

**THE REASONS AND SUGGESTED SOLUTIONS
OF UNDERDEVELOPMENT OF THERMAL
TOURISM IN TURKEY**

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ABSTRACT

THE REASONS AND SUGGESTED SOLUTIONS OF UNDERDEVELOPMENT OF THERMAL TOURISM IN TURKEY

The main aim of this study is to find out the ways to use geothermal resources efficiently in the thermal tourism sector within the planning perspective. This thesis research has been conducted considering the related issues about thermal tourism such as national and global thermal tourism market assessments, the reasons of underdevelopment of thermal tourism in Turkey, and objectives of thermal tourism planning. In the analysis section, five thermal tourism centers licensed by the Ministry of Culture and Tourism are evaluated according to the technical, physical, and economic feasibility measures and the reasons of underdevelopment of thermal tourism are determined in the cases. In conclusion, the study tries to suggest some solutions to improve thermal tourism sector from the planning discipline's perspective.

ÖZET

TÜRKİYE'DE TERMAL TURİZMİN AZGELİŞMİŞLİĞİNİN NEDENLERİ VE ÖNERİ ÇÖZÜMLER

Bu çalışmanın ana amacı planlama perspektifi içerisinde jeotermal kaynakların termal turizm sektöründe etkin kullanım yollarını araştırmaktır. Bu tez çalışması termal turizmi ile ilişkili terimler ve konular, ulusal ve uluslararası termal turizm sektör değerlendirmeleri ve termal turizm planlama yaklaşımları göz önünde bulundurularak oluşturulmuştur. Analiz bölümünde T.C. Kültür ve Turizm Bakanlığında belgeli beş termal turizm merkezi teknik, fiziksel ve ekonomik fizibilite ölçütleriyle değerlendirilmiştir ve termal turizmin yeterince gelişmemesi nedenleri incelenmiştir. Sonuç olarak, bu çalışma termal turizm sektörünün planlama yaklaşımıyla gelişimine yönelik çözüm önerileri sunmaya çalışmaktadır.

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LIST OF ABBREVIATIONS

CAM	: Complementary and Alternative Medicine
EO	: Essential oil
ESPA	: European Spa Organization
EU	: European Union
FITEC	: World Federation of Hydrotherapy and Climatotherapy
ISPA	: International Spa Organization
MTA	: General Directorate of Mineral Research and Exploration
TJD	: Türkiye Jeotermal Derneği (Turkish Geothermal Association)
WTO (UNWHO)	: World Tourism Organization
WTTC	: World Travel and Tourism Council

CHAPTER 1

INTRODUCTION

The understanding of tourism has strayed from its classical definition recently. As people are gradually moving away from mass tourism products mass tourism is declining. The users of touristic services have been in search of various types of activities resulting in the necessity of diversification that service suppliers should handle.

In the meantime, hard living conditions such as long working hours, high amount of stress in daily life, malnutrition, and aging population of the world particularly in developed countries, leads to an increase in the demand for a healthier lifestyle by metropolitan citizens. Due to the spread of a healthy lifestyle throughout the entire population of the world from the youngest to the oldest, the demand is expected to increase. Likewise, more importance is given to the quality of life both in developed and developing countries, including ours. As a result, health and well being rank among the most important growing fields in the tourism market for the coming decades. For that reason thermal tourism will be one of the strongest developing sectors in the tourism market in the next years.

The objective of this study is to determine the reasons of underdevelopment of thermal tourism in Turkey and give suggestions from the planning field's perspective. This is important because Turkey is located on top of a major geothermal belt with its active earthquake zones, various rich ores, and deep fault lines. With these characteristics, numerous hot and mineralized natural springs show a country-wide spread. With around 1500 hot springs, Turkey is one of the seven countries in the world and the first country in Europe in terms of thermal resources potential.

In spite of this fact, when thermal tourism market is concerned, the existing potential is not efficiently used. Although there are quite rich hot springs and thermal tourism potential in Turkey, the hot spring sources are not presently utilized to their optimum level. The uses of the resources are at an underdeveloped or totally undeveloped level. The numbers of facilities which provide high quality service and are well equipped are only a few. Apart from these, few thermal facilities are licensed by the Ministry of Tourism and small-size thermal facilities are providing services with

their poor marketing, technical infrastructure, and equipment capacity. Most of these facilities belong to local administrations and municipalities. In terms of treatment, hygienic conditions, and accommodation facilities many of these services are not in the desired level. In spite of all these inadequacies, since they provide services at reasonable prices and lack of alternatives they are intensively preferred. The recent developments, however limited, most of the demand for these facilities still comes from the domestic market. As most of them have not yet kept pace with European standards, inefficiency of organizational service management, ineffective promotion, and marketing result in low demand from other countries.

While the traditional bathing usage of thermal springs does not change much in Turkey, in many surrounding countries such Hungary, Romania, Czech Republic, Slovakia, and other European countries such as Germany, France, and Italy the utilization of thermal spring water has reached high standards.

Before examining the reasons of underdevelopment of thermal tourism in Turkey an extensive literature review is conducted on thermal tourism. This review revealed several Master's and Doctoral theses and other research on the topic. However, these studies were mostly technical, mainly aimed at determining the quality and quantity of flow of the hot springs, assessing their potential sources for mineral water, management, and design techniques of thermal facilities. In contrast, this thesis attempts to determinate the reasons of underdevelopment of thermal tourism and to provide new knowledge about how geothermal resources should be used efficiently in the thermal tourism market from the planning discipline's perspective. It also provides an overview about thermal tourism in the world and makes assessments about where Turkey stands within the global market.

This thesis examines Kütahya's thermal tourism centers. The thermal tourism centers are evaluated with respect to technical, physical, economical and organizational factors and interviews were made with representatives of the industry and local administrations to determine the underdevelopment of thermal tourism for each case. In conclusion the suggested solutions will be given to improve the thermal tourism sector with the planning approach.

1.1. General Definitions and Terminology about Thermal Tourism

According to the International Federation of Spas (FITEC), waters containing no less than one gram of mineral salt or dissolved carbon dioxide per liter are called *mineral or hydromineral* (WEB_8 2006). If the temperatures of such waters exceed 20 °C, they are referred to as “thermal”. Unlike in western countries, in Turkey the temperature limit is taken as 30 °C.

Hot spring or a hydrothermal spring is defined as “a place where warm or hot groundwater issues from the earth on a regular basis for at least a predictable part of the year, and is significantly above the ambient ground temperature” (WEB_6 2006).

Cure is “a method or course of medical treatment used to restore health” (WEB_6 2006). *Drinking cure* is “medicinal water for hydration and for the supplementation of minerals” (Burt and Price 2001).

Wellness is defined as “a process in which an individual makes choices and engages in activities in a way that leads to health-promoting lifestyles, which in turn positively impact the multiple dimensions of healthy balance of the mind-body and spirit that results in an overall feeling of the individual’s well being”(WEB_6 2006). The term has been defined by the Singapore-based National Wellness Association as “an active process of becoming aware of and making choices toward a more successful existence”. This is consistent with a shift in focus away from illness in viewing human health, typical of contexts where the term wellness is used. In other words, wellness is a view of health that emphasizes the state of the entire being and its ongoing development (WEB_6 2006). *Balneology* is “the traditional study and practice of water-based treatments using geothermal hot springs, mineral water, or seawater” (WEB_6 2006).

1.1.1. Therapy

Within the context of the study, the word denotes “rest and relaxation for therapeutical purposes under certain conditions at spas, in seaside and suitable climatic environments” (WEB_6 2006). Various different types of therapy are described below.

1.1.1.1. Balneotherapy

Balneotherapy is “a general term for water-based treatments using natural thermal, spring, mineral, or seawater to induce relaxation, improve the circulation, stimulate the immune system, and bring about detoxification whilst revitalizing the body” (WEB_3 2006). The term "balneotherapy" has gradually come to be applied to everything relating to spa treatment, including the drinking of waters and the use of hot baths and natural vapor baths, as well as of the various kinds of mud and sand used for hot applications. The principal constituents found in mineral waters are sodium, magnesium, calcium, and iron, in combination with the acids to form chlorides, sulphates, sulphides, and carbonates. Other substances occasionally present in sufficient quantity to exert a therapeutic influence are arsenic, lithium, potassium, manganese, bromine, iodine, etc. The chief gases in the solution are oxygen, nitrogen, carbonic acid and hydrogen sulfide (WEB_6 2006).

1.1.1.2. Thalassotherapy

“Therapeutic activities in marine waters and under marine atmospheric conditions” are referred to as thalassotherapy (WEB_6 2006). Burt and Price define it as “an ancient Greek system of water-based treatments using seawater, seaweed, algae, and sea air”(Burt and Price 2001).

1.1.1.3. Aromatherapy

Aromatherapy is “a massage with oils from plant and flower essences intended to relax the skin’s connective tissue and stimulate the natural flow of lymph” (Burt and Price 2001). Commonly associated with complementary and alternative medicine, is the use of volatile liquid plant materials, known as essential oils (EOs), and other aromatic compounds from plants to affect someone's mood or health.

When aromatherapy is used for the treatment or prevention of disease, a precise knowledge of the bioactivity and synergy of the essential oils used, knowledge of the dosage and duration of application, as well as a medical diagnosis, are required. Aromatherapy is incorporated into mainstream medicine in France and in England,

whereas in many countries such as United States, Russia, Germany, and Japan has never been recognized aromatherapy as a valid branch of medicine.

Essential oils and other natural volatile organic compounds work in different ways. At the scent level they activate the limbic system and emotional centers of the brain. When applied to the skin they activate thermal receptors, and kill microbes and fungi. Internal application of essential oil preparations may stimulate the immune system (WEB_6 2006).

1.1.1.4. Hydrotherapy

Hydrotherapy is defined as “an underwater massage alternating hot and cold showers and other water-oriented treatments” (Burt and Price 2001). Its use has been recorded since ancient times in Egyptian, Greek, and Roman civilizations. Egyptians bathed with essential oils and flowers, while Romans had communal public baths for their citizens. Today, hydrotherapy is used in treating arthritis, burns, and musculoskeletal disorders as well as for stroke patients with paralysis but this treatment is not medically proven to be effective (WEB_6 2006).

1.1.1.5. Peloidotherapy

Peloidotherapy is a thermal therapy which “involves dissolving highly mineralized, purified therapeutic mud or peat in water and applying to the body.” The spa physician will decide whether to give the patient a full or partial mud pack to be placed directly on to the skin at around 40 degrees Celsius. The effect of the hot mud is extremely relaxing to the muscles, reducing local swellings around joints, muscle tension and strengthening anti-inflammatory activity and immune processes within the body. Peat is used in the form of wraps for locomotive system disorders, gynecological disorders, and respiratory tract disorders. Peloidotherapy is used to treat rheumatism, inflammation, neuralgia, and obesity. The heat improves the blood circulation rate and the local metabolism. This therapy also helps to eliminate cellulite and stretch marks. (WEB_10 2007).

1.1.1.6. Climatherapy

Climatherapy is defined as “living in a healthy climatic area, rest and relaxation under such conditions or stated differently climatic therapy, is an integral part of balneotherapy and thalassotherapy” (WEB_6 2006, 1/2). Freshness of the air, altitude, temperature, solarly, humidity, and windiness are the factors which are important for climatherapy.

The 10 to 21 days indicated for medically successful treatments for the described above therapies must be supported by good food and regular physical activity. For this reason the spas which are in the service of climatherapeutic centers are usually developed alongside mountain resorts where people have opportunities of skiing, climbing, walking, and fishing. The climatherapeutic and mountain resorts are in practice located within 800 to 3.000 meters altitude (WEB_6 2006).

Turkey is surrounded by sea on three sides and extending westward in form of a peninsula covering mountainous and forested areas. Having different climatic belts and geological formations, Turkey possesses highly suitable environmental conditions with respect to climatherapeutic opportunities. Moving northward, the climatic conditions drastically change in this country that stretches from 36 to 42 °C altitudes. Sunny days are no less than 210 in the Mediterranean coast while this figure drops to a moist 120 in the Black Sea. The weather is rather unpleasant during July and August due to high temperatures and humidity in the Mediterranean, whereas the Eastern and Northern Anatolian districts are quite satisfactory in the same period of time (Ministry of Culture and Tourism 2003).

1.1.2. Spa

The world “spa” is the abbreviation of the Latin term “salud per aqua” or “Health through Water.” In Germany, they refer to the “Kur”, which does not mean just a cure, but instead is a series of treatments over time including baths, taking (drinking) water, massage, exercises, mud baths, etc.

For the sophisticated European of the nineteenth century, a spa was much more than just a health resort. The famous spas of France, Germany, and Britain were elegant social and cultural centers. Most who took the cure (“kur”) did not do so primarily for

medical reasons, but to see and be seen by high society (Rockel 1986). Other definitions include “The spa is the social aspect of using water therapeutically,” “The spa is a natural space and place with a perspective on time,” and “A spa is a space with a purpose, through a plan, by a purpose, for a period of time” (DeVierville 1998)

1.1.2.1. Types of Spas

Spas today can have many forms and emphasize certain treatments. The following is a descriptive list of a seven spa facility types identified by the International Spa Association (ISPA) (Burt and Price 2001).

- **Club Spa:** A facility whose primary purpose is fitness and which offers a variety of professionally administered spa services on a day-use basis.

- **Cruise Ship Spa:** A spa aboard a cruise ship providing professionally administered spa services fitness and wellness components, and spa cuisine menu choices.

- **Day Spa:** A spa offering a variety of professionally administered spa services to clients on a day-use basis.

- **Destination Spa:** A destination spa is a facility with the primary purpose of guiding individual spa-goers to develop healthy habits. Historically a seven-day stay, this lifestyle transformation can be accomplished by providing a comprehensive program that includes spa services, physical fitness activities, wellness education, healthful cuisine, and special interest programming.

- **Medical Spa:** A facility that operates under the full-time, on-site supervision of a licensed health care professional whose primary purpose is to provide comprehensive medical and wellness care in an environment that integrates spa services traditional, complimentary, and/or alternative therapies and treatments. The facility operates which can include both Aesthetic/Cosmetic and Prevention/Wellness procedures and services.

- **Mineral Springs Spa:** A spa offering an on-site source of natural mineral, thermal, or seawater used in hydrotherapy treatments.

- **Resort/Hotel Spa:** A spa owned by and located within a resort or hotel providing professionally administered spa services, fitness and wellness components, and spa cuisine menu choices. In addition to the leisure guest, this is a great place for

business travelers who wish to take advantage of the spa experience while away from home.

Another classification is provided by Sarnoff for the American spas as follows (Sarnoff 1989):

- **Intensive fitness spas:** Where fitness buffs can trim and tone “to the max” in minimum time.
- **Rejuvenation spas:** Where you can take advantage of the latest beauty treatments for a younger looking you.
- **Weight- loss spas:** Where you can vacation and shed those unwanted pounds at the same time.
- **Athletic camps:** Where excellent sports programs and exercise classes can be had at a very affordable price.
- **Mineral springs or “magic mud” resorts:** Where health-giving waters and the olds, most aristocratic spa traditions await you.
- **New age retreats:** Where you can renew your psychic and spiritual self as well as physical well-being.
- **Gustatory hideaways:** Where you can enjoy and learn about the best in healthful, nonfattening, gourmets fare.

1.1.3. Tourism

According to the official World Tourism Organization (UNWHO) definition, *tourism* is the act of travel for the purpose of recreation and business, and the provision of services for this act (WEB_6 2006).

1.1.3.1. Tourists

Tourists are people who are "traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business, and other purposes not related to the exercise of an activity remunerated from within the place visited" (WEB_6 2006). The distance between these two places is of no significance.

1.1.3.2. Thermal Tourism

Thermal Tourism is the usage of thermal waters for human health and recreation except for usage of thermal waters for bath (WEB_6 2006). Terminology of thermal tourism studies executed by the Ministry of Culture and Tourism is described below.

Thermal Facilities are establishments that use thermal waters. These include thermal hotels, cure centers, cure parks, thermal hotels that include baths, different types of cure units, and physical treatment hospitals.

1.1.3.3. Health (Medical) Tourism

Health Tourism is the act of traveling to other countries to obtain medical, dental, and surgical care. Terminology of health tourism used by Ministry of Culture and Tourism is summarized below:

Facilities for Health are for treatment of physiological and psychological diseases which include hospitals, clinics, and rehabilitation centers. *Facilities for Health and Beauty* are the activities and related establishments for the purpose of healthy life and physical fitness. These include units of accommodation establishments, beauty centers (make-up, massage, physical treatment, aromatherapy etc.), fitness-sport centers, recreation centers (aqua parks etc.)

CHAPTER 2

OVERVIEW OF THE GLOBAL AND TURKISH THERMAL TOURISM MARKET

Thermal spring water with its curing features as one of the natural resources has an important role in the tourism of many European countries and the world. Turkey with its thermal springs has quite rich potential for thermal tourism. In this chapter, thermal tourism market Europe and Turkey is evaluated and their thermal facilities are compared.

2.1. Overview of the Turkish Tourism Market

Tourism is an important economic activity. It consists of a wide variety of products and destinations. Tourism has a great potential for contributing to sustainable development as well as economic and employment growth.

The World Tourism Organization's (WTO) ranking of the top ten destinations in the World in 2005 was based on two key tourism indicators:

- International tourist arrivals
- International tourism receipts.

In 2005 Turkey entered the Top Ten Destinations ranking of WTO in the 9th position in terms of tourist arrivals and 8th position in terms of tourism receipts. Turkey is evaluated as the fourth most important destination in the Mediterranean Region and the sixth in Europe (WEB_4 2007). Table 2.1. shows top ten tourist destinations in the world in 2005.

Table 2.1. Top Ten Tourist Destinations in the World in 2005
(Source: Association of Turkish Travel Agencies, June 2006)

	2005 TOP TOURISM DESTINATIONS BY INTERNATIONAL TOURIST ARRIVALS	2005 TOP TOURISM DESTINATIONS BY INTERNATIONAL TOURISM RECEIPTS
1	France	United States of America
2	Spain	Spain
3	United States of America	France
4	China	Italy
5	Italy	United Kingdom
6	United Kingdom	China
7	Mexico	Germany
8	Germany	Turkey
9	Turkey	Austria
10	Austria	Australia

According to World Travel and Tourism Council (WTTC) estimations (2002-2012), Turkey will be the *fastest growing country* in tourism demand with an annual growth rate of 10.2 percent.

2.2. Health Tourism Market in the World

Globalization makes new forms of international co-operation within the health field. International cooperation in the health field may take different shapes: international trade in health tourism, supply of health services abroad, and migration of health personnel. International trade concerns mainly explain this and other supporting services. Supply of health services abroad concerns foreign direct investments and private supply of health services. Health tourism concerns patients, who accept a treatment abroad. The patient flows usually take place from developing countries to the industrialized countries, with those patients searching for higher quality treatments, as well as from the industrialized countries into the developing countries with the patients who would like to get good quality for low prices (Albaner and Helmenstein 2002).

The medical care system in many countries favors the search for therapy abroad. For example, in Canada and in Great Britain, medical waiting lists are long enough to drive patients to traveling to another country in search of therapy. Another important

factor is cost. In the UK a cataract operation can cost \$ 4.500 compared with \$ 2.250 in France or \$ 345 in India. It is estimated that 10 percent of European patients seek therapy outside the boundaries of their country. As a result of these trends, a significant number of luxurious spa/ thalassotherapy centers and health resorts have emerged abroad. These establishments combine medical services with recreation activities, thus offering a "package" of health services-recreation-holidays (Ikkos 2002).

The developments in health tourism have been increasing in Turkey as the right of patients to seek treatment abroad has been extended in years and European Union (EU) clarified that health care provision is considered as a service under European Law. The candidate countries of EU, including Turkey, have a valuable potential for providing cheaper and high quality health services.

After the recent agreements and co-operations with European Insurance companies from Switzerland, Norway, Denmark, Germany, and Holland to send their patients to Turkey and cover their health expenditures, the expected number of visitors for health tourism has increased up to 1.000.000 people/year for the future (Aydın 2005c). The most important factor in potential of health tourism in Turkey is its geothermal capacity. The country has a significant supply of over 1.300 thermal waters. These thermal water resources are much higher quality compared to Europe in terms of physical conditions and chemical compound (WEB_8 2007).

2.3. Thermal Tourism Market in the World

Mass tourism is declining as people are gradually moving away from mass tourism products. Today's consumer is well-traveled and is looking for something new and different for his holidays. In the world there is a strong shift in the standard tourist product, which stems from a shift in tourism consumer habits. The increase in demand to health tourism refers to the life style of modern metropolitan citizens. Cure, wellness, and relaxation concepts come out with solutions that stand as an alternative medicine for the urbanization problems and trigger the new health tourism investments due to the increasing demand in the world today.

The history of utilization of thermal spring waters for health and therapy purposes extent a few thousand years back and it is a lasting tradition. Today, it maintains its popularity in all continents: Middle East, Japan, China, Turkic Republics,

The South, Central and East European Countries, Argentina, Mexico, Colombia, Morocco, and Tunisia. While the traditional thermal spring water utilization does not change much in Turkey and many countries, in countries such as Germany, France, Italy, Hungary, Romania, and Japan utilization of thermal spring water has reached high standards (Odak Grup 2005).

