

Flood 2010 damages in Khyber Pakhtunkhwa

Zakir Hussain¹, Amjad Naseer², Khan Shahzada², Bashir Alam² and Abid Ali Shah²

¹University of Engineering and Technology, Khuzdar

²Department of Civil Engineering, UET, Peshawar

The flood of 2010 incurred damages in all four Provinces of Pakistan, which were estimated to be many times greater than those caused by the Kashmir Earthquake 2005. More than one thousand people were killed; millions of people were made homeless and displaced. Millions were left without food and clean drinking water and were later on exposed to different kinds of diseases. The flash flood swept away all kinds of man-made structures, which came along its course. These included different types of buildings, bridges, roads, water diverting and retaining structures, electricity and telephone towers. This paper focuses on the assessment of damages of buildings and bridges in the province of Khyber Pakhtunkhwa. Stone masonry buildings and adobe buildings (mud construction) were the worst-hit structures and followed by structures made with burnt-bricks laid in mud-mortar. Foundation settlement was also one of the causes of the damages in the buildings. Bridges including suspension and reinforced concrete were also damaged partly because of their structural deficiencies and partly because of inadequate hydrological studies.