

## INSURANCE OPTIONS FOR ADDRESSING CLIMATE CHANGE

*Emerging markets are especially vulnerable to threats from climate change. Storms, droughts, and floods jeopardize the livelihoods of farmers, while extreme temperatures limit the ability of workers to be outdoors. Insurance is one tool that can help emerging markets adapt to climate change by heading off threats before they become disasters. Some pilot projects around the world are showing promise in using insurance to help emerging markets reduce the impact of climate change.*

Climate change has proven to be a major stumbling block to development in emerging markets. Floods in Thailand, typhoons in the Philippines, and droughts in Africa and India have cost thousands of lives and stalled economic development. Temperatures are likely to rise even higher, which will only worsen the impact of climate change. And extreme heat can affect productivity and economic activity. In 2015, for example, when temperatures across Iraq topped 50 degrees Celsius, the government called for a mandatory four-day holiday.<sup>1</sup> Such incidents are likely to become common.

In emerging countries, insurance markets are under development and don't play a major role in helping businesses mitigate climate change threats. Because insurance is viewed as a luxury product, many emerging markets have yet to prioritize the regulations and standards that insurance markets needs to function.

But now a number of factors are driving emerging markets to use insurance as a tool to adapt their countries to the changing climate. The insurance industry has been looking to emerging markets, where penetration rates have historically been low, in order to grow their business. In addition, cellular and digital technologies now make it possible to reach customers in remote areas.<sup>2</sup> Many international donors are also realizing the importance of heading off climate change to promote growth in emerging markets. Their efforts have shifted from programs that focus on distributing aid after a disaster to complementary programs that also reduce the impact of natural disasters, such as insurance. Insurers could, for example, lower premiums for a business that raises buildings in flood prone areas, or for builders who use fire resistant materials to build houses in areas at risk of wildfires.

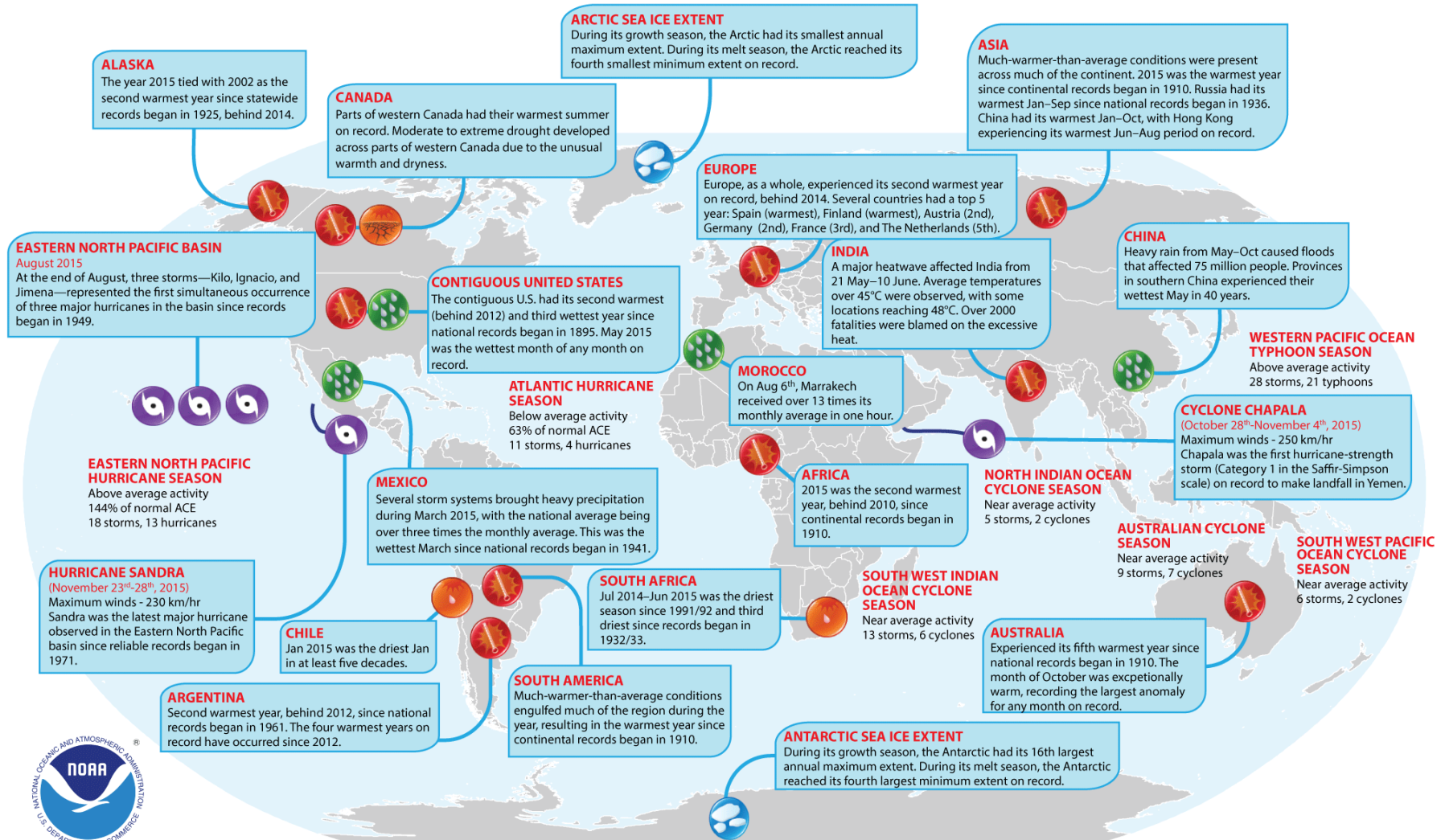
Finally, as awareness about climate change risks grow, people and businesses are looking for solutions that minimize the impact of climate related threats. Many governments are further boosting awareness by taking steps to increase financial literacy in their countries. As a result, more people are starting to see insurance as one tool that can help them address climate change.

