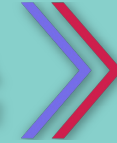




Resilience Week 2022

COLLECTIVE RESILIENCE
7-8 NOVEMBER 2022



Welcome





PARIMA
RESILIENCE WEEK 2022



Navigating the Climate Change Journey to a Sustainable Future

Presentation by

Mujalin Boonrod
Associate Director, Insurance Management
Minor Hotel Group Ltd.

Rungthiwa Jatuphaksamphan
Director of Strategic Account Management, Asia
Aon

Siri-on Luangaroonlerd
Specialty Director, Thailand
Aon



Speakers

AON



Mujalin Boonrod

Associate Director, Insurance
Management
Minor Hotel Group Ltd.



Rungthiwa Jatuphaksamphan

Director of Strategic Account
Management, Asia
Aon



Siri-on Luangaroonlerd, Dip CII

Specialty Director, Thailand
Aon

Poll Question

The World Risk Index ranks countries not only based on exposure to natural perils, but also measures their ability to cope with such disasters. Where does Thailand rank out of 192 countries?

การจัดอันดับดัชนีความเสี่ยงโลก (World Risk Index) จากทุกประเทศไม่เพียงแต่จะวัดจากความเสี่ยงทางธรรมชาติเท่านั้น แต่ยังวัดจากความสามารถในการรับมือกับภัยพิบัติดังกล่าวด้วย ประเทศไทยอยู่อันดับไหนจาก 192 ประเทศ?

A 23

B 53

C 83

D 133

E 173

Poll Question

Which impact of climate change are you most concerned with?

องค์กรของท่านมีความกังวลเรื่องใดมากที่สุด จากผลของการเปลี่ยนแปลงสภาพอากาศ

- | | | |
|---|------------------------------|------------------------------------|
| A | Flood | น้ำท่วม |
| B | Drought | ภัยแล้ง |
| C | Heatwave/rising temperature | คลื่นความร้อน อุณหภูมิที่สูงขึ้น |
| D | Windstorm/typhoon | ลมพายุ ไต้ฝุ่น |
| E | Riverbank/sea level increase | ระดับน้ำในแม่น้ำ หรือ ทะเล สูงขึ้น |

Poll Question

Have you recently experienced any climate change impact on your risk management/insurance programme? องค์กรของท่าน เริ่มรับรู้ หรือได้รับผลกระทบ ในส่วนของ การบริหารความเสี่ยง และการจัดโปรแกรมประกันภัย จากการเปลี่ยนแปลงสภาพภูมิอากาศ เมื่อเร็วๆ นี้ หรือไม่ อย่างไร?

- A No impact at all ยังไม่ได้รับผลกระทบ
- B Starting to witness some impacts on the coming renewals
เริ่มรู้สึกถึงปัญหาในการต่ออายุกรมธรรม์
- C In discussions on transition impact ต้องนำส่งข้อมูลเกี่ยวกับการเปลี่ยนแปลงสภาพภูมิอากาศมากขึ้น
- D Already experienced significant impact on this year's renewals
ได้รับผลกระทบอย่างชัดเจน



Climate Change Overview





No corner of the globe is immune from the devastating consequences of climate change.

Rising temperatures are fuelling environmental degradation, natural disasters, weather extremes, food and water insecurity, economic disruption, conflict, and terrorism.

Sea levels are rising, the Arctic is melting, coral reefs are dying, oceans are acidifying, and forests are burning. It is clear that business as usual is not good enough.

