Ministry of Foreign Affairs

Reconstruction in Türkiye After the 6 february earthquakes Assessment of Water and Sanitation, Modular Buildings, Circular Economy Sectors

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Assessment of Water and Sanitation, Modular Buildings, Circular Economy Sectors

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Table of Contents

Executive Summary

Overview

In the wake of the 6 February 2023 earthquakes, Türkiye faces a monumental task of reconstruction, demanding a concerted effort across various sectors to rebuild the affected regions sustainably and resiliently. 14,013,196 million individuals have been heavily affected by the earthquakes, which corresponds to 16.4% of the country's population.

The report draws on comprehensive analyses conducted across the water and sanitation, modular buildings, and circular construction sectors, alongside an in-depth review of financial strategies and resource allocation, providing actionable insights and strategic recommendations for stakeholders.

The path forward necessitates a collaborative, informed, and strategic approach, leveraging national and international resources to rebuild a resilient and sustainable future for the affected regions. All actors are encouraged to develop comprehensive project proposals and action plans for the next steps when engaging with local and national stakeholders.

Methodology and Research Design

The assignment involved thorough data collection and analysis, focusing on Türkiye's post-earthquake recovery efforts. This included a detailed desk review of 22 documents and programs related to water and waste management, modular buildings, and circular construction principles and conducting 17 semi-structured interviews with diverse stakeholders such as state officials, business and commerce chambers, INGO representatives, and experts.

Key Findings

1. ***Water and Sanitation Sector:***

- The principal actors, the State Hydraulic Works (DSI) and IlBank, have undertaken extensive field studies to assess the damage, particularly to the drinking water pipelines. The total investment earmarked for drinking water infrastructure rehabilitation in these provinces stands at 6.6 billion TL, highlighting the scale of the intervention required. International funding has been secured, with notable contributions from global institutions like the World Bank, Japan International Cooperation Agency (JICA), European Investment Bank (EIB), and European Bank for Reconstruction and Development (EBRD), aimed at bolstering the municipal infrastructure through non-repayable grants, signifying a collaborative international effort towards recovery.

- The sector's dynamics are shaped by a consortium of governmental bodies, including the Ministry of Agriculture and Forestry and the Ministry of Environment, Urbanization, and Climate Change, alongside key municipal players, IlBank, and Water and

Sewerage Administrations. These entities collectively drive the agenda for sustainable water management and urban resilience.

- The procurement landscape within this sector is guided by Türkiye's Public Procurement Law (Law No. 4734) , with a strong inclination towards digitization through the Electronic Public Procurement Platform (e-KAP), facilitating transparent and efficient procurement processes.

- In the Turkish water and sewerage infrastructure sector, construction firms demonstrate strong competence and competitiveness, with established capabilities for undertaking large projects. However, there are limitations in access to advanced equipment and technological innovations for network monitoring and evaluation. Therefore, products enhancing advanced technologies, control devices, and intelligent software for water management are likely to find a receptive market in Turkey.

2. Modular Buildings Sector

- The total population of the 11 provinces affected by the 6 February 2023 earthquakes corresponds to 16.4% of the total population and 14.05% of Türkiye's total housing stock.
- In the earthquake zone, 86.7% of buildings and 95.4% of apartments are reinforced concrete. 2.4% of the buildings are steel, 3.5% are masonry, and 3.6% are prefabricated structures
- According to the damage assessment study conducted by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC), 2.273.551 individuals have faced direct housing issues following the earthquake.
- The number of housing units planned for construction in the 11 provinces is 405,505 residences and 83,149 rural houses. TOKİ is given a mandate to build 690,000 residential houses and 150,000 commercial offices; as of February 2024, TOKİ completed the construction of 50,000 residential houses.

- AFAD, in collaboration with TOKI, spearheads the housing initiatives, leveraging both traditional construction methods and modern modular techniques to expedite the provision of homes to the affected populations. Under Article 9 of Presidential Decree No. 126 regarding Settlement and Construction within the Scope of a State of Emergency, AFAD is given the authority to allocate resources to the MoEUCC and affiliated, relevant, and associated institutions and organizations of the Ministry, including their subsidiaries.

- The devastating earthquakes have underscored a pressing need for rapid reconstruction across three critical areas: housing, commercial, and industrial building constructions. The sector presents a fertile ground for the adoption of lightweight steel and modular construction methods, especially in rural settings where traditional concrete construction faces logistical and material challenges.

- The need for knowledge transfer, consultancy services, and the introduction of new technologies is recognized among the local stakeholders.

Yet, the market is more competitive and reluctant to accept foreign companies that are directly undertaking construction projects.

- The market dynamics within this sector necessitate coordination with government agencies, local authorities, regulatory bodies, and private sector entities, each contributing to the modular construction ecosystem. The investor's journey through this sector necessitates a nuanced understanding of local regulations, licensing regulations, stakeholder engagement, and strategic alignment with national housing priorities.

3. Circular Construction Sector

- Türkiye's commitment to transitioning towards a circular economy, particularly post-2015 Paris Agreement, has significantly influenced the Circular Construction sector. The focus is on minimizing waste and enhancing resource efficiency, with the government actively aligning its policies with EU standards. The sector is at a transformative juncture, with legislative advancements and the formulation of a National Circular Economy Action Plan indicating a robust framework for sustainable construction practices.

- The Solid Waste Management Regulation manages waste without harming the environment and human health, from its formation to disposal, while the Regulation on the Control of Excavation Soil, Construction, and Demolition Waste sets out the rules that must be followed for the reduction at source, collection, temporary storage, transportation, recovery, evaluation, and disposal of excavation soil and construction and demolition waste in an environmentally harmless manner.

- The debris management strategy in disaster areas is orchestrated by the Zero Waste Project (sifiratik.gov.tr) and the Turkey Environment Agency (tuca.csb.gov.tr), under the MoEUCC. After the earthquake, central authorities quickly signed public tenders for debris removal.

- The debris management sector is characterized by a fragmented yet functional ecosystem involving demolition contractors, scrap dealers, and recycling firms. The amount of damage in disaster zones highlights the urgent need for efficient waste management and recycling practices. There is a need for investors capable of introducing innovative technologies and expertise, particularly in debris-crushing and asbestos management, to elevate the sector's sustainability quotient.

- Partnerships and collaborations, especially with key national and local governmental actors and private sector stakeholders, emerge as pivotal for successful market entry and impactful contribution to Türkiye's reconstruction and resilience-building efforts.

- The actors of the sector involve the Ministry of Environment, Urbanisation and Climate Change (MoEUCC), industry associations such as Organizations like the Turkish Ready Mixed Concrete Association (THBB) and the Turkish Contractors Association (TMB), construction and demolition companies, recycling and waste management firms, and demolition contractors.

4. Resource Allocation and Financing Strategies

- After the devastating earthquakes on 6 February in Türkiye, the Disaster Reconstruction Fund was established under Law No. 7441, signifying a structured approach to channeling resources towards the rehabilitation of the disaster zones.
- The international response to the earthquake's aftermath has been robust, with significant financial aid flowing from organizations like the World Bank, the European Investment Bank (EIB), and the European Bank for Reconstruction and Development (EBRD). In 2023, approximately 2.8 billion USD in financing was provided by international organizations for earthquake relief purposes. These funds are directed towards various sectors, including healthcare, infrastructure, and support for small and medium-sized enterprises (SMEs), to facilitate a comprehensive recovery.

- A noteworthy initiative is the Attraction Centers Program, which has been expanded to include disaster zones, offering enhanced incentives for investments in these areas. This program is part of a broader strategy to encourage private sector involvement in recovery, ensuring rapid and efficient reconstruction efforts.

- The priority is to proceed as fast as possible to respond to the damage done by the devastating earthquakes. Therefore, local and international private entities and finance institutions are welcome to participate in the construction efforts. The criteria are the service quality, credibility, and competitiveness.

5. Tax Regulations and Risk Management:

- The legal landscape for foreign investment in Türkiye is well-defined, with clear categorizations for foreign investors and direct investments. The Foreign Direct Investment Law No.4875 forms the core of this framework, aiming to attract and protect foreign investments through a streamlined and transparent system.

- Taxation plays a crucial role in investment decisions, and Türkiye offers a range of tax incentives, particularly for investments in disaster zones. These incentives include VAT exemptions, customs duty reductions, and other financial supports to lower the investment barriers in the affected regions.

- Additionally, The 65 districts, 4 in 9 provinces affected by the earthquake disaster, were included in the Attraction Centers Program on 5 April 2023. The Attraction Centers Program extends specific benefits to investments in the earthquake-affected districts, further incentivizing reconstruction efforts.

- The Ministry of Treasury and Finance, Ministry of Environment and Urbanization, local municipalities, and Development Agencies "*Kalkinma Ajanslari*" (RDAs) are the agencies to be consulted for taxation incentives.

6. Strategic Recommendations and Insights

The strategic and project-based recommendations collectively aim to guide investors and stakeholders through the complexities of participating in Türkiye's post-disaster reconstruction efforts, ensuring that investments are strategic, sustainable, and aligned with both local needs and national development objectives. The recommendations are categorized under two headings, Paradigm, and Project-Based Recommendations, each addressing different aspects of the strategic engagement and investment in the reconstruction efforts.

Paradigm Recommendations

- Investors should form relationships with key governmental bodies such as the Ministry of Environment, Urbanization and Climate Change, and the Directorate General for Construction Works, ensuring alignment with national objectives and procurement frameworks.

- Investments must comply with the broader urban development strategy and City Master Plans to ensure sustainability and integration with the long-term vision for the affected cities.

- Public officials emphasize the need for rapid implementation of projects in disaster zones, with a focus on quality, credibility, and competitiveness.

- Projects should include a social dimension, coordinate with local communities, and prioritize job creation to contribute to the local economy remerge.

- Investors are advised to present well-defined project proposals with clear objectives and deliverables, demonstrating preparedness and commitment to feasible initiatives.

- In the circular construction sector, investors should consider both the market gap and stakeholder perspectives for informed decision-making.

Project-Based Recommendations

- Support the establishment of small industry zones using modular construction technologies in less affected districts to restore employment activities.

- Investors should acknowledge the developed and adaptable nature of Türkiye's construction sector, characterized by concrete-based approaches and openness to modular buildings in rural areas.

- Articulate clear, unique selling propositions, demonstrating how foreign products or services can enhance the construction sector's quality, efficiency, or sustainability.

- Consider market penetration through technology transfer, especially in the water and sanitation and circular construction sectors.

- Concentrate on launching innovative products for advanced monitoring and evaluation of networks, addressing a current market gap in the water and sanitation sector.

- Explore partnerships with foreign development agencies to finance energy-efficient and eco-friendly housing projects.

- Recognize the potential in debris processing and the integration of advanced technologies and expertise in areas like asbestos management.

Background information

About the scale of the general need:

- According to the preliminary assessment called the Türkiye Earthquakes Recovery and Reconstruction Assessment (TERRA) prepared by the Turkish government with the support of the United Nations Development Programme (UNDP), the World Bank, and the European Union, the recovery and reconstruction costs for Türkiye is around US$103.6 billion, equivalent to 9 percent of Türkiye's forecast GDP for 2023.

- According to the damage assessment studies conducted in 11 provinces affected by earthquakes, as of January 22, 2024, out of 2,258,622 buildings; 39,361 have been demolished, 21,191 are in urgent need of demolition, 202,571 are heavily damaged, 43,344 are moderately damaged, and 1,952,155 have been identified as either slightly damaged or undamaged.[1]

- Based on Article 119 of the Constitution and Article 3 of the Law No. 2935 on State of Emergency, a Presidential Decree No. 6785 was issued due to earthquakes affecting the provinces of Adana, Adıyaman, Diyarbakır, Gaziantep, Hatay, Kahramanmaraş, Kilis, Malatya, Osmaniye, and Şanlıurfa, declaring a State of Emergency (OHAL) for a period of three months starting from February 8, 2023. Additionally, on the 16th of February Elazığ, and on the 7th the Gürün district of Sivas were declared "disaster zones". Later Bingöl, Kayseri, Mardin, Tunceli, Niğde, and Batman provinces were also included in disaster zones.

