

Bangladesh

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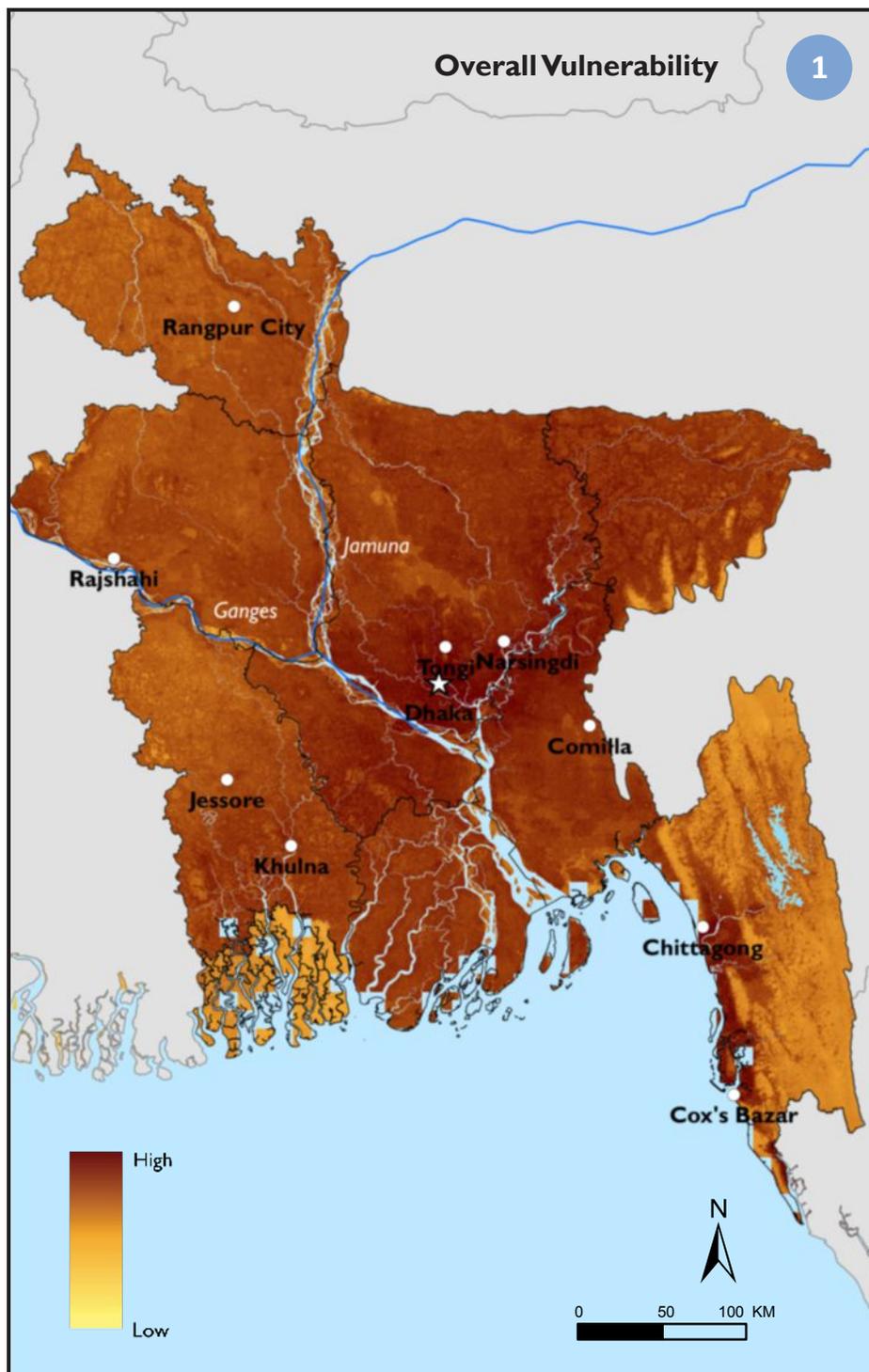
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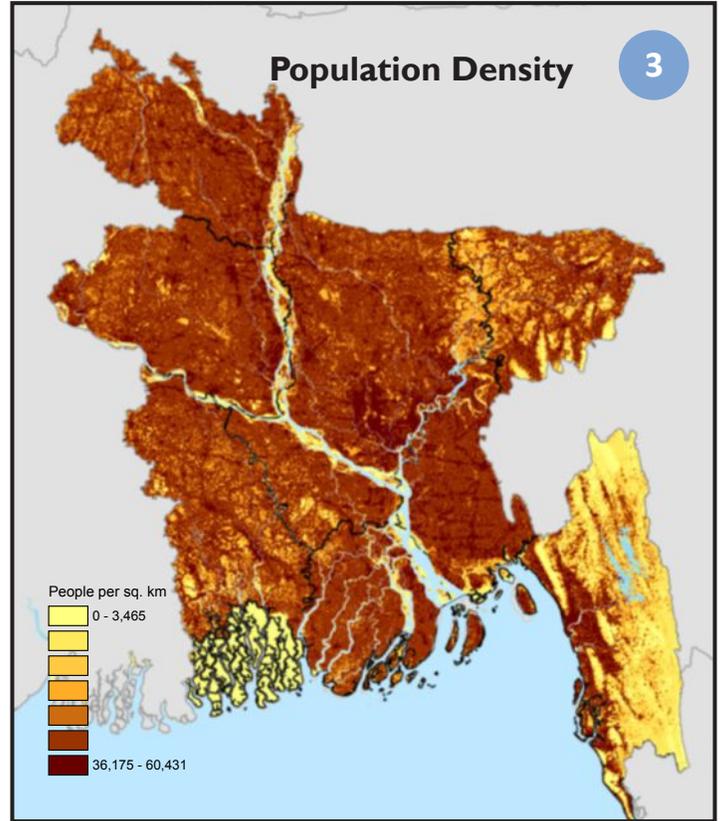
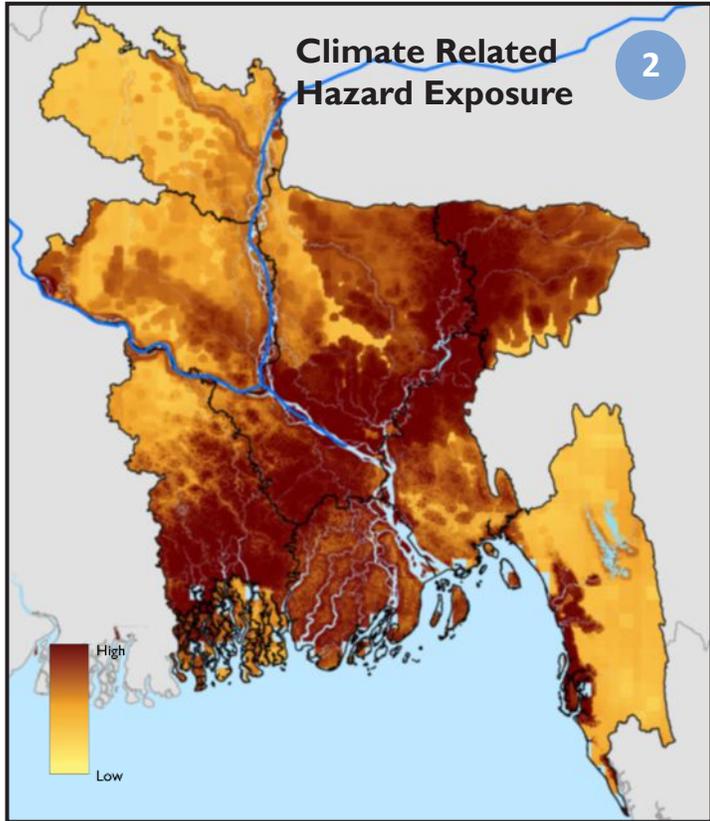
Bangladesh is often touted as one of the world's most vulnerable countries to the impacts of climate change. Nestled in the deltaic plains created by the Ganges, the Brahmaputra, and the Meghna, the low-lying country is periodically inundated with water. Exposed to the Bay of Bengal, it has experienced several major cyclones, storm surges, and flood-related disasters, resulting in major loss of life as well as significant damage and destruction to livelihoods and properties across the country. In 1970, Cyclone Bhola hit Bangladesh (then East Pakistan) and India's West Bengal. Bhola is considered to be the deadliest cyclone ever recorded, with 500,000 fatalities estimated. Inadequate response to the storm contributed to the country's quest for independence from Pakistan (then West Pakistan). In 1971, George Harrison (the former Beatles lead guitarist) and Ravi Shankar organized the Concert for Bangladesh, the first ever concert for humanitarian relief and elevated the profile of the country.^{1,2}

