INVENTORY STUDIES FOR TOURISM INFORMATION SYSTEM OF OBRUK LAKE IN KONYA/TURKEY

T. Caya, S. Inama, F. Iscan, H. Caglab

*aUniversity of Selcuk, Faculty of Engineering and Architecture, Department of Geodesy and Photogrammetry, 42031 Konya, TURKEY- tca@selcuk.edu.tr, sinam@selcuk.edu.tr, fiscan@hotmail.com
*bUniversity of Selcuk, Cumra Vocational School of Higher Education, Department of Geodesy and Photogrammetry, 42031 Konya, TURKEY- heagla@selcuk.edu.tr

KEY WORDS: Cultural Tourism, Information Systems, Inventory, Natural Heritage, Planning

ABSTRACT

Lake of Obruk, which has been formed last century in Konya/TURKEY, is an important natural heritage. With the characteristics of mythological and mystical, the existence of mound of which has oldest settlement places (Gökhöyük, Çatalhöyük) ever known on it’s nearest around, the Binbir Church and Taşkale of which has historical, artistic and cultural centers taking place at the center of easy arrivable and landscape, it is candidate to be foundation tourism center.

It is important for tourism that Lake of Obruk is to be including underground water network because of its geological characteristic, suitable fishing industry and a lot of caves that have been used different duty.

In this study, In order to be charm center of region, Infrastructure studies have been done for touristic foundations. Topographic maps have been produced for Tourism Information System and have been overlayed cadastral maps. For region, Tourism Information System has been designed.

1. INTRODUCTION

Cumra, located 47 km southern to the center of Konya, is like a gate opening to the south of Konya Plain, Toros Mountains. Most settlements, excluding interior prolongation of Toros mountain which starts from 20 km south of Cumra has been located on plains. Carsamba River coming from around Bozkır and Beysehir has an effect on irrigated farming of Cumra. Çatalhöyük which interest Anatolia even World’s Prehistory, Gökhöyük and the lake of Obruk is in this region. Gökhöyük Village is 15 km to Cumra Town ( Figure 1.). The history of settlement in that town dates up to the age of Heolitic.

As the study subject, the reason we select this region is approach way and treatment riches of the people living in this region. They follow developments in close and want to benefit them. In fact another factor which supports this claim is that application of plans done and ownership developing in time has been protected. These are;

- Completed 1912, technic infrastructure studies, protecting Cumra Plain studies from flooding of Carsamba River, Using this River studies for irrigating purpose. The firm to carry out these duties was responsible for building Istanbul-Bagdat railroad (Erdi ve Ark., 2000),
- In the republic history of our country putting district in order studies was first made in Cumra (Türker,2000),
- Beginning from Cumra, deed of real estate belonging to ottoman term was first given by government in our history (Türker,2000),
- In terms of Emvali Real Estate Law, the firt written cadastre law with 5 february 1912, the first cadastre studies was done in Cumra ( Alibey Höyük).
- First togheter lands similar to that of todays was made in term of Johannes Verkaren’s instruction, Holland specialist (Demirel,1999),

The aim of this project is that the Lake of Obruk taking place in Konya-Cumra-Gökhöyük Village is brought to native and foreign tourism.

With the characteristic of mythological and mystical, the existence of mound of which oldest settlement places (Gökhöyük, Çatalhöyük) ever known on it’s nearest around, Binbir Church and Taşkale of Which has historical, artistic and cultural centers taking place at the center of easy arrivable and landscape ( Figure 2.), it is candidate to be foundation tourism center.

It is important for tourism that lake of Obruk is to be including underground water network because of it’s geological characteristic, suitable fishing industry and a lot of caves that have been used different duty.

Figure 1. Map of Çatalhöyük, Binbir Church, Yassitepe, Cumra
Because Obruk Lake is in the center of Catalhoyuk Binbir Church-Taskale which is popular tourist places and in the line of transportation, it must be charm center and that is why we plan making topographic maps of the region. After completing this project another required activities for information system (searching, tourism reconstruct plan, water analyse, three dimensional photogrammetric predesign, investigation e.t.) can be projected.

