

**Table 12.12 | Emergence of CIDs in different time periods, as assessed in this section.** The colour corresponds to the confidence of the region with the highest confidence: white cells indicate where evidence is lacking or the signal is not present, leading to overall low confidence of an emerging signal.

Climatic Impact-driver Type	Climatic Impact-driver Category	Already Emerged in Historical Period	Emerging by 2050 at Least for RCP8.5/SSP5-8.5	Emerging Between 2050 and 2100 for at Least RCP8.5/SSP5-8.5
Heat and Cold	Mean air temperature	1		
	Extreme heat	2	3	
	Cold spell	4	5	
	Frost			
Wet and Dry	Mean precipitation		6	7
	River flood			
	Heavy precipitation and pluvial flood			8
	Landslide			
	Aridity			
	Hydrological drought			
	Agricultural and ecological drought			
Wind	Fire weather			
	Mean wind speed			
	Severe wind storm			
	Tropical cyclone			
Snow and Ice	Sand and dust storm			
	Snow, glacier and ice sheet		9	10
	Permafrost			
	Lake, river and sea ice	11		
	Heavy snowfall and ice storm			
	Hail			
Coastal	Snow avalanche			
	Relative sea level		12	
	Coastal flood			
Open Ocean	Coastal erosion			
	Mean ocean temperature			
	Marine heatwave			
	Ocean acidity			
	Ocean salinity	13		
Other	Dissolved oxygen	14		
	Air pollution weather			
	Atmospheric CO <sub>2</sub> at surface			
	Radiation at surface			

- High confidence except over a few regions (CNA and NWS) where there is low agreement across observation datasets.
- High confidence in tropical regions where observations allow trend estimation and in most regions in the mid-latitudes, medium confidence elsewhere.
- High confidence in all land regions.
- Emergence in Australia, Africa and most of Northern South America where observations allow trend estimation.
- Emergence in other regions.
- Increase in most northern mid-latitudes, Siberia, Arctic regions by mid-century, others later in the century.
- Decrease in the Mediterranean area, Southern Africa, South-west Australia.
- Northern Europe, Northern Asia and East Asia under RCP8.5 and not in low-end scenarios.
- Europe, Eastern and Western North America (snow).
- Arctic (snow).
- Arctic sea ice only.
- Everywhere except WAN under RCP8.5.
- With varying area fraction depending on basin.
- Pacific and Southern oceans then many other regions by 2050.

