

What Are the Obstacles in the Recovery Process Considering the Role of Actors? The Case of the Kahramanmaraş Earthquake in Turkey

Gözde İdil ÖZCAN

Affiliation: Istanbul Technical University

Email: gozdeidilozcan@gmail.com

Abstract

The earthquakes centred in Kahramanmaraş on 6 February 2023 revealed profound structural and institutional vulnerabilities in Turkey's disaster management system. This study explores the post-disaster recovery efforts in Hatay and Adıyaman, focusing on the difficulties encountered by central and local governments, NGOs, international organisations, and community-based actors. Employing qualitative content analysis, the research demonstrates that the highly centralised governance structure restricts local adaptability and participation, resulting in spatial injustices and widespread institutional distrust. The findings underscore that recovery must extend beyond technical reconstruction and be guided by inclusive, multi-actor, and transparent governance approaches. Strengthening local institutional capacity and ensuring the meaningful integration of civil society and diverse actors into the recovery process are essential for building long-term resilience.

Keywords: Recovery; earthquake; actors; institutional hierarchy; Turkey

Introduction

Earthquakes are disasters that not only cause physical destruction but also disrupt social, economic, and institutional systems. Due to its location on active fault lines, Turkey frequently experiences earthquakes, which continuously challenge its disaster management capacity and reconstruction processes. The two major earthquakes that struck on 6 February 2023, centred in Kahramanmaraş and directly affecting 11 provinces, brought about severe difficulties not only on a physical level but also at institutional and societal levels. This disaster affected approximately 13.5 million people, resulted in the displacement of around 3.3 million individuals, and caused an economic loss exceeding 87 billion USD (Turkish Enterprise and Business Confederation [TÜRKONFED], 2023).

The post-disaster recovery process entails not only the reconstruction of destroyed infrastructure but also the restoration of the social fabric, the revitalisation of economic activities, and the rebuilding of governance capacity (UNDRR, 2015). In this process, coordinated action among actors at different levels—central and local governments, civil society organisations, international aid agencies, and community-based structures—is essential for effective recovery. However, Turkey's disaster management system largely operates through centralised structures, often limiting the roles of local actors.

The primary aim of this study is to examine the roles of actors involved in the recovery process following the Kahramanmaraş earthquakes and to identify the main obstacles encountered during this process. In this context, the research focuses on the following question: What challenges did the actors involved in the post-earthquake recovery process face, and how did these challenges affect the effectiveness of the process?

The study adopts qualitative content analysis as its research method. Within this framework, academic publications, official reports, documents produced by local administrations and NGOs, and media content related to the aftermath of the earthquakes were examined. Through the analysis of discursive and thematic patterns, findings were obtained regarding the roles of various actors, the institutional and structural challenges they encountered, their positions in decision-making processes, and the forms of interaction between them.

The article consists of five main sections. First, the literature review will discuss post-disaster recovery processes and actor-based governance approaches. The second section will explain the research methodology based on

content analysis. The third section will address the heterogeneity of the regions affected by the Kahramanmaraş-centred earthquakes. The fourth section will present the contextual framework of the study by describing the socio-economic and spatial characteristics of the two most affected provinces. The fifth section will focus on the findings obtained through thematic analysis, highlighting the challenges faced and the roles of different actors. In the final section, an evaluation of the findings will be provided, along with policy recommendations for an actor-based and inclusive recovery process.

1. Theoretical Framework and Literature Review

Post-disaster recovery processes are generally addressed in the literature in two main phases: short-term and long-term recovery. While short-term recovery refers to response-oriented processes such as search and rescue, emergency aid, and temporary shelter, long-term recovery involves not only physical reconstruction but also the restoration or more resilient rebuilding of social and economic systems (UNDRR, 2015). The success of these processes depends not only on the optimal use of financial resources but also on the ability of institutions and communities to develop strategies that enhance post-disaster resilience.

At this point, the concepts of resilience and adaptation come to the forefront in evaluating post-disaster recovery processes. Resilience refers to the capacity of societies or systems to withstand crises and recover rapidly (Cutter et al., 2008), whereas adaptation highlights the ability of these systems to adjust to changing conditions following such crises (Adger et al., 2005). Considering the diversity and complexity of disaster impacts across different spatial contexts, it becomes essential to examine these two concepts together.

Recovery processes are shaped not only by theoretical principles but also by the roles of the actors involved. Disaster management is considered a multi-actor domain; the relationships among central governments, local administrations, civil society organisations (CSOs), international agencies, and local communities directly influence the success of recovery. In this regard, the literature emphasises the multi-actor governance model, which prioritises the participation and collaboration of diverse stakeholders in decision-making processes, based on the principles of transparency, inclusiveness, and accountability (Ansell & Gash, 2008). The effective implementation of this governance model is directly dependent on institutional capacity. Kapucu (2008) stresses that the capacities of institutions involved in disaster management are shaped by factors such as access to information, resource mobilisation, coordination ability, and decision-making skills during crises.

