DESIGN OF TOURIST INFORMATION SYSTEMS OF SUR DISTRICT (DIYARBAKIR/TURKEY) USING GEOGRAPHICAL INFORMATION SYSTEMS

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ABSTRACT
Tourism, the world's largest and fastest-growing economy sectors in the last several decades. Tourism activities become more effective thanks to Geographical Information Systems (GIS) methodology. In this respect, the use of GIS should become more widespread in order to expand the tourism economy. GIS methodology makes tourist areas more visible. Diyarbakır has special position as geographically and so high potential for tourism. Sur District is located in the central part of Southeastern Anatolia. One of the largest provinces in the region. Diyarbakır city center has a history of about 12000 years. Diyarbakır Province and Sur District has special position as geographically and so high potential for tourism. The aim of this research was to assess the tourism information potential of the district of Sur. As a result of this study, local and foreign tourists reach historical, ecological or cultural tourism areas at a short distance and practical transportation.

Keywords: Diyarbakır, GIS, Southeastern Anatolia, Sur District, Tourist Information Systems.

INTRODUCTION

When visiting cities and natural areas as tourists share the same goal: they intend to explore the area and find interesting information (Klante et.al, 2004). In this respect, information system (IS) is of great importance in tourism (Ortega and Rodriguez, 2007). In other words IS is required for those who participate in tourism to travel further in a short time. The information technology (IT) is one of the driving forces in the information society (Gurbaxani et.al., 1990; Malaka and Zipf, 2000).

On the basic technology of GIS and with the help of computer network and database managing methodology (Jing, 2002; Chen, 2007) Tourism activities become more effective thanks to GIS (Jovanović, 2016). Tourism, the world's largest and fastest-growing economy sectors in the last several decades (Brohman, 1996; Atan and Aslanturk, 2012). In recent years, the tourism activities have become widespread at the global level and is considered jointly with the concepts of protection of natural and cultural heritage and rural development (Özüpekçe, 2019). The number of international tourists in the world from 25 million in 1950 to 278 million in 1980, 2000, increased to 674 million in 2015 and to 1 billion 186 million in 2015 (Kızılelma et.al, 2017). In this respect, the use of GIS should become more widespread in order to expand the tourism economy. GIS methodology makes tourist areas more visible (Dondo et.al, 2002).

Sur District has special position as geographically and so high potential for tourism. In the national and international arena with the inability to use this potential effectively. Whereas contributions to the national economy considering that tourism is one of the most important areas to be emphasized. The aim of this study is to investigate the ecological, archeological, historical and cultural values of Sur District as well as the tourism value. Thus, domestic and foreign tourists faster and more practical access to tourist sites in Diyarbakır. In this study we design the information system of Sur District tourist activities. By collecting, storing, managing, calculating and map processing, our study show comprehensively the system processing result by means of figures, words and images. In this way, our study provide strong evidence for the design of Sur tourism. Sur is located in the central part of Southeastern Anatolia, north of Al Jazeera (Mesopotamia). One of the biggest district in the Diyarbakır. The Sur city, which has been subjected to population movements throughout history, is a place where every civilization wants to have due to its fertile land and strategic location. Sur city on the eastern edge Karacadağ plateau and 100 m high above the Tigris valley. (Kejanlı and Dinçer, 2011) (Figure 1).
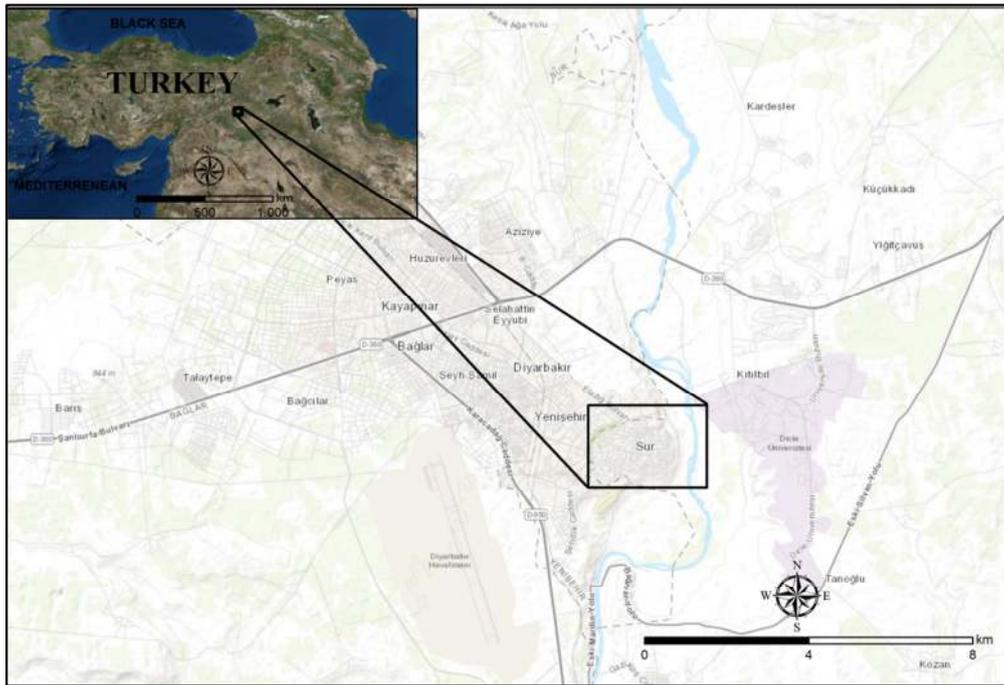
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Figure 1. Location map of study area.

