

A Brief Report on the Beirut Port Explosion

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Beirut, one of the oldest cities in the world, was historically destroyed and rebuilt seven times, affirming the resilience and self-reliance of its people.^{1,2} Lebanon has suffered from decades of political corruption, sectarian fragmentation and protracted conflicts that resulted in health, economic and social struggles. Moreover, Lebanon was overburdened with more than one million refugees, increasing its population size by nearly 30%, to become home to the world's largest refugee per capita ratio.³ Over the past year alone, Beirut has witnessed a civil revolution, the COVID-19 pandemic, its worst economic crisis in decades, and most recently one of the largest non-nuclear explosions in history.^{4,5}

Shortly after 6 p.m. on August 4, 2020, nearly 3,000 tons of ammonium nitrate stored at the Port of Beirut detonated resulting in one the worst non-nuclear man-made explosions and the 3rd largest explosion in modern time.⁴ This explosion had devastating effects on the city's social, economic, and health infrastructure.

The blast resulted in damages and destruction that extended up to 10 kilometers away from the site of the blast and was felt in Cyprus, around 160 kilometers away.^{4,6} As a result, more than 6,500 people were injured and 220 died, including two children and a newborn.^{7,8} Moreover, more than 300,000 individuals were displaced; of those, 80,000 were children.^{7,9}

The estimated 4.6 billion dollars worth of damage was not limited to houses.¹⁰ In addition to the

severe demolition sustained by the port, more than 120 schools, six hospitals, 22 healthcare facilities, along with several landmarks and cultural heritage sites suffered varying degrees of destruction.^{7,11} The Port of Beirut is key for importing essential goods and one of the most lucrative sources of income in Lebanon, with an estimated 300 million dollars in annual revenue.¹² This country's already-failing economy will hardly endure such losses and this will further challenge the recovery process.

Moreover, the blast gravely harmed the port main grain silos, containing more than 80% of Lebanon's imported grains. With only 10% of Lebanon's grain consumption provided from domestic production, the country's food security is threatened.¹³ In the most recent report of the United Nations Economic and Social Commission for West Asia, nearly half of the Lebanese population reported concerns about their ability to access enough food.^{14,15} Around one-third of the population reported their inability to consume nutritious food options for the whole part of the year.¹⁴ With the recent losses from the explosion, these numbers are expected to further increase.

Furthermore, the port warehouse containing medical supplies and personal protective equipment (PPEs) was completely destroyed.¹⁶ As the world, in general, is dealing with shortages in PPEs¹⁷, Lebanon in particular was dealing with further shortages in light of its severe economic crisis and the devaluation of the country's currency as per the Human Rights Watch.¹⁸ Given the ongoing COVID-19 pandemic and the dire need for these supplies, the port losses further expose the country's threatened healthcare sector.

Numerous efforts and organizations with various forms of humanitarian aids from all over the world are collectively trying to rebuild Beirut for the eighth time. The national and international communities are mobilized, trying to save the country's failing

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economic and resource-limited healthcare sectors.¹⁹ Accordingly, effective coordination is now crucial to properly match the needs of people in dire conditions to prevent an impending humanitarian crisis.

REFERENCES

1. Yassin N. Beirut. *Cities*. 2012;29(1):64-73.
2. Raschka M. Beirut digs out: developers vie with archaeologists over the future of a 5,000-year-old city. *Archaeology*. 1996;49(4):44-50.
3. Cherri Z, González PA, Delgado RC. The Lebanese–Syrian crisis: impact of influx of Syrian refugees to an already weak state. *Risk Manag Healthc Policy*. 2016;9:165–172.
4. Hernandez M. How powerful was the Beirut blast? Thomson Reuters; 2020. [Accessed October 1, 2020]. Available from: <https://graphics.reuters.com/LEBANON-SECURITY/BLAST/yzdpxnmqbpX/>
5. Diwan I, Abi-Rached JM. Lebanon: Managing Covid-19 in the time of revolution. *Arab Reform Initiative*; 2020 [Accessed October 1, 2020]. Available from: <https://www.arab-reform.net/publication/managing-covid-19-in-the-time-of-revolution/>
6. Balkiz G, Qiblawi T, Wedeman B. Huge explosion rocks Beirut, injuring thousands across Lebanese capital. *Cable News Network*; 2020 [Accessed October 1, 2020]. Available from: <https://edition.cnn.com/2020/08/04/middleeast/beirut-explosion-port-intl/index.html>
7. World Health Organization. Beirut port blast emergency strategic response plan; 2020. [Accessed October 1, 2020]. Available from: <http://www.emro.who.int/images/stories/lebanon/who-lebanon-strategic-response-plan-27.9.20.pdf?ua=1>.
8. UNICEF. 80,000 children displaced due to Beirut explosions. UNICEF; 2020. [Accessed October 1, 2020]. Available from: <https://www.unicef.org/press-releases/80000-children-displaced-due-beirut-explosions-unicef>
9. Najjar F, Alsaafin L, Regencia T. Beirut explosion death toll rises to 135 as 5,000 wounded: live. *Al Jazeera*; 2020. [Accessed October 1, 2020]. Available from: <https://www.aljazeera.com/news/2020/08/05/beirut-explosion-death-toll-rises-to-135-as-5000-wounded-live/>
10. Decisive action and change needed to reform and rebuild a better Lebanon. World Bank. [Accessed October 1, 2020]. Available from: <https://www.worldbank.org/en/news/press-release/2020/08/30/beirut-explosion-decisive-action-and-change-needed-to-reform-and-rebuild-a-better-lebanon>
11. Rosa A. Blast destroyed landmark 19th century palace in Beirut. *ABC News*; 2020 [Accessed October 1, 2020]. Available from: <https://abcnews.go.com/International/wireStory/blast-destroyed-landmark-19th-century-palace-beirut-72276766>
12. Lebanon port of Beirut. Digital Logistics Capacity Assessments. [Accessed October 1, 2020]. Available from: <https://dlca.logcluster.org/display/public/DLCA/2.1.1>
13. Musto J. Deadly Beirut blast wiped out 85% of grain silos. *Fox News*. FOX News Network; 2020 [Accessed October 1, 2020]. Available from: <https://www.foxnews.com/world/beirut-explosion-desolated-lebanons-grain-storage-about-85-of-silos-destroyed>
14. Lebanon. World Food Programme. [Accessed October 1, 2020]. Available from: <https://www.wfp.org/countries/lebanon>
15. Awwad N. Food security in Lebanon. *EcoMENA*; 2020 [Accessed October 1, 2020]. Available from: <https://www.ecomena.org/food-security-in-lebanon/>
16. Lebanon explosion - update for partners: August 9, 2020 - Lebanon. *ReliefWeb*; 2020 [Accessed October 1, 2020]. Available from: <https://reliefweb.int/report/lebanon/lebanon-explosion-update-partners-august-9-2020>
17. Shortage of personal protective equipment endangering health workers worldwide. *World Health Organization*. [Accessed October 1, 2020]. Available from: <https://www.who.int/news-room/detail/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide>
18. Lebanon: COVID-19 worsens medical supply crisis. *Human Rights Watch*; 2020. [Accessed October 1, 2020]. Available from: <https://www.hrw.org/news/2020/03/24/lebanon-covid-19-worsens-medical-supply-crisis>
19. Al-Hajj S, Abou-El-Hassan H, Khalil L, Kaafarani H, El Sayed M. Hospital disaster and emergency preparedness (HDEP) in Lebanon: a national comprehensive assessment. *Int J Disaster Risk Reduct*. 2020;51:101889.