2.3.1 Thermal Tourism Market in Europe

Aging population is increasing in respect to the younger population in Europe. Rapidly growing population is more pronounced in countries with a higher national income and lower immigration. Italo (1995) reported over 65 years old population rates in some developed European countries as follows:

Table 2.2. Growing Population Rates (in percent)
(Source: Italo, 1995)

YEAR	ITALY	UNITED KINGDOM	FRANCE	GERMANY
2000	22.6	22.3	23.4	25.4
2010	25.7	22.7	25.7	30.5
2020	29.7	25.5	29.4	33.5
2030	41.1	33.1	38.2	48.5

Trends and changes in the European target groups in tourism sector in 2000s show that:

- The High divorce rates, late marriages, and increases in single parent households create new target groups for the health tourism market.
- The increase in the environmental awareness increases demand for niche tourism products and among the popular ones of these are spa and wellness centers.
- The majority of Europeans in densely populated areas desire certain types of tourism: rural escapes, spa and wellness, city breaks, etc.
- The increase in the share of older citizens in Europe's population creates an increase of demand for tourism products suiting the older market segments.
- Also, dynamics in the health industry - the problems that occur within the health care systems of the countries and the awareness of patients and European Union -

have an increasing effect on the growth of health tourism within the globalized world today.

2.4. General Evaluation of Foreign Spa Resorts

In this section a general evaluation of foreign spa resorts including Germany, Hungary, Greece, Italy, Czech Republic, Slovakia, and other countries are provided.

2.4.1. Germany

Germany has over 250-300 officially recognized spa and health resorts located throughout the country with over 7 million visitors in a year. In Germany, visiting health spas has been customary for a very long time and can therefore be considered as part of their culture.

Until recently when the government decided to cut down its expenditure on health spas, every citizen was entitled to 4 weeks of spa vacation every 3 years. The total cost of spa treatment depends on the disease being treated and normally varies from a 21-day treatment costing 2600-3000 euros, to a 14-day treatment 1700-2200 euros, to a 7-day treatment 900-1200 euros (Aydın 2005b).

According to the Lieber (2007), the number of social cures (3 weeks) will continuously decrease. Private guests with shorter stay will increase only slowly because of many lower price offers from the Czech Republic, Slovakia, and Portugal. In addition, preventive health holidays will increase – 80 percent of the Germans consider prevention very important. Also, the German spas will also profit from wellness holidays (16 percent of the Germans older than 14 years are interested). Table 2.3. shows the number of visitors according to the therapy types in thermal facilities. The table shows that peloidotherapy and thalassotherapy are the most preferred therapy types.

Table 2.3. Number of Visitors According to the Therapy Types in Thermal Facilities
(Source: Lieber, 2007)

	Peloidotherapy	Climatherapy	Thalassotherapy	Hydrotherapy	Total
1999	5.700.857	3.312.442	4.788.909	1.837.148	15.639.356
2000	6.099.605	3.534.588	5.064.124	1.970.475	16.668.792
2001	6.234.372	3.336.014	5.265.106	2.048.659	16.884.151
2002	6.129.399	3.250.651	5.361.952	1.982.853	16.724.855
2003	6.109.789	3.263.893	5.787.913	1.968.095	17.129.690
2004	6.203.661	3.277.010	5.698.489	2.035.355	17.214.515
2005	6.240.972	3.453.527	5.848.652	2.080.592	17.623.743
2006	6.476.794	3.458.627	6.044.625	2.084.582	18.064.628
Change between 1999-2006 (in numbers and %)	+755.937 +13,61	+146.185 +4,41	+1.255.716 +26,22	+247.434 +13,47	+2.425.27 +15,51
Change between 2005-2006 (in numbers and %)	+235.822 +3,78	+5.100 +0,15	+195.973 +3,35	+3.990 +0,19	+440.885 +2,50

With one of the best health care systems in the world Germany has always considered health and well being as one of the basic needs of all humans and therefore does not feel the need only to live healthy but also to die healthy. In fact, it is one of the very few countries, if not the only country where both the private and public health insurances cover a range of cures offered by the more than 300 spa and health resorts with a doctor's prescription. In this section, the most important thermal centers in Germany such as Bad Füssing, Baden Baden, and Bad Kissingen are described.

2.4.1.1. Bad Füssing

Thermal waters are obtained from a depth of 1.000 meters with 56 °C in temperature. Therme 1, Europa Therme, and Johannesbad are thermal cure centers in the region. Spa and Wellness/Aroma Therapy, Shiatsu, Meditation, Anti-aging, Thalasso-therapy, sea moss treatments, sauna, and stream baths are the preventive treatments. Besides, an 18-hole golf course, concert and musical halls, theaters, restaurants, luxurious boutiques are the recreational facilities (Burt and Price 2001).

2.4.1.2. Baden Baden

Baden Baden is one of the most prestigious and historic thermal spas in Germany. The hot springs are known at least since Roman times, and spa was a social center for the European nobility in the 19th century.

Caracalla, Arena Vita, Cara Vitalis, ve Friedrichsbad are the thermal centers in the region. Check-up and rehabilitations are the main treatments. Spa and Wellness / Anti-stress, Anti-Aging, Massage, Fitness, Thalassotherapy are the preventive treatments. Besides these golf, cycling, festival theater, casino, luxurious restaurants, and boutiques are the recreational facilities (Sanner 2000).

2.4.1.3. Bad Kissingen

There are 7 thermal centers. These are; Rakoczy, Pandur, Max Well, Luitpoldsprudel, Roundwell, and Beautiful Fount. In the region there are 30 clinics and sanatoriums for thermal treatments. BMS Therapy, Parkinson, and Psychosomatic Therapies are the main treatments. Anti-Aging and Well-being Programs, Classical Thermal water cures are the preventive treatments (Proje Yönetim A.Ş. 2006).

2.4.2. Hungary

Hungary has been one of the world's 15 most popular tourist targets in the past decade and ranks 8th on the list of most frequently visited European countries. All this is closely related to the fact that Hungary is very rich in curing and thermal waters, which has attracted significant tourism to the country to date (WEB_7 2007).

Thermal springs are founded in 22 cities and 62 towns throughout the nation. Hungary, which is considered as one of the most developed countries in this sector, has over 120 centers of curative spas with full furnishing and infrastructure. The Romans, the Ottomans, and many other civilizations benefited from the curative spa centers of this country. The Turkish baths which are in operation to date were of great influence to Hungarian habits during the 150 years of Turkish domination. During the Turkish occupation baths were built in Szeged and Buda in the 16th century. Today Hungary offers 385 towns having thermal or medicinal water, 35 qualified medicinal spas, 55

qualified medicinal spa-hotels, 38 wellness-hotels, and lots of sport facilities (Bender 2007).

22 percent of foreign visitors to the country have these centers as their destination. Every year thousands come for treatment. The total cost (hotel accommodation inclusive) normally varies with a 7-day treatment costing 400-700 euros, 14-day treatment 800-2000 euros, and a 21-day treatment 1400-2400 euros. With a doctor's prescription, the social health insurance will pay for all or half of the curative services obtained at the spa centers (Aydın 2005b). In this part, the most important thermal centers in Hungary Budapest and Heviz are described.

Budapest has 50 springs fed by over 100 curing thermal waters. Danubius Group, a SPA resort chain, owns 6 hotels in Budapest. Heviz Lake is the second biggest thermal lake in the world. Danubius Thermal Hotel, Heviz Danubius Thermal Hotel Aqua, and Lotus Therme Rogner Dorint Hotel are located in the health village of Heviz (Proje Yönetim A.Ş. 2006).

2.4.3. France

In this section, the most important thermal centers in France such as Les Thermes d'Aix-Les-Bains, Therme Evian, Region Provence-Alpes-Côte-D'Azur, Region Poitou-Charence, and Region Auvergne are described.

2.4.3.1. Les Thermes D'Aix-Les-Bains

Aix-Les-Bains, a prestigious thermal town, is located at the heart of the Savoie Olympic region on the edge of the Le Bourget Lake, the largest natural lake in France. The town is located approximately 75 kilometers South of Geneva and 90 kilometres east of Lyon near the Italian-Swiss border. The thermal town is consists of different thermal centers.

Hevalley Baths is one of the largest building sites in the Rhone-Alpes region. Great lake gives visitors opportunity for rehabilitation and recreation. The Phytomer Center, the Aqualioz-Thalgo Espace, and the Adelpia Baths, all have a fitness area with heated swimming pools, sauna, stream baths, and hydromassage, a therapy area, a beauty center, and various specialized treatments (Lund 2000b).

2.4.3.2. Therme Evian

Evian, famous with its mineral water, is located at the foot of the Alps, on the shores of Lake Léman. From season to season the lake and the mountains offer a multitude of activities. The activities and treatments at Evian Thermal Baths are mainly based on wellness for different age groups. The cure packages include a variety of alternatives like “Short Breaks”, “Mother and the Baby”, and “Day Packages (Proje Yönetim A.Ş. 2006).

2.4.3.3. Region Provence-Alpes-Côte-D’Azur

Côte-D’Azur, the famous region of France, has an important combination of art and culture, sea and mountains, golf and thermal waters. The thermal centers that are located within the region are Barthemont-les-Bains, Camoins-les-Bains, Digne-les-Bains, and Greoux-les-Bains. The thermal center, Digne-les-Bains has 18.000 inhabitants and located at an altitude of 609 meters. It has an exceptional climate of 300 sunny days a year (Proje Yönetim A.Ş. 2006).

2.4.3.4. Region Poitou-Charente

Poitou-Charente is a thermal region composed of different thermal centers. One of the most well known thermal centers in the region is La Roche-Posay, a thermal town of 1,454 inhabitants. The altitude of the center is 75 meters. It has a soft and sedative climate (Proje Yönetim A.Ş. 2006).

2.4.3.5. Region Auvergne

Region Auvergne is famous with its thermal centers like Bourbon l’Archambault, Bourboule, Chateauneuf-les-Bains, Chatel-Guyon, Chaudes-Augues, Mont-Dore, Nérís-les-Bains, Royat-Chamalières, Saint Nectaire, and the most famous Gingham (Vichy Water). Gingham (Vichy) is a thermal town with 28.000 inhabitants (Proje Yönetim A.Ş. 2006).

2.4.4. Greece

Curative spa has been known for a very long time in this country. Some authorities even claim that it was originated in this country. The great historian Herodotus, the father of medicine Hippocrates, and doctors like Herophilus and Agasthinos mentioned these curative spas. Most of the centers are founded by the sea shores. Visitors normally come to these centers in August and September and stay for an average period of 15-21 days. With a doctor's prescription, the social health insurance will pay for all or half of the curative services obtained at the spa centers (Aydın 2005b).

Thermal/mineral springs are natural resources which can be found all around Greece. It is nevertheless, a resource that has been inadequately exploited for the development of special forms of tourism. Thermal centers in Greece also seem to have been classified according to the disease that each can treat (Boleti 2006).

2.4.5. Italy

In Italy, well-equipped spa resorts number about 180. Some of them are public and others are privately owned. A total of 3 million people spend over 16 million euro for a day in Italian spa towns, but not all of them use the health facilities. Italy is second only to Germany (8 million visitors) in Europe (Carella 2005).

The volcanic mountains in various parts of the country are thought of as the main reason for the many spa centers in different parts of the country. With a doctor's prescription, the social health insurance will pay for all or half of the curative services obtained at the spa centers (Aydın 2005b).

2.4.6. Czech Republic and Slovakia

In the Czech Republic, there are 60 spa resorts visited by 460,000 patients annually for an average of 3 weeks each. Czech Republic's spas have old and well-established therapeutic traditions.

The most important thermal center in Czech Republic Karlsbad Spa (Karlov Vary). Karlsbad, a town of 60,000 population, has about one million visitors and treats

80,000 patients per year. The town was founded in the 14th century (Lund 2000a). Thermal springs in the town provide treatment of chronic illnesses of the digestive diseases, metabolic disorders, lipid disorders, parodontosis, and diseases of the muscular-skeletal system. Beside thermal facilities, cultural and sporting events allure the guests to remain more days. It is a town of beautiful parks, art-nouveau houses, cafes, hotels, small shops, its traditional glass, porcelain, and Becherovka liquer production (Jitka 1995).

In Slovakia, the most important thermal resources are Diamant Dudince, Piestany, Rajcke and Bardejov springs. Diamant Dudince Thermal Spring is the newest of these thermal resources and located in the south of Slovakia. It is famous for the springs treating muscular, neuropatic and cardiovascular system disorders, chronic rheumatism and spinal cord diseases, post operational or traumatic disorders in the muscular system, heart diseases, high blood pressure, neurological diseases, stress, and fatigue (Lund 2000). 40.000 patients come to seek relief from rheumatic pains annually to Pienstany Spa. At present, the spa can treat 3.000 patients per day, with plans to increase the capacity to 5.000 per year. The spa was known since 1412 (Lund 2000a).

Using natural methods for treatments is known for a long time in these countries. Compared to Hungary and Greece, this country is new in this sector but in the recent years very modern curative spa centers have been established. The two countries have over 60 curative spa centers with an approximate figure of 500,000 visitors. 14-day spa treatment cost ranges from 950-1500 dollars but the prices are generally higher in summer. With a doctor's prescription, the social health insurance will pay for all or half of the curative services obtained at the spa centers (Aydin 2005b).

2.4.7. Other Countries

Spas are not evenly distributed in the world. Although present in some parts of Asia and Africa, they are most common in Europe. The spa culture is well-developed in eastern and southern Europe. Spas did not develop in England, northern Europe, and America for a long time and in fact the trend still continues in the same way even today. Most probably the different climatic conditions have contributed to this uneven distribution.

The spa centers found in England, northern Europe, and America are mostly for resting rather than for therapeutic purposes. In this regard, England spends approximately 1 billion pounds a year (Aydın 2005b).

Germany, Italy, and France are the main destinations of thermal tourism in Europe and moreover in Austria and Switzerland thermal tourism also flourishes. The total the tourist market in Europe. Thermal tourism represents a quite small part of it and contributes in total only 15-17 million tourists per year (Boleti 2006).

Some parts of Russia have well-developed spa centers with one in three Russians visiting these centers at least once in a year. Curative spas are common in Russia and other Baltic states. Customers to these centers are mostly from Finland.

Bulgaria has a spa history that dates back to the old days and has over 300 spa centers. It has hundreds of thousands of visitors a year. Mediterranean countries such as Tunisia, Morocco, and Israel have also spa centers. In Southeastern Asia (India, Thailand, Singapore, Indonesia) spa services are generally offered in very big and luxurious hotels. They are more of resting and self refreshment types rather than therapeutic (Aydın 2005b).

2.5. Thermal Tourism in Turkey

Thermal tourism is a relatively new concept in Turkey, which is being studied by the Ministry of Culture and Tourism, related tourism organizations, and universities within the context of diversification of the tourism product and the prolongation of the tourist season. The concept of thermal tourism is known, but in reality, barely existent in Turkey.

Thermal tourism is associated with mineral spring tourism in Turkey and visit of elderly people to various mineral springs for curative purposes. However, the situation is much different abroad and just beginning to change in Turkey.

Radiology, cardiology, dietetics-nutrition, urology, dermatology, allergy testing, osteopathy-osteoporosis treatments, homeopathetics, spa/ thalassotherapy, physiotherapy-kinesitherapy, stress management seminars are some examples of services available in health resorts in Turkey.

2.5.1. Geothermal Spring Potential of Turkey

Turkey is located on top of a major geothermal belt and has numerous hot springs. Researches conducted regarding thermal springs have shown that there are around 1300 hot and cold mineral water sources in Turkey. The temperatures of hot springs range from 20 °C to 110 °C with a water flow rate ranging from 2 to 500 liters/sec. (Ministry of Culture and Tourism 2003). These sources, widely dispersed over the whole country, are generally of self-rising type, with a high percentage of dissolved mineral salts and different physio-chemical compositions and of high flow rate. Table 2.4. shows the regional distribution of thermal spring waters in Turkey.

Table 2.4. Regional Distribution of Thermal Spring Waters in Turkey.
(Source: Odak Grup 2006)

Regions	Cold water (0-19 °C)	Warm water (20-35 °C)	Hot water (36-46 °C)	Very Hot water (46-99 °C)	Total
Marmara	7	8	8	30	53
Aegean	5	17	28	31	81
Central Anatolia	10	10	14	17	51
Black Sea	4	4	3	3	14
Mediterranean	1	3	2	-	6
East and South East Anatolia	4	7	8	5	24
Total	31	49	63	86	229

The thermal springs generally concentrating in South Marmara, South Aegean, Central Anatolian, and Eastern Anatolian districts are of different temperature characteristics (see Table 2.4). While some of these waters are within the required temperature limits, rather high temperatures are noted in some others.

2.5.2. Type of Thermal Facilities in Turkey

Ministry of Culture and Tourism has categorized thermal facilities in Turkey as follows:

1. Those that serve bathing purposes,

2. Those that serve medical purposes, and
3. Those that serve medical and tourism purposes.

Thermal hotels can be licensed by:

1. Local governments,
2. Ministry of Health, and
3. Ministry of Culture and Tourism (Ministry of Culture and Tourism, 1988).

2.5.2.1. Thermal Facilities Operated by Local Governments

Most of the thermal facilities across the country are built and operated by local governments and lack adequate health and medical treatment activities. These facilities are licensed by the municipalities and mainly meet the bathing needs of the local people. Limited financial resources prevent local governments from investing in the physical stock and thus, poor building conditions exist in these facilities.

According to recent data from the Ministry of Culture and Tourism (2005) 91 percent of the 17.600 current bed capacity in Turkey is in the hands of local governments, the remaining is in the private sector (see Table 2.5.)

Table 2.5. Bed Capacity Rate Among Private Sector and the Local Government
(Source: Ministry of Culture and Tourism 2005)

	Bed Capacity	Percentage in Total
Private Sector	1.592	9
Local Government	16.800	91
Total	17.600	100

The total number of people accommodated in facilities with Municipal Certification is 11,158,090 in 2005, where 29,19 percent are foreigners and 70,81 percent are citizens. (See Table 2.6.a) Total overnight visitors are 28,080,095, with 53,53 percent foreigners and 46,47 percent citizens.

In 2005, average accommodation duration was 4,6 nights/year for foreigners and 1.7 nights/year for citizens. Average occupancy ratio concerning beds was 34,84 percent. (See Table 2.6.b) 18,65 percent of this is foreigners and 16,16 percent citizens. From 1995 to 2005, we observe an increase both in the number of accommodated people and in the number of overnight stays.

Table 2.6.a. Annual Visit Statistics in Facilities Licensed by the Municipalities
(Source: Ministry of Culture and Tourism Statistics 2005)

YEARS	NUMBER OF ARRIVALS			NUMBER OF NIGHTS SPENT		
	FOREIGNER	CITIZEN	TOTAL	FOREIGNER	CITIZEN	TOTAL
1995	2 319 455	13 393 175	15 712 630	7 784 631	21 867 841	29 652 472
1996	3 494 092	13 154 852	16 648 944	10 507 297	20 177 556	30 684 853
1997	3 182 629	12 601 258	15 783 887	10 606 716	18 598 610	29 205 326
1998	2 304 724	11 153 495	13 458 219	7 184 792	18 421 704	25 606 496
1999	1 403 518	9 768 186	11 171 704	4 942 973	15 910 201	20 853 174
2000	1 662 005	9 515 085	11 177 090	5 993 602	15 487 749	21 481 351
2001	2 144 606	8 655 588	10 800 194	7 239 131	13 202 431	20 441 562
2002	3 249 837	8 456 432	11 706 269	9 901 035	13 028 808	22 929 843
2003	2 356 304	7 610 259	9 966 563	10 252 308	12 581 007	22 833 315
2004	3 095 238	7 674 201	10 769 439	12 343 869	12 873 531	25 217 400
2005	3 257 825	7 900 265	11 158 090	15 032 937	13 047 158	28 080 095

Table 2.6.b. Annual Accommodation Statistics in Facilities Licensed by the Municipalities
(Source: Ministry of Culture and Tourism Statistics 2005)

YEARS	AVERAGE LENGTH OF STAY			OCCUPANCY RATE (%)		
	FOREIGNER	CITIZEN	TOTAL	FOREIGNER	CITIZEN	TOTAL
1995	3,4	1,6	1,9	10,80	20,90	31,70
1996	3,0	1,5	1,8	10,00	19,30	29,30
1997	3,3	1,5	1,9	10,70	18,70	29,40
1998	3,1	1,7	1,9	7,70	19,70	27,40
1999	3,5	1,6	1,9	6,18	19,91	26,09
2000	3,6	1,6	1,9	5,68	14,69	20,37
2001	3,4	1,5	1,9	9,42	17,18	26,59
2002	3,0	1,5	2,0	11,44	15,05	26,49
2003	4,4	1,7	2,3	12,34	15,14	27,48
2004	4,0	1,7	2,3	15,32	15,97	31,29
2005	4,6	1,7	2,5	18,65	16,19	34,84

2.5.2.2. Thermal Facilities Operated by the Ministry of Health

Some thermal facilities providing medical therapy have been built by the Ministry of Health. Although some of these facilities have modern physical therapy units, they do not have enough accommodation and recreational activities which in turn make them look like hospitals or clinics having almost no tourism value.

In Turkey there are two facilities providing medical therapy with thermal water:

1. Kütahya Yoncalı Physical and Rehabilitation Hospital
2. Bolu Karacasu Physical and Rehabilitation Hospital

There are 93 facilities licensed by the Ministry of Health (See Appendix A for a list). 73 of these facilities are managed by the private sector, 17 facilities are managed by local governments, 2 facilities are managed by universities, and 1 facility is managed by the Ministry of Health.

2.5.2.3. Thermal Facilities Operated by the Ministry of Culture and Tourism

Excessive developments regarding mass tourism recently have forced investors to seek alternatives to coastal areas in Turkey. Table 2.7 shows the total number of facilities certified by the Ministry of Culture and Tourism among which there are 37 thermal spas licensed (See Appendix B for a list). 11 of these are in Thermal Tourism Centers. These spas are being built as modern complexes which include contemporary accommodation units and medical treatment centers as well as enough outdoor space for recreational activities. Table 2.8. shows the thermal facilities make up only 1 percent of all facilities allocated by the Ministry of Culture and Tourism and 0,3 percent of the total bed capacity. As a result, the ratio of thermal facilities is very low among the total facilities mostly for serviced in mass tourism.

