

The Effects of Politics on Natural Disasters: Lessons Learned from Bangladesh

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Abstract

Natural disasters are commonly thought to be less politically contentious than armed conflicts. Yet, a closer look reveals that politics are deeply wedded to both the impact of a natural disaster and the subsequent delivery of humanitarian assistance. Political considerations before, during, and after a natural disaster can determine who is most at risk, who can intervene, what actions will be taken, and who will benefit from those actions. With these considerations in mind, this paper will derive some lessons learned from the effects of politics on the humanitarian situation in Bangladesh during the 1991 cyclone. Ultimately, this case study demonstrates that economic, social, and political factors can significantly amplify the devastating impact of a natural disaster.

(Keywords: cyclones, Bangladesh, natural disaster response)

Overview:

Natural disasters are commonly thought to be less politically contentious than armed conflicts. Yet, a closer look reveals that politics are deeply wedded to both the impact of a natural disaster and the subsequent delivery of humanitarian assistance. Political considerations before, during, and after a natural disaster can determine who is most at risk, who can intervene, what actions will be taken, and who will benefit from those actions. With these considerations in mind, this paper will derive some lessons learned from the effects of politics on the humanitarian situation in Bangladesh during the 1991 cyclone. Ultimately, this case study demonstrates that economic, social, and political factors can significantly amplify the devastating impact of a natural disaster.

Background & Risk Factors:

Cyclones are among the most damaging natural disasters in the world. The National Oceanic and Atmospheric Administration (NOAA) defines a cyclone as a “non-frontal synoptic scale low pressure system over (sub)-tropical waters with thunderstorm activity and surface wind circulation.”¹ Cyclones go by a variety of names based upon their location and wind speed, including hurricane, typhoon, and cyclonic storm. Cyclones produce heavy rainfall, flooding, storm surges, strong winds, tornadoes, and mudslides. These effects are often deadly and can decimate populations, disrupt local economies, and damage infrastructure, property, and the environment.

Bangladesh, in particular, is very prone to cyclones. On average, the country suffers from sixteen tropical cyclones per decade due to its geography and favorable climatic conditions for formation.² The North Indian Ocean region, including Bangladesh, divides these weather events

¹ National Oceanic and Atmospheric Administration. “Frequently Asked Questions: What is a Hurricane, Typhoon, or Tropical Cyclone.” Available at <http://www.aoml.noaa.gov/hrd/tcfaq/A1.html>

² U.S. State Department. “Background Note: Bangladesh.” Available at <http://www.state.gov/r/pa/ei/bgn/3452.htm>

into eight categories from “low pressure area” to “super cyclonic storm.”³ Cyclones that form in the Bay of Bengal are known for their intense storm surges and are among the deadliest in the world.⁴

In addition to the frequency and intensity of these natural disasters, other risk factors present in Bangladesh include high population density in coastal areas, uneven development and exposure, and an insufficient disaster management system.⁵ Inadequacies associated with building quality, evacuation procedures, and emergency shelters were also noted. It is factors like these that can and must be mitigated in order to reduce fatalities and other devastating impacts of natural disasters.

Cyclone Marion:

On the evening of April 29, 1991, the 5th deadliest recorded tropical cyclone of the 20th century hit the densely populated Chittagong region of Bangladesh.⁶ The India Meteorological Department (IMD) designated the rapid onset disaster as a super cyclonic storm – the most intense storm category - with winds exceeding 138 miles per hour⁷ and a 20 ft. storm surge.⁸ With damages estimated over 1.5 billion dollars and fatalities reaching over 138,000 people and as many injured, “Cyclone Marion” had devastating effects for the country and its people.⁹ On some of the smaller offshore islands, entire populations were drowned.¹⁰

Impact:

³ World Meteorological Organization. “Technical Document TCP-21: Tropical Cyclone Operational Plan for the Bay of Bengal and the Arabian Sea.” 2008: 1-2. Available at http://www.wmo.int/pages/prog/www/tcp/documents/TCP-21_OP2008_Rev.pdf

⁴ Paul, Bimel. “Why Relatively Fewer People Died? The Case of Bangladesh’s Cyclone Sidr.” *Natural Hazards*, 50 (2). 2009: 290.