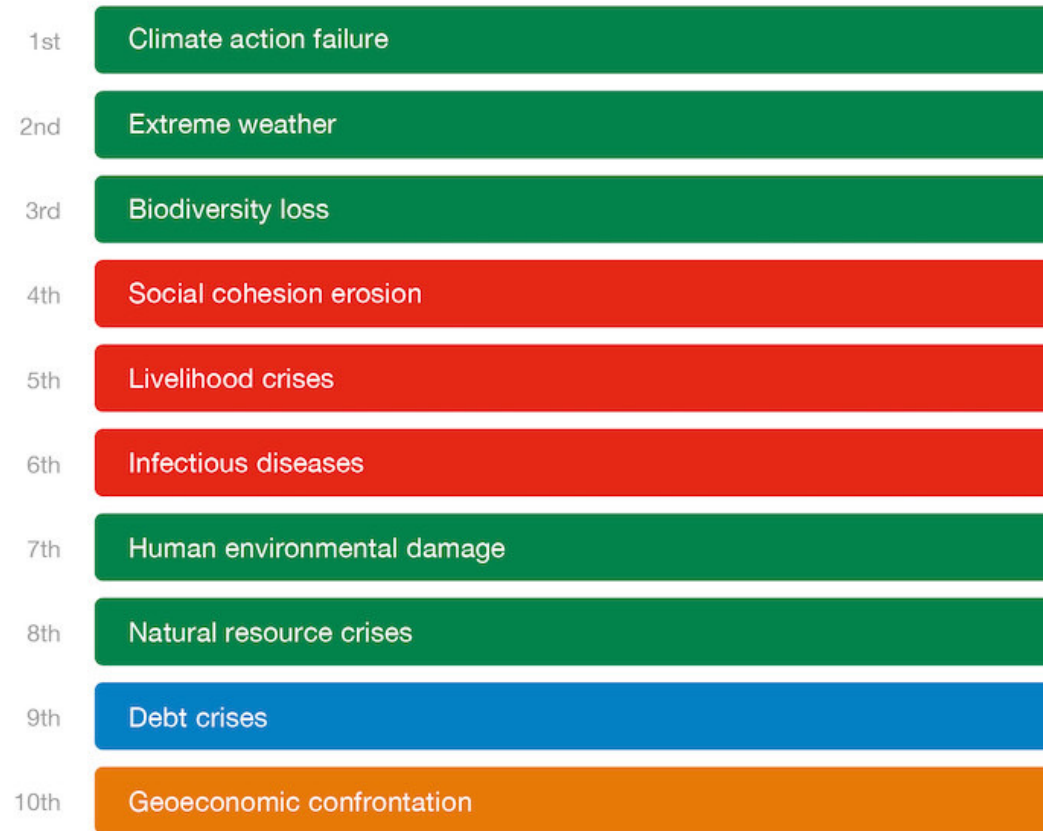
As the infinite cost of climate change reaches irreversible highs, now is the time for bold collective action.

UN Secretary-General António Guterres
September 2019

Top 10 Global Risks by Severity

Over the Next 10 Years

AON



■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Source: World Economic Forum Global Risks Report 2022

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Climate Change Journey in Thailand

- Vulnerable to **climate variability and change** due to **increasing natural hazards**, such as heavy rainfall, floods, and droughts, as well as sea level rise impacts the country's coasts
- Focusing its adaptation efforts on key sectors such as **energy, water, transportation, agriculture, human settlements** and **public health**
- **Asian Development Bank (ADB) Strategy 2030**: Climate Change is one of the seven operational priorities
- ADB's climate risk management framework requires all projects to undergo **climate risk screening** at the concept stage and full climate risk and adaptation assessments for projects with medium to high risk.

Projected Anomaly for Maximum, Minimum and Average Daily Temperatures for 2040–2059 and 2080–2099

Scenario	Average Daily Maximum Temperature		Average Daily Temperature		Average Daily Minimum Temperature	
	2040–2059	2080–2099	2040–2059	2080–2099	2040–2059	2080–2099
RCP2.6	1.0 (–0.6, 2.9)	1.1 (–0.6, 3.0)	1.0 (–0.3, 2.4)	1.1 (–0.2, 2.5)	1.0 (–0.1, 2.2)	1.1 (–0.2, 2.4)
RCP4.5	1.3 (–0.5, 3.3)	1.8 (0.0, 3.9)	1.4 (0.0, 2.8)	1.9 (0.4, 3.5)	1.4 (0.0, 2.7)	2.0 (0.6, 3.5)
RCP6.0	1.2 (–0.7, 3.0)	2.2 (0.4, 4.5)	1.2 (–0.4, 2.5)	2.3 (0.6, 4.1)	1.2 (–0.2, 2.4)	2.4 (0.7, 4.0)
RCP8.5	1.7 (0.0, 3.6)	3.6 (1.6, 6.1)	1.8 (0.4, 3.2)	3.8 (2.0, 5.8)	1.9 (0.5, 3.2)	3.9 (2.2, 5.9)

