

# COMPREHENSIVE URBAN RESILIENCE MASTER PLAN FOR BEIRUT

## A roadmap for a resilient future

### AT A GLANCE

**Country** Lebanon

**Risks** Natural hazards exacerbated by rapid urbanization, climate change, and socioeconomic shocks and stressors

**Area of Engagement** Scaling up the resilience of cities

The Comprehensive Urban Resilience Master Plan for Beirut will provide city authorities with a strategy for addressing the city's vulnerabilities to shocks and stressors.

## A BUSTLING METROPOLIS STRADDLING AN ACTIVE FAULT SYSTEM

Generating 75 percent of Lebanon's gross domestic product, Beirut is both the political center and economic hub of the country. Marked by rapid urbanization over the past few decades, the greater Beirut area has more than 2 million residents, including nearly 500,000 who live within Beirut proper. Long a safe haven for displaced people, the densely populated capital city is currently home to a large population of refugees fleeing the conflict in neighboring Syria.

Beirut and its growing population face a multitude of hazards, both natural and man-made. The city's seismic risk is considered by many experts to be among the most serious of those hazards. Though it is located along an active fault system, Beirut has not been hit by a major earthquake since 1759 – but the likelihood of another major one is high. Most of Beirut's population live in poorly constructed homes that would be unlikely to withstand a major seismic event. Beirut is also threatened by severe weather events and increasing stress on its water resources due to the impacts of climate change. Other hazards facing the city include security incidents and overstretched infrastructure.

Map of project focus area



## BUILDING A ROADMAP FOR A RESILIENT FUTURE

Recognizing these looming hazards, the municipality of Beirut worked with the Global Facility for Disaster Reduction and Recovery (GFDRR) and the World Bank to proactively prepare the bustling metropolis for a resilient future. This joint effort paved the way for Beirut's Comprehensive Urban Resilience Master Plan, which is designed to give decision-makers a clear view of the city's shocks and stressors, and the specific actions that are needed to address them. The Resilience Master Plan, which is expected to be released in late 2018, aims to address a wide variety of natural and man-made vulnerabilities. In developing the plan, Beirut authorities followed a three-stage process:

- ▶ Resilience Diagnostic. By gathering and analyzing data, authorities constructed a comprehensive view of potential shocks and stresses, the city's related vulnerabilities, and

key gaps and challenges in building resilience. This process drew upon data for city conditions, disaster risks, existing resilience measures, and governance structures.

- ▶ **Resilience Strategy.** Informed by the resilience diagnostic, a resilience strategy identified three priority areas for actions going forward: enhancing risk governance across the entire resilience cycle, from risk assessment to recovery; reducing the risks posed by shocks and stresses; and increasing preparedness for major disasters by developing early warning systems and comprehensive plans for response and recovery.
- ▶ **Action Plans.** Over a dozen action plans were developed and grouped into three programs of action based on the three priority areas. Each action plan tackled the likely timeframe for implementation, links to other action plans, likely costs, the potential cost benefit, and the plan's alignment with local, national, and global frameworks, such as the Sendai Framework for Disaster Risk Reduction.

## LESSONS LEARNED

Engagement with a wide range of stakeholders is critical to getting a full picture of resilience gaps and challenges.

Every stage of the Resilience Master Plan put a heavy emphasis on stakeholder engagement. Beirut authorities sought inputs from a wide range of stakeholders representing the public, private, and nongovernmental sectors, which provided a rich picture of the city's resilience gaps and challenges. During the first stage of the Resilience Master Plan, authorities piloted an innovative online survey tool, which allowed them to glean quantifiable, comparable insights into the city's resilience needs from multiple stakeholders.

Resilience planning must be viewed as a "living framework" that responds to evolving risks and hazards.

Against the backdrop of intensifying climate risk and rapid urbanization, Beirut's vulnerabilities are constantly evolving. Accordingly, the Resilience Master Plan provides for the establishment of a cross-sectoral platform for disaster risk management, which will oversee regular updates of the Resilience Master Plan and implementation of the action plans. The platform will comprise city-level agencies, national agencies, and nongovernmental organizations, among others.



Nearly  
**500,000**  
residents covered by  
master plan

### DATA FOR RESILIENCE

The development of the Resilience Master Plan has yielded critical data and information for understanding the shocks and stresses facing Beirut, as well as the city's capacity to address its vulnerabilities to these shocks and stresses.

### COMPREHENSIVE RESILIENCE STRATEGY

The analysis of this data and information has paved the way for a comprehensive resilience strategy for all of Beirut proper, which has nearly 500,000 residents. The resilience strategy, paired with the action plans also developed as part of the Resilience Master Plan, has provided Beirut authorities with a roadmap for building the city's resilience.

### MOBILIZING AND PRIORITIZING INVESTMENT

The Resilience Master Plan is expected to serve as a platform for securing and prioritizing private and public investment to address the city's resilience needs. Additionally, the Plan calls for a cross-sectoral platform for disaster risk management, which could also act as a coordinating mechanism for investment proposals.

*"Beirut is a diverse city with a remarkable ability to overcome challenges and to continuously build its future. Yet, this inherent ability needs to be strengthened and developed into a comprehensive Resilience capacity, with Resilience embedded in all development planning, in order to enable improved preservation, adaptation and sustainable growth."*

-- Matilda El-Khoury, Councilor, Municipal Council of Beirut