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## Dark Tourism and Natural Disasters: A Proposal For An Earthquake Memorial Museum in Kahramanmaraş\*

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### Abstract

The relationship between disaster tourism and earthquake museums is complex. While disaster tourism can provide a powerful firsthand experience of the impact of earthquakes, earthquake museums offer a more comprehensive understanding of the science and history of these events, as well as the steps that can be taken to prepare for and mitigate their effects. Therefore, the purpose of this study is to propose an earthquake memorial museum for dark tourism in Kahramanmaraş, Turkey. Findings from literature review and recent Kahramanmaraş earthquakes have shown that the earthquake sites have the potential to be developed as dark tourism sites. By developing these sites, countries can not only help to preserve the memory of the victims of these disasters, but also raise awareness about the importance of preparedness and disaster response. Moreover, visitors can gain a deeper appreciation for the impact of earthquakes. The findings were discussed and suggestions were presented.

**Keywords:** Dark Tourism, Disaster Tourism, Kahramanmaraş Earthquake, Earthquake Memorial Museum.

### Hüzün Turizmi ve Doğal Afetler: Kahramanmaraş'ta Bir Deprem Anıt Müzesi Önerisi

### Öz

Felaket turizmi ile deprem anıt müzeleri arasındaki ilişki karmaşıktır. Felaket turizmi, depremlerin etkisine ilişkin ilk elden güçlü deneyimler sunabilirken, deprem anıt müzeleri bu olayların bilimselliği ve tarihi aracılığıyla depremin etkilerine hazırlanmak ve etkilerini azaltmak için atılabilecek adımlar hakkında kapsamlı bir anlayış sunmaktadır. Bu nedenle yapılan çalışmanın amacı, Kahramanmaraş'ta hüzün turizmi açısından bir deprem anıt müzesi önerisi sunmaktır. Yapılan literatür taraması ve son Kahramanmaraş depremlerinden elde edilen bulgular, deprem alanlarının hüzün turizmi alanları olma potansiyeline sahip olduğunu göstermiştir. Ülkeler, bu felaket alanlarını geliştirerek yalnızca bu felaketlerin kurbanlarının anılarının korunmasına yardımcı olmakla kalmamakta, aynı zamanda depremlere hazırlıklı olma ve afet müdahalesinin önemi konusunda farkındalık yaratmaktadır. Ayrıca, ziyaretçiler depremlerin etkisi konusunda daha içsel bir minnet duygusu kazanabilirler. Elde edilen bulgular literatürle tartışılmış ve öneriler sunulmuştur.

**Anahtar Kelimeler:** Hüzün Turizmi, Felaket Turizmi, Kahramanmaraş Depremi, Deprem Anıt Müzesi.

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\* This research is among the studies that do not require an ethics committee decision.

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## INTRODUCTION

In the enigmatic realms of travel, a captivating phenomenon called “dark tourism” has intrigued tourists and scholars. This unconventional form of tourism within the contemporary visitor economy commodified “death” for popular consumption, disguised of memorials and museums, special events and exhibitions or specific tours, and it has emerged as a focal point for providers in the mainstream tourism industry (Stone, 2013). Dark tourism refers to the phenomenon of visiting sites that are associated with death, atrocity, suffering, distress, pain and tragedy (Faulkner, 2013; Gotham, 2015). In recent years, there has been increasing interest in dark tourism (Chen & Xu, 2021; Prayag, Buda & Jordan, 2021; Sarkar, Chakraborty & Valeri, 2022; Zhang, 2022; Magano, Fraiz-Brea & Leite, 2023) and disaster tourism (Wang, 2019; Liu-Lastres, Mariska, Tan, & Ying, 2020; Prastowo, Agustin & Lusiana, 2020; Martini & Sharma, 2022), with many people seeking to explore the history and legacy of past events (Minić, 2012; Stone & Sharpley, 2008). Most of tourists engage these tourism activities to understand the life of famous events or individuals by promoting empathy (Magee & Gilmore, 2015; Tucker, Shelton & Bae, 2016). They seek to develop perception about their challenging lives and their “stories”, probably ended with disasters and death (Robb, 2009). On the other hand, this can be an educational adventure for dark tourist to reinforce living values rather than death (Cohen, 2011). Experiences and consequences of wars, crimes or murders can rise awareness about how life and death actually is the only important concepts in people’s lives. Another feature about dark tourism can be individuals’ search for meaning (Stone, 2006, 2011; Minić, 2012). Findings for dark tourism researches can be controversial. Local people who witness or know people (their relatives, friends, etc.) who witness the historic events such as disasters can perceive dark tourism as commoditized tragedy, humiliation or further suffering instead of attraction (Rucińska, 2016; Korstanje, 2020). For example one may argue that dark tourism is inappropriate for values and memories of deceased so that anger, pain or upsetting experiences can emerge as in the Holocaust era where Jewish Race were sent to concentration camps for Nazi ideals in Europe. One can suggest that crime-related dark destinations either promote tourism activities to adopt death and trauma reminiscences for commemorative and educational purposes or the are just commercial exploitations.