Source: World Bank Group Climate Risk Country Profile: Thailand

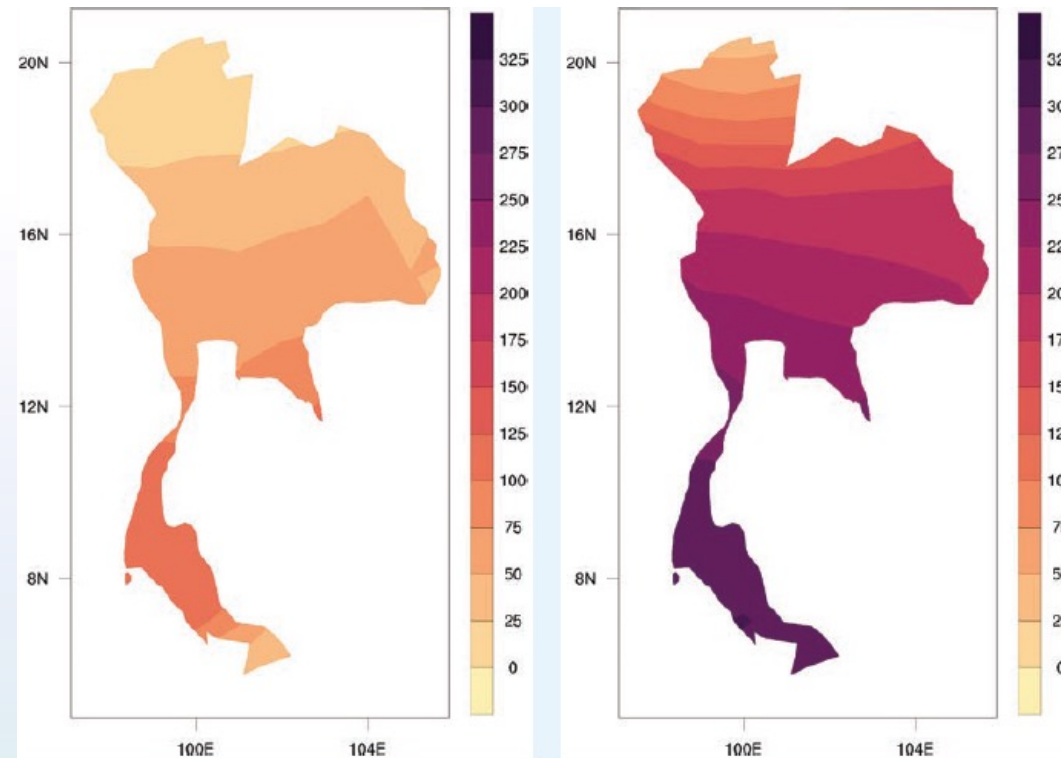
Projections of Average Temperature Change in Thailand

Scenario	2040–2059		2080–2099	
	Jun–Aug	Dec–Feb	Jun–Aug	Dec–Feb
RCP2.6	1.0 (0.2, 2.0)	1.0 (–0.6, 2.6)	1.0 (0.1, 2.0)	1.1 (–0.4, 2.6)
RCP4.5	1.4 (0.5, 2.5)	1.4 (–0.4, 2.8)	1.8 (0.9, 3.0)	1.9 (0.2, 3.7)
RCP6.0	1.2 (0.3, 2.3)	1.0 (–0.8, 2.2)	2.3 (1.2, 3.7)	2.1 (0.2, 4.0)
RCP8.5	1.6 (0.6, 2.8)	1.9 (0.1, 3.4)	3.5 (2.4, 5.4)	3.8 (1.4, 6.1)

Source: World Bank Group Climate Risk Country Profile: Thailand

Climate Related Natural Hazards: Heat Waves

- Current median probability of a heat wave (defined as a period of 3 or more days where the daily temperature is above the long-term 95th percentile of daily mean temperature) is around 3%
- By 2080s, Thailand is projected to experience significant increases in the number of days in which Heat Index exceeds 35°C, particularly under higher emissions pathways (RCP6.0 and 8.5)



Climate Related Natural Hazards: Drought

- In Western Thailand, El Niño-related droughts have become more frequent and severe concurrently with increasing CO₂ levels
- With increased drought conditions, as well as increases in temperature, Thailand is at risk from heightened air pollution, particularly for major urban areas
- These conditions are also likely to increase the country's risk for forest fires, which will impact air quality

Climate Related Natural Hazards: Flood

- Major natural hazard facing Thailand in terms of frequency and damage
- According to United Nations Office for Disaster Risk Reduction (UNISDR), average annual loss associated with flooding in Thailand is approximately US\$2.6 billion, which represents almost 100% of losses associated with hazards
- Median increase in the population affected by an extreme (90th percentile) flood by 2035–2044 is approximately 2.3 million people – increase of 258% from the population exposed to extreme flooding in 1971–2004

Estimate	Population Exposed to Extreme Flood (1971–2004)	Population Exposed to Extreme Flood (2035–2044)	Increase in Affected Population
16.7 Percentile	312,568	1,194,555	881,987
Median	886,335	3,177,190	2,290,855
83.3 Percentile	2,184,124	4,941,744	2,757,620

Source: World Bank Group Climate Risk Country Profile: Thailand

Key Takeaways

- By the 2090s, the average temperature is projected to increase by 0.95°C–3.23°C above the 1986–2005 baseline, with the rate of warming dependent on the emissions pathway
- Projected temperature increases are strongest in the south
- Drought and cyclone impacts represent major hazards which may intensify in future climate scenarios
- Thailand's agriculture sector could be significantly affected by a changing climate, due to its location in the tropics where agricultural productivity is particularly vulnerable to temperature rises
- Combination of rising seas and sinking land, as well as potential cyclone-induced storm surge resulted from the climate change impact, place Bangkok in a precarious position when the net, or relative, rate of sea-level rise
- Human impacts of climate change remain dependent on the approach to adaptation adopted



Questions?





Thank You!

