

INTERNATIONAL RESPONSE TO TURKEY 2023 EARTHQUAKE: A POLICY ANALYSIS

John R. Fisher

Utah Valley University, USA, john.fisher@uvu.edu

Muhaedin Bela

Institute of Emergency Preparedness, N. Macedonia, bela66@gmail.com

Zijavere Keqmezi Rexhepi

Kosovo Customs, zijaverek@hotmail.com

Abstract: Western Balkan states, among them Kosovo and North Macedonia, joined others from around the world in offering aid to Turkey, which, along with Syria, was hit by two deadly earthquakes on February 6, 2023. The epicenter of the 7.8-magnitude earthquake was in Kahramanmaraş province near the border with Syria.

As a result of the earthquakes, there were 50,783 deaths, 297 missing and 107,204 injured across 11 of the 17 affected provinces of Turkey. At least 15.73 million people and 4 million buildings were affected. About 345,000 apartments were destroyed. Over 1.5 million people were left homeless.

Over 100 nations and 16 international organizations offered aid to the earthquake victims in Turkey. In addition, 11 countries contributed search and rescue teams accompanied by specially trained dogs to locate survivors trapped in the rubble. In contrast, aid to Syria was comparatively less, primarily due to Western sanctions on the nation and government-imposed restrictions on humanitarian organizations operating beyond their controlled regions.

The paper conducts an analysis of ten existing international response organizations, examining their agreements and procedures in disaster response efforts. It investigates the history and effectiveness of these organizations in managing disaster situations, with a specific focus on their roles in addressing the Turkey and Syria disasters. The paper assesses their effectiveness in the context of the February 2023 earthquake.

Furthermore, the paper explores the concept of mutual aid mechanisms, which are commonly utilized by countries worldwide for disaster response. These agreements, whether bilateral or multilateral, are typically established at different levels of government, ranging from local to national and even international. While the specifics of these agreements may vary among nations, the overarching goal is to create a framework for sharing resources, personnel, and expertise during times of emergency.

Additionally, the paper discusses the response efforts of two Balkan countries, Kosovo and North Macedonia, which provided assistance such as search and rescue teams, handlers with dogs, and material aid like blankets and stretchers. Notably, these nations offered their support independently, without being part of any international organization. Their response was established through direct communication with Turkey. It was characterized by its immediacy and sincerity,

Finally, the paper draws conclusions based on an evaluation of the strengths and weaknesses of existing response systems, offering recommendations to policymakers to enhance overall disaster response procedures.

Keywords: earthquake responses, disaster recovery, emergency preparedness, readiness, disaster agreements, mutual aid

1. INTRODUCTION

In this paper we examine the current policies and procedures to respond to an international disaster. We compare the contributions of major disaster response agencies with the contributions of small countries to respond to the following questions.

First, what was the contribution to disaster response and recovery played by major disaster response organizations and what value did they add to the process?

Second, what role did small countries play in the response and recovery of a major international disaster?

Third, what role does the host country play in the process of response and recovery and how important is the contribution of major response agencies and donor countries?

Finally, what are the lessons learned for disaster policy from the disaster response and recovery process?

1.1. Background to the 2023 earthquake in Turkey and Syria.

Two fatal earthquakes struck Turkey's southwest and northern Syria on February 6, 2023. The 7.8-magnitude earthquake's epicenter was in the Syrian border province of Kahramanmaraş. In 11 of Turkey's 17 impacted provinces, there were 50,783 fatalities, 297 unaccounted for, and 107,204 injuries because of the earthquakes. In

Syria 8,476 died. Four million buildings and at least 15.73 million individuals were impacted. There were over 345,000 demolished apartments, resulting in more than 1.5 million homeless persons.

Sixteen international organizations and more than 100 countries helped Turkey's earthquake victims. Additionally, 11 nations sent search and rescue teams with specially trained canines to find those trapped in the wreckage. As a result of Western sanctions against the country and government restrictions on humanitarian organizations operating outside of their declared control zones, help to Syria was, in contrast, comparatively less than that provided to Turkey (UN News, 2023).