Table 2.7. Number of Facilities Certificated by the Ministry of Culture and Tourism
(Source: Ministry of Culture and Tourism 2006)

	TOURISM INVESTMENT CERTIFICATE		TOURISM OPERATING CERTIFICATE		TOTAL		
	Number of Facilities	Number of Beds	Number of Facilities	Number of Beds	Number of Facilities	Number of Beds	Rate (%)
Thermal Facilities	8	2.438	37	9.736	45	12.174	1
Other Facilities	1.141	248.071	2.264	422.542	3.405	670.613	99
Total	1.149	250.509	2.301	432.278	3.410	682.787	100

Table 2.8. Allocations of Facilities by the Ministry of Culture and Tourism
(Source: Ministry of Culture and Tourism 2006)

	Number of Allocated Areas	Rate (%)	Number of Beds	Rate (%)
Thermal Facilities	4	1	414	0,3
Others Facilities	345	99	143150	99,7
Total	349	100	143564	100

2.5.3. Investment Procedures in Tourism

Bed capacity is one of the most important indicators in tourism. Tourism sector defines the capacity of accommodation establishments in the country operating with the licenses some of which are given by the Ministry of Culture and Tourism and others by the Municipal Administrations.

Establishment certifications which are given by the Ministry of Culture and Tourism are referred in the Law for The Encouragement of Tourism (Law No: 2634). Definitions below are from the Law for The Encouragement of Tourism, Article 3.

Tourism Establishments: “Commercial ventures operating in the tourism sector jointly or individually established by real persons and corporate entities of Turkish or foreign nationality.”

Tourism Investment Certificate: “Certificate issued by the Ministry to investors in the tourism sector for a specific investment period.”

Tourism Establishment Certificate: “Certificate issued by the Ministry to establishments operating in the tourism sector.”

Certified Tourism Investments and Establishments: “Investments or establishments for which certificates have been issued by the Ministry.”

In order to make an eligible tourism investment and receive incentives which the Tourism Encouragement Law offer to the tourism investors, the investment must be certified by the Ministry of Tourism. Tourism Investment Certificates are issued under the Regulation on the Required Qualities of Tourism Investments and Establishments provided that the requirements are met for tourism investments. First the investor should find out the status of the land as shown in the land-use plan. No tourism facilities may be constructed on land not allocated for tourism uses. If the land is not within the boundaries of any plan, a land use plan must be made first in order for the tourism investment to proceed. If the land is located within municipal or adjacent area boundaries the Municipality is authorized; if not Provincial Public Works and Settlement Directorate is authorized. If there is no map, a current map will be made and approved by the concerned Municipality if the land is located within municipal and adjacent areas or by the Provincial Public Works and Settlement Directorate, if not.

Allocation of Public Land Located within a Tourism Center: Public lands are identified in the present specification are to be allocated to local and foreign investors (entrepreneurs) for touristic investments pursuant to the provisions of Law for The Encouragement of Tourism numbered 2634, as amended by the Law numbered 4975 and Article 8 of the Regulations for Public Land Allocation for Tourism Investments.

Constitutional Court finalized the issue following the decision of Council of State to stop execution regarding the allocation of the forest lands to tourism investments. Constitutional Court revoked the execution on grounds that some arrangements are contrary to Article 169 of the Constitution, which are provided in Article 8 of Tourism Promotion Law No. 2634 which is the basis for the subparagraph (d) of paragraph 1 of Article 7 and Article 11 of the Regulation on Allocation of Public Lands to the Tourism Investments which allows that forest areas of Ministry of Culture and Tourism are allocated.

Article 169 of Constitution foresees that the forests cannot be made a subject for a right of use apart from public interest. Pursuant to the order of the Constitutional

Court, whether allocation of the forest areas to the tourism is of public interest or not and how this is to be applied should not be determined with regulations or resolution of Ministry but with laws. Therefore a new law should be enacted by Turkish Grand National Assembly as regards this regulation on allocation. Constitutional Court has granted a respite to fill in this blank.

2.5.4. Examples of Thermal Towns in Turkey

In this section, the most important thermal centers in Turkey such as Balçova Thermal Resort and Çeşme in İzmir, Ömer Gecek in Afyonkarahisar, Pamukkale in Denizli, Köyceğiz-Dalyanköy in Muğla, and Kangal in Sivas are described.

2.5.4.1. Balçova Thermal Resort, İzmir

Balçova Thermal Resort is set around 64 hectares of land, near the historical site of Agamemnon. It is situated within the Balçova district of İzmir. Directly behind the establishment is many kilometers of forest walks belonging to a nature reserve. Balçova Thermal Resort is 25 kilometers from the İzmir Adnan Menderes International Airport, 8 kilometers from the city centre and 500 meters from Dokuz Eylül University Hospital and shopping malls.

Balçova Thermal Resort is the one of the largest thermal treatment centers in Turkey. The Balçova hot spring complex has a total capacity of 3.000 people per day and its current bed capacity is 1000 beds. Thermal Princess and Balçova Agamemnon hotels in the thermal center are licensed by the Ministry of Culture and Tourism. Visitors to Balçova Thermal Facilities can use its services either as a medical treatment center or as a Health Center for sport activities and relaxation, as well as for physical and mental rejuvenation.

The springs have a water temperature ranging from 62 °C to 80 °C and in the tourism center a rate of 28 liters per second thermal water is obtained from the two exploratory wells. The mineral content is 1,369 mg/lit. and has a PH of 6,4. These hot springs are recommended for the treatment of rheumatic diseases, digestive maladies, post-injury healing and post-operative problems, along with calcification and metabolic disorders (Yücel 1995).

2.5.4.2. Çeşme, İzmir

Çeşme is located in the İzmir Province on the Aegean coast. The holiday resorts in the town have mostly hotels with spas famous for its therapeutic natural thermal springs and sea water.

The water temperature is 55 °C with a pH of 6.5, and the mineral content is 2.720 mg/lit and gives the opportunity of use of sea water, thalassotherapy. The heated sea water is used for treating rheumatic, dermatological, and gynecological diseases.

Şifne Ilıca and Alaçatı are the thermal centers of Çeşme. Altinyunus and Ilıca Resort, Sheraton Çeşme, Süzer Otel, Hotel Delmar, and Otel Hora are the main thermal resorts licensed by the Ministry of Culture and Tourism in Çeşme (Kültür ve Turizm Bakanlığı 2002).

2.5.4.3. Ömer Gecek, Afyonkarahisar

Located on the intersection point of Ankara – İzmir and Afyon – Kütahya Highways, this thermal area is highly accessible by highways and this is creating an advantage for the development of thermal tourism. The area was certified as thermal tourism center by the Ministry of Culture and Tourism giving another opportunity for planned development. Afyon Oruçoğlu Thermal Resort and İkbâl Thermal Resort, considered as two of the primary thermal facilities in Turkey, are located within the area. Moreover, Hayat Thermal Resort, Ömer Thermal Resort, Garden Kale Thermal Resort, and Korel Thermal Resort, which is a new establishment with its 1200 bed capacity, are the others in the thermal area. Afyonkarahisar Ömer Gecek is the thermal area mostly demanded in terms of investment opportunities. (WEB_7 2007).

2.5.4.4. Pamukkale, Denizli

Pamukkale is located 250 kilometers from İzmir and 20 kilometers from Denizli. Most of the hotels are in Karahayıt, 5 kilometers north of Pamukkale. 2, 3, 4, and 5 star hotels are located in Pamukkale and Karahayıt. 10 hotels (1702 room and 3457 bed capacity) were licensed by the Ministry of Culture and Tourism and 32 hotels

(1.084 room and 2.574 bed capacity) were licensed by the municipality and 85 pensions have 1.148 room and 2.335 bed capacities (Kültür ve Turizm Bakanlığı 2002).

The thermal water temperature is 42-56 °C, with a flow rate of 400 liters per second. The thermal water is used both for drinking and bathing. The water is recommended for the treatment of rheumatic, dermatological, and gynecological diseases, neurological and physical exhaustion, digestive maladies, and nutritional disorders. Throughout history, Pamukkale has been a famous spa, with both baths and open pools set into the snow-white cliffs. Bath treatments take place in natural pools developed around the main hot springs (Doğan and Karagülle 2005).

2.5.4.5. Köyceğiz-Dalyanköy, Muğla

Situated next to a natural channel between Köyceğiz Lake and the Mediterranean Sea, the Rıza Çavuş Thermal Baths form a water pool and mud pond, with a flow rate of about 8 liters per second. The mud and mineral baths can accommodate 1.000 people per day. At a second spring is Velibey Thermal Baths, 1.5 kilometers north of Rıza Çavuş, with similar qualities and a flow rate of 20 liters per second. The waters of Sultaniye are good for both bathing and drinking. They flow at a rate of 42 liters per second, resulting in a bath capacity of 10.000 baths per day.

The thermal water is good for the treatment of rheumatic, dermatological, and gynecological diseases, as well as neurological diseases as well as neurological and physical exhaustion. The Köyceğiz baths do not offer overnight accommodations, so visitors stay at hotels and pensions at nearby Köyceğiz or Dalyan. Sultaniye Hot Springs offer overnight accommodations (Kültür ve Turizm Bakanlığı 2002).

2.5.4.6. Kangal, Sivas

The famous Kangal Hot Springs are 96 kilometers from Sivas and 13 kilometers from the town center of Kangal. The thermal springs come from five different sources and fish come directly from the springs into two large pools. The thermal water flows at rate of 130 liters per second and the temperature of the water is 35 °C and it contains bicarbonate, calcium, magnesium as well as many tiny fish (2-10 cm. in length) which are effective in curing skin diseases, rheumatism, and neurological disorders. The fish

present in the water simply draw out diseased areas in a curettage-like fashion. Many doctors and clinics throughout Turkey have recommended that their patients try the Kangal thermal waters as a cure. The Ministry of Culture and Tourism licensed the region as thermal tourism center. Balıklı Kaplıca Thermal Hotel in the region has 300 bed capacities (Ministry of Culture and Tourism 2003).

Among thermal sources in Turkey, Kangal Fish Spring has a unique nature with its doctor fish known to cure psoriasis. Kangal Fish Spring attracts two main types of visitors. First are the treatment seekers who make up the majority of the demand for this destination. The second group of visitors comes for short-term recreation purposes. It seems that recreation seekers' short-term visits satisfy their curiosity and relaxation (Sayılı et al. 2006).

2.5.5. General Evaluation of Spa Resorts in Turkey

Despite Turkey's high potential of thermal tourism and resources, it has only few facilities having completely modern characteristics. Within this context; İzmir-Balçova, Çeşme-Altınyunus, Sheraton, Süzer, Afyon-Oruçoğlu, İkbâl, Korel, and Kütahya-Harlek facilities are good examples having modern characteristics. Particularly, Balçova facilities are very close to European standards. Other facilities apart from above mentioned ones are planned mostly for taking baths, and the treatment feature of spring water in these facilities are not applied under control of an expert. Some facilities have accommodation, but no curing centers. Therefore, thermal tourism facilities/centers in Turkey should be organized in a way to meet the new requirements of today.

According to Odak Grup report, most of thermal facilities in Turkey apart from those with tourism management certification, are active as seasonal management. For them to be active throughout the year, first of all, accommodation with wide range of bed capacity and peripheral service units are needed. Many of these facilities are unqualified enterprises realized with limited financial provisions of municipalities or family enterprises with low bed capacity (Odak Group Report 2006). Besides qualified thermal centers with hotel and motel type accommodation facilities, it is seen that most facilities are usually boarding house and similar types. In addition, insufficient bed capacities, and facilities with inefficient conditions are shows the deficiencies of thermal tourism sector in Turkey.

2.6. Comparative Analysis of Turkish and European Thermal Centers

European thermal facilities which are described in Section 2.4 especially in France, Germany, Slovakia, and Hungary have easy accessibility, developed infrastructure, and rich recreational facilities. But their thermal centers are mostly old facilities with high prices that affect the demand of aging groups towards new health destinations for cure purposes with lower prices at modern facilities.

Turkey is among the seven countries in the world that has higher potential with its thermal spring waters than Europe with respect to flowrate, temperature, and also chemical and physical characteristics. Thermal facilities have begun to develop recently, as a result they are new and modern and their prices are low compared to the European thermal facilities. In comparison, insufficient transportation (especially airway transportation), insufficient technical infrastructure, and poor recreational facilities are weaknesses of the thermal tourism sector in Turkey.

2.7. Why Thermal Tourism is Underdeveloped in Turkey

The reasons of underdevelopment of tourism in Turkey include lack of special incentives, lack of legal arrangements specially aimed at protecting geothermal resources, insufficient investments and management in local government facilities, lack of skilled labor force, lack of institutional collaboration, lack of a thermal tourism master plan, marketing, insufficient qualified facilities, and reluctance of investors.

2.7.1. Lack of Special Incentives

The Law for the Encouragement of Tourism, Article 5, Part a indicates that “in the tourism sector, it shall be compulsory to procure either a tourism investment certificate or a tourism establishment certificate in order to benefit from the incentives, exceptions, exemptions, and rights prescribed in this law and other enactments.” Article 5, Part b indicates that “investments with certificates shall commence, be completed and be put into operation within the periods of time specified by the Ministry. However, such periods may be extended in cases of circumstances of force majeure acknowledged by the Ministry.”

Article 10 and Article 11 of the Law for Encouragement of Tourism give the rules under control of the Ministry about price list and notification. General principles concerning the preparation and approval of lists of prices to be charged by certified establishments set out by the Ministry. (Law No: 2634, Article 10). Investors and operators holding tourism certificates should obtain the permission of the Ministry for any transfer or leasing out, in part or in whole of the establishment with which the certificate is concerned and for any amendment, in part or in whole, of the ownership structure and field of activity of the establishment; it shall be a condition of any such amendment that the establishment shall continue to be a tourist establishment. Furthermore, investors holding tourism certificates notify the Ministry twice a year of the progress of their investment and establishments holding tourism certificates shall submit data to be used in the determination of Turkey's tourism figures to the Ministry on a quarterly basis (Law No: 2634, Article 11).

Investors and operators holding tourism certificates may benefit from such incentives certified tourism investments and establishments shall pay for utilities such as electricity gas and water at the lowest of the rates that apply to the industrial facilities and homes in the locality (Law No: 2634, Article 16). Any and all procedures and allocations in connection with requests of certified tourism investments and establishments for telephone and telex facilities shall be carried out on a priority basis (Law No: 2634, Article 17) and the law gives some opportunities about employment of personnel. Certified tourism establishments may employ qualified foreign personnel and experts with the approval of the Ministry and the Ministry of Interior. The ratio of foreign personnel may be increased to up to 20 percent by the Ministry. The personnel in question may start working at the establishment 3 months prior to the date when it commences commercial operations (Law No: 2634, Article 18). In addition, certified tourism establishments and sales stands exclusively for the sale of services under such certificates shall, during the working hours specified in the certificate issued by the Ministry, maintain their operations throughout official holidays, weekends and lunch times (Law No: 2634, Article 20).

The Ministry shall be exclusively authorised to inspect investments and establishments holding tourism certificates, to check those characteristics of such investments and establishments on the basis of which certificates are issued and to establish whether they maintain such characteristics as well as to categorise such establishments. If the Ministry deems it necessary, matters on the basis of which

inspections and classifications are to be made may be determined by the real or legal experts designated by the Ministry. However, the Ministry shall take and implement any and all decisions based on such examinations (Law No: 2634, Article 30). The qualifications of the experts, concerning the conduct of their examinations shall be specified in a regulation. (Regulation on the Required Qualities of Tourism Investments and Establishments)

We can conclude that the incentives explained above have been provided to develop tourism sector since 1980. However up until now there is no special supporting developed for thermal tourism by the government to make thermal tourism attractive to investors.

2.7.2. Lack of Legal Arrangements Specifically Aimed at Protecting Geothermal Resources

Under the Law numbered 927 for usage of thermal water and utilization of thermal springs and the Law numbered 6977 for searching and managing mines, the right of searching, extracting, utilizing, leasing, and allocation of thermal springs is given to the local authorities and local authorities can turn this authority over to municipalities.

The General Sanitation Law numbered 1593 gives permission to manage every kind of thermal springs and mineral waters to the Ministry of Health. The healing characteristics of these waters should be approved by the Ministry of Health. The Ministry can demand from an investor or manager to employ a doctor who is approved by the Ministry of Health, to be responsible for the hygienic conditions in thermal and mineral springs existing in thermal facilities. The Ministry of Health gives management licenses to the thermal facilities based on the Regulation of Therme published in the Official gazette numbered 24472 dated July 25, 2001. This regulation is organized to clarify the necessary basis for establishing, determining, giving management permission, supervising, under control as proper to hygienic conditions, quality and quantity of thermal facilities where natural healing elements originating from the soil, underground, sea, and climate are benefited as curing factors. In order for thermal facilities to start operation, first facility and then management permissions should be taken from the Ministry as proper to the stipulations stated in the Regulation. After the

stated permissions are obtained, a certain fee is paid by the Social Security Institutions when these services are used by people under guarantee by the Social Security Institutions provided that procedures and basis determined by the social security institutions are applied (Odak Group Report 2005).

The Tourism Incentives Law numbered 2657 has in line a project for the development of thermal stations through granting of permits and assistance for supplying the infrastructure. Supplementary Article I of Article 38 of the Law indicates that:

“Without prejudice to rights previously granted and currently being exercised and rights entered into the land registry, hot and cold mineral springs resorted to for cures shall be transferred to tourism investors pursuant to the provisions hereof. The powers of the authorities referred to in the Law numbered 927 dated June 10, 1926 and in article 2 of the Law numbered 4268 dated June 17, 1942 as amended by the Law numbered 6977 dated May 24, 1957 shall belong to the Ministry, provided that such powers shall be restricted solely to the tourism areas and tourism centers as indicated. However, dividend and duty entitlements of provincial administrations shall be reserved.”

And in addition, the article points out that:

“A regulation to be issued by the Ministry in conjunction with the Ministry of Health and Social Welfare and the Ministry of Energy and Natural Resources shall lay down the principles for the determination of excess amounts of spring waters used by real persons and corporate entities who hold a right to operate water springs resorted to for cures, the manner and conditions of operation of excess spring waters not used, beneficiaries in this connection.”

Actually, with the Law numbered 2657, the Ministry of Culture and Tourism aims to improve the thermal facilities bringing them up to western standards as well as cooperating with other public and private organizations to build new centers. But, in practice the implementations are not shown the realities in fact as in law. Under the Law numbered 6977, the local authorities have the right to use the thermal waters; after the publication of the Law numbered 3487. The Rule for the Right to Use and Exploit the Thermal Facilities in Thermal Tourism Centers, this right was transferred to the Ministry of Culture and Tourism in case of the discovery of new hot springs in touristic areas. The tax right and profits are in favor of local authorities whereas the rental and revenues are enforced under instruction from the Ministry of Tourism.

There is not a protective and leading special law for using geothermal resources in the tourism sector. Use of thermal resources is not up to productive and efficient levels within the thermal areas due to the fact that an effective solution concerning

withdrawal of the water up to surface, distributing, and supplying the overflow could not be established because there is no collaboration to the related institutions and no general authority to usage of the geothermal water (Ministry of Culture and Tourism 2005).

2.7.3. Insufficient Investments and Management in Local Government Facilities

Thermal tourism centers certified by the Ministry of Culture and Tourism and other thermal areas are mostly owned and managed by local government administrations (municipalities and provincial special administrations). Following from the fact that local administrations have limited budgets, not only renewal of the buildings but also qualified service supplied by the facilities cannot be achieved so that facilities which have international competitiveness can not be created. Moreover, the land and facilities owned by the local administrations cannot be sold or allocated for the use of private sector for the long term. Short term renting, however, prevents investing on the land leading to low-quality establishments (Ministry of Culture and Tourism 2005). Vicinity of the thermal centers has no plan that should be applied by many local administrations (Eda 2000).

2.7.4. Source Protection Areas in Upper Level Plans

In Manisa-Kütahya-İzmir Planning Region Master Plan (EAP) with a 1/100.000 scale, it is aimed that the local participation and partnership is ensured and integrated planning decisions are produced which shall direct the plans to be made via subscales by creating a balance between protection and use. Target year of prepared plan is accepted as 2025. 1/100.000 scale Manisa-Kütahya-İzmir Planning Region Master Plan study includes determination of the problems which affect the planning decisions on a direct or indirect basis in line with the specified objective and target for 2025 in all of the provinces constituting the planning region as Manisa, Kütahya and İzmir, specifying the legal, natural and artificial thresholds, the protection decisions and sectorial development proposals are converted into decisions for land use by observing protection–use balance.

For tourism planning under the Master Plan in question, for the lands, it is aimed to produce plan decisions which might enhance the improvement of the tourism in the areas where geothermal sources in particular are available whereas an approach is adopted for improvement of the tourism in the areas which are of cultural and historic values and have geothermal sources and in the areas which have natural beauties and possibility of being developed for touristic purposes except for the shorelines.

Locations where tourism growth is observed within the borders of Planning Region are predominantly the shorelines and the areas of thermal sources. It is stated that the improvement decisions which were made by the Ministry of Culture and Tourism in the regions where thermal sources are available are supported. In the areas which are determined to be “Culture and Tourism Protection and Improvement Region” and “Tourism Center” by Ministry of Culture and Tourism, plans which had been prepared and approved by Ministry of Culture and Tourism in accordance with the respective legislation were accepted and transferred into the plan.

