



# FOREST CADASTRAL SURVEYS IN TURKEY

**Assoc. Prof. Dr. Mustafa ATASOY**  
**Res. Asst. Hakan ERASLAN**  
**Prof. Dr. Cemal BIYIK**





## INTRODUCTION

In Turkey, the “forestry cadastre” works and “ownership cadastre” works are carried out by different institutions and by using different technical standards.

The forestry cadastre, defined as “demarcation of forests and their registration into the land registry in the name of ‘state’ as a public property”, is carried out in Turkey by forestry cadastral committees formed by five members appointed by General Directorate of Forestry.

These committees functioning in subordination to the General Directorate of Forestry perform their works in accordance with the Forestry Law No. 6831 dated 1956 and the Implementation Regulation dated 11 April 1990.



The reason of forest cadastral works made by different institutes was the great lack of technical problems and personnel inability at that time.

Area, position and owners of the forests should be determined while developing policies for sustainable forest management. Depend on forest management plans approximate data are known. However real and absolute scores will ensure with completing forest cadastre.



When socially and economically considered, the forest villager's income depends mostly on agricultural activities therefore forested land planned to extend agricultural areas in favor of villagers.

Because of the these negative conditions, in 1921 "Coppice Law" brought in to force to meet the need of villagers and give to them live assurance, according to this law 2 hectare of forest land left for their private usage. In contrast to expectations, a great deal forest land devastated after this regulation brought in to force.



By the law no 3116 dated 1937 which was the first time promulgated forest law, determining owners and boundaries of country's forests as soon as possible was aimed.

The law foresaw that forestry organization start bordering forests and finish works within 10 years.

Causes that forest cadastre cannot be finished until now are laws which were legislated constantly and changing at the definition of forests which generates legal basis of these works. In consequence of instability at legal structure, works returned to beginning many times at forest cadastre and sometimes work requirement was ensued 4-5 times at the same area.



After law no 4785 "Nationalizes the Forest Area law" put in to force, all forestry land (foundation's land, private land, legal entity) was considered for public use and nationalized.

Even if since 1945, 4785 so called law governs forestry land, forestry cadastral planning was not carried out in parallel with this rule and some arid or forest areas became mixed. If cadastral works were completed at that time, it hadn't been forest property problems.

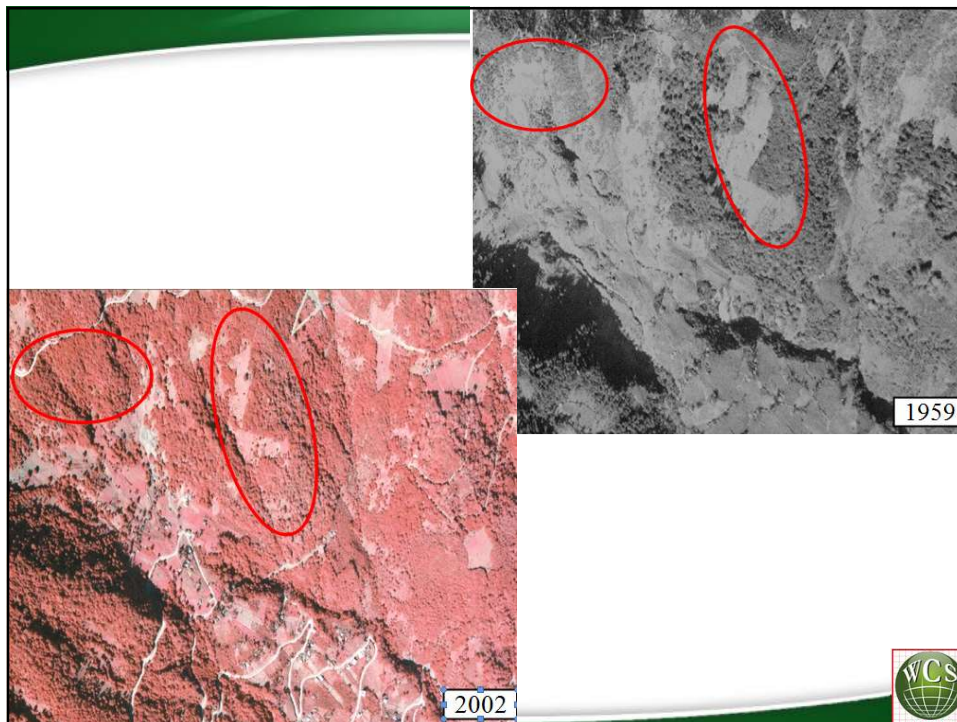

As result when some areas became agricultural areas some others remained heavily forested.



