

Possible Marmara Earthquake



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Picture Source: (Canva AI,

Presentation Outline



Intoduction
Causes



Effects
Existing Solutions



Suggested
Solution
Conclusion and Q&A

Introduction

- What is earthquake?
- What is the significance of the earthquake for Turkey?
- According to Parsons et al. (2000), the probability of a devastating earthquake near Istanbul within 30 years is estimated to be between 47% and 77% (Gündüz et al., 2012).



Picture Source: (TOKİ Haber, 2019)



Picture Source: (Oda TV, 2025)

Causes



Picture Source: *(Karaaslan Mimarlık, 2022)*

- Unplanned urbanization and Unstable structures in Türkiye



Picture Source: *(Global News,*

- İstanbul is located on the North Anatolian Fault Line

Effects



- Economic and physical destruction, vital losses.
- Damaging the economy, daily life, and many system.
- Earthquakes have profound effects on schools and students, both physically and psychologically.

Video Source: (Sabah
Newspaper, 2023)

Video Source: ([Earth Observatory of Singapore Youtube Channel, 2020](#))



Existing Solution 1

Earthquake Early Warning
System (EEW)



It warns the building residents to take emergency measures before a severe tremor occurs.



This system aims to minimize loss of life and property.



Earthquake Early Warning (EEW) system implemented in many countries (Fujinawa and Noda, 2013).

Picture Source: (
Süperlit,2024)



Existing Solution 2

Structural protection Method



We can be less affected thanks to stronger buildings after the earthquake.



Fiber wrapping is used to strengthen structures (Fukuyama and Sugano, 2000).

The fiber is flexible, lightweight, and practical by its structure.



It was also implemented in Hatay by Prof. Dr. Güney Özcebe in 2009. (Akkaya,2023)



Suggested Solution

The gradual evacuation of the Marmara region

The Marmara region is densely populated and is an area under earthquake threat. The gradual relocation of the region to different parts of the country may succeed in reducing the damage that could be incurred in a possible earthquake.



Conclusion

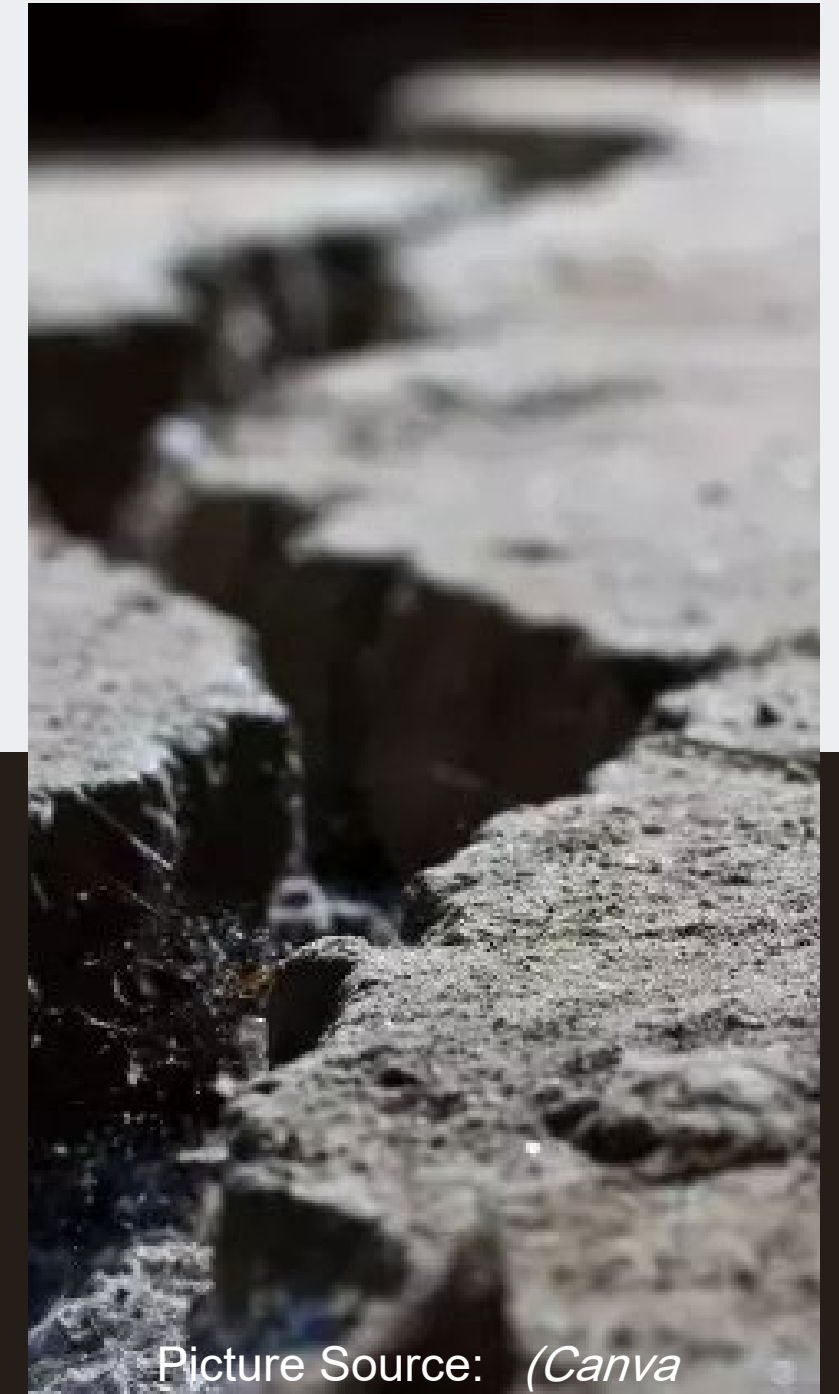
Picture Source: (Canva AI, 2025)

Earthquakes are a vital problem for our country, as they are in most parts of the world.


Earthquake is a problem that threatens the lives, welfare and economies of our people.

There are some solutions to this problem that have been implemented in the world, such as early warning systems and building structures with fiber winding methods.

Considering Türkiye's current situation, evacuating the region where an earthquake is predicted is, in our opinion, one of the most appropriate solutions.



Picture Source: (Canva AI, 2025)

The image is a composite. The top half shows a massive, billowing plume of white and grey ash or smoke rising from a volcanic eruption against a clear blue sky. The bottom half shows a scene of total destruction, with a multi-story building completely collapsed into a pile of rubble, debris, and twisted metal. A semi-transparent dark grey banner with white text is overlaid across the center of the image.

We cannot prevent an earthquake, but we can prevent its damage. The important thing is not to live without an earthquake, but to live despite an earthquake.

Q&A

Thank you for listening to us.

Reference

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