⁵ Also see Alam, Edris and E. Collins. “Cyclone Disaster Vulnerability and Response Experiences in Coastal Bangladesh.” Available at http://www.dfid.gov.uk/r4d/PDF/Outputs/ESRC_DFID/60433-Collins-RJ1-AC2-RJ2.pdf

⁶ National Oceanic and Atmospheric Administration. “Global Factsheet: NOAA’s Top Global Weather, Water and Climate Events of the 20th Century.” Available at <http://www.noaanews.noaa.gov/stories/images/global.pdf>

⁷ India Meteorological Department. “Frequently Asked Questions on Tropical Cyclones.” Available at <http://www.imd.gov.in/section/nhac/dynamic/faq/FAQP.htm>

⁸ USAID. “Briefing Paper: the 1991 Bangladesh Cyclone.” Available at http://pdf.usaid.gov/pdf_docs/PNADG744.pdf

⁹ “Global Factsheet,” 2

¹⁰ “Briefing Paper: the 1991 Bangladesh Cyclone” 1

The cyclone lasted 15 hours and created a dire humanitarian crisis. The Government of Bangladesh reported that Cyclone Marion impacted all important sectors of the country. One report states that, “780,000 homes were destroyed, 9,300 schools [were] damaged or destroyed, and 655 health centers [were] damaged or destroyed.”¹¹ Impoverished communities along the coast were the most adversely affected. Survivors of the storm were left for days without adequate shelter, food, water, or sanitation, and also suffered a rapid increase in deaths from dysentery and diarrhea – up to half a million cases.¹² Crops, livestock, natural resources, soil, and other means of livelihood were also destroyed in the cyclone. Much of the land and water became contaminated due to salt or sewage, and inland flooding killed an additional 10,000 people.¹³ Furthermore, major infrastructure such as levees, power lines, bridges, railroads, ports, and roads were inoperable after the cyclone made landfall. These obstacles made the distribution of relief supplies to Chittagong almost impossible in the initial aftermath of the natural disaster.

Humanitarian Actors & Delivery of Services:

The humanitarian environment following the cyclone included a variety of local and international actors. The government of Bangladesh, UN agencies, bilateral donors, militaries, and NGOs were all involved in disaster relief and reconstruction efforts in Bangladesh. The activities ranged from the immediate provision of basic items to long-term development projects, including future disaster prevention measures. The humanitarian response was generally successful, but a number of political and social shortfalls were evident.

Government & Bilateral Actors:

The Bangladeshi government, installed two months before the cyclone hit, called for international assistance but was wary of any challenges to its sovereignty. The government

¹¹ Ibid., 1

¹² Karim, Nehal (no date) *Options for Cyclone Protection: [The] Bangladesh Context*. Dhaka: University of Dhaka, Department of Sociology.

¹³ Ibid.,2

initially preferred to distribute aid in coordination with local NGOs and the army rather than foreign groups. In the immediate aftermath, the Minister of Relief instructed the army to collect data and begin relief operations, including airdrops of food and medicines. The government also put aside 1.4 million dollars for immediate relief operations, and sent out “790 medical teams and 108 army medical teams.”¹⁴ However, the Bangladesh airforce and navy had also been affected by the cyclone and was at reduced capacity. The government realized that international assistance was necessary because its own resources and personnel were overwhelmed.

The United States also contributed to relief efforts in the aftermath of the cyclone. According to the USAID Office of Foreign Disaster Assistance annual report, the U.S. government donated \$28 million to disaster response and recovery efforts.¹⁵ The United States also spearheaded one of the largest military disaster relief forces at the time. From May 10 to June 13, 1991, the Joint Task Force Sea Angel transported vital relief items such as medical supplies, grain, and water purification tablets from Dhaka to Chittagong and the severely affected offshore islands under the command of Lieutenant General Henry C. Stackpole.¹⁶ The operation included 7,000 US military personnel, 33 helicopters, 4 Landing Craft Air Cushioned vehicles, and 15 ships diverted on their way back from the Persian Gulf.¹⁷ The helicopters and boats, in particular, were vital to the distribution of aid because local transportation was very limited and weather conditions continued to be bad. After an assessment of the situation, Stackpole rightfully concluded that the Bangladesh Government had to be treated as in charge of all relief operations. Therefore, the operation occurred in three phases: 1) stabilize the situation by distributing food, water, medicine, and other necessary items 2) restore the situation so that

¹⁴ United Nations Disaster Relief Organization. “Bangladesh 1991 Cyclone Situation Reports 1-10.” Available at <http://reliefweb.int/node/35295>

¹⁵ Brilliant, Franca, *et al.* *OFDA [Office of Foreign Disaster Assistance] Annual Report FY 1991*. Arlington, VA: Labat Anderson, Inc. and Washington, DC: USAID Office of Foreign Disaster Assistance. 1992.