DATA AND METHOD

The aim of the this research was to assess the tourism information potential of the district of Sur. For this purpose collecting tourism data. Data in the study provided Diyarbakır Provincial Directorate of Culture and Tourism. The GIS-based tourist information system is designed for layers created for spatial data belonging to areas of value. Tourist information systems designed for the district of Sur city was created. It has been identified historical and cultural value of Sur district. Later these data were converted to spatial data. Thus, spatial attribute table was created. The final stage was mapping. As a result, tourism information system of Sur city was created using GIS (Figure 2).
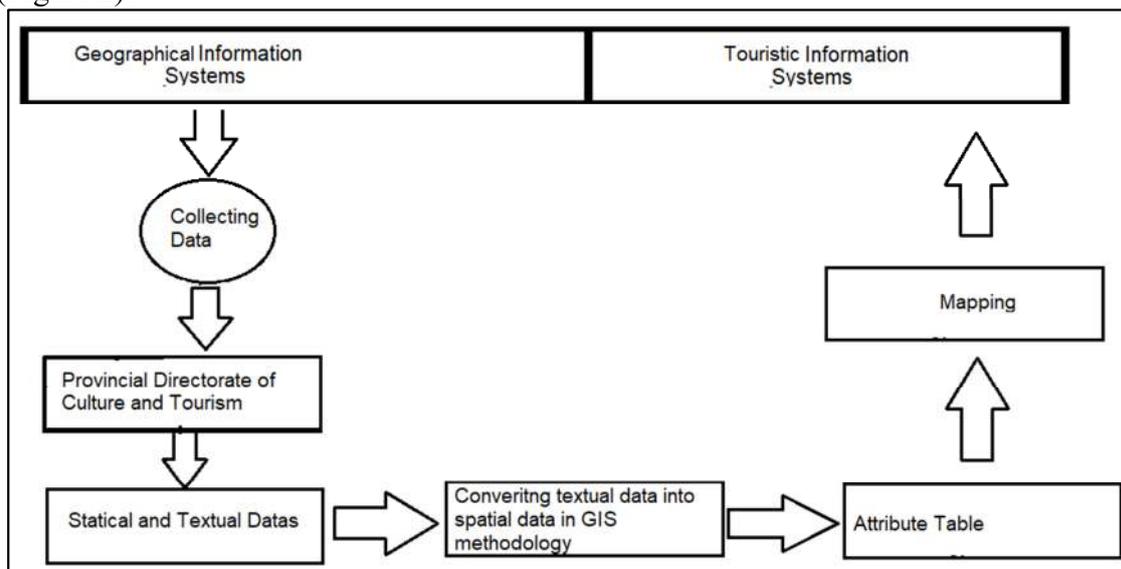

Figure 2. Workflow chart of study.

