

AON

Weekly Cat Report

June 2, 2023



Canada: Wildfire (Update)

Overview

Ongoing warm and dry weather worsened conditions favorable for wildfire development across Canada. Dozens of wildfires were ignited particularly in British Columbia and Alberta, however new focus occurred in Nova Scotia, where destructive fires damaged or destroyed hundreds of structures. To date, wildfires have already burned an area of more than 2.94 million hectares (7.26 million acres), resulting in notable economic and insured losses.

Meteorological Recap

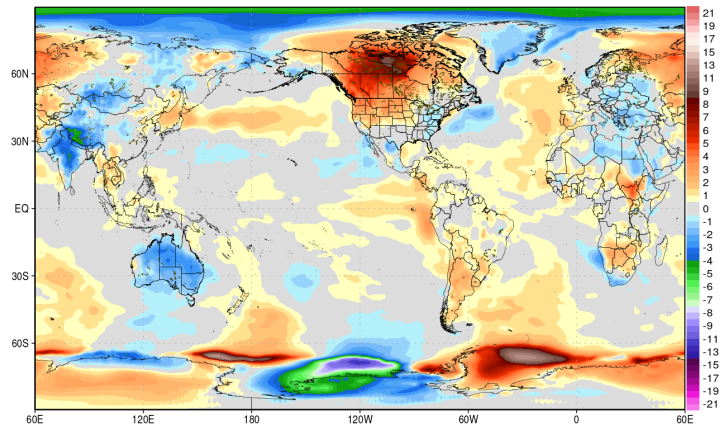
Most of the Canadian territory has experienced prolonged period of very warm and dry weather since the beginning of May. Mean air temperatures during last 30 days were exceptionally high compared to the long-term average. Remarkable monthly temperature anomaly in excess of 5°C (9°F) covered widespread area, particularly in northern and north-western parts of Canada. Windy conditions further enhanced wildfire spreading in the region.

In recent days, area of high pressure extended further east, easing the wildfire situation in western Canada, but on the other hand bringing record-breaking temperatures to the eastern part of the country. Dozens of stations in Québec, Ontario, Nova Scotia and New Brunswick broke their monthly records with maximum temperatures well above 30°C (86°F).

The table below highlights selected locations with extreme maximum temperatures, often exceeding monthly records. Such extreme temperatures have been recorded even at stations located at latitudes higher than 50°N.

JRA-55 Global Temperature Anomaly [°C]
Last 30-days --> 18Z28MAY2023

ANALYSIS T: 15.87°C
ANOMALY T: 0.41°C



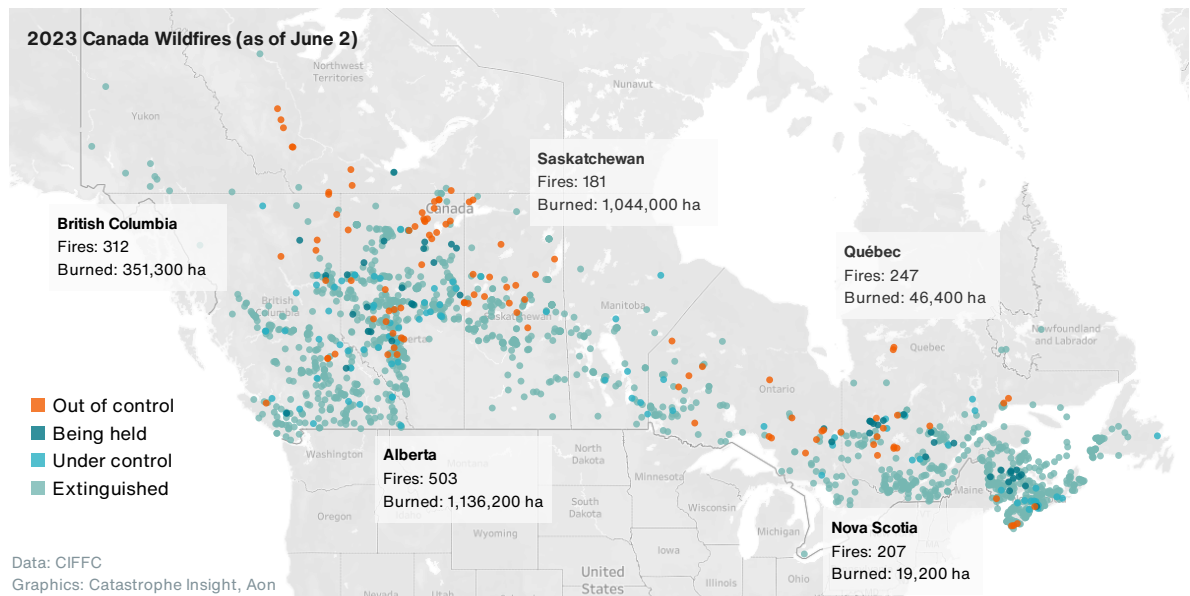
JRA55 1991-2020 Climatology | @RyanMaue | climatas.com

