüğü

http://212.156.70.86/ortofoto/

Dosya Düzen Görünüm Sık Kullanılanlar Araçlar Yardım

Sık Kullanılanlar Önerilen Siteler Web Slice Galerisi

http://212.156.70.86/ortofoto/

TKGM-Bilgi Amaçlıdır. Resmi Amaçlar İçin Kullanılamaz.



**TAPU ve KADASTRO GENEL MÜDÜRLÜĞÜ** Ortofoto Web Servisi Test Yayını

Yazıcı | İL SORGULA

Sorgu Sonuçları

Harita ve Servisler

- ORTOFOTO
  - SINIRLAR
    - SERVISLER
      - TKGM-2
      - TKGM-3
      - TKGM-4
      - TKGM-5
      - TKGM-6
      - TKGM-7
      - TKGM-8
      - TKGM-9
      - TKGM-10
      - TKGM-11
      - TKGM-12
      - TKGM-13
      - BELEDIYE-1
      - ILLER BANKASI-1
      - ILLER BANKASI-2
      - ILLER BANKASI-3
      - ILLER BANKASI-4
      - ILLER BANKASI-5
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      - ILLER BANKASI-7
      - ILLER BANKASI-8
      - ILLER BANKASI-9
      - ILLER BANKASI-10
      - ILLER BANKASI-11



Bitki

Başlat

Gelen Kutusu - Micr...

A\_KISA

PIRIREIS\_MZA\_150...

Ortofoto [Salt Okun...

http://212.156.70....