“The growing interest in dark tourism and disaster tourism reflects several trends, such as the increasing vulnerability of human settlements to natural disasters, the spreading worldwide financial crisis, and the

growth of the tourism disaster management and planning fields” (Richie, 2008). In Turkey, one such trend that has not gained attention yet as a potential dark tourism site is earthquakes. Turkey is one of the most earthquake-prone countries in the world, and the country has been hit by several devastating earthquakes over the centuries, with many resulting in significant loss of life and property damage (Gurenko, Lester, Mahul & Gonulal, 2006; Gunes, 2015; Zhang, Fung, Johnson & Sattar, 2022). It is interesting that although there have been many devastating earthquakes in Turkey throughout history, there are limited touristic attempts to learn from or raise awareness about it. This article explains the potential of an earthquake memorial museum as a disaster tourism site in Turkey.

The most important motivation of this study is the lack of empirical findings about natural disaster tourism as a dark tourism. Although theoretical approaches and few cases have shown in relation to earthquakes, literature on this topic is underdeveloped and still needs to expand to fill the gap. Many earlier studies overlooked earthquake sites and rather addressed dark tourism as a whole (Ryan & Hsu, 2011; Teigen & Glad, 2011; Coats & Ferguson, 2013; Biran, Liu, Li & Eichhorn, 2014). Recently, Min, Yang & Thapa-Magar (2021) investigated dark tourists’ experience, attitudes and benefits at seismic memorial sites in Nepal. Tang (2018) summarized major seismic memorial sites within dark tourism. Coats & Ferguson (2013) explored perceptions of dark tourists after an earthquake and made suggestions for business practices.

Death-related sites have gained attention of millions of visitors across the world (Puryova, 2013). Despite this fact, only battlefield and prison tourism researches are well-studied in Turkey (Yesildag, 2010; Topsakal & Ekici, 2014; Kantarbaeva-Bill, 2016; Coban, 2018; Cavlak & Ruziye, 2019; Aylan & Kaya, 2020). However, research on earthquake-related attractions are lacking although Turkey has a devastating and painful past due to earthquakes. This paper is the first research to recommend to build an earthquake memorial museum in terms of dark tourism in Kahramanmaraş and other ten affected provinces in Turkey.

## LITERATURE REVIEW

### **Dark Tourism: Definition and Common Examples**

Dark tourism is defined as “the act of tourists traveling to sites of death, tragedy, and suffering” (Foley & Lennon, 1996). Broadly, it is the “visitation to places where tragedies or historically note-worthy death has occurred” (Tarlow, 2005, p.48) or as “the act of travel to sites associated with death, suffering and the seemingly

macabre” (Stone, 2006, p.146). Another approach to dark tourism is the representation of encounter with death, crimes, violence, disasters, pain, suffering with emotional effects (Mionel, 2019). Destinations forming these effects can make tourists vulnerable. For instance, many tourists want to face the war crimes against humanity such as Nazi genocide on Jewish people. Auschwitz-Birkenau camp was one of the largest concentration camps owned by Nazi Germany, especially built to round up and kill or employ Jews. This historical location have been preferred by dark tourist both recreational and educational ways (Stone, 2006). On the door of the Auschwitz concentration camp, which was the disgrace of humanity of the century, was written “Arbeit Macht Frei” meaning “work sets you free” (Jenoff, 2001). This inscription on the door is still exhibited within the scope of dark tourism. Another approach to dark tourism is that it may focus on life and living rather than death and dying (Stone & Sharpley, 2008). For example, Yoshida, Bui & Lee (2016) found that atomic bombs explosion sites in Hiroshima and Nagasaki memorialized by tourists for educational context. These cities’ tragedy revealed tourism-education and war-peace themes rather than leisure.

The term “dark” express the feeling of “disturbing practices” and “morbid products and experience” in tourism industry (Stone, 2006). Attention to phenomenons about death, atrocity, and suffering in dark tourism stems from curiosity towards mortality (Fonseca, Seabra, & Silva, 2016). The attraction given to “end of life” has been top concern since pilgrimages of past (Niemele, 2010). The uncertainty and anxiety of death have become a major concern and since then death is considered as a taboo for humanity (Kunwar & Karki, 2019).