The country has achieved several milestones, including increases in life expectancy at birth, reductions in maternal and child mortality, and sustained economic growth. The country's GNI per capita increased from \$100 in 1972 to \$1,190 in 2015, and is officially considered a lower middle income country.^{3,4} However, it continues to face severe challenges to its continued development. As Figures 1 through 5 highlight, the country is highly exposed to the impacts of climate change. Population pressures, exposure to cyclones, floods, and rainfall deviations, and household capabilities⁵ are significant contributors to the country's vulnerability. Calculations under the CEPSA program indicate that approximately 86% (i.e., 141 million people) of the country's population faces above average exposure. Further, roughly 64% (i.e., 104 million) and 35% (i.e., 58 million) is 1 and 2 standard deviations above the regional mean exposure level respectively.⁶

Over the 2000 - 2015 period, the country has faced over 68 separate disasters, including cyclones, extreme temperatures, droughts, and floods.⁷ In November 2007, Cyclone Sidr hit coastal Bangladesh, especially affecting Satkhira, Khulna, Barguna, Patuakhali, and Bagerhat, amongst other districts in the southwest. The cyclone's effects were felt as far inland as Dhaka. More than 3,300 deaths are directly associated with the storm and over 2 million households were affected, with over 1 million being severely so.⁸ Just two short years later, in 2009, Cyclone Aila severely affected at least 11 of the country's 64 districts and was especially felt again in Khulna and Satkhira (in the southwest). While 'only' 190 fatalities were reported, over 7,000 were injured, and approximately 4 million people were affected. Over 600,000 household structures, 5,000 educational and other institutional buildings, 157 bridges, and countless roads and other hard infrastructure were damaged or destroyed by the storm.⁹



Data Sources: KOF Index of Globalization; World Bank World Governance Indicators; Political Instability Task Force (PITF); Polity IV Project; World Bank World Development Indicators; USAID Demographic and Health Surveys; UNICEF Multiple Indicator Cluster Surveys; Center for International Earth Science Information Network; UNEP\Grid-Europe; Viewfinder Panoramas; LandScan; Princeton University Terrestrial Hydrology Research Group





Investments in early warning systems and preparedness activities by the Government of Bangladesh, donors and NGOs like the U.K.'s Department for International Development, the United States Agency for International Development, the World Bank, and Save the Children and Oxfam have mitigated the cyclones' impacts. Approximately 2 million people were evacuated and 1,800 multipurpose cyclone shelters were utilized during Cyclone Sidr.¹⁰ Cyclone Aila mobilized officials to evacuate around 500,000 people to shelters.¹¹ These actions have undoubtedly saved countless lives.

Bangladesh has received significant amounts of development and climate-related aid over the last several decades. Over the 2004 - 2013 period, the country received over US\$37 billion in official development assistance (ODA) from 47 funding organizations.¹² Roughly US\$2.2 billion (approximately 5%) was directed towards climate change and disaster risk reduction activities. Additionally, the country has benefited from two climate related trust funds, namely the Bangladesh Climate Change Resilience Fund (BCCRF), a multi-donor trust fund administered by the World Bank and the Bangladesh Climate Change Trust (BCCT), funded by the Government of Bangladesh's own budget. Both of these funds have had mixed success. The BCCRF ceased operations in December 2016, amidst allegations of a lack of cooperation between key actors, including the World Bank and the contributing donors.¹³ The BCCT has also repeatedly been under scrutiny due to allegations of misappropriation of funds.^{14,15} While several documents, like the Bangladesh Climate Change Strategy Action Plan, exist to guide such activities, the country will need to think more critically about its approach. Further information and analysis about these efforts can be found in the CEPSEA program's analysis of its resilience plans.

