



Wind exposure is calculated from the digital elevation model (DEM) of a given area using "directional relief modelling". This is a relative measure of the degree to which a site is located above or below its surroundings.

Output is areas of relative wind exposure. Level of relative exposure is a continuous scale between +20 and -30, with -30 the most exposed. The camp areas were divided into three classes of wind exposure (high, medium, low) of which areas of high exposure are displayed. Smart Quantile classification was applied, a scheme where class breaks are based on intervals that have a common geometrical series. This classification scheme ensures that each class range has approximately the same number of values and that the change between intervals is fairly consistent. The Smart Quantile algorithm was designed to accommodate continuous data, minimizing variance within classes.

Note: This analysis does not take into account meteorological data. Additional data and further groundtruthing are required for more comprehensive modeling.



**Hazard Areas**

- Wind Exposure
- Flooding
- Landslide (> 30° Slope)

**Structures**

- Shelters with Greater Wind Exposure<sup>1</sup>
- Other Shelters
- Non-Shelter Structures<sup>2</sup>

**Boundaries**

- Camps
- Mahjee Blocks
- 1m Contours

**Estimated total shelters:**

6932

**Estimated shelters in areas of greater wind exposure<sup>1</sup>:**

1388

**Percentage shelters in areas of greater wind exposure<sup>1</sup>:**

20%

<sup>1</sup>Excludes shelters also vulnerable to landslide and/or flood  
<sup>2</sup>Structures with areas of less than 5 square metres

Data Sources:  
- Wind Vulnerability: REACH  
- Flood Areas: ADPC / UNHCR / IOM, European Space Agency  
- Landslide Areas: REACH  
- Camp Boundaries: ISCG  
- Mahjee Block Boundaries: IOM / NPM  
- Shelter Footprints: OpenStreetMaps  
- 1m Elevation Contours: IOM

Coordinate System: WGS 1984 UTM Zone 46N  
Projection: Transverse Mercator  
File: REACH\_BGD\_Map\_CoxsBazar\_AreasWithGreaterWindExposure\_Camp 8W\_25SEP2018\_A1

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates, donors mentioned.

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