In the Turkish context, disaster management has long been structured through centralised mechanisms. This centralisation has limited the participation of local authorities in decision-making processes and exacerbated coordination problems in post-disaster interventions. The formation and operation of such centralised institutions and their structural limitations have been observed in Turkey's past disaster experiences. For instance, the 1999 Marmara Earthquake triggered a major transformation in Turkey's disaster management system; in its aftermath, new institutional structures such as AFAD were established, and response coordination was consolidated under a single central authority (Ergünay, 2001). However, similar coordination problems, as well as imbalances in temporary shelter and resource distribution, were also noted in the 2011 Van and 2020 Elazığ earthquakes. These examples indicate that although institutional transformation in Turkey's disaster management system has begun, the capacity for multi-actor governance remains underdeveloped.

While the disaster management literature broadly discusses governance models, institutional capacities, and inter-actor collaboration, it often fails to address in sufficient depth the spatially differentiated roles of actors and how these roles manifest on the ground—especially in disasters affecting extensive and diverse geographies. Existing studies tend to focus on institutional actors at the macro level, with limited attention to local implementation patterns, variations shaped by local needs, and disparities in the capacities of local actors. In large-scale disasters such as the 6 February 2023 Kahramanmaraş earthquakes, which occurred in a socio-economically and spatially heterogeneous region, such comparative analyses are particularly significant. Given Turkey's multi-centred structure, regional disparities, and administrative differences, it is evident that the recovery process unfolds differently across provinces and actors.

This study aims to contribute to the existing literature by analysing the coordination deficiencies, institutional and structural obstacles, and functioning of multi-actor governance mechanisms in recovery processes across different provinces following the Kahramanmaraş earthquakes. In doing so, it not only proposes an actor-focused framework but also offers a comparative assessment of recovery practices shaped by different regional contexts, providing a critical contribution to the understanding of post-disaster governance in Turkey.

2. Method

This study aims to analyse the division of responsibilities, institutional visibility, and levels of collaboration among actors involved in the recovery processes across various provinces affected by the Kahramanmaraş earthquakes of 6 February 2023. In this context, content analysis was chosen as the primary method for data interpretation.

Content analysis is a qualitative data analysis technique that enables the systematic and objective examination of written or verbal materials. Through this method, hidden structures, patterns, and themes within texts relating to social phenomena can be revealed (Sheydayi and Dadashpoor, 2023). The approach adopted in this study was preferred for its ability to reconstruct statements from diverse sources within a coherent thematic framework. Content analysis includes both the explicit meanings of texts and the latent meanings embedded between the lines.

During data collection, various types of textual documents related to the Kahramanmaraş earthquakes were utilised. These included official disaster reports from public institutions, statements by local administrations, evaluation reports from civil society organisations, and academic articles published in the aftermath. These sources reflect not only the interventions of central authorities but also those of local actors, volunteer groups, and international institutions.

Although all provinces affected by the Kahramanmaraş-centred earthquakes were considered within the analytical universe, Hatay and Adiyaman were selected as case studies for in-depth analysis. The selection was based on the severity of physical destruction and the challenges encountered during the recovery process. Hatay was among the most severely affected in terms of absolute destruction and population loss, while Adiyaman stood out due to its high rate of building collapse per unit and the impact on rural areas. Additionally, the administrative, spatial, and socio-economic differences between these two provinces enabled a comparative analysis. Thus, the study aims to evaluate the recovery process with sensitivity to regional contexts.

The data analysis was structured according to the four fundamental stages of content analysis: identification of meaning units, coding, categorisation, and thematic interpretation. Each document was first read in detail, and relevant passages were marked as “meaning units.” These units were then translated into explicit codes based on their conveyed messages. Codes were grouped by similarity to form subcategories and themes, allowing for a systematic identification of recurring structures and governance-related patterns in the recovery process.

To ensure the reliability of the study, the principle of transparency was observed during the analysis process. The coding process was carried out systematically by the researcher, and the resulting themes were compared with the existing literature to strengthen internal consistency. This approach aimed to reduce the potential subjectivity inherent in qualitative analysis, while maintaining a transparent and traceable research process.

Ethical use of data was also a key consideration throughout the research process. All textual sources were compiled from publicly available documents, and no personal data or confidential information was used. Additionally, all sources referenced in the study were properly cited.

In conclusion, this methodological approach offers a suitable analytical framework for understanding the multi-actor structures and regional differences in post-disaster recovery processes. In doing so, it enables a comprehensive evaluation of both social and institutional dynamics, and considers post-earthquake governance not

only from a technical but also from a socio-political perspective.

3. The Impact Area and Regional Heterogeneity of the Earthquake

The earthquakes centred in Kahramanmaraş on 6 February 2023 are regarded as among the most devastating disasters in the history of the Republic of Türkiye. The two major earthquakes, measuring 7.7 and 7.6 Mw, occurred in the districts of Pazarcık and Elbistan in Kahramanmaraş and directly affected 11 provinces, causing severe physical, social, and economic destruction across a vast area of 110,000 km² (Disaster and Emergency Management Authority [AFAD], 2023; EERI, 2023). As a result of the earthquakes, a total of 51,158 people lost their lives in these 11 provinces (Turkish Statistical Institute [TÜİK], 2023).

