

Global exposure to river and coastal flooding: Long term trends and changes

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Global economic exposure to both river and coastal flooding has been estimated for the period 1970–2050, using two different methods for damage assessment:

1. The method based on population density and GDP per capita resulted in an estimate of total global exposure to river and coastal flooding of 46 trillion USD in 2010 and a projected increase to 158 trillion USD by 2050.
2. The method based on land use within areas subject to 1/100 year flood events resulted in an estimate of total flood exposure of 27 trillion USD in 2010 and projected increase to 80 trillion USD by 2050.

The largest absolute exposure changes between 1970 and 2050 are simulated in North America and Asia. In relative terms the largest increases are projected for North Africa and Sub-Saharan Africa. The results are based on a large number of assumptions and should only be interpreted as a first estimate of indicative values.

Source: Jongman et al., 2012. Global Environmental Change 22: 823-835.

Photo: US Geological Survey (www.stckr.com)