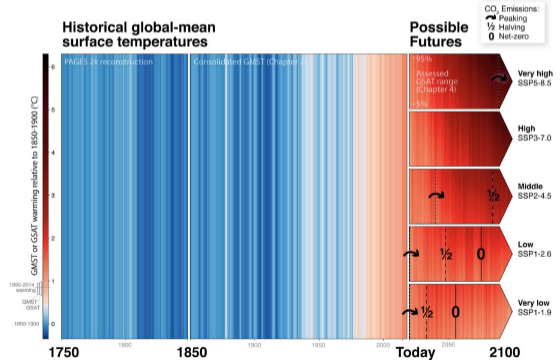


AR6: Headlines & Highlights





[Credit: NASA]

“Recent changes in the climate are widespread, rapid, and intensifying, and unprecedented in thousands of years.



[Credit: Yoda Adaman | Unsplash]

“ It is indisputable that human activities are causing climate change, making extreme climate events, including heat waves, heavy rainfall, and droughts, more frequent and severe.



[Credit: Hong Nguyen | Unsplash]

“ Climate change is already affecting every region on Earth, in multiple ways.

The changes we experience will increase with further warming.



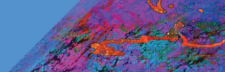
[Credit: Shari Gearheard | NSIDC]

“ There’s no going back from some changes in the climate system. However, some changes could be slowed and others could be stopped by limiting warming.



[Credit: Peter John Maridable | Unsplash]

“ Unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, limiting warming to 1.5°C will be beyond reach.



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A.2.2 “Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years (high confidence).”

A.1.2 “Each of the last four decades has been successively warmer than any decade that preceded it since 1850.”

A.1.2 “Global surface temperature was 1.09 [0.95 to 1.20] °C higher in 2011–2020 than 1850–1900, with larger increases over land (1.59 [1.34 to 1.83] °C) than over the ocean (0.88 [0.68 to 1.01] °C).”



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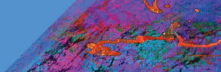


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A.4.3 “Together, ice sheet and glacier mass loss were the dominant contributors to global mean sea level rise during 2006–2018 (high confidence). The rate of ice sheet loss increased by a factor of four between 1992–1999 and 2010–2019.”

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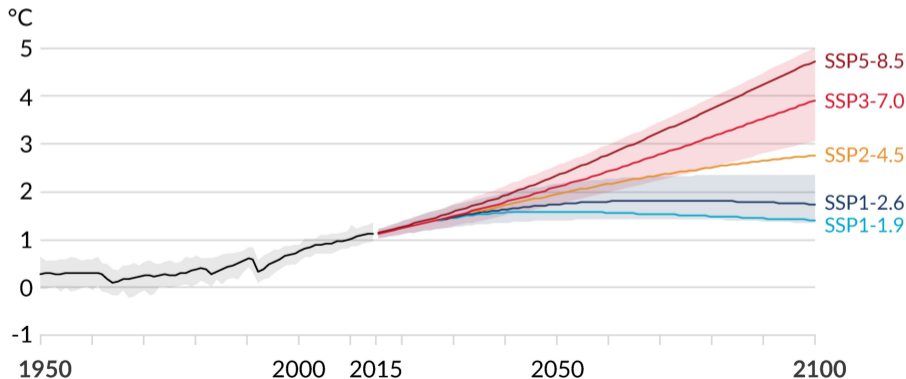
Possible climate futures

Scenario	Near term, 2021–2040		Mid-term, 2041–2060		Long term, 2081–2100	
	Best estimate (°C)	<i>Very likely</i> range (°C)	Best estimate (°C)	<i>Very likely</i> range (°C)	Best estimate (°C)	<i>Very likely</i> range (°C)
SSP1-1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0	1.4	1.0 to 1.8
SSP1-2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2	1.8	1.3 to 2.4
SSP2-4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5	2.7	2.1 to 3.5
SSP3-7.0	1.5	1.2 to 1.8	2.1	1.7 to 2.6	3.6	2.8 to 4.6
SSP5-8.5	1.6	1.3 to 1.9	2.4	1.9 to 3.0	4.4	3.3 to 5.7

B.1 “Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered.”