Hatay recorded the highest number of fatalities, with 19,795 deaths. It was followed by the epicentral province of Kahramanmaraş, where 11,828 individuals lost their lives. Among the 11 provinces, the lowest number of fatalities was recorded in Kilis, with 107 deaths. Although Hatay reported the highest absolute death toll, Adıyaman had the highest relative fatality rate, with deaths amounting to 1.34% of its 2022 population. Across all affected provinces, the average fatality rate was recorded at 0.35% (Turkish Statistical Institute [TÜİK], 2023).

Table 1 Number of Fatalities and Their Percentage to the 2022 Population in the 11 Earthquake-Affected Provinces (Turkish Statistical Institute [TÜİK], 2023)

Province	2022 Population	Number of Fatalities	Fatalities as a Percentage of the 2022 Population
Hatay	1 686 043	19795	%1,17
Kahramanmaraş	1 177 436	11828	%1,00
Adıyaman	635 169	8523	%1,34
Gaziantep	2 154 051	4309	%0,20
Adana	2 274 106	1756	%0,08
Malatya	812 580	1626	%0,20
Osmaniye	559 405	1080	%0,19
Diyarbakır	1 804 880	968	%0,05
Şanlıurfa	2 170 110	829	%0,04
Elazığ	591 497	337	%0,06
Kilis	559 405	107	%0,02
Total	14424682	51158	%0,35

In addition to the human losses, 518,809 residential buildings were either destroyed or severely damaged, while a further 131,577 suffered moderate damage (Ministry of Environment, Urbanisation and Climate Change [ÇŞİDB], 2023). The extent of the damage varied significantly between provinces. Hatay was the province with the highest number of damaged or destroyed residences, followed by Kahramanmaraş. When the number of damaged and destroyed residences is evaluated as a proportion of the total housing stock in each province, Hatay ranks first with 60.22%, followed by Adıyaman with 52.45%.

Among the 11 affected provinces, Kilis reported the lowest number of damaged residences. However, the provinces with the lowest ratio of damaged or destroyed residences to the total housing stock were Adana and Şanlıurfa (Strategy and Budget Office of the Presidency [SBB], 2023; Ministry of Environment, Urbanisation and Climate Change [ÇŞİDB], 2023)

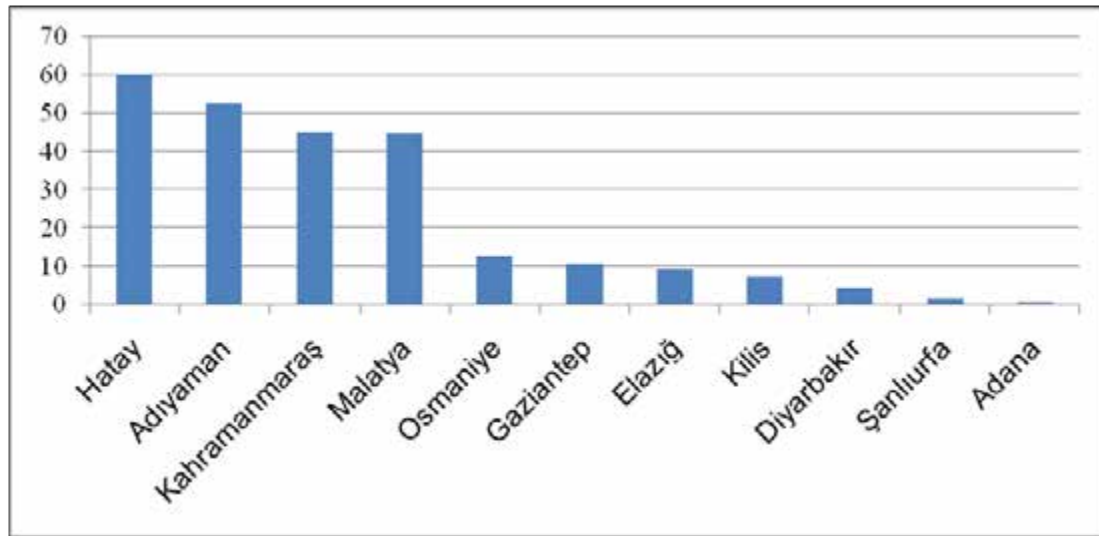


Figure 1 Percentage of Destroyed and Damaged Residential Buildings to the Total Housing Stock in the 11 Earthquake-Affected Provinces (Strategy and Budget Office of the Presidency [SBB], 2023; Ministry of Environment, Urbanisation and Climate Change [ÇŞİDB], 2023)

When examining the overall impact of the earthquake, it becomes evident that the extent of destruction across the affected provinces was not homogeneous. Significant differences emerged between provinces in terms of physical damage, loss of life, aid delivery processes, and reconstruction needs. This variation was shaped by a range of factors, including proximity to the earthquake's epicentre, soil conditions, the quality of the building stock, and the capacity for emergency response.

