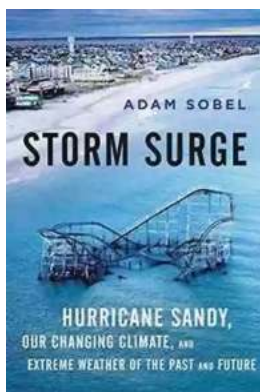


Hurricane Sandy: Our Changing Climate and Extreme Weather of the Past and Future

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Hurricane Sandy, also known as Superstorm Sandy, was one of the most devastating natural disasters in U.S. history. The storm, which struck the East Coast of the United States in October 2012, caused over \$70 billion in damages and claimed the lives of at least 233 people. However, Sandy was more than just a major weather event; it was a powerful reminder of the changing climate and the increasing intensity of extreme weather events. In this article, we will explore the connection between Hurricane Sandy and our changing climate, as well as the potential future risks posed by extreme weather.

The Rising Threat of Extreme Weather:



Storm Surge: Hurricane Sandy, Our Changing Climate, and Extreme Weather of the Past and Future by Adam Sobel (Illustrated Edition, Kindle Edition)

★★★★☆ 4.6 out of 5

Language : English
File size : 6724 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 336 pages



In recent decades, there has been a growing concern about the increase in extreme weather events, such as hurricanes, storms, and floods. Scientific research has shown that these events are directly linked to climate change and the warming of the Earth's atmosphere. Warmer temperatures lead to more evaporation, which in turn increases the amount of moisture in the air. This, combined with other factors such as changes in atmospheric circulation patterns, can create ideal conditions for the formation and intensification of hurricanes.

Hurricane Sandy: A Wake-Up Call:

When Hurricane Sandy made landfall in the United States, it quickly became clear that this storm was unlike anything the region had experienced before. The sheer size and power of Sandy were unprecedented, with hurricane-force winds extending over 175 miles from its center. The storm surge, which was intensified by factors such as high tide and coastal topography, caused severe flooding in coastal areas, including parts of New York City.

It is important to note that while Hurricane Sandy was a natural weather event, its impact was magnified by human activities and the changing climate. Rising sea levels, caused by global warming, made the storm surge more destructive. The combination of high tide, storm surge, and rising sea levels resulted in massive flooding, which overwhelmed coastal defenses and caused extensive damage.

The Anatomy of Hurricane Sandy:

In order to understand the connection between Hurricane Sandy and climate change, it is necessary to delve into the anatomy of the storm. Sandy's formation was influenced by a variety of factors, including warmer-than-average sea surface temperatures in the Atlantic Ocean, a weakening jet stream, and a high-pressure system over Greenland. These conditions allowed the storm to move

along an unusual track, making a sharp left turn towards the heavily populated areas of the East Coast.

Scientists have analyzed the data collected during Hurricane Sandy and concluded that the storm was significantly influenced by the changing climate. The warmer sea surface temperatures provided the necessary fuel for the storm, allowing it to gain strength and maintain its intensity as it traveled northward. Additionally, the weakening jet stream, which is believed to be linked to the melting of Arctic sea ice, contributed to the storm's unusual track.

The Future of Extreme Weather:

As our climate continues to change, the risk of extreme weather events like Hurricane Sandy is expected to increase. Scientists predict that warmer temperatures will lead to more intense hurricanes, powered by warmer ocean waters. Rising sea levels will also make storm surges more damaging, leading to increased flooding and erosion in coastal areas.

