

VIEWPOINT

Creating Resilience

Climate Risk and Real Estate Resilience

CBRE RESEARCH
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Introduction

The annual UN climate “Conference of the Parties” (COP 30) got underway last week in Belém, Brazil. COP 30 comes against a backdrop of heightened climate risk due to frequent and intense weather events, such as tropical cyclones, floods, heatwaves, droughts and bushfires.

This damage can be quantified in monetary terms, with some estimates putting the average annual loss from climate extreme events in Asia Pacific at around US\$780 billion, potentially increasing to US\$1.2 - US\$1.5 trillion in moderate to worst-case scenarios.¹

These costs include direct damages from events like flooding and typhoons along with future losses projected to impact a significant portion of the region's GDP.

Climate-related events pose significant risks to real estate assets and surrounding areas. As a result, property owners and occupiers must augment operational resilience to maintain asset value and viability.

This Viewpoint by CBRE explains how the real estate industry is identifying and mitigating the physical risks associated with the impacts of climate-related events.

Asia Pacific Cannot Afford to Ignore Extreme Weather, Barclays Bank, 2023.

¹ Asia Pacific Cannot Afford to Ignore Extreme Weather, Barclays Bank, 2023.



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Steady increase in climate extreme events

Severe climate-related events have increased in intensity across many regions of the world in recent decades, with Asia Pacific no exception.

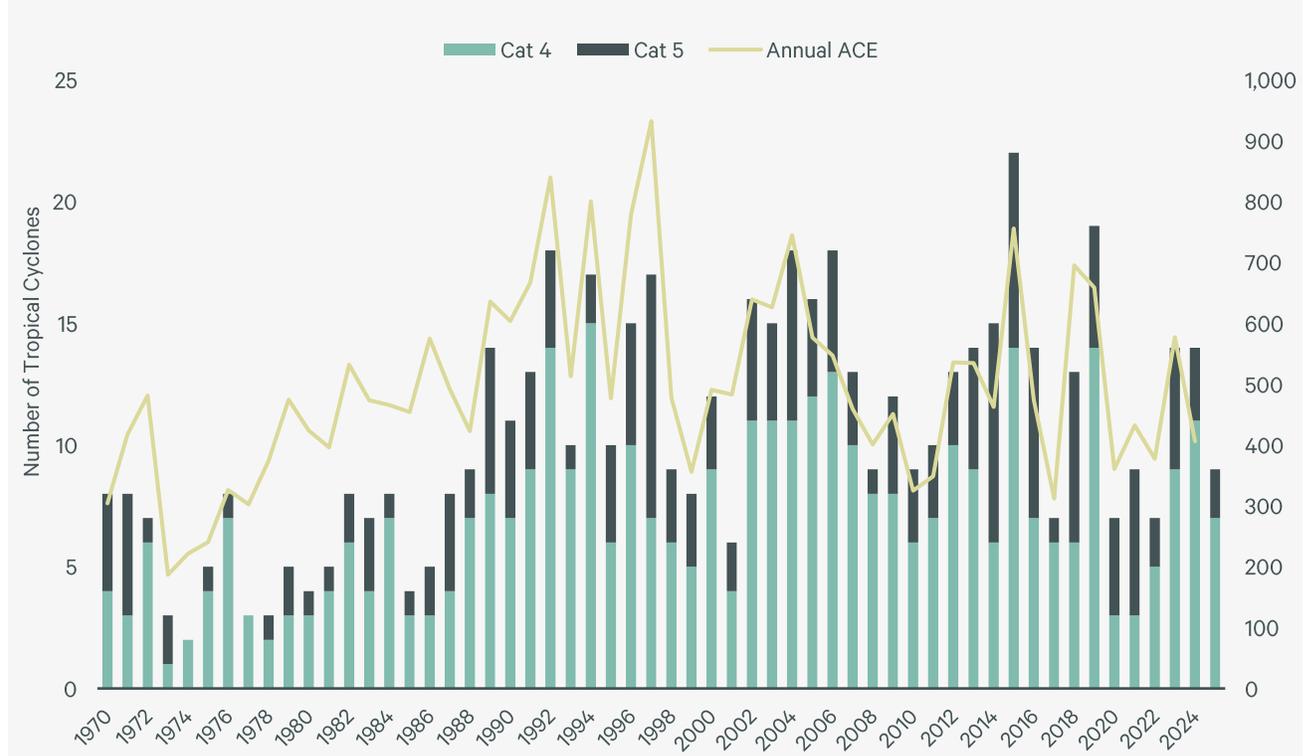
The World Meteorological Organisation’s (WMO) "State of the Climate in Asia 2024" report found that Asia was among the world’s most impacted regions from climate, weather, and water-related hazards in 2024.²

Precipitation-related events such as floods and storms typically cause the most casualties and economic losses in this region. Although the frequency of tropical cyclones in Asia Pacific has not risen, their strength and destructive potential have steadily increased in recent decades (Figure 1), with climate change a major contributing factor.