Source: Japanese Met Agency, JRA-55 Reanalysis

Location, Province	Maximum Temperature (°C)	Maximum Temperature (°F)
Miramichi, New Brunswick	35.5	95.9
Bedford Range, Nova Scotia	34.5	94.1
Québec City, Québec	34.4	93.9
Bathurst, New Brunswick	33.7	92.7
Gaspé, Québec	33.0	91.4
Maple Plains, Prince Edward Island	32.9	91.2

Event Details

As of June 2, wildfires have already burned an area of more than **2.94 million hectares (7.26 million acres)** nationwide since the beginning of the year, including **1,895 individual wildfires**, according to the Canadian Interagency Forest Fire Centre (CIFFC). Notable wildfire ignition occurred in British Columbia, Alberta, and Saskatchewan in mid-May (see previous Weekly Cat Report). In recent days, widespread fires have been reported particularly in Nova Scotia. As of this writing, 239 active fires have been monitored – 62 in Alberta, 38 in British Columbia, 35 in Québec, 19 in Saskatchewan, and 16 in Nova Scotia. No injuries have been reported and no one has been reported missing.



Tantallon Fire in Halifax Regional Municipality, Nova Scotia, is now one of the most severe wildfires in the country. As of June 2, fire burned 836 hectares (2,065 acres) of land and prompted evacuation of approximately 16,000 people in surrounding area. According to local authorities, preliminary estimates indicate that about 200 structures have been destroyed due to fire, including 150 homes.

Another extensive wildfire has ignited near **Barrington Lake**, Shelburne County in Nova Scotia, on May 27. As of this writing, it has reached more than 17,600 hectares (43,500 acres) and affected about 5,000 people, who were forced to be evacuated.

Although cooler and rainy weather eased the wildfires situation across Alberta and British Columbia, **Alberta** remains under a provincial state of emergency for numerous wildfires burning in the province. Nearly 11,000 residents were under evacuation order past week.



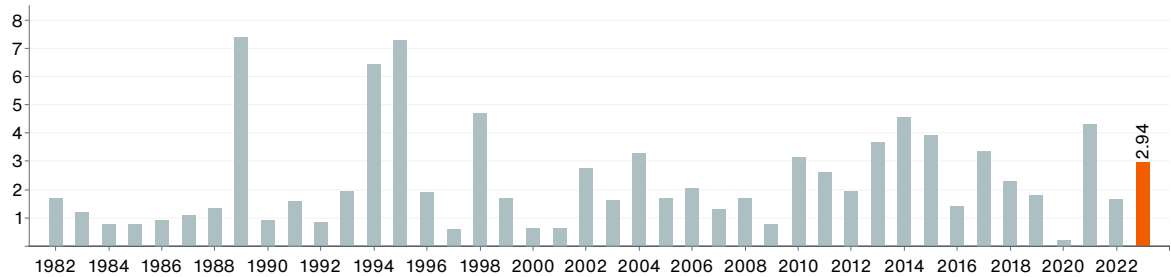
Barrington Lake Wildfire damage
 Source: RCMP

