

Megacities are the breeding ground for a wide variety of (re)insurance claims

## Megacities

In general, cities with a population of more than ten million are called “Megacities”. Very often, the term “Metropolitan Area” is used as an alternative, as it includes the metropolis, their surrounding suburbs and adjacent rural areas.

While only about 30% of the world's population lived in cities in 1950, today this figure is about 55% and is expected to rise to 68% by 2050. According to the United Nations in 2007 for the first time in history, the majority of humans lived in cities, many of them in megacities and their extended suburbs. Current calculations expect that within the next 20 years the urbanisation rate in industrial countries will increase only slightly, whereas in developing and threshold countries their cities have to absorb nearly the full growth of world population until 2030. This development will be driven primarily by India, China and Nigeria. These countries will probably account for one-third of the global urbanization trend. Delhi is projected to become the world's most populous city around 2028, overtaking Tokyo, which has a declining population. By 2025, China will have more than 220 "million" cities and 8 megacities.

The unbroken trend of growth in metropolitan areas is associated with several problems that may easily overburden the local infrastructure. In particular, there is an increasing need for food, drinking water, energy and living space. Limited access to health care, education and public transport are only some further aspects that highlight the complexity of unlimited increase in population.

It is well known that most notably in developing countries most of the above listed problems are not resolved and already led to substantial negative social and economical consequences for large parts of the population. Due to the speed of population growth, substantial improvements cannot be expected in the near future.

Claims related to megacities can predominantly affect four insurance lines:

### Product liability

In case of technological disasters, companies may be held liable to compensate in particular for personal damages and environmental damages. While personal damages are

covered under product liability insurance, environmental damages have to be paid via environmental liability policies. Historically chemical plants seem to be at risk for explosion and / or fire catastrophes (e.g. Seveso 1976, Bhopal 1984, Sandoz-fire Basel 1986).

### Life and Health Insurance, Personal Accident

Natural catastrophes but also terrorism risks are in general covered under life, health and personal accident insurance. High exposures also exist in nuclear risks, fire and explosion damages and traffic accidents, especially air or train disasters. Infectious diseases outbreaks like epidemics or pandemics represent an additional risk in life and health insurance, as regional or global outbreaks of infectious diseases may affect millions of lives at the same time. As chronic cardiovascular and airway diseases are linked to air pollution, health insurance industry will probably be affected by increased expenditures to treat these conditions.

### Property and Engineering

Property insurance covers may be hit after natural disasters, technological disasters or by terrorist attacks. As insured material assets have grown tremendously over the last decades in megacity areas, there is a substantial accumulation risk for property insurers. Due to limited space, the trend towards construction of skyscrapers is unbroken. Complex constructions sites increase risks for both areas, structural and civil engineering.

### Business interruption (BI), Transport & Marine, Aviation

Substantial BI claims can be expected after natural and technological disasters or infectious diseases outbreaks. Business interruption losses were one of the major effects to the (re-)insurance industry related to the SARS-CoV-2 pandemic. Transport disasters (train crash, air crash) will affect the respective policies of transport, marine or aviation. In addition, these policies are at risk related to natural disasters or terroristic attacks. So, a seaquake may affect airports on artificial island like Tokyo (Haneda) or Osaka (Kansai). The Japan tsunami in March 2011 flooded the airport of Sendai within minutes.