1.2. Hazards versus disasters. A distinction needs to be made between the terms natural hazards and disasters. FEMA explains that while hazards and disasters are connected, they are not the same. A natural hazard represents the potential for an event that could lead to adverse consequences, whereas a natural disaster refers to the outcome that arises when a natural hazard occurs and causes substantial harm to a community. Hazards encompass potential threats or occurrences with the capacity to inflict harm, whereas disasters materialize when these hazards come to fruition, leading to substantial damage or losses. Hazards can take the form of natural events or be of human origin, whereas disasters emerge when one or more hazards impact a susceptible population. For example, an earthquake is a natural hazard that when it occurs may result in a disaster with the potential to cause harm to people and property.

1.3. Reasons for earthquake severity.

An earthquake is a shaking of the earth's surface by energy waves emitted by slowly moving tectonic plates overcoming friction with one another underneath the earth's surface. While a number of factors (including location, intensity, depth, and seismic waves) determine the severity earthquakes, the most common measure is magnitude (Mw). Magnitude is measured using the Richter scale (USGS, n.d.). The potential hazard of a 3 Mw earthquake is minor while that of a 7 Mw is high. A Mw 7.8 earthquake occurred on February 6, 2023, at 04:17 TRT impacting northern and western Syria as well as southern and central Turkey. The epicenter was 37 kilometers to the west-northwest of Gaziantep. The earthquake's highest Mercalli intensity was XII at Antakya and the area surrounding the epicenter. At 13:24, a second earthquake struck with a Mw of 7.7.

2. METHODOLOGY

This policy study uses qualitative analysis to examine contributions of various actors in the response to the 2023 earthquake in Turkey and Syria. Typically, policy studies use interviews or archival research to describe the history of current policy and to propose changes or solutions to problems in the current policy. In this study, we draw from materials from Internet searches, primarily media coverage.

3. RESULTS

In this section, we first describe the various international agencies which are involved in disaster relief and make remarks about their role in the 2023 Turkish earthquake. Second, we point out the use of mutual aid as a means of disaster response and how it is used in seven countries. Third, we look at the contribution of two small Balkan neighbors (Kosovo and North Macedonia) in terms of their contribution to the Turkish disaster response. Finally, we explore the core reason for the large death toll from this disaster, the failure to implement building codes.

3.1. International contributions to disaster relief. A number of agencies have been established to support humanitarian efforts in the event of disasters. These agencies are supposed to make it easier to coordinate responses and make sure that impacted areas receive aid as soon as possible. Some of the key agreements and mechanisms include:

3.1.1. Sendai Framework for Disaster Risk Reduction (2015-2030): The Sendai Framework for Disaster Risk Reduction (2015-2030) is a United Nations initiative aimed at diminishing the risk of disasters and strengthening resilience to such events. It promotes global collaboration to enhance readiness, response, and recovery in the face of disasters. The UN Office of Disaster Risk Reduction (UNDRR) has been entrusted with the responsibility of supporting the execution, monitoring, and assessment of the Sendai Framework. UNDRR also coordinates efforts within the UN system to achieve these goals. As the primary agency in the United Nations system for orchestrating disaster risk reduction activities, UNDRR leverages its extensive expertise and its presence in five regional offices to cultivate relationships with national and local governments, intergovernmental organizations, civil society, and the private sector. An examination of UNDRR's website indicates that it has not yet responded to the 2023 Turkish earthquake (UNDRR, 2023).

3.1.2. International Civil Aviation Organization (ICAO): The International Civil Aviation Organization (ICAO), is a specialized agency of the United Nations. It coordinates international aviation responses during disasters, including the transportation of relief supplies and personnel. Airlines, including Turkish Air, responded quickly to the earthquake. The webpages of the ICAO don't describe the role the UN agency played in coordinating aviation's response to the earthquake (ICAO, 2023).

3.1.3 United Nations Office for the Coordination of Humanitarian Affairs (OCHA): During humanitarian crises and natural catastrophes, OCHA helps to mobilize resources and coordinates international humanitarian response activities. Humanitarian organizations have aided the Turkish government's attempts to provide emergency aid following the two earthquakes that devastated Turkey on February 6, 2023. By the time the Flash Appeal came to a conclusion in May 2023, 5.4 million people had received targeted aid for urgent humanitarian needs. This support complimented the government's initiatives to start home restoration while also establishing a variety of social protection packages for affected families, farm owners, and companies (OCHA, 2023, August 15).