Historical Context

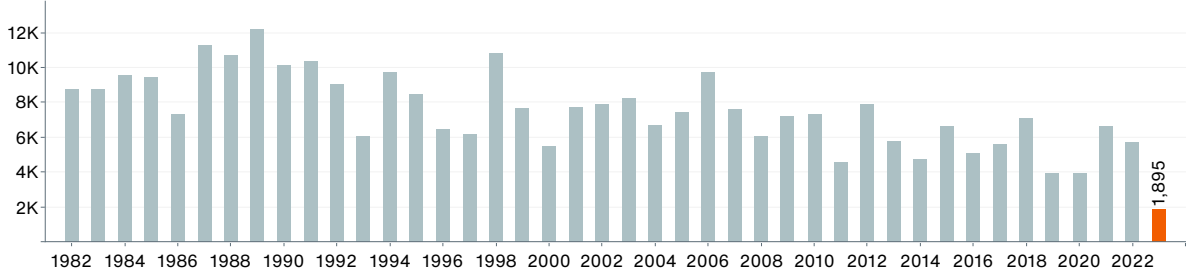
This year, several provinces in Canada have been severely impacted by numerous wildfires. From the historical perspective, the number of fires to date stands relatively close to the 10-year average (1,895 fires compared to the long-term average of 1,608 as of June 2). However, the year-to-date wildfire extent of nearly 3 million hectares (7.4 million acres) is highly above 10-year average; 241,300 hectares (596,300 acres) as of June 2, according to CWFIS. This year spring wildfire season is the worst on record as for burned area for most of the provinces. Data shows that 2023 wildfire season started earlier than usual. There were several years in the past (1989, 1994, 1995) when higher total extents were recorded, but majority of affected area was burned later during the year in summer. This year total extent might potentially become one of the highest on record.

Canada Wildfires since 1982 (2023 as of June 2)

Burned Area (million hectares)



Number of Fires



Data: CIFFC. Graphic: Catastrophe Insight, Aon

Province	Burned Area YTD 10-year average (ha)	YTD 2022 (ha)	YTD 2023 (ha)
Alberta	127,300	504	1,136,200
British Columbia	19,200	600	351,300
Nova Scotia	647	3,300	19,200
Québec	772	208	46,400
Saskatchewan	16,100	473	1,044,000

Financial Loss

As the event remains ongoing, it is difficult to determine total economic and insured impact and the total effects of the fires will depend on weather conditions in the next period. Additionally, the fires have also resulted in notable business interruption costs, particularly to the oil & gas industry.

Australia: Severe Convective Storm

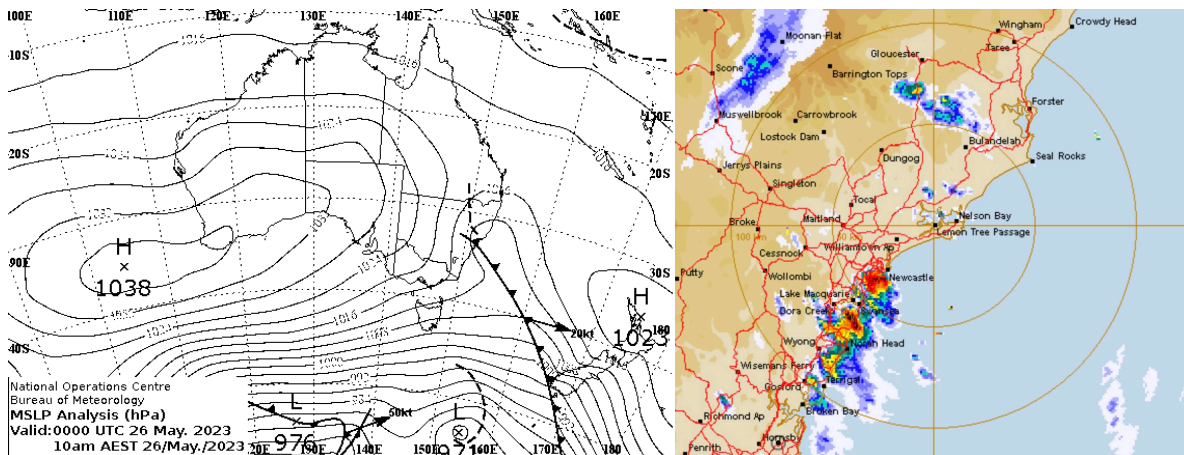
Overview

Storms accompanied by golf ball-sized hailstones and strong winds battered parts of the New South Wales coast, south-eastern Australia, on May 26. Hailstorms caused particularly notable motor damage, resulting in more than 7,500 claims around Newcastle. Total economic and insured losses can potentially reach into the tens of millions (AUD).

