
Izmir Earthquake 2020

3 Disasters at Once!

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+ Agenda



01

Overview

Statistics of the
Earthquake

02

Precautions

The preventions taken
in the region

03

Disaster Management

Preparedness, Response and
Recovery from the Earthquake

04

Lessons Learned

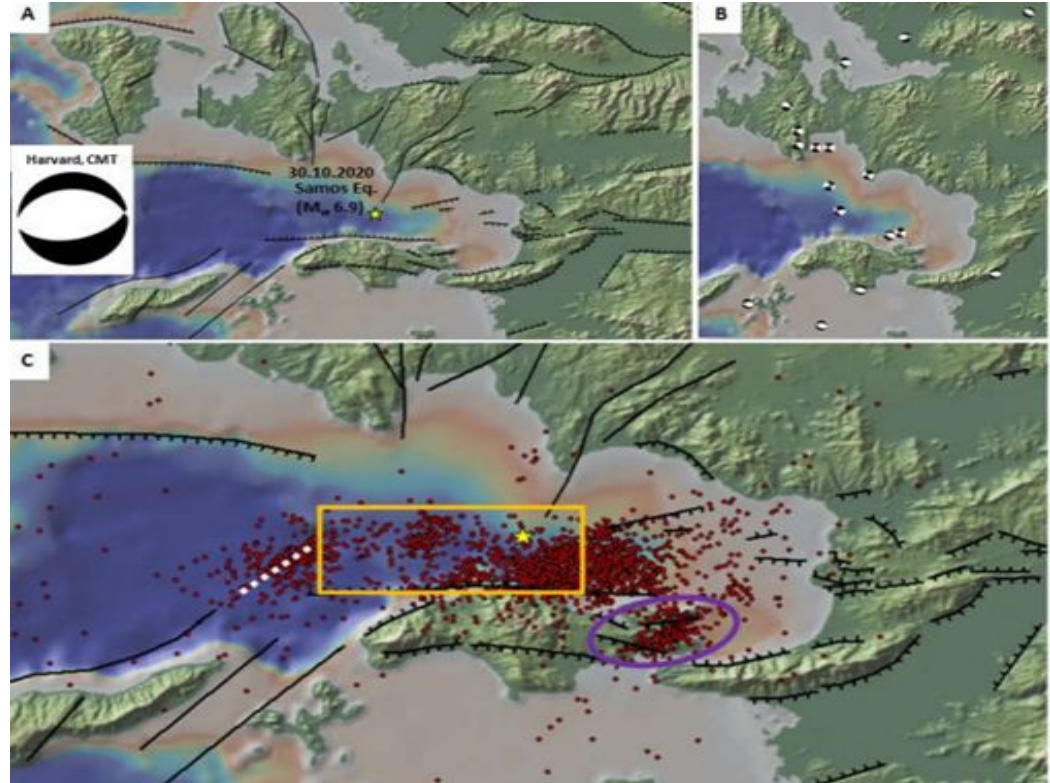
What was
right/wrong?

Overview of İzmir Earthquake

- The earthquake is slip of two blocks on the earth.
- The fault is the name of the surface where this slip occurs.
- This earthquake is occurred in the Aegean Sea, Seferihisar offshore
- Moment Magnitude(M_w) is 6.6

Overview of İzmir Earthquake

- Picture A shows epicenter of Mainshock
- The star on the Picture A shows the starting point of the earthquake.
- Picture B shows past earthquakes happened in the region
- Red Dots in the Picture C shows the distribution of aftershocks.



Affected Regions



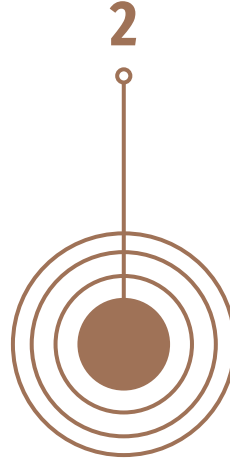
Seawater covers a public square after the earthquake at the Greek port of Vathi on the Island of Samos.

As a result of earthquake flood happened in Greek island of Samos

Affected Regions



After the earthquake a tsunami occurred



This tsunami affected the coasts near the Seferihisar.



Other affected regions are Muğla, Manisa, Greek Island of Samos.

Statistics of İzmir Earthquake

01

115 people died.

02

1034 people injured.