RESULTS

Diyarbakır city center has a history of about 12000 years. There are many cultural archaeological, ecological and historical sites in Diyarbakır and these areas attract tourists. Potential of tourism in Diyarbakır very high but the security problems and

threats image problem as the weakness of the type of tourism is one of the key ingredients is less (Karakaş and Çenberlitaş, 2014).

Diyarbakır is one of Turkey's largest 10 cities and has a lot of tourist attractions. First of all, the historical and cultural places of Diyarbakır should be mentioned. One of the most noticeable Hasan Pasha Han. It is located on the Gazi Street across the eastern entrance of Ulu Mosque in Diyarbakir. It was built in 1572-1573 by Hasan Pasha, one of the third governors of the ottoman period. This structure was built in accordance with the geographical factors around it. In other words, the basalt used as building material was obtained from the close environment. In all of the historical structures in Diyarbakır, basalt was used as building material (Photo 1).

Photo 1. Seem of Hasan Pasha Han.

Ulu Cami (Big Mosque) is another remarkable tourist attraction in Diyarbakır. The mosque was built in the center of the city by Muslim Arabs (On time Hz. Ömer) who ruled Diyarbakir in 639 (Yıldız, 2008). It is located in the center of the city, in the Mosque Kebir neighborhood. It lies to the west of the main street in the north-south direction near the northern gate of the city. Ulu Cami is main street between the Mountain Gate (Dağkapı) and the Mardin Gate (Mardin Kapı) served as the main artery for transportation to the city center in the Middle Ages. The structure is mostly stone, but it is built with very little brick material. By following history of Ulucami of Diyarbakır many historical events about Diyarbakır can be remembered or come to light (Mermutlu, 2012).

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Photo 2. Seem of Ulucami (Big Mosque). (Source:
https://www.sozcu.com.tr/hayatim/seyahat/anadolunun-en-eski-camisi-diyarbakir-ulu-cami/4/?_szc_galeri=1).

Wall of Diyarbakır is the most important historical value of the city. Until the years of domination by the Ottomans, Diyarbakır frequently fell under the possession of various rulers either as a result of wars through various treaties (Parla, 2005). Wall of Diyarbakır city has 4 doors. These doors include Mardin Door, Dağ Kapı Door, Yeni Kapı Door and Urfa Door (Figure 3). The basalt stones which characterize the walls of Diyarbakır City are only the outer surface of an elaborate brickwork structure which included barracks and storage rooms. The walls were initially built in the 4th century AD and they have been modified several times; the original Roman sections can be identified by the presence of layers of thin bricks (http://romeartlover.tripod.com/Turmag08.html).