1/100.000 scale of Manisa-Kütahya-İzmir Planning Region Master Plan report underlines the importance of the geothermal sources and provides a considerable account of use of this source. However, both the prepared plan and its report and the provisions of the plan, there is no reference to the protection of the areas containing the geothermal sources. Although measures were taken for the fresh and utility water, there is no applicable measure available for the preservation of thermal waters. Under the Master Plan in question, decisions were made for the archeological sites, urban protected areas, natural protection areas and wetlands, national parks, wildlife protection and improvement areas and other protection areas out of the decisions for the natural and cultural values. Furthermore, protection areas which can be perceived via 1/100.000 scale were transferred to the plan with the area borders being specifying and the smaller protection areas are given in the Master Plan as a symbol. However, there are source protection areas determined by General Directorate of Mineralogical Studies Institute and the protection measures necessary to be taken to protect the geothermal sources both in the plan, plan legend, plan report and plan provisions plan.

2.7.5. Lack of Skilled Labor Force

In 2004, Dilaver Tengilimoğlu and H. Dilek Sevin made a research of the 85 thermal facilities in Turkey. The main objective of this research was determining the service quality of private and state thermal facilities. In this work, the significance of the problems about the management of facilities was determined. It was observed in the results that the managers of the thermal facilities were not satisfied with the activities carried out by the concerned government aimed at the development of health tourism. The majority of the managers (93.2 percent) believed that personnel training is necessary in higher education institutes and career schools established by the Ministry of Education.

The result of this research revealed the fact that health personnel were employed in only 27 (36.5 percent) of the thermal facilities and specialist doctors (Physical treatment and rehabilitation specialists and hydroclimatology specialists) were present in only 11 (14.9 percent). The main problems about personnel of the thermal facilities are listed below:

- 69 percent of the managers of the facilities are not educated in tourism and 51 percent are high school graduates.
- 41.9 percent of the managers have indicated the insufficiency of physical treatment services.
- It has been determined that health personnel are not employed in the majority of these facilities (63.5 percent) and in these resorts there is a lack of the service of scientific hydrotherapy.
- There are only 2 universities in Turkey, which give Medical Ecology and Hydroclimatology courses. Therefore, there is a lack of educational institutes, which train specialists and personnel.

The lack of skilled labor force and specialists trained in the thermal field on health and management and tourism fields as well as absence of training institutions result in poor quality service.

2.7.6. Lack of Institutional Collaboration

There is not a collaborative working environment between institutions and organizations that manage the thermal resources (Ministry of Culture and Tourism 2005). There are many difficulties in implementing the related regulations enacted by the Ministry of Health, Ministry of Culture and Tourism, and the General Directorate of Mineralogical Studies Institute.

Turkey should participate in the thermal tourism market with qualified facilities meeting international standards which are integrated with cure parks, cure centers, and accommodation units. In order to reach the international standards, the Ministry of Health and the Ministry of Culture and Tourism should cooperate for treatment and tourism purposes. In addition, in the countries that have a developed thermal tourism sector, the public and private health insurance institutions have classified the diseases according to physical and chemical composition of the thermal water. However, in Turkey diseases have not been classified according to the properties of the thermal water. The Ministry of Health should work on that.

2.7.7. Lack of a Thermal Tourism Master Plan

So far national policies and planning have not been guided by health and thermal tourism master plan and comprehensive documentation in Turkey. There is no comprehensive work on thermal tourism until 2006. In order to increase tourism income through developing thermal tourism market for the usage of the thermal spring water efficiently the Ministry of Culture and Tourism prepared Thermal Tourism Master Plan in December 2006 as mentioned in Section 3.4, Chapter 4. The priority regions were determined in the master plan to develop as thermal tourism centers. Because the plan is recent successful and it is too early to say whether it will be successful in promoting thermal tourism as described.

2.7.8. Insufficient Marketing

Tengilimoğlu and Sevin (2004) found that the customer profile of the thermal facilities indicates that approximately 83 percent of their customers are local tourists

whereas 17 percent are foreign tourists. The underlying reasons of this situation may be a lack of interest in health tourism from foreign countries, insufficient advertisement and orientation activities, and facilities that do not meet the quality standards of international tourism.

Foreign patients have not come yet within the context of Social Security Legislation in Turkey except for Balçova Thermal Resort. This thermal facility is supplied the requirements which foreign insurance agencies are demand for their insurants.

2.7.9. Deficiency of Qualified Facilities

There are limited developments in qualified facilities integrated with cure centers, cure parks, and thermal hotels. The percentage of thermal facilities is very low among the total facilities. As it mentioned in Section 2.5.2.3, Chapter 4 the total number of facilities is only 37 which were certificated by the Ministry of Culture and Tourism.

2.7.10. Reluctance of Investors

Since tourism investors are not experienced and well-informed about the advantages of investing in the thermal field, many of them abstain from taking action on the issue. As a consequence of the matters stated above, investors have been reluctant about directing the funds through thermal tourism resulting in underdevelopment of thermal tourism sector (Ministry of Culture and Tourism 2005).

CHAPTER 3

THERMAL TOURISM PLANNING

As described in the preceding chapter, Turkey has a rich and important potential of thermal waters. There are upwards of 1300 hot mineral waters some of which have high potential for development, some medium potential and the remaining low potential. As the available budgetary sources are limited, firstly the the basic and predominant thermal tourism planning principles should be analyzed particularly regarding the production of technical services and the development of the required infrastructure. In this chapter, planning criteria will be evaluated for thermal facilities location and facility sizes as well as the types are determined.

3.1. Regional Planning Techniques and Planning Processes

Prior to any regional planning work designed to determine the characteristics of thermal resources, a source preservation strategy must be established through an examination of the location of each source and their integration with the regional physical planning (Ün 1979). According to Ün, 1:5000 or 1:1000 scale master plans to be drawn especially for thermal cities require the predetermination of the following primary and basic data:

- A full-scale analysis of the water and the establishment of its chemical and physical properties plus the determination of the ailments for which it is indicated,
- Measurement of its flow rate and the calculation of it's sufficiency for the number of patients foreseen,
- Determination of the pollution level in and around the SPA, of the suitability of weather conditions and establishment of the absence of microorganismal pollutants in the Spa water,
- Completion of the hydrogeological studies at and around the source and implementation of measures aiming at the potection of the source itself, and
- Availability of actual maps at indicated scales for the areas admitted to the master plan.

Besides this criteria the climatic conditions, especially number of sunny days, is an important criteria for choosing the location of the spa establishment.

Upon completion of the above work, studies shall be made with a view to introduce the plan analysis stage and of the principles of using geothermal sources efficiently. Also the determination of the bed capacity of thermal establishments as a function of the flow rate, the relationship between the other facilities in the area, and the ownerships of the area should be taken into consideration.

3.2. Feasibility Criteria of Thermal Tourism

Planning of the Cure Centers in Thermal Settlements should have different criteria than the planning of other settlements. Some issues should be kept in mind especially in determining the general transportation network and arranging the green areas. While determining the transportation network in the city, in planning the traffic roads care should be taken not to disturb the curists and the roads for pedestrians should be widely spread. Green areas, however, should be planned in harmony with the existing nature and should answer the needs of the curists while in open spaces (Çekirge and Ögüt 1995).

The study of potential development of thermal springs for thermal tourism sector basic criteria can be categorized into two parts: Technical criteria and the economic criteria. Details of these criteria are explained below.

3.2.1. Technical Feasibility

Technical feasibility criteria include geological characteristic, flow rate, temperature, physical and chemical composition of water, and source protection areas. The explanations of these criteria follow.

3.2.1.1. Geological Characteristic

“It is observed that most of the hot springs are located either in or close to granitic masses or along the major fault or shear zones. It is believed that the granite batholith which have become embedded in the earth crust continue to give off heat after

solidification. Their residual heat is probably in the order of +700 - + 1200°C. Some of the heat is probably generated by the radioactive decay of minerals contained in these rocks. Other thermal springs occur at the granitic-sedimentary contacts or within sedimentary rocks near the granite contacts” (Samsudin et al.1997). Based on the above assumption it is possible that the hot springs originated from the deep-lying groundwater of the earth crust which moved towards the surface as a result of magmatic heat and pressure. The groundwater seeping through the fractures and crevices in the earth’s crust is heated by contact with the hot granic rock and emerges as hot springs

The location of the hot springs in Turkey are shown in the Figure 3.1. The geographic distribution of the majority of hot springs found along the west part of the peninsula and the other hot springs are found in the central and eastern part as illustrated by the map. A greater concentration of springs is noted at localities of major fault zones. These permeable zones offer rapid penetration of ground or meteoric water to depths where the rocks are hot enough to generate a convective upflow of hot water.



Figure 3.1. Geothermal Areas and the Main Fault Lines and Hot Waters of Turkey. (Source: MTA General Directorate, 2005)

3.2.1.2. Flowrate and Temperature

The flowrates and temperatures are the two important parameters which determine the technical potential of development for the hot springs. Ideally for a high potential hot spring, both temperature and flowrate should be high. However, both these

parameters would vary with season. During the wet season, the flowrate could be higher and mostly in the summer season the flowrate could be lower.

3.2.1.3. Physical and Chemical Composition of the Water

The physical and chemical properties of thermal waters and the treatment practice to be implemented in accordance with physical and chemical properties of the water are among the important issues in spa planning. The water temperatures between 36 °C and 38°C are the most suitable temperature, provided that constant medical supervision is available, while 34°C is suggested as the normal temperatures for pool treatment. Temperatures exceeding the above levels may lead to deaths if medical supervision is absent. Likewise, measures for lowering water temperature must be introduced into SPA planning to offer the cure water at exactly the desired temperature.

Waters with a pH value at 7 are at acid-alkali balance, such waters leave no residue. For this reason, waters with pH values between 6.5 and 8.2 are the most suitable ones to be used in spas and the total mineralization of water is higher than 1000 mg/l the effective solution of treatment could be successful.

As some of the radioactive elements existing in thermal waters have short half-lives (for example Radon 219 and Radon 220), a rather rapid use of such waters is indicated while those containing Radon 222 can be stored for as much as 72 hours, failing which the radioactivity shall considerably weaken. From the standpoint of source utilisation and marketing, sulphurous and radioactive waters and muds at sea level or within forest areas at altitudes from 800 to 2000 meters are of significant importance (Ülker 1993).

3.2.1.4. Source Protection Areas

The rules for avoiding cave-ins, underground collapses, water leakages and pollution, the areas where construction shall be prohibited and drilling techniques to be implemented shall be indicated in the hydrogeological report to be prepared or approved by the General Directorate of Mineralogical Studies Institute.

In the geothermal areas 1st, 2nd and 3rd degree protection areas were specified by the General Directorate of Mineral Research and Exploration (MTA). Within the boundaries of these protection areas measures that should be taken were assessed.

According to pronouncement which MTA dated 26.09.2006 and numbered 10056 informing the Ministry of Culture and Tourism; maximum two-floored health and thermal tourism establishments are within the boundaries of 1st degree protection areas. Besides, regulation for protection areas has been specified in article 9 of the “*Regulation of Thermae*” published in the *Official Gazette No.25665 on November 9, 2004*.

Article 9: By taking the geological and hydrogeological data into consideration, protection areas and measures that should be taken are determined in order the physical-chemical composition, flowrate, and temperature of thermal water not to be affected by various conditions and not to be polluted.

Protection zones which were determined upon the surveys are shown in the suitable scale maps and plans, measures that should be taken are shown in the plan notes. Source protection area report should be prepared by a geological engineer who is the specialist in subject of hydrogeology (Law No: 25665).

3.2.1.5. Rules of Water Distribution and Storage

As point or points of emergence of thermal waters are within the source safety areas, construction shall not be permitted in their vicinity. For this reason, the source water has to piped into the treatment facility. The basic rule here is to use such waters outside of the boundaries of source safety area, at a point located nearest to the source itself (Ün 1979).

Thermal water has to be piped carefully and it should not be forgotten, that radioactive waters may lose some of their properties if stored for a long period of time. Materials not affected by the chemicals in the thermal water must be used in the tank system for the continuity of operations and economy of water.

3.2.2. Economic and Physical Feasibility

Economic feasibility characteristics such as location, accessibility, current and market potential, surrounding attractions, land ownership, settlement possibilities, and climatic conditions are used to determine the economic potential for development of the hot springs. These criteria are explained below.

3.2.2.1. Location

Sources capable of providing a local or regional scale service near a metropolis or within the influence area of a metropolis, those in the vicinity of industrial areas are preferred.

3.2.2.2. Accessibility

Sources located on main arteries and consequently accessible via public and private means of transport establishment at a point to which the mass tourism is easy and possessing rail, highway, and air way connections measures easy accessibility to the thermal area by ranking of good, medium or low based on perceptions of specific standards. For example, good accessibility indicates direct access from highway and main roads. Medium or fair accessibility indicates access through secondary roads and poor accessibility indicates access through gravel roads, via footpaths and long distances from mainroads (Samsudin et al.1997).

3.2.2.3. Current and Market Potential

Current and market potentials are indications of present and future visitation to the hot spring areas. In most cases, there are no official statistics on the number of visitors to the areas. Judgement is made based on observations and also based on interviews with caretakers or officials from the relevant agencies. Good market indicates a large crowd (> 100 visitors), medium market indicates a moderate crowd (50-99), low market indicates a small crowd (20-50) and poor market indicates a meagre crowd (~20 or only occasionally used by locals) (Samsudin et al.1997).

3.2.2.4. Surrounding Attractions

Surrounding attractions like rural and village setting, rivers, waterfalls, rapids, historical sites, forests, cultural settlements, golf course etc. are the main attractions for the tourism areas. Monuments, ruins, and excavated antiquities at or near the thermal centers can be evaluated as historical sites or museums, with a view to emphasize the

other tourism activities. Culture tourism and health tourism have a strong relationship with each other. Cultural activities give the tourist opportunities to entertain themselves.

3.2.2.5. Land Ownership

Ownership of sources by a single person or institution is one of the main criteria of planning. Public lands are mostly preferred because of lack of fragmentation of ownership of land like private land.

3.2.2.6. Settlement Possibilities

The areas which spas are planned are generally located on fault lines, and consequently, on earthquake belts. For this reason, the planning work must strictly obey the earthquake safety factors.

Spa and thermal water centers normally contain healing areas, in-patient treatment facilities and units, research institutions, as well as ancillary units for management, overnighting, entertaining, commerce, sports, and green fields.

The cure centers are planned either as separate entities or as facilities interconnected by passages permitting easy access to each unit. Spa water is normally not fed to overnighting segment of the facility (Çekirge 1982).

Sheltered and open-air sports halls, minigolf, volleyball, tennis and chess rooms and other field sports must also be foreseen in the spa planning. Considering the particular objectives such centers, green field and park arrangements are of particular significance. The surface area per head must be held as large as practicable in the initial planning.

During the preparation of the layout plan of the spa, measures to be taken against suppressing the traffic, noise, and other environmental problems are also to be incorporated in the preliminary studies. Under all circumstances, landscape and natural assets in the vicinity must be protected.

In addition to the thermal treatment activities, rest and relaxation, sunbathing, and walking opportunities must be provided, and trees in the green fields and forests in the immediate vicinity must be planted.

It would be appropriate to adopt a construction adapted to local and national architectural traditions in the planning and project design stages. Means must also be sought to ensure that facilities as Turkish baths and new Spa utilisation forms inspired from the social traditions are introduced into the complex.

3.2.2.7. Climatic Conditions

Sources emanating from areas where the pollution is below threshold values possess a healthy climate. From the standpoints of utilisation and operation facility, it is recommended that spas must be developed in areas where the number of sunny days per annum is high, the average temperature and humidity is low.

3.3. Objectives of Spa Planning

According to Ün the objectives of a SPA planning are as follows (Ün 1979):

1. a) to protect the public health and to increase the labor productivity through the use of SPA planning.
 - b) to erect Spa healing centers embodying adequate and high-quality health service,
 - c) to introduce a healing practice in accordance with medical rules and under medical supervision in such centers,
 - d) to ensure the establishment and support of organizations and institutions providing scientific training on SPA treatment and to train the necessary medical personnel for this purpose,
 - e) to ensure that SPA waters are available for treatment to people of different purchasing power and to create a public opinion conducive to this goal,
 - f) to encourage the establishment, at SPA centers, of social treatment facilities of non-profit nature,
2. a) to develop the internal and foreign SPA tourism at country level and to increase the foreign currency inflow,
 - b) to increase the tourism diversification via the SPA tourism within the touristic development areas, to extend the tourism season, to raise the sales rate in touristic facilities and to improve thereby the marketing potential,

c) to develop and expand the internal tourism and to create new employment opportunities via encouragement of thermal centres outside of touristic development areas,

d) to direct to available national institutions the international demand directed to foreign facilities, and

e) to facilitate a continuous flow of purchasing power via internal and foreign SPA tourism from abroad and more developed parts of the country and to accelerate the process of cultural interaction.

3.3.1. Capacity Definitions

Nevertheless, up to date the spa types are used in new thermal facilities, the most widespread SPA treatment methods practiced in Turkey are bath and pool types. Total flow rates must be predetermined during the planning phase when the bath and pool sizes that can be created.

Below are given, in line with the rules set forth by the FITEC, the water consumption values and approximate optimum sizes applicable to Turkey (including the capacity, unit sizes depending on the capacity, and the required volumes).

3.3.1.1. Bath-type Treatment

Under the international standards and rules established by the Ministry of Health, “the day/bath/treatment” method is used in Turkey. According to the studies and observations, about 350 liters of SPA water are needed for each bath. Consequently, the total bath capacity is determined through the multiplication of source flow rate in lt/sec. by $24 * 60 * 60 = 86.400$

$$\text{Capacity} = \frac{\text{Source flow rate} * 86.400 \text{ sec}}{350}$$

If, for example, the source of flow rate is 1 lt/sec., the bed capacity becomes

$$\frac{1 * 86.400}{350} = 246 \text{ person / day / bath}$$

On the other hand, one bath every other day would result in doubling the above figure. In either method, it is assumed that the source water is admitted to a storage facility and this facility is sufficient to hold the 24-hour output of the source.

3.3.1. 2. Pool-type Treatment

For the indoor or open-air pool treatment, the day/bath/person method is also valid. The assumptions here are: a pool with maximum depth of 1,5 meters, 3 square meters and two hours are required per person, the operation of pool for a total of 12 hours per day, and a water circulation of at least 8,12, and 24 hours per day is foreseen during this period.

Let us assume that 4,5 cubic meters (3,0 square meters * 1,5 meter) of water volume shall be used by six people during a 12 hour period and that one-half of this volume shall be replaced during this period, a 6,75 cubic meter/person value shall be found through 4,5 cubic meter +2,25 cubic meters.

$$\frac{\text{Source flow rate (m}^3\text{)} * 24}{6,75}$$

Capacities may also be calculated for the other types of treatment through this method. Since the regulation, the baths and pools which SPA centers require should be no less than 7 lt/sec. of flow rate appears to be necessary for two pools of 17 * 8 * 1,5 m and 10 private baths.

3.3.2. Unit Sizes

Treatment units, ancillary facilities, and an evaluation taking into account the future usage types shall be elaborated under the heading of “Spa Types” in Chapter 1. The following provision may be found in the “*Regulation of Thermae*” published in the *Official Gazette No.25665, dated November 9, 2004.*

Article 7- The Spas approved by the Ministry of Health to be a therapeutical institution shall contain at least the following units:

Bath Implication units

- Thermal treatment pool(s)
- Private baths
- Local bath apparatus
- Treatment showers
- Training pools

Drinking cure units

- At least one drinking cure and suitable relaxation place

Inhalation cure units

- Individual inhalators
- Inhalation room or rooms
- Collective inhalation places (inhalatorium)

Peloidotherapy units

- Peloid preparation unit
- Peloid baths
- Peloid implacation rooms

Thalassotherapy units

• Natural solarium places in addition to the necessary conditions for bath implementations.

• The places where the equipment to be used in order to heat the sea water without deformation of the quality are placed if heating sea water is planned.

Gas bath units

- Gas bath cabins
- Radon gas inhalation rooms

These units can be projected and established upon indications of “Medical Assessment Committee” and the other units which are not described above are established by the Committee’s directions.

3.3.3. Staffing

Close connections and collaboration with universities in the neighborhood must be given due consideration for finding instructing personnel for the spa employees and for medical supervision support (Çekirge 1982).

Article 14 of the “Regulation of Therme” states that at least in the spa establishments there must be;

a) Medical ecological and hydroclimatological specialist or physical treatment and rehabilitation specialist (Law No: 25665).

b) A physiotherapist, nurse, medical servant, or health technician (Law No: 25665).

Implementation of treatment practice in Spa Centers supplied by professional staffing. The staffing requirements under the “Turkish Law” are given below: (Ün 1979).

- a. One person for each 3 to 4 bath rows,
- b. One massager for each massage table,
- c. One person for every two mud bath units,
- d. Two persons for every eight inhalation treatment units,
- e. One person for each underwater massage unit,
- f. One person for each shower unit,
- g. One person for each electrotherapy unit,
- h. One person with first aid knowledge for each pool
- i. One person for each individual pool treatment unit,
- j. Two persons for every eight bath units for legs or arms.

3.4. National Thermal Tourism Master Plan

The studies for Health and Tourism are crucial for government policies about diversifying tourism by diffusing to all country. Some of the possibilities of thermal tourism determined by the Ministry of Culture and Tourism as below:

- Tourism during 12 months,
- High occupancy rate in tourism facilities,
- High employment rate,

- Achieving balanced regional tourism development by integrating thermal tourism with other alternative types of tourism,
- Together with possibilities for treatment of human disease in thermal facilities, existing possibilities for health, physical fitness, recreation, relaxation, and entertainment,
- Investigations show that cost of the facilities integrated with cure centers pay back fast, have competitive power and are also profitable.

In order to increase tourism income through developing thermal tourism market for the usage of the thermal spring water efficiently prepared “Thermal Tourism Master Plan”.

In the plan, new areas have been determined within the context of Thermal Tourism Development Regions Project by the Ministry taking into consideration geothermal potential of our country.