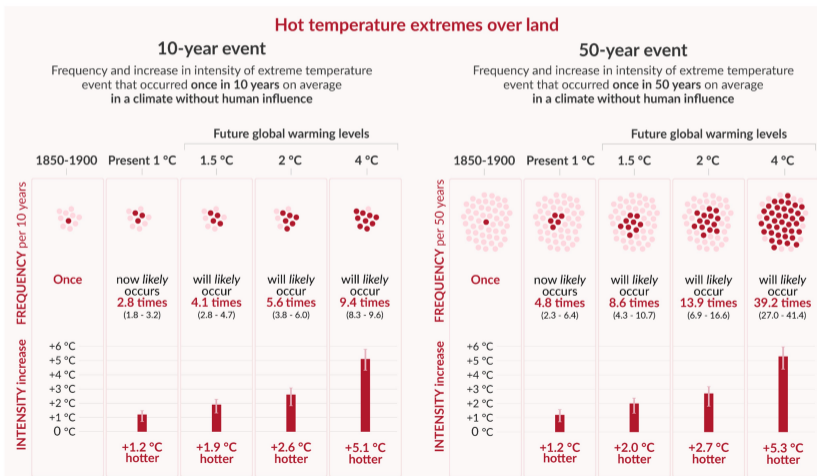
Human activities affect all the major climate system components, *Figure SPM.8* with some responding over decades and others over centuries

a) Global surface temperature change relative to 1850-1900

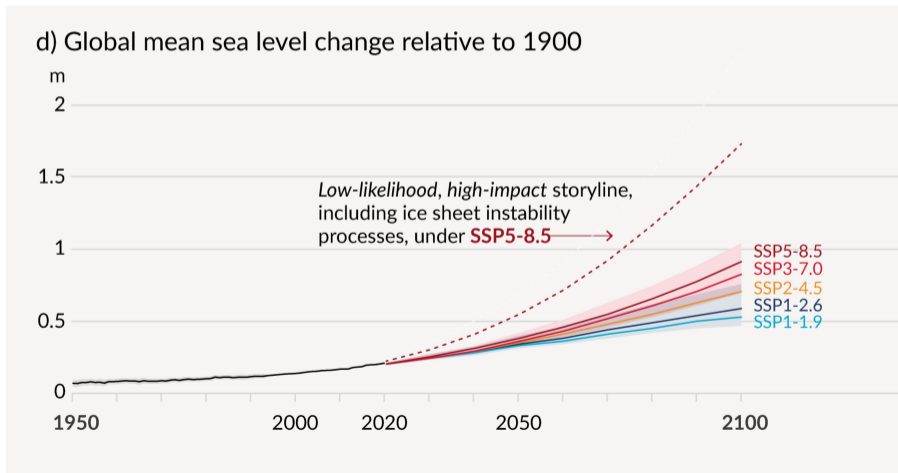


Projected changes in extremes are larger in frequency and intensity with every additional increment of global warming

Figure SPM.6



Human activities affect all the major climate system components, *Figure SPM.8* with some responding over decades and others over centuries



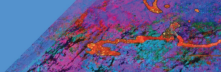


B.5.3 “It is virtually certain that global mean sea level will continue to rise over the 21st century.”

C.2.5 “Due to relative sea level rise, extreme sea level events that occurred once per century in the recent past are projected to occur at least annually at more than half of all tide gauge locations by 2100 (high confidence).”

B.5.4 “Relative sea level rise contributes to increases in the frequency and severity of coastal flooding in low-lying areas and to coastal erosion along most sandy coasts (high confidence).”

B.5.4 “...sea level is committed to rise for centuries to millennia due to continuing deep ocean warming and ice sheet melt, and will remain elevated for thousands of years (high confidence).”



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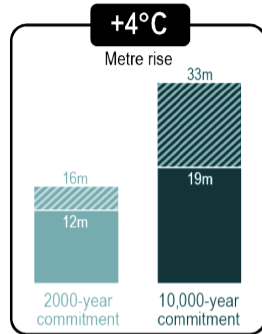
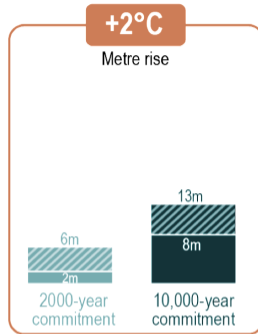
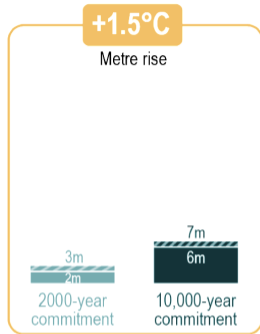
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Long-term consequences: Sea level rise

Today, sea level has already increased by 20 cm and will increase an additional 30 cm to 1 m or more by 2100, depending on future emissions.

Sea level reacts very slowly to global warming so, once started, the rise continues for thousands of years.



The future...

The climate we and the young generations will experience depends on future emissions. Reducing emissions rapidly will limit further changes, but continued emissions will trigger larger, faster changes that will increasingly affect all regions. Some changes will persist for hundreds or thousands of years, so today's choices will have long-lasting consequences.