Early experiences of dark tourism involves Roman gladiator games, guided tours to watch public executions in England, and pilgrimages (Lennon & Foley, 2000; Stone, 2006). Even today, attraction of many tourists are drawn to the sites of death and tragedy such as the John F. Kennedy’s death site in Dallas, Texas, and the Ground Zero 9/11 Memorial in New York. Abandoned prisons and sites of punishment and incarcerations are also considered attraction points among dark tourists (e.g., Pentridge in Melbourne, Australia; Foley & Lennon, 1996).

According to the pre-COVID-19 data (2019), more than 2.1 million tourists visited Auschwitz Memorial and 3.2 million tourists visited the Ground Zero 9/11 Memorial annually (Lewis, Schrier, & Xu, 2021). Although the popularity of dark tourism has increased recently, there is still limited understanding as a multi-faceted phenomenon (Biran, Poria, &

Oren, 2011; Powell, Kennell & Barton, 2018; Baroch, de Almeida-Leite, Ribeiro, Alves & Camacho, 2023). Most studies were examined dark tourism on conceptual frameworks, few with empirical data and less investigated visiting intentions to dark sites (Poria, Reichel, & Biran, 2006; Zhang, Yang, Zheng, & Zhang, 2016). Raine (2013) investigated the motivations of tourists for visiting three burial grounds in UK such as St Mary’s Graveyard, Whitby, Bunhill Fields Burial Ground, London and Weaste Cemetery, Salford. Walby & Piche (2011) showed how penal museums in Canada create and communicate meaning as it regards imprisonment and punishment. Studies mostly focused on prisons, concentraton camps and historical battlefields. Yet, a wide understanding about motives of dark tourists and their intentions to visit lacks in literature.

Dark tourism have several dimensions to draw attention such as “dark experience”, “engaging entertainment”, “unique learning experience”, and “casual interest” (Lewis et al., 2021). According to Biran, Poria & Oren (2011), motives for dark tourism categorized into four factors. These include (1) the need to see dark sites to believe what really happened there, (2) learning and understanding, (3) interest in famous attractions to feel empathy with victims, (4) emotional heritage experience. Another study by Preece & Price (2002) after interviews proposed three visitation motives such as learning, historical interest and fascination with abnormal or bizarre. Ryan & Kohli (2006) found ambiguous responses about the themes of dark tourism. They found three factors such as “safety, convenience and amenities”, “nature and scenery”, and “history/culture and experience”. But these themes explained 23%, 18%, and 15% of the variance related to dark tourism, respectively. A different approach by Stone (2011) emphasize that “dark tourism mediates rapid social change through symbolically the significant other dead” as well as it mediates mortality by representing and communicating death.

Especially since the 2000s, many researchers studied on various aspects of dark tourism (Biran & Hyde, 2013; Stone, 2013; Ashworth & Isaac, 2015; Shekhar & Valeri, 2022). However, with the development of the dark tourism phenomenon and providing an important tourism experience for tourists, new concerns and moral dilemmas have increased. Today, many countries try to learn their history by preserving and living it. Dark tourism has emerged to domestic and foreign tourists in places where important events in history have taken place, in order to increase the motivations that provide educational and instructional, national unity and integrity, and to meet individuals’ curiosity and learning motives.

### Disaster Tourism As A Part of Dark Tourism

Terminologically, dark tourism forms an umbrella concept, involving various similar concepts such as penal-prison tourism (Light, 2017). Other terms used within dark tourism are genocide tourism, thanatourism, morbid tourism, grief tourism, disaster tourism, suicide tourism and so on (Kunwar & Karki, 2019). In context of disaster tourism, most important motivation for visiting destinations of natural hazards and disasters is the emotions, observing nature's impacts and tragedy rather than safety and comfort. The natural disaster tourism can be classified as the dark tourism. In disaster tourism, destinations should be directly affected by natural events and their consequences. Some of these destinations can be categorized as thanatourism due to historical and cultural interests or as black spots due to mass murder and death such as 300,000 tsunami and earthquake-related deaths in Haiti in 2004 (Rucińska, 2016).

A disaster is defined as "an extraordinary event, recovery from which demands external assistance and resources" (Tierney, Lindell & Perry, 2001; cited in Sharpley & Wright, 2018). Natural disasters have a unique way of drawing tourist's attention. Many people feel a sense of fascination with the power of nature and want to witness it firsthand. Earthquakes are one such natural disaster that draws tourists. According to Islam, M. & Islam M.N. (2016), earthquakes are a sudden and violent shaking of the earth's surface caused by the movement of tectonic plates. They can cause significant damage to buildings and infrastructure, and loss of life (Bulut et al., 2005). However, earthquakes also offer a unique opportunity for tourists to witness the power of nature in action.