- According to the 2022 Address-Based Population Registration System (ABPRS) data, the total population in the 11 provinces heavily affected by the earthquake is 14,013,196, which corresponds to 16.4% of the country's population (85,279,553 people). In Türkiye, there are approximately 3.2 million Syrians under temporary protection. About 49% of the total number of Syrians in Türkiye live in the 11 provinces affected by earthquakes.

- More than 1 trillion TL (approx.. 30.535.000.000 EUR) has been allocated from the 2024 Central Government budget to finance earthquake damage and recovery. This amount corresponds to 9.3% of the 2024 Central Government budget.

[1] According to the damage assessment studies conducted in the 11 provinces affected by earthquakes, as of January 22, 2024, out of 2,258,622 buildings: 39,361 have collapsed, 21,191 are to be urgently demolished, 202,571 have suffered severe damage, 43,344 have moderate damage, and 1,952,155 are found to have minor damage or are intact. p.6

Methodology of the Assignment

- The assignment was executed through a meticulous data gathering and analysis process, which involved an extensive desk review complemented by qualitative data collection derived from semi-structured interviews with key stakeholders.

- The research team conducted a thorough examination of documents and programs, which provided a comprehensive overview and deeper insight into the current state of post-earthquake recovery efforts in Türkiye. The focus areas included water and waste management systems, the implementation of modular buildings, and the application of principles of circular construction. A catalog of the reviewed documents is available in the annexes.

- This desk review served a dual purpose: it identified the key stakeholders for subsequent data collection and established the necessity for an in-depth analysis to further understand the nuances of the recovery processes.

- Desk research included:

  - an analysis of the legal framework in Türkiye as it relates to public procurement, tax requirements and legislation, and investment incentive frameworks.
  - review of existing reports, research, and studies of official and non-official entities
  - review of existing programs and implementation structures

- Interviews: 17 semi-structured interviews were conducted with representatives of the Presidency, official entities, INGO representatives, business and commerce chambers, business associations, and experts.
- The research team made a special effort to be inclusive both in terms of sectors and entities covered to be able to present a non-biased and full picture.
- An interview guideline was followed. However, it is pertinent to mention that questions were tailored for each interviewee since the profiles of the interviewees differed. The interviews were conducted through online communication platforms.
- A list of 22 documents reviewed and interviewed persons and institutions is attached in the Annex.

Comp 1 (Axe 1)- Water and Sanitation Sector

A. Needs Identification

- Infrastructure systems are among the most critical operational components of cities in the process of maintaining economic and social functionality after an earthquake. Therefore, damage to water and wastewater infrastructure systems not only interrupts the provision of basic services to the public, but also disrupts recovery efforts during and after an earthquake. According to field studies conducted by the State Hydraulic Works "*Devlet Su İşleri*" (DSI) General Directorate[2] and IlBank[3], which are the authorized institutions for the provision of drinking and utility water to settlements and municipal infrastructure investments, serious damages have been observed on the drinking water pipeline systems in 11 provinces affected by earthquakes. A significant portion of the pipe damage in the region is caused by liquefaction, and different settlements are observed intensely due to the earthquake.

- In the aftermath of the earthquake, IlBank conducted meetings and on-site surveys with Municipalities whose infrastructure and service facilities were damaged to identify urgent priority needs. IlBank initiated regional analyses and conducted comprehensive studies targeting specific damage points along the drinking water pipelines. The region experienced widespread liquefaction, a phenomenon where the earthquake's force transforms solid ground into a liquid state. This led to significant horizontal and vertical movements of the ground, altering its shape and, consequently, inflicting damage on the drinking water pipelines. These studies aimed to meticulously assess the extent of the damage, identify the areas most in need of urgent repair and develop strategies to reinforce the infrastructure against future seismic events. The efforts included detailed inspections of the pipelines, utilization of advanced geotechnical assessments to understand the ground's behavior during the earthquake, and the application of innovative engineering solutions to restore and enhance the resilience of the water supply system. Through these proactive measures, the goal was to not only address the immediate repair needs but also to strengthen the overall infrastructure, ensuring a more robust and reliable water supply network capable of withstanding the challenges posed by natural disasters.

- The total investment amount for projects carried out in the drinking water sector for 11 provinces affected by earthquakes by the State Hydraulic Works " *Devlet Su İşleri Genel Müdürlüğü*" (DSİ) is 6.6 billion TL, with an expenditure of 736.6 million TL in 2023. In this context, the rehabilitation of structures such as transmission lines, treatment plants, storage, and pumping stations is targeted.

[2] The State Hydraulic Works (*Devlet Su İşleri*) is a state agency, under the Ministry of Environment and Forestry of Türkiye, responsible for the utilization of all the country's water resources. The institution's four major functions are energy, agriculture, services and environment.
For more information about DSI:https://www.dsi.gov.tr

[3] Ilbank A.Ş., short for "*İller Bankası Anonim Şirketi*", is a state-owned development and investment bank based in Ankara, Türkiye. It is subordinated to Ministry of Environment, Urbanization and Climate Change **(**MoEUCC) "*T.C. Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*". The main areas of expertise of Ilbank are banking and insurance, mapping, drinking water supplies and treatment, sewage collection and disposal, wastewater treatment, solid waste management, and urban superstructure. For more information in IlBank. https://www.IlBank.gov.tr/sayfa/history
In the stakeholders mapping, one may find contact information of key people at IlBank.

Within the framework of projects conducted by IlBank in the earthquake region, 1 billion TL has been spent in 2023 for the drinking water sector on repairs to transmission lines, construction of drinking water treatment plants, and construction of water storage facilities, while 948.4 million TL has been spent in the sewage sector for the repair of wastewater treatment plants, construction of sewage networks, and similar tasks.

- Following discussions with international financing institutions for infrastructure facilities damaged in the earthquake region, funding has been secured from various international organizations such as the World Bank (WB), Japan International Cooperation Agency (JICA), European Investment Bank (EIB), and European Bank for Reconstruction and Development (EBRD. In exchange for this financing, the Treasury and Finance Ministry has incurred debt, and the funds will be provided by IlBank as non-repayable grants, considering the emergency needs priorities of the Municipalities.

- This financing aims to re-establish the municipal infrastructure and services. The funds obtained will be used not only for water, wastewater, and stormwater networks but also for rehabilitating and reconstructing critical municipal service infrastructures and facilities such as solid waste management facilities and municipal fire stations. Additionally, the funds will be utilized to renew damaged municipal equipment and vehicles.

- The most urgent needs have been contracted out for immediate construction through existing or newly commissioned projects, funded by the state budget. The construction works for these projects have either been completed or are still ongoing. For 26 projects decided to be financed externally and for which project (design) works are ready or completed, tenders for preparing Project Introduction Files "*Proje Tanitim Dosyasi*" in 9 packages have been issued.[4]

- The purpose of these efforts is to prepare Project Identification Document "*Proje Tanitim Dosyasi*" per the procedures of the relevant IFIs and the laws and requirements in force in Türkiye, under the Emergency Earthquake Credit Financing "*Acil Deprem Kredisi Finansmani*". These Project Identification Documents, "*Proje Tanitim Dosyasi*" are currently being prepared by various firms and will reach a stage where they can be presented to IFIs within a few months.[5]

- Experts closely analyzing the situation emphasize that the infrastructure investment requirements in the earthquake-affected region should not be viewed as confined solely to the current funding. There exists a substantial demand for infrastructure investment that far exceeds the obtained financing. Notably, municipalities are continuously submitting new requests for infrastructure investments. These requests emerge both from areas later identified as impacted by the earthquake and from projects deemed of secondary priority. Furthermore, as damage assessments are actively ongoing, experts project an increase in the estimates concerning the extent of the damage. This evolving situation underscores the critical need for a dynamic and responsive approach to infrastructure investment in the region, highlighting that the initial funding is but a starting point in addressing the comprehensive rehabilitation needs.

[4] For more information about these projects please see Annex 1- IlBank Water and Sanitation Project List.
[5] Experts monitoring the situation have indicated a timeline of 'within a few months'. It's crucial to note, however, that IlBank has not set or communicated an official deadline.

B. Market Dynamics and Structure

- In Türkiye, the water and sanitation sector involves various key players, each with expertise, contributing to the comprehensive management, development, and maintenance of water resources, drinking water supply, and wastewater treatment.
- The primary organizations and their areas of expertise include:

- **Ministry of Agriculture and Forestry "***T.C. Tarım ve Orman Bakanlığı***"**- The Ministry, particularly through its General Directorate of Water Management (DSİ), is pivotal in managing Türkiye's water resources. Its responsibilities include developing, conserving, and managing water resources, constructing dams, irrigation, and flood control. DSİ is also involved in supplying drinking water in rural areas.

- **Ministry of Environment, Urbanization and Climate Change (MoEUCC)** "*T.C. Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*" The Ministry is responsible for setting policies, regulations, and environmental protection standards, including water quality and wastewater treatment. It oversees the sustainability of urban and rural environments and is crucial for climate change adaptation strategies that affect water resources. "The three main investor institutions affiliated with the Ministry of Environment are IlBank, TOKI, and the General Directorate of Construction Works "*Yapı İşleri Genel Müdürlüğü*". In Türkiye, public buildings are constructed through tenders held by the General Directorate of Construction Works.

- **The General Directorate of Construction Works "***Yapı İşleri Genel Müdürlüğü"*, within the Ministry of Environment, Urbanization, and Climate Change in Türkiye, plays a crucial role in overseeing and managing construction projects related to public buildings and infrastructure. The Directorate is responsible for ensuring that these projects meet the necessary standards, regulations, and quality requirements. It handles various aspects of construction, including planning, tendering, execution, and supervision, to ensure that public buildings are safe, functional, and environmentally sustainable.

- **Relevant Municipalities** "*Belediyeler"* Municipalities in Türkiye are directly responsible for providing drinking water, and collecting, and treating wastewater in their respective jurisdictions. They operate water and sewage treatment plants and are involved in the maintenance of the infrastructure necessary to supply water and sanitation services to their communities.

- **IlBank**- IlBank provides financial and technical support to municipalities for the development of infrastructure projects, including those related to water and sanitation. It plays a significant role in financing, project design, and implementation support for local governments. IlBank is affiliated with the Ministry of Environment, Urbanization, and Climate Change.

- **Water and Sewerage Administrations,** "*Su ve Kanalizasyon İdaresi*" **(SKİ)** are established as municipal corporations responsible for managing and regulating water supply and wastewater services within a city or metropolitan area in Türkiye. These administrations are critical for ensuring the provision of clean drinking water and the collection, treatment, and disposal of sewage and stormwater.
  - SKIs must adhere to specific local regulations and by-laws that further define their scope of work, tariffs, and service standards. The legal statute of SKIs in Türkiye positions them as key players in the urban infrastructure ecosystem, with a

mandate to ensure the sustainable management of water resources and the provision of essential water and sewage services to the public.

- SKI's Key Functions and Responsibilities are water supply, wastewater treatment, sewage system management (designing, constructing, and maintaining sewage and stormwater drainage systems to prevent flooding and protect water quality), infrastructure development, and setting and enforcing standards for water quality, wastewater treatment, and environmental protection.
- In cities with no specific Water and Sewerage Administration, key water and sewerage sector actors are mainly municipalities and/or Provincial Special Administrations "*Il Özel Idaresi*". These local government bodies handle the responsibilities of water supply and sewage management directly or through their departments dedicated to environmental and infrastructure services.

D. Procurement Insights

- Examination of government (national and local) procurement processes and alternatives.
  - Enacted in 2003, the Public Procurement Law No.4734 "*Kamu İhale Kanunu*" (PPL) is Türkiye's primary legislation governing national and international public procurement processes. The law establishes the principles and procedures to be applied in procurements by all public entities and institutions governed by public law or under public control or public funding.
  - Article 63 of Law No. 4734 provides some advantages to domestic contractors compared to foreign investors.
  - Under the PPL, there are three types of tender procedures.