Figure 3.2. Thermal Tourism Regions
(Source: Ministry of Culture and Tourism 2005)

60 hot springs have been declared as thermal tourism centers by the Ministry of Culture and Tourism. With respect to Tourism Encouragement Law, the Ministry of Culture and Tourism has the right to prepare and approve the plans of the hot springs. This study includes determining the potential of geothermal resources and investigating ownership in the areas determined to have potential of geothermal resources. At the beginning of the planning process, the Ministry gathers the technical data related to geological and hydrological values. Protection zones, regarding the mineral springs have to be determined. After determining possibilities of infrastructure in those areas associating with alternative tourism types, the Research Report concludes with thermal

tourism-oriented development strategies that will be used. At the end Environmental Master Plan will be prepared in areas determined after completion Provincial Thermal Master Plan and Regional Thermal Master Plan.

The priority development regions which could be integrated with other tourism types and could compose thermal-oriented destinations have been determined as below:

- South Marmara Thermal Tourism Region (Fig. 3.3)
(Çanakkale, Balıkesir, Yalova)
- Phrygia Thermal Tourism Region (Fig. 3.4)
(Afyonkarahisar, Kütahya, Uşak, Eskişehir, Ankara)
- South Aegean Thermal Tourism Region(Fig 3.5.)
(İzmir, Manisa, Aydın, Denizli)
- Central Anatolia Thermal Tourism Region (Fig 3.6)
(Aksaray, Kırşehir, Nevşehir, Niğde, Yozgat)

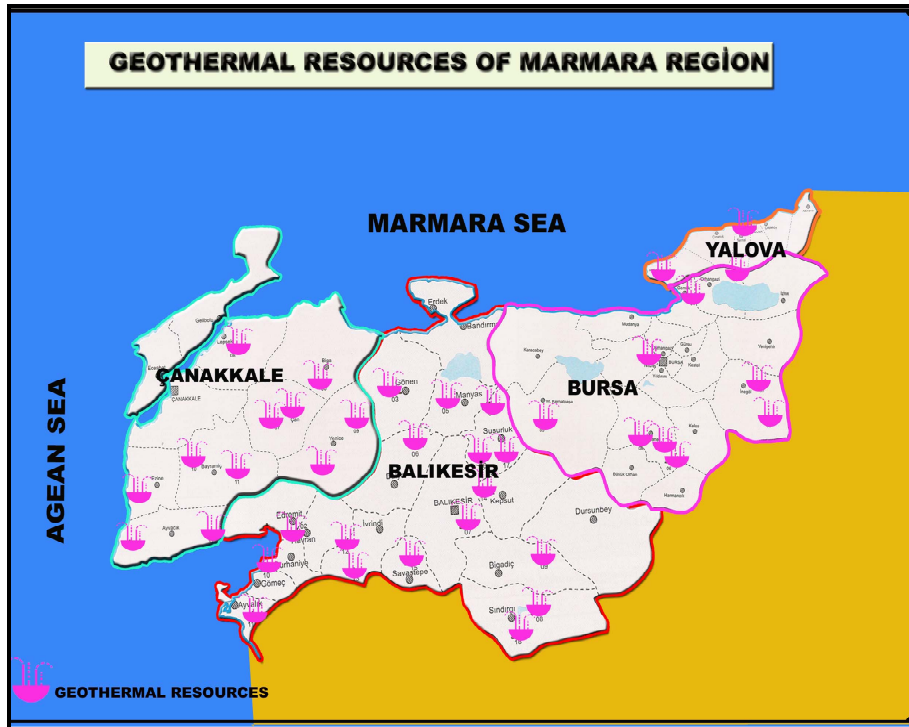


Figure 3.3. Geothermal Areas in South Marmara Thermal Tourism Region
 (Source: The Ministry of Culture and Tourism Documents 2006)



Figure 3.4. Geothermal Areas in South Aegean Thermal Tourism Region
 (Source: The Ministry of Culture and Tourism Documents 2006)



Figure 3.5. Geothermal Areas in Phrygia Thermal Tourism Region
 (Source :The Ministry of Culture and Tourism Documents 2006)

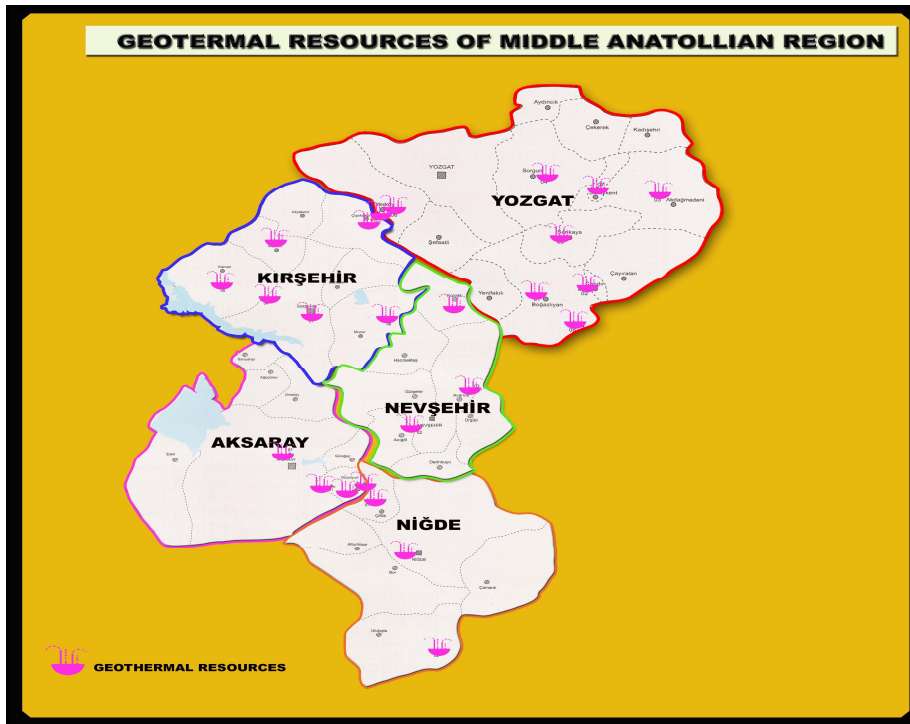


Figure 3.6. Geothermal Areas in Central Anatolia Thermal Tourism Region
 (Source :The Ministry of Culture and Tourism Documents 2006)

The project will be implemented in other regions while information and experiences obtained after this study are being reflected to the whole country. It is aimed to develop every region as a thermal city and in thermal tourism-oriented regions it is aimed to integrate some tourism types such as golf, nature, water sports tourism and link to other natural and cultural assets nearby. For this purpose, a 1/500.000 scale Regional Master Plan is prepared for each region (See Figure 3.7) and 1/250.000 scale Provincial Master Plan is prepared for each province (See Figure 3.8).

The aim is to allocate geothermal resources-oriented Tourism Center and/or Culture and Tourism Conservation and Development Region to tourism investors at short notice after physical plans of those regions are completed.

3.4.1. Targets for Thermal Tourism

In the Short Term; In order to develop thermal tourism, the studies for evaluating geothermal resources started taking into consideration all areas in which geothermal resources located. After the implementation of the environmental of the master plans for the regions, it is aimed to reach 250.000 bed-capacities.

In the Middle Term; The plans and revision plans of Thermal Tourism Centers announced up until now by the Ministry of Culture and Tourism will be completed. It is aimed to reach 1.000.000 bed-capacity in whole Turkey. It is expected that thermal tourism-oriented facilities will be operating with 200.000 bed-capacity.

In the Long Term; It is aimed in the long term to make Turkey the first destination in Europe, to have 15 million tourists for thermal tourism and 500.000 thermal tourism facilities to be operating in Turkey.

CHAPTER 4

METHODOLOGY

The research question of this thesis constitutes how geothermal resources can be used efficiently in thermal tourism from the planning discipline's perspective. To answer this question firstly thermal tourism and related concepts (hot spring, cure, wellness, balneology, various types of treatments, spa, etc.) are explained. Next, thermal tourism is analyzed in the global and national level within the context of the current thermal tourism market in Europe and in Turkey. After making an assessment about where Turkey stands within the global market, the reasons of the underdevelopment of thermal tourism in Turkey are given. In the final section of the literature review, thermal tourism planning is examined in terms of technical, economic, and physical feasibility. In addition to this, the dimensions, capacities, and other requirements in spa planning are summarized. At the end of this chapter The National Thermal Tourism Master Plan prepared by the Ministry of Culture and Tourism in January 2007 is reviewed. In the plan four regions (South Marmara Thermal Tourism Region, Phrygia Thermal Tourism Region, South Aegean Thermal Tourism Region, Middle Anatolia Thermal Tourism Region) were identified according to their potential of geothermal resources and seventeen provinces are included within those (Balıkesir, Çanakkale, Yalova, Ankara, Eskişehir, Kütahya, Afyonkarahisar, Uşak, İzmir, Manisa, Aydın, Denizli, Nevşehir, Yozgat, Tokat, Kırşehir, Niğde).

In order to answer the research question, Kütahya in Phrygia region was chosen as case study. Kütahya was chosen because it has possession of highest geothermal potential among the other provinces.

In the analysis chapter, in order to answer the research question the current thermal tourism market is analyzed using five thermal tourism centers in Kütahya which are licensed by the Ministry of Culture and Tourism as case studies.

The five cases are chosen to determine the reasons of underdevelopment of thermal tourism market and their potential tourism development levels are analyzed. These tourism centers show different features from each other in terms of technical, economic, and physical aspects.

4.1. Evaluation Criteria

In order to make an evaluation of thermal tourism centers in Kütahya, a mathematical approach was found to be necessary. The criteria that will be used are described in the previous chapter. Eight basic criteria including flowrate, temperature, physical and chemical composition of the water, physical feasibility, accessibility, ownership, current market potential, and surrounding attractions are used for the evaluation.

4.1.1. Data Collection

Technical data, consisting of flowrate and temperature are collected from “General Directorate of Mineral Research and Exploration” inventory and data on the characteristics of water are obtained from Ministry of Health’s inventory.

An inventory of physical data and accessibility were collected from the documents of the Ministry of Culture and Tourism and the other data in terms of the ownership of land, current market potential, surrounding attractions, and the reasons of underdevelopment of thermal tourism are gathered during site visits through observations and interviews with managers of the facilities and the local leaders.

4.2. Data Analysis

Eight basic criteria influence the overall evaluation. Using a mathematical approach would give a more accurate result to determine the improvement of the thermal tourism centers. In the analysis part of the thesis the criteria were applied for each tourism center and each criterion for which the scoring method is explained below was scored and total points were calculated for each center. In this evaluation, the higher total scores illustrate the successful examples while lower scores illustrate unsuccessful cases.

The selected criteria are two types: technical criteria and physical and economic feasibility.

1. Technical Criteria

- a. Flowrate (4 points)
- b. Temperature (4 points)
- c. Physical and chemical composition of the water (4 points)

2. Physical and Economic Feasibility

- d. Physical Feasibility (4 points)
- e. Accessibility (4 points)
- f. Ownership (4 points)
- g. Current market potential (4 points)
- h. Surrounding attractions (4 points)

The criteria described above were scored from 1 to 4 points as indicated below:

a. Flowrate

- 4 points High Flowrate > 60 l/sec.
- 3 points Medium 30 l/sn < Flowrate > 59 l/sec.
- 2 points Low 10 l/sn < Flowrate > 29 l/sec.
- 1 point Poor Flowrate > 9 l/sec.

b. Temperature

- 4 points High Temperature > 55 °C
- 3 points Medium 45 °C < Temperature > 54 °C.
- 2 points Low 30 °C < Temperature > 44 °C
- 1 point Poor Temperature > 29 °C

c. Physical and Chemical Composition of the Water

- 4 points High Total mineralization > 3000 mg/l
- 3 points Medium 1000 mg/l < Total mineralization > 2999 mg/l
- 2 points Low 500 mg/l < Total mineralization > 999 mg/l
- 1 point Poor Total mineralization > 499 mg/l

d. Physical Feasibility

The selected sub-criteria such as topography, climate, flora, fauna, geological properties, hydrology has been determined and scored from 1 to 4 as indicated below:

4 points	Good
3 points	Medium
2 points	Fair
1 point	Inadequate

e. Accessibility

4 points	Airway + highway
3 points	Highway + main roads
2 points	Secondary roads or railway
1 point	Macadamized road, long distances from highway

f. Ownership

4 points	Non-municipal Public Property*
3 points	Municipal Property
2 points	Private Property
1 point	Litigated property

* Non-municipal public property consists of national land, forests, and pasture lands.

g. Current Market Potential

4 points	Usage around the year
3 points	3 seasons
2 points	2 seasons
1 point	summer or winter

h. Surrounding Attractions

The selected sub-criteria such as village setting, rivers, waterfalls, rapids, historical sites, forest, urban setting etc. has been determined and scored from 1 to 4 as indicated below. Cases that have many of the above assets are categorized as “good” while centers with few are “inadequate”.

4 points	Good
3 points	Medium
2 points	Fair
1 point	Inadequate

CHAPTER 5

ANALYSIS

In this chapter, five thermal tourism centers which are located in Kütahya is examined and their tourism development potential is evaluated with respect to the technical, physical, and economical planning criteria. Then, the reasons of underdevelopment of thermal tourism market are analyzed and suggested solutions are offered.

5.1. Tourism in Kütahya

According to the recent accommodation statistics in Kütahya, the total number of arrivals is 30782 in 2005, where 0,012 percent are foreigners and 0,279 percent are citizens. The total number of nights spent is 0,061 percent. Occupancy rate is 32,55 percent in Kütahya whereas % 52,38 in Turkey (See Table 5.1). The statistics are below the average of the country. The same result can be seen in Table 5.2. Only 5 tourism establishments have tourism operating certificates and 3 tourism establishments have tourism investment certificate from the Ministry of Culture and Tourism.

Table 5.1. Accommodation Statistic in Kütahya 2005
(Source: Ministry of Culture and Tourism Statistics 2005)

	Kütahya			Türkiye			Share of Kütahya in Tourism Market (%)		
	Foreigner	Citizen	Total	Foreigner	Citizen	Total	Foreigner	Citizen	Total
Number of Arrivals	1 561	29 221	30 782	12 952 616	10 458 386	23 411 002	0,012	0,279	0,131
Number of Nights Spent	2 953	43 143	46 096	56 108 453	18 818 631	74 927 084	0,005	0,229	0,061
Average Length of Stay (Day)	1,9	1,5	1,5	4,3	1,8	3,2	44	83	47
Occupancy Rate (%)	2,09	30,46	32,55	39,22	13,16	52,38	5	231	62

Table 5.2. Facilities Certificated from Ministry of Culture and Tourism in Kütahya 2005
(Source: Ministry of Culture and Tourism Statistics 2005)

	Facilities with Tourism Operating Certificate			Facilities with Tourism Investment Certificate		
	Kütahya	Türkiye	Share of Kütahya in the Tourism Market (%)	Kütahya	Türkiye	Share of Kütahya in the Tourism Market (%)
Number of Establishment	5	1 039	0,36	3	2 412	0,13
Number of Room	264	128 005	0,22	182	231 123	0,07
Number of Bed	528	278 255	0,21	364	483 330	0,07

5.2. Case Studies

There are 11 geothermal sources in Kütahya (See Figure 5.1). 5 of these are chosen as case studies for this thesis considering the criteria stated in Chapter 4 and the matters below.

1. Their hydrogeological and geological etudes are completed by the General Directorate of Mineralogical Institute.
2. They have current tourism facilities.
3. They are licensed as Thermal Tourism Centers by the Ministry of Culture and Tourism.
4. They are included in the Thermal Tourism Master Plan which the Ministry of Culture and Tourism prepared in January 2007.

Among the geothermal sources in Kütahya, 7 of them are licensed as “thermal tourism center” by the Ministry of Culture and Tourism. In the Thermal Tourism Master Plan, 5 of them are decided on to improve whereas the other two are not shown to be developed. In this thesis the 5 thermal tourism centers are examined. Table 5.3 shows the license status of the thermal tourism centers, their license date, and technical features are given.

Up until the National Thermal Tourism Master Plan there were 34 thermal tourism centers in Turkey licensed by the Ministry of Culture and Tourism. Among these Ilıca Harlek, Simav Eynal, and Gediz Ilıcası are in the city of Kütahya. Within the Master Plan, these centers’ boundaries were enlarged and Tavşanlı Göbel and Hisarcık Esire were licensed in the Official Gazette dated December 16, 2007 numbered 11354 in accordance with the Law for the Encouragement of Tourism (Number/2634).

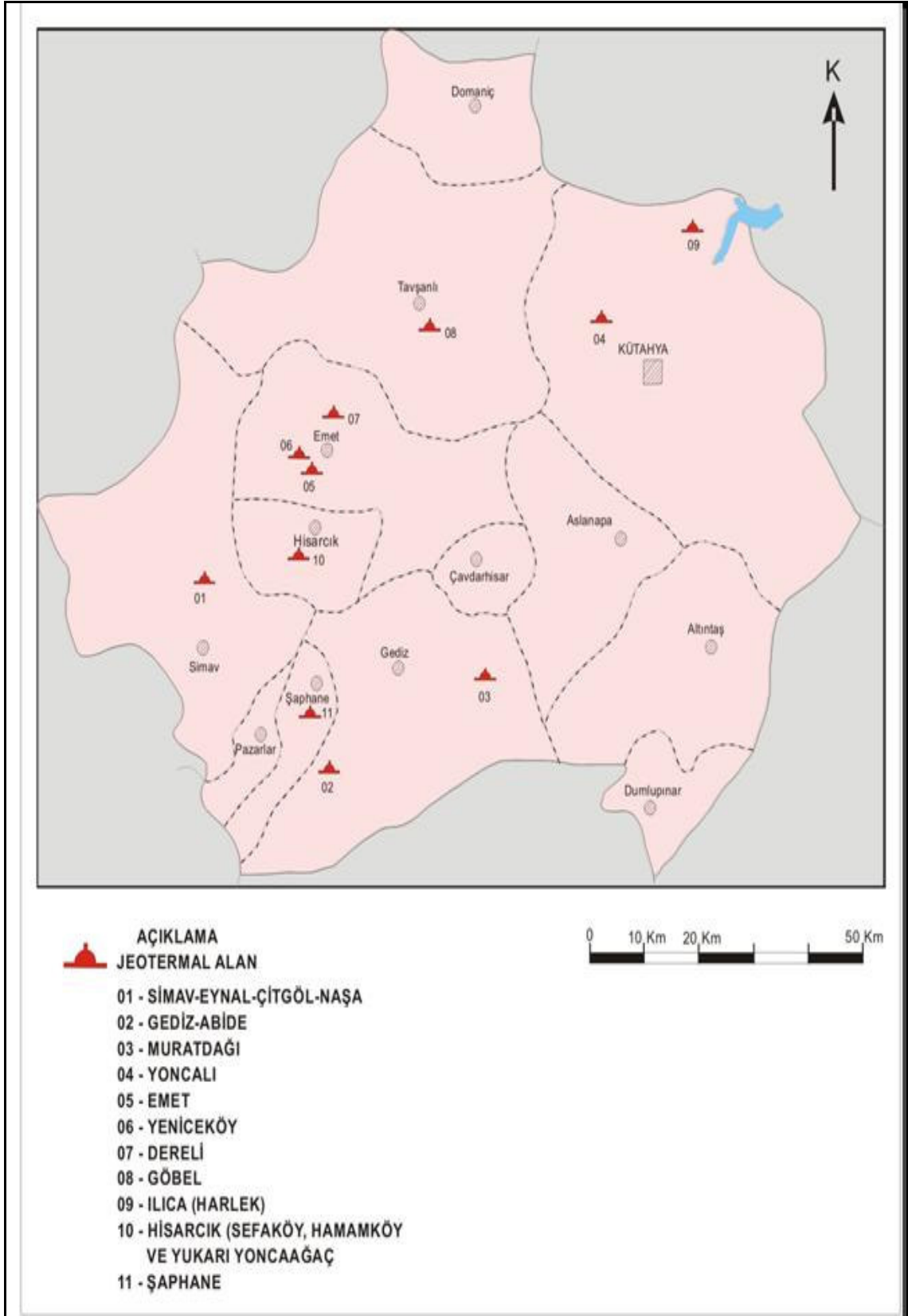


Figure 5.1. Geothermal Areas in Kütahya
(Soure: Akkuş et al. 2005)

Table 5.3. Licence Status and Technical Features of Geothermal Sources in Kütahya (Source: The Ministry of Culture and Tourism and General Directorate of Mineralogical Institute Documents 2007)

Thermal Tourism Centers	Licensed Date	Flowrate of the source (lt/sec.)	Temperature of the source (°C)
Ilıca Harlek Thermal Tourism Center	16.12.2007 (Border Enlargement)	486,1 lt/sec.	25-162,4 °C
Simav Eynal Çitgöl Naşa Thermal Tourism Center	16.12.2007 (Border Enlargement)	139,9 lt/sec.	65-93 °C
Gediz Ilıcasu Thermal Tourism Center	16.12.2007 (Border Enlargement)	7,5 lt/sec	37-39 °C
Gediz Muratdağı Thermal Tourism Center	02.05.1991	118 lt/sec	31-43 °C
Emet Thermal Tourism Center	04.05.1989	10 lt/sec	45 °C
Tavşanlı Göbel Thermal Tourism Center	16.12.2007	0,5 lt/sec	41 °C
Hisarcık Esire Thermal Tourism Center	16.12.2007	75 lt/sec	41 °C
Yoncalı Thermal Tourism Area	Not licensed	60 lt/sec.	34,3 °C
Emet Dereli Thermal Tourism Area	Not licensed	50 lt/sec.	25-43 °C
Emet Yeniceköy Thermal Area	Not licensed	7 lt/sec.	38-51 °C
Gediz Şaphane Thermal Area	Not licensed	3 lt/sec	46 °C

Interviews were made with representatives of the industry and local administrations about the underdevelopment of thermal tourism for each case in the city of Kütahya. The questions asked in the interviews were mainly on the subject of problems faced by tourism centers. The problems about transportation, infrastructure, refining thermal water, utilization of establishments, and advertising the area were the main matters of concern. Additional questions were asked in order to get information on the properties of the area; determining the profile of visitors, where they come from and how long they regularly stay, was aimed by asking related questions. Questions on determining current market potential by calculating the occupancy rate, further tourism activities, and how much the investors are interested in the area were also asked. Final questions focused on the advantages of the selected area, meaning, and overall tourism potential of each area for each case study.

