

## 3.2

# CLIMATE-RELATED PHYSICAL RISKS

## Types of climate-related physical risks

### Important notice

This unit is part of a package of learning materials designed to support understanding of foundational concepts relating to climate-related financial disclosures. These learning materials do not constitute application or regulatory guidance for the preparation of climate-related financial disclosures and are not intended to represent legal or professional advice. We encourage you to seek your own professional advice to find out how the Corporations Act 2001 (Corporations Act) and other relevant laws may apply to you and your circumstances, as it is your responsibility to determine your obligations and comply with them.



### Key topics

- › Climate-related physical risks
- › Acute and chronic physical risks

## Relevance for climate-related disclosures

Understanding climate-related risks, including climate-related physical risks, will help entities in their climate-related disclosures. Climate-related risks include climate-related physical risks and climate-related transition risks. Climate-related physical risk refers to both acute physical risk and chronic physical risk.

In this unit, you will learn about different types of climate-related physical risks.

## Overview

Climate-related risks are the potential negative effects of climate change on an entity and are categorised as climate-related physical risks and climate-related transition risks.

Climate-related transition risks are covered in Module 4 Units 1-6.

## Climate-related physical risks

Climate-related risks can be categorised as climate-related physical risks and climate-related transition risks.

- › Climate-related physical risks are those risks arising from climate change that are event driven (acute physical risk) or from longer-term shifts in climatic patterns (chronic physical risk).
- › Climate-related transition risks are those risks arising from efforts to transition to a lower-carbon economy. Climate-related transition risks include policy, legal, technological, market and reputational risks. Climate-related transition risks are covered in Module 4, Units 1-6.

## Acute physical risks

Acute physical risks are risks resulting from climate change that are event-driven. 'Acute physical risks arise from weather-related events such as storms, floods, drought or heatwaves, which are increasing in severity and frequency.'



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The effects may be shorter-term in nature and can include direct physical damage to business assets, disruption of supply chains, threats to worker safety and substantial financial losses.

Module 3, Unit 3 has further details on acute physical risks.

## Chronic physical risks

Chronic physical risks are risks resulting from climate change from longer-term shifts in climatic patterns. Chronic physical risks include changes in precipitation and temperature which could lead to sea level rise, reduced water availability, biodiversity loss and changes in soil productivity.

Unlike acute physical risks, the effects may accumulate gradually and, in the absence of proper risk assessments, may go unnoticed until they reach a critical level.

Long-term changes in rainfall may lead to reduced water availability. Changes in temperature may see tropical diseases spread to new regions. Sea level rise may threaten critical infrastructure. Just as for acute physical risks, these chronic physical risks can have significant financial implications, such as the risk of damage to premises, disruption of operations, or risks to the health and safety of employees.

Module 3, Unit 6 has a case study on chronic physical risks.

## How acute and chronic physical risks relate to one another

The distinction between acute physical risks and chronic physical risks is important when assessing and reporting climate-related physical risks. They unfold over different timeframes, are different in their nature, and may lead to different potential impacts and needs.

However, acute physical risks and chronic physical risks also interact in ways that amplify each other. For example, tropical cyclones (an acute physical risk) are more destructive due to sea-level rise (a chronic physical risk), as storm surges are now riding upon a higher sea level and able to reach further inland. Similarly, the persistent stress on systems and infrastructure from chronic physical risks may reduce our resilience to acute shocks.

Therefore, in addition to identifying acute physical risks and chronic physical risks affecting your entity, you may also need to consider how they interact and compound your overall climate-related physical risks.

### Key takeaways

- › Climate-related physical risks may be classified as either acute physical risks (event-driven) or chronic physical risks (long-term). These reflect different types of risks that can affect an entity.
- › Assessing both acute physical risks and chronic physical risks allows for a more robust understanding of climate-related risks and opportunities.