    Open tender procedure

    Restricted tender procedure

    Negotiated tendering procedure.
  - A public agency may use a direct procurement method in exceptional situations defined in the PPA.
  - PPL also introduced threshold values utilized to determine the provisions detailed in Articles 13 and 636. The threshold values are defined per the estimated costs.
  - Although the PPL is wide in scope, it has certain exemptions. The tender of tools, arms, military materials, equipment, and systems for national defense, security, and intelligence, and tender of goods, services, or works, which are to be realized with foreign financing according to international agreements, are excluded from the scope of PPL, therefore are not subject to the provisions of Law No. 47347.
  - The public procurement system has internal and external control mechanisms to ensure accountability and well-functioning. The main body is the Public Procurement Authority "*Kamu Ihale Kurumu*" (PPA) of Türkiye, established in 2002 with the ratification of the PPL. The other bodies are the Court of Accounts, the Internal Control System, and the Inspection Board
  - Starting from August 1, 2021, prospective bidders are mandated to participate in public procurements exclusively through the Electronic Public Procurement Platform "*Elektronik Kamu Alımları Platformu" EKAP* (EPPP), aligning with the new governmental strategy leveraging digital technologies to enhance public services and foster economic development.

[6] Law No. 4734 brings certain threshold values, which have been increased by Communiqué No. 2003/1 published in Official Gazette No. 25000 dated 21 January 2003.

[7] https://cakmak.av.tr/wp-content/uploads/2019/07/1-The-New-Turkish-Public-Tender-Law-1.pdf

Utilizing electronic signatures (e-signatures) and/or mobile signatures (m-signatures) is obligatory for engagement with the EPPP.[8] All conventional procurement procedures, including registration, bidding, announcement, clarification, and communication between the administrative body and bidders, must be conducted electronically within the framework of the EPPP.

Box 1: Public Procurement Law

Legal Background: The fundamental document regulating national and international public procurements in Türkiye is the Public Procurement Law No.4734 (PPL), approved by the Turkish Parliament in 2022 and enacted in January 2003 to improve competition, transparency, and integrity.

Law No. 4734 replaced the provisions of Law No. 2886 regulating public procurement. The State Procurement Law No. 2886[1] was amended since it could not respond to the changing and developing needs of the day and did not comply with the European Union and international procurement practices.

In addition, Law No. 4735 was prepared to regulate the management and execution of public procurement contracts[1] - **(**Public Procurement Contracts Law (PPCL) No. 4735**).** Moreover, PPL established the Public Procurement Authority (PPA), which is an administratively and financially independent authority and the main regulatory and governing body in the public procurement market

Scope of PPL: The procurement of goods, works, and services, the cost of which is covered by any resources that are at the disposal of the contracting entities mentioned below, shall be executed per the provisions of PPL[11]:

- Departments included in the general budget, annexed budget, special provincial administrations, municipalities and their related revolving funds, organizations, associations, and legal entities.
- State economic enterprises.
- Social security organizations, funds, entities of legal personalities that are established per special laws and assigned with public duties (except professional organizations and higher education institutions funded by foundations), and establishments with independent budgets.
- Any institutions, organizations, associations, enterprises, and corporations which more than half of their capital, directly or indirectly, together or separately, are owned by these entities and institutions; and
- Banks within Law No. 4603 ((Ziraat Bank, Halk Bank, and Emlak Bank) only procurement of construction works)

Exemptions: The tender of tools, arms, military materials, equipment, and systems for national defense, security, and intelligence, and tender of goods, services, or works, which are to be realized with foreign financing according to international agreements, are excluded from the scope of PPL, therefore are not subject to the provisions of

[8] https://cms.law/en/int/expert-guides/cms-expert-guide-to-public-procurement/turkey

Law No. 4734. PPL also introduced threshold values utilized to determine the provisions detailed in Articles 13 and 63.

Main Public Procurement Methods

a. Open tender procedure (Article 19 of Law No. 4734): The most common procedure in which all tenderers submit their tender following PPL. Narrative/technical and financial tenders are submitted at the same time.
b. Restricted tender procedure (Article 20 of Law No. 4734): Tenderers who are pre-qualified by the contracting authority can submit tenders. A restricted tender procedure is usually applied when the tender content is complex and requires expertise and/or high technology. The pre-qualification evaluation should be conducted following Article 10 of PPL.
c. Negotiated tendering procedure may be applied if;

- no tender is submitted in open or restricted procedures,
- it is inevitable to conduct the tender procedures immediately, due to unexpected and unforeseen events such as natural disasters, epidemics, etc.
- it is inevitable to conduct the tender procedures immediately due to the occurrence of specific events relating to defense and security,
- the procurement is of a character requiring a research and development process and not subject to mass production,
- due to specific and complex characteristics of the works, goods, or services to be procured

The monetary limits and threshold values for exceptions and negotiated tender procedures are shown in Tables 1 and 2. The condition of "inevitability of conducting the tender procedures immediately due to unexpected and unforeseen events such as natural disasters, epidemics, etc" is detailed in Article 21(b) of Law No. 4734, which has no monetary limits and values.

Table 1: The monetary limits and values table specified in Law No. 4734 on Public Procurement (Feb 1, 2024-January 31,2025)[9]

According to Law 4734 Article No	Monetary Limits and Values for the period between 1 Feb 2024 – 31 Jan 2025 (in TRY)
Article 3(g) (exceptions)	95,508,971
Article 13(b) (tender notice periods and terms)	1,245,628 2,491,384 20,762,692

[9] https://www.resmigazete.gov.tr/eskiler/2024/01/20240124-14.htm

According to Law 4734 Article No	Monetary Limits and Values for the period between 1 Feb 2024 – 31 Jan 2025 (in TRY)
Article 21(f) (negotiation method)	2,076,108
Article 22(d) (direct procurement)	622,756 207,453

Table 2: The threshold values table specified in Law No. 4734 on Public Procurement (Feb 1, 2024-January 31,2025)[10]

Contracting Authority/Article	Scope	Thresholds for the period between 1 Feb 2024 – 31 Jan 2025 (in TRY *)
Central government authorities and central public institutions – Article 4734/8a	Supply and Service *"Mal ve Hizmet Alimi"*	**11,417,574** (Approx. EUR 338,783)
Other government authorities (local government authorities, local public institutions, other institutions operating under a central government authorities, etc.) which falls under the scope of the PPL - Article 4734/8b	Supply and Service*"Mal ve Hizmet Alimi"*	**19,029,344** (Approx. EUR 564,658)
All administrative authorities that fall under the scope of PPL- Article 4734/8c	Works "*Yapim"*	**418,648,353** (Approx. EUR 12,422)

E. Competitive Landscape

- Comprehensive competitor analysis, including potential for partnerships and cooperation.

- It is planned to carry out various infrastructure rehabilitations and new projects in provinces affected by disasters and those that have received migration due to disasters with financing from international sources provided by Ilbank. In this context, a total of 70.2 billion TL (approx. 2.082.548.000 EUR) in loans provided by the World Bank, Japan International Cooperation Agency, Islamic Development Bank, European Bank for Reconstruction and Development, European Investment Bank, and French Development Agency will be utilized as grants without repayment for tasks under the responsibility of municipalities.

[10] https://www.resmigazete.gov.tr/eskiler/2024/01/20240124-14.htm

- The projects planned to be carried out include drinking water and sewage infrastructure rehabilitation, construction and repair of treatment facilities, and construction works for drinking water storage and stormwater network, among other tasks in the table presented in annex 1.

F. Market Entry Conditions

- In the realm of water and sewerage infrastructure within Türkiye, the construction sector demonstrates a high degree of competence, with several firms exhibiting robust capabilities. These entities are well-established and poised to submit highly competitive bids, underscoring their significant prowess in undertaking substantial projects. Nonetheless, it is pertinent to note that the market exhibits certain limitations, particularly in the realm of advanced equipment and the latest technological innovations for monitoring and evaluating water and sewerage networks.

- The advent of products that enhance the utilization of SCADA (Supervisory Control and Data Acquisition), GIS (Geographic Information Systems) technologies, control devices, instruments, and software that intelligently manage and measure water supply and distribution will likely encounter a receptive and competitive landscape in the Turkish market. Turkish firms may offer products in this domain. According to the first observations, the level of innovation might not match the Dutch companies.

- Given this scenario, it is strategically advisable for entities looking to enter the Turkish market to focus on introducing innovative products, especially those geared towards the sophisticated monitoring and evaluation of networks. Such a strategy capitalizes on the existing market gap and aligns with the growing demand for advanced technological solutions in Türkiye's water and sewerage sector. This approach promises to offer a competitive edge and positions one as a leader in innovation, catering to a critical and evolving need within the sector.

- It is essential to note that the Turkish Public Procurement Law "*Kamu İhale Kanunu"* (PPL) requires all companies, including foreign ones, to be registered with the Electronic Public Procurement Platform (EPPP) "*e-Kap*". The centralized public e-procurement platform operated by the Turkish Public Procurement Authority "*Kamu Ihale Kurumu"* https://ekap.kik.gov.tr/EKAP/Ortak/IhaleArama/index.html (tender search engine), which can be found at the Public Procurement Authority (PPA) web site http://www.ihale.gov.tr/.

- As noted above, the companies must register before acting and have an authorized e-signature to access the procurement documents. Getting an authorized e-signature if the company does not have a legal representative or office in Türkiye is challenging. The registration process and this procedure are complex, requiring an apostille certification, making the process more difficult for foreigners.

- To mitigate the challenges encountered in EPPP "*e-Kap*". , one potential solution is to designate a representative from Türkiye. The representative should be entitled to carry out all kinds of EPPP/ e-Kap system transactions. Opening a branch in Türkiye does not eliminate foreign status, but establishing a partnership in Türkiye with a locally registered company removes foreign status, making the venture a domestic company. Therefore, the recommended method for foreign companies is to partner with a Turkish entity.

- It is equally important to note that PPL might not be applied if a foreign investment, credit, loan, or grant institution is involved. Therefore, registration to EPPP is not required. If a foreign financing institution is involved, and the specifications of the foreign financing institution are taken as the basis, the terms and conditions for foreign companies are often more favorable. There is a high possibility that the financing institutions involved in earth-quake recovery in Türkiye will apply their specific terms of reference documents even if they engage in contractual relationships with national and local authorities.

- As an additional note, the tender and bulletin search engines are only available in Turkish. Under the PPA's web page, general announcements (i.e. press releases, legislative amendments etc.), related legislation, statistics, and information relating to the administrative authority are available in English.

Comp 1- (Axe 2)- Modular Buildings Sector

A. Needs Identification

- As noted in the previous sections, as of 2022, the total population of the 11 provinces affected by the 6 February earthquakes corresponds to 16.4% of the total population of Türkiye. In addition, 14.05% of Türkiye's total housing stock is in the disaster zone. Below, Table 3 shows the housing stock in the disaster zone provinces.[11]

Table 3: Housing Stock per Province in the Earthquake Zone

Province	Housing Stock
Adana	972,561
Adıyaman	216,744
Diyarbakır	563,295
Elazığ	292,406
Gaziantep	893,558
Hatay	847,380
Kahramanmaraş	481,362
Kilis	74,976
Malatya	345,536
Osmaniye	243,436
Şanlıurfa	718,063
Regional total	5,649,317
Türkiye	40,200,000

The Ministry of Interior's Spatial Address Registration System, (MAKS) (*Mekansal Adres Kayıt Sistemi*) data provides general information about the structural systems of buildings and apartments in earthquake zones (Table 4).

[11] Kahramanmaraş ve Hatay Deprem Sonrası Değerlendirme Raporu, Strategy and Budget Directorate of the Presidency

Table 4: Structural System of Buildings in Earthquake Zones (%)[12]

	Reinforced concrete (%)	Steel (%)	Masonry (%)	Prefabricated (%)	Other (%)
Building	86.7	2,4	3,5	3,6	3,9
Housing Unit	95,4	0.4	1,3	0,6	2,3

- In the earthquake zone, 86.7% of buildings and 95.4% of apartments are reinforced concrete. 2.4% of the buildings are steel, 3.5% are masonry, and 3.6% are prefabricated structures. The 'other' category includes wood, mixed, or unidentified structural systems. The level of masonry buildings, the most problematic category regarding earthquake resistance, remains low. On the other hand, steel construction, generally considered resistant to earthquakes but costly, is also observed to be quite low in proportion.

