

Insurance, part 1: Flooding

Tuesday, 3 November 2015
08:45-10:15, Room I

- Explanation of the insurance sector: what is the role of insurers, re-insurers, brokers, financial regulators, etc.. (Marc Melsen, Guy Carpenter)
- Risk management and insurance (Ludo Nicotina, RMS)
- Assessment of Climate Change impacts on Flood Risk (Laurens Bouwer, Deltares)

DRAFT ABSTRACT

The role of insurance (and re-insurance) companies is to reduce the financial impact of weather related hazards to individuals, companies, and governments. For insurers, likelihoods and future trends of specific weather extremes are essential ingredients in the estimation of damage risk due to such events. Next to the likelihood of the event, the scale of the hazards (both in space and time) may be relevant as well, as correlated risks may increase the capital requirements for insurers to cover the larger losses in case the hazard occurs.

Damage to assets caused by inundation by river or sea water is one of the largest risks that is (partly) transferred to insurance companies. Coastal and inland river floods have different meteorological drivers: the former is a wind driven phenomenon, while the latter is an effect of precipitation and snow melt. Compounding events, such as extreme river discharge and concurrent storm surge near the coast, or a series of storms leading to additional surge are also very relevant for assessing flood risks. In the information chain from wind and precipitation data to damage risks estimates additional hydrological modelling is needed, next to the exposure and vulnerability factors that have to be accounted for.

The economic impact of floods is substantial: the annual (normalized) loss due to major floods in Europe between 1970 and 2006 is estimated at 3.8 billion US\$ (Barredo, 2009). However, the occurrence and extent of coastal and inland floods are highly variable, and the trends in past decennia are hard to detect. Observations indicate that average streamflows have decreased in the south and east of Europe and increased in Northern Europe, but increases in extremely high runoff have been found only for a few locations in Europe (IPCC, 2014).

For your information, please visit:

http://media.swissre.com/documents/Economics_of_Climate_Adaptation_focus_infrastructure.pdf).

<https://github.com/davidnbresch/climada>