For disaster tourism, Rucińska & Lechowicz (2014) indicated positive and negative functions in four categories as physical, mental, economic, and educational. Emotional experiences in mental category are considered both negative and positive while economic and educational benefits are often dominant. Many tourists may perceive post-disaster sites as "places to avoid" even the reconstruction was completed. However, disasters can change composition of local tourism market (Nepal, 2015). This "changing composition" is known as disaster tourism which is often considered as a subset of dark tourism (Korstanje, 2014). In the cases of Christchurch in New Zealand and L'Aquila in Italy, cities rapidly became disaster tourism destinations where tourists "attracted to the horror of the destroyed cities" (Wright & Sharpley, 2016). Disaster tourism's ability to create new post-disaster dark tourism products makes it more tourism flexibility (Miller, 2008; Prayag, 2016) as well as emphasizing

connections between tourism and disasters' social and economic recovery (Tucker et al., 2016).

In recent years, there has been a rise in disaster tourism, with people travelling to areas affected by earthquakes to witness the aftermath and to offer help and support. For example, after the 2011 earthquake in Christchurch, New Zealand, the city became a popular destination for tourists interested in disaster tourism (Prayag, 2016; Tucker et al., 2016; Jordan & Prayag, 2022). Other earthquake memorial sites after seismic hazards are "San Francisco Fire Department Museum" after Great San Francisco Earthquake of 1906 in United States, "Hokudan Earthquake Memorial Park" in Japan after the Kobe Earthquake of 1995, "Wenchuan Earthquake Memorial Museum" in China after 2008 earthquake and "Baan Nam Khem Memorial Park" after the Sumatra-Andaman Earthquake and Tsunami of 2004 in Thailand (Hartmann, 2014; Tang, 2018).

One of the most notable earthquake in Turkish history is the 17 August 1999 Izmit earthquake, which struck the Marmara region of Turkey and caused widespread destruction. The earthquake measured 7.6 on the Richter scale and was responsible for the deaths and injuries of approximately 20,000 and 50,000 people, respectively (Kunwar & Limbu, 2015), making it one of the deadliest earthquakes in the 20th century. In the aftermath of the disaster, the government and aid organizations worked together to rebuild the affected areas, and today, the region is home to several memorials and monuments that commemorate the victims of the earthquake. Another significant earthquake in Turkish history was the Duzce earthquake of 12 November 1999, which struck the Black Sea region of Turkey (Tobriner, 2000). The earthquake measured 7.2 on the Richter scale and caused widespread damage and loss of life. Analysis after the earthquake showed that the most damaged buildings were not suitable for residential areas and were not designed or constructed in accordance with Turkish earthquake code (Ates, Onur-Ugur, Akbiyikli, Polat & Keskin, 2017). Like the Izmit earthquake, the Duzce earthquake has also left its mark on the region, with several monuments and memorials erected to commemorate the victims of the disaster. In addition to the Izmit and Duzce earthquakes, there are also several other earthquakes in Turkish history that could be developed as dark tourism sites. For example, 2011 Van earthquake was a devastating natural disaster that occurred in the eastern part of Turkey. On October 23, 2011, a 7.2 magnitude earthquake struck the city of Van, causing widespread destruction and was responsible for the deaths of over 600 people. The earthquake affected not only the buildings and infrastructure of the city but also its cultural heritage, damaging several historical sites and artifacts (De Gori, Akinci, Pio Lucente &

Kilic, 2014; Yazgan, Oyguc, Erguven & Celep, 2016). These earthquakes offer an opportunity to learn about the impact of earthquakes on communities and the role of government and aid organizations in responding to disasters.

Both the Izmit and Duzce earthquakes have the potential to be developed as dark tourism sites, as they offer a unique opportunity for visitors to learn about the impact of earthquakes on communities and the role of aid organizations in responding to disasters. For example, visitors could visit the earthquake memorials and monuments in the affected regions and learn about the events through guided tours, exhibitions, and interactive displays. They could also visit the ruins of buildings that were destroyed in the earthquakes and learn about the rebuilding efforts that took place in the aftermath.

Recently, on February 6, 2023, two devastating earthquakes occurred in the Southeastern part of Turkey (AFAD, 2023). Earthquakes have occurred along the East Anatolian Fault Zone. While the magnitude of the first big and destructive earthquake was  $M_w=7.7$ , the magnitude of the other one was calculated as  $M_w=7.5$ . Among these devastating earthquakes, a large aftershock of  $M_w=6.7$  and several  $M_w>6.0$  aftershocks occurred. Numerous aftershocks still continue to shake the earthquake zone. The first reports from the area where the earthquake took place point to heavy damage and loss of life (Utkucu, Durmuş, Uzunca & Nalbant, 2023). Latest data suggested that 45,089 citizens lost their lives and hundreds of thousands were injured (AFAD, 2023). However, the death toll is expected to rise as debris is collected and many missing people are still considered under the debris [1].

