

UNPRECEDENTED FLOODS INCREASING NON-TRADITIONAL SECURITY CHALLENGES IN SOUTH ASIA

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(Views expressed in the brief are those of the author, and do not represent those of ISSI)

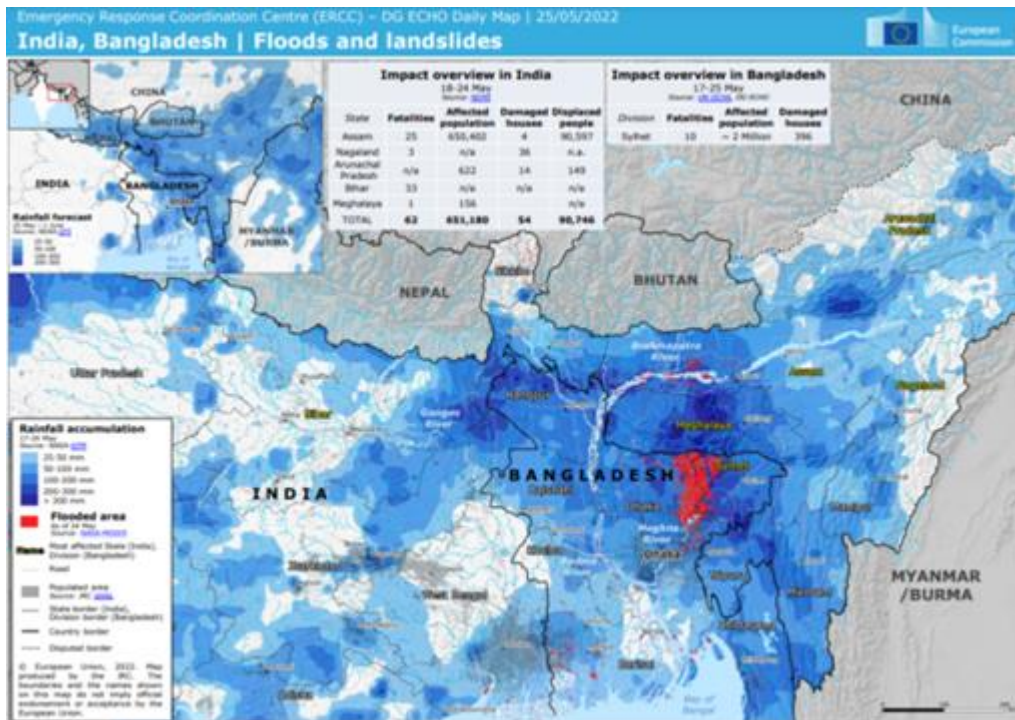


Heavy, pre-monsoon rains affected north-eastern India, Bangladesh, and Nepal beginning mid-May, leading to landslides, river overflow and floods. The flooding displaced millions and was among the worst in Bangladesh in decades. Scientists warn that catastrophic flooding events are on the rise, because of climate change which is threatening not only people, but infrastructure and agriculture. Some level of flooding in South Asia is expected during its monsoon season, which runs from June to September. But as temperatures rise, the monsoon is now marked by short spells of very heavy rainfall, which can trigger deadly, fast-moving floods.¹

South Asia, a region with millions of the most vulnerable people in the world, has this year become the embodiment of climate extremes and weather records. Devastating floods that have washed away homes, drowned rice fields and stranded millions of people in northeast India and Bangladesh in recent weeks are not unusual. What is unusual is that large areas of land in the two countries disappeared underwater much earlier this year. The peak flooding takes place in July and August

¹ Brian Bushard, "Hundreds Killed And Millions Evacuated In Devastating South Asia Floods," Forbes, June 22, 2022, <https://www.forbes.com/sites/brianbushard/2022/06/22/hundreds-killed-and-millions-evacuated-in-devastating-south-asia-floods/?sh=3c32f79a3180>

when the monsoons are in full swing. But this year heavy rainfall began in May and created a disaster situation.²



Current Situation

In India's north-eastern Assam state, where entire villages have been engulfed by the swirling flood waters, authorities say that more than 5 million people have been affected and more than 80,000 are sheltered in relief camps. Over 100 have died. In Bangladesh, millions have also been affected by the flooding, while the death toll in monsoon-related events is around 60. Disaster authorities in Nepal also reported that heavy rain had caused flooding and landslides in the country over the last few days, causing fatalities and destroying homes. In a period from 10 to 17 June, 7 people had died and heavy rainfall has also caused landslides in at least 11 locations.³

Both India and Bangladesh have pressed their militaries into action for rescue and relief work and set up shelters for the displaced. In Assam, people marooned in flooded homes said they were without food and drinking water. In north-eastern Bangladesh, the districts of Sylhet and Sunamganj have borne the brunt of the flooding. Poor connectivity and communication snags are preventing aid from reaching those who need it most, and relief workers say the widespread flooding has made it