In this context, in order to enhance the analytical depth of the study and enable a comparative analysis, the research focuses on the two provinces that experienced the most severe disaster-related losses: Hatay and Adiyaman. Hatay was the most affected province in terms of total fatalities and infrastructure destruction, while Adiyaman recorded the highest relative fatality rate in proportion to its population. A comparative examination of these two provinces allows for a more concrete and multidimensional analysis of the structural and institutional challenges encountered during the post-disaster recovery process.

4. Regional Background and Socio-Spatial Characteristics

The pre-disaster structural, socio-economic, and spatial characteristics of Hatay and Adiyaman—the two provinces most severely affected by the Kahramanmaraş-centred earthquakes of 6 February 2023—largely explain the complexity of the subsequent recovery processes. These provinces, where societal, administrative, and spatial vulnerabilities intersect, proved more susceptible to external interventions during the crisis period, ultimately delaying the recovery process.

In terms of demography and social structure, Hatay had a population of approximately 1.7 million as of 2022, making it the 13th most populous province in Türkiye (Turkish Statistical Institute [TÜİK], 2023). With a population density of 258 people per km², Hatay comprises both densely populated urban centres such as Antakya, Defne, and İskenderun, and extensive rural areas. It is also characterised by a multicultural and multilingual social structure. The coexistence of diverse religious and ethnic groups has occasionally contributed to governance challenges and inequalities in resource distribution.

Adiyaman, by contrast, had a smaller population of around 635,000 in 2022 and a population density of 89 people per km². Despite its size, the province has a population growth rate above the national average and a significant-

ly high rural population; approximately 46% of its inhabitants reside in rural areas. The proportion of youth is high, while the elderly population remains below the national average (Turkish Statistical Institute [TÜİK], 2022). These demographic characteristics contributed to difficulties in accessing shelter, transportation, and emergency services during the earthquake. Furthermore, levels of education and income in Adiyaman are below the national average, increasing the province's overall vulnerability.

Prior to the earthquake, both provinces experienced both in- and out-migration. Hatay, due to its proximity to the Syrian border, hosted over 400,000 Syrians under temporary protection. In Adiyaman, mobility was mostly seasonal and based on agricultural labour, with temporary workers arriving from other regions during harvest periods.

The two provinces also differ significantly in their economic structures. Hatay was one of Türkiye's prominent industrial and port cities prior to the earthquake. It played a major role in iron and steel production, logistics, and agriculture. The Port of İskenderun was not only crucial for Hatay but also for foreign trade in Türkiye's eastern and southern regions (Eastern Mediterranean Development Agency, 2014). However, this economic potential turned into a major risk factor due to a lack of structural safeguards. The extensive damage to industrial infrastructure created a significant void in economic as well as physical recovery (Turkish Enterprise and Business Confederation [TÜRKONFED], 2023).

In contrast, Adiyaman's economy relies heavily on agriculture and small-scale industrial activities. The province is known for the production of tobacco, pistachios, and cotton, yet its industrial infrastructure remains weak (İpekyolu Development Agency, 2020). According to 2022 data from the Turkish Statistical Institute (TÜİK), Adiyaman ranks among the lowest provinces in terms of per capita income. This weak industrial base has constrained the ability of local economic dynamics to contribute to recovery. The province has low export capacity, a fragile production chain, and limited private sector investment.

In terms of the built environment, Hatay is marked by high urban density. The narrow street layouts and multi-storey buildings in districts such as Antakya and Defne were key factors that amplified the destructiveness of the earthquake. Much of the housing stock in these districts consists of old, structurally vulnerable buildings (World Bank, 2023). In Adiyaman, spatial vulnerabilities were more prominent in rural areas.

Due to their pre-disaster socio-spatial configurations, both Hatay and Adiyaman were among the provinces that faced the most severe challenges in the post-disaster recovery process. In both cases, physical vulnerabilities, limited economic capacity, and social inequalities exacerbated the impact of the earthquake.

5. Recovery Process: Actions, Challenges, and Governance

The previous section detailed the pre-disaster spatial, socio-economic, and administrative vulnerabilities of Hatay and Adiyaman, highlighting how these fragile structures intensified the impacts of the 6 February earthquakes. This background is critical not only for understanding the scale of destruction but also for explaining why the recovery process in these two provinces was particularly complex and delayed. This section focuses on the concrete actions taken during the post-disaster recovery process, the key challenges encountered, and the governance-based interactions among the actors involved.

In the literature, the recovery process is defined not merely as the reconstruction of physical infrastructure, but as a multi-layered endeavour shaped by the reorganisation of the social fabric, the establishment of institutional coordination, and the inclusion of local communities in decision-making (Smith & Wenger, 2007; Tierney, 2014). In analysing this multi-layered process, Hatay and Adiyaman are examined under two main subheadings. The first subheading presents post-disaster physical and administrative interventions and the problems encountered, based on thematic content analysis. The second subheading evaluates the governance relations among public institutions, local authorities, civil society organisations, and international actors, with a focus on the distribution of authority and contradictions in decision-making processes. Through this structure, the recovery process is revealed to be less a technical issue and more a matter of governance.

