

COMMUNICATIONS

CYCLONE DEATHS IN BANGLADESH, MAY 1985: WHO WAS AT RISK

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Received June 12, 1986

Accepted for publication September 5, 1986

Abstract. In May 1985, a cyclone from the Bay of Bengal struck the coastal islands of Bangladesh. In spite of early detection of atmospheric turbulence and the history of severe cyclones in the area, an estimated 11,000 people lost their lives.

In a natural experiment, cyclone death rates from the two severely affected islands, Urir Char and Sandwip, were analysed to determine the risk factors of cyclone-associated mortality. In Urir Char, in which no cyclone shelters existed, the study group lost 40% of the family members in contrast to 3.4% from Sandwip, where at least eight cyclone shelters existed. Individuals who did not seek shelter were at the highest risk. Barriers in seeking safety were physical as well as behavioural. Easy access to shelters was a significant factor in reducing the risk. Deaths could have been averted through improved timing and method of advance warning.

Key words: natural disasters; shore protection; coastal signals; estuaries; Bangladesh

Introduction

On May 23, 1985, the Bangladesh Space Research and Remote Sensing Organization computer detected the formation of a cyclone storm moving northward in the Bay of Bengal [1]. Slightly less than 36 hours later, the storm reached the coastal islands of southeastern Bangladesh. In spite of the early detection of atmospheric turbulence and the history of severe cyclones in the area, an estimated 11,000 people lost their lives. An epidemiologic investigation of this disaster was conducted in order to determine the risk factors of cyclone-associated mortality and help to establish priorities for future preparedness.

The 50,000 sqkm delta in the Bay of Bengal at the outfall of the Ganges, the Brahmanputra and the Meghna Rivers is inhabited by over 10 million people. These rivers deposit enormous quantities of silt in the northern portion of the Bay of Bengal each year, forming temporary islands, or 'chars', which are constantly being altered by accretion and erosion. Their fertile soil attracts poor, landless migrants who are willing to tolerate severe weather conditions in exchange for economic self-sufficiency. This char area, along with coastal Bangladesh, has been the site of cyclones and tidal waves that, in the recent past, have caused 22,000 deaths in 1963; 65,000 deaths in 1965 [2]; and 500,000 deaths in November, 1970 [3]. As a result, some cyclone shelters had been built, particularly on the more populated, more permanent chars such as Sandwip island where, in addition, the Bangladesh Red Cross maintains a cyclone warning system by means of which inhabitants are alerted of impending storms via loud speaker.