### **Role of Earthquake Museums in Disaster Tourism**

An earthquake museum is a facility dedicated to educating the public about earthquakes and their impact as well as served as commemorate the events regarding an earthquake, impart knowledge through entertaining means and exhibit artifacts from past earthquakes such as damaged buildings (Ryan & Hsu, 2011). Earthquake museums may offer educational programs and events, such as lectures, workshops, and guided tours. Some earthquake museums may also be involved in research related to earthquakes and seismic activity. Overall, the goal of an earthquake museum is to increase awareness and understanding of earthquakes, as well as to promote earthquake preparedness and safety.

Several earthquake museums were built across the World, particularly in Asia. After seven years from Kobe earthquake in 1995, Earthquake Memorial Museum

was opened for education and reducing natural disaster risk in Japan (Rucińska, 2016). This museum is dedicated to the victims of the Great Hanshin-Awaji Earthquake of 1995. The museum features exhibits on the earthquake's impact and aftermath, as well as interactive displays that simulate earthquake experiences. According to Nishisaka, Yazawa & Furuya (2022), many museums and stone monuments were established to communicate the insights obtained from 2011 Great East Japan Earthquake. More than 200 facilities have been registered as "earthquake memorial facilities" by the Japanese government. Tokyo Reconstruction Memorial Museum, Mt. Unzen Disaster Memorial Hall, Okushiri Tsunami Memorial Museum, Disaster Reduction and Human Renovation Institution, Nojima Fault Preservation Museum, Chuetsu Earthquake Memorial Corridor, and Inamurano-Hi no Yakata are other disaster museums which function as community connection, education, object exhibition, scientific explanation, and storytelling (Maly & Yamazaki, 2021). The Beichuan National Earthquake Ruins Museum in Chengdu, China is dedicated to the victims of the 2008 earthquake that struck the Sichuan province of China and disaster tourism was developed (Gao & Otani, 2018). The museum features exhibits on the earthquake's impact and aftermath, as well as a memorial wall with the names of the victims in 2011 (Xu, 2018). Earthquake museums in the Far East reinforce information sharing among generations and ensure that the earthquakes are not forgotten. Another function of earthquake museums is to keep the research on earthquakes alive and visible.

L'Aquila Earthquake Memorial Museum in Italy is dedicated to the victims of the 2009 earthquake that struck the city of L'Aquila in central Italy (Pica, 2018). The museum features exhibits on the earthquake's impact and aftermath, as well as a 3D model of the earthquake's epicenter. Christchurch Quake Centre in New Zealand is a museum and research center dedicated to the earthquakes that struck the city of Christchurch in 2010 and 2011. The museum features exhibits on the earthquakes' impact and aftermath, as well as information on earthquake engineering and building safety (Davies, 2012; Topham, 2017). San Francisco Fire Museum in the US are dedicated to the 1906 San Francisco earthquake, which was one of the deadliest and most destructive earthquakes in US history. The museums feature exhibits on the earthquake's impact and aftermath, as well as information on earthquake preparedness and early warning systems (Sumy, Jenkins, McBride & de Groot, 2022).

In Turkey, Adapazarı Earthquake and Culture Museum in Sakarya was started to be built in 2000 and opened to visitors in 2004. It is affiliated to Adapazarı

Municipality and has a usage area of 450 square meters. The museum involves exhibition stands, cafeteria, and cine-vision hall. Pre- and post-earthquake photographs of the 1967 and 1999 earthquakes in Adapazarı, a vibrating electronic stand that creates artificial earthquakes, construction materials related to the construction technique of the buildings destroyed in the earthquake, seismograph and other earthquake-related elements are exhibited (Ozcelik, 2012). The purpose is to offer and authentic experience to visitors and “take a lesson” from the tragedy. The architecture and interior arrangement of the building is completely built as an art gallery where photographs, paintings, and similar materials can be exhibited (Coban, 2018). Due to the fact that the region is in the first degree earthquake zone, the purpose of the museum is to continuously keep the earthquake phenomenon on the agenda of Turkey (Ministry of Culture and Tourism, 2013).

## METHODOLOGY

Literature review methodology was adopted for the study. A literature review can broadly be described as “a more or less systematic way of collecting and synthesizing previous research” (Baumeister & Leary, 1997; Tranfield, Denyer, & Smart, 2003; Snyder, 2019: 333). Published materials that provide examination of recent or current literature was obtained from books, journal articles, reports, and online documents or

publications. Literature review can cover wide range of subjects at various levels of completeness and comprehensiveness, and may include research findings (Grant & Booth, 2009).