- According to the damage assessment study conducted by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC), the total number of residences categorized as urgently to be demolished, collapsed, or heavily damaged is determined to be 518.009. The number of moderately damaged residences is estimated to be 131.577, and the number of slightly damaged residences is estimated to be 1.279.727. This data shows that 2.273.551 individuals have faced direct housing issues following the earthquake.

Table 5: Province- Specific Damage Assessment Report[13] (6 March 2023)

	Number of Heavily Damaged + Collapsed Building	Number of Moderately Damaged Building	Number of Lightly Damaged Building
Province			
Adana	2952	11768	71072
Adıyaman	56256	18715	72729
Diyarbakır	8602	11209	113223
Elazığ	10156	1522	31151
Gaziantep	29155	20151	236497
Kahramanmaraş	99326	17887	161137
Malatya	71519	12801	107765
Hatay	215255	25957	189317
Kilis	2514	1303	27969
Osmaniye	16111	4122	69466
Şanlıurfa	6163	6041	199401
Total	518009	131577	1279727

[12] The Ministry of Interior's Spatial Address Registration System (MAKS) "*Mekansal Adres Kayıt* Sistemi". The number of buildings represent the registered buildings.
[13] Kahramanmaraş and Hatay Post-Earthquake Assessment Report, Strategy and Budget Directorate of the Presidency

- After the earthquakes, the primary aim was to offer earthquake victims dependable and readily available housing solutions. These accommodations should include essential public utilities such as electricity, water, natural gas, and internet, designed to withstand earthquakes and other disasters. Moreover, these housing options should meet decent standards, ensuring individuals can fulfill their basic humanitarian requirements.[14]

- AFAD was given the responsibility and authority to construct houses for the earthquake-affected people[15] by the MoEUCC and the Presidency. AFAD runs the housing process following two approaches; one is through TOKI – Türkiye's government-based housing agency, while the second approach is through tenders. According to interviews and reviewed documents, AFAD may open a tender for the construction of houses if the selection of disaster housing locations is made collectively. With this method, AFAD can implement permanent housing projects, or depending on the density, the housing can also be carried out through the MoEUCC in collaboration with the IlBank.

- Under Article 9 of Presidential Decree No. 126 regarding Settlement and Construction within the Scope of a State of Emergency, new authorities have been granted to AFAD concerning constructing permanent housing units. In this context, AFAD is given the authority to allocate resources to the MoEUCC and affiliated, relevant, and associated institutions and organizations of the Ministry, including their subsidiaries.

- The number of housing units planned for construction in the 11 provinces, applicable as of 3 March 2023, is provided in Table 6 below. 405,505 residences and 83,149 rural houses in the earthquake region are planned to be constructed according to the Kahramanmaraş and Hatay Earthquake Report prepared by the Strategic and Budget Directorate of the Presidency.

- Additionally, interviews with stakeholders indicated that TOKİ is given a mandate to build 690,000 residential houses and 150,000 commercial offices. It was also stated that as of February 2024 TOKİ completed the construction of 50,000 residential houses.

- The stakeholders' interviews underlined the lack of concrete material and the difficulty of building concrete structures in rural areas. On the other hand, the interviewees pointed out the increasing use of lightweight steel and modular structures, particularly in rural areas. Yet, it is also acknowledged that in Türkiye construction sector expertise is concrete dominant, while lightweight steel and modular building construction is a newly developing area.

[14] Türkiye Earthquakes Recovery and Reconstruction Assessment, UNDP Report
[15] Law No. 7269 on Measures and Aids in Cases of Disasters Affecting Public Life

Table 6: Disaster Houses Program[16]

Province	Planned number of houses	Planned Number of Village Houses
Adana	1900	7
Adıyaman	47350	13987
Diyarbakır	6000	716
Elazığ	4500	1602
Gaziantep	27150	6506
Kahramanmaraş	88500	18874
Malatya	66230	21549
Hatay	146650	14997
Kilis	1800	1368
Osmaniye	12425	2731
Şanlıurfa	3000	812
Total	405505	83149

B. Market Dynamics and Structure

- For a private sector investor planning a modular construction investment in Türkiye, interacting with various stakeholders is crucial for the project's success. These stakeholders range from governmental and regulatory bodies to local communities and private sector suppliers who are gathered in different sector associations.
- Understanding these stakeholders' roles and interests can help navigate the investment process more effectively.

The main public stakeholders:

- **Governmental and Regulatory Bodies**

Ministry of Environment, Urbanization, and Climate Change (MoEUCC) *"Bakanlık: Çevre, Şehircilik ve İklim Değişikliği Bakanlığı"*

The duty and authority to issue a building permit license *(inşaat ruhsatı/yapı ruhsatı)*, a building use permit license *(yapı kullanım izni/iskan izni)*, and a workplace opening, and a work permit belong primarily to the relevant district municipalities.

At the exception defined by the provision in No. 644 of the Decree Law on the Establishment and Duties of the Ministry of Environment, Urbanism and Climate, 2.1Article paragraph (c) and (h) *(Çevre ve Şehircilik Bakanlığı'nın Kuruluş ve Görevleri Hakkında Kanun Hükmünde Kararnamenin, 2. maddesinin 1. fıkrasının (ç) ve (h) bendi)*, "if the relevant administration does not issue a building permit, a building use permit and a workplace opening work permit

[16] Kahramanmaraş and Hatay Post-Earthquake Assessment Report, Strategy and Budget Office of the Presidency, Türkiye Earthquakes Recovery and Reconstruction Assessment, UNDP Report

within two months, there is a provision that a building permit, a building use permit, and a workplace opening work permit can be issued by the Ministry of Environment and Urbanization without consulting anyone." Applications within this scope can be made to the Provincial Directorate of Environment and Urbanization in the province where the building is located, together with their documents. In this case, the Provincial Directorate *(Çevre ve Şehircilik ve İklim Değişikliği İl Müdürlüğü)* is requested to be notified of the reason for not issuing a building permit, building use permit, or work permit to open a workplace from the relevant administration within fifteen days at the latest. The document requested by the Provincial Directorate may be issued considering the justification of the relevant administration.

Municipality *"Belediye"*

- Municipalities are local government institutions that ensure the execution of business and processes with laws and regulations. Local government units, such as municipalities, are crucial for approvals on land use, local infrastructure access, and adherence to local construction codes.

- In Türkiye, there are three different municipalities.
  City-level municipalities are divided into the following groups:
  - Metropolitan Municipalities *(Büyükşehir Belediyesi)* (31 cities are governed by metropolitan municipalities- where the population is over 750.000)
  - Provincial Municipalities *(İl Belediyesi)*(50 cities have provincial municipalities)
  - District Municipalities *(İlçe Belediyesi)*.

- **District Municipalities** "*İlçe Belediyesi*" are responsible for the Building Permit License *(Yapı İzin Ruhsatı / İnşaat İzin Ruhsatı)* and Building Usage Permits License *(Yapı Kullanım İzin Belgesi/ İskan Belgesi)*. During building construction, it conducts a compliance audit for the approved zoning plan and architectural and engineering projects" by the Ministry of Environment, Urbanization, and Climate Change and the metropolitan municipality.

- **Public Procurement Authority "***Kamu İhale Kurumu***" (PPA**): For projects that involve public tenders or government contracts, understanding the Public Procurement Law No. 4734 and interacting with the PPA is essential. (In the above section dedicated to water and sanitation sector more information is provided about the PPA). It is important to note that in the disaster zone public construction contracts are mainly signed with the Housing Development Administration of Türkiye, "*Toplu Konut İdaresi*" (TOKİ). According to the Presidency strategy, Emlak GYO will join TOKİ to handle housing construction demand in future steps.

- **Housing Development Administration of Türkiye,** "*Toplu Konut İdaresi*" **(TOKİ)** is primarily responsible for constructing permanent residences and social facilities, along with their infrastructure, especially in areas affected by natural disasters. It aims to increase the stock of quality, earthquake-resistant housing in Türkiye and to carry out urban transformation projects in areas where disaster risk and irregular urbanization are prevalent in collaboration with local administrations.

- Since its establishment, TOKİ has been a major player in addressing the housing needs post-disasters, renewing and transforming affected regions through protocols, such as the ones organized with AFAD (Disaster and Emergency Management Presidency). For instance, following the Van earthquakes on October 23, 2011, and November 9, 2011, TOKİ delivered 17,504 homes within ten months.

To date, it has produced 113,667 permanent houses in disaster-affected areas. These homes are quickly manufactured to provide access to housing post-disasters and have a public perception of high performance in terms of disaster resilience.

- Following the February 2023 earthquakes, the construction of permanent disaster homes has commenced in collaboration with the Ministry of Environment, Urbanization and Climate Change, AFAD, TOKİ, and local administrations.

- TOKİ, in collaboration with the Ministry of Environment, Urbanization and Climate Change, AFAD, and local administrations, started the construction of permanent disaster homes. A comprehensive plan involves building 405,505 new homes and 83,149 village houses across 11 provinces. These homes are designed to be earthquake-resistant, considering the regional architecture, and include all necessary infrastructure and social facilities. The total estimated construction cost, excluding land costs, is projected to be around 6,083 billion TL (approximately 322 billion USD) for the homes and 1,927 billion TL (approximately 102 billion USD) for the village houses.

- **Emlak Konut GYO (Emlak Konut):** Emlak Konut, founded in 1987, has grown to become a leading figure in Turkey's real estate sector, with a significant stake of 49.37% held by the Housing Development Administration of Turkey (TOKI), an essential arm of the Turkish government. The company's origins trace back to Ankara İmar Ltd., established in 1953, which laid the groundwork for its specialization in housing projects nationwide.

- **Turkish Standards Institution "***Türk Standartlari Enstitusu***" (TSE):** Ensuring modular construction components meet Turkish standards is critical for project approval and market acceptance.

- **The Turkey Environment Agency "***Türkiye Çevre Ajansi*" **(TUCA) and the Zero Waste Project**, both semi-public entities, play significant roles in Türkiye's circular economy. TUCA, affiliated with the Ministry of Environment, Urbanization, and Climate Change, focuses on environmental protection with initiatives in waste management and sustainable practices. On the other hand, the Zero Waste Project is dedicated to reducing waste generation, enhancing recycling efforts, and encouraging efficient use of resources. Each entity contributes to developing and implementing policies and practices that support the circular economy framework within Turkey.).

- **The Disaster and Emergency Management Presidency (AFAD)** *"T.C. İçişleri Bakanlığı Afet ve Acil Durum Yönetimi Başkanlığı"* is a government agency affiliated with Ministry of Interior is responsible for managing and coordinating responses to natural and man-made disasters and emergencies within the country. Established to handle various types of emergencies, including earthquakes, floods, fires, and other disaster situations, AFAD plays a critical role in Türkiye's disaster preparedness, response, recovery, and mitigation efforts. AFAD is also in charge of collaborating with international organizations and other countries on disaster management initiatives, sharing best practices, and participates in international relief efforts. Coordination with AFAD is vital for compliance with disaster resilience standards for investments in earthquake-prone areas.

- For more information on the private sector, see the enclosed. Annex 2- Modular construction stakeholder mapping.

D. Procurement Insights

- For foreign investors and companies, focusing on the supply of innovative construction technologies, equipment, and expert services offers a strategic entry point into Türkiye's construction market. This path ensures participation in the country's extensive rebuilding and development efforts, fostering partnerships and contributing to enhancing local construction capabilities in a regulated yet -prospect environment.

Legal Framework and Building License Process

To start the construction and use the building, the landowner/contractor must request two certificates from the relevant District Municipality.

a) Building License/ Construction Permit License *(Yapı Ruhsatı / İnşaat Ruhsatı)*
(The contractor company applies for it before starting the construction activity)
b) Building Use Permit License (Occupancy Permit License) *(Yapı Kullanma İzni / İskan Ruhsatı)* (To be able to start using it when the construction activity is completed)

The building license application process is constituted of four below-described steps.
Each of those four must be completed completely.

1) Zoning Statutes (*İmar Durumu*)

This document shows the parcel's construction conditions according to the application zoning plan and the provisions of the regulation, as a basis for the preparation of projects. License addition is based on projects; the decision to use the building order related to that parcel in the approved zoning plan includes front-side-back garden approach distances, building height Floor Sitting Area (TAKS) (*Taban Oturum Alani*) (KAKS)(*Precedent/Emsal*), etc. criteria.

