EXTREME WEATHER

Definition: Extreme weather refers to meteorological events of great destructive power including but not limited to heat waves, sudden heavy downpours, tropical cyclones, floods and droughts.

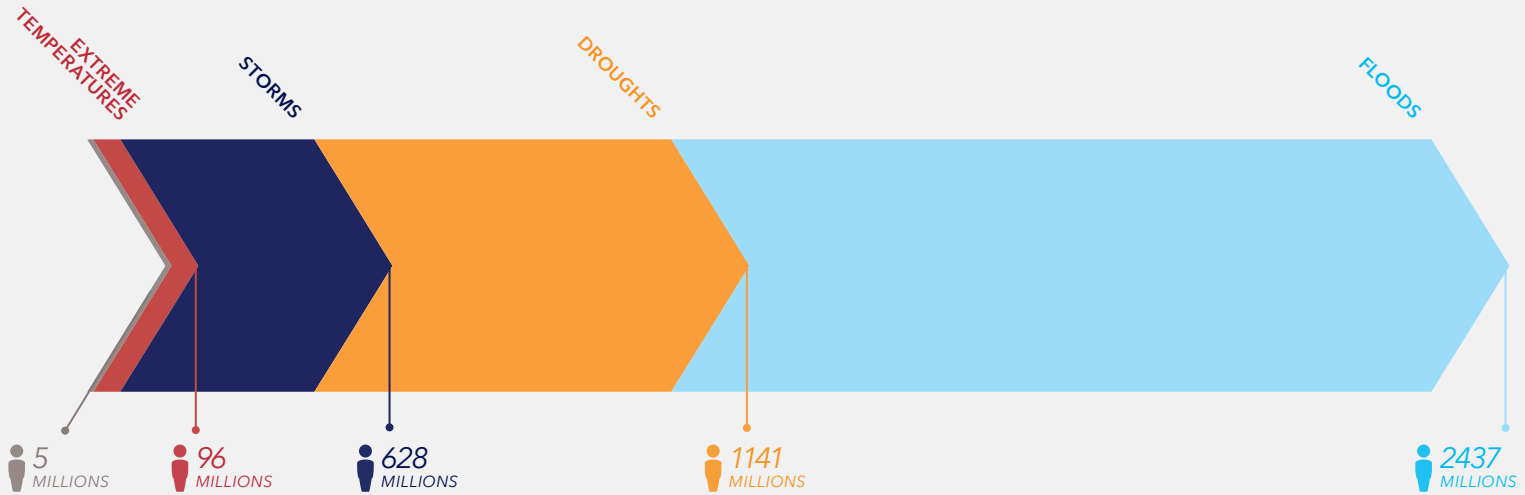
Extreme weather is by far the most costly type of natural disaster, and flooding is the main source of both human and economic losses. The growing world population and the growing concentration of people in coastal areas puts even more people and property at risk from extreme weather[1]. It is estimated that more than 630 million people live in low elevation coastal zones (less than 10 metres above sea level), and nearly two-thirds of urban settlements with more than five million inhabitants are also at least partially located in these zones[2].

Although extreme weather events are naturally occurring, climate change has the potential to increase the number and/or the severity of these incidents in the coming decades[3]. This might affect key development and security issues, such as food security and political and social stability.

The IPCC considers it very likely (with over 90 pct. probability) that the frequency and/or duration of heatwaves will increase. It is considered over 66 pct. likely that many land areas will experience increase in heavy precipitation events and/or severity of such events in the early 21st century. There is less confidence in predictions regarding the development in tropical cyclones in the coming decades, but the IPCC projects that it will become very likely in the late 21st century that extreme high sea level events will increase in number and/or severity. Simultaneously droughts are creating severe losses both in the economy and in terms of the number of people affected. They also have the potential to hit agricultural production and thus affect food prices globally.