This year the region has suffered a series of climate-related disasters including monsoon flooding in mainland China, as well as flash floods, landslides, and other severe weather events in Indonesia, Thailand and the Philippines.

Developed cities have not been spared, with the likes of Hong Kong SAR experiencing an unusually severe typhoon season in 2025. The city is typically hit by around six typhoons annually but by mid-September had already been struck by eight with warning signals of level 1 or higher.³

Figure 1: Annual Accumulated Cyclone Energy (ACE) and Number of Tropical Cyclones of and above Category 3 in Asia Pacific Basins From 1970 to October 11th, 2025



² <https://wmo.int/news/media-centre/rising-temperatures-and-extreme-weather-hit-asia-hard>

³ <https://www.cityu.edu.hk/en/media/press-release/2025/09/23/cityuhk-climate-scientist-analyses-unusual-typhoon-surge-in-hong-kong-in-2025>

Typhoon Ragasa – the most powerful cyclone ever recorded – inflicted widespread damage on the city and the wider southern China area in September, causing several days’ disruption and economic losses estimated at hundreds of millions of USD.⁴

The typhoon forced the closure of container terminals in Hong Kong SAR, Shenzhen, and Guangzhou for several days, while Hong Kong International Airport was shuttered for 36 hours, the longest period in its history, grounding airfreight and severely disrupting supply chains.

As well as causing economic losses, displacement of people and damage to key infrastructure, climate events pose a significant risk to real estate assets and surrounding areas.

This will necessitate real estate owners, investors and occupiers to augment operational resilience to maintain the value and viability of their properties.

Impacts on real estate

Severe climate events impact real estate in several ways. These include:

Physical damage and repair costs: Typhoons, floods, and bushfires can cause substantial damage to buildings, infrastructure and surrounding areas, leading to high repair and maintenance costs and potential operational shutdowns. Increased exposure to more frequent and extreme weather incidents will affect aspects of building maintenance such as glazing, cladding and façades, pushing up operational costs over time.⁵

Increased insurance costs and reduced insurability: The rising frequency and severity of extreme weather events are pushing up insurance premiums, especially in high-risk areas. Properties in highly vulnerable areas may become difficult or impossible to insure affordably, negatively impacting their marketability and ability to be financed.



⁴ <https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3326892/hong-kongs-economic-losses-ragasa-may-run-billions-experts>

⁵ <https://www.cbre.com/insights/articles/business-insights-how-property-management-is-building-resilience-to-climate-risk>

Impact on property valuation and investment performance: Climate risk is increasingly factored into property valuations and investor decisions. Properties located in areas with high exposure to physical risks may see a decline in asset value, while those considered more resilient could benefit from a pricing premium. Some buildings may be at risk of becoming “stranded assets”; a term referring to a property that has lost or is expected to lose significant economic value prematurely due to external factors such as climate-related events.⁶

Disruption to operations and supply chains: Damage to a property or surrounding infrastructure can disrupt business operations, leading to a loss of rental income and lower occupancy rates.

Shifting occupier and investor preferences: As occupiers and investors increasingly incorporate climate risk into decisions, they prefer buildings with sustainability credentials and resilience measures. Properties with exposure to severe climate events face the risk of becoming obsolete with reduced leasing potential and the possibility of being subject to a “brown discount”.

Financing challenges: Lenders are applying stricter rules and higher lending ratios for properties at risk to climate-related events, reflecting the heightened credit risk associated with climate vulnerability.

Potential financial losses to the real estate sector because of severe climate events could be substantial. The Australian government's National Climate Risk Assessment, published in September 2025, estimated that losses in Australian property values could reach AUD 611 billion (USD 390 billion) by 2050 under a high (3°C) global warming scenario.

This figure represents the drop in market value of properties as climate risks (such as floods, bushfires, tropical cyclones, and heatwaves) become more apparent, leading to buyers paying less, banks potentially lowering valuations, and insurance becoming more expensive or more challenging to obtain.⁷

Enhancing property resilience to climate risks

The most obvious way commercial real estate can be protected from severe climate events is to build it in locations where there is a low likelihood of such events occurring.

While this is not always possible in Asia Pacific's many coastal and sub-tropical cities, investors can nevertheless conduct risk assessments at the due diligence phase of asset or site selection to identify potential hazards and pinpoint locations (even within the same neighbourhood) less vulnerable to specific threats.

Other factors to consider include the resilience of the wider area's infrastructure such as the power grid, water supply and drainage, and transportation routes, to ensure continuity of operations during and after a climate extreme event.

In terms of property features, investors should ensure resilience features are implemented at the design stage for new builds or retrofitted in existing properties.

⁶ <https://www.crrem.eu/wp-content/uploads/2022/12/CRREM-initiative-definition-on-stranding-risk-and-stranded-assets-in-the-build-environment.pdf>

⁷ [https://www.westernsydney.edu.au/newscentre/news_centre/more_news_stories/opinion_new_climate_report_warns_property_prices_face_a_\\$611_billion_hit_what_does_that_mean](https://www.westernsydney.edu.au/newscentre/news_centre/more_news_stories/opinion_new_climate_report_warns_property_prices_face_a_$611_billion_hit_what_does_that_mean)

Practical building-level measures may include:

Installing backup power systems: These are usually a combination of standby commercial generators for long-duration power and an uninterruptible power supply for instantaneous transfer to backup power. Ideally, property owners should utilise renewable energy systems such as solar panels with backup storage to maintain power during outages. Plant rooms and other critical systems can also be relocated to upper floors to safeguard them from potential flooding.