5.1. Recovery Actions and Challenges

The post-disaster recovery process initiated after the Kahramanmaraş-centred earthquakes of 6 February 2023 has raised numerous questions regarding its design and prioritisation. Analysis of the process reveals key challenges such as damaged infrastructure systems, reconstruction policies, centralised interventions, and inequalities in resource distribution.

Both Hatay and Adıyaman faced significant logistical infrastructure problems. These issues stem not only from earthquake-induced destruction but also from long-standing structural deficiencies. In Hatay, the collapse of urban transportation routes, the absence of alternative roads, and the disruption of port connections severely hindered search-and-rescue and aid delivery operations. Additionally, the fire and destruction at the Port of İskenderun interrupted the logistics chain (Şipal, 2023). In Adıyaman, the limited capacity and narrowness of the arterial roads connecting to the main highways caused significant delays in the delivery of aid to the region. Access problems in rural areas further exacerbated the situation. In Adıyaman's rural neighbourhoods, collapsed roads and landslide risks left many villages isolated for weeks. This not only restricted access to essential needs for the rural population but also delayed the provision of health, food, and temporary shelter services (Şipal, 2023). In Hatay, the dispersed settlement pattern in rural areas and the collapse of bridges also hindered emergency response teams from accessing certain zones.

Infrastructure deficiencies in temporary shelter areas also posed a major challenge to the recovery process. In both provinces, container and tent settlements were established without prior infrastructural preparation, and basic services such as water, sanitation, and electricity were either unavailable or provided at very low capacity in the initial days. In some tent areas in Hatay, safe drinking water, toilets, and showers could not be provided for several weeks (Erdoğan, 2023). These shortcomings not only increased public health risks but also contributed to social unrest and a growing sense of distrust. The lack of infrastructure reflects not only the limitations of local capacity but also the broader deficiencies of disaster management in preparedness and scenario planning.

A second and widely debated dimension of the recovery process concerns the centralised nature of reconstruction policies. The mass housing projects managed directly by the Housing Development Administration (TOKİ) under central authority bypassed local planning processes. In both Hatay and Adıyaman, these centrally implemented initiatives ignored local urban plans and zoning strategies, drawing serious criticism regarding their spatial integration, respect for historical context, and alignment with community needs (Bozkurt & Keleş, 2023).

Exclusion of local planning is not merely an administrative preference but also a governance issue. Decisions regarding the location, design, and social amenities of post-disaster housing were made by central actors, neglecting the needs and priorities of local residents. In Hatay, for instance, some TOKİ housing units were built in geologically controversial areas, which both violated scientific principles and undermined public trust.

Moreover, the implementation of standardised housing projects across different regions created issues in both spatial and social cohesion. Observations suggest that most TOKİ projects in Hatay and Adıyaman were constructed with similar scales, materials, and architectural styles, failing to adapt to the diverse cultural, climatic, and social contexts of the regions. While the needs of disaster victims varied greatly, the uniform solutions offered created a "one-size-fits-all" approach that contradicted the principle of equity.

This situation not only affects the physical environment but also undermines the sense of social belonging. Shelter is not merely the provision of a roof, but the reconstruction of a space where social relations are reorganised. Therefore, the rigid, standardised interventions of central institutions transform the recovery process from a purely technical effort into a matter of social cohesion. However, housing problems for earthquake survivors persist, and significant deficiencies remain in temporary accommodation areas. While the construction of new housing is being carried out predominantly by public authorities, the costs of repair and reinforcement have been left to homeowners, thereby exacerbating existing inequalities (Özüdoğru, 2023).

One of the most pressing difficulties encountered during post-disaster interventions and reconstruction was the inequitable distribution of resources at both spatial and institutional levels. In both Hatay and Adiyaman, serious disparities were reported in the allocation of in-kind aid and housing investments. In Hatay, for example, the concentration of aid in certain districts led to a sense of “invisibility” in others. In Adiyaman’s northern rural villages, it was reported that aid had not reached some communities for several weeks (Özer, 2023). Furthermore, the involvement of political actors in the distribution of aid undermined the legitimacy of the entitlement system for disaster survivors.

Spatial injustice was not only about the volume of aid but also about the prioritisation of certain areas over others. In Hatay, despite the extreme devastation in central districts such as Antakya and Defne, some rural neighbourhoods did not see the initiation of housing projects for months. In Adiyaman, permanent housing construction began in specific zones, while other equally affected areas experienced no progress. This inequality was reflected not only in the physical landscape but also in demographic changes: 148,872 people reportedly migrated from Hatay due to the earthquake, while in Adiyaman, over 6% of the population relocated to other cities (Turkish Statistical Institute [TÜİK], 2023) (Table 2). These trends indicate that local-level assessments of both physical and social conditions were insufficiently incorporated into the recovery planning process.