² Anjana Pasricha, "Shifting Monsoon Patterns Worsen South Asia's Flood Menace," VOA, June 24, 2022, <https://www.voanews.com/a/shifting-monsoon-patterns-worsen-south-asia-s-flood-menace/6631323.html>

³ Swati Gupta and Rhea Mogul, "Millions affected after deadly floods hit India and Bangladesh," CNN, June 22, 2022, <https://edition.cnn.com/2022/06/22/india/bangladesh-india-floods-death-toll-intl-hnk/index.html>

difficult for them to store rations for distribution. Beyond the immediate need for food and safe drinking water, people also need urgent access to health care. According to UNICEF 4 million people, including 1.6 million children, in northeast Bangladesh have been cut off by floods and are without fresh drinking water, putting them at risk of waterborne diseases.⁴

In addition to the flooding, much of South Asia has been impacted by heat waves since March. Temperatures in parts of India reached 50 C. Like the floods, the hot weather is linked to climate change, although it is unusual in a La Niña season to reach such highs. The hot weather caused power outages and buckled roads and railway tracks. Heat waves create negative interactions that increase flooding risk and drought. By drying out the land, it is harder for water to be absorbed and therefore, it is more likely to pool and flood.⁵

The Brahmaputra River, which runs through northeast India into Bangladesh is flowing above the danger level at several places, even as monsoons are likely to pick up pace in the coming weeks. It could turn out to be a long-drawn crisis, as embankments and roads are already damaged. The impact of events triggered by climate change is particularly severe in areas where millions of people depend on farming small plots of land for sustenance.⁶

Conclusion

A 2022 report by the Intergovernmental Panel on Climate Change (IPCC) said they had medium confidence that heatwaves and humid stress would become more intense and frequent, and that annual and summer monsoon precipitation will increase. The flooding has led to warnings by climate experts that South Asia's most vulnerable communities may have to cope with more unpredictable and longer spells of devastation as monsoon patterns change and extreme weather events become the norm rather than the exception. The widespread flooding triggered by the heavy pre-monsoon rains this year is unprecedented.⁷

With rising global temperatures due to climate change, experts say the monsoon is becoming more variable, meaning that much of the rain that would typically fall in a season is arriving in a shorter

⁴ Niha Masih, Azad Majumder and Sadiq Naqvi, "Deadly South Asia floods leave families trapped without food and water," The Washington Post, June 21, 2022, <https://www.washingtonpost.com/world/2022/06/21/bangladesh-india-assam-meghalaya-floods/>

⁵ "2022 South Asian Floods," CDP, Accessed June 28, 2022, <https://disasterphilanthropy.org/disasters/2022-south-asian-floods/>

⁶ Julhas Alam and Wasbir Hussain, "Officials Try to Deliver Aid to Flooded South Asia Villages," The Diplomat, June 21, 2022, <https://thediplomat.com/2022/06/officials-try-to-deliver-aid-to-flooded-south-asia-villages/>

⁷ IPCC, "Regional fact sheet – Asia'," IPCC Sixth Assessment Report, Accessed June 28, 2022, https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Asia.pdf

period. The rainfall calendar has changed, the intensity and magnitude of flooding has increased. Both India's northeast and Bangladesh have already experienced two bouts of severe flooding one in May and another in June 2022. Instead of steady distribution of rain during the June-September monsoon season, shorter spells of torrential rainfall have become more common, experts say. Assam for example received about double the rain in the first three weeks of June compared to the average rainfall during this period, according to the Indian Meteorological Department.⁸

The pattern of monsoons, vital for the agrarian economies of India and Bangladesh, has been shifting since the 1950s, with longer dry spells interspersed with heavy rain. It may take much longer to determine the extent to which climate change played a role in the floods, but scientists say that it has made the monsoon a seasonal change in weather usually associated with strong rains more variable over the past decades. About 17% of the population in the region will need to be relocated over the next decade or so if global warming persists at the present rate.⁹

⁸ Associated Press, "Dozens Dead, Thousands Homeless in Bangladesh, India Floods," VOA, June 21, 2022, <https://www.voanews.com/a/dozens-dead-thousands-homeless-in-bangladesh-india-floods-/6627216.html>

⁹ Aniruddha Ghosal and Al-Emrun Garjon, "Climate change a factor in 'unprecedented' South Asia floods," The Washington Post, June 22, 2022, https://www.washingtonpost.com/world/climate-change-a-factor-in-unprecedented-south-asia-floods/2022/06/22/cb6d4558-f20c-11ec-ac16-8fbf7194cd78_story.html