Meteorological Recap

Severe thunderstorms developed on a cold front moving north through the coastal regions of the New South Wales, where severe weather warnings were issued by the Australian's Bureau of Meteorology, including parts of Greater Newcastle and Gosford/Wyong areas in New South Wales.

The primary hazard were strong wind gusts and large hail up to 2.5 inches (6 cm) in diameter. The eventual impact was relatively limited as the storms were isolated in nature.



Event Details

While the spatial extent of severe phenomena was relatively limited, the event hit a highly urbanized area around Newcastle and resulted in notable financial impact.

On May 29, the Insurance Council of Australia (ICA) declared a “significant event” for the Hunter and Central Coast regions of the **New South Wales**. The capital of Sydney was also partially affected. As of May 29, insurers had received 7,552 claims related to the hailstorm, including more than 6,000 claims to motor vehicles. State Emergency Service received hundreds of calls as the storms passed through the region.

Natural Catastrophes: In Brief

Severe Convective Storm (Indonesia)

Strong thunderstorms affected parts of southern Sumatra in Indonesia on May 25-28. In particular, more than 200 homes were damaged in East Ogan Komering Ulu Regency on May 27. Lampung Province noted nearly 160 damaged homes on May 28 in the districts of Kota Gajah, Punggur, and Trimorejo, according to the ASEAN Disaster Information Network.

Severe Convective Storm (India)

Storms resulted in casualties and material damage in Rajasthan State in north-western India on May 26. According to authorities, high winds and hailstorms caused damage on several buildings, and left at least 12 people dead and no fewer than 40 injured, particularly in Tonk district.

Typhoon Mawar (Guam, Taiwan, Philippines)

Mawar, alternatively named Betty by Philippine's PAGASA, which impacted Guam last week (see previous Weekly Cat Report), weakened to a tropical storm and caused additional, minor material damage in Taiwan and the Philippines on May 29-31. In the Philippines, about 30,000 people were affected, with many experiencing power outages. The storm killed at least three people in Guam (2) and Taiwan (1), several others were injured or remain missing.

Winter Weather (Pakistan)

An avalanche killed at least 11 people and injured 25 others in Shounter Pass, northern Pakistan, on May 27. All victims were members of a nomadic tribe, travelling through the pass. Such events occur more often with seasonal temperature increase.

Heatwave (China)

Many regions in southern China have experienced a notable heatwave in recent days. More than 1,000 weather stations in several provinces across China broke their daily or monthly records on May 29-June 1, including Shanghai, where the maximum temperature reached 36.7°C (98°F), surpassing the previous May record set in 1876. The hottest areas saw maximum temperatures well above 40°C (104°F). On June 1, Donchuang station, southern China, reached 42.2°C (108°F) at 1,250 m (4,101 ft) above sea level.