Table 2 Migration Flows to and from the 11 Earthquake-Affected Provinces
(Turkish Statistical Institute [TÜİK], 2023)

Disaster-Induced Migration Dynamics in Earthquake-Affected Provinces in 2023		
Province	Out-Migration (Number of People)	InMigration (Number of People)
Hatay	148 872	6 743
Malatya	93 895	8 382
Kahramanmaraş	71 709	8 565
Adiyaman	42 100	7 089
Gaziantep	30 987	22 172
Adana	28 546	17 028
Şanlıurfa	23 697	15 606
Diyarbakır	21 801	6 059
Osmaniye	12 643	9 690
Elazığ	6 399	14 470
Kilis	2 556	4 579
Total	483 205	120 383

The fact that permanent housing in some regions has yet to be completed illustrates the extent to which the recovery process has been shaped by regional inequalities. According to the most recent data published by the Disaster and Emergency Management Authority (AFAD) and the Housing Development Administration (TOKİ), the number of planned permanent housing units in Hatay exceeds 40,000; however, less than 15% of these units were completed within the first year. Similarly, in Adiyaman, only 17% of the approximately 25,000 planned housing units have been delivered (Table 3). Furthermore, when delivery performance is assessed as a percentage of documented urban housing needs, the disparities become even more pronounced. In Kilis, the number of delivered urban units (1,097) exceeds the identified need (733), reflecting a delivery rate of approximately 150%. In stark contrast, only 5% of the urban housing need has been met in Adiyaman (2,158 out of 41,171), and merely 3% in Hatay (6,572 out of 220,006). This contrast highlights significant inconsistencies in how provinces are prioritised within the recovery process.

The underlying causes of these delays are not purely technical; rather, they reflect political, bureaucratic, and capacity-based decisions embedded within the prioritisation mechanisms (Altay & Labonte, 2014). Thus, the recovery process must be analysed not only in terms of what has been implemented, but also in terms of what has not—or could not—be realised.

Table 3 Urban Housing Needs and Reported Number of Housing Units Ready for Delivery (Disaster and Emergency Management Authority [AFAD] and Housing Development Administration [TOKİ], 2024)

Province	Housing Development Administration [TOKİ], 2024			Disaster and Emergency Management Authority [AFAD], 2024	
	Urban Housing Need	Rural Housing Need	Commercial Space Need	Reported Number of Urban Units Ready for Delivery	Reported Number of Rural Units Ready for Delivery
Adıyaman	41171	23640	17392	2158	640
Hatay	220006	34129	55777	6572	703
Kahramanmaraş	82104	30310	34504	8122	716
Malatya	77717	25302	20744	5140	141
Adana	18583	2438	1744	1589	124
Osmaniye	13646	6856	8862	1242	156
Gaziantep	29315	12607	17650	10090	608
Şanlıurfa	13782	3000	1641	1208	106
Diyarbakır	13167	3614	1367	1374	139
Kilis	733	2628	697	967	136
Elazığ	20261	-	4528	2255	-
Total	53672	165271	169000	39327	4574

5.2. Actors and Governance in the Recovery Process

Following the earthquakes centred in Kahramanmaraş, the recovery process was shaped not only by technical and physical interventions but also by questions regarding who implemented these interventions, how, and at what level—questions which have become central to the discussion. Post-disaster governance entailed the involvement of multiple actors at various levels and with differing capacities; however, coordination among these actors was often fragile. The following thematic evaluations address this process through institutional structures, local administrations, civil society, international actors, and community-based organisations (Göver, 2023).

Neighbourhood volunteers played a prominent role in meeting fundamental needs such as aid distribution, the establishment of temporary shelter sites, and the support of vulnerable groups, particularly during the initial days. In certain neighbourhoods of Hatay and Adıyaman, where public institutions could not reach within the first 72 hours, neighbourhood volunteers took organised action to supply food and water and actively contributed to the physical setup of temporary accommodation areas.

Nevertheless, many of these structures were fragile due to a lack of both formal institutional recognition and financial resources. While they provided short-term solutions during the recovery phase, their inability to operate sustainably underscores the need for systematic recognition and support of these practices. Integrating local volunteer groups into formal frameworks would enhance capacity utilisation and reinforce a sense of belonging.

The research conducted in Hatay and Adıyaman indicates that, despite the theoretical presence of a multi-actor

structure in the recovery process, in practice, central government institutions were overwhelmingly dominant. Local authorities, civil society organisations (CSOs), and community-based structures were either marginalised or excluded from the process entirely. This governance model resulted in decision-making occurring behind closed doors, the exclusion of local knowledge and experience, and a deepening institutional distrust. The success of the recovery process is thus not solely dependent on technical capacity but is directly linked to how this capacity is mobilised through democratic, inclusive, and multi-actor mechanisms. Despite its strong central structure, Türkiye's current disaster management system suffers from severe limitations in terms of local adaptability and flexibility, hindering not only the pace but also the equity of post-disaster recovery.

One of the most striking issues during the recovery process in Hatay and Adıyaman was the multiplicity of institutional authorities and ambiguity in the distribution of responsibilities. The Disaster and Emergency Management Authority (AFAD), the Ministry of Environment, Urbanisation and Climate Change (ÇŞİDB), the Ministry of Interior, and the Housing Development Administration (TOKİ) operated independently of one another. At the provincial level, roles and responsibilities between the governor's office, metropolitan municipalities, and district municipalities were poorly defined (Göver, 2023). This fragmentation led to delays in decision-making and reduced the responsiveness of interventions to local needs.