India, for example, is especially vulnerable to climate change threats. Flash floods and droughts have disrupted energy production and destroyed crops in the rapidly growing country. In the state of Uttarakhand, for example, flash floods shut down six hydropower plants in 2013, cutting the state's installed power capacity by 35 percent. The situation could worsen, as most of the existing nuclear plants and many planned coal power projects will be on the coast where they will be exposed to extreme storms.<sup>3</sup>

Yet few people in India have insurance today, and insurance penetration stands at about 1 percent of gross domestic product. India faces about \$9 billion to \$10 billion in losses every year because of extreme weather events, and 80 percent of those losses are uninsured, according to the Earth Security Group.<sup>4</sup> Agriculture has been especially hard hit. From 2000 to 2016, India experienced five drought years and crop insurance has covered less than half of those losses. Because losses couldn't be fully covered, the government had to cap the premium for insured crops at between 1.5 percent and 3.5 percent of the insured value so as to allow some protection to all the farmers at risk.

But as extreme weather and related losses grow, people—and especially India's rapidly expanding middle class—are becoming more aware of insurance. As a result, insurers have a major

# Selected Significant Climate Anomalies and Events in 2015



Please Note: Material provided in this map was compiled from NOAA's NCEI State of the Climate Reports and the WMO Provisional Status of the Climate in 2015.

Source: National Oceanic and Atmospheric Administration, State of the Climate in 2015



opportunity to reach this market with products that cater to local needs.

### Donor Funded Efforts

Donor-funded environmental projects have historically focused on reducing greenhouse gasses, often through clean energy initiatives. Now international organizations are turning their attention to helping countries adapt their economies to reduce the threat of climate change, with insurance as a potential tool.