The research approach for the literature review is primarily systematic and comprehensive. It aims to identify, evaluate, and synthesize existing scholarly works, academic articles, books, reports, and other relevant sources that explore the intersection of dark tourism and natural disasters, as well as the establishment of earthquake memorial museums. Multiple electronic databases, such as Scopus, Web of Science, and Google Scholar, are utilized to gather a wide range of publications. Keywords and search terms related to dark tourism, natural disasters, and earthquake memorial museums are used in various combinations to ensure a comprehensive search.

The inclusion and exclusion criteria are established to ensure that only relevant literature is included in the review. The criteria is determined based on the research objective and the focus of the study. The inclusion criteria may include scholarly articles published in peer-reviewed journals, books, reports, and other credible sources that explore dark tourism, natural disasters, and the establishment of memorial museums. The exclusion criteria involve non-English publications, irrelevant topics, or studies that do not align with



**Figure 1.** Satellite image of the provinces affected by Kahramanmaraş earthquakes

**Kaynak:** [https://satellites.pro/Turkey\\_map#37.197518,37.029419,8](https://satellites.pro/Turkey_map#37.197518,37.029419,8).

the research objective. Data synthesis identified gaps, trends, and areas of consensus or disagreement in the existing literature for earthquake memorial museums.

As this study involves a literature review, ethical considerations mainly revolve around proper citation and acknowledgment of the sources referred. All sources were appropriately cited and referenced to ensure intellectual property rights and avoid plagiarism.

## FINDINGS

An earthquake memorial museum after recent Kahramanmaras earthquakes can be a powerful tool for educating visitors about the science, history, and impacts of earthquakes, as well as the importance of earthquake preparedness and mitigation. This proposal for an earthquake museum design was explained by certain characteristics such as location, exhibitions, design, and possible contributions to community and region.

**Location:** The earthquake memorial museum could be located in a seismically active or heavily damaged area such as Elbistan or Pazarcik in Kahramanmaras to highlight the importance these regions. Although Hatay is most affected region by these earthquakes, it is thought that priority should be given to this regions, since the epicenter of these earthquakes is Kahramanmaras. If different earthquake memorial museums are planned to be built in the future, it may be appropriate to build a museum with a similar concept in Hatay.

**Exhibitions in the Museum:** The earthquake memorial museum could feature a variety of interactive exhibits including seismic activity simulator, earthquake

science exhibit, historical science exhibit, seismic retrofitting exhibit, emergency preparedness exhibit. Seismic activity simulator recreates the experience of an earthquake, allowing visitors to experience the shaking and vibration of an earthquake in a controlled environment. Earthquake science exhibit explains the scientific mechanism behind earthquakes, including tectonic plate movement, fault lines, and seismic waves. Historical earthquake exhibit chronicles the history of earthquakes in Turkey, including notable earthquakes and their impacts on Turkish communities. Seismic retrofitting exhibit demonstrates how buildings can be retrofitted to withstand earthquakes, including examples of retrofitted buildings in Turkey and around the world. Emergency preparedness exhibit provides information and resources for earthquake preparedness, including emergency kits, evacuation plans, and communication strategies.

Different visual and auditory exhibitions could be designed specifically for tourists. Earthquake museum could feature film screenings which shows documentary-like films or records related to recent earthquakes. These displays can highlight the devastating impact of the earthquakes, shown as in Figure 2 and explain the story of earthquake victims or survivors by using dramatic storytellings. Moreover, earthquake souvenir shops that sells earthquake-related souvenirs such as earthquake kits, emergency supplies, books, and clothing should be included. Further, tourists can learn about disaster relief efforts and how countries come together to help those in need after an earthquake by disaster relief exhibits. The exhibit could showcase stories and images after two massive earthquakes, demonstrating the co-operation of search and rescue teams from many different



**Figure 2.** Images of collapsed or destroyed houses after two earthquakes in Kahramanmaras

**Kaynak:** <https://www.bolgegundem.com/kahramanmarastaki-son-durum-yurekleri-acitti-iste-kahramanmaras-depreminin-13740g-p13.htm>

countries, as in Kahramanmaraş. Finally, an interactive earthquake preparedness exhibit can teach tourists about earthquake preparedness and the importance of readiness. Visitors can interact with displays, games, and simulations to learn about how to prepare for and survive an earthquake.

Lastly, a “lessons learned” and “how to be organized” corners should be involved in the museum. In Turkey, poor emergency response and funding and resources for earthquakes has been major problems for many years. In the immediate aftermath of an earthquake, local authorities were overwhelmed by the need to respond to the disaster. They are responsible for coordinating rescue efforts, providing medical care, and distributing aid to affected individuals. This created a significant amount of pressure on local authorities, particularly for those who were under-resourced and inexperienced in disaster response. On the other hand, rebuilding efforts can require a significant amount of funding and resources. Local authorities are struggled to secure the necessary support. In addition to state institutions, clothing and food aids and donations were made from other regions of Turkey by both individuals and national or international organizations.