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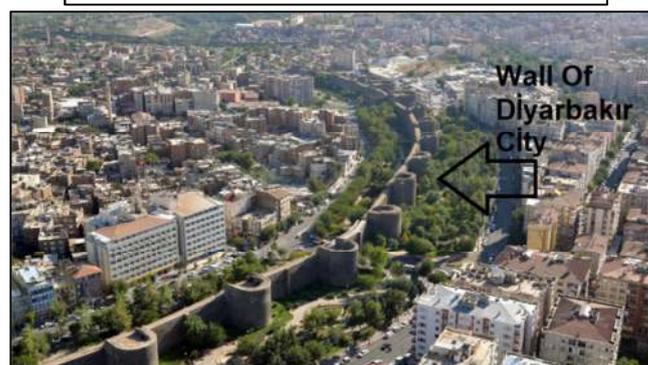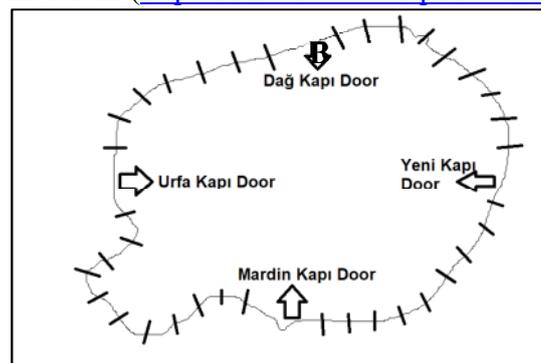
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Figure 3. Wall of Diyarbakır City and Doors (a) and seem of Wall Of Diyarbakır City. Interesting and important tourism areas close to each other in Sur District. For example Hevsel Gardens close to the Tigris River because the Tigris River is the reason of the Hevsel Gardens are here. Another example relation between the Wall of Diyarbakır City and Hasan Pasha Han or Big Mosque. The wall of Sur City is the reason why the oldest buildings were built here (Figure 4).
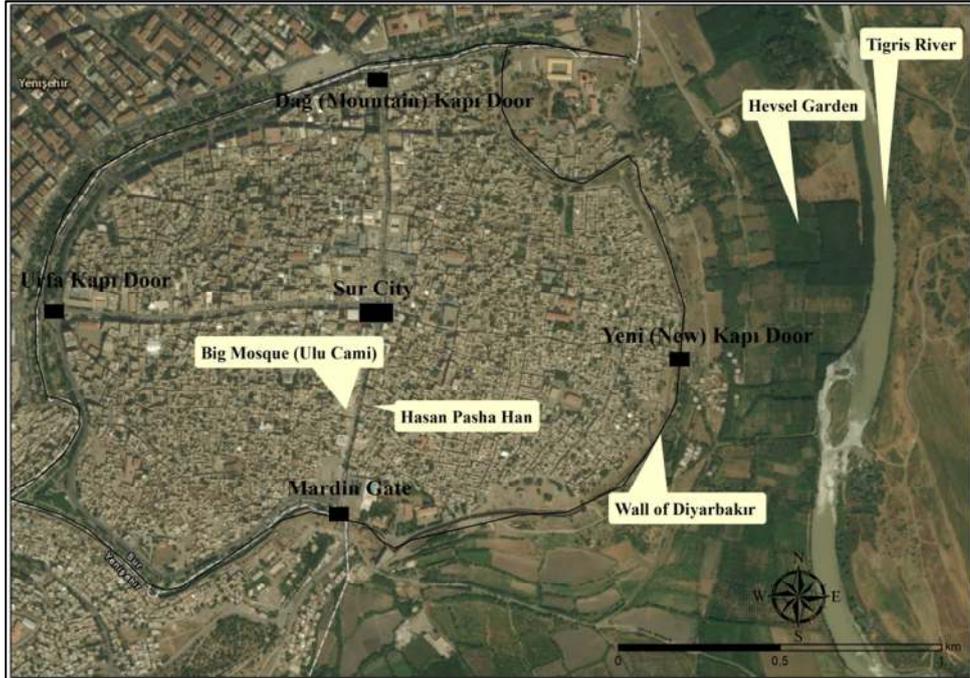

Figure 4. Attactive tourism areas close to each other in Sur District.

Hevsel Garden have memories which become heritages common to several civilizations. The river and valley systems at Diyarbakır are such a heritage, which is now part of the UNESCO List of Natural and Cultural World Heritage (Karadoğan and Kuzucuoğlu, 2017). Located on an escarpment of the Upper Tigris River Basin that is part of the so-called Fertile Crescent (*Mümbit Hilal*), the fortified city of Diyarbakır and the landscape around has been an important area since the Hellenistic period, through the Roman, Sassanid, Byzantine, Islamic and Ottoman times to the today (https://whc.unesco.org/en/list/1488/).

Tourism areas in the study area should be classified as historical, ecological and cultural. Thus, the route of tourists who want to participate in ecology tourism or historical tourism becomes clear (Figure 5).
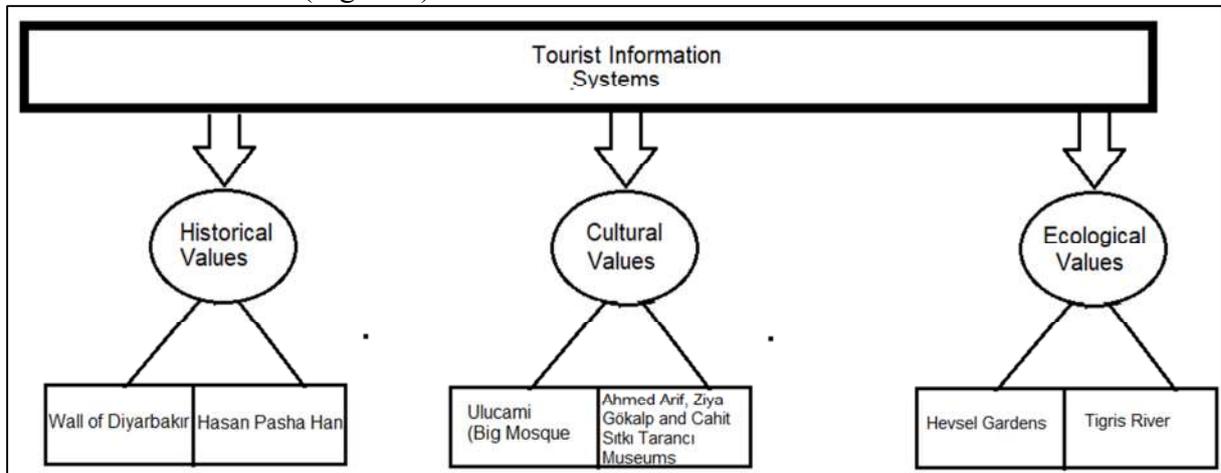