2) Construction Direction Surveying (*İnşaat İstikamet Rölövesi*)

Construction direction surveying is an outline showing the parcel dimensions prepared by the zoning situation, including the substrate for the situation plan that will be drawn before the construction license is obtained. The relevant district municipalities regulate it according to the Application Outline.

3) Approval of Layout Plan (*Vaziyet Planı Onayı*)

The Layout Plan should clearly depict various elements. These include the adjacent parcels, the dimensions of the parcel as indicated on the construction application plan, and the parcel's total area. Additionally, the plan should detail the building's floor area along with the floor area ratio. It is important to show the building setback distances, the spacing between separate blocks, and the dimensions of each block situated on the parcel. The plan must also outline the number of floors, the locations of block entrances, and the direction north for orientation. Moreover, features such as outdoor parking areas, and where applicable, transformers and retaining walls, must be included.

4) Elevation Section Certificate *(Kot Kesit Planı)*

To determine the ground placement of the structure to be built on parcels having zoning status, is the document in which the building corner points and the elevations of the parcel corner points determined on the existing land are processed.

Planned Areas Zoning Regulation, 6. Section In 'Projects and Building Permit Documents' title, General Provisions regarding Building License "ARTICLE 54 – (1)(*Planlı Alanlar İmar Yönetmeliği, 6. Bölüm ''Projeler ve Yapı İzin Belgeleri'' başlığında, YapıRuhsatına İlişkin Genel Hükümler* ''MADDE 54 – (1)) Construction of any structure should not be started without getting a building license, out of the exceptions introduced by the Law and this Regulation".

Building License Application Process and Steps

The provisions in the title of the Building Permit are clearly stated in Article 55 of the Planned Areas Zoning Regulation "*Planlı Alanlar İmar Yönetmeliği,"*

Table 7: The Building License process

	Procedures	**Contents**	**Explanation**	**Relevant Directorate of the competent Municipality**
1.	Application for zoning status certificate	Obtaining a Zoning Status Certificate Obtaining a Construction Direction Survey and Denim Section Certificate	The elevation/section document and the direction relay will be issued in addition to the zoning status certificate. The fee related to these transactions will be calculated and reported in bulk and will be paid at one time.	Directorate of Zoning and Urbanization (*İmar ve Şehircilik Müdürlüğü*)
2.	Preparation of the application outline *(Aplikasyon krokisinin çıkarılması)*			
3.	Determination and recruitment of independent Building Inspection Organizations			
4.	License application	Obtaining the Architectural ProjectPre-Approval Obtaining a Water-Channel Infrastructure Permit Certificate And Receipt for Paying Registration of Licenses Obtaining an Excavation Permit	○ Architectural project approval, excavation permits and water-channel permit documents will be issued with the license. ○ The fee related to the transactions will be calculated and reported in bulk and will be paid at one time. In addition, the pay receipt will not be required. ○ The metropolitan district municipality, which will receive the building permit application, will deposit it into the bank account to be opened on behalf of the water and sewerage administration after making the collection. ○ The metropolitan district municipality will make the	Directorate of Zoning and Urbanization

	Procedures	Contents	Explanation	Relevant Directorate of the competent Municipality
			necessary correspondence with the relevant water and sewerage administration in order to obtain the water and sewerage status document.	
5.	Before starting the construction, registration with National Social Security Institution (*Sosyal Güvenlik Kurumu SGK*)			Building Control Directorate (*Yapı Kontrol Müdürlüğü*)
6.	Receipt of the "no tax debt" letter from the national tax authority (Vergi kurumundan "*Vergi Borcu* Yoktur'' yazısı alınması)			Building Control Directorate
7.	Receipt of the insurance "There is no premium debt" (*prim borcu yoktur yazısı*)letter			Building Control Directorate
8.	Application for Permission to Use the Building	Municipal Inspection at The End of The Work And Delivery Of The Report Building Use Permit Certificate	The transactions related to the audit will be carried out by internal correspondence.	Building Control Directorate
9.	Making classification of type allocation from the deed *(Cins Tahsisi Yapılması)*			
10	Opening a workplace and applying for a work license	Conducting a Fire Department Inspection Obtaining an Activity Permit	If a fire department inspection is required, this stage will be carried out by internal correspondence.	License And Audit Directorate (*Ruhsat ve Denetim Müdürlüğü*)
11	Water and channel connection application	Inspection of the Water-Channel Connection Section Making a Water-Channel Connection	Water and canal unit inspection will be carried out by internal correspondence.	Directorate of Zoning and Urbanization

E. Competitive Landscape

- As an investor focusing on the modular construction market within the disaster zones, a nuanced understanding of the sector's dynamics and challenges is crucial. The devastating earthquakes have underscored a pressing need for rapid reconstruction across three critical areas: housing, commercial, and industrial building constructions. Each presents unique requirements and considerations for potential investors and developers, especially when evaluating the suitability and potential of modular construction technologies.

Housing Construction

- The demand for housing in the earthquake-affected regions is substantial, aligning with the strategic priorities outlined by the presidency. TOKİ, the Housing Development Administration of Türkiye, has primarily addressed this need through traditional concrete construction methods. However, this approach faces significant challenges. Firstly, the time-sensitive nature of the housing demand in these disaster zones conflicts with the inherently slower construction timelines associated with cement-based methods. Secondly, Türkiye is currently experiencing a notable shortage of aggregate, further complicating traditional construction efforts. Modular construction emerges as a viable alternative in this context, offering speedier development times crucial for meeting urgent housing needs. However, potential investors must be aware of the Turkish construction sector’s actors' perceptions and capabilities on the modular sector. In addition, the price competitiveness is a factor, Strong cooperation and dialogue with key stakeholders is recommended. For this purpose, the list of key stakeholders of the sector is provided in Annex 2.

Commercial Building Construction

- While TOKİ's mandate addresses both housing and commercial construction needs, the specific strategies and projects for commercial building reconstruction post-disaster remain less publicly detailed. Modular construction in commercial projects could mirror the housing sector's benefits, particularly in speed and efficiency. Yet, accepting and integrating such methods within the commercial sector necessitates a clear understanding of market demands and regulatory landscapes.

Industrial Building Construction

- The industrial construction sector, particularly concerning disaster recovery efforts, appears underdeveloped, with limited publicly identified projects. One notable exception is an industrial zone construction initiative in Kahramanmaraş. This presents an intriguing window for investors to consider Industrial Zone Construction and Management for Small and Medium-Sized Industries.
- During our market scanning, the Gaziantep Chamber of Commerce expressed a readiness to support such projects, indicating a favorable reception for initiatives that could stimulate economic recovery and growth in the region. For those interested in further dialogue, contact information of the key actors is provided in Annex 3.

F. Market Entry Conditions

Market Perception and Stakeholder Engagement

- A crucial factor for investors to consider is the local construction sector's openness to foreign participation. There is a general recognition of the need for knowledge transfer, consultancy services, and the introduction of new technologies; there is less acknowledgment of the need for direct foreign undertaking in construction projects. This sentiment suggests that successful entry into the market may require a focus on partnerships emphasizing technological and expertise exchange over direct involvement in construction.

- Investors in Türkiye's housing development sector, particularly in modular construction, must meticulously consider the regulatory framework for housing construction. This ensures compliance and positions their ventures for success in a market with a pressing need for rapid, resilient housing solutions. Considering these considerations, providing services and equipment for upcoming construction projects emerges as a viable strategy. This approach allows investors to contribute their technological and operational expertise to Türkiye's housing sector, facilitating the adoption of advanced construction methods while aligning with local regulations and market needs.

- For potential investors and developers eyeing Turkish modular construction, the pressing need for rapid reconstruction in the housing, commercial, and industrial sectors aligns well with the advantages of modular construction. However, navigating this market requires a strategic approach considering the unique challenges of cost, market perception, and stakeholder engagement. Collaboration with local entities, such as the Gaziantep Chamber of Commerce, and aligning projects with strategic national recovery goals could provide a pathway for successful investment and development in Türkiye’s modular construction sector.

Comp 1 (Axe 3)- Circular Construction Sector

A. Needs Identification

- Circular construction in Türkiye is part of a broader effort to transition to a circular economy, particularly following the 2015 Paris Agreement. The focus is on minimizing waste and maximizing resource efficiency in the construction sector, which is essential for sustainable development. Research in this area has seen a significant increase, especially after 2021, indicating a growing interest and the need for interdisciplinary approaches to implement circular economy principles effectively in construction.

- The state of play of the circular construction sector in Türkiye is undergoing significant transformation. The Turkish government is actively working to harmonize its environmental regulatory and policy framework with the European Union standards as part of its transition to a circular economy. This includes focusing on efficient and renewable forms of energy and better waste management systems. Part of these efforts involves developing a comprehensive national strategy and action plan for the circular economy, which includes improving integrated waste management. Additionally, there have been organized study visits to European countries to learn best practices in circular economy models, particularly in the construction sector. This includes practices like recycling construction waste and using recycled materials in new buildings. These initiatives are part of Türkiye's broader aim to align with the EU Circular Economy Action Plan by 2028.

- In conducting a comprehensive market analysis for stakeholders interested in Türkiye's circular construction sector, our assessment identifies two primary approaches to gauging market demand. The first approach focuses on earthquake-prone disaster zoner, where the assessment is centered around the volume of debris generated by February 2023 earthquakes. This includes structures that have been demolished, are slated for demolition, or are likely to be impacted within these designated disaster zones. The mass can be evaluated by leveraging official data regarding the mass of buildings to derive accurate estimations mentioned above.

- Conversely, the second approach broadens the scope to encompass nationwide urban reconstruction initiatives aimed at mitigating earthquake disaster risks in regions beyond the immediate disaster zones. This proactive strategy underscores the need for a holistic market view, recognizing the potential for circular construction practices across the country.

- Both approaches underscore the dual-layered demand within the sector: the need for specialized know-how and the requisite equipment. Our analysis aims to equip stakeholders with a nuanced understanding of these needs, facilitating informed decision-making in capitalizing on the emerging conditions within Türkiye's circular construction sector.

Know-how

- Türkiye has actively incorporated the circular economy concept into its national policy framework, and the Environmental Law is being revised accordingly. On the other hand, in the demolition sector, operations are currently conducted through locally coordinated activities as the overarching regulatory framework to gauge their impact on the circular economy is being newly introduced. Post-receiving demolition clearances, property proprietors contract independent recycling entities, colloquially referred to as "*hurdacı,*" for the retrieval of valuable materials such as iron, PVC fenestration, and electrical conduits, with valuation determined by the open market's dynamics. According to the interviews, the Ministry of Environment, Urbanization, and Climate Change coordinates and keeps a record of the demolition process with local official institutions.

- Subsequent to the salvage phase, the focus shifts to the dismantling of the building's concrete edifice. This phase mandates engagement with a demolition contractor possessing the requisite licensure. However, the prevailing regulatory criteria for licensure fall short of incorporating competencies related to circular construction methodologies or asbestos abatement practices. (for more information see: Demolition contracting applications information and application guides "*Yıkım müteahhitliği başvuruları bilgi ve başvuru kılavuzlar*".)

- Given these market dynamics, a pronounced necessity emerges for providing advanced technical support to licensed demolition entities and developing a comprehensive framework dedicated to the quantitative assessment and qualitative evaluation of circular construction practices. This would not only elevate industry standards but also foster a more sustainable and regulated demolition ecosystem in Türkiye.

Equipment

- As a result of the comprehensive market analysis focused on the circular construction sector in Türkiye, we have identified a predominant perception that significantly influences industry practices for innovation and investment. The prevalent understanding among key stakeholders, derived from extensive interviews, is narrowly centered on concrete crushing. This is primarily due to widespread confidence in the recycling processes conducted by local "*hurdacı*" (scrap dealers), who play a pivotal role in the current recycling ecosystem.