FLOODS ARE THE GREATEST CHALLENGE

People affected by extreme weather, 1992-2012[7]



FACTS AND FIGURES

Since 1992, storms have caused losses of $720 billion.[4]

The years 2001–2012 were all among the top 13 warmest years on record.[5]

Over the last 30 years natural disasters took the lives of over 2 million people. Almost 90 pct. of such disasters, more than 70 pct. of the casualties and almost 80 pct. of economic losses were caused by extreme weather.[6]

IMPACTS[8]

*Typhoon Haiyan hit the **Philippines** in November 2013. Casualties are estimated to be at least 6,000 with close to 2,000 still missing. Less than a year before, typhoon Bopha killed at least 1,000 people and affected the lives of 6 million Filipinos.*

*Two severe hailstorms in southern **Germany** on the 27th and 28th July 2013 caused insured losses of 3.7 billion dollars.*

*Floods in **Central Europe** caused by persistent rainfall caused several rivers to overflow causing an estimated 15.2 billion dollars of economic loss, the biggest in 2013.*

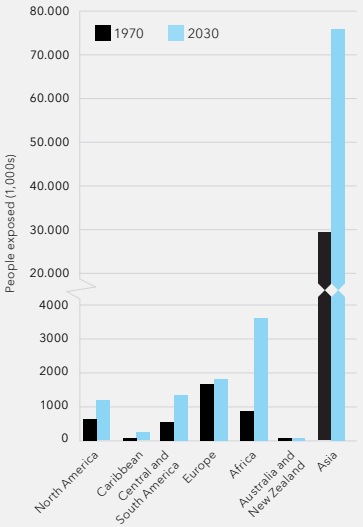
*In an otherwise relatively quiet 2013 tornado season in the **USA**, three thunderstorms caused damage of 10.3 billion dollars*

[1] IPCC. 'Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability – Summary for policymakers'. Report. 2007. [2] Columbia University - Earth Institute. 'New Research Analyzes Countries at Greatest Risk from Climate Change Impacts'. March 2007. Online: www.earth.columbia.edu/news/2007/story03-29-07.php
[3] IPCC. 'CLIMATE CHANGE 2013 –The Physical Science Basis, Summary for Policymakers'. Report. 2013. [4,7] UNISDR. 'Impacts of disasters since the 1992 Rio de Janeiro Earth Summit'. 2012. [5] World Meteorological Organization. 'WMO Statement on the status of the global climate in 2012'. Report. 2013
[6] World Meteorological Organisation. 'Watching the Weather to Protect Life and Property'. Online: www.wmo.int/pages/mediacentre/press_releases/pr_971_en.html [7] UNISDR. 'Impacts of disasters since the 1992 Rio de Janeiro Earth Summit'. 2012 [8] Munich Re, 'Global Natural Catastrophe Update – 2013'

MORE PEOPLE WILL BE AT RISK

People exposed to floods per year, 1970 vs. 2030[9]

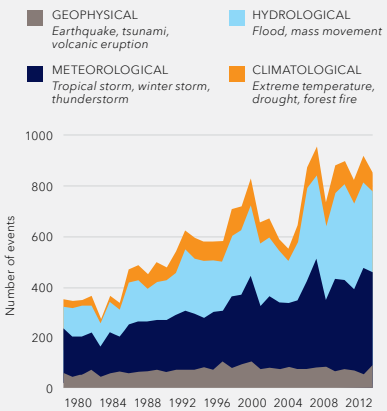
Floods are the most common extreme weather event – either caused by heavy downpours, meltwater flows or by storm surges. As floods become more frequent, and as more people live in vulnerable areas, the number affected by floods each year will more than double.



GROWING LOSSES TO EXTREME WEATHER

Loss events worldwide 1980-2013[10]