Different problems were encountered when forest cadastral works put in action. By passage of nearly half century, characteristic of forestland was mixed and turned to almost unsolvable.

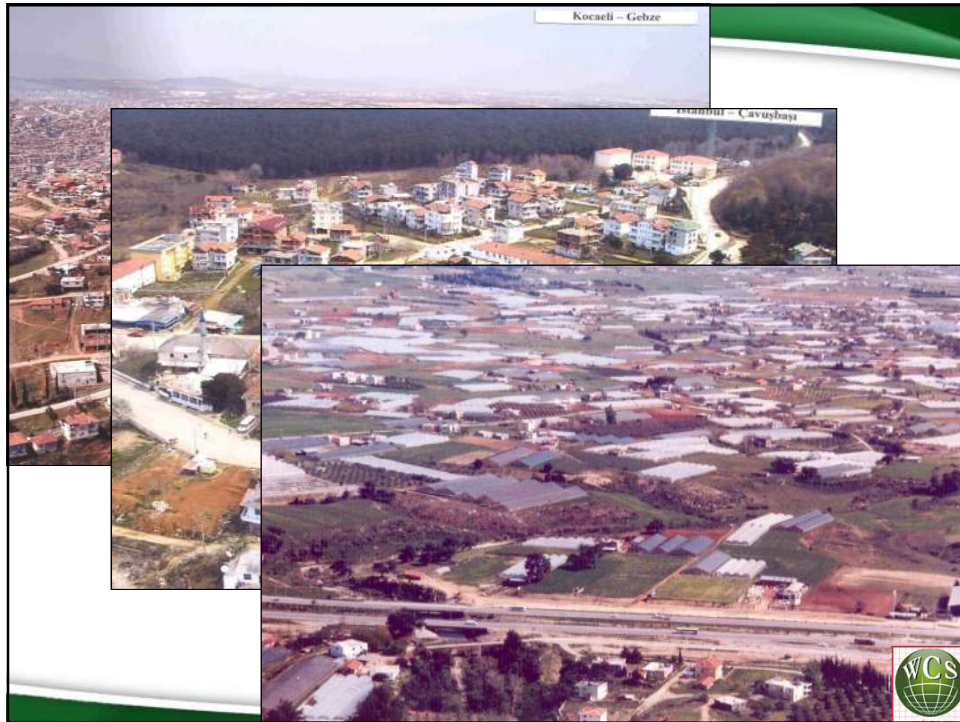
Many civil cases were opened between forestry department and landowners. To make the local forestry department more effective and productive, investigation of ownership and ownership rights relation must be clear and secure.

Land ownership problem became very important according to time and proposed forestry management plans and income. In the context of the forestry management and planning that problem plays very important role.



### Works for Cadastre of 2/B Areas

To ensure the registration, according to their actual use, by eliminating errors of 2/B areas which cannot be registered because they are defective, in accordance with the provisions of additional Article 4 of the law no. 3402 added by the Law No. 5831 which entered into force upon publishing in the Official Gazette No. 27123 dated January 27, 2009, of the areas put beyond boundaries of forests or became definite to be put beyond boundaries of forests by Forest Cadastre Commissions on behalf of the Treasury under the Forest Law No. 6831.

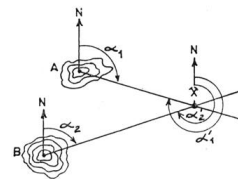


## Measurement Methods

Unfortunately a period over 75 years passed but forest cadastre couldn't be completed although a great number of law amendment made.



In view of continuously changing at the definition of forest property, difficulty of forest cadastre works can be understood easier. According to the law no 3116 effectuated at 1937, compass distance measuring method was implemented at forest cadastre works. By this method, application mean error of forest boundaries was identified as 7.85 m.



Forest cadastral works were continued by compass until 1965. After this date photogrammetric cadastral mapping was added to agenda. Taking aerial photographs was started for forest activities as of this planned period at 1963.

These aerial photographs were used both forest management plans and forest cadastral works. By plotting forest boundaries on these aerial photographs, maps were produced scaled-up 1/10.000 and mean error of location was identified as 28.38 m.



According to Forest Cadastre Regulations and Forest Cadastre Prospectus, forest boundaries measured by ground surveying methods official reports were made at areas 1/5000 scaled standard topographic map and coordinates of boundaries were calculated and charted.