**Design:** The earthquake memorial museum could be designed to reflect the seismically active environment in which it is located. The building could feature earthquake-resistant construction techniques and materials, such as base isolation and steel frames, to demonstrate the importance of seismic retrofitting. The museum could also incorporate outdoor exhibits and demonstration areas, such as a seismic retrofitting demonstration site, to provide hands-on learning opportunities for visitors. By incorporating interactive exhibits, historical information, and demonstrations of seismic retrofitting techniques, the museum could help visitors understand the science, history, and impacts of earthquakes, and encourage them to take steps to protect themselves and their communities.

In the memory of earthquake victims, the museum should include memorials to remember them as well as displays that honor the heroes who worked to save lives during search and rescue. However, exploitations and privacy should be considered during the design of the proposed museum. Disaster tourism can be exploitative if it is done without regard for the people who have been affected by the disaster. Visitors may take insensitive or disrespectful photos and treat the disaster site as a spectacle. On the other hand, privacy violation can also disrespect the privacy of those affected and their loved ones by the earthquakes. There is also risks which can cause emotional distress for survivors and families of victims. Visits may trigger traumatic memories or

retraumatize those who have already suffered loss or trauma. To prevent these drawbacks, consent from families or relatives of victims should be taken before displaying anything in the museum.

All museum parts should include foreign language statements to create a more inclusive and welcoming environment for all visitors, regardless of their background or language proficiency. First, by including foreign language statements, visitors can better understand and connect with the content of the museum which can enhance their experience. Second, the museum can show respect and sensitivity to visitors from different cultures and backgrounds. Third, in regions where earthquakes have affected multiple countries or regions, foreign language statements can help ensure that all affected communities are represented and included in the memorial.

The proposed earthquake memorial museum is expected to contribute to several fundamental domains for both citizens and tourists:

(1) **Raising Awareness:** Earthquake memorial museum in the context of disaster tourism can help to raise awareness about the impact of natural disasters. By witnessing the aftermath of a disaster, visitors can better understand the devastation that can be caused and the importance of disaster preparedness and relief efforts.

(2) **Educational Opportunity:** Earthquake memorial museum can provide an educational opportunity for visitors to learn about the causes and effects of disasters, as well as the science behind natural disasters like earthquakes or other extreme events.

(3) **Historical Preservation:** Some disaster sites such as the Hiroshima Peace Memorial Park serve as reminders of historical events and can be important for preserving cultural and historical heritage.

(4) **Economic Benefit:** Earthquake memorial museum can bring a significant level of economic boost to local communities that have been affected by a disaster. Visitors spend money on accommodation, food, transportation, and souvenirs, which can create jobs and stimulate local businesses. In other words, tourists can support the local economy by staying in Kahramanmaraş or adjacent provinces which were affected by the earthquake.

Since significant damage has occurred in the aftermath of the earthquakes, there is a need for long-term reconstruction and rebuilding efforts. This includes the construction of new buildings, homes, and infrastructure. These efforts can create job opportunities for local residents with relevant

skills. Moreover, dark tourism organizations can be established to meet tourists' demands such as education and improve local employment and economy. Further, there may be a temporary decrease in tourism due to the severity of the earthquake and the impact on local attractions. However, as recovery efforts progress, it can be an opportunity to attract visitors to the area to witness the rebuilding efforts and learn about the community's resilience.

## DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Disaster tourism and earthquake museums are two seemingly disparate concepts that share a complex relationship. On one hand, disaster tourism traveling to destinations that have experienced natural or man-made disasters, often with the intention of observing the destruction and its aftermath. On the other hand, earthquake museums aim to educate visitors about the science and history of earthquakes, as well as the impact they have had on communities and the steps that can be taken to mitigate their effects. While the two may seem contradictory, they are in fact intertwined, and their relationship is worth exploring. We consider dark tourism as a developing and promising discipline and highlight the importance between historical events-people and experiences which may be the key to education, new pursuits, finding a meaning for life and/or entertainment.

This study suggests that disasters offer a unique opportunity for visitors to learn about the impact of earthquakes on communities, remembrance of the people and past, and the role of aid organizations in responding to disasters. Limited dark tourism cases related to earthquake memorials support the common themes of "memorialization of dead", "educational experience" and "tourism recovery actions (organization)" (Beirman, Upadhayaya, Pradhananga & Darcy, 2018; Tang, 2018; Kunwar & Karki, 2020; Min et al., 2021). Kunwar & Karki (2020) suggested that visitors who want to see the epicenter of an earthquake is increasing and this is suitable with dark tourists seeking for authenticity in dark sites. Biran et al. (2014) explored that tourists are generally motivated by push factors regarding leisure pursuits after an earthquake. Therefore, an earthquake destination in the aftermath can still be suitable for visitors attraction (Yang, Wang & Chen, 2011).

