



Nat CATs: Finding a solution to close the protection gap in Asia

Ms Anne-Claire Serres, Head of Natural Catastrophe Underwriting, **Asia Capital Reinsurance Group Pte Ltd (ACR)**, shares a holistic framework to ensure better protection against natural catastrophes in the vulnerable parts of Asia.



Asia is getting increasingly exposed to natural catastrophes. Between 1970 and 2016, the region suffered, on average, 47% of the total world economic damage from natural catastrophes. Its share increased to 50% and 48% in 2015 and 2016 respectively while its insured losses accounted for only 18% and 16% of the worldwide insured losses over the same period.

The root causes of underinsurance are manifold. In developing and emerging markets, the phenomenon is generally attributed to the still-low levels of risk awareness and risk culture. In some cases, institutional legacies and cultural peculiarities such as decades of state monopolies and religious reservations towards the very concept of insurance also contribute to low levels of insurance penetration.

Even where there is receptiveness towards insurance, the affordability of such products can be a main concern especially for lower-income households and small and medium-sized enterprises.

However, empirical evidence does suggest that insurance penetration, i.e. the share of premiums in GDP, tends to rise when economies have reached a certain stage of development where basic needs, such as food and housing, are met. Another factor to consider is also risk perception due to rapid exposure changes. Yet interestingly, it seems that risk awareness does not rise according to the risk increase.

Asia: More exposed than ever

Indeed, the number of natural catastrophe events reported in Asia has risen from over 440 during the period 1971-1980 to over 1,600 in the last decade, a trend that is unlikely to change.

This is firstly a result of climate change. Although the 5th Intergovernmental Panel

on Climate Change (IPCC) assessment report indicates that climate change might not have a significant impact on the frequency and intensity of tropical cyclones in Asia, it is expected to impact precipitation by future increases in mean and extremes values of monsoon in East, South, and Southeast Asia. Furthermore, the rise in sea levels has already increased the height of a 50-year flood event in many coastal locations. In addition, a 10- to a more than 100-fold increase in the frequency of floods is anticipated in many places.

Secondly, the potential number of individuals exposed to natural hazards is also increasing. Over the past 45 years, the region's population has almost doubled from 2.2 billion in 1970 to 4.4 billion in 2016. Cities have expanded with the migration of people from rural areas in search of livelihoods and opportunities in urban cities, with 47.7% of the population of Asia-Pacific now living in cities compared to only 25.9% in 1970.

GDP is now increasingly concentrated along coastline countries like the Philippines and Japan (ranked third and fourth respectively on the Worldwide Risk index 2016), which have higher exposures to natural catastrophes. In particular, people living in low-lying coastal zones and flood plains are most at risk from the impact of climate change in Asia. In fact, some 50% of Asia's urban population lives in such areas.

Improving resilience

Thirdly, the ability for each country to prepare for, respond to, and recover from natural hazard events varies from one country to another depending on institutional capacity, financial resources, infrastructure and many social and economic factors. These will determine the impact of a disaster on a country and its people.

Insurance is undoubtedly one of the key

elements that can help decrease the vulnerability of a country with post-disaster financing. Japan, for example, has the lowest vulnerability while the Philippines, shares the highest exposure to natural catastrophes in Asia with Japan, is one of the most vulnerable.

To bridge the gap, Philippines has been trying to decrease its vulnerability by using innovative financial solutions. After having secured a Catastrophe Deferred Drawdown Option (a contingent credit line that provides immediate liquidity in the aftermath of a natural disaster) with the World Bank two years ago, the Philippines has just put in place a new parametric risk insurance programme against losses from major typhoons and earthquakes, again supported by the World Bank, following six years of intensive partnership.