03

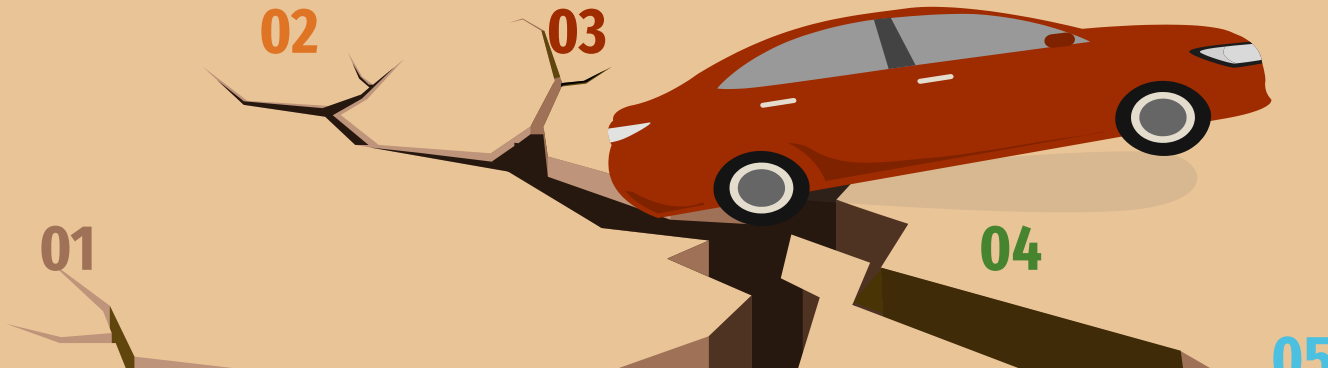
1000 teams worked for evaluations of damaged places.

04

17 demolished buildings

05

2758 tents were built for people.



Damaged Infrastructures

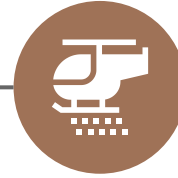
Transportation

No significant damage on roads



Electricity

Electricity of 18000 people is cut off.



Hospitals

Many hospitals were damaged.



Schools

Education suspension for 1 week.



Telecommunication

Telecommunication companies provided mobile communication vehicles.