Figure 5. Classification of major tourist areas in Sur District.

The area where Ziya Gökalp, Cahit Sıtkı Tarancı and Ahmed Arif Museums, Zinciriye Madrasah, Sülüklü Han, Hasan Pasha Han and Big Mosque are located should be

declared a cultural route and planning should be done accordingly. When the tourism information system map is examined, it is noteworthy that the tourist areas are very close to each other (Figure 5).
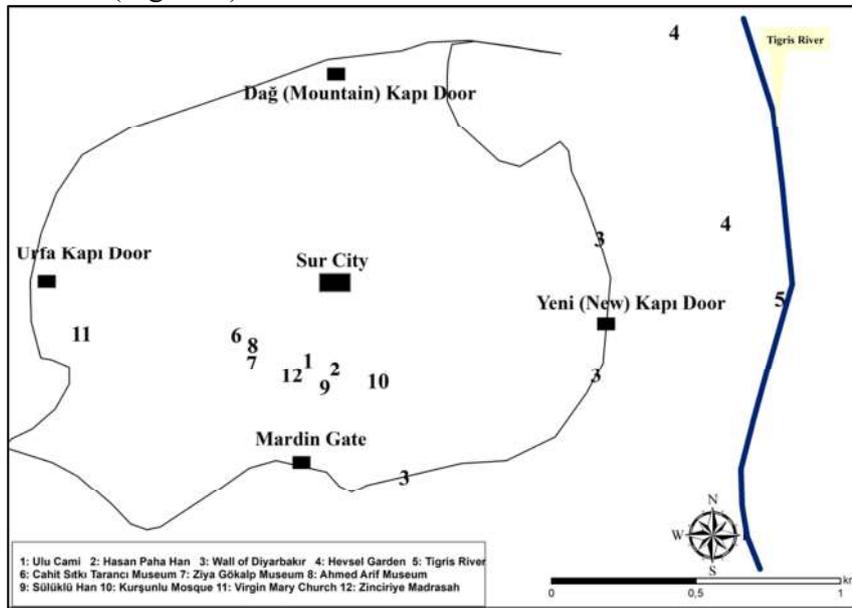

Figure 6. Tourism Information Map of Sur District.

CONCLUSIONS

Aim of this study, local and foreign tourists reach historical, ecological or cultural tourism areas at a short distance and practical transportation. For this purpose firstly, cultural, historical and ecological areas in the study area were determined. Important and attractive touristic areas close to each other. For example Hevsel gardens close to the Tigris river because the Tigris river is the reason for the emergence of Hevsel gardens. Another example relation between the Wall of Diyarbakır City and Hasan Pasha Han or Big Mosque. The wall of Sur City is the reason why the oldest buildings were built here. As a result, the distribution of tourist areas in Sur District helps to visit many places in a short time. With the addition of tourism information system, management of tourist areas in the study area will become more practically. Existing tourism in Sur City regular and more practical presentation of tourism areas will contribute to the development of tourism. However, for the development of Diyarbakır tourism; domestic tourists, especially foreign development of transportation systems in terms of eliminating the transportation problem. In addition, the tourism development activities in question are based on the WEB must be supported with tourist information system. Finally, the threat and terrorism is important for the development of tourism in Sur City.

