Agriculture reinsurance in China: Climate, resilience and the next phase of growth

As climate volatility drives increasingly correlated losses across Asia-Pacific's farm sector, China's agricultural insurance market is entering a new phase where growth depends less on scale and more on resilience, data and reinsurance partnership. **Allianz Re**'s **Ms Yu Qingyao** elaborates.

Agricultural insurance across Asia-Pacific is entering a new stage of development. Climate volatility, food security concerns and the modernisation of agricultural production are reshaping the risk landscape, creating new challenges for insurers and reinsurers alike.

The region remains highly exposed to floods, droughts, typhoons, extreme temperatures and disease outbreaks. However, the issue is no longer simply the frequency of these events. Increasingly, losses are becoming more systemic and correlated, affecting multiple regions, production sectors and supply chains simultaneously.

For insurers, this creates growing accumulation risk and volatility of earnings. For reinsurers, it reinforces the importance of providing not only capacity but also the technical expertise required to assess, model and manage increasingly complex agricultural exposures.

Against this backdrop, reinsurance is becoming a cornerstone of agricultural resilience across Asia, supporting insurers' ability to grow sustainably while helping governments achieve broader objectives around food security, rural development and economic stability.

Scale meets increasing complexity

China represents one of the most significant agricultural insurance success stories globally. Supported by extensive government premium subsidies and strong policy commitment, the market has expanded rapidly over the past two decades and is now among the largest agricultural insurance markets in the world.

The early stages of market development focused primarily on crop-yield protection against natural catastrophes. Today, however, China's agricultural sector is becoming increasingly sophisticated and commercialised. As a result, demand is expanding beyond traditional crop /livestock insurance into aquaculture, agricultural infrastructure, and downstream services.

At the same time, insurance solutions are evolving from yield-based coverage towards more comprehensive income and revenue protection products, and index-based insurance solutions that better reflect the financial realities of modern farming businesses.

This evolution is occurring against a backdrop of increasing climate uncertainty. The influence of large-scale climate drivers such as the El Niño-Southern Oscillation (ENSO) is becoming more pronounced, contributing to changing precipitation patterns, drought conditions and flood risks across key agricultural regions.

Recent years have demonstrated how rapidly agricultural risk can evolve. The 2023 pre-harvest rainfall event in Henan caused widespread wheat quality deterioration and significant economic losses in one of China's most important grain-producing provinces. In the same year, Typhoon Doksuri tracked unusually far inland after landfall, generating severe flooding across northern provinces and challenging traditional assumptions regarding catastrophe footprints and hazard zones.

Such events highlight a critical trend: agricultural losses are becoming increasingly correlated, making diversification more difficult for primary insurers and placing greater emphasis on sophisticated reinsurance support.

Reinsurance as a strategic enabler of growth

As insured values increase and risk accumulations become more concentrated, reinsurance is playing an increasingly strategic role within China's agricultural insurance market.

Historically, reinsurance has provided essential capital protection against severe catastrophe events. Today, its role extends much further. Reinsurers help insurers manage accumulation risk, improve portfolio resilience and support sustainable market expansion.

Agricultural production in China is increasingly concentrated within major growing regions. Consequently, a single drought, flood or typhoon event has the potential to impact multiple insurers, crops and agricultural sectors simultaneously. This creates significant earnings volatility and places pressure on insurers' balance sheets.

Reinsurance serves as a critical mechanism for diversifying these concentrated risks and providing protection against large-scale catastrophe events. Equally important, reinsurance enables insurers to continue expanding coverage and supporting government policy objectives without assuming disproportionate levels of risk concentration.

As climate-driven losses become increasingly unpredictable, the value of experienced reinsurance partners becomes even more significant. Reinsurers bring analytical capabilities, global catastrophe expertise and risk-management frameworks that can help insurers adapt to evolving risk patterns and strengthen underwriting discipline.

Technology is transforming agricultural risk management

The future development of agricultural insurance in China is likely to be driven as much by data and analytics as by market growth itself.

Historically, agricultural underwriting relied heavily on historical loss experience, regional averages and broad assumptions about hazard frequency and severity. However, changing climate conditions are reducing the predictive value of historical data alone.

Advances in satellite imagery, remote sensing, climate analytics and artificial intelligence are enabling insurers and reinsurers to develop a more granular understanding of agricultural risk.

These technologies provide significant benefits across the insurance value chain. Underwriters can assess risks at farm or field level rather than relying solely on regional averages. Portfolio managers can identify hidden concentrations of exposure and evaluate the impact of changing climate patterns. Claims teams can use satellite-based assessments to improve transparency and accelerate loss evaluation following major catastrophe events.

For reinsurers, these tools also strengthen accumulation management and scenario analysis. Understanding how climate change may alter catastrophe footprints is becoming increasingly important following events such as the Henan rainfall disaster and Typhoon Doksuri, both of which demonstrated that future losses may not conform to historical expectations.

Allianz Re's contribution: combining capacity with expertise

As agricultural risks become more complex, Allianz Re believes that sustainable market development requires a combination of risk-transfer capacity, advanced analytics and product innovation.

Traditionally, agricultural underwriting has relied heavily on historical hazard maps and past claims experience. However, climate change is altering the frequency, severity and geographic distribution of many weather-related perils.

Using climate analytics, insurers can identify regions where flood, drought or heat stress exposures may be increasing over time. For example, changing precipitation patterns linked to ENSO cycles may alter flood risks along the Yangtze River basin, while rising temperatures and reduced rainfall can intensify drought risk in northern agricultural regions.

These insights help insurers and reinsurers anticipate emerging risk concentrations before loss experience fully reflects the changing conditions.

Allianz Re is also actively supporting innovation in agricultural risk solutions. Parametric insurance, for example, is attracting growing interest as insurers seek efficient ways to address protection gaps associated with drought, flood and aquaculture risks.

Drawing on experience in weather- and satellite-based parametric structures, Allianz Re helps develop solutions where claims payments are linked to objective triggers such as rainfall levels, excess precipitation or vegetation indices. These products can complement traditional indemnity coverage, provide faster payouts and improve protection in sectors where conventional loss adjustment remains challenging.

By combining underwriting expertise, advanced analytics and innovative risk-transfer solutions, Allianz Re supports insurers in building more resilient agricultural portfolios while contributing to the long-term sustainability of the market.

Looking ahead: building agricultural resilience through partnership

The long-term outlook for agricultural insurance and reinsurance across Asia-Pacific remains positive. Continued government commitment to food security, ongoing agricultural modernisation and increasing awareness of climate risk are expected to drive further demand for protection solutions.

However, future growth will depend not only on expanding coverage but also on improving risk management capabilities.

Agricultural risks are becoming more interconnected, catastrophe losses more volatile and underwriting decisions increasingly data driven. Insurers will require greater analytical sophistication, stronger accumulation management and enhanced access to reinsurance capacity to navigate this environment successfully.

Technology, advanced climate analytics and innovative solutions such as parametric insurance will play a central role in this transformation. Equally important will be close collaboration between governments, insurers and reinsurers.

China's agricultural insurance market has already achieved remarkable scale, but its next chapter will be defined by resilience rather than expansion alone. Reinsurance will remain a critical enabler, combining capacity with expertise, innovation and strategic partnership. While China, South Korea and Japan have developed broad protection frameworks for their agricultural sectors, many Southeast Asian markets are still at an earlier stage. This presents both a significant protection gap and an opportunity for governments, insurers and reinsurers to work together in building more sustainable and climate-resilient agricultural insurance ecosystems.

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