¹⁶ “Briefing Paper: the 1991 Bangladesh Cyclone” 1-2

¹⁷ GlobalSecurity.org. “Operation Sea Angel.” Available at http://www.globalsecurity.org/military/ops/sea_angel.htm

the government could take control of relief efforts and 3) departure.¹⁸ The UK, Norway, Australia, Japan, India, Pakistan, China, and other countries also provided assistance. The additional food, water, cash, medicine, tents, household items, hygiene kits, equipment, and personnel helped to prevent further casualties. A survey conducted after the cyclone concluded that 95% of 435 households surveyed received food within four days of the disaster.¹⁹

NGOs & IGOs:

It was difficult to find accounts of exactly which local and international NGOs were involved in the humanitarian assistance operations and what functions they performed. One report states that following the deadly 1970 cyclone, many NGOs formed in Bangladesh to provide relief aid and development assistance. Following the 1991 cyclone, these knowledgeable groups distributed food and other items to the population in an equitable manner which prevented conflict. Their history in the area and knowledge of local conditions and disparities made them effective actors. The report also mentions that these groups worked well with the government, despite prior tension, and were coordinated by the Association of Development Agencies in Bangladesh.²⁰ The Bangladesh Red Crescent Society was also involved by disseminating storm warning signals, providing medical services, and reuniting separated families.

Starting on May 2nd, various agencies of the UN also became involved in humanitarian assistance efforts.²¹ These included - UNDRO, UNDP, HABITAT, WFP, FAO, UNESCO, WHO, ITU, UNIDO, WMO, and others. For example, UNICEF personnel arrived in the aftermath of the cyclone to assess the health conditions of the population and ensure water and

¹⁸ Ibid., 1

¹⁹ Bennish, Michael and Carine Ronsmans. "Health and Nutritional Consequences of the 1991 Bangladesh Cyclone." *Nutrition Reviews* 50(4). 2009: 102-105.

²⁰ Ibid., 3

²¹ "Bangladesh 1991 Cyclone Situation Reports 1-10."

sanitation access.²² A series of ten situation reports delineates the stages of relief operations and the items and cash that were given by international partners.²³ These reports also frequently mention cooperation and coordination between the UN agencies, the government, and NGOs. The UNDRO Chief Delegate helped to conduct needs assessments and coordinate international relief efforts. A UN Inter-Agency Task Force was also established to work with the Government of Bangladesh and other actors to ensure that the delivery of services was effective. To this end, regular meetings were held with key representatives from each agency, donors, NGOs, etc. throughout the ongoing humanitarian operations.

By May 26th, the UN had given \$3,762,000, governments had given \$249,034,668, IGOs had given \$13,295,120, Red Cross and Red Crescent had given \$5,304,719, and NGOs had given \$7,279,690. Thus, a grand total of \$278,676,197 was sent to Bangladesh for immediate relief operations.²⁴ Donor meetings were also convened in Geneva to determine priorities and solicit contributions for long-term reconstruction and rehabilitation efforts.

Analysis of the Response:

There were a number of shortfalls associated with the disaster response following Cyclone Marion. First, many of the citizens did not heed the warnings to evacuate prior to the cyclone hitting because the numbering system to describe the severity of the storm was confusing and had been wrong in the past. For those who did try to evacuate, many did not know where to seek shelter, were forced out of the structure due to overcrowding, or were too far away to reach the shelter in time. Second, high population density and poverty rates in the low coastal areas resulted in poorly constructed houses that could not withstand the cyclone's devastating impact.²⁵ The impoverished coastal area communities were also reluctant to leave their

²² "Health and Nutritional Consequences of the 1991 Bangladesh Cyclone."

²³ "Bangladesh 1991 Cyclone Situation Reports 1-10."

²⁴ Ibid., 26

²⁵ Paul, "Why Relatively Fewer People Died," 291

belongings behind in order to seek shelter. Third, the Bengali government did not have an effective disaster management plan in place, and was slow to develop the bureaucratic cohesion necessary to respond to and coordinate such a large-scale disaster relief response. The civilian regime, installed after years of military rule, was inexperienced but still demanded control of all relief operations in order to protect its sovereignty.²⁶ Fourth, bad weather and transportation difficulties slowed the delivery of services and made them less effective. Humanitarian actors had trouble accessing the offshore islands and heavily damaged areas of Bangladesh to perform relief operations and distribute supplies.