5.2.1.1. Evaluation of Tourism Potential

Flow Rate and Temperature

The temperature of the water is 25-43 °C and the total flow rate is 50 lt/sec. According to the evaluation criteria, the center receives a score of 2 points for temperature and 3 points for flowrate.

Physical and Chemical Composition of the Water

Physical and chemical composition of the water in Harlek is given in Table 5.4. In the scoring method, the center received 3 points.

Table 5.4. Physical and Chemical Composition of the Water in Ilıca Harlek
(Source: Kütahya Directorate of Culture and Tourism Inventory)

Physical Classification	Oligometallic water group
Chemical Classification	Bicarbonate, calcinated and magnesiated
Ph Value	pH 7.31
Total Mineralization	2300 mg/l

Climate

Climate data of Ilıca Harlek is given in Table 5.5.

Table 5.5. Climate Data of Ilıca Harlek
(Source: Kütahya Directorate of Culture and Tourism Inventory)

MONTHS	1	2	3	4	5	6	7	8	9	10	11	12
Average Number of Open Days	4	4	8	4	7	12	26	17	19	14	7	6
Average Number of Cloudy Days	14	19	18	20	22	18	5	13	11	15	19	17
Average Number of Skylesless Days	23	6	5	6	12	-	-	1	-	2	4	8
Average Temperature	0.5	2.7	6.7	10.5	14.1	18.2	21.3	20.3	17.9	13.9	6.8	2.8
Rainy Days	78.5	67.0	57.1	60.6	61.3	59.9	53.7	61.3	58.6	62.7	67.4	71.6

Accessibility

Kütahya Ilıca Harlek Thermal Tourism Center is 28 kilometers north of Kütahya 4 kilometers off the Kütahya- Eskişehir Highway. Airport transportation is through the Ankara Esenboğa Airport, 283 kilometres and İzmir Adnan Menderes Airport, 362 kilometers away. Railway transportation is available at Kütahya Railway Station. Accessibility criterion scored 4 points in this center.

Ownership

The thermal area is owned by the local administration and small private owners. The surrounding area is public property which consists of mainly forest land property and a small amount of pasture which belongs to public land. In scoring method ownership scored 4 points.

Current Market Potential

250 bed capacity five-star hotel Ilıca Harlek is licensed by the Ministry of Culture and Tourism and managed by Kütahya Seramik Porselen Turizm A.Ş., which is the biggest employer in the city. Other facilities in Kütahya are unqualified. There are ten apart hotel and motels certificated by municipality.. These hotels just provide accommodation and have no cure centers. There are three baths, an open air swimming pool with a small aqua park and mini football park to serve daily usage. In summer season other facilities serve full capacity to citizens with low prices. Current market potential scored 4 points.

Surrounding Attractions

Kütahya Ilıca Harlek Thermal Tourism Center is the nearest tourism center to the town of Kütahya. During the data collection process, a minister came to stay at the hotel preferring it to the city center. The hotel manager said this was because “There are no qualified hotels in the city, so important meetings are generally organized in this hotel.” In conclusion, this shows that the tourism center is the major attraction points Kütahya. Porsuk River located in the thermal center is an advantage of the area with

regard to the sportive and recreational activities. Figure 5.3 shows the general view of the thermal area consist of Ilıca Hotel, aquapark and trade center. Surrounding attraction scored 3 points.



Figure 5.3. General Views of Ilıca Harlek.
(Source: by the Author 2006)

5.2.1.2. Interview

An interview with Batuhan Çağrıcı, Sales and Marketing Manager of Ilıca Harlek Thermal Hotel, was done during The Study Congress on Development of Tourism of Kütahya, dated March 14, 2007 on Ilıca Harlek Thermal Tourism Center. The statements of the interviewer mentioned the following disadvantage of the center:

“It is hard to give a regular tourism activity to the city since neighbour Afyon has advantages of being located in the middle of the transportation route. The area has a main disadvantage of being linked to the Eskişehir – Kütahya highway by a 4 kilometers of destroyed asphalt road. The situation also brings the matter of invisibility of the facility. There is an airport problem which could be worked out by a Regional

Airport Project. There is a lack of consciousness about thermal area concept in our country. Foreign visitors come to stay rarely”. The statements of the interviewer mentioned the following advantage of the center:

“Thermal water could reach the facility without facing an obstacle. Used thermal water is send to treatment system of the municipality and discharged into the spring after treatment. 53 percent of the city area is forests leading to high quality thermal water. Turkish bath, aquapark, and cafe-restaurants are appropriate for daily usage by high service quality. Ilıca Harlek Hotel has the highest quality among the other facilities within the city. With an occupancy rate of 30 percent in weekdays and 70 percent in weekends the hotel has the visitors both in summer and in winter. People from almost all generations come to stay and opportunity to have a holiday for three seasons a year exists. Entertainment opportunities such as paintball may attract children and teenagers. Visitors come to stay mostly from İstanbul and İzmir”.

5.2.2. Kütahya Tavşanlı Göbel Thermal Tourism Center

Kütahya Tavşanlı Göbel Thermal Tourism Center was licensed by the Ministry of Culture and Tourism and published in the Official Gazette dated December 16, 2007 numbered 11354 (See Figure 5.4).

KÜTAHYA TAVŞANLI GÖBEL
THERMAL TOURISM CENTER

Map No: İ22 – J22
Scale: 1/100.000

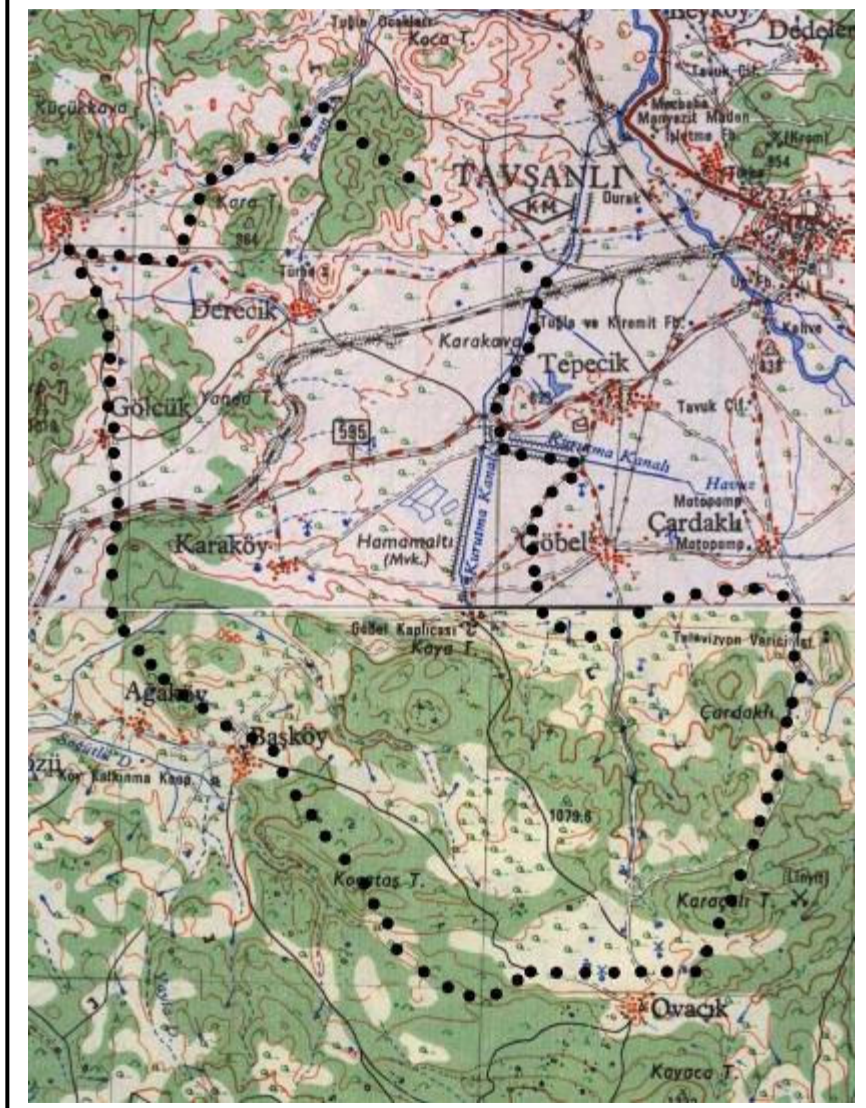


Figure 5.4. Kütahya Tavşanlı Göbel Thermal Tourism Center
(Source: The Ministry of Culture and Tourism Documents submitted to the Official Gazette)

5.2.2.1. Evaluation of Tourism Potential

Flow Rate and Temperature

The temperature of the water is 34,3 °C and the total flow rate is 60 lt/sec. With the scoring method, temperature scored 2 points and flowrate scored 4 points.

Physical and Chemical Composition of Water

Physical and chemical composition of the water in Tavşanlı Göbel is given in Table 5.6. With the scoring method, this criterion scored 3 points.

Table 5.6. Physical and Chemical Composition of the Water in Tavşanlı Göbel
(Source: Kütahya Directorate of Culture and Tourism Inventory)

Physical Classification	Hypotonic, Oligometallic water group
Chemical Classification	Bicarbonate, calcinated, bromated, magnesiated
Ph Value	pH 6,74
Total Mineralization	1200 mg/l

Climate

Climate data in Tavşanlı is given in Table 5.7.

Table 5.7. Climate Data of Tavşanlı
(Source: Kütahya Directorate of Culture and Tourism Inventory)

MONTHS	1	2	3	4	5	6	7	8	9	10	11	12
Average Number of Open Days	-	2	11	6	5	9	23	7	14	10	5	4
Average Number of Cloudy Days	12	16	8	14	19	19	7	22	16	19	17	15
Average Number of Skyless Days	19	11	12	10	7	2	1	2	3	2	8	12
Average Temperature	1.1	2.2	6.8	10.5	14.2	19.4	22.6	21.4	18.5	14.1	7.2	3.8
Rainy Days	80.1	70.1	58.6	64.0	65.6	62.0	55.3	63.1	58.1	62.5	70.7	76.8

Accessibility

Kütahya Tavşanlı Göbel Thermal Tourism Center is at a distance of 6 kilometers from Tavşanlı town center. Highway transportation is used to reach the center. Airport transportation is provided by means of Bursa Airport 140 kilometers away. Railway transportation is provided from the Kütahya Railway Station. With the scoring method, accessibility scored 2 points.

Ownership

The facilities are owned and managed by the Municipality of Tavşanlı. The north side of the tourism center is in private property and used for agriculture and the south side of the center is forest land which is public property. With the scoring method, ownership scored 3 points.

Current Market Potential

In the tourism center there are 33 apart units with 68 bed capacity managed by the Municipality of Tavşanlı. A modern cure center which is the new investment of the area is used for swimming and bathing purposes. Beside that, in the center there is a tourism establishment under construction which obtained tourism investment certification from the Ministry of Culture and Tourism. With the scoring method, current market potential scored 2 points.

Surrounding Attractions

Tavşanlı is the biggest town in Kütahya. Kütahya Tavşanlı Göbel Thermal Tourism Center has rich natural resources. Forest and wide fields surround the area. In the future the area will be developed as a thermal town with sport activities such as golf courses, football, camping etc. Figure 5.5 shows general views of Tavşanlı and Figure 5.6 shows the cure center. Surrounding attractions scored 3 points.



Figure 5.5. General Views of Tavşanlı
(Source: by the Author 2006)



Figure 5.6. A Cure Center in Tavşanlı
(Source: by the Author 2006)

5.2.2.2. Interview

A phone interview with Ali İhsan Çakır, Mayor of Tavşanlı Municipality, was made in May 20, 2007 on Tavşanlı Göbel Thermal Tourism Center. The statements of the interviewee are given below:

“Some of disadvantages of the area can be stated as need of renewal of the road to hot spring area and insufficient bed capacity that the facility holds. New and various cultural activities will be put in use of visitors after the completion of additional facility building. Investors are closely interested with the area after it has become a thermal tourism center. Demand for Göbel Thermal springs is high with its thermal water, which helps to cure rheumatism, asthma and skin diseases by high oxygen derivation”.

5.2.3. Kütahya Hisarcık Esire Thermal Tourism Center

Kütahya Hisarcık Esire Tourism Center was licensed by the Ministry of Culture and Tourism and published on the Official Gazette dated December 16, 2006 numbered 11354 dated 16.12.2007 (See Figure 5.7).

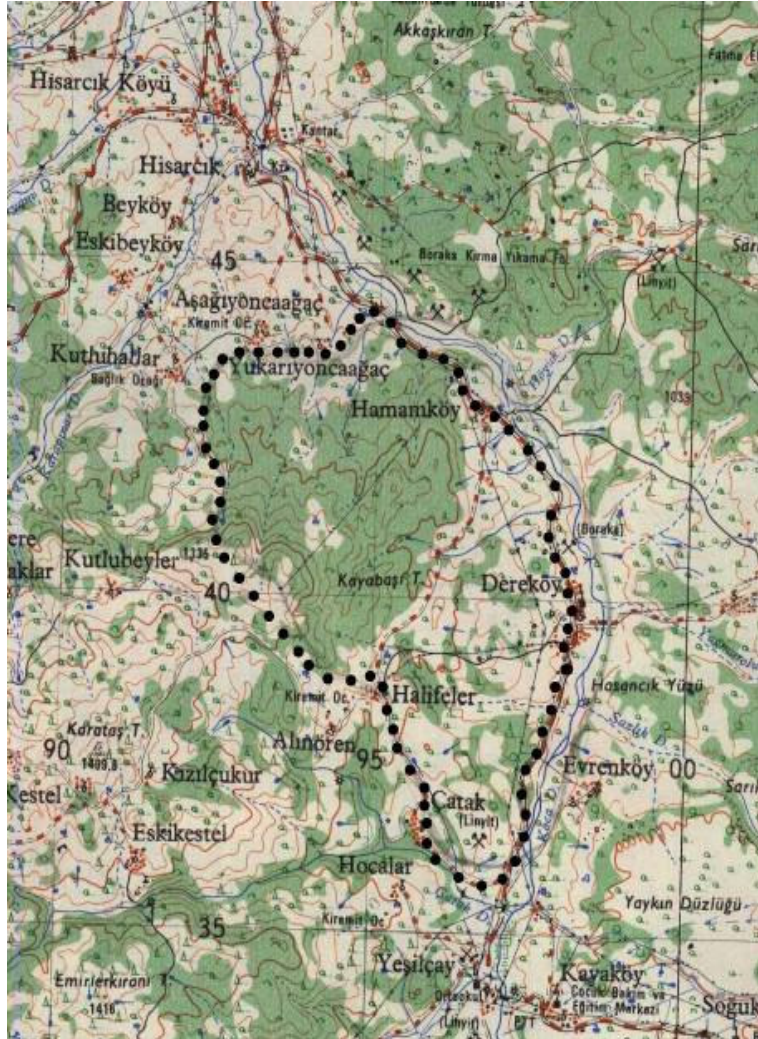


Figure 5.7. Kütahya Hisarcık Esire Termal Tourism Center
(Source: The Ministry of Culture and Tourism Documents submitted to the Official Gazette)

5.2.3.1. Evaluation of Tourism Potential

Flow Rate and Temperature

The temperature of the water is 38-51 °C and the total flow rate is 7 lt/sec. Both temperature and flowrate scored 3 points.

Physical and Chemical Composition of the Water

Physical and chemical composition of the water in Hisarcık Esire is given in Table 5.8. With the scoring method, this criterion scored 2 points.

Table 5.8. Physical and Chemical Composition of the Water in Hisarcık
(Source: Kütahya Directorate of Culture and Tourism Inventory)

Physical Classification	Oligometallic water group
Chemical Classification	Bicarbonate, calcinated, sulfated, magnesiated
Ph Value	-
Total Mineralization	836 mg/L. - 958 mg/L.

Climate

Climate data in Hisarcık is given in Table 5.9.

Table 5.9. Climate Data of Hisarcık
(Source: Kütahya Directorate of Culture and Tourism Inventory)

MONTHS	1	2	3	4	5	6	7	8	9	10	11	12
Average Number of Open Days	-	2	11	6	5	9	23	7	14	10	5	4
Average Number of Cloudy Days	12	16	8	14	19	19	7	22	16	19	17	15
Average Number of Skyless Days	19	11	12	10	7	2	1	2	3	2	8	12
Average Temperature	1.1	2.2	6.8	10.5	14.2	19.4	22.6	21.4	18.5	14.1	7.2	3.8
Rainy Days	80.1	70.1	58.6	64.0	65.6	62.0	55.3	63.1	58.1	62.5	70.7	76.8

Accessibility

Kütahya Hisarcık Esire Thermal Tourism Center is at a distance of 7 kilometers from Sefaköy village in Hisarcık town center. The Center is at distance of 110 kilometers from Kütahya, accessible by Simav-Kütahya Highway and a macadamized road. The narrow path winding through the village settlement and fields is suitable only when the weather conditions permit. Airport transportation is through the İzmir Adnan Menderes Airport 274 kilometers away. Railroad transportation is by Tavşanlı Railway. Accessibility scored 1 point.

Ownership

The facilities are owned and managed by the Municipality of Hisarcık. The surrounding area is in private ownership and consists of agricultural fields and in public ownership which consists of forest, pasture and treasury lands.

Current Market Potential

In the tourism center there are 12 apart units which are owned and managed by the Municipality of Hisarcık that serve the area. A bath in the form of hammam is used in the bathrooms. This criterion scored 1 point.

Surrounding Attractions

There is a reservoir of boron mineral in the surrounding area which would have a harmful effect in tourism potential of the area whereas thermal area is near to the Aizonai antique city in Çavdarhisar. This attractive cultural point will be an important potential for the visitors in the future. This criterion scored 1 point. General Views of the area is shown in Figure 5.8.



Figure 5.8. General Views of Hisarcık
(Source: by the Municipality of Hisarcık 2006)

5.2.3.2. Interview

A phone interview with Nihat Helvacı, mayor of Hisarcık Municipality, was made in on May 16, 2007 on Hisarcık Esire Thermal Tourism Center. Interviewee stated the disadvantages of the center as follows:

“Highway transportation has been facing problems in Tavşanlı-Emet and Hisarcık-Gediz connections. The other main disadvantage is lack of an airport. Altıntaş Airport will be completed by the year 2010 which will directly affect the attraction of the area to the investors. Due to financial problems of the municipality utilizing the facilities have been getting harder, nevertheless new apart units will be constructed in order to make the facility profitable. Since there is no health staff working for the facility, it is not possible to get the necessary licences from the Ministry of Health. Used thermal water has been flowing through drainage of Hamamköy since reinjection could not be done because of insufficient infrastructure”. Interviewee stated the advantages of the center as follows:

“According to new regulations, investors in Kütahya have begun to receive subsidies from the government for employee and input costs, this is an advantage. An American company found the area as worthy except for its transportation problem. Effective advertising has been made by participating fair organizations, festivals and plaung advertisements on domestic television channels. Customers of the facility come mainly from İstanbul, Bursa, Ankara and Uşak, excess demand to the facility is not observed during regular periods of year. Visitors stay for 15 days on the average. An occupancy rate of 100 percent during summer and 80 percent during winter is observed. Proximity to the Aizonai ancient city in Çavdarhisar and Gölcük and Muratdağı wold provides great advantage to the thermal center”.

5.2.4. Kütahya Simav Eynal Çitgöl Naşa Thermal Tourism Center

The area of Kütahya Simav Eynal Çitgöl Naşa Tourism Center was enlarged by the Ministry of Culture and Tourism and published in the Official Gazette dated December 16, 2006 numbered 11354 dated. (See Figure 5.9.)

Table 5.10. Physical and Chemical Composition of the Water in Simav Eynal Çitgöl Naşa
(Source: Kütahya Directorate of Culture and Tourism Inventory)

Physical Classification	Hypotonic water group
Chemical Classification	sodium bicarbonate, sulfated, magnesiated, calcinated
Ph Value	-
Total Mineralization	2000 mg/L.

Climate

Climate data in Simav is given in Table 5.11.

Table 5.11. Climate Data in Simav
(Source: Kütahya Directorate of Culture and Tourism Inventory)

MONTHS	1	2	3	4	5	6	7	8	9	10	11	12
Average Number of Open Days	3	5	10	7	10	13	25	17	25	14	10	7
Average Number of Cloudy Days	10	13	14	11	17	14	6	13	5	14	14	14
Average Number of Skyless Days	18	11	7	12	4	3	-	1	-	3	6	10
Average Temperature	2.1	3.0	7.5	11.2	14.8	19.9	22.8	21.6	18.9	14.6	8.2	5.1
Rainy Days	71.6	63.1	53.5	56.0	56.4	53.3	46.5	52.2	50.5	56.0	61.8	64.6

Accessibility

Kütahya Simav Eynal Çitgöl Naşa Thermal Tourism Center is in the southwest of Kütahya 4 kilometres from the town of Simav. Airport transportation is through the İzmir Adnan Menderes Airport 225 kilometers away. Railway transportation is from Tavşanlı Railway Station 90 kilometers away. With the scoring method accessibility scored 2 points.

Ownership

The facilities are owned and managed by the Municipality of Simav. The near vicinity is private property which is used for agriculture and greenhouses. The surrounding area consists of pasture land and forest land which has steep shape. 2 points is given with the scoring method.