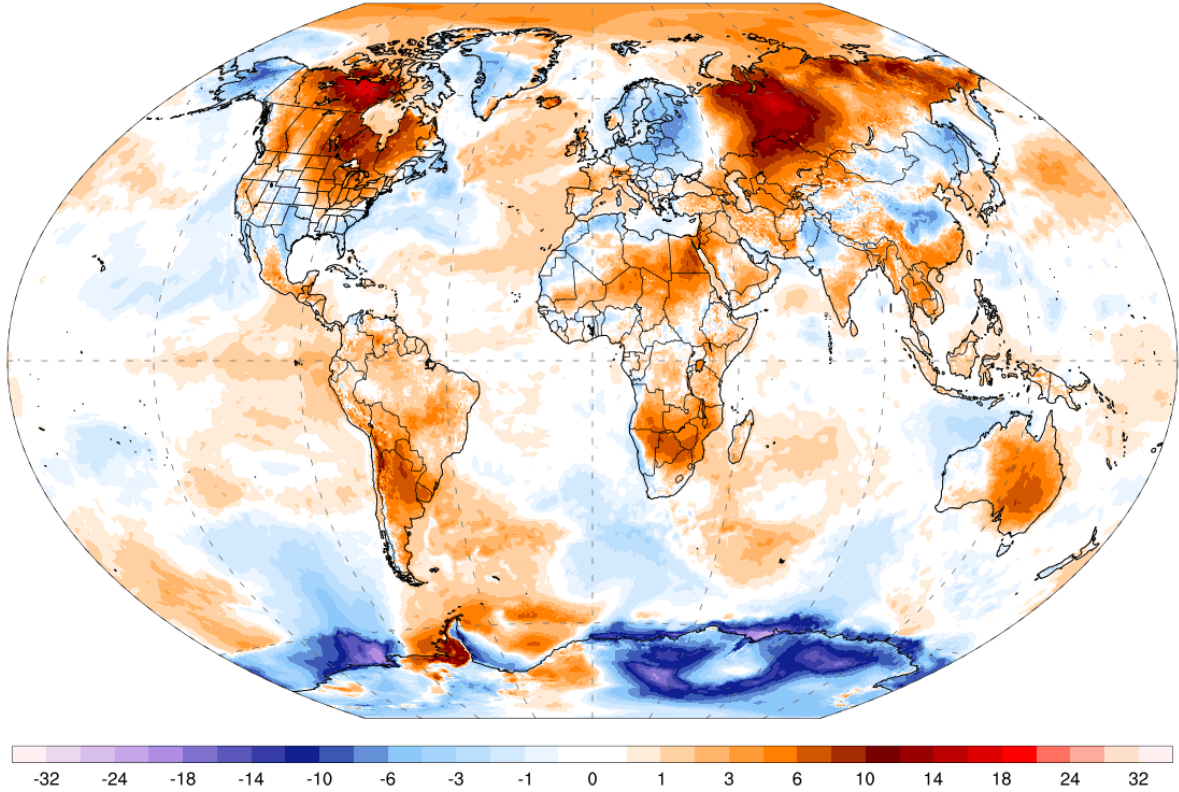
Flooding (Serbia, Bosnia and Herzegovina)

Heavy rains and localized thunderstorms triggered flash flooding in several regions across Serbia and Bosnia and Herzegovina on May 26-30. Serbian's regions of Vojvodina and Šumadija and Western Serbia were the most affected by flooding that caused minor damages on infrastructure, property, and crops. Several municipalities declared the state of emergency, hundreds of people were evacuated.

Global Temperature Anomaly Forecast

GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]
Days 1-3 Avg | Fri, Jun 02, 2023