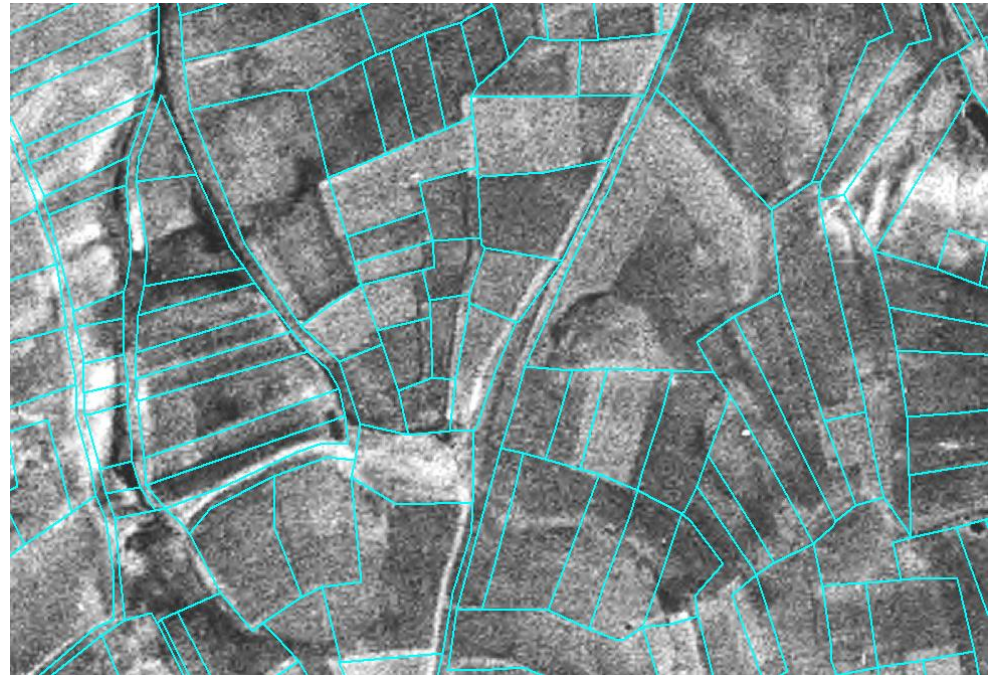
adsız - Paint

Internet

TR

19:08

# ORTHOPHOTO PRODUCTION WITH B/W ARCHIEVE AERIAL PHOTOGRAPHS

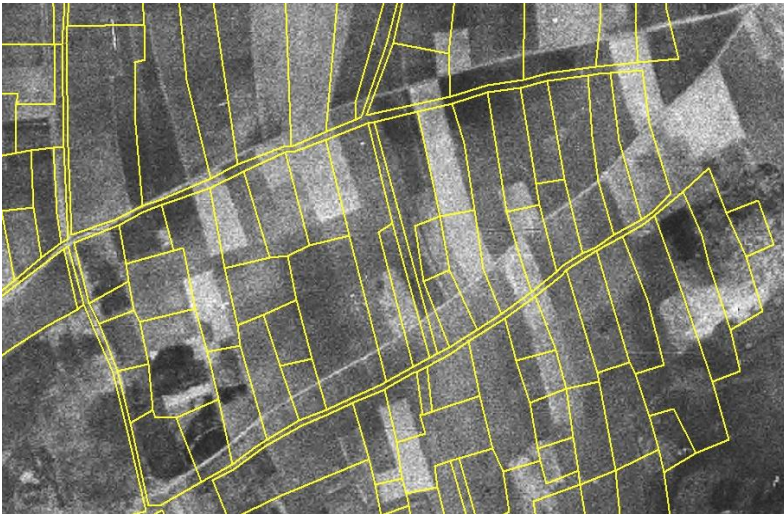


## Existing Situation;

Old-dated aerial photographs within the archive of **GDLRC**, whose orthophotos were not produced, are demanded and used by Cadastre Directorates at **renewal and update** of cadastral maps

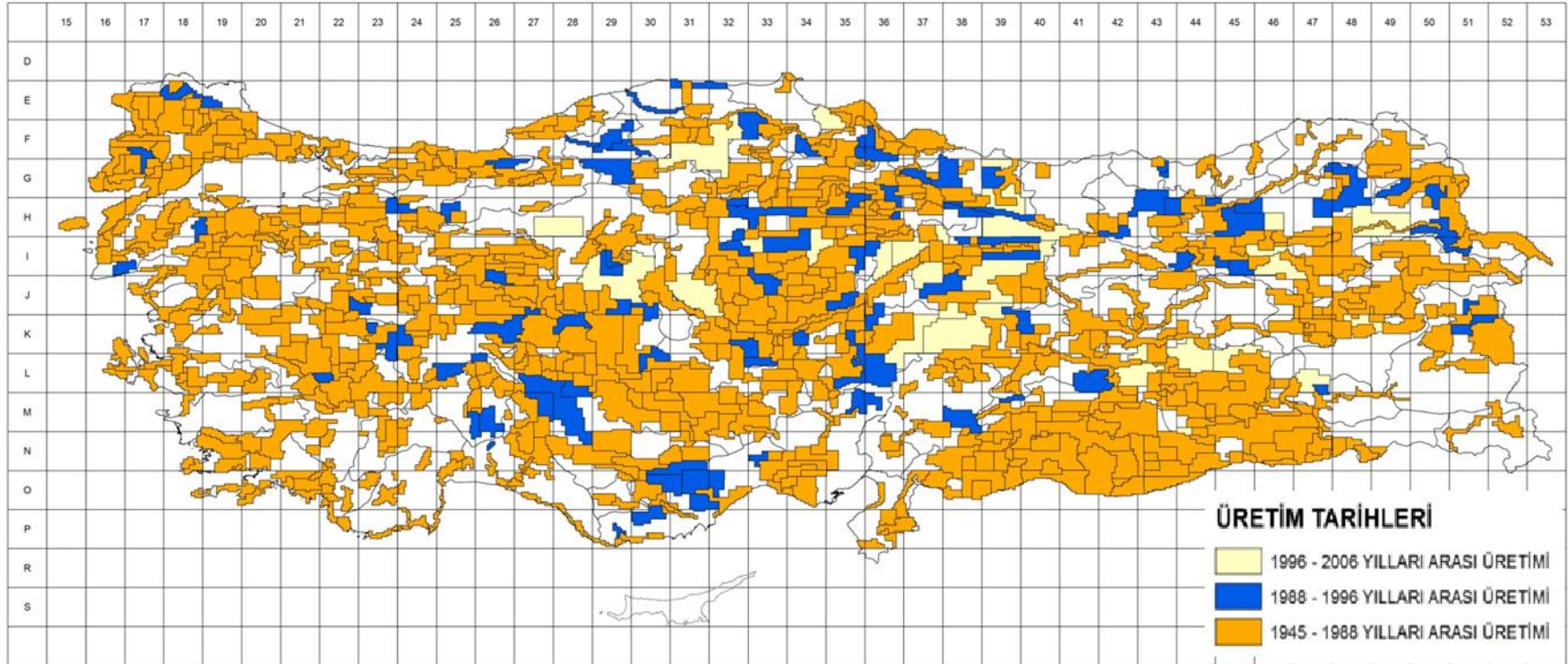
It is quite hard to use these images at cadastral works, which are not in orthophoto format, **having no coordinates & scale** and **including errors arising from field slope**.