Current Market Potential

Two hotels with 152 bed capacities and 65 apart units with 260 bed capacities are the facilities in the tourism center. Beside that, two Turkish baths and one covered pool serve the visitors. Current market potential scored 3 points.

Surrounding Attractions

Greenhouses are developing around the thermal tourism center. Town center is also using geothermal energy for central heating. There is a dried lake that is being used for agriculture; however, it is possible for the area to be used for recreational and sportive purposes in the future. Figure 5.10 illustrates general views of the Simav Eynal Çitgöl Naşa Thermal Tourism Center which consists of apart units, wells, open pool and green area. Surrounding attractions scored 2 points.



Figure 5.10. General views of Simav
(Source: by the Municipality of Governorship 2006)

5.2.4.2. Interview

An interview with Hüseyin Güner, Assistant Mayor of Simav Municipality, was arranged during The Study Congress on Development of Tourism of Kütahya on March 15, 2007 on Simav Eynal Thermal Tourism Center. The statement of the interviewee indicates the disadvantages of the center as follows:

“Eynal thermal springs have not been supported financially due to size of the facility, renewals and additions could not been made due to insufficient financial conditions. Facility Certification had been supplied from the Ministry of Health after analysis of thermal water; however, there is no licence from the Ministry of Culture and Tourism. The number of staff is insufficient, while there is a definite need for a physiotherapist even the municipality is not able to pay for such a position, the situation is completely against the regulations of hot springs. There are also problems of training of staff and advertising the area. Transportation cannot be carried effectively with the existing connection; Simav-Kütahya, Gediz-Simav , Simav-Uşak , Simav-Bursa, Simav- Balıkesir. Investors are not interested enough to develop the facilities due to the transportation problem. Used thermal water has been discharge Sındırgı Barrage by this way to Marmara Sea due to lack of treatment facilities. In conclusion, general problems of the area could be summarized under four main categories; transportation, financial support, advertising, and investments”. The statement of the interviewee indicates the advantages of the center as follows:

“The facility has an occupancy rate of 50 percent in winter and 100 percent in summer. Visitors stay for 20 days on the average, Simav Bazaar, Gölcük and Nadar can be stated as good places for sight-seeing. One of the advantages of the area is the fact that the natural environment has been protected within the settlement. The area is suitable for further development by its rich natural sight”.

5.2.5. Kütahya Gediz Ilıcası Thermal Tourism Center

Kütahya Gediz Ilıcası Tourism Center was enlarged by the Ministry of Culture and Tourism and published in the Official Gazette dated December 16, 2006 numbered 11354 dated (See Figure 5.11).

KÜTAHYA GEDİZ ILICASU
THERMAL TOURISM CENTER

Map No: K 22
Scale: 1/100.000

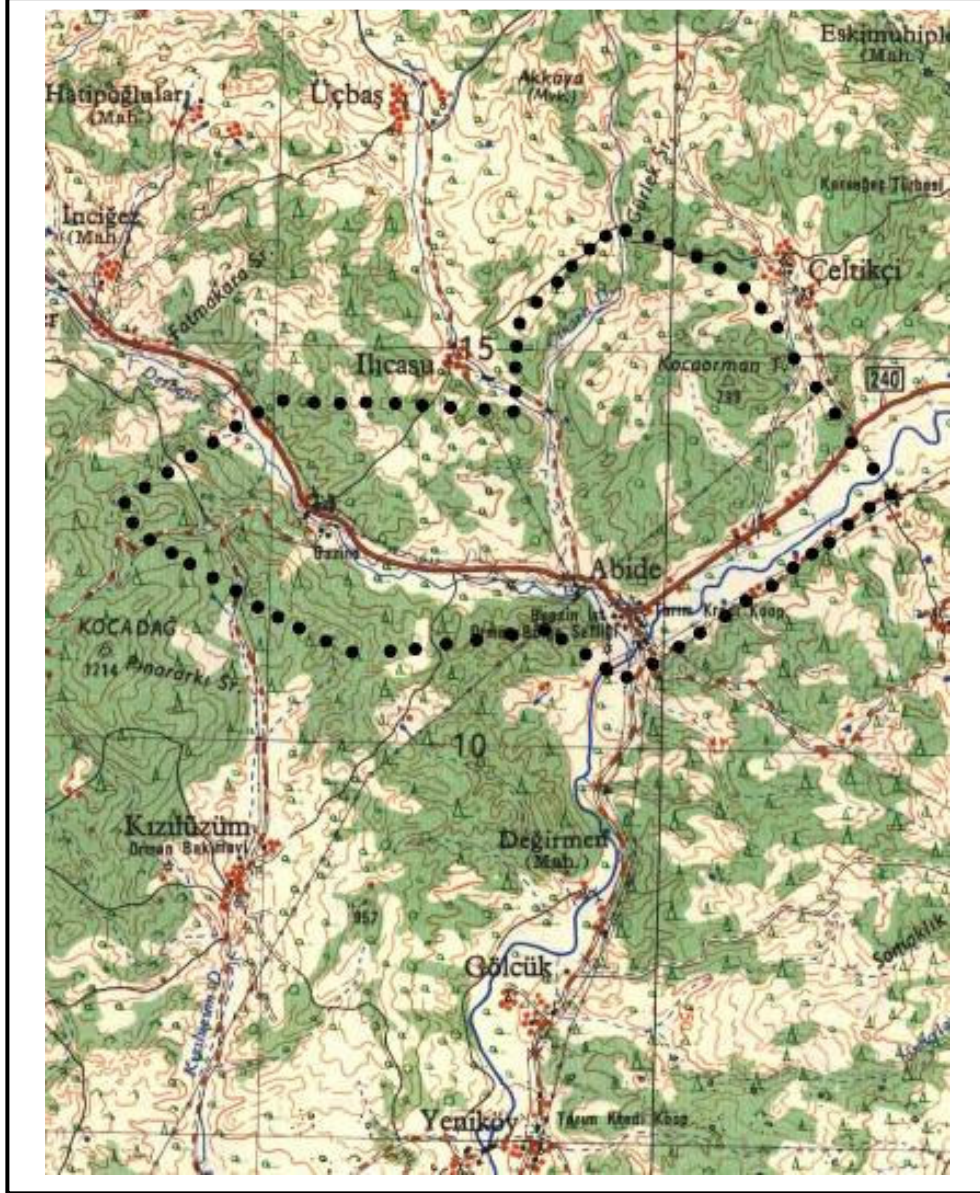


Figure 5.11. Kütahya Gediz Ilıcası Thermal Tourism Center
(Source: The Ministry of Culture and Tourism Documents submitted to the Official Gazette)

5.2.5.1. Evaluation of Tourism Potential

Flow Rate and Temperature

The temperature of the water is 65-93 °C and the total flow rate is 139,9 lt/sec. Both the temperature and the flowrate scored 4 points.

Physical and Chemical Composition of Water

Table 5.12 shows the physical and chemical composition of the thermal water in Gediz Ilıcası. This criterion takes 4 points with the scoring method.

Table 5.12. Physical and Chemical Composition of the Water in Gediz
(Source: Kütahya Directorate of Culture and Tourism Inventory)

Physical Classification	Hypothermal and Hypotonic water group
Chemical Classification	Magnesiated, bicarbonate, sulfated, sodium, arsenic and metabolic
Ph Value	pH 6,5-7,9
Total Mineralization	1289 -3218 mg/lt

Climate

Climate Data in Gediz is given Table 5.13.

Table 5.13. Climate Data in Gediz
(Source: Kütahya Directorate of Culture and Tourism Inventory)

MONTHS	1	2	3	4	5	6	7	8	9	10	11	12
Average Number of Open Days	2	6	9	5	8	10	25	16	17	13	9	8
Average Number of Cloudy Days	14	17	16	21	22	20	6	15	13	18	16	16
Average Number of Skyless Days	15	6	6	4	1	-	-	-	-	-	5	7
Average Temperature	1.4	2.7	7.5	11.1	15.8	21.9	25.1	23.0	19.3	13.9	7.4	3.5
Rainy Days	75.0	64.3	59.8	63.4	62.0	57.2	48.4	56.7	54.8	62.0	68.5	74.3

Accessibility

The tourism center is located in the south of Kütahya 18 kilometers from the town of Gediz. Airport transportation is by means of the İzmir Adnan Menderes Airport 260 kilometers away. Railway transportation is from Uşak Railway Station 50 kilometers away. Accessibility scored 3 points.

Ownership

The facilities are owned and managed by the Municipality of Gediz. The facilities are surrounded by forest land and greenhouses. Ownership scored 3 points.

Current Market Potential

There are 92 apart units with 356 bed capacity, 22 wooden huts, and 10 concrete huts giving poor service. In daily use 1 sauna, 1 mud bath, 2 Turkish baths, and 2 swimming pools are serving the visitors. These usages are divided into men's and women's sections. There is no definite season. The visitors come from the neighboring villages during the summer months. There is an unfinished thermal investment which was holding off by the Municipality of Gediz because of inadequate budget. (See the marked building in Figure 5.10.) Current market potential scored 3 points.

Surrounding Attractions

Greenhouses are developing around the thermal tourism center. Town center is also using geothermal energy for central heating. Figure 5.11. illustrates the general views of Gediz. The discharge of used thermal water to the river where can be seen in the last picture. Surrounding attractions scored 3 points.

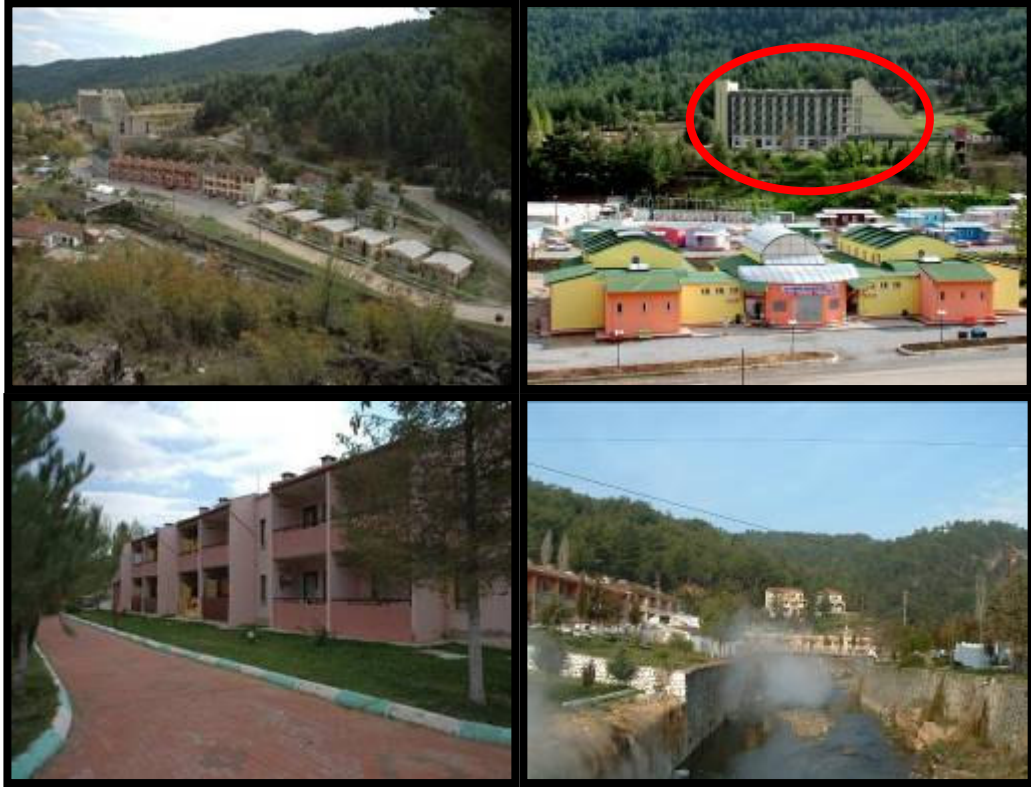


Figure 5.12. General Views of Gediz
(Source: by Author 2006)

5.2.5.2. Interview

An interview with Ali Nazım Balcıoğlu, Governor of Gediz District, was arranged during The Study Congress on Development of Tourism of Kütahya on March 15, 2007 on Gediz Ilıcasu Thermal Tourism Center. The interviewee recounted the following disadvantages:

“Following from the fact that the facilities within the area are managed by the Municipality of Gediz, quality of service and utilization stay in low level. Facilities within the area are not certificated by the Ministry of Tourism and the Ministry of Health. There is no concept of “area management”, legal regulations to enable and allow this should be put in order. The problem of reinjection of thermal water exists, used water links to the stream passing from the middle of area which causes environmental and visual pollution. By the way, there is a lack of drinking water in the area. The 80 °C thermal water is not appropriate for bathing purposes in thermal tourism. Another problem is, the area has the disadvantage of transportation”. The interviewee recounted the following advantages of the area:

“The area is 70 kilometres away from Altıntaş Airport that will be completed in 2010-2015 period. Another advantage is being located near Uşak, however, the 30 kilometer road which links the area to the highway should be renewed. It has been planned to locate a light industrial region where not far away from the area which may create an opportunity for tourism market to develop. Climate conditions are appropriate for natural and cure purposes. Occupancy rate in summer is high, visitors find the opportunity to make shopping in Gediz and Uşak”.

5.3. Evaluation of the Thermal Tourism Centers

The thermal centers taken as case studies are analyzed according to flowrate, temperature, physical and chemical composition of the water, climate, accessibility, ownership, current market potential, and surrounding attractions. They are scored using the method explained in Section 4.2 of Chapter 4.

Table 5.14 shows the total scores for each center. As can be seen in the table 5.14, Kütahya Ilıca Harlek Thermal Tourism Center and Kütahya Gediz Ilıcası Thermal Tourism Center took the highest scores. Kütahya Simav Eynal Thermal Tourism Center, Kütahya Tavşanlı Göbel Thermal Tourism Center came after them and Kütahya Hisarcık Esire Thermal Tourism Center took the lowest score.

Table 5.14. Analysis of the Cases

	EVALUATION CRITERIA								
	<i>TECHNICAL CRITERIA</i>			<i>PHYSICAL AND ECONOMICAL FEASIBILITY</i>					
THERMAL TOURISM CENTERS	Flowrate	Temperature	Physical and Chemical Composition of the Water	Physical Feasibility	Accessibility	Ownership	Current Market Potential	Surrounding Attractions	TOTAL SCORE
Kütahya Ilıca Harlek Thermal Tourism Center	3	2	3	3	4	4	4	3	26
Kütahya Tavşanlı Göbel Thermal Tourism Center	4	2	3	3	2	3	2	3	22
Kütahya Hisarcık Esire Thermal Tourism Center	3	3	2	1	1	2	1	1	14
Kütahya Simav Eynal Çitgöl Naşa Thermal Tourism Center	4	4	3	2	2	2	3	2	22
Kütahya Gediz Ilıcası Thermal Tourism Center	4	4	4	3	3	3	3	3	27

We can conclude that, thermal centers with higher scores can be improved easily and comparatively cheaper, the medium ones can be improved with a bit more effort and expense whereas the center with the lowest score requires extensive improvements to reach European standards.

The usage of the thermal water planning is an important factor in the thermal tourism planning. Examination of the planned bed capacity which the Ministry of Culture and Tourism has planned in the Master Plan is examined. Total bath capacities of these centers are not determined through the multiplication of source flow rate in lt/sec. as it should be. When we calculate the bed capacities according to this method explained in Section 3.3.1 of Chapter 3, the result is not the same with the Ministry's determination (see Table 5.15.). The Ministry calculates the bed capacities from the size of the tourism areas in the plan decision.

$$\text{Capacity} = \frac{\text{Source flow rate} * 86.400 \text{ sec.}}{350}$$

Table 5.15. Bed Capacity Calculations of Thermal Tourism Centers

Thermal Tourism Centers	Ministry of Tourism Determinations		Flowrate-based Calculations	
	Area (ha)	Ministry of Tourism Planned Bed Capacity	Flowrate (lt/sec.)	Bed Capacity Calculated by Flowrate
Kütahya Ilıca-Harlek Thermal Tourism Center	5,600	10.000	50	12 340
Kütahya Tavşanlı-Göbel Thermal Tourism Center	6.300	15.000	60	14 810
Kütahya Hisarcık-Esire Thermal Tourism Center	3.000	10.000	7	1 718
Kütahya Simav Eynal Naşa Çitgöl Thermal Tourism Center	10.000	15,000	486	119 972
Kütahya Gediz İlçası Thermal Tourism Center	2.700	10.000	139	34 313

When we examine the table, we see that Kütahya Ilıca Harlek Thermal Tourism Center, Kütahya Simav Eynal Çitgöl Naşa Thermal Tourism Center, and Kütahya Gediz

Ilıcası Thermal Tourism Center's bed capacities as determined by the Ministry are less than the potential. As a result the thermal water is not used efficiently and this causes waste of the natural resource. The purpose of usage should be taken into consideration when the capacities of beds are planned. Simav Eynal and Gediz Ilıcası have a high temperature and the thermal water is not only used for thermal tourism purpose but also used for heating. So, given capacity can be less than the calculation of the flowrate with bed capacity. Kütahya Tavşanlı Göbel Thermal Tourism Center and Kütahya Hisarcık Esire Thermal Tourism Center's bed capacities as determined by the Ministry are more than they are supposed to be. As a result, the thermal water is not used in a sustainable manner and this can have a harmful effect to the natural resources.

When we examine the reasons of underdevelopment of thermal tourism from the interviews conducted with the representatives of each tourism center examined in the city of Kütahya, the main reason common to all is revealed to be insufficient transportation as can be seen in Table 5.16. Lack of treatment system for used thermal water which causes waste of the resource, limited municipality of budgets, and lack of facilities certificated by the Ministry of Health and Ministry of Culture and Tourism which causes lack of sanitation and educated staff are the other reasons. Inadequate accommodation units, reluctance of investors, and insufficient advertisement were mentioned the least. An analysis of the reasons is shown in Figure 5.13.

The analysis of the interview data indicates that Ilıca Harlek is the thermal tourism center with least number of problems whereas Hisarcık Esire, Simav Eynal, and Gediz Ilıcasu are the ones with most number of problems. Earlier analysis based on technical, physical, and economical criteria showed that Ilıca Harlek and Gediz Ilıcasu have the most potential for improvement. Since Ilıca Harlek performed well in both evaluations it seems to be the tourism center that is most likely to succeed.

Table 5.16. The Reasons of Underdevelopment of Thermal Tourism in Thermal Tourism Centers

TOURISM CENTERS REASONS	Ilıca Harlek Thermal Tourism Center	Tavşamlı Göbel Thermal Turism Center	Hisarcık Esire Thermal Tourism Center	Simav Eynal Thermal Tourism Center	Gediz Ilcasu Thermal Tourism Center	TOTAL
Insufficient Highway Connection	•	•	•	•	•	5
Lack of Airport	•	•	•	•	•	5
Lack of Treatment of Used Thermal Water		•	•	•	•	4
Limited Municipality Budget		•	•	•	•	4
Lack of Facilities Certificated by the Ministry of Health			•		•	2
Lack of Facilities Certificated by the Ministry of Culture and Tourism		•	•	•	•	4
Lack of Sanitation		•	•	•	•	4
Inadequate Accommodation Units		•	•	•		3
Reluctance of Investors			•	•	•	3
Insufficient Advertisement		•		•	•	3
TOTAL	2	8	9	9	9	

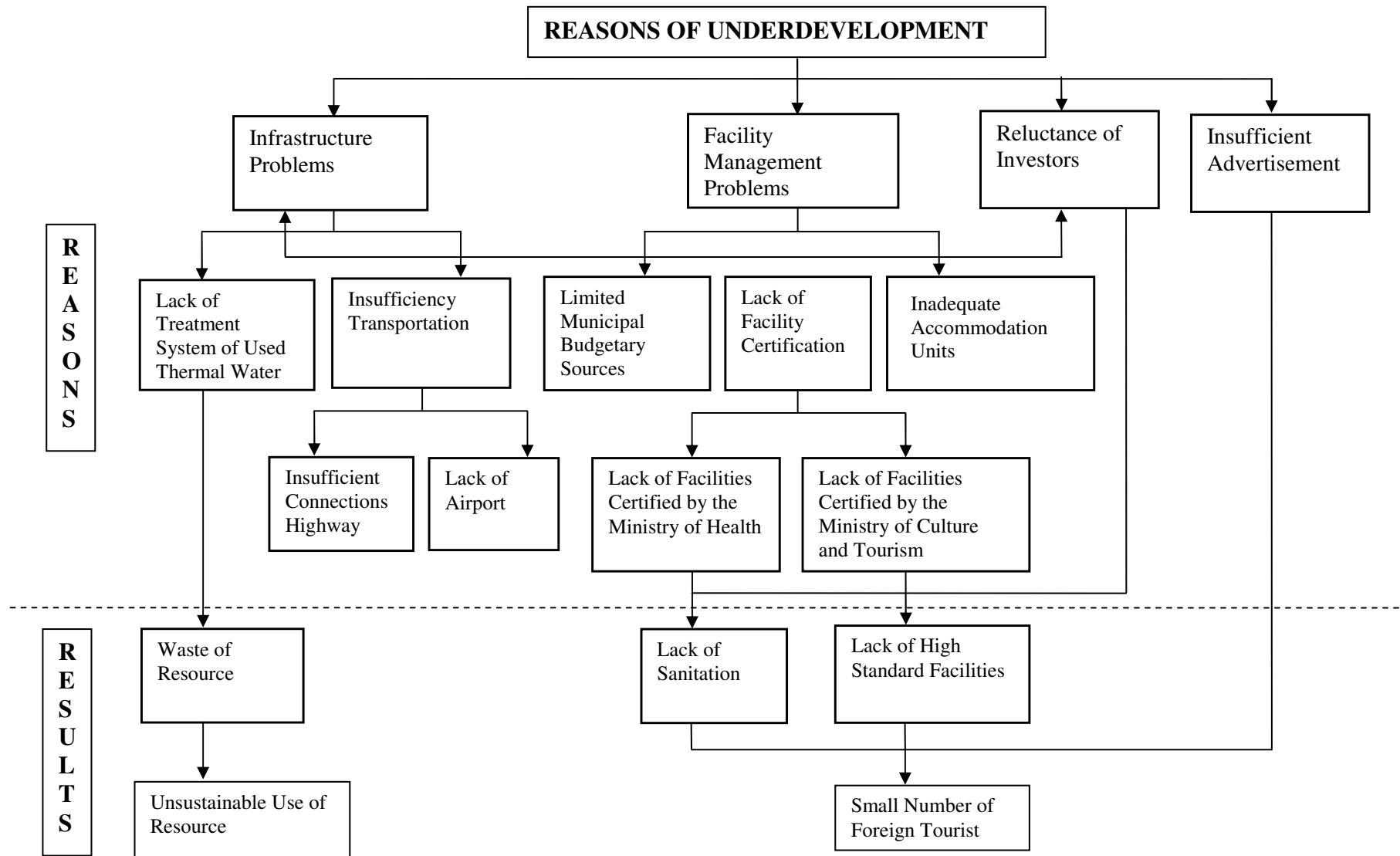


Figure 5.13. Problem Chart of the Cases

CHAPTER 6

CONCLUSIONS

Turkey is one of the important centers of geothermal resources in the world. However, the geothermal potential is not utilized efficiently in the thermal tourism market. The main reason of this is the fact that the thermal facilities are mainly owned and managed by local administrations and private investors are still not involved in the sector. To achieve a developed thermal tourism market, new tourism investments should be put into practice by the private sector to establish internationally standardized facilities. To use thermal water efficiently, under the lead of the government, local administrations have to cooperate with the private sector to manage thermal areas with an organization design starting from getting thermal water into the wells to the distribution of the water in thermal facilities.

