



## **Asia-Pacific Centre for Environmental Law Report 1902**

### **Climate Change and Catastrophe Management in a Changing China: The Way Forward**

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# Climate Change and Catastrophe Management in a Changing China: The Way Forward

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Under the influence of climate extremes and other natural disasters, the world is exposed to more and more catastrophe disasters. There is increasing attention not only to the question of how to compensate victims, but also of how compensation mechanisms, including insurance, can stimulate disaster risk reduction.

## China's "Whole Nation System": Success and Failure

Policymakers' first instinct is to rely on government intervention and controls. In disaster management field, it performs through the "Whole Nation System". In contrast with federal disaster policy in the United States, the Whole-Nation System is not the result of the failure of the private catastrophe insurance market. It generally refers to the government's effort to deploy and allocate the whole nation's resources to fulfill a specific difficult task within a limited time and thus promote the nation's interest. Government fiscal support serves as the major capital source for disaster relief and post disaster reconstruction.

Under the Whole-Nation System, China's government has resources at its disposal to manage the disaster response and recovery processes. It coordinates multiple levels of government and establishes national pools. It also mobilizes the military for emergency response to disasters. However, the government is by no means a perfect risk manager. The Whole-Nation System confronts government failures as follows:

- The perverse incentives for rent-seeking and corruption
- Samaritan's Dilemma reducing people's incentives to invest in protection and mitigation measures
- The regressive effects of counterpart aid
- The lack of risk financing under the Whole-Nation System
- The burden on public budgets and possible hindrance to economic growth
- The overuse of the military's resources for nondefense purposes

In view of these concerns, there is growing attention to how to augment government intervention by harnessing market forces to address disaster risks.

## **The Role of Insurance**

Increasingly, policymakers have come to realize that government alone cannot prevent or defray climate-related disaster risks. The role of insurance in managing global climate change has received a fair amount of attention in China. For example, in 2014, Shenzhen began its first large-scale experiment with a city government funded model called the Disaster Insurance Pilot.

Two important functions of insurance should be distinguished. The first is that it can spread risks over a larger community and thus compensate risk-averse individuals exposed to risky activities through risk pooling and risk shifting. A second function is precisely that by controlling the moral hazard risk insurers also regulate policyholders' behavior and can thus contribute to risk reduction. Insurers can have these important functions also for catastrophic risks, provided specific conditions are met. Insurance has an increasingly important potential to mitigate risk and prevent loss through regulating risky behaviors, because once insurers underwrite catastrophe risk, they have every reason to work to reduce their payouts. Therefore, regulation by insurance may help realizing the goal of disaster risk reduction and the corresponding losses.

## **Market Failure of Insurance**

However, promoting insurance to combat disaster risks faces a number of general challenges. Firstly, Chinese citizens are used to relying on the government, not private insurance, for catastrophe relief. Secondly, underwriting catastrophe insurance faces both supply-side and demand-side barriers. The commercial catastrophe insurance market is still in its infancy. On the supply side, problems with insurability and capacity hamper the underwriting process; Private insurers often lack sufficient incentives or capacity to provide adequate, affordable catastrophe insurance or to mitigate climate change risk. On the demand side, consumer demand for catastrophe insurance may also fall flat. Due to the frequent high cost of that insurance, consumers ignore such catastrophe risk because they believe "it will not happen to me." Many people are reluctant to discuss "accidents" or "death" ex ante, since they are afraid that doing so may induce mishaps.

## **China's Choice: The Way Forward**

Compared to the United States and European Union, China has a distinctive history and political-economic configuration as a transition economy. In order to fully develop a market-based disaster insurance system, which does not yet exist in China, government insurance, which is bought by the government from commercial insurers to supply basic assistance to the residents rather than government provides insurance coverage, could be a temporally compromise

choice to be discussed; and further, a dynamic relationship between government insurance and commercial insurance is crucial.

The New Model for catastrophe management should be run by private insurers rather than the government in order to promote risk mitigation. Under this multi-layered public-private catastrophe insurance partnership, the layers of risk transfer need to be supported by public and private sector activity centered on risk communication and risk reduction.

- The first layer of catastrophe losses would be covered by government insurance, which is bought by the government from commercial insurers to supply basic coverage to the residents rather than government provides insurance coverage (Government purchased insurance, not government provided insurance).
- The second layer would be consisted of commercial catastrophe insurance provided by private insurers charging risk-based premiums.
- The third layer would be private reinsurance and insurance-linked securities.
- Finally, the fourth and last layer would be a government-funded backstop as the last resort (i.e., government-sponsored reinsurance or compensation fund).

The interesting conclusion is that it is possible to combine the political desiderata (for example, of providing affordable disaster insurance to all) in a model whereby insurers could still apply their technical tools aimed at disaster risk reduction. Government acting as last resort is a reasonable choice since it can not only support failing catastrophe insurance due to the credit capacity of the government (as a last resort) but also regulate primary insurers' behaviors in risk mitigation and risk management through reinsurers' regulatory activities. More importantly, that would allow insurers to play their important role as private regulators, thus substituting or complementing public regulation aimed at disaster risk reduction. This private-public partnership becomes a prototype to develop catastrophe insurance in many countries. It could be developed in China as soon as possible to cope with the increasing catastrophe risks.