The marginalisation of local governments posed a further serious issue. While local authorities in Türkiye possess limited disaster management capacity, they are known to be among the fastest-responding units with direct contact with the public during crises (Altay & Labonte, 2014). Nonetheless, in both Hatay and Adıyaman, municipalities were largely excluded from planning processes, resource allocation, and decision-making mechanisms. Instead, interventions were carried out directly through governorates, district governorships, and central government institutions. Municipalities were compelled to act on their own initiative due to a lack of official authorisation, which not only prevented the effective use of local knowledge and capacity but also weakened channels of communication with the public.

The centralised structure of The Disaster and Emergency Management Authority (AFAD) constituted the most critical aspect shaping the institutional framework of the process. Particularly in the early stages, The Disaster and Emergency Management Authority (AFAD) had full control over emergency response and shelter planning. In some cases, municipal settlement plans were disregarded and annulled by The Disaster and Emergency Management Authority (AFAD), pushing local actors into a subordinate role as mere implementers. This approach resulted in standardised intervention models being applied without consideration for the region's spatial, social, and economic diversity. In decisions ranging from the siting of container settlements in Hatay to the construction of permanent housing in Adıyaman, the exclusion of local dynamics was clearly evident.

This dominance of central government extended beyond decision-making to resource allocation and prioritisation of interventions. The distribution of aid, allocation of housing, and infrastructure investments often ignored local demands, damaging relationships between actors and leading to a lack of trust and cooperation on the ground. Such issues reflect not only governance shortcomings but also directly impact the effectiveness of the recovery process.

Civil society organisations (CSOs) played a crucial role in post-disaster recovery not only through service provision but also by contributing to social solidarity and the development of inclusive governance mechanisms. However, in the context of the earthquakes centred in Kahramanmaraş, CSOs were largely marginalised or rendered ineffective in Hatay and Adıyaman.

In the initial days following the earthquakes, CSOs were among the first actors to reach the affected areas, delivering critical assistance in areas such as shelter, food distribution, and psychosocial support. In Hatay, organisations such as Ahbap, along with local volunteer initiatives, provided essential services in regions where the state was unable to respond promptly. For instance, the Ahbap Association and its partner civil initiatives reportedly distributed over 4,000 containers across Hatay. In Defne, female volunteers established community kitchens with

their own resources, serving hot meals to thousands (Ahbap, 2023). In Adıyaman, small civil initiatives from neighbouring provinces organised tent distributions and similar relief efforts. However, many of these actions lacked a systematic coordination mechanism, and CSO representatives were frequently excluded from crisis coordination centres established under The Disaster and Emergency Management Authority (AFAD).

Moreover, central institutions predominantly portrayed relief operations in the media and public discourse as being driven solely by The Disaster and Emergency Management Authority (AFAD) and ministerial efforts. Yet, in many areas, it was in fact the work of CSOs that sustained living spaces, food supply chains, and emergency first aid points. This exclusionary approach not only created symbolic invisibility but also led to material constraints. Many CSOs faced difficulties obtaining permits to collect donations or were compelled to channel funds through AFAD, thereby limiting their operational autonomy.

Despite these challenges, some CSOs managed to maintain continuity in specific regions owing to their strong community ties and flexible organisational structures. Small-scale support efforts led by women's associations, youth initiatives, and neighbourhood forums effectively addressed the gaps left by central government agencies, particularly in rural areas. However, unless these contributions are integrated into a systematic governance structure, their scalability will remain limited.

The role of international actors in post-disaster recovery is particularly significant in terms of funding, technical assistance, and normative guidance. Following the 6 February 2023 earthquakes, Türkiye received financial and logistical aid from numerous international institutions. Nevertheless, how this support was translated on the ground and the extent of collaboration with local actors sparked considerable debate, especially in Hatay and Adıyaman.

Following the disaster, more than USD 1.6 billion in aid and credit was pledged by the World Bank, the European Union, the United Nations Development Programme (UNDP), and various international NGOs. Of this, USD 1 billion was allocated to Türkiye by the World Bank as an emergency credit package, channelled through central projects managed by The Disaster and Emergency Management Authority (AFAD) and the Ministry of Interior, and the Housing Development Administration (TOKİ). However, no information was shared regarding the provincial-level allocation of these resources. The European Commission's Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) provided EUR 25 million in direct funding for humanitarian aid efforts in Hatay and Adıyaman (World Bank, 2023; UNDP, 2023). Yet, these funds were distributed without the involvement of local authorities; in some neighbourhoods, interventions were unnecessary, while rural areas were entirely neglected. Most of these funds were allocated through the Disaster and Emergency Management Authority (AFAD) and relevant ministries. Public disclosure regarding the transparency of this aid, its distribution process, and provincial allocations remains significantly lacking. For instance, while some permanent housing projects in Hatay were reportedly financed through international aid, their visibility on the ground has been limited.