Within the cooperation between the local administrations and private investors, an effective planning process should be undertaken in the thermal areas. Before making tourism plans, geological and hydrogeological studies are necessary to determine the thermal water potential and according to the results of the study, the protection areas should be determined to keep water sustainable and in a good quality.

In the National Thermal Tourism Master Plan which the Ministry of Culture and Tourism has prepared, new thermal tourism centers are licensed in 17 provinces. Owing to the limited government budgetary sources to support all these tourism centers, priority thermal tourism centers should be select to support with the Law of Tourism Encouragement (Numbered 2634). Two main criteria are used develop in this study to determine the thermal tourism potential of the area. These include;

- Technical Feasibility, and
- Physical and Economic Feasibility.

Sustainable usage of water in the area is one of the main principles in planning in order to provide protection-utilization balance. Flowrate of thermal water should be considered while tourism bed capacity is calculated for planned thermal tourism areas. Bed capacity exceeding the flowrate may cause the natural resources to be used in an unsustainable manner, whereas bed capacity less than the flowrate may cause the thermal water not to be used efficiently and wasted.

Turkey should participate in the thermal tourism market with qualified facilities meeting international standards which are integrated with cure parks, cure centers, and accommodation units. In order to reach the international standards, the Ministry of Health and the Ministry of Culture and Tourism should cooperate for treatment and tourism purposes. In addition, in the countries that have a developed thermal tourism sector, the public and private health insurance institutions have classified the diseases according to physical and chemical composition of the thermal water. However, in Turkey diseases have not been classified according to the properties of the thermal water. The Ministry of Health should work on that. In addition, through the integrated use of high temperature water for heating, greenhouse, tourism, and fishery maximum return can be gained in the from the resource.

Tourism incentives which Law of Tourism Encouragement (Numbered 2634) offers are not sufficient to improve thermal tourism sector. To encourage the thermal tourism investors the law should be provide more incentives to improve the sector. The reason of underdevelopment of thermal tourism is the lack of a protective and leading special law which requires the geothermal resources to be used efficiently. The new law should regulate thermal water from the resource to the surface, including distribution and supply of the water to the thermal facilities and one institution should authorize the right to use the thermal water.

The important question that forms the basis of this thesis is how the geothermal resources can be used efficiently in the thermal tourism market from the planning discipline's perspective. Literature review and analysis gives an idea about the reasons and suggested solutions of underdevelopment of thermal tourism in Turkey as explained throughout the study. Based on the impressions of the interview respondents and the author's observations, the following suggestions can be summarized:

- Roads to the thermal tourism centers should be rehabilitated and roads between thermal tourism and other types of activities that have direct relation to tourism such as nature and culture, etc. should be connected.

- Airport is an important locomotive factor for mobilization of international tourism activities. This matter is closely related drawing attention of the tourism investors.

- The treatment systems of used thermal water should be supplied to all thermal tourism centers to prevent waste of resources and refined water should be reinjected to its underground source.

- Through the integrated use of high temperature water for heating, greenhouse, thermal tourism, and fishery maximum return should be gained from the resource.

- To make qualified facilities meeting international standards, the facilities should be certified by the Ministry of Health and Ministry of Culture and Tourism.

- To overcome the difficulties arising from limited budgetary sources, municipalities should cooperate with private investors to improve their facilities.

- Thermal facilities should meet the quality standards of international tourism to be able to deal with the international social security insurance companies to bring the foreign patients to the region.

- Effective marketing should be done to attract more tourists to the tourism centers.

In summary, there is a need for comprehensive planning with the technical and economical feasibilities to secure the balanced provision of infrastructure, management of facilities, and marketing that is necessary to utilize thermal tourism potential of Turkey fully.

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APPENDIX A

THERMAL FACILITIES LICENSED BY THE MINISTRY OF HEALTH (2006)

Licence Number	City	Name of the Facility / Type	Licence Date	Management of the Facility
1	Afyon	İkbal Termal Otel/Kaplıca Kür Oteli	25.11.2002	Private
2	Afyon	Oruçoğlu Termal Oteli/Kaplıca Kür Oteli	25.11.2002	Private
3	Afyon	Hüdaî Kaplıcası/Kaplıca Kür Oteli	25.11.2002	Local Government
4	Balıkesir	Gönen Kaplıca Kür Oteli	31.01.2003	Local Government
5	Denizli	Colessea Kaplıca Kür Oteli	25.06.2003	Private
6	Denizli	Herakles Kaplıca Kür Oteli	25.06.2003	Private
7	Ankara	Kaplıca Kür Merkezi/Ayaş Kaplıca ve İçmeler	13.08.2003	Private
8	İzmir	Balçova Termal Kaplıca Kür Oteli	27.08.2003	Local Government
9	Sivas	Kaplıca Kür Merkezi /Kangal Balıklı Kaplıcası	26.09.2003	Private
10	Yalova	Kaplıca Kür Oteli/Yalova Termal	24.12.2003	Ministry of Health
11	Aydın	Kaplıca Kür Oteli/Alangüllü Termal	19.02.2004	Private
12	Balıkesir	Kaplıca Kür Merkezi/Entur Kaplıcası	25.02.2004	Private
13	Kütahya	Kaplıca Kür Oteli/ Tutav Termal	28.04.2004	Private
14	Muğla	Kaplıca Kür Oteli (ThermeMaris)	12.05.2004	Private
15	Konya	Kaplıca Kür Merkezi/İsmil Termal	08.06.2004	Private
16	Denizli	Kaplıca Kür Oteli/Umut Kaplıcası	09.07.2004	Private
17	Konya	Kaplıca Kür Merkezi/İlgın Kaplıcası	12.07.2004	Local Government
18	Bingöl	Kaplıca Kür Oteli/Bin-Kap Kaplıcası	15.07.2004	Private
19	Ankara	Kaplıca Kür Oteli/Edesa Kaplıcası	20.07.2004	Private
20	İstanbul	Kaplıca Kür Merkezi/Tuzla Kaplıcası	22.07.2004	Private
21	Konya	Kaplıca Kür Merkezi/Kösk Kaplıcası	16.08.2004	Private
22	Yalova	Kaplıca Kür Oteli/Erdilli Termal	17.08.2004	Private
23	Sakarya	Kaplıca Kür Oteli/Kuzuluk Kaplıcası	19.08.2004	Private
24	Aydın	Radon Termal Tesisi/Kaplıca Kür Merkezi	09.09.2004	Private
25	Aydın	Natur-Med Termal Tesisi	21.09.2004	Private
26	Balıkesir	Serpin Manyas Termal Tesisi	04.10.2004	Private
27	Manisa	Kursunlu Kaplıcası	12.10.2004	Local Government
28	Nevşehir	Yapı-Sel Kaplıca Kür Oteli	02.11.2004	Private
29	Hatay	Kumlu Hamamat Termal Tesisi/Kür Merkezi	17.11.2004	Private
30	Balıkesir	Körfez Tatil Beldesi	21.11.2004	Private
31	Nevşehir	Termalya Kaplıca Tesisi	14.12.2004	Private
32	Ankara	Asya Termal Tatil Köyü	22.12.2004	Private
33	Kahramanmaraş	Mehmet KAÇAMAZ Kaplıcası	22.12.2004	Local Government

Licence Number	City	Name of the Facility / Type	Licence Date	Management of the Facility
34	Denizli	Pam Termal Otel	29.12.2004	Private
35	Balıkesir	Adramis Termal Hotel	30.12.2004	Private
36	Ankara	Sifa Hayat suyu Kaplıca Otel	09.02.2005	Private
37	Ankara	Ab-i Hayat Termal Otel	09.02.2005	Private
38	Çanakkale	Kırkıgeçit Termal Tesisleri	21.02.2005	Private
39	Ankara	Haymana Belediyesi Merkez Kaplıcası	24.02.2005	Local Government
40	Nevşehir	Günes Kaplıca Tesisi	03.03.2005	Private
41	Bursa	Yeni Kaplıca-Kaynarca-Karamustafa Kaplıcaları	03.03.2005	Private
42	Tokat	Resadiye Kaplıca Termal Tesisleri ve Kür Merkezi	04.03.2005	Local Government
43	Ankara	Beyter Dutlu Tahtarı Termal Tesisleri	21.03.2005	Private
44	Denizli	Hierapolis Termal Otel	12.04.2005	Private
45	Ankara	Patalya Termal Resort Otel	12.04.2005	University
46	Ankara	K. hamam Termal Otel ve Büyük Kaplıca	13.04.2005	Local Government
47	Kırşehir	Grand Hotel Terme Kaplıcası	15.04.2005	Private
48	Kırşehir	Terme Kür Hotel Kaplıcası	15.04.2005	Private
49	Rize	Ayder Kaplıca Tesisleri	19.04.2005	Private
50	Amasya	Gözlek Termal Tesisleri	19.04.2005	Private
51	Şanlıurfa	Karaali Kaplıca Tesisi	28.4.2005	Local Government
52	Balıkesir	Pamukçu Asya Termal Oteline	09.05.2005	Private
53	Nevşehir	Vural Kaplıca Tesisi	18.05.2005	Private
54	Kayseri	Bayramhacı Kaplıcası	06.06.2005	Local Government
55	Bursa	Oylat Kaplıcaları	14.06.2005	Private
56	Samsun	Ancere Termal Hotel	15.08.2005	Private
57	Nevşehir	Haciveli Kaplıca Tesisi	23.08.2005	Private
58	Eskişehir	Sakarılıca Belediyesi Termal Turizm Merkezi	05.09.2005	Private
59	Bolu	Bolsantur Termal Otel	19.09.2005	Private
60	Sivas	Tek Otelinin	20.09.2005	Private
61	Sivas	Cumhuriyet Üniversitesi Fizik Tedavi ve Rehabilitasyon Merkezi	12.10.2005	University
62	İzmir	Princess Hotel	01.11.2005	Private
63	İzmir	Sheraton Çeşme Hotel Resort	01.11.2005	Private
64	Konya	Grand İpek Palas Termal Otel	08.12.2005	Private
65	Amasya	Hamamözü Tesisi	12.12.2005	Private
66	Sakarya	Paşalar Kıl Hamamı Kaplıcası	03.01.2006	Private
67	Nevşehir	Roza Resort Kaplıca Tesisi	16.01.2006	Private
68	Nevşehir	Altınsu Kaplıca Tesisi	16.01.2006	Private
69	Yalova	İhlas Armutlu Tatil Köyü	17.01.2006	Private
70	Kayseri	Fizitürk Thermal Resort Kayseri Kaplıca Kür Merkezi	30.01.2006	Private
71	Ankara	Haymana Resort Otel	17.02.2006	Private
72	Samsun	Ladik Hamamayağı Kaplıca Tesisi	11.04.2006	Local Government
73	Kütahya	Güral Harlek Termal Otel	03.05.2006	Private

Licence Number	City	Name of the Facility / Type	Licence Date	Management of the Facility
74	Sivas	Soğuk Çermik Kaplıcası	08.05.2006	Local Government
75	Ankara	Haymana Termal Otel	31.05.2006	Private
76	Bursa	Kervansaray Termal Otel	13.06.2006	Private
77	Çanakkale	Küçüktepe Köy Karalıda Termal Tesisi	30.06.2006	Local Government
78	Çanakkale	Bardakçılar Dağ Kaplıca Tesisi	11.07.2006	Local Government
79	Çanakkale	Kestanbolu Kaplıca Tesisi	11.07.2006	Local Government
80	Bursa	Çelik Palas Termal Oteli	03.08.2006	Private
81	Bursa	Keçeli Hamamı	28.08.2006	Private
82	Bursa	Öz Yeşilyayla Termal Oteli	29.08.2006	Private
83	Bursa	Boygüzel Termal Otel	29.08.2006	Private
84	Bursa	Yıldız Termal Otel	06.09.2006	Private
85	Kütahya	Yeşil Kaplıcası	14.09.2006	Private
86	Kütahya	Eynal Kaplıcası	14.09.2006	Local Government
87	Nevşehir	Çifçiler Kaplıca Tesisi	18.09.2006	Private
88	Bursa	Gönlüferah Termal Hotel	17.10.2006	Private
89	Balıkesir	Hüseyin İrmek Termal Tesisleri	17.11.2006	Private
90	Ankara	Doktorun Yaşam Tesisleri	17.11.2006	Private
91	İzmir	Ilca Hotel	30.11.2006	Private
92	Afyon	Korel Thermal Resort Clinic	05.12.2006	Private
93	Çankırı	Kurşunlu Termal Otel	07.12.2006	Private

APPENDIX B

THERMAL FACILITIES LICENSED BY THE MINISTRY OF CULTURE AND TOURISM (2006)

City	Name of the Facility	Types and Classes	Bed Capacity	Management of the Facility
Afyon	Thermal Resort Oruçoğlu	5 Stars Hotel	624	Private
Afyon	İkbal Thermal Otel	5 Stars Hotel	604	Private
Amasya	Gözlek Thermal Facility	2 Stars Hotel	42	Private
Ankara	Cimcime Oteli	1 Star Hotel	68	Local Government
Ankara	Asyafin	5 Stars Hotel	197	Private
Ankara	Abuhayat Resort Otel	3 Stars Hotel	203	Private
Ankara	Şifa Hayat Suyu Kaplıca Oteli	3 Stars Hotel	114	Private
Balıkesir	Entur Termal Tesis	3 Stars Hotel	80	Private
Balıkesir	Gönen Kaplıca Oteli	4 Stars Hotel	417	Private
Balıkesir	Berlin Pansiyon	Pension	29	Private
Balıkesir	Asya Pamukçu Termal	4 Stars Hotel	199	Private
Bolu	Bolu Termal Oteli	3 Stars Hotel	164	Private
Bursa	Çelik Palas Oteli	5 Stars Hotel	359	Private
Bursa	Anatolia Otel	4 Stars Hotel	192	Private
Bursa	Dilmen Oteli	4 Stars Hotel	200	Private
Bursa	Kervansaray Termal Oteli	4 Stars Hotel	435	Private
Bursa	Büyük Yıldız 2 Oteli	3 Stars Hotel	68	Private
Bursa	Gönlüferah Oteli	3 Stars Hotel	140	Private
Bursa	Ada Palas Oteli	2 Stars Hotel	73	Private
Denizli	Colossea Hotel Thermal	5 Stars Hotel	502	Private
Denizli	Pam Oteli	4 Stars Hotel	490	Private
Denizli	Denizli Richmond Otel	4 Stars Hotel	642	Private
Denizli	Lycus River Oteli	4 Stars Hotel	444	Private
İstanbul	Tuzla İçmeler Oteli	1 Stars Hotel	43	Private
İzmir	Termal Princess Otel	5 Stars Hotel	630	Private
İzmir	Bağcıva Termal Turizm Tesisleri	Special Facility	418	Local Government
İzmir	Sheraton Çeşme Hotel Resort	5 Stars Hotel	870	Private
İzmir	Otel Delmar	3 Stars Hotel	192	Private
İzmir	Otel Hora	3 Stars Hotel	100	Private
Kırşehir	Büyük Otel Terme	3 Stars Hotel	264	Private
Kırşehir	Terme Kür Hotel ve Kaplıcaları	3 Stars Hotel	79	Private
Kütahya	Tütav Termal Otel ve Kür Merkezi	4 Stars Hotel	154	Private
Nevşehir	Termalya Oteli	4 Stars Hotel	304	Private
Rize	Kaplıca Tesisleri Fizik ve Rehabilitasyon	Special Facility		Private
Trabzon	Elegante Oteli	2 Stars Hotel	130	Private
Yalova	Türksev Yalova Termal Tesisleri	Special Facility	212	Private
Yozgat	Mehmetoğulları Pansiyon	Pension	54	Private

APPENDIX C

THERMAL TOURISM CENTERS LICENSED BY THE MINISTRY OF CULTURE AND TOURISM (2006)

Thermal Tourism Centers

1. Afyonkarahisar Heybeli Thermal Tourism Center
2. Afyonkarahisar İhsaniye - Gazlıgöl Thermal Tourism Center
3. Afyonkarahisar Ömer ve Gecek Thermal Tourism Center
4. Afyonkarahisar Sandıklı - Hüdai Thermal Tourism Center
5. Ağrı Diyadin Thermal Tourism Center
6. Amasya - Terziköy Thermal Tourism Center
7. Ankara Haymana Thermal Tourism Center
8. Ankara Kızılcahamam – Seyhamamı Thermal Tourism Center
9. Aydın Tralleis Thermal Tourism Center
10. Aydın Buharkent / Denizli - Sarayköy Thermal Tourism Center
11. Balıkesir Edremit - Güre Thermal Tourism Center
12. Balıkesir Gönen Thermal Tourism Center
13. Balıkesir Gönen - Ekşidere Thermal Tourism Center
14. Balıkesir Bigadiç - Hisarköy Thermal Tourism Center
15. Balıkesir Manyas - Kızık Thermal Tourism Center
16. Balıkesir Susurluk Kepekler Thermal Tourism Center
17. Balıkesir Sındırgı Hisaralan Thermal Tourism Center
18. Bolu, Karacasu Thermal Tourism Center
19. Bursa Mustafakemalpaşa Tümbüldek Thermal Tourism Center
20. Çanakkale Ezine - Kestanbol Thermal Tourism Center
21. Çanakkale Çan-Etili - Tepeköy Thermal Tourism Center
22. Çanakkale Yenice-Hıdırlar Thermal Tourism Center
23. Çanakkale Ayvacık-Tuzla Thermal Tourism Center
24. Denizli Çardak - Beylerli/Burdur Akgöl Thermal Tourism Center
25. Denizli Buldan - Tripolis Thermal Tourism Center
26. Denizli Akköy - Gölemezli Thermal Tourism Center
27. Diyarbakır Çermik Thermal Tourism Center
28. Erzurum Ilıca Thermal Tourism Center

29. Erzurum Pasinler Thermal Tourism Center
30. Eskişehir Kızılınler Thermal Tourism Center
31. Eskişehir Mihalgazi - Sakarılıca Thermal Tourism Center
32. İzmir Balçova Thermal Tourism Center
33. İzmir Seferihisar - Doğanbey Thermal Tourism Center
34. Konya İlgin Thermal Tourism Center
35. Kütahya Tavşanlı - Göbel Thermal Tourism Center
36. Kütahya Hisarcık Esire Thermal Tourism Center
37. Kütahya Emet Thermal Tourism Center
38. Kütahya Gediz - Ilıcasu Thermal Tourism Center
39. Kütahya Gediz - Muratdağı Thermal Tourism Center
40. Kütahya Ilıca - Harlek Thermal Tourism Center
41. Kütahya Simav - Eynal - Çitgöl - Naşa Thermal Tourism Center
42. Manisa - Demirci - Hisar Thermal Tourism Center
43. Manisa - Kula - Emir Thermal Tourism Center
44. Manisa Turgutlu - Urganlı Thermal Tourism Center
45. Niğde Çiftehan Thermal Tourism Center
46. Narlıgöl (Niğde-Aksaray) Thermal Tourism Center
47. Osmaniye Haruniye Thermal Tourism Center
48. Rize Ayder Thermal Tourism Center
49. Sakarya Akyazı-Kuzuluk Thermal Tourism Center
50. Samsun Havza 25 Mayıs Thermal Tourism Center
51. Samsun Havza Mevcut Kaplıca Thermal Tourism Center
52. Sivas Sıcakçermik Thermal Tourism Center
53. Sivas Balıklıçermik Thermal Tourism Center
54. Uşak Banaz Thermal Tourism Center
55. Yalova Thermal Tourism Center
56. Yalova Armutlu Thermal Tourism Center
57. Yozgat Sarıkaya Thermal Tourism Center
58. Yozgat Boğazlıyan - Cavlak Thermal Tourism Center

Cultural and Tourism Preservation and Development Regions

1. İzmir Dikili Thermal Cultural and Tourism Preservation and Development Regions
2. İzmir - Bergama - Allanoi - Manisa Soma Menteşe Thermal Cultural and Tourism Preservation and Development Region.