Upgrading drainage infrastructure: Landlords should implement advanced stormwater drainage systems and water channels. Effective storm drainage for office buildings usually comprises a multi-layered system of roof drains with primary/overflow pipes, external site drainage like trench drains, and features such as permeable surfaces and landscaping to minimize soil erosion and runoff.

Investing in impact-resistant windows: So-called “hurricane windows” are engineered to withstand extreme weather conditions and feature laminated glass with an interlayer that holds the glass intact even if broken. Other options include high-performance double-pane windows, which are engineered to withstand stronger winds.

Formulate disaster recovery plans: Commercial real estate landlords should have strategies in place to minimise the impact of climate-related hazards, respond effectively during a climate-related event, and restore property operations to normal within a short timeframe.

Even relatively small details such as where to locate building lobbies and entrance doors should be given careful consideration. This is especially relevant in the case of properties situated on coastlines of cities such as Hong Kong SAR, Tokyo and Manila, for which flood mitigation measures may be insufficient to prevent sea-facing ground floor areas becoming inundated during storms and floods.



Emergency Back-up Battery Storage

In Australia, measures in bushfire-prone areas include clearing flammable vegetation around the building's perimeter to create a defensive space. For buildings experiencing the urban heat island effect, owners can add more vegetation to provide shade.

Whilst such features are relatively straightforward, and regulators are exerting pressure to adopt them, implementing climate risk mitigation and adaptation measures face challenges. Many challenges relate to property owners' perceptions of risk.

Some real estate industry stakeholders focus on short-term horizons and either do not see climate risk as a proximate threat or fear that acting will negatively affect their immediate interests. Risks are often viewed as not being predictable enough to warrant concrete action, and their impact may not be consistent across portfolios.⁸

Although there will come a tipping point where certain areas become high risk zones for investment and insurance, and valuations will come down, the uncertainties of climate risk can make property investors reluctant to introduce measures today that reduce long-term costs and preserve asset value.

CBRE expects occupiers looking to minimise their exposure to climate risk will increasingly opt for resilient properties, a shift that will have consequences for the performance of buildings with or without such features. Put simply, resilient buildings will command higher rents and long-term value.

Leveraging climate risk tools

Platforms that collect and analyse climate data are emerging as a powerful tool to safeguard real estate against climate risk. This data can be used in decision-making to inform site selection, evaluate property value, and guide resilience strategies. Data can also be utilised to improve property resilience, such as retrofitting buildings to withstand specific hazards such as extreme heat, strong winds or flooding.

There now exist several climate risk platforms that help financial institutions, asset managers, real estate companies, and service providers price, manage, and identify actions to build resilience to climate-related impacts on the built environment.

Physical climate risk assessment tools such as Climate X, which CBRE uses for corporate operations and client portfolios along with insights from AI technology, incorporates variables to facilitate the calculation of risk from local hazards, such as coastal flooding, drought, extreme heat, landslides, storms and wildfires.⁹ This enables sustainability specialists to translate climate risk scenarios and hazards into easy-to-understand information that helps clients evaluate locations and pinpoint potential climate risks.

In practical terms, these tools can identify severe climate events that happened in a particular location—information that is essential to would-be owners or tenants. The platform can use predictive models to assess the likelihood of a climate extreme event occurring in a particular location in the future.

Using floods as an example, data inputs and insights on a property's location—and characteristics like internal and external structure and surroundings—can help property managers identify which part of the asset will be at risk in the short, medium and long term.

⁸ <https://www.cbre.com/insights/articles/business-insights-how-property-management-is-building-resilience-to-climate-risk>

⁹ <https://www.climate-x.com/>

This same analysis can be used to identify mitigation measures such as protecting vulnerable equipment in the property's lower floors, installing flood protection equipment around the building perimeter and even changing wall and floor coverings.

Some tools include the ability to plan adaptation measures, enabling advisors to help clients calculate CapEx requirements and return on investment for retrofits and acquisitions that increase resilience.

Conclusion

Climate events in Asia Pacific pose significant risks to real estate through direct property damage, increased operational costs, and reduced property valuations. A property's ability to mitigate losses and maintain value depend on its location, design, hardware, and day-to-day management.

Investors will increasingly prioritise climate resilience, as properties with higher resilience may retain more value, attract stronger occupier demand and outperform their less resilient counterparts. Owners who invest in resilience can gain a competitive advantage by protecting their properties from damage and maintaining their value and marketability in the face of changing climate risks.

Leading-edge tools and insights from real estate experts can capture and analyse data on climate risk will be essential for investors and occupiers seeking to protect value across a property's lifecycle.

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