Precautions

← → ↻ izmir.bel.tr/izmirdeprem/

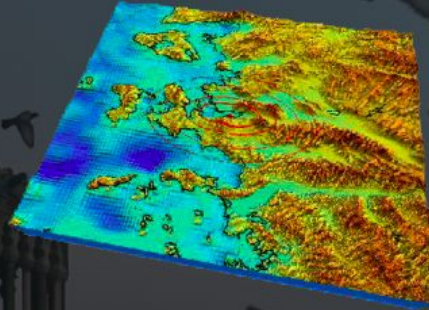


İZMİR DEPREM SENARYOSU VE DEPREM MASTER PLANI

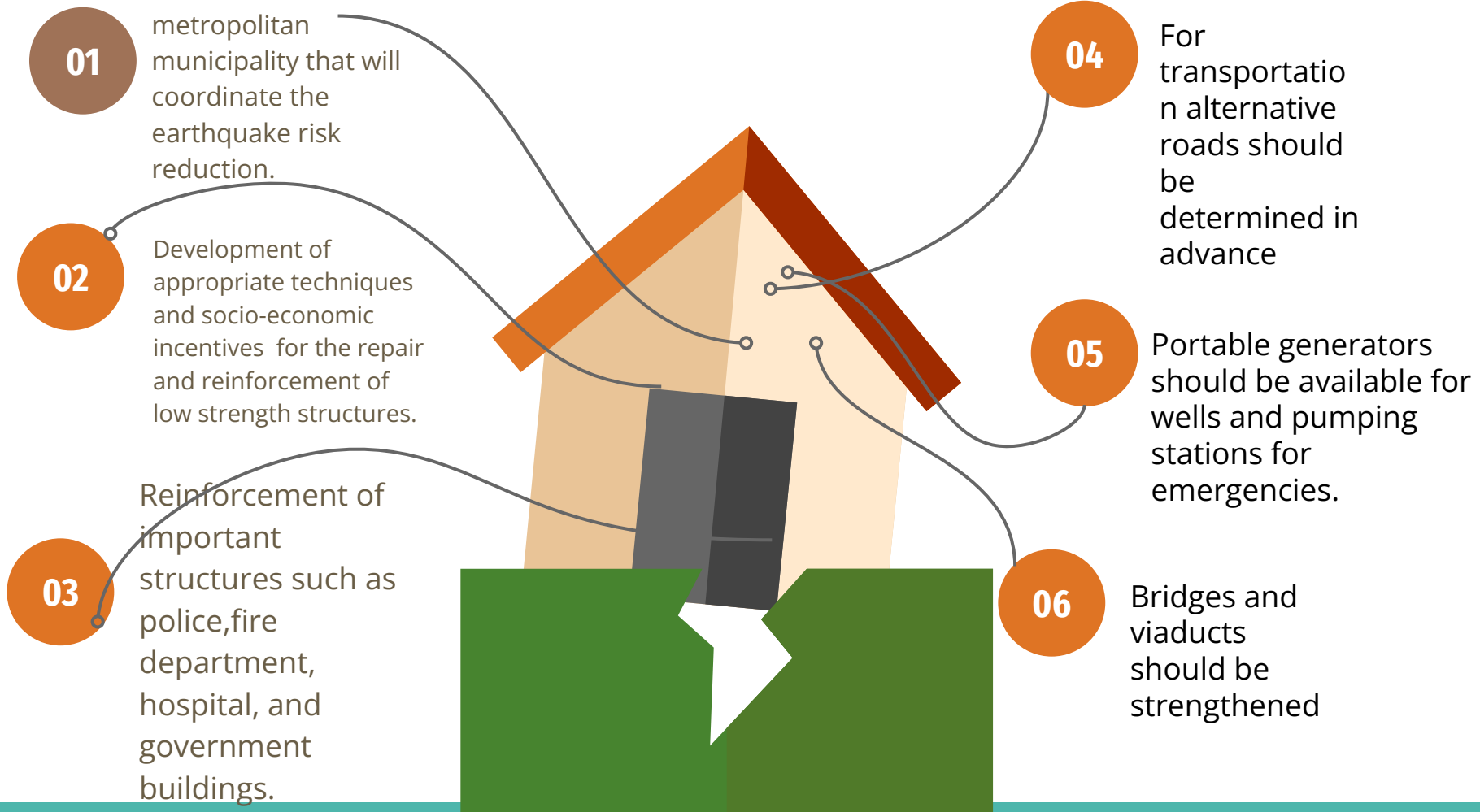
[Anasayfa](#) [Takdim, Teşekkür ve Tanıtım](#) [Jeoloji ve Tektonik](#) [Deprem Oluşumları](#) [Deprem Tehlikesi](#) [Geoteknik Değerlendirme](#)
[Alt Yapı](#) [Binalar](#) [Sosyo-Ekonomik Yapılar](#) [Risk Azaltılması İçin Öneriler](#)



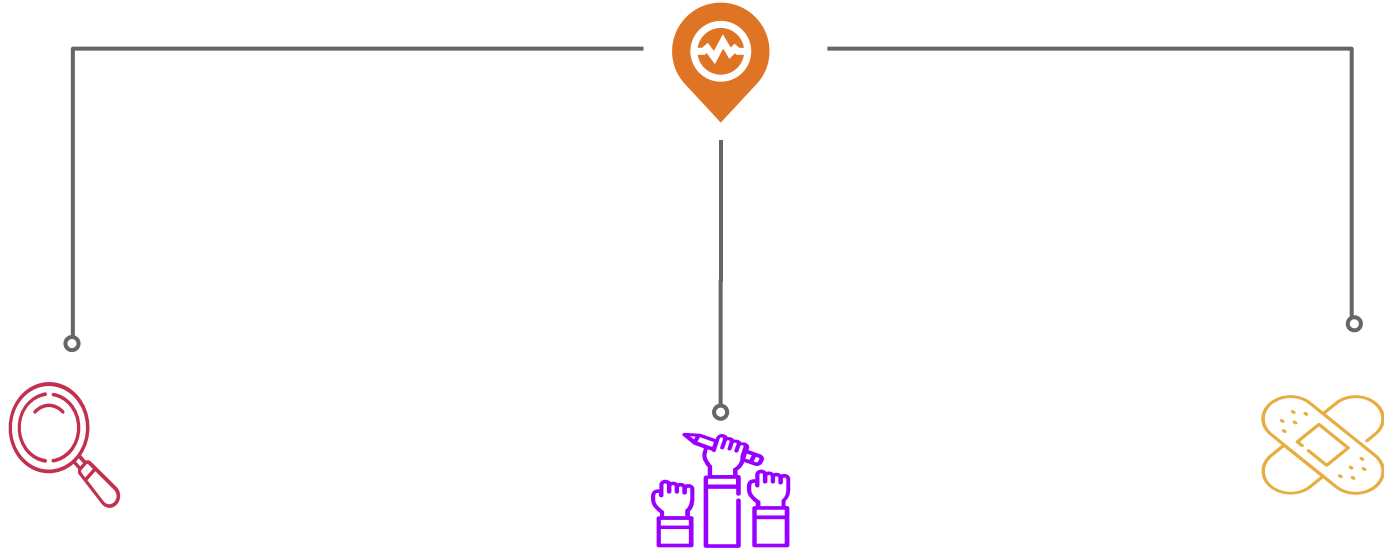
İzmir Büyükşehir Belediyesi ile Boğaziçi Üniversitesi Arasında İmzalanan Araştırma Projesi Protokol Sözleşmesi Kapsamında Hazırlanmıştır.



