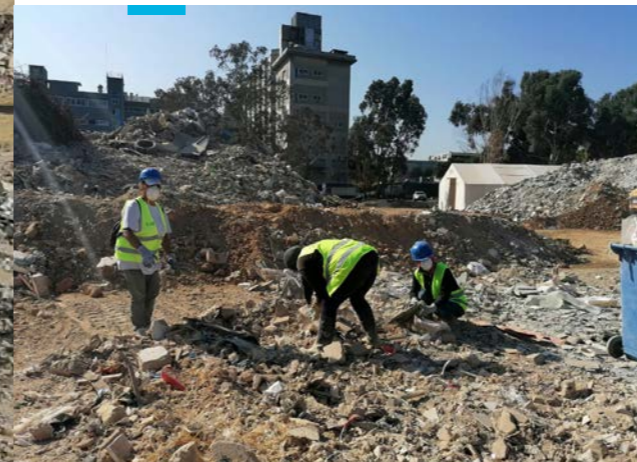




Rubble being sorted by workers in the Rubble to Mountains initiative
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Zeinab Khamis separates the rubble into material type: glass, plastics and metal
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Rubble to Mountains initiative in Karantina, Beirut
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Diverting rubble left by the Beirut blast away from Lebanon's landfills

On 4 August 2020 an explosion of ammonium nitrate at the Beirut port killed more than 200 people and injured over 7,500. It is estimated that the blast caused over USD 15 billion in property damage to some 77,000 households and directly impacted more than 300,000 people within a 3 km radius.

As local authorities helped facilitate the emergency response with already limited financial, human and technical resources, UN-Habitat's urban crisis expertise helped conduct rapid assessments of damage to over 14,000 buildings to establish the level of infrastructure repair and safety precautions needed in Beirut and Bourj Hammoud municipalities. The assessments highlighting the most affected areas continue to inform partners' priority interventions.

The explosion created an enormous amount of rubble – an estimated 400,000 tonnes. For weeks following the blast, thousands of people came together and swept the city's debris-littered streets, leaving piles of waste destined for Lebanon's already saturated landfills.

To address this challenge and prevent foreseeable environmental hazards associated with disposing of rubble – similar to the unfortunate landfilling scenarios which followed the Lebanese Civil War – UN-Habitat co-launched the Rubble to Mountains initiative. In collaboration with a consortium of United Nations agencies, private sector and non-governmental organization partners, the initiative aims to prevent an environmental waste crisis by collecting, sorting

initiative not only beneficial for the environment but also giving financial support to breadwinners and heads of households.

Ultimately, it is envisioned that the initiative will create a circular economy model where the rubble collection site becomes a hub for the transformation of Lebanon's construction and demolition waste into biodegradable material used by the initiative's other outputs.

The case of Lebanon demonstrates that:

- Private sector engagement can fuel a holistic response to an urban crisis as each party brings their own expertise, innovation and best practices to ensure a wider reach.
- Solid waste management should be considered as a complementary priority in an urban crisis response such as the one following the Beirut blast. Mismanaged waste can exacerbate pre-existing issues including inter-communal tensions, health, climate change and environmental degradation.

UN-Habitat has, in addition to this intervention, been working with the Lebanese Government to help ensure that housing, land and property rights of Beirut's residents were protected in the wake of the protracted loss of housing. Its integrated programming covered the provision of shelter assistance to vulnerable groups and restoration of heritage buildings in compliance with Lebanon's Directorate of General Antiquities standards. The strategy of urban recovery includes the design of an Urban Recovery Framework for Beirut to improve coordination of recovery efforts by other United Nations agencies and partners.

Country: **Lebanon**
 City: **Beirut**
 Donors: **UN-Habitat and United Nations Children's Fund**
 Local Authority: **Municipality of Beirut, Beirut Governorate**
 Implementing Partners: **UN-Habitat Lebanon, American University of Beirut, Lebanon Reforestation Initiative, Development Inc., Reel-ly, International Rescue Committee, Association of Volunteers in International Service**
 Duration: **2020–present**

Following the Beirut Port explosion, I began working in the Karantina rubble collection and sorting site to support the Rubble to Mountains initiative through separating the rubble by material type: glass, plastics and metal. We are doing our best to help Lebanon and especially the people of Beirut.

Zeinab Khamis, Worker at the Rubble to Mountains sorting site, Karantina

All of us are very happy to work for this project, especially after the Beirut port explosion, we are very grateful for our salaries as the money has enabled us to live in dignity and we are able to help Beirut.

Hussein Fahmy, Worker at the Rubble to Mountains sorting site, Karantina

Over **14,000** rapid building damage assessments were conducted through UN-Habitat's urban crisis expertise to establish the level of infrastructure repair and safety precautions needed in Beirut and Bourj Hammoud municipalities after an explosion of ammonium nitrate at the Beirut port on 4 August 2020.