- However, the research reveals a more nuanced perspective, particularly regarding construction debris crushing. The demand for aggregate, as a byproduct of the crushing process, has been consistently highlighted in discussions with key stakeholders and noted in the report prepared by Turkish Ready Mixed Concrete Association (THBB) "*Hazir Beton Birligi"*which is a prominent actor in concrete field in Türkiye and corroborated by findings in the THBB's sectoral report for 2022. This points to a growing market need that extends beyond the existing recycling capabilities.

- There is a notable openness among industry actors to engaging with foreign investors who can introduce advanced technological solutions or cutting-edge equipment for the efficient crushing of construction and crushing of debris. Such collaborations could significantly enhance the sector's sustainability and operational efficiency.

- Moreover, our analysis also sheds light on a critical gap in the current market landscape - the lack of specialized expertise in asbestos management. This deficiency not only represents a significant risk to public health and safety but also highlights an area ripe for development through targeted training programs and the introduction of international best practices.

- In summary, while the current perception of Türkiye's circular construction sector is largely focused on debris crushing, our market scan has identified key areas for growth, investment, and improvement, particularly in the adoption of advanced technologies and the development of expertise in critical areas such as asbestos management.

B. Market Dynamics and Structure

- The Turkish circular construction sector involves various stakeholders, each playing a critical role in advancing circular economy practices within the industry.

  Key players typically include:
- **Government Bodies and Regulatory Authorities**: Ministries such as the Ministry of Environment, Urbanisation and Climate Change (MoEUCC) are instrumental in setting regulations, standards, and policies that promote circular economy principles in construction.
- **Industry Associations**: Organizations like the Turkish Ready Mixed Concrete Association (THBB) and the Turkish Contractors Association (TMB) contribute to the sector by advocating for sustainable practices, providing guidelines, and facilitating dialogue among industry participants.
- **Construction and Demolition Companies**: Companies specializing in construction and demolition are at the forefront of implementing circular economy practices, such as recycling construction materials and minimizing waste.
- **Recycling and Waste Management Firms**: These entities, including both formal companies and informal *"hurdacı"* (scrap dealers), play a vital role in the recycling of construction waste, such as concrete, metals, and other materials.
- **Demolition contractor:** Their primary responsibilities involve the safe, efficient, and environmentally responsible dismantling or demolishing of buildings, structures, and other constructed entities. For more information on the demolition contractor license see above.

Regulation For Scrap Dealers "*Hurdacı*"

The rules and regulations for scrap dealers are typically governed by municipal regulations and the Ministry of Environment, Urbanisation and Climate Change (MoEUCC). Therefore, it may show differences according to the municipality where the investment is foreseen:

General steps and requirements:

Environmental Permit and License: Scrap dealers are required to obtain an Environmental Permit and License from the Provincial Directorate of Environment and Urbanization, which falls under the MoEUCC. This permit ensures that the scrap dealing activities comply with environmental regulations and standards.

Waste Transportation License: If the business involves collecting and transporting scrap or waste materials, a waste transportation license may be required according to Municipal regulations of the district. This license ensures that waste is handled and transported in a manner that adheres to environmental safety standards.

Compliance with Local Regulations: Scrap dealers must also comply with any additional local municipality regulations, which may vary depending on the location of the business. This could include specific rules about the storage and handling of scrap materials.

Regular Inspections: Once operational, scrap dealing businesses may be subject to regular inspections by local health, safety, and environmental authorities to ensure ongoing compliance with relevant regulations.

It's important to note that regulations can change, and there might be additional requirements or updates to the process. Therefore, it's advisable for anyone looking to become a "*hurdacı*" in Türkiye to consult with the local municipality and the Provincial Directorate of Environment and Urbanization for the most current information and specific requirements applicable in their areas.

D. Procurement Insights

- Türkiye has actively incorporated the circular economy concept into its national policy framework, primarily under the auspices of the Ministry of Environment, Urbanization, and Climate Change (MoEUCC). The inclusion of circular economy principles in the Environmental Law through amendments made in 2020[17] marked a significant legislative milestone. This amendment, listed under Article 3 – General Principles, signifies the formal recognition and integration of the Circular Economy (CE) into Turkey's legal framework.

- In the wake of recent legislative advancements, the MoEUCC has demonstrated commendable agility in updating ancillary legislation to embody the principles of the CE, culminating in significant regulatory enhancements. A cornerstone of this progressive agenda is initiating the EU-funded Technical Assistance for the Assessment of Türkiye's Potential on Transition to a Circular Economy (DEEP project) in February 2022. This pivotal project is tasked with the formulation and broad dissemination of a National Circular Economy Action Plan and Roadmap, actively involving principal public institutions, with its publication slated for the final quarter of 2023. Furthermore, the interviews revealed new technical assistance programs specifically tailored to support circular construction practices in Türkiye can be expected.

- Investors with an interest in contributing services within these domains are advised to diligently monitor international funding institutions' project calls.

- It is noteworthy to add that the European Commission's support for Türkiye, including the construction management, will be implemented in collaboration with the national authorities.

- Parallel to these efforts, the Ministry of Trade oversees a study related to the EU Green Deal, indicating a broader governmental engagement with sustainability and CE principles.

[17] https://hukuk.csb.gov.tr/cevre-ajansinin-kurulmasi-ile-bazi-kanunlarda-degisiklik-yapilmasina-dair-kanun-resmi-gazetede-yayimlandi-haber-257676

Despite the absence of a fully elaborated CE policy, the MoEUCC has enacted regulations to promote the utilization of waste as a valuable resource, covering aspects like additional fuel, alternative raw materials, and byproducts.

- Additionally, since 2020, Türkiye has been implementing its national strategy document focused on the prevention, reduction, and monitoring of food loss and waste, underscoring the country's commitment to sustainable practices and the principles of the circular economy.

- During extensive interviews with the Presidency and key stakeholders, there was a recurrent emphasis on the fact that Türkiye's roadmap for the circular economy is in the advanced stages of its development, with a public announcement on the horizon. This strategic framework is not only pivotal for aligning Türkiye's economic policies with sustainable practices but also presents a plethora of windows for investors looking to navigate the emerging landscape of circular economy initiatives. The roadmap is anticipated to outline key sectors and industries ripe for transformation, thereby offering clear guidance for investment in sustainable technologies, waste management solutions, and resource-efficient processes. Furthermore, this strategy is expected to foster a regulatory environment conducive to green investments, potentially unlocking financial incentives, subsidies, and supportive policy measures. This represents a unique chance for investors to be at the forefront of Türkiye’s transition to a circular economy, contributing to and benefiting from sustainable growth, innovation, and environmental stewardship. Engaging with this roadmap can provide investors with a comprehensive understanding of market needs, regulatory trends, and potential partnerships, setting a solid foundation for a resilient and future-proof investment portfolio.

- The interviews with the stakeholders and business representatives showed the demand for such a regulatory framework, and the local companies have already started to align their businesses accordingly. This might be an window for foreign companies with extensive knowledge and expertise to provide consultancy to local firms or engage in partnerships.

- A press article was published on 14 January 2021 states that the strategy focuses on developing specialized industrial zones for waste management, incentivizing the recovery of rare earth elements from waste, and enhancing recycling infrastructure and incentives F durable, reusable, and repairable products. (https://www.milliyet.com.tr/ekonomi/depolama-vergisi-atiklari-azaltacak-7063764).

E. Competitive Landscape

- According to the calculations made by independent academic researchers of Artvin University, as a result of the Kahramanmaraş earthquakes, which affected 13 million people, approximately 350 to 580 million tons of construction and demolition waste will be formed and this will be 1.453.015.25 tons of hazardous waste, 16.273.770.74 tons of soil and stone mixture, 21.698.360.99 tons of bituminous waste mixtures and wood waste, 57.151.932.97 tons of mineral fraction waste, 37.747.073.20 tons of reinforced concrete waste and 935.317 tons of scrap iron waste.[18]

- The experts interviewed mentioned the figure of 200 million tons of construction waste following the 6 February earthquakes. It is noted that majority of the debris has been piled up, but there are difficulties with sorting and utilization processes, mostly due to the emergency situation in the earthquake zones. The experts underlined that advanced sorting is needed at this stage. Hatay municipality is running a project for debris sorting, but it is said to be a limited one.

- In Türkiye, the circular construction sector presents untapped potential, with a newly emerging unified national strategy, and is largely driven by disparate private initiatives. The industry is segmented, with scrap dealers "*Hurdacılar*" salvaging materials, demolition contractors managing concrete structures, and transferring debris to storage centers.

- Notably, in disaster-affected areas, specific agreements, such as those with EKOVAR Environmental Group, facilitate debris transfer (https://ekovar.com.tr) . Crushing centers then process this debris into aggregate, showcasing a fragmented yet functional circular construction ecosystem.

- Forming partnerships with key sector stakeholders is a crucial first step for an investor aiming to enter the Turkish recycling market. The Recyclers Confederation (*Geri Dönüşümcüler Konfederasyonu*), established initially in 2011 as the Association of Iron and Non-Iron Metals, and expanded in 2013, represents a significant portion of the sector. With 28 associations and 3 federations under its umbrella, the Confederation serves a vast community of over 500,000 professionals, including collectors, transporters, storers, and recycling facilities. It is the sole organization that supplies zinc, copper, aluminum, lead, iron, and steel scrap in the recycling sector. For more information, visit their website at [www.geridonusumculerkonfederasyonu.com](https://www.geridonusumculerkonfederasyonu.com/2/47/46/kurumsal/yonetim-kurulu/asil-uyeler/).

- Our Turkish circular construction sector analysis identified a strategic gap in debris management, specifically in deploying monitoring and evaluation tools and systems. This finding suggests a potential niche for strategy consulting services. However, stakeholder feedback did not highlight perceived vulnerabilities or express a need for system enhancements. Investors need to consider both the identified market gap and the stakeholders' perspectives to make informed decisions.

- Engaging with UNDP is highly recommended for investors interested in replicating or scaling up pilot projects in the debris management sector. UNDP is nearing the completion of a pilot debris treatment and crushing center in Hatay. It would be prudent to consult the UNDP project officer for detailed insights and potential collaboration.

[18] Management of Post-earthquake Construction and Demolition Waste: 6 February 2023 Kahramanmaraş Earthquake Disasters, Gamze Dogdu, Seda Nur Alkan, Artvin Coruh University Journal of Engineering, and Sciences, Vol: 1 No: 1, 2023 (38-50).

Contact information for the UNDP project officer is available in the interviewee list provided in the project documentation. This approach could offer valuable lessons and frameworks for future investments in similar initiatives.

F. Market Entry Conditions

Transparency of public tenders and strategy

- The debris management strategy in disaster areas is orchestrated by the Zero Waste Project (sifiratik.gov.tr) and the Turkey Environment Agency (tuca.csb.gov.tr), under the MoEUCC. After the earthquake, central authorities quickly signed public tenders for debris removal. There is no public information on the process.

- The Regulation on the Control of Excavation Soil, Construction, and Demolition Waste, "*Hafriyat Toprağı, İnşaat ve Yıkıntı Atıklarının Kontrolü Yönetmeliği*" effective since 18 March 2004, mandates reducing, collecting, temporarily storing, transporting, recycling, evaluating, and disposing of such waste to prevent environmental pollution. Municipalities assess applications for the reuse and evaluation of excavation soil within the city limits, ensuring compliance with this regulation and other environmental laws.

- Presently, each municipality, with support from special provincial administrations, is tackling debris management based on local resources and conditions. There is no single source of public information on the process.

Legal limit

- The Solid Waste Management Regulation (Official Gazette Date: 02.04.2015, Official Gazette Number: 29314) aims to manage waste without harming the environment and human health, from its formation to disposal. It focuses on reducing waste generation, promoting the reuse of waste, recycling, and recovery, as well as minimizing the use of natural resources and ensuring efficient waste management. The regulation obligates waste producers and holders to prepare and get approval for a waste management plan that prioritizes waste prevention, reduction, and recovery.
- The Solid Waste Management Regulation primarily focuses on general principles like cost recovery, extended producer responsibility, by-products, reuse preparation, and the movement of wastes across borders.