ClimateReanalyzer.org
Climate Change Institute | University of Maine

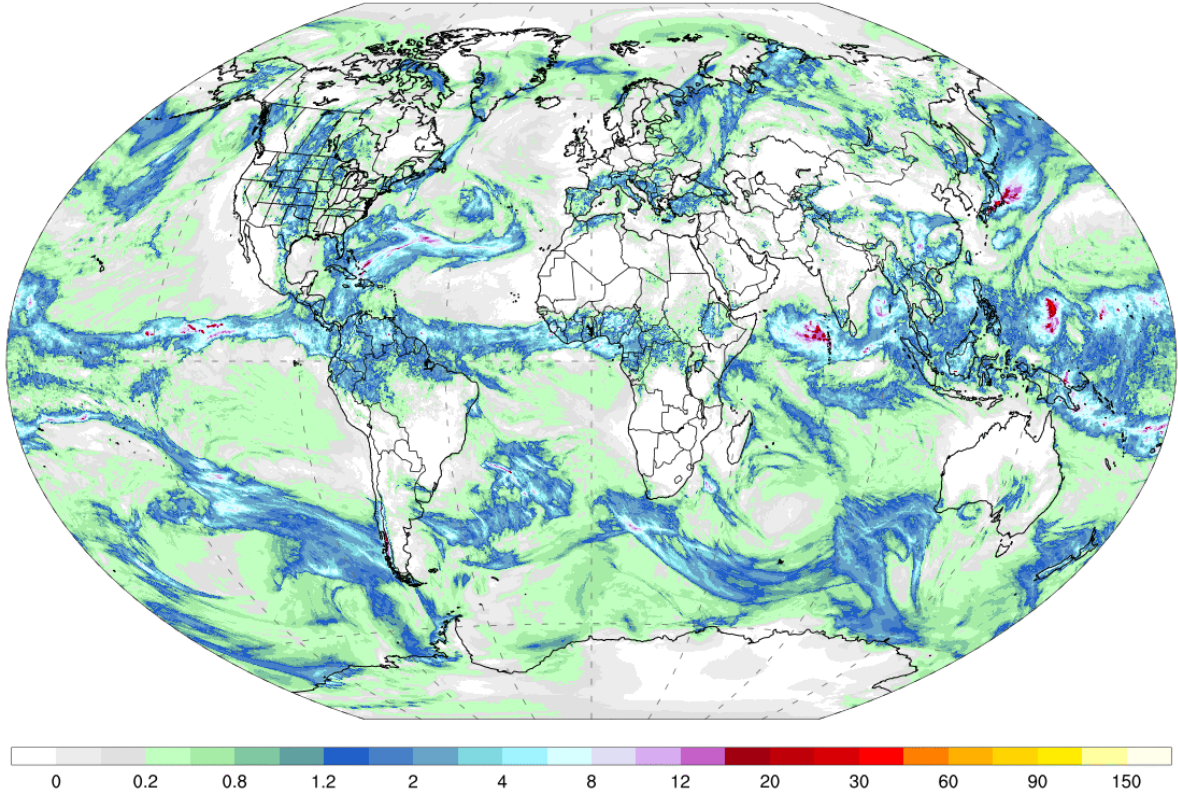


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

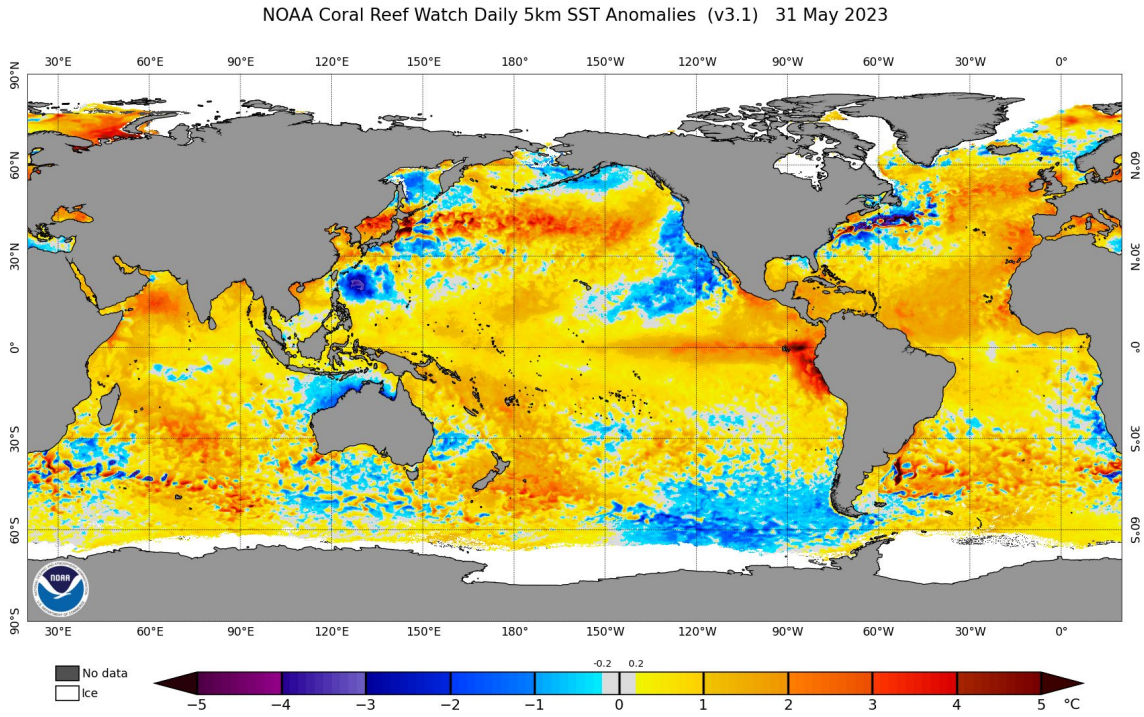
GFS Accumulated Precipitation (cm)
Days 1-3 Total | Fri, Jun 02, 2023

[ClimateReanalyzer.org](https://climatereanalyzer.org)
Climate Change Institute | University of Maine



Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

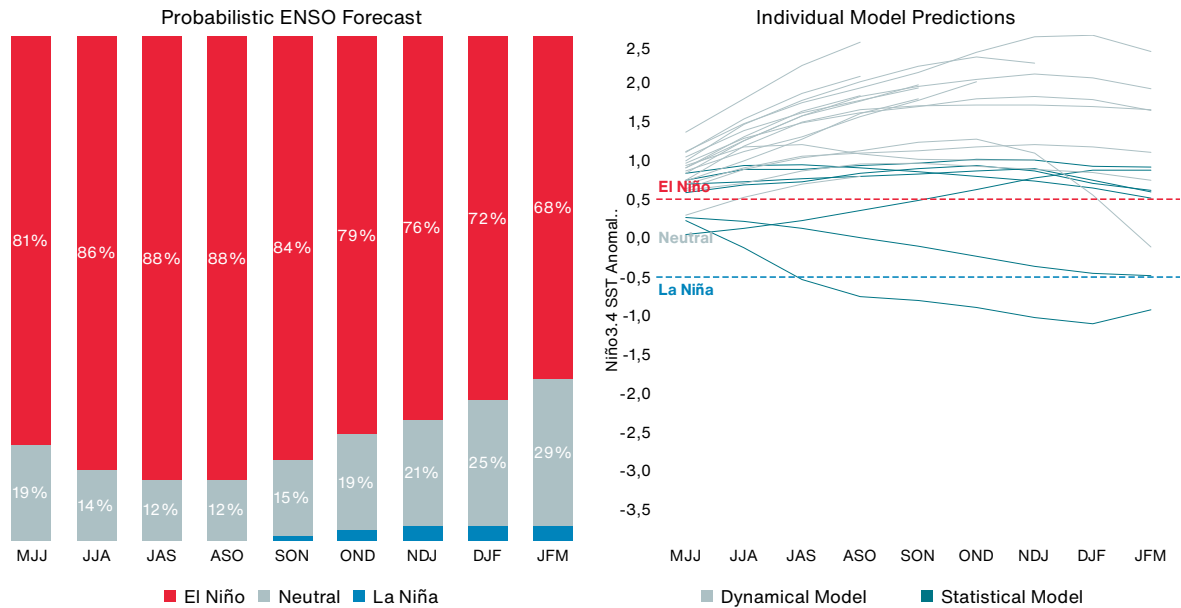
Weekly Sea Surface Temperature (SST) Maps (°C)



El Niño-Southern Oscillation (ENSO)

Probabilistic ENSO Model Projections: Mid-May 2023

Data: NOAA & Columbia University (IRI) | Graphic: Catastrophe Insight, Aon



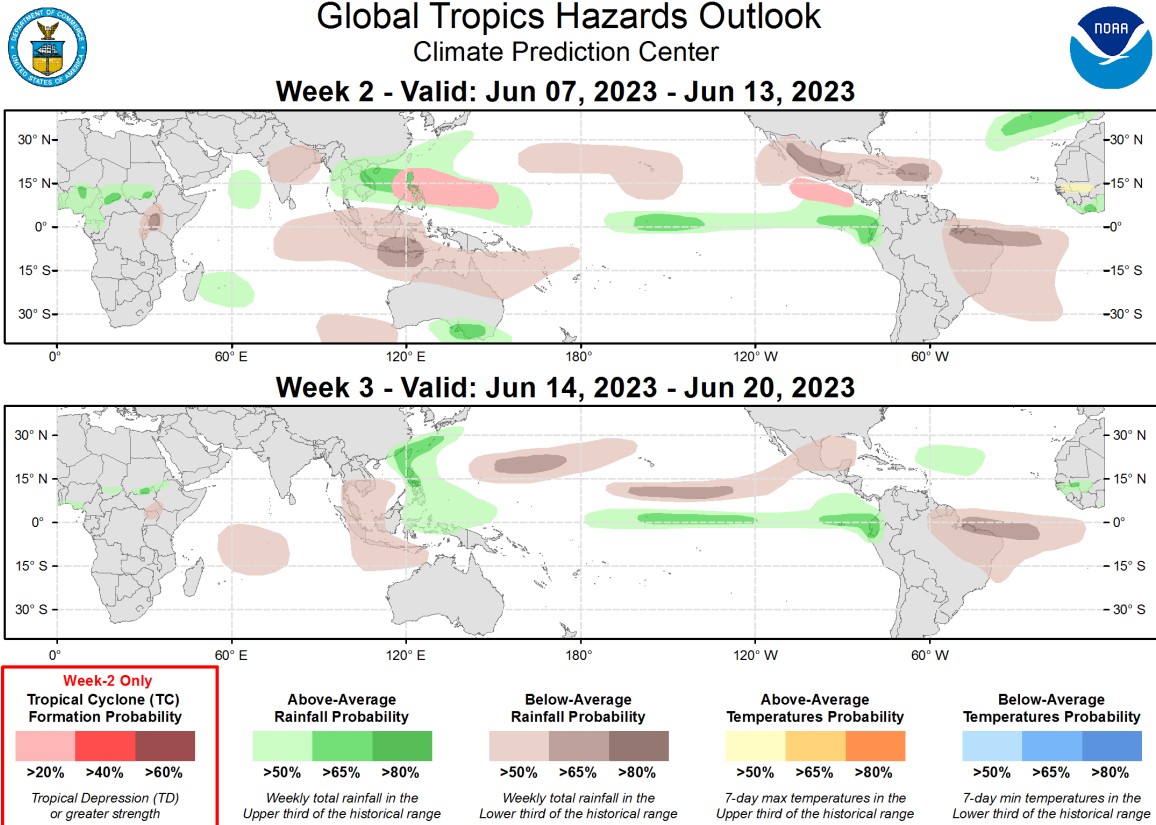
El Niño: Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.