## Aerial Photograph+Cadastre; Orthophoto+Cadastre;



## Current

Production of **Archive Orthophotos** by scanning 1/16.000 scaled aerial photos taken for **1/5.000 scale** standard topographic map production over an area about **480.000 km<sup>2</sup>** has been contracted. Project is finished by Jan 2016







Malatya 1970



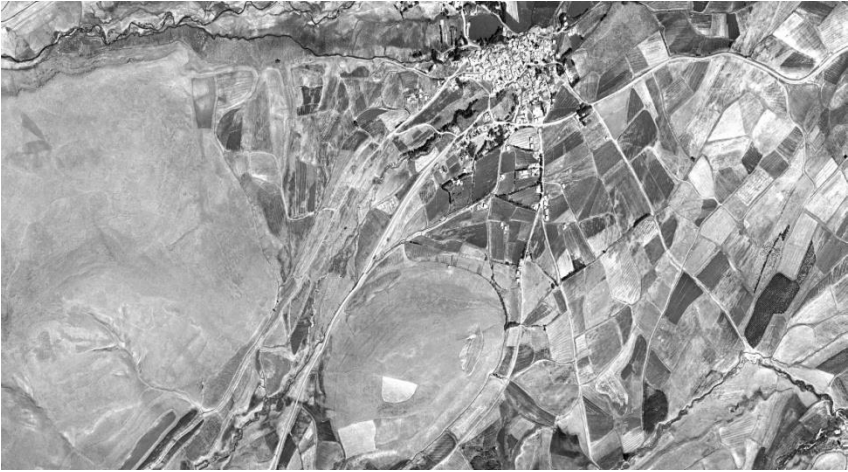
Gaziantep İslahiye 1965



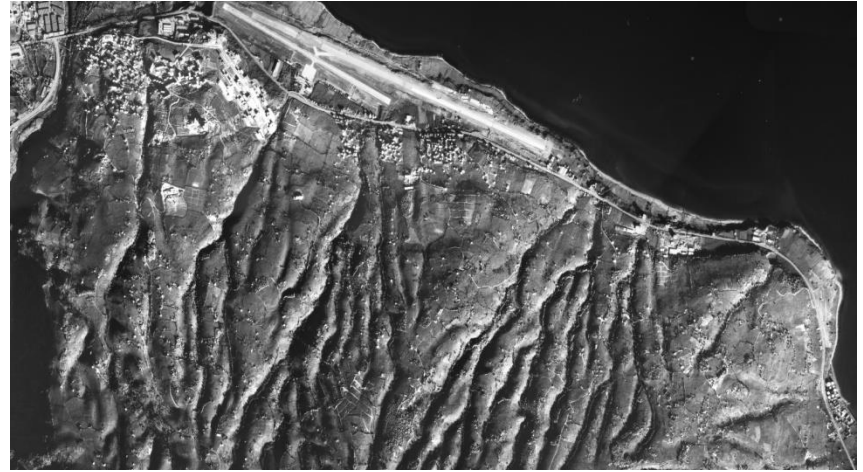
Malatya 2011



Gaziantep İslahiye 2010



Erzurum Palandöken 1973



Trabzon 1975



Erzurum Palandöken 2011



Trabzon 2012

## GEOMATICS DEPARTMENT

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**THANK YOU ...**