

## Climate change in Lebanon: a threat multiplier

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Over the last few years, Lebanon has been through immense challenges that have left no segment of its society unscathed. The country has been challenged by economic crisis, the COVID-19 pandemic, the Beirut Port explosion, environmental disasters and prolonged political deadlock. These challenges have crippled Lebanon, obstructed its development and decimated its capacity to cope. To top it all off, in climate change Lebanon faces another challenge: A threat multiplier that will intensify current predicaments, and one that requires resolute action by the government and the people, both in the short term and well into the future.

Economically, Lebanon is reeling from years of financial crises, which have plunged more than half of the population into poverty and many into extreme poverty, caused others to lose their homes and wiped away the savings of many more. The Environment Ministry estimated that climate change will cause a 14% fall in Lebanon's GDP by 2040, falling further to 32% by 2080.

In terms of livelihoods, climate change is expected to increase temperatures and make water resources scarcer. This will negatively affect agricultural output and the livelihoods of many communities. Higher temperatures will also result in increased energy demand, putting a strain on businesses and services as they struggle to meet their power needs.

Health-wise, the combination of COVID-19 and the Beirut Port explosion in August 2020 starkly exposed the fragility of Lebanon's health system. Climate change will cause higher rates of infectious disease, rises in illness and deaths due to higher temperatures, increased malnutrition from reduced agricultural output and higher frequency of extreme events. This will result in more annual deaths than today and strain available capacity in urban and regional health facilities.

For Lebanon's natural resources, climate change is already in plain sight. The wildfires in the country's north that have burned large swaths of pine forests have already caused the death of at least one firefighter and forced some to flee their homes in search of shelter. The month of July this year was the hottest ever recorded, and the fires that have also burned throughout the summer of 2021 in Greece, Italy, the United States and Canada give us a glimpse into the new normal.

Despite these challenges, there is cause for hope. The government of Lebanon has made significant strides in its response to climate change. In 2021, it submitted its revised Nationally Determined Contribution (NDC), a key component of countries' global commitment under the Paris Agreement. The climate action planned under the NDC up to 2030 can significantly contribute to Lebanon's sustainable recovery from COVID-19, addressing structural challenges such as energy, waste, and water, as well as create job opportunities and improve socio-economic conditions. Lebanon is also embarking on a National Adaptation Plan, which provides a platform to mainstream climate adaptation across its governance structures and processes, enhancing resilience of Lebanese communities.

In tackling the bundle of crises Lebanon is going through, the government should include and prioritize climate planning and disaster risk management in all reforms moving forward. This would accelerate Lebanon's path toward sustainable development, and enhance the protection of the economy, livelihoods and ecosystems.

Governments must also work with and empower their citizens to do their part. Options and incentives must exist in order for people to take up new, more sustainable behaviors. For example, minimizing energy consumption with easy, low-cost options such as using energy efficient appliances and shifting daily travel habits by walking, cycling, and carpooling can make a significant contribution to reducing emissions. More importantly, and in light of the current fuel crisis, investing in a safe and reliable public transportation system would be a transformative social and environmental effort.

Increasing resilience and adaptive capacity is crucial. Ensuring agricultural communities are supported with know-how, technology and finance to continue providing sustainable food options is another priority to avoid additional disruptions.

Entrepreneurship, long a mainstay of Lebanese society, can also play an important role through climate-resilient and sustainable technological innovation. The private sector is a critical component in finding solutions in the real world, and climate change is no different. To support entrepreneurs, an ecosystem of opportunities to develop ideas, through incubators and accelerators, sustainability-related business training and mentoring, fiscal and financial incentives, and other forms of support must be provided. Finally, focus must be placed on awareness raising. Whether it's through campaigns informing citizens of climate change and its impacts, including relevant courses and research programs in the higher education system, or establishing and enhancing existing early warning systems that alert residents and responders to the threats posed by extreme weather, information and knowledge must be developed and shared with all segments of society.

Climate change will add complexity and uncertainty to the myriad challenges faced by Lebanon. What is certain, however, is the need for action and the full engagement at all levels of the community, today and into the future.

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