3.1.4. United Nations Disaster Assessment and Coordination (UNDAC): UNDAC is a system of trained personnel and teams that can be rapidly deployed to assess and coordinate international disaster response efforts.

To ensure effective coordination with Turkey's Disaster and Emergency Management Authority (AFAD), which led the response efforts, an UNDAC liaison team was established in Ankara. UNDAC coordinated International Urban Search and Rescue (USAR) on the ground in Turkey. As of February 19, 2023, there were 65 active United Nations Classified and other International Urban Search and Rescue (USAR) Teams on the ground. These teams comprised a total of 3,273 personnel and were accompanied by 77 search and rescue dogs. In addition, a total of 191 international teams had completed their search and rescue operations and have been demobilized. An UNDAC team was deployed to Gaziantep to assist in coordinating USAR operations and in conducting assessments of the situation and humanitarian needs. As of February 18, international USAR teams have successfully conducted 250 live rescues (OCHA, 2023, February 19).

3.1.5. The United Nations Central Emergency Response Fund (CERF): CERF is a humanitarian fund that provides rapid and flexible funding to respond to crises, including natural disasters. It helps jumpstart relief efforts in the early stages of a disaster.

On February 16, the Central Emergency Response Fund (CERF) allocated \$10.2 million to help UNHCR, IOM, UNICEF, UNFPA, WFP, UNDP, and NGO partners carry out life-saving multi-sectoral assistance (OCHA, 2023, February 21). The World Bank announced an initial loan of \$1.78 billion and the United States contributed \$100 million in aid. Numerous other countries contributed financial or material aid. CERF was actively involved in raising funds from the public. No final financial figures for contributions appear to be readily available.

3.1.6. International Federation of Red Cross and Red Crescent Societies (IFRC): The IFRC coordinates disaster response activities and provides support to national Red Cross and Red Crescent societies during emergencies. Red Cross and Red Crescent workers from both Turkey and Syria were actively involved in provided relief in terms of hot meals, hygiene kits, clothing, bedding, tents, family reunification, and counseling services. National Red Cross, Red Crescent organizations were actively involved in fund raising (IFRC, 2023).

Bilateral and regional agreements are in place to help with disaster relief. Also, several Humanitarian Charters exist that demonstrate voluntarily made agreements by governments, other stakeholders, and humanitarian groups to coordinate and enhance disaster response activities. The Sphere Handbook and the Grand Bargain are two examples. A more effective and coordinated response to disasters is ensured by these agreements and protocols, and the suffering of the affected communities is minimized. Depending on the type of disaster and the affected area, the specific agreements and organizations may change.

3.2. Mutual Aid Agreements. To promote collaboration and help during times of crisis, many nations adopt mutual aid agreements in disaster response (UKEssays, 2018). These pacts may be bilateral or multilateral in nature and are frequently made at all tiers of government, from municipal to international. In principle, the purpose of these agreements is to establish a framework for sharing resources, manpower, and knowledge during emergencies. The contents of these agreements can differ greatly from one nation to another. Mutual aid agreements are based upon the concept of government decentralization. Here are a few countries that have mutual agreements:

3.2.1. United States: At many levels of government, the United States has a system of mutual aid agreements. Mutual aid agreements exist between nearby counties or municipalities on a local level. Emergency Management Assistance Compacts (EMACs) at the state level enable states to ask other states for support during disasters. The Federal Emergency Management Agency (FEMA) also organizes federal aid to communities and states.

3.2.2. European Union: The Civil Protection Mechanism within the European Union promotes collaboration and mutual aid amongst member states during emergencies. Member states can ask other members for assistance, and different teams and resources can be sent across borders to help.

3.2.3. Australia: Mutual aid agreements are in place in Australia at both the state and territory levels. During crises like wildfires, these agreements permit the sharing of resources and personnel.

3.2.4. Canada: Mutual aid agreements are frequently employed by the provinces and territories in Canada. During catastrophes like floods or wildfires, these agreements enable provinces and territories to ask one another for help.

3.2.5. Japan: Due to Japan's Mutual Assistance Agreement for Disaster Response, local governments are able to ask for support from nearby municipalities or prefectures in times of crisis.

3.2.6. *New Zealand*: The Civil Defence Emergency Management Groups in New Zealand oversee regional disaster response activities, including mutual aid agreements.