REFERENCES

Atan, S., & Arslanturk, Y. (2012). Tourism and economic growth nexus: An input output analysis in Turkey. Procedia-Social and Behavioral Sciences, 62, 952-956.

Brohman, J. (1996). New directions in tourism for third world development. Annals of tourism research, 23(1), 48-70.

Chen, R. J. (2007). Geographic information systems (GIS) applications in retail tourism and teaching curriculum. Journal of Retailing and Consumer Services, 14(4), 289-295.

Dondo, C. H., Bhunu, S. T., & Rivett, U. (2002). GIS in Tourism–A Zimbabwean perspective. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 34(6), 197-200.

Gurbaxani, V., Kraemer, K. L., King, J. L., Jarman, S., Dedrick, J., Raman, K. S., & Yap, C. S. (1990). Government as the driving force toward the information society: National computer policy in Singapore. The Information Society, 7(2), 155-185.

Jing, C. H. E. N. (2002). The Research of Fujian Tourist Information System Based on GIS [J]. Economic Geography, 1.

Jovanović, V. (2016). The application of GIS and its components in tourism. Yugoslav Journal of Operations Research, 18(2).

Karakaş, A. G. A., & Çenberlitaş, A. G. İ. (2014) Diyarbakır İlinin Turizm Potansiyelinin Swot Analizi İle Belirlenmesi. 9TH International Conference: New Perspectives In Tourism And Hospitality Book Of Proceedings (p. 352).

Malaka, R., & Zipf, A. (2000). Deep Map: Challenging IT research in the framework of a tourist information system. In Information and communication technologies in tourism 2000 (pp. 15-27). Springer, Vienna.

Mermutlu, B. (2012) Ali Emiri Efendi'nin Mir'atü'l-Fevaid Notlarında Diyarbakır'ın Anıtsal Tarihi Yapıları. Şarkiyat, (8), 88-100.

Karadoğan, S., & Kuzucuoğlu, C. (2017). Diyarbakır Hevsel Bahçeleri ve Dicle Nehri: Arazi Değişimlerinin Jeomorfolojik Kayıtları. Türkiye Jeoloji Bülteni, 60(1), 63-76.

Kejanlı, D. T., & Dincer, I. (2011). Conservation and Planning Problems in Diyarbakır Castle City//Diyarbakır Kale Kenti'nde Koruma ve Planlama Sorunları. Megaron, 6(2), 95.

Klante, P., Krösche, J., & Boll, S. (2004). Accessights–a multimodal location-aware mobile tourist information system. In International Conference on Computers for Handicapped Persons (pp. 287-294). Springer, Berlin, Heidelberg.

Kızılelma, Y., Bengin, E., Acar, Ö., Denizdurduran, M., 2017. Coğrafi Bilgi Sistemleri Kullanılarak Yozgat Turist Bilgi Sisteminin Tasarlanması, II. Uluslararası Bozok Sempozyumu, 4-6 Mayıs, Bildiriler Kitabı, Cilt:3, Sayfa:506-515, ISBN:978-605-609996-9-4, Bozok Üniversitesi, Yozgat.

Parla, C. (2005). Diyarbakir surlari ve kent tarihi. Metu Journal of the Faculty of Architecure, 22(1), 57-84.

Ortega, E., & Rodriguez, B. (2007). Information at tourism destinations. Importance and cross-cultural differences between international and domestic tourists. Journal of Business Research, 60(2), 146-152.

Özüpekçe, S. (2019). Geographical Analysis of Cultural and Eco-tourism Potential in Cittaslow Halfeti (Şanlıurfa-Turkey). International Journal of Humanities and Social Science Invention (IJHSSI), Volume 8 Issue 05 Ser. I, pp: 53-61.

Yıldız, A. (2008) 135/313 nolu şer'iye siciline göre XVIII. asırda Diyarbakır'da bulunan cami ve görevlileri. Harran Üniversitesi İlahiyat Fakültesi Dergisi, 20(20), 283-290.

https://www.sozcu.com.tr/hayatim/seyahat/anadolunun-en-eski-camisi-diyarbakir-ulu-cami/4/?_szc_galeri=1 Last Access: 13.10.2019

http://romeartlover.tripod.com/Turmag08.html Last Access: 16.10.2019

https://whc.unesco.org/en/list/1488/ Last Access: 18.10.2019