UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

Bündnis Entwicklung Hilft

Factsheet

Central results of the WorldRiskReport 2016

WorldRiskIndex 2016

- Vanuatu is the country with the highest risk of disaster (index value: 36.28) among the 171 countries included in the WorldRiskIndex 2016. Tonga (index value: 29.33) and the Philippines (index value: 26.70) rank number 2 and 3. Germany is ranked at number 147 (index value: 2.95).

- The hotspot regions for the risk of disaster are located in Oceania, South-East Asia, Central America and in Southern Sahel (see map page 50/51).

- Six island states are among the 15 countries with the highest risk of disaster. The other nine countries are also located by the sea. They are particularly exposed to natural hazards such as flooding, hurricanes and sea-level rise.

- Updated data was available for 17 of the 28 indicators of the WorldRiskIndex 2016.

Main topic: logistics and infrastructure

- The world map on page 17 shows the exposure of key transport infrastructure with regard to four of the five natural hazards taken into consideration in the WorldRiskIndex (earthquakes, hurricanes, flooding and sea-level rise). It shows that the existing transport infrastructure of small island states in the Caribbean and Oceania and states with long coastlines and a high risk of earthquakes or hurricanes, especially in Asia and Latin America, is highly exposed to natural hazards.

- Damage to roads and railway lines caused by flooding is estimated at around 470 million US dollars in Europe alone, with an upward trend (Forzieri et al. 2015). While the biggest share of infrastructure damage is recorded in countries with a high income, the relative damage, measured by the income level of the respective countries, is often higher in developing and emerging countries.

- The functionality and stability of infrastructure in one sector can significantly depend on the susceptibility of the infrastructure in other sectors (Bach et al. 2013). Power supply outages caused by natural hazards, for instance, can bring with them far-reaching effects on other infrastructures that are relevant in the event of a disaster, such as transport or telecommunications infrastructure. This is referred to as cascading effects.

- The WorldRiskReport identifies a strong need for action for improving the logistics and infrastructure in the countries Benin, Burundi, Haiti, Cambodia, Cameroon, Madagascar, Myanmar, Zimbabwe and Chad, which are at severe risk of extreme natural events.

- The need for action is stated for other country groups (see map on page 38/39), three indicators were employed to ascertain this: the logistics affinity of a country ("logistics performance index"), the transport infrastructure and the electricity supply.

- Local actors have had an increasing importance for several years when it comes to providing humanitarian aid following extreme natural events. There are particular efforts to boost the ability to react at a national and local level. This takes place through collaboration with local aid organizations and also local authorities in preparation for future emergencies. From a logistics viewpoint, this includes, among other things, the "mapping" of critical infrastructures such as airports, ports and depots as well as the electricity and water supply. In exposed regions, the logistics experts can thus assess and localize the capacities as well as strengths and weaknesses of the local infrastructure.

- One of the most important tasks in the coming years will above all be the further strengthening of local capacities – both with regard to disaster prevention as well as with regard to logistics in humanitarian aid. International organizations should be involved less as actors themselves and instead place their focus on strengthening local actors.

- At the same time, the importance of the mere distribution of aid ("in-kind") is dropping steadily. Instead, "cash transfers" are increasingly being used in the form of cash payments or vouchers as alternative or in addition to "in-kind" aid. The beneficiaries either get cash payments that they can use to purchase goods, or vouchers, which they can redeem with cooperating merchants. For the World Food Programme (WFP) alone, expenditure for these programmes increased from 10 to over 830 million US dollars between 2009 and 2013 (WFP 2014).

- To what extend information technologies are accessible crucially depends on the level of development and the location of a region. This, in turn, impacts their regional application in humanitarian logistics. While the share of the population with Internet access in emerging and developing countries only comes up to 34 percent, the access rate for mobile phones comes to 97 percent worldwide from a statistical viewpoint. With a high distribution of mobile phones and continuously falling costs, this technology offers possibilities for humanitarian logistics in emerging and developing countries and increasingly also for rural regions (ITU 2015).

- New technologies such as drones and "big data" also represent opportunities for humanitarian logistics. For instance, "big data" can be used to monitor the spread of epidemics following disasters, when data from social networks is collected and assessed.

- Social media such as Twitter, Facebook and Instagram is now also among the most important channels for communication between the population, national authorities, rescue teams and international humanitarian organizations. At the same time, they improve the self-organization of the affected population. But only around 10 percent of the news in social networks is relevant and informative for those affected in the event of a disaster (Imran 2013). Specialized disaster relief apps should increase this figure.

For sources, see bibliography WorldRiskReport 2016.