Exposure Assessment

Major exposure units or elements-at-risk considered in this study are population, housing, crops, infrastructure (roads, railways, and ports), and forests. The impacts of disasters on exposure units depend on the latter’s inherent nature and the types of hazards affecting them.

<table>
<thead>
<tr>
<th>Exposure Unit</th>
<th>Indicators</th>
<th>Year</th>
<th>Sources of Data</th>
<th>Administrative Level/Spatial Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Density</td>
<td>2011</td>
<td>BBS</td>
<td>District</td>
</tr>
<tr>
<td>Housing</td>
<td>Number of households in a district area</td>
<td>2016</td>
<td>BBS</td>
<td>District</td>
</tr>
<tr>
<td>Crop</td>
<td>Crop yield x crop area per district area</td>
<td>2015–2016</td>
<td>DAE</td>
<td>District</td>
</tr>
<tr>
<td>Forest</td>
<td>Ratio of forest cover to district area</td>
<td>2012</td>
<td>FD</td>
<td>District</td>
</tr>
<tr>
<td>Infrastructure (road)</td>
<td>Unit or length per district area</td>
<td>2016–2017</td>
<td>BBS</td>
<td>District</td>
</tr>
</tbody>
</table>

BBS = Bangladesh Bureau of Statistics, DAE = Department of Agricultural Extension, FD = Forest Department.

* Year of latest published data available.
Building walls in a woman’s hand. Women in poverty often work in brick industries. With little amount of money and lack of support, they remain marginalized, thus highly exposed to disasters (photo by Khurshid Alam).
Hazards

People

Faces of Bangladesh. A child in a village get-together in Faridpur district to discuss the threats of climate change for future generations. Farmers busy harvesting winter vegetables; their livelihood are affected by various climatic hazards (photos by Nurun Nahar [top] and Shawkat Haider [bottom]).
Map II.2: Population Density Exposure

Legend
- District boundary
- Exposure
  - Very low
  - Low
  - Moderate
  - High
  - Very high

Data Sources:
- BBS (population density); and WARPO (district boundaries).
Map II.3: Exposure of Households in Bangladesh
Crops

Rice production and climate change. Rice, the staple food and most important crop in Bangladesh, is grown in three seasons and covers nearly 75% of the country’s cultivated land. Extensive damages to agricultural crops due to floods, river erosion, and salinity result in huge economic losses especially for the rural poor (photos by Ashfaq Chowdhury [top] and Talha Zubair Masror [bottom]).
Map II.4: Aman Rice Production Exposure

Legend

<table>
<thead>
<tr>
<th>Exposure</th>
<th>District boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Very high</td>
<td></td>
</tr>
</tbody>
</table>

Data Sources:
- DAE (aman rice yields), and WARPO (district boundaries).
Map II.6: Aus Rice Production Exposure

Legend
- District boundary
- Exposures:
  - Very low
  - Low
  - Moderate
  - High
  - Very high

Data Sources:
- DAE (Aus rice yields); and WARPO (district boundaries).

Bay of Bengal
Map II.7: Boro Rice Production Exposure
Map II.9: Potato Production Exposure

Legend
- District boundary

Exposure
- Very low
- Low
- Moderate
- High
- Very high
Mangroves and forests in Bangladesh. The Sundarban Mangrove Forest in southwest Bangladesh protects the region from storm surge and cyclones emerging from the Bay of Bengal. Most of the country is plain land except the Chittagong Hill Tract region in southeastern Bangladesh (photos by S.K. Faruk Hossain [top] and Md. Sirajul Islam [bottom]).
Map II.11: Exposure of Forest Areas

Legend
- District boundary
- Exposure: Very low, Low, Moderate, High, Very high

Data Sources:
- FD (Forest area), Forest Department (forest areas exposures), and WARPO (district boundaries).