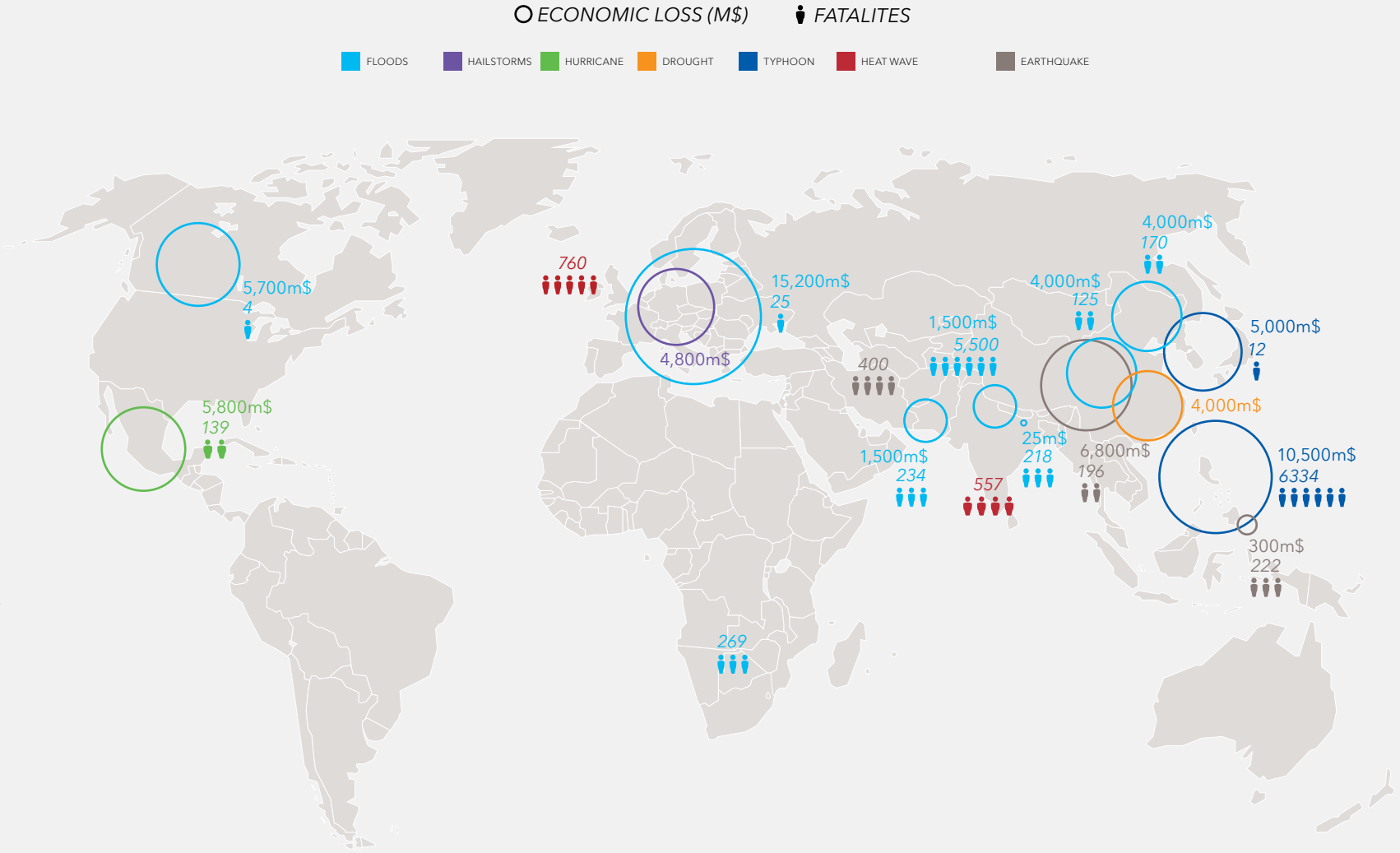
The number of extreme weather events has grown rapidly over the past three decades, with floods and storms as the most prevalent events.



EXTREME WEATHER DOMINATE LIST OF GREATEST LOSS EVENTS

Loss of life and property, 2013[11]

The insurance business keeps a close eye on events causing damage to life and insured property. Weather events are prevailing among the most significant.



[9]IPCC. 'Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation'. Report. 2012. [10,11]Munich Re. 'Global Natural Catastrophe Update – 2013'. Online: www.munichre.com/touch/site/touchnaturalhazards/get/documents_E6024637/mr/assetpool.shared/Documents/5_Touch/_NatCatService/Focus_analyses/1980-2013-Loss-events-worldwide.pdf Accessed 21/07/14