2. MATERIAL AND METHOD

- Reconnaissance, establishing and measuring of triangulation and traverse point in study area
- Measuring to draw topographic map of Obruk lake and it’s around
- Evaluation of topographical surveying
- Digitating 1/5000 scaled propert maps to be used for Obruk Lake Tourism Plan Information System.
- Harmonizing property maps with topographic maps.
- Design of Tourism Plan Information System.

3. APPLICATION

3.1 Measuring And Calculating Of Triangulation And Traverse Points

To be able to make photogrammetric drawing of land use map of project’s area and edges of Obruk lake in future, 7 number traverse points between number of 9160 and 133 triangulation and it’s around 7 number, that is, total 14 traverse points have been establishing. Dispersion of the points are seen Figure 3. The values of traverse coordinate has been measured by American JavaT GPS device with 4 reciever, double-frequancy. In spirit levelling average error $m_0=\pm9$ mm. It is found that these values are in the instruction of making big-scaled map.

3.2. Measuring Studies of Topographic Map

From traverse points, energy carry lines, water drains canal and other foundation has been measured by Sokhisha Power Set 2000 Electronic Station in study area. In figure 4, the position and dispersion of measured points are seen.

3.3. Evaluation of Topographic Map and Drawing of Section of Land

Transfering details to computer, evaluations have been made in NetCAD programme. In country coordinate system land sections 1/1000 of project area have been made. Indexes of section land are given on Figure 5.
3.4. Digitating Of 1/5000 Scaled Property Maps To be Used for Tourism Plan Information System of Obruk Lake

1/5000 scaled maps (Konya-CumraN29-a-05-a and N29-a-05-b) have been scanned. Raster files have been transformed to NetCAD and Affine Transformation has been made. The report turned out the result of Affine transformation has been pointed out per section of land.

3.5. Hormonyzing Property Maps With Topographic Maps.

Section of land edge errors of digitated maps has been eliminated by Affine Transformation and 1/1000 scaled maps produced has been fit into topographic map. With these processes, that contours, cadastre roads and other details are harmony has been observed (Figure 6). By means of the produced maps, Tourism reconstructure plans can be drawn.

4. CONCLUSIONS

Available cadastre maps are insufficient for Tourism Plan Information System studies. These maps should be updated or combined with topodraphic maps.

In these studies, 5 number 1/1000 scaled topographic maps have been produced (125 ha) and 2 number 1/5000 scaled Topographic map have been digitated. Cadastral maps in NetCAD form have been combined with topographic maps and required database has been establish for Tourism Plan Information System. Three dimension visual of Obruk Lake and it’s around has been given as well (Figure 7).

According to the project data, required other activities for Tourism Plan Information System (searching tourism reconstructure plan, analyzing water, three dimension photogrammetric designed and geological examing e.t.) can be projected.

In order to offer Obruk lake to native and foreign tourism, Obruk Lake Information System is following:

1. General Information
   - Historical account
   - Communication
   - Stay for a short time
   - Climate features
   - Traditions
   - Festivals
   - Albums

2. Geologic Examinations

3. Water Analyses
   - Developing fhising

4. The Underwater Network of Obruk Lake
   - Running waters
   - Lakes

5. Tourism Plans
   - Relaxing foundations (hotel, spor ground,..)
   - Near foundation to touristic places
   - Settlement network of roads.
   - Topographic position
   - Cadastral position
   - Land use plans
   - Developing village settlement districts
   - Three dimension designe by photogrammetric method
   - Economic contribution

6. Offering Tourism Information System to Internet Explorer
ACKNOWLEDGEMENTS

This paper is supported by Selcuk University Coordinating Office of Scientific Research, Project nr. 2004/040, “Surveying Studies In Gökhöyük (Obruk Lake) Tourism Planning Information System”.

REFERENCES