Bangladesh is also facing significant political and security-related challenges and has experienced a rise in militant-sponsored attacks. The country is caught in a struggle to define its future, facing pressures from more conservative parts of the society. The current ruling party, the Awami League, ran unopposed in the last parliamentary elections in 2014 amidst a boycott by the opposition and is effectively unaccountable to the citizenry. These governance challenges loom large as the country continues to develop.

These governance, economic, and social development challenges described will necessarily need to be addressed if Bangladesh is to continue its advancement. This will require concerted efforts to address the current political climate, investments in infrastructure, economy, and its people, and most importantly, continued efforts to protect its investments through disaster risk reduction activities.

Endnotes

- ¹ The George Harrison Fund for UNICEF (2017). The Concert for Bangladesh. Available at: <http://theconcertforbangladesh.com/theconcert/>
- ² TIME (2013). "Concert for Bangladesh: Photos from the First-Ever Rock'n'Roll Benefit Show." Available at: <http://time.com/3877705/concert-for-bangladesh-photos-from-the-first-ever-benefit-rock-show/>
- ³ UNDP (2015). "Work for human development: Briefing Note for Countries on the 2015 Human Development Report, Bangladesh." Available at: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/BGD.pdf
- ⁴ The World Bank Group (2016). Bangladesh Country Snapshot. Available at: <http://documents.worldbank.org/curated/en/654391476782032287/pdf/109247-WP-BangladeshCountrySnapshots-highres-PUBLIC.pdf>
- ⁵ Further explanation of our approach can be found in Busby et al. (2016)'s Climate Security Vulnerability in Asia v1.0. Available at: <https://www.strausscenter.org/cepsa-research-briefs?download=627:climate-security-vulnerability-in-asia-1-0>
- ⁶ These estimates were calculated using LandScan (2014) and our overall exposure layer.
- ⁷ CRED (2017). EM-DAT The International Disaster Database. Available at: http://www.emdat.be/advanced_search/index.html
- ⁸ CRED (2017). EM-DAT The International Disaster Database. Available at: http://www.emdat.be/advanced_search/index.html
- ⁹ Government of Bangladesh (2008). Cyclone Sidr: Damage, Loss, and Needs Assessment for Disaster Recovery and Reconstruction. Available at: http://reliefweb.int/sites/reliefweb.int/files/resources/F2FDFF067EF49C8DC12574DC00455142-Full_Report.pdf
- ¹⁰ IRIN (2009). "Cyclone Aila recovery slower than Sidr." Available at: <http://www.irinnews.org/feature/2009/07/23/cyclone-aila-recovery-slower-sidr>
- ¹¹ For more information on how these vulnerability maps were created, please refer to Joshua W. Busby, Todd G. Smith, Nisha Krishnan, and Charles Wight, "Climate Security Vulnerability in Asia 1.0." CEPISA Brief No.1. May 2016. Available at: <https://www.strausscenter.org/cepsa-research-briefs?download=627:climate-security-vulnerability-in-asia-1-0>
- ¹² Government of Bangladesh. Bangladesh Climate Change Strategy Action Plan. Dhaka: Government of Bangladesh. 2009. Accessed December 10 2016. Available at: http://www.climatechange.org.bd/Documents/climate_change_strategy2009.pdf
- ¹³ Bangladesh Climate Change Trust. Available at: <http://www.bcct.gov.bd/>
- ¹⁴ Bangladesh Climate Change Resilience Fund. Available at: <http://www.worldbank.org/en/news/feature/2012/05/22/bangladesh-climate-change-resilience-fund-bccrf>
- ¹⁵ Ministry of Food and Disaster Management (now Ministry of Disaster Management and Relief). Standing Order on Disaster. Dhaka: Government of Bangladesh. 2010. Accessed December 10 2016. Available at: http://old.ddm.gov.bd/pdf/sod_final.pdf

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The Strauss Center's program on Complex Emergencies and Political Stability in Asia (CEPSA) explores the causes and dynamics of complex emergencies in Asia and potential strategies for response. In doing so, the program investigates the diverse forces that contribute to climate-related disaster vulnerability and complex emergencies in Asia, the implications of such events for local and regional security, and how investments in preparedness can minimize these impacts and build resilience. CEPSA is a multi-year initiative funded by the U.S. Department of Defense's Minerva Initiative, a university-based, social science research program focused on areas of strategic importance to national security policy.

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