Planned Precautions



Disaster Management



- Management of the resources and responsibilities for dealing with all humanitarian aspects of emergencies.

Preparedness

#BePreparedForDisasters

6 Disaster Management Projects by AFAD

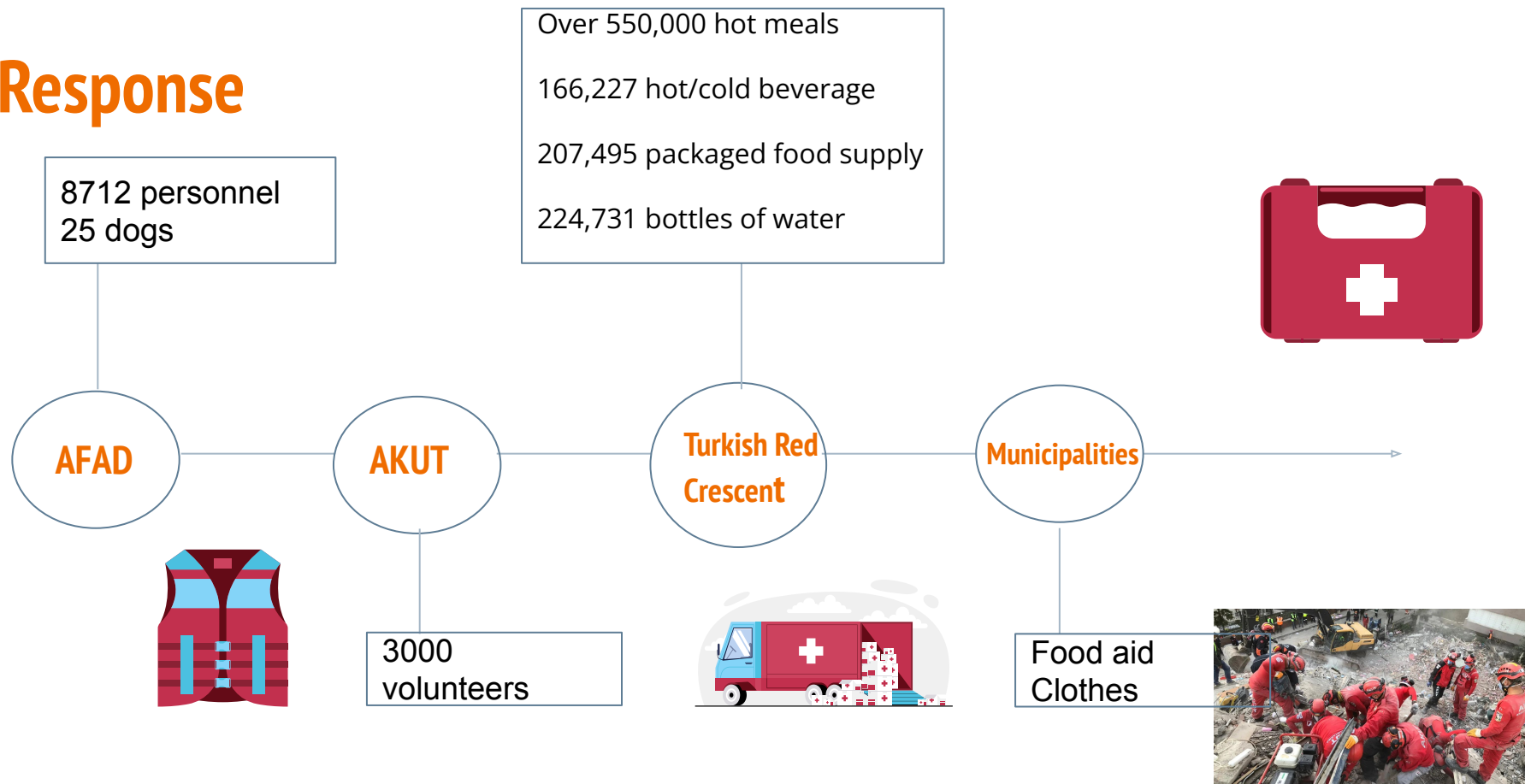
IMM & Boğaziçi University

RADIUS program

AFAD 



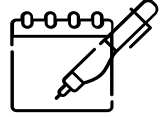
Response



Recovery

60 families hosted in Hilton Hotel
160 families settled in apartments
of IMM

23,000
applications
made



More than 3000
Shelters set up



"Bir Kira Bir
Yuva" campaign
by IMM

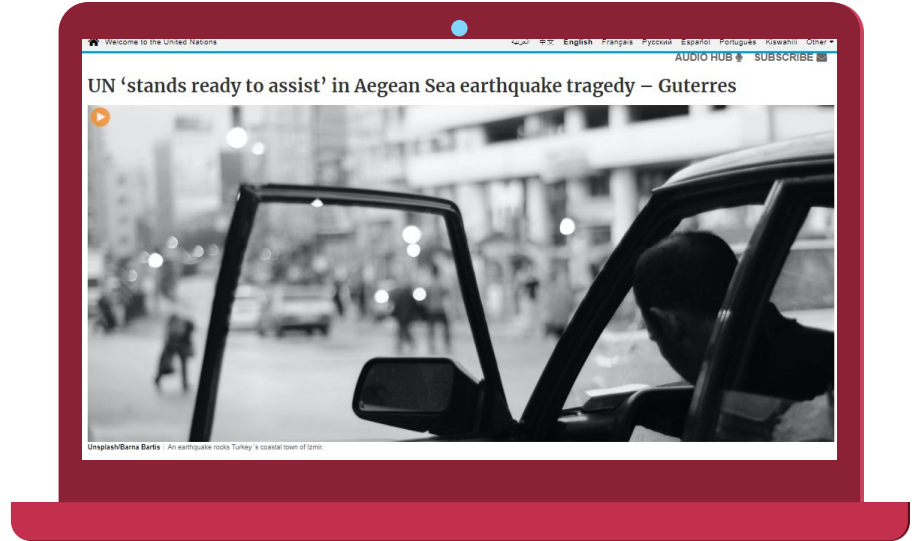
DASK (Turkish
Catastrophe
Insurance Pool)

Collected > 42 M TL



Global Help

Even if NATO, and UN stated that they are ready to help if it is needed, Turkey did not receive any direct help from these organizations as well as any other countries.





TURKEY, Izmir, 2020
Magnitude: 6.6
115 dead, 1034 injured

WHY?

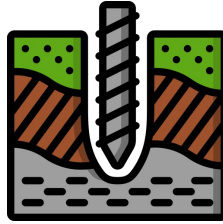
JAPAN, Miyagi, 2021
Magnitude: 6.8
0 casualties



What Was Wrong?



Poorly constructed buildings



Wrong selection of land



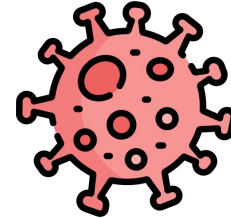
Inadequate precautions



Congestions in traffic



Poor coordination between the
rescue teams



Violation of Corona virus
preventions

Poorly constructed buildings

10 buildings that are collapsed in Bayraklı district have concrete and reinforcement material of poor quality.

Stores on the ground floor brought lack of partition wall

Not enough column and retaining wall



Wrong Selection of Land

Loose land

Earthquake waves effect is reinforced by the land and transmitted to the surface.

One of the buildings collapsed was situated near agricultural land rich of water sources.

"Salata ekeceğine apartman ekerek zengin olunan bir bölge. Tarım alanları akarsu yatakları içinde değişken zemin yaratır. Binadaki en ufak hatayı affetmez." -

Marine Geologist and Geophysicist



Rıza Bey Building, 36 dead, 17 injured

Inadequate Precautions



Unexpected risk of tsunami

Disaster management plan for tsunami should have been prepared

Educating people



Producing prefabricated houses instead of tents

Congestions in Traffic

- Rescue teams could not arrive to disaster areas quickly (4 hours)
- *"Buraya bir an önce profesyonel destek gelmeli, trafikten dolayı 20-25 tane itfaiye aracı ulaşamıyor. Bayraklı'da 8 binanın yıkık olduğunu biliyoruz." - Bornova Municipality Mayor*