3.2.7. *United Kingdom*: In the UK, there are mutual aid agreements in existence for emergency services like the fire and rescue service, which can be contacted to assist neighboring regions during emergencies.

Similar plans are in existence in many other nations to guarantee a coordinated response to emergencies and disasters. These agreements can cover a variety of calamities, including natural disasters, public health emergencies, and more, and their specifications can vary greatly. As nations update their emergency management and response plans, the specifics of these agreements may likewise alter over time.

3.3. Kosovo and North Macedonia assistance. Other states have centralized systems for government response to disasters. Turkey is one of those as are the Balkan countries of Kosovo and North Macedonia. The Turkish Disaster and Emergency Management Authority (AFAD) commanded the response to the February 2023 earthquake within its provinces. The AFAD also organized the international response through the assistance of United Nations Disaster Assessment and Coordination (UNDAC). It also plays a role in recovery and rebuilding following the disaster.

On February 6, 2023, President Vjosa Osmani of Kosovo, as supreme commander over the Kosovo Security Force (KSF), utilized her constitutional powers to approve the deployment of Kosovo Security Force personnel to participate in an international humanitarian mission based in Turkey. The mission's objective was to provide assistance to Turkish authorities in their rescue and recovery endeavors following the earthquake (Oculus News, 2023).

Members of the Kosovo Security Force (FSK), who helped in the search and rescue operations in Turkey after the February 6 earthquakes, were honored with medals two weeks later when they arrived back in Kosovo. At the award ceremony, Prime Minister of Kosovo, Albin Kurti, said that the medals showed Kosovo's gratitude for their courage shown in Turkey. "It is our humanitarian obligation, but at the same time it is also our duty as partners, allies, and as a state and friendly people of the Republic of Turkey to be with them in these difficult days and this was realized precisely through you, who without wasting time left for Turkey and tried with everything you know and can to save lives," said Kurti to the members of the KSF. The KSF team consisted of 39 people. They saved four people left under the ruins from the earthquakes, and brought out about 50 dead people (Halili, 2023).

In the meantime, in Northern Macedonia, on February 7, 2023, in Skopje, a total of 24 Army personnel, comprising two handlers with service dogs, along with 10,000 blankets and 200 medical stretchers, were dispatched to provide assistance to Turkey following the impactful earthquake that struck the nation the previous day. The Minister of Foreign Affairs extended an offer of assistance to Mevlüt Çavuşoğlu, his Turkish counterpart.

3.4. Turkish earthquake response. The Turkish response was highly criticized by the international press (Oztaskin, 2023; Shah, 2023). A Forbes article (Yildiz, 2023) typified the reporting. "The earthquakes that struck Turkey on February 6, 2023, had revealed significant shortcomings in the government's response, contributing to the enormous loss of life. The three key failures included a lack of flexibility in planning, a lack of coordination, and an initial politicized response. These glaring inadequacies highlight the importance of scrutinizing the reaction to such crises, as it is critical to ensuring that they do not occur again."

Turkey is a nation with a lengthy history of seismic activity. It possesses a thorough understanding of natural disasters and maintains a dedicated disaster management authority called AFAD. Interestingly, this authority had foreseen a 7.5 magnitude earthquake striking Pazarcik more than three years prior to the actual occurrence of a 7.7 magnitude tremor in the town. In anticipation of such an event, AFAD conducted a drill in 2019, with the expectation of receiving assistance from nearby cities. However, it seems they did not anticipate the seismic impact extending across such an extensive area, encompassing at least 10 cities initially slated to provide aid and numerous towns spanning hundreds of square kilometers. The earthquake was of such immense scale that it stretched over 280 miles in length and 180 miles in width.

In the context of large-scale disasters, Turkey possesses just one entity capable of mounting an efficient response: the military. Their remarkable transportation and communication skills, coupled with their disciplined training under NATO standards, would have been invaluable for orchestrating rescue operations. Nonetheless, the decision to sideline the military in the earthquake response led to their absence during the critical initial hours and days when lives might have been preserved.

Turkey's current presidential governance model is characterized by a high degree of centralization, which presents challenges for on-the-ground organizations in terms of their ability to respond with the required flexibility. While centralized systems are often praised for their efficiency in decision-making and emergency responses, the recent earthquake in Turkey has revealed their limitations. The inflexibility of centralization has impeded the decision-making process, and local entities have faced significant criticism for their delayed response.