Also forest boundaries neighboring valuable lands were measured by ground surveying methods and plotted. Tachometric method, used real property cadastre works, was also started to use at determining forest boundaries. Ground surveying method was begun to use instead of photogrammetric assessment method at 1982.



Table 1. Forest cadastre and 2B applications planned period and before (DPT, 1999)

Planned Periods	Year	Forest Cadastre		Application	2B Application
		Programmed (Ha)	Completed (Ha)	Completed (Ha)	Completed (Ha)
	Before PP		3.839.936		
I	1963-1967		800.391		
II	1968-1972		1.766.824		
III	1973-1977		1.368.156	1.396.231	62.564
IV	1978-1982		1.463.202	1.334.442	39.996
V	1984		51.992	533.401	11.707
VI	1985-1989	1.577.500	1.401.639	1.117.031	147.721
VII	1990-1994	3.850.000	2.292.260	1.331.279	130.974
VIII	1995-1999	4.960.000	2.448.990	966.210	55.448
Total		10.387.500	15.433.390	6.678.591	448.410

Because of reasons such as adopted personnel policy, not existed enough personnel, not to attached importance by political power and technical equipment deficiency, expected return didn't procure.



Rural cadastre was finished faster than forest cadastre and at forest villages, land registrations were done without completing forest cadastre. Because of that, broad forest areas were registered in the name of individuals. In this context forest organization sued numerously.

At 1987, cadastre law no 3402 that aimed to be worked forest cadastre and real property cadastre in coordination for increasing property problems.

Although it was made progress at forest cadastre by upholding amendment at cadastre law, problems weren't overcome. At many areas forest organization couldn't determine forest boundaries that would be a base for rural cadastre and was faced local objection.



Real property, forest and pasture cadastre works were made by 2 different institutes and it was caused multiple problems such as lack of coordination, delayed cadastre works and in coordination of maps that were produced with different scales.

For making cadastre works faster, ensuring works will be resumed even if local expert not participate and creating the coordination between institutes, the law no 5304 was produced in 2005 by amendment of some clauses in cadastre law no 3402.





### Service Procurement from Private Sector

Within the completion of the Cadastre Project was actualized by the General Directorate of Land Registry and Cadastre, property cadastre works was completed the percentage of 99 by the end of the 2014. Cadastral works have been completed in 51.622 units of totally 52.161 and it's aimed that cadastre works will be completed by the end of the 2015.

While property cadastre works will be completed soon, forest cadastre works have not been registered yet substantially. Forest cadastre maps which have been produced in previous years don't have the standards that necessary for registration. So it hasn't been registered by the directorate of land registry.



On the other hand, with amendments at cadastre law no 3402 at 2005 both property cadastre works and forest cadastre works were recorded significant progress. After these years, technical works which have been made by private sector in cadastral works have been an important factor in the completion of cadastre.

By the end of the 2011, by lawful amendments of 2005, within the law no 5304, forest cadastre has been completed at 9.104 unit and 14.141 parcels by General Directorate of Land Registry and Cadastre.



Of the forest lands for which cadastre works were completed, 65% were registered to the land registers and the registration for the remaining 35% failed. This situation is among the major causes of boundary and possession disputes between the people and the forest administration.

**Table 2.** Cadastre and registration state in forest areas, 2011

Type	Area (hectare)
Lands with Cadastral Plan Made	18,860,115
Lands with Registration	12,280,992
Lands without Registration	6,579,123



Currently, part of forest cadastral works are conducted by forest cadastral commissions under the General Directorate of Forestry, and the other part of forest cadastral works are conducted by a team composed of land surveying teams of General Directorate of Land Registry and Cadastre with the participation of a forest engineer representing the General Directorate of Forestry.



## CONCLUSION

It can't be said that mistakes don't be made again, works are cleared sailing and people are adopted forest cadastre.

Relying on fifth article which was added to law no 3402 by law no 6495 published in the official gazette 02.08.2013 dated and no 28726, a protocol was signed for completing forest cadastre and application between General Directorate of Forestry and General Directorate of Land Registry and Cadastre.

Works are targeted to finish at 2016 if enough fund is allocated and it hasn't a delay in the process of tender because of reasons such as objection, cancellation etc. Within this framework forest cadastre works are aimed in 3 steps, totally 5.527 units and almost 20.000 km<sup>2</sup> area.



Thanks for attentions...

