**Flood**

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| **Title:** | Flood Frequency |
| **Component:** | Exposure |
| **Rationale:** | Floods have had devastating impact on people and livelihoods and have led to losses in GDP. Recent floods in Malawi caused serious damages and losses to the country |
| **Source Data Set:** | UNEP GRID http://preview.grid.unep.ch/index.php?preview=data&events=floods&evcat=2&lang=eng |
| **Units:** | Unit is expected number of events per 100 years |
| **Computation:** | This dataset includes an estimate of flood frequency. It is based on three sources: 1) A GIS modeling using a statistical estimation of peak-flow magnitude and a hydrological model using HydroSHEDS dataset and the Manning equation to estimate river stage for the calculated discharge value. 2) Observed flood from 1999 to 2007, obtained from the Dartmouth Flood Observatory (DFO). 3) The frequency was set using the frequency from UNEP/GRID-Europe PREVIEW flood dataset. In area where no information was available, it was set to 50 years returning period. Unit is expected average number of event per 100 years. This product was designed by UNEP/GRID-Europe for the Global Assessment Report on Risk Reduction (GAR). It was modeled using global data. Credit: GIS processing UNEP/GRID-Europe, with key support from USGS EROS Data Center, Dartmouth Flood Observatory 2008. Data was resampled to 1 km resolution using Resampling tool in ArcGIS. |
| **Statistics for raw data:** | Min=0, Max=34 |
| **Scoring system:** | *Raster values were rescaled from 0-100 based on min and max values* |
| **Statistics for transformed data:** | Min=0, Max=100 |
| **Spatial Extent:** | Global |
| **Spatial Resolution:** | 10 km |
| **Year of Publication:** | 2009 |
| **Time Period:** | Observed flood from 1999-2007 |
| **Additional Notes:** | Downloaded from UNEP/DEWA/GRID-Europe; United National Environment Program Division of Early Warning Database. Downloaded from PREVIEW Global Risk Data Platform.  Data were subset to the Malawi national boundary extent using ArcGIS Extract by Mask tool using a 1km Raster Mask. Raster values were extracted using ArcGIS Extract Values to Points tool and the 1km centroids.  The output was exported to csv table for statistical analysis. |
| **Date:** | July 2015 |
| **Format:** | Grid |
| **File Name:** | Flood frequency |
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