



Are Global Economic Losses from Natural Hazards Increasing?

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Global society has long been influenced by natural hazards, but it has been widely noted that the economic cost of natural hazards has been rising rapidly over recent decades. This upward trend highlights the increasing exposure of the global economy to natural hazards and the need for society to understand the driving factors to help improve the resilience of communities. However disaster risk is driven by a plethora of factors, including population, wealth, land-use, and demographics. Consider also the natural variability in the frequency and severity of events, climate change, and implementation of resilience policies, and it becomes clear that disaster-risk management is a challenging field. To investigate the apparent upward trend in reported annual economic losses from natural disasters, socioeconomic factors known to influence the magnitude of losses must first be accounted for. Adjustment for these factors, known as loss normalisation, aims to estimate the losses sustained if historical events were to impact present day society.

We have undertaken a detailed assessment of global economic losses from natural disasters for the period 1995 through 2013. Although the studied time-period is relatively short, expanding the investigated period would not necessarily produce more reliable insights owing to the inherent difficulty in obtaining accurate economic loss estimates for earlier periods and the challenge of finding consistent and reliable sources of socioeconomic data for the normalisation process. The results of the study, presented at a global and regional level, appear to suggest that the main driver of perceived increase in economic losses over the last ~20 years was the development of nations' economies (i.e. increase in population and wealth/GDP) and not in the natural hazards themselves. As populations all over the world migrate into areas of higher natural hazards regions (e.g. coastal areas or floodplain zones) and global wealth continues to increase, it will be important to continue to monitor this trend. The average annual economic losses presented herein could be used as a benchmark for the Sendai Framework which aims to "Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030".