The authoritarian nature of Turkey's governance system constrains the room for opposition and civil society participation. Over time, the Turkish civil society has weakened, making it increasingly challenging for them to

coordinate and mobilize rescue and relief efforts. As civil society becomes less organized outside the sphere of the state, its capacity to react to disasters and crises diminishes.

4. DISCUSSIONS

In this section, we discuss the results that help to answer the four study questions. What is the contribution to disaster response and recovery played by major disaster response organizations and what value do they add to the process? What role did small countries play in the response and recovery of a major international disaster? What role does the host country play in the process of response and recovery and how important is the contribution of disaster response agencies and donor countries? What are the lessons learned for disaster policy from the disaster response and recovery process for the Turkish/Syrian earthquake?

4.1. International agency contributions to the earthquake response. Over 100 countries and 16 aid agencies offered disaster aid in Turkey. For political reasons, Syria didn't get that kind of help. The most effective assistance appears to be from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Disaster Assessment and Coordination (UNDAC), and the International Federation of the Red Cross, Red Crescent Societies (IFRC). OCHA helped mobilize resources and coordinate international humanitarian response activities, mostly in the recovery stage. UNDAC brought in search and rescue teams (SARS) and coordinated their efforts with Turkish responders and others. The IFRC and its in-country affiliates mobilized thousands of volunteers who provided aid in many forms, including hot meals. The Red Cross/Red Crescent operated in both Turkey and Syria. All of these agencies in conjunction with other organizations contributed to the earthquake response and recovery. The other agencies on our list appear to have done less or didn't report their efforts. Some agencies are obviously less effective in their efforts or find their mandate elsewhere. For example, the UNDRR appears to be more concerned about identifying risks (like global climate change) than offering aid in disaster situations. The agencies efforts may actually be significant in building resilience and preparing against future hazards. The lesson learned may be that aid agencies need to clarify their missions, work toward achieving the big goals, and promote their successes.

4.2. Contributions of other countries. Over 100 small and large countries played a significant role in disaster response in Turkey. Kosovo and North Macedonia were on the ground in Turkey for the first crucial weeks. They deployed quickly, probably because the response teams were drawn from the military. This may suggest that more effort should be made in training civilians for emergency management and SARS functions.

Bilateral and multilateral agreements need to be in place, particularly for small countries that lack the resources for response to large scale catastrophes. Mutual Aid Agreements appear to be used primarily within developed countries or in the case of the European Union with member countries.

4.3. The Turkish response. The Turkish response process is highly centralized and politicized. While the disaster and emergency management authority (AFAD) performed an important function, it appears from media coverage that the agency was not prepared to handle a large disaster as the February 2023 earthquakes. The Turkish military is much better prepared but wasn't called on immediately. Many lives may have been saved had the response been more flexible and less politicized. It appears that AFAD worked well in coordinating response with other agencies and countries. Experience elsewhere suggests that agencies and local governments working together under strong unified command are more successful in handling disaster recovery. The best response is local where responders know the local people, their needs and culture. Politics and politicians shouldn't be a part of the response process, except to help in bringing together resources.

4.4. Policy recommendations. The primary takeaway for policymakers is that decentralizing emergency management may be more efficient than a centralized framework. Although it may not be clear from the study's examples, successful responses have occurred in other places where local citizens had the skills and resources to act right away. As the size of the event grows, outside help should be requested right away. Other places have seen success with a strong unified command using an incident command structure. Supplying and coordinating resources are functions that can be accomplished at the national and international levels. To receive outside assistance, bilateral and multilateral agreements need to be in place.

5. CONCLUSIONS

If communities are prepared, the loss of life and human suffering from disasters can be lessened. While it's possible that substandard housing, inadequate infrastructure, and a disregard for construction regulations worsened the impact of the earthquake in Turkey (Inanc, 2023), local preparation through citizen training and maintaining resources could have saved lives. Decentralized rather than centralized response would have improved reaction times. Disasters should be handled locally first. Only when a disaster is so severe that local response is inadequate

should central government and international resources be used. Decentralized response systems are more flexible and less political. Successful disaster response requires flexible planning and effective collaboration. This study is limited to only information found through internet searches. This information was in the form of organizational documents and news stories. A future study needs to incorporate interviews of people with knowledge of the disaster response process and the organizations involved.

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