- The Regulation on the Control of Excavation Soil, Construction, and Demolition Waste (Official Gazette Date: 18.03.2004, Official Gazette Number: 25406) sets out the rules that must be followed for the reduction at source, collection, temporary storage, transportation, recovery, evaluation, and disposal of excavation soil and construction and demolition waste in an environmentally harmless manner. According to the demolition procedures stipulated in the regulation, it is essential to first separate and recover recyclable materials from the buildings to be demolished. In this context, construction materials such as doors, windows, cupboards, floor and wall coverings, flooring, insulation materials, and hazardous wastes are separated and collected separately from the buildings to be demolished. According to the regulation's principle of the Recovery of Construction/Demolition Waste, the recovery of construction/demolition waste is fundamental for the conservation of natural resources, sustainable production, reducing the amount of waste to be stored, and creating economic value.

- In Türkiye, there is no mandatory legislation regulating the embedded energy and carbon caused by the construction and demolition of buildings. In recent years, good practices have been observed with the voluntary use of national and international green certification systems for buildings and settlements. Access to the necessary data to calculate the energy consumption and carbon emissions caused by construction and demolition in the life cycle assessments of construction projects is challenging.

- The legal framework for disaster waste management includes the Environment Law No. 2872 of 1983, the Regulation on the Control of Excavation Soil, Construction, and Demolition Waste published in 2004, and the Waste Management Regulation issued in 2015.

- In Türkiye, the debris from disasters can be utilized in the circular construction sector since there is also a growing public awareness and demand for sustainable management practices. The UNDP project, supported by the Japan International Cooperation Agency (JICA), aims to environmentally sensitive debris removal and hazardous waste disposal, highlighting international efforts in this area. However, experts stress the absence of industrial symbiosis regulations in Türkiye, which is a risk factor for investors. Nonetheless, there is anticipation that relevant regulations will be enacted by year-end. For further details, it's advisable to consult the stakeholder mapping and interviews provided by the project.

Environment and health concerns

- In Türkiye, up until 2010, approximately 500,000 tons of asbestos were used, indicating its widespread application in both construction and industrial fields. This highlights the critical need for asbestos identification in buildings undergoing renovation or demolition to prevent exposure. The construction sector faces asbestos exposure risks during the demolition or dismantling of asbestos-containing structures, as well as during the handling, storage, control, and collection of asbestos-containing debris and materials. More information can be found at the Türkiye Asbestos Control Strategic Plan 2012. *"Asbest Kontrolü Stratejik Planı*, 2012*"*

Comp 2- Financial and Resource Analysis

Comp 2. Part 1- Resource Allocation and Financing Strategies

- Following the 6 February earthquakes in Türkiye, the Disaster Reconstruction Fund (*Afet Yeniden İmar Fonu*) was established (Law No. 7441) and entered into force after being published in the Official Gazette on 21 March 2023.[19] The Fund aims to ensure the provision, management, and allocation of the necessary resources for reconstruction, infrastructure, and superstructure works in earthquake-affected zones.

- The Board of Directors of the Disaster Reconstruction Fund is affiliated with the Ministry of Treasury and Finance and has a legal personality. The board includes the Minister of Treasury and Finance as the chair, along with the Minister of Environment, Urbanization and Climate Change, Minister of Energy and Natural Resources, Minister of Agriculture and Forestry, Minister of Interior, Minister of Transport and Infrastructure, and the President of Strategy and Budget.

- The fund's resources consist of all kinds of cash donations, aid, grants, bonds, and loans, as well as appropriations allocated to the budget for this purpose, domestically and internationally. The fund will allocate these resources to relevant projects in line with the purposes specified in the law and within the framework of decisions of the Fund's Board of Directors. The Regulation on the Structure and Operation of the Disaster Reconstruction Fund was published in the Official Gazette on 2 February 2024.

- The international community-initiated efforts to support Türkiye in addressing earthquake damages. The efforts were directed at providing emergency support to earthquake-affected populations and reconstruction efforts. According to the Kahramanmaraş and Hatay Earthquakes Reconstruction and Development Report of the Presidency Strategy and Budget Office, in 2023, approximately 2.8 billion USD in financing was provided by international organizations for earthquake relief purposes. [20]

- The World Bank has been the leading international actor to provide the most significant funding for earthquake recovery in Türkiye. World Bank provided a total of 990.8 million USD in financing for activities aimed at mitigating earthquake damage by the Ministry of Health, Ilbank, Ministry of Environment, Urbanization and Climate Change. It also allocated 450 million USD to the Small and Medium Enterprises Development Organization of Türkiye "T*.C. Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı*" (KOSGEB) for the recovery and continuity of small and medium-sized enterprises (SMEs).[21]
- The European Investment Bank (EIB) provided approximately 428.4 million USD[22] in financing to Ilbank for infrastructure improvement projects to be carried out by local governments. The European Bank for Reconstruction and Development (EBRD) secured approximately 277.3 million USD in financing within the framework of budget financing to contribute to the Ministry of Health's efforts to maintain health services in the region.[23]

[19] Kahramanmaraş and Hatay Earthquakes Reconstruction and Development Report of the Presidency Strategy and Budget Office, 2024, Ankara. For more information about the regulatin visit Official Gazette https://www.resmigazete.gov.tr/eskiler/2023/03/20230321-11.htm
[20] Kahramanmaraş and Hatay Earthquakes Reconstruction and Development Report of the Presidency Strategy and Budget Office, 2024, Ankara.
[21] https://en.kosgeb.gov.tr
[22]Kahramanmaraş and Hatay Earthquakes Reconstruction and Development Report of the Presidency Strategy and Budget Office, 2024, Ankara.
[23] Kahramanmaraş and Hatay Earthquakes Reconstruction and Development Report of the Presidency Strategy and Budget Office, 2024, Ankara.

Interviews with stakeholders confirmed that EBRD had introduced a loan line, particularly for the earthquake recovery in Türkiye.

- The Asian Infrastructure Investment Bank provided 100 million USD to the Export Credit Bank of Türkiye "*Türkiye İhracat ve Kredi Bankası*", and the Islamic Development Bank provided 100 million USD each to the Development and Investment Bank of Türkiye "*Türkiye Yatırım ve Kalkınma Bankası*" and the Industrial Development Bank of Türkiye "*Türkiye Sınai Kalkınma Bankası*" (TSKB), totaling 200 million USD. The Japan International Cooperation Agency also provided approximately 138.4 million USD to KOSGEB, and the Japan International Cooperation Bank provided 200 million USD to TSKB.

The following Table 8 summarizes the funding through international organizations in 2023.

Table 8: Total External Financing Provided for Earthquake Relief in 2023[24]

International Organization	Recipient Institution	Amount (million dolars)
World Bank	Ministry of Health, Ministry of Environment, Urbanization and Climate Change, Ilbank	990,8
World Bank	KOSGEB	450
European Investment Bank	Ilbank	428,4
European Bank for Reconstruction and Development	Ministry of Health	277,3
Asia Infrastructure Investment Bank	Export Credit Bank of Türkiye	100
Islamic Development Bank	Development and Investment Bank of Türkiye and Industrial Development Bank of Türkiye	200
Japan International Cooperation Agency	KOSGEB	138,4
Japan International Cooperation Bank	Industrial Development Bank of Türkiye	200
Total		**2,784,9**
International Organization	**Recipient Institution**	**Amount (million dolars)**

In addition, within the scope of emergency aid, the United Nations provided Türkiye 5,4 million USD to support the emergent needs of the earthquake-affected populations. The European Union Solidarity fund also decided to provide 400 million EUR for earthquake recovery efforts. UNDP has also been implementing a project for debris management with the Japan government funding. A pilot project is being implemented in Hatay, and Kahramanmaraş will soon be included. If additional funding could be secured, there is a plan to include Adıyaman and Malatya. The interviewees stressed that contacting the Ministry of Environment,

[24] Source: Republic of Türkiye Ministry of Treasury and Finance

Urbanization and Climate Change and the local authorities is essential to understand the need and proceed accordingly.

The EU term presidency held a donor conference in Brussels on 20 March 2023 to raise funding for the earthquake recovery in Türkiye and Syria. The participating countries promised 1,6 billion EUR of donation and 4,3 billons EUR of loan to Türkiye. Additionally, the European Union Solidarity fund decided to provide 400 million euros for earthquake recovery efforts. The loan amounts promised in the conference per institution are as follows:

Table 9: International Donors Conference Commitments on Loans[25]

Institution	Loan (in euros)
World Bank	1,687,363,731
European Bank for Reconstruction and Development	1,500,000,000
European Investment Bank	500,000,000
European Council Investment Bank	500,000,000
Balck Sea Trade and Development Agency	55,000,000
Spain	50,000,000
Total	**4,292,363,731**

- The European Commission is expecting to announce a third round of Facility for Refugees (FRIT) in Türkiye, as communicated to the researchers during the interviews. The European Commission Delegation Ankara is working on the details of the third phase of FRIT, which will be announced in the first half of 2024. Like the previous two phases, the third phase of FRIT is expected to focus on water and waste and support to refugees and agriculture. The interviewees underlined that the European Commission will be involved in socio-economic recovery besides water and waste.

- The Delegation representatives noted that they are working on technical assistance for construction, which will be tendered; the details have yet to be discussed. It is important to stress that the European Commission funding could be tendered through international organizations or international finance and investment actors; the projects should originate from the Turkish ministries and authorities. Once the projects and priority areas are identified with close coordination with Turkish authorities, tendering through international organizations could start. Based on the interviews, the research notes that the European Commission is not involved in long-term housing/construction funding and debris management.

- The interviewees mentioned that Turkish banks are getting loans from international finance institutions for recovery efforts. Additionally, it is underlined that small and medium enterprises, small-medium scale industrial production businesses, and public agencies are the beneficiaries of the loans distributed through Turkish banks. It is further stressed that the public and private banks are included in the earthquake recovery loans and could be efficient partners to collaborate with a third-party seeking to be involved in reconstruction efforts.

[25] Source: European Commission

- The interviews with public officials demonstrated that the priority of the public officials is to proceed as fast as possible to respond to the damage done by the devastating earthquakes. Therefore, local, and international private entities and finance institutions are invited to participate in the construction efforts. The criteria for public authorities are the quality, credibility, and competitiveness of the service provided. The authorities further underlined that the spread of the work carried out over time is impossible in areas declared as disaster zones. Such projects need to be urgently implemented and often require intensive funding. Therefore, they often require urgent intervention and rapid implementation.

- The relevant authorities are willing to work with interested and capable local and international parties. Yet, they need concrete projects to discuss feasibility and funding further and decide on strategies for collaboration and implementation.

Comp 2. Part 2. Tax Regulations and Risk Management

Domestic Legislation on Foreign Investment

Definition of foreign investor and foreign investment in Turkish regulation :
The legislation defines "foreign investor" as a foreign individual, foreign entity, or non-resident Turkish citizen making a foreign direct investment into Türkiye. "Foreign direct investment" includes foreign or domestic assets used to establish a new company or branch or acquire shareholding in a Turkish company. Assets of foreign sources may include cash capital, corporate securities (excluding government bonds), machinery, equipment, or intellectual property. Assets of domestic origin may include profits, receivables, or natural resource exploration rights.

Legislation

- Türkiye has established a legal framework to regulate foreign investment, which includes laws, regulations, and bilateral investment treaties[26].
- The primary legislation governing foreign investment in Türkiye are:
  - the Constitution and
  - the Foreign Direct Investment Law No.4875, enacted in 2003. [27]

- The Foreign Direct Investment Law No.4875 seeks to: (i) regulate the principles promoting foreign direct investment, (ii) protect the rights of foreign investors, (iii) standardize definitions of investment and investor, (iv) establish a notification-based system for foreign direct investment, and (v) increase foreign direct investment[28].

  Foreign investors with a subsidiary, branch, or liaison office in Türkiye must fulfill certain notification requirements. For instance, companies and branches must inform the Ministry of Industry via an online platform called the Electronic Incentive Application and Foreign Investment Information System "*Elektronik Teşvik Uygulama ve Yabancı Sermaye Bilgi Sistemi*" (E-TUYS), about any alterations in foreign ownership within their share capital.29 This notification obligation is typically a post-closing task in mergers and acquisitions transactions.
- Similarly, liaison offices are obliged to report their activities and are subject to audits by the Ministry of Industry to ascertain compliance with their permit and relevant legislation.