The United Nations Framework Convention on Climate Change, for example, has created the Green Climate Fund. The fund's goal is to generate \$100 billion in private funds to address climate issues in emerging economies, with about half going toward climate change adaptation efforts in the lowest-income countries such as small island nations. The fund backs programs that are both long-term and self-sustaining, as well as some that are more experimental. The first projects approved for funding in November 2015 included several adaptation measures such as the construction of emergency shelters in Bangladesh's coastal areas and support for modernizing weather observation and early warning systems in Malawi.<sup>5</sup>

The World Bank and IFC are also developing innovative insurance products in emerging markets and providing seed funding to help other organizations grow their climate related insurance programs. The Global Innovation Lab for Climate Finance, for example, is identifying new financial products, including insurance, to better use private investment to help emerging economies lessen the impact of climate change.<sup>6</sup> The donor-funded organization has backed green bonds to fund water projects in Kenya and a project to encourage people in Indonesia, Bangladesh, and the Philippines to buy property insurance.<sup>7</sup> Even though these projects are in the early stages, they show promise in using insurance as a tool to promote climate risk management.

The World Food Programme, Oxfam America, and the R4 Rural Resilience Initiative teamed up to create a program that allows low-income farmers to pay for crop insurance with their own labor. The goal of the program is to encourage farmers to eventually pay for insurance with cash by making them aware of the benefits and helping them generate savings. In 2015 about 32,000 farmers in four African countries participated in the program, which has a goal of enrolling 500,000 farmers by 2020.<sup>8</sup>

<sup>1</sup> Nick Wiltgren, "Feels-Like Temp Reaches 164 Degrees in Iran, 159 in Iraq," *Weather.com*, August 5, 2015.

<sup>2</sup> PWC, "Insurance 2020: The digital prize – Taking customer connection to a new level," <http://www.pwc.com/gx/en/industries/financial-services/insurance/publications/digital-non-life.html>.

<sup>3</sup> Earth Security Group, 2016. "Indian Insurance and Sustainable Development" (<http://earthsecurity.org/esg-convenes-roundtable-with-indian-insurers-to-discuss-sustainable-development/>).

Insurance should be seen as a complement to other measures to promote development, including the extension of credit. For example, banks are more willing to lend to small farmers when climate risks are covered by insurance. Insurance may also need to be capped and over time may prove infeasible if climate change causes losses to occur too frequently or if losses are too great, as with the crop insurance program for small farmers in India.

### Public and private Efforts

International donors are also starting to work with private insurers to create other forms of disaster relief that reduce the impact of climate change in emerging countries. For example, the Africa Risk Capacity, which supports pre-approved disaster relief programs based on defined weather events, and the G7 Climate Risk Insurance Initiative, which addresses climate risk, both involve a mix of public and private support. These 'risk pools' can be even more efficient than insurance because premiums are collected as needed and not annually. So far such programs remain the domain of governments, but commercial insurers are getting involved with crucial aspects of program design. With the ARC, for example, private insurers help design and execute programs. While private insurers have yet to see major profits from such programs, they are gaining a toehold to new customers in emerging markets and testing new business models.

### Conclusion

Climate change has led to major economic and financial losses in emerging markets. As weather conditions become even more extreme, the potential for losses will continue to rise in the absence of adaptation measures. Insurance, which has mostly been used to protect people and businesses in advanced economies after disaster strikes, is now being tested to help emerging markets adapt to climate change. As governments and private insurers step up their support for such efforts and consumers become more aware of their benefits, such programs will take off. ■

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<sup>4</sup> Ibid

<sup>5</sup> Green Climate Fund, (<http://www.greenclimate.fund/home>)

<sup>6</sup> The Global Innovation Lab for Climate Finance, ([www.climatefinancelab.org](http://www.climatefinancelab.org)).

<sup>7</sup> Laurie Goering, "New ways to lower investment risk seek to propel climate action," *Reuters*, June 30, 2016.

<sup>8</sup> World Food Programme, "The R4 Rural Resilience Initiative," <http://www.wfp.org/climate-change/initiatives/r4-rural-resilience-initiative>.