Lessons Learned:

The 1991 cyclone in Bangladesh offers some important lessons both at the country level, and more generally for natural disasters:

- Bangladesh is one of the most disaster-prone countries in the world and must have a comprehensive disaster management plan in place to reduce economic and social impacts. The 2003 country report by the Asian Disaster Reduction Center reported that, “After the floods of late 1980s and the devastating cyclone of 1991, the concept of acting only after the occurrence of disaster has been replaced by the concept of total disaster management involving prevention / mitigation, preparedness, response, recovery and development.”²⁷
- To reduce its vulnerabilities to natural disasters, Bangladesh created the Comprehensive Disaster Management Programme, the Disaster Management and Relief Bureau, the

²⁶ Ibid., 1

²⁷ Asian Disaster Reduction Center. “2003 Country Report: Disaster Management in Bangladesh.” Available at <http://www.adrc.asia/countryreport/BGD/2003/page2.html>

Emergency Operations Center, and a revamped Cyclone Preparedness Program (CPP).²⁸

These efforts resulted in fewer deaths during the 2007 Cyclone Sidr.²⁹

- The number of CPP volunteers, who warn communities of cyclones, also increased after 1991 so that at risk areas could evacuate more quickly and efficiently.
- The government acknowledged that development efforts to reduce poverty and improve housing would reduce casualty rates from natural disasters. In particular, the government extended the warning system to reach isolated, unplanned settlements in hazardous areas. They also tried to develop alternative livelihood skills besides fishing and agriculture.
- This case also reaffirmed that special attention should be paid to women, children, the disabled, the elderly, and other vulnerable populations. These groups usually experience the highest death rates in natural disasters.³⁰ Women, in particular, were reluctant to evacuate during the cyclone because male heads of household thought they might lose their *purdha* (Muslim head scarf).
- Following the 1991 cyclone, the Bangladesh government and the Red Crescent Society developed a credible early warning system so that residents can evacuate before the cyclone hits. Warnings must be frequently broadcast over radio, bicycle-mounted loudspeakers, TV, and megaphones to each rural areas. Many people prior to the 1991 cyclone did not believe the warnings because the information was too technical and had been wrong in the past. To be effective, evacuated orders must be heard and heeded.

²⁸ Ibid., 5

²⁹ Paul, "Why Relatively Fewer People Died," 297

³⁰ International Federation of Red Cross and Red Crescent Societies. "Empowering Community to Prepare for Cyclones." Available at http://www.ifrc.org/Global/Publications/disasters/reducing_risks/194300-Empowering-communities-to-prepare-for-cyclones.pdf

- Additionally, more evacuation shelters have been set up in the coastal areas to handle the influx of evacuees following a natural disaster.³¹ By 2007, the number of usable shelters was five times greater than in 1991.³² If shelters are constructed to handle the number of people at risk and withstand flooding, they can significantly reduce fatalities. They must also be culturally appropriate and secure for women.
- The U.S. joint task force coordinated its activities with the Government of Bangladesh and other NGOs on the ground and was able to withdraw as the situation turned from relief operations to rehabilitation efforts.³³ A clear strategy for operations and withdrawal was evident.
- Although coordination between relief actors was clearly a priority from the start, the UNDRO report notes that, “Local co-ordination cells set up with Bangladesh Army, US Task Force, zonal co-ordinators, district administration and NGOs have started functioning since Saturday 18 May, reducing possible overlapping of relief operations and ensuring better distribution.”³⁴ This statement suggests that coordination was an ongoing process and not always effective.
- Community awareness and resilience to natural disasters are key. Households need to be educated about disaster preparation actions such as raising the house on earth platforms, seeking higher ground, finding shelter, burying food and water, etc. People should also be educated about where and how cyclones strike, and develop community-based disaster management and evacuation plans.

³¹ Asian Disaster Reduction Center. “Field Survey on Bangladesh Cyclone.” Available at <http://www.adrc.asia/publications/annual/07/07eng/pdf/6-2.pdf>

³² Paul, “Why Relatively Fewer People Died,” 297

³³ “Briefing Paper: the 1991 Bangladesh Cyclone” 2

³⁴ “Bangladesh 1991 Cyclone Situation Reports 1-10.”

- Coastal embankments and drainage channels, if properly designed and constructed, can help to reduce saline flooding. Similarly, forest management in coastal areas can reduce the impact of cyclones.³⁵

Conclusion:

Despite the limitations and as specified by the ‘lessons learned’ section, the government, the UN, the U.S. military task force, and NGOs did prevent the deaths of hundreds of thousands of people through their timely interventions. Coordination among these actors was a priority and the government was a key partner and decision-maker. The early warning systems and evacuation shelters, though not perfect, helped to prevent a higher casualty count and were subsequently improved as a result of the ’91 cyclone.

³⁵ Ibid., 2