"Kızılay tişörtümü gösterip, arkadaşları çevirdim, trafik çok yoğunlu. Beni bir kurye getirdi" -
Özlem Baran Tezen (Turkish Red Crescent from Manisa)

Poor Coordination between the Rescue Teams

Confusion between the government-based and municipality-based rescue teams

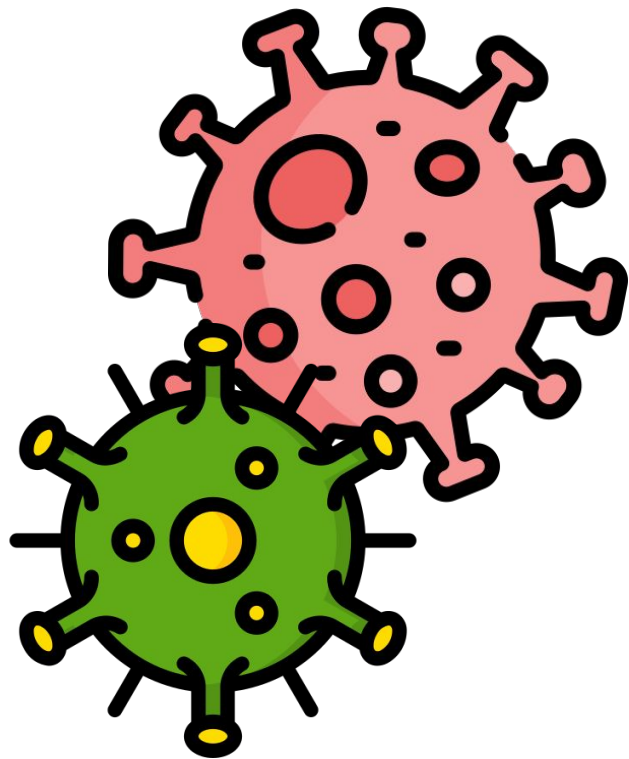
Number of teams stepped into the debris

Distribution of roles over the debris

Transfer of victims from the disaster areas to hospitals



Coronavirus Preventions were Disregarded



In the middle of the pandemic

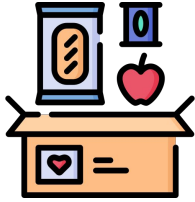
Positive, carrier, negative were mixed in the rush

Fever control, sanitation, mask dispensing

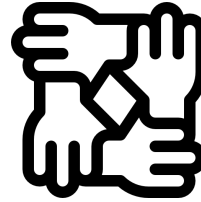
TRIPLED

number of deaths and cases

What was Right?



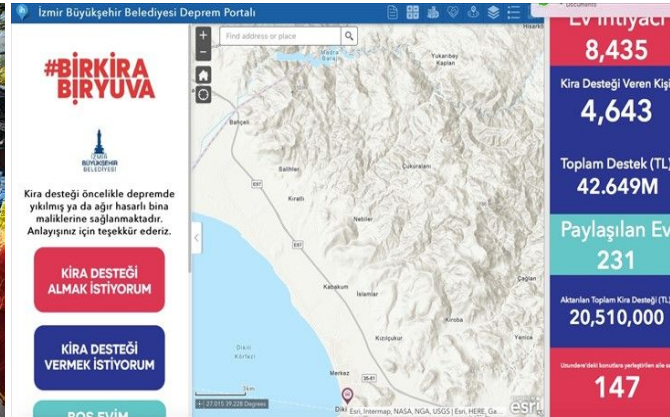
Sending necessary items to the disaster area for victims quickly



Sense of solidarity
"Bir Kira Bir Yuva"
+42M TL was raised



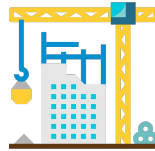
3111 tents were set up for the victims



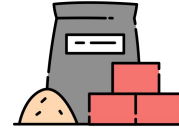
Lessons Learned



Municipalities' authorities should be increased during disasters.



Detailed investigations on constructing buildings against legislations should be carried.



The importance of the quality of the materials used



Get away from the shore in case of tsunami. Do not go close for recording video!

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ANY QUESTIONS?

Discussion Question

What was the reason behind the different institutions announcing different magnitudes for Izmir Earthquake?

AFAD: 6.6 M_{ww}

Kandilli: 6.9 M_{ww}

USGS: 7.0 M_{ww}