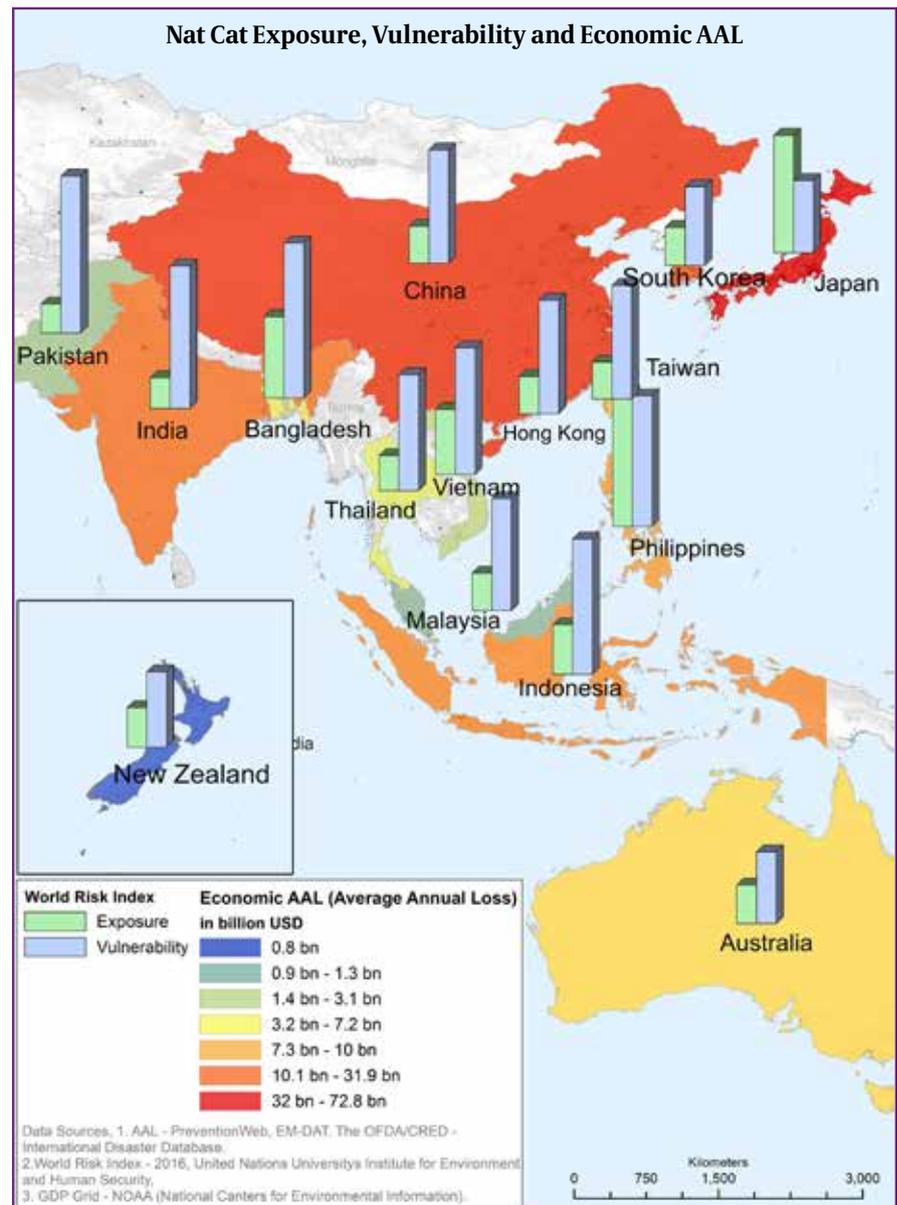
The programme includes the preparation of the first catastrophe risk model for the country and the adoption of a Disaster Risk Finance Strategy by the Department of Finance. This highlights the need for catastrophe models and state-of-the-art risk quantification methods to ensure the successful implementation of adequate insurance products.

Towards a common approach to measuring risk in the region

In the same vein, in order to raise natural catastrophe risk awareness and quantification, as well as decrease insurance gap, the Monetary Authority of Singapore (MAS) is supporting the Natural Catastrophe Data and Analytics Exchange (Nat Cat Dax) initiative led by Institute of Catastrophe Risk Management (ICRM) to establish a catastrophe data and analytics platform for the Asia Pacific region. This is expected to guarantee a common approach to natural catastrophe risk quantification.

Asian countries are individually using various disaster risk financing mechanisms. Looking further, a pan-Asian database using the same methods and concepts for all countries and perils such as floods, cyclones, earthquakes or maybe even droughts, will in fact be greatly beneficial to the standardisation of catastrophe products across the region and maybe even to the establishment of a regional sovereign risk pool.

This may happen in the next few years as the Association of Southeast Asia Nations (ASEAN) has launched the Disaster Risk Financing and Insurance Programme. As part of the programme, the development of a regional damage-and-loss database to estimate



the regional risks better is now in the works but above all, the programme aims at defining the conditions for establishing a regional risk insurance pool in the region.

Reinsurers need to offer timely solutions

Insurers and reinsurers together have to continue to bring more tailor-made solutions to the market. For example, small- and medium-sized agriculture corporations are increasingly looking for more meaningful catastrophe protection.

There is an increasing demand for customised (re)insurance solutions for the protection of rice, coffee, sugar cane or banana crops. However, as there are no off-the-shelf solutions for such exposures, herein lies an opportunity for the industry to develop tailored approaches

in evaluating and implementing the appropriate risk management measures assessing the level of protection required as well as understanding the loss of production according to different scenarios, and the resultant insurance needs (simulation of optimum deductibles and limits) and reinsurance coverage.

At the end of the day, this will support insured corporations in protecting both capital and earnings by covering production costs with a unique solution designed for their own needs.

In conclusion, Asia is in an exciting and prolific phase of transition where interest is growing toward new solutions to risk disaster relief – both in property and agriculture - and both insurers and reinsurers have the duty to ride on the interest and offer palpable products and solutions. ■