Transparency in the use of funds is not merely a technical administrative issue but also a key determinant of public trust in the process. In both Hatay and Adıyaman, there has been no publicly accessible reporting on the allocation of international aid, the criteria used to define regional priorities, or how decisions were made. This has fuelled perceptions that aid may have been guided by political or institutional preferences, eliciting backlash particularly from neglected rural communities.

Meanwhile, there have been limited efforts by institutions such as UNDP and the EU to promote local capacity-building through long-term technical support programmes. However, for these initiatives to expand and become sustainable at the local level, there is a need for clearer governance protocols and stronger partnerships with local actors.

In conclusion, the contribution of international actors to the recovery process has been largely mediated through central authorities, resulting in weak collaboration at the local scale. Yet, for recovery to be both effective and

equitable, it is not sufficient to ensure the flow of funds—these resources must be utilised in ways that are sensitive to the local context and involve active participation of local stakeholders.

Finally, it is essential to recognise that post-disaster recovery processes are not solely driven by institutional actors. On the contrary, informal community-led initiatives also played a critical role. Content analysis and field observations in Hatay and Adıyaman reveal that neighbourhood volunteers, local networks, and community-based organisations filled vital gaps in rebuilding life after the disaster.

6. Conclusion and Policy Recommendations

The earthquakes centred in Kahramanmaraş on 6 February 2023 marked a turning point in Turkey's disaster management history, leaving deep traces both physically and institutionally. The content analysis conducted within the scope of this study demonstrates that the post-disaster recovery process is not merely a technical reconstruction effort, but also a multi-actor and multi-level governance process. In-depth analyses of the provinces of Hatay and Adıyaman reveal that, due to their socio-spatial vulnerabilities, these two provinces faced more complex challenges in the recovery phase. The findings show that post-disaster interventions were spatially unequal and heavily centralised in terms of governance, with the roles of local governments, civil society organisations (CSOs), and international actors remaining limited.

In this context, regionally scaled policy recommendations are critically important for reducing the impact of disasters and accelerating recovery processes. First, the institutional capacity of local governments in high-risk areas must be strengthened. As evidenced in the cases of Hatay and Adıyaman, municipalities lacked both financial resources and planning authority, which hampered effective coordination on the ground. In order for local administrations to play an active role in disaster planning, their disaster management budgets should be increased, personnel training supported, and they should be structurally integrated into decision-making processes.

Second, institutional coordination mechanisms at both local and national levels must be restructured. One of the main issues encountered during the recovery process was the lack of clearly defined responsibilities and task allocations (Ergünay, 2001). Overlaps in authority between the Disaster and Emergency Management Authority (AFAD), the Ministry of Environment, Urbanisation and Climate Change (ÇŞİDB), the Housing Development Administration of Turkey (TOKİ), and local actors led to delays in the field and unjust distribution of resources. Therefore, task definitions for post-disaster interventions should be predetermined, and a clear coordination protocol ready for activation in times of crisis must be established.

Third, the integration of civil society organisations and volunteer structures into the process has become a necessity. The critical role played by the Ahbap Association and similar organisations in the initial days of the disaster ensured the continuity of essential services in areas unreachable by central institutions (Ahbap, 2023). However, the lack of visibility of these structures in the official process led not only to symbolic exclusion but also to material inequalities. CSOs should be subject to a pre-disaster certification and authorisation system; support-capable structures should be identified in advance and integrated accordingly. Furthermore, their operations should not be subordinated to the Disaster and Emergency Management Authority (AFAD)'s coordination, but rather conducted through horizontal collaborations and information-sharing platforms.

Fourth, international funding and technical assistance must be managed transparently. The provincial distribution of funds from institutions such as the World Bank, the European Union, and the United Nations Development Programme (UNDP) should be made public, and regular reports must be published detailing which projects these resources were allocated to, when, and according to which criteria. In Hatay and Adıyaman, the visibility of these funds remained particularly low in some areas, reinforcing perceptions that assistance was directed based on political or technical preferences. To counter this, transparent and accountable monitoring mechanisms that involve local actors in the allocation of international funds must be developed.

Finally, the long-term social impacts of the recovery process must be considered. Post-disaster migration, we-

akening of social belonging, and the erosion of trust have lasting effects not only on physical space but also on the social structure (Tierney, 2014). Given that more than 148,000 people migrated from Hatay and over 6% of Adıyaman's population relocated to other provinces (Turkish Statistical Institute [TÜİK], 2023), the recovery process must be supported not only through housing policies but also with community rebuilding programmes.

In conclusion, this study shows that Turkey's post-disaster recovery process has a highly complex and multi-actor nature; however, the current governance structure remains inadequate in addressing this complexity. For recovery efforts to be conducted effectively and equitably, central institutions must collaborate with local actors, strategies must be developed with sensitivity to social needs, and institutional capacity must be strengthened at every level. Implementing these recommendations is vital for building a more resilient society and governance structure in the face of future disasters in Turkey.

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