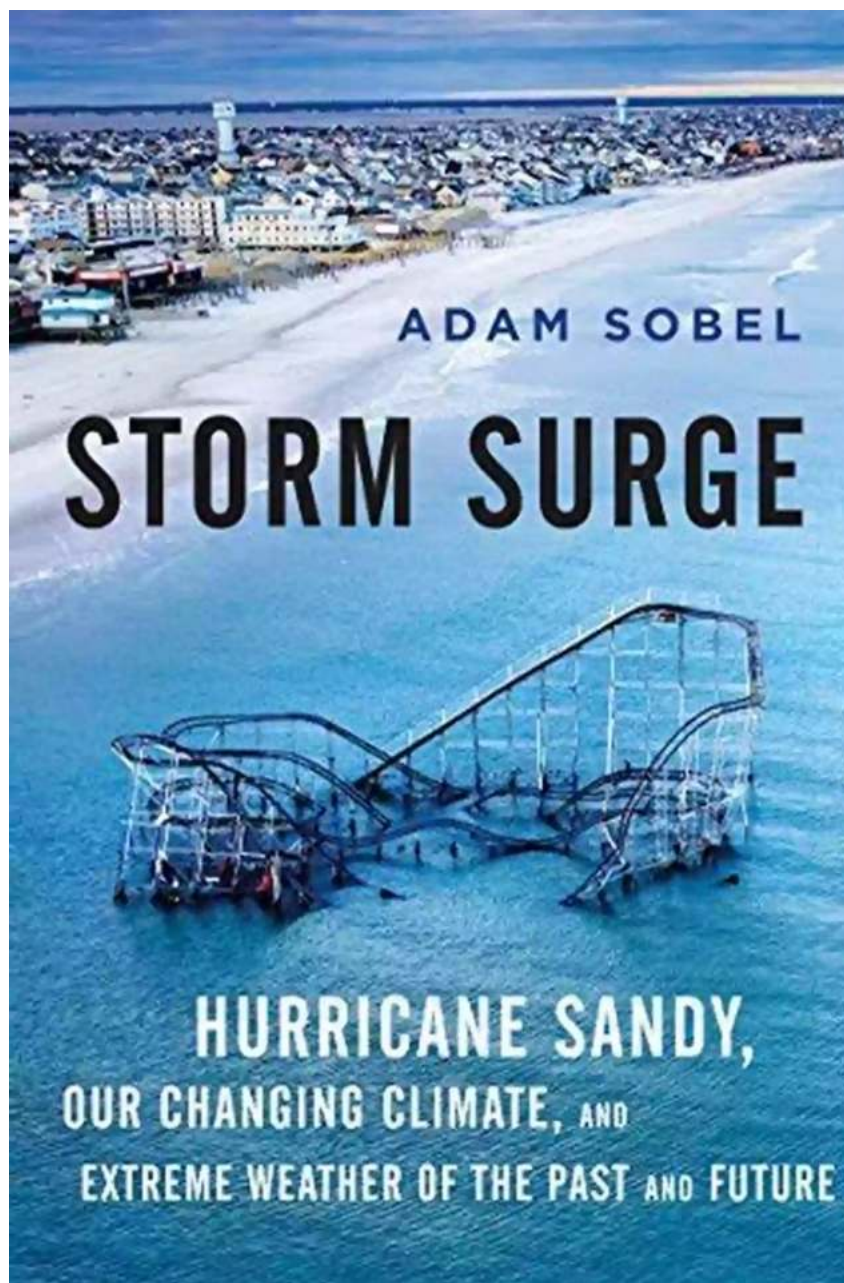
In addition to hurricanes, other types of extreme weather, such as heatwaves and droughts, are also expected to become more frequent and intense. These events can have a significant impact on human health, agriculture, and the environment, causing widespread disruption and economic costs.

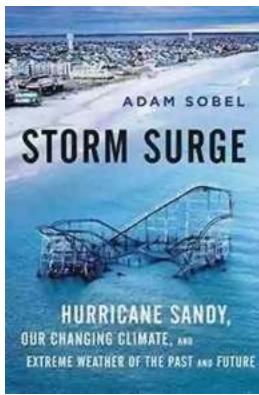
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Hurricane Sandy served as a wake-up call, a stark reminder of the changing climate and the increasing risks posed by extreme weather events. The storm highlighted the need for better preparedness and adaptation strategies, as well as the urgency of taking action to mitigate climate change. With the right

investments and policies, we can reduce the risks and impacts of future storms, protecting both lives and livelihoods.

By acknowledging the connection between Hurricane Sandy and our changing climate, we can work towards building a more resilient and sustainable future for ourselves and future generations.





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A renowned scientist takes us through the devastating and unprecedented events of Hurricane Sandy, using it to explain our planet's changing climate, and what we need to do to protect ourselves and our cities for the future.

Was Hurricane Sandy a freak event—or a harbinger of things to come? Was climate change responsible? What connects the spiraling clouds our satellites saw from space, the brackish water that rose up over the city's seawalls, and the slow simmer of greenhouse gases? Why weren't we better prepared?

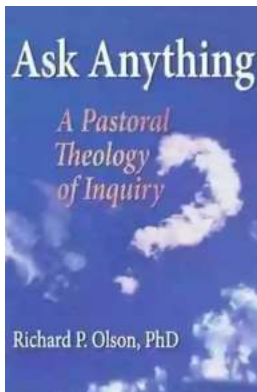
In this fascinating and accessible work of popular science, atmospheric scientist and Columbia University professor Adam Sobel addresses these questions, combining scientific explanation with first-hand experience of the event itself.

He explains the remarkable atmospheric conditions that gave birth to Sandy and determined its path. He gives us insight into the sophisticated science that led to the forecasts of the storm before it hit, as well as an understanding of why our meteorological vocabulary failed our leaders in warning us about this

unprecedented storm—part hurricane, part winter-type nor’easter, fully deserving of the title “Superstorm.”

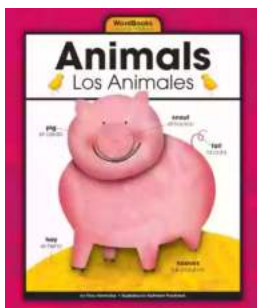
Storm Surge brings together the melting glaciers, the shifting jet streams, and the warming oceans to make clear how our changing climate will make New York and other cities more vulnerable than ever to huge storms—and how we need to think differently about these long-term risks if we hope to mitigate the damage.

Engaging, informative, and timely, Sobel’s book provokes us to rethink the future of our climate and how we can better prepare for the storms to come.



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