Company Formation:

- Foreign investors can establish various business entities in Türkiye, such as joint-stock companies, limited liability companies, branches, liaison offices, and joint ventures.

[26] In addition, in the international context, Türkiye is a party to 117 bilateral investment treaties on the protection and promotion of investments, 82 of which are currently in force, and 90 double taxation treaties, as well as several treaties regarding customs union, free trade, multilateral investments, protection of social security rights and agreements concerning alternative dispute resolution methods.[26]
[27] https://investmentpolicy.unctad.org/investment-laws/laws/33/turkey-foreign-investment-law
[28] Ibid.
[29] http://etuys.sanayi.gov.tr

The choice of entity depends on factors such as the nature of the business, capital requirements, and liability considerations.

Taxation:

- Foreign investors are subject to Turkish taxation on their income generated in Türkiye. The tax regime for foreign investors may vary depending on factors such as the type of business entity, the nature of the income, and any applicable double-taxation treaties.

Corporate Income Tax (CIT):

Foreign investors operating in Türkiye through a corporate entity are subject to corporate income tax on their taxable income derived from Turkish sources. The standard corporate income tax rate in Türkiye is 20% for 2024. However, certain incentives and exemptions may apply to specific industries or regions. Taxable income generally includes profits, dividends, interest, royalties, and gains from selling assets in Türkiye.

Value Added Tax ("*KDV*" VAT):
Foreign investors selling goods or services in Türkiye may be liable to register for VAT and charge VAT on their sales. The standard VAT rate in Türkiye is 18%, with reduced rates applicable to certain goods and services.

Withholding Tax:
Türkiye imposes withholding tax on various types of payments made to non-residents, including dividends, interest, royalties, and technical service fees. The withholding tax rates may vary depending on the payment type and whether a tax treaty exists between Türkiye and the investor's home country.

Capital Gains Tax:
Capital gains derived from the sale of immovable property in Türkiye are subject to capital gains tax. The capital gains tax rate for real estate transactions is progressive, ranging from 15% to 35%, depending on the ownership duration and the property's value.

Double Taxation Treaties:
Türkiye has signed treaties with numerous countries to prevent double taxation and promote cross-border investment. These treaties often provide for reduced withholding tax rates on certain types of income and may contain provisions for resolving tax disputes.

Taxation and Investment Incentives in the Disaster Zone "*Genel Hayata Etkili Afet Bölgesi*"**:**[30]

- In Türkiye, the investment incentive system consists of four different incentive applications: general investment incentives, regional investment incentives, prioritized investment incentives, and strategic investment incentives.[31]

[30] "Disaster Zone "definition is provided by T.C. İÇİŞLERİ BAKANLIĞI AFET VE ACİL DURUM YÖNETİMİ BAŞKANLIĞI (AFAD) in their official decision dated 03.04.2023, which specifically names the "*Genel Hayata Etkili Afet Bölgesi*" the disaster zone (https://www.afad.gov.tr/genel-hayata-etkili-afet-bolgesi-hk). This definition includes the cities of Bingöl, Kayseri, Mardin, Tunceli, Niğde, Batman, Kahramanmaraş, Hatay, Gaziantep, Osmniye, Malatya, Adıyaman, Adana, Diyarbakır, Kilis, and Şanlıurfa.
[31] https://www.ozgunlaw.com/makaleler/turkiyede-yabanci-sermayeli-sirket-kurulusu-1142

- Investments made in Disaster zone in Türkiye may qualify for certain tax incentives and benefits, such as tax exemptions, reduced rates, or financial assistance, depending on the type of investment and investing party.
- Most tax incentives are directed to reconstruction efforts in the areas affected by the earthquake. For example, the VAT rate for the delivery (including installation and assembly) of prefabricated buildings and containers was determined to be 1% until 31 December 2023.
- Customs duty exemptions may apply in some cases; the government may grant customs duty exemptions or reductions for importing machinery, equipment, and materials necessary for investment projects in earthquake zones to help lower the initial investment costs for businesses operating in these areas.
- The Ministry of Treasury and Finance, Ministry of Environment and Urbanization, local municipalities, and Development Agencies "*Kalkinma Ajanslari*" (RDAs) are the agencies to be consulted for taxation incentives as the tax incentives are finalized upon the specification of the work/investment.[32]

Attraction Centers Program Investment Incentive "*Cazibe Merkezleri Programi*":[33]

The Attraction Centers Program includes the earthquake-affected zones, which provides additional incentives for investments in these zones. The details are as follows:

- The 65 districts, 4 in 9 provinces affected by the earthquake disaster, were included in the Attraction Centers Program on 5 April 2023, following Presidential Decree.[34] With this decision, investments in the 65 districts of the nine provinces will benefit from the 6th region incentives.[35]
- According to the regulation, investments to be carried out in the 65 districts will benefit from the most advantageous incentives of the 6th region. Financial cost support will be applied up to 30 million TL (approx. 866.700 EUR), not exceeding 10% of the investment amount. Investments within the scope can utilize incentives such as VAT exemption, Customs Duty Exemption, Tax Deduction, Employer Share of Insurance Premium Support, Investment Site Allocation, and Employee Share of Insurance Premium Support.
- The new Presidential Decree covers investments to renew damaged investments, buildings, and constructions. Investments in repairing or procuring new machinery and damaged equipment will be eligible for incentive certificates.
- Employment support rates will be determined based on the level of structural damage or machinery and equipment damage, considering existing and additional employment rates.
- To benefit from the incentive, there is a requirement for a minimum investment of 1.500 000 TL (approx. 43.335EUR)
- Under the scope of the decision, incentive certificate applications to be made by 31 December 2024 will be valid. Applications are made through the Electronic Incentive Implementation and Foreign Capital Information System (E-TUYS) (https://dijitalbakanlik.sanayi.gov.tr/hizmetdetay?hizmetId=69300546-f7cf-4e87-a95f99284b70a082)

[32] For more information about Development Agencies, https://www.ka.gov.tr/en
[33] https://www.sanayi.gov.tr/medya/haber/depremzede-ilcelere-ozel-yatirim-tesviki
[34] https://www.resmigazete.gov.tr/eskiler/2023/04/20230405-9.pdf / https://www.pwc.com.tr/tr/hizmetlerimiz/vergi/dolayli-vergi/bultenler/yatirim-tesvik-bultenleri/2023/cazibe-merkezleri-programi-kapsaminda-yatirimlarin-desteklenmesi-hakkinda-kararda-degisiklik.html
[35] The types of incentives are separately regulated for six different investment regions nationwide, with incentives provided for each region separately. 6th region is defined as the least developed one,

- The Ministry of Industry and Technology will execute the Presidential Decree published in the Official Gazette.

Comp 3- Strategic Recommendations and Insights

Paradigm Recommendations

- Private investors looking to participate in the redevelopment of disaster zones should be diligent in **establishing strategic relationships with key governmental bodies**. This includes the Ministry of Environment, Urbanization and Climate Change, alongside the Presidency's Strategic and Budget Unit. Within the Ministry, three subsidiary entities — IlBank, TOKİ, and the Directorate General for Construction Works — play a pivotal role. Of these, the Directorate General for Construction Works is particularly crucial as the tenders and monitoring of public buildings are executed through the Directorate.

- While **liaising with local authorities** remains important, the connection with these national authorities that will provide the groundwork for any prospective project. Investors should not only be proactive in understanding and adhering to the regulatory landscape. Still, they should also ensure that their initiatives are strategically aligned with national objectives and sensitive to procurement frameworks.

- Moreover, for investments specifically in cities of the disaster zone, projects must align with the broader urban development strategy as outlined in the **Master Plans**. This ensures that all investments are strategic, sustainable, and complementary to the long-term vision established for the city's growth and resilience. Compliance with the City Master Plans will facilitate integrated and harmonious development, maximizing the potential for successful investments that resonate with local needs and the national development agenda.

- The interviews with public officials demonstrated that the priority of the public officials is to proceed as fast as possible to respond to the damage done by the devastating earthquakes. Therefore, local and international private entities and finance institutions are invited to participate in the construction efforts. The criteria for public authorities are the quality, credibility, and **competitiveness** of the service provided. The authorities further underlined that the spread of the work carried out over time is impossible in areas declared as disaster zones. Such projects need to be urgently implemented and often require intensive funding. Therefore, they often require urgent intervention and rapid implementation.

- The **societal climate and public perception** in the disaster zone should not be undermined. The scanning findings highlight that an initiative or investment plan should have a social dimension and needs to be coordinated with the local community. This would enhance the acceptability and sustainability of investments.

- The interviews with stakeholders demonstrated that projects and investment plans intended to be implemented in earthquake zones should **prioritize employment**. Therefore, foreign investors willing to participate in post-earthquake recovery and construction efforts are advised to have a clear employment component demonstrating the projects' value-added for the population's well-being and contribution to the local economy.

- Local and international investors should present well-defined project proposals to optimize successful collaboration with Turkish regulatory bodies. The Turkish authorities have expressed a keen interest in partnering with capable entities but emphasize the need for substantive discussions to be anchored on concrete projects with clearly outlined objectives and deliverables. To this end, agencies such as AFAD and Ilbank have underscored their preference for receiving at least a preliminary action plan.

This should detail specific steps, potential outcomes, and resource requirements rather than general inquiries or conceptual frameworks for partnership. To progress to the negotiation stage and establish meaningful dialogue, investors are advised to develop a comprehensive draft of their action plan. This approach demonstrates preparedness and a commitment to contributing tangible value through feasible and fundable initiatives. It is recommended that stakeholders initiate contact only after solidifying such an action plan. This will serve as a substantive basis for discussing strategies, feasibility, and funding options for potential collaboration and implementation.

- In the circular construction sector, investors need to consider both the identified market gap and the stakeholders' **perspectives to make informed decisions**.

Project Based Recommendations

- In parallel, there is an urgent need to support the **revival of the light industry and production facilities** in the disaster zone, particularly in districts that were relatively less affected by the disaster but where employment activities have been damaged. Local stakeholders, especially the chambers of commerce, showed readiness to support initiatives and investment plans.
- The catastrophic earthquakes have highlighted an urgent requirement for swift rebuilding efforts in three essential sectors: **residential, commercial, and industrial infrastructures**.

- Prospective investors considering projects in disaster zones, particularly those in the **construction sector**, must consider the sophistication and adaptability of the sector in Türkiye. The Turkish construction landscape is quite developed and known for its predominantly concrete-based approaches. Yet, it is also characterized by its flexibility, with the incorporation of modular buildings more prevalent in rural zones. Given this backdrop, the sector’s receptiveness to foreign investment is noteworthy, as there is no overbearing demand from local actors for external capital. This presents a room of entry for international players to introduce their offerings.

- Investors poised to enter the **construction sector** should clearly articulate their unique selling propositions, such as **advanced technical know-how, competitive advantages**, and innovative practices that complement the existing framework. The emphasis should be on demonstrating how their involvement will enhance quality, efficiency, or sustainability, which could prove transformative in the post-disaster rebuilding process. Given the sector’s open perception, foreign investments that align well with Türkiye's construction standards and support the progressive vision of the industry are likely to be welcomed and find fertile ground for growth.

- All investors interested in the **water and sanitation sector** should consider the maturity of the Turkish construction sector, as previously mentioned. There is notable potential for market penetration through technology transfer and SCADA equipment, with detailed analysis provided in the report. In this context, hosting public communication events to showcase the advantages of Dutch expertise compared to local practices could prove beneficial. Such events would be particularly valuable in engaging local authorities, who play a crucial role in defining their needs and preferences in collaboration with international banks.

- For entities aiming to penetrate the Turkish market, it is strategically prudent to concentrate on launching innovative products, particularly those designed for advanced monitoring and evaluation of networks.
- In the domain of residential development, forming a partnership with the French Development Agency (AFD) could prove advantageous. AFD is currently investigating financing models aimed at supporting the construction of energy-efficient and eco-friendly housing.
- The current perspective on Türkiye's circular construction sector is mainly associated with debris processing. Yet, our market examination reveals substantial potential in the integration of advanced technologies and the development of expertise in essential areas such as **asbestos management.**

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