Previous dark tourism literature also indicated motivation factors as curiosity towards death, authenticity, remembrance, edutainment [2], historical consciousness, and emotional experiences (Lennon & Foley, 2000; Wilson, 2008; Stone, 2010; Isaac & Cakmak, 2013; Yan, Zhang, Zhang, Lu & Guo, 2016;

Lewis et al., 2021). Beirman et al. (2018) found that "Nepal Tourism Rapid Recovery Taskforce Report and Recommendations" developed by The Pacific Asia Travel Association (PATA) had significant contribution as recovery program aftermath of the earthquake. Embracing volunteer and accessible tourism can greatly enhance visitor attractions to earthquake sites. In case for Turkey, Turkish Ministry of Tourism provided social, psychological, and financial support to restore tourism market after 1999 Izmit Earthquake (Kunwar & Limbu, 2015). Unfortunately, recent Kahramanmaras earthquakes showed unpreparedness of Turkish community as a whole. Therefore, memorialization of the dead and education can offer a solution for which the same problems do not happen again. Depending on this, Adapazarı Earthquake Culture Museum is considered as a good example to commemorate the earthquake with its meaningful exhibits. However, it doesn't involve foreign language statement in the exhibition halls and mainly focuses on domestic tourists (Coban, 2018).

This proposal for an earthquake memorial museum is based on literature findings and real-life implications. Similar earthquake memorials and museums often contain exhibits and interactive displays that explain the causes of earthquakes, their effects on the environment and infrastructure, and the steps that can be taken to mitigate their effects (Rucińska, 2016; Gao & Otani, 2018; Xu, 2018; Maly & Yamazaki, 2021; Nishisaka et al., 2022; Sumy et al., 2022). In addition, many earthquake museums feature historical artifacts and first-hand accounts from people who have experienced earthquakes, providing a deeper understanding of the human impact of these events (Ryan & Hsu, 2011; Maly & Yamazaki, 2021). On the other hand, disaster tourism can also provide an opportunity for people to witness the impact of earthquakes in context of emotional experience to gain a deeper appreciation for the impact of these events on local communities. While this experiences can be a powerful experience, it is important for visitors to approach disaster tourism with sensitivity and respect, and to avoid exploitative or voyeuristic behavior.

Findings from previous literature can not be generalized to all dark tourism sites due to unique characteristics of various earthquake sites (Tang, 2018; Min et al., 2021). Coats & Ferguson (2013) found controversial responses between visitors and residents for post-earthquake dark tourism practices. Their study showed that while visitors' motivation was curiosity with the macabre, residents' motivation was "remembrance and confronting death as part of the grieving process". They also emphasized that as time passes, some responses to touristic activities changes.

For example, sensitiveness of residents against taking photos, consciousness and preservation of visitor was significantly reduced as time passed. This is linked with intense media exposure and public interest through constant communications and the provision of supply at the earlier period of earthquake (Coats & Ferguson, 2013). This is important to explain the situation of Turkey for many years. The fact that earthquake experiences are forgotten by both citizens, local and central authorities is a common problem in daily life. In order to maintain conscious and preventive behaviors, the use of earthquake memorial museums should be expanded as an important educational and touristic tool.

At its core, disaster tourism is driven by a mix of curiosity, fascination, and a desire to understand the impact of catastrophic events. While some people may be drawn to these destinations out of a genuine desire to help or to learn, others may be motivated by a sense of thrill-seeking or the desire to capture dramatic footage for social media. Whatever the motivation, disaster tourism is a complex and often controversial phenomenon that has been for exploiting the suffering of disaster-stricken communities. To overcome exploitation drawbacks, earthquake memorial museums should be primarily designed with the intention of educating visitors about the science of earthquakes and their impact on communities. This knowledge can be especially valuable for people who live in areas that are prone to earthquakes, as they can use this information for better preparation for future disasters.

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#### Notes:

[1] For recent Kahramanmaras earthquakes, it is estimated that the numbers of mortality will increase as debris removal efforts are still ongoing at the time of writing this article. Search and rescue efforts were finished at the end of February. Missing citizens are not considered in the statistics due to lack of publicly available data from Turkish government authorities.

[2] “One can be benefited with the component of education and entertainment called as ‘edutainment’ as well as ‘dartainment’ describing dark attractions that attempt to entertain” (Kunwar & Karki, 2020, p.165).

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