La Niña: Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.

Neutral: A period when neither El Niño nor La Niña conditions are present.

El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

Global Tropics Outlook



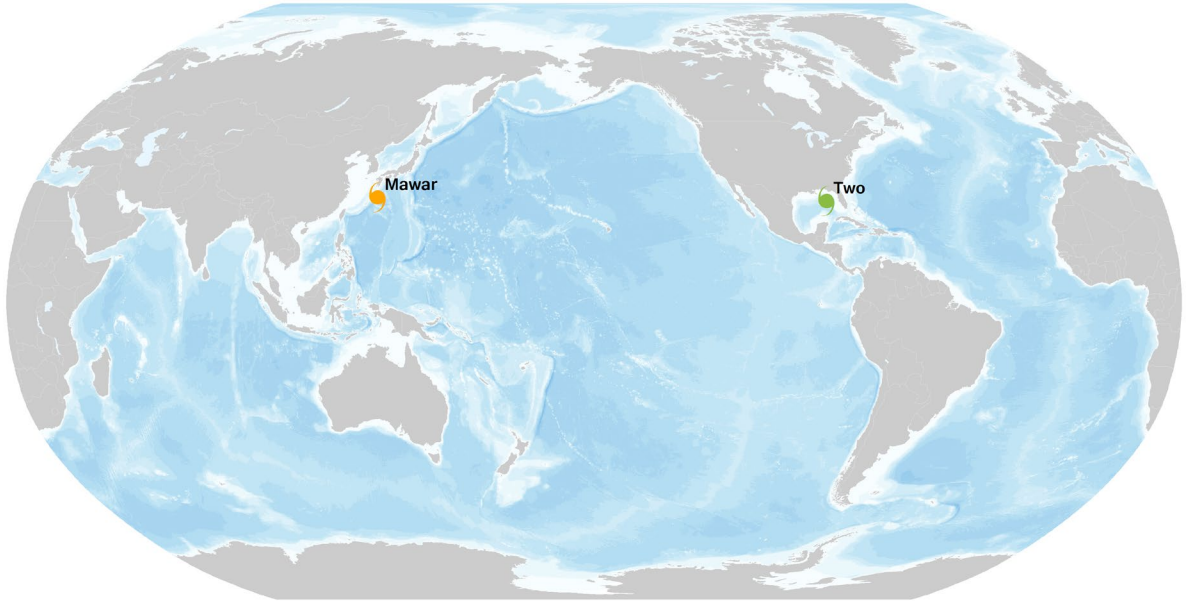
Issued: 05/30/2023

Forecaster: Barandiaran

This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity



● Tropical Depression
 ● Tropical Storm
 ● Category 1
 ● Category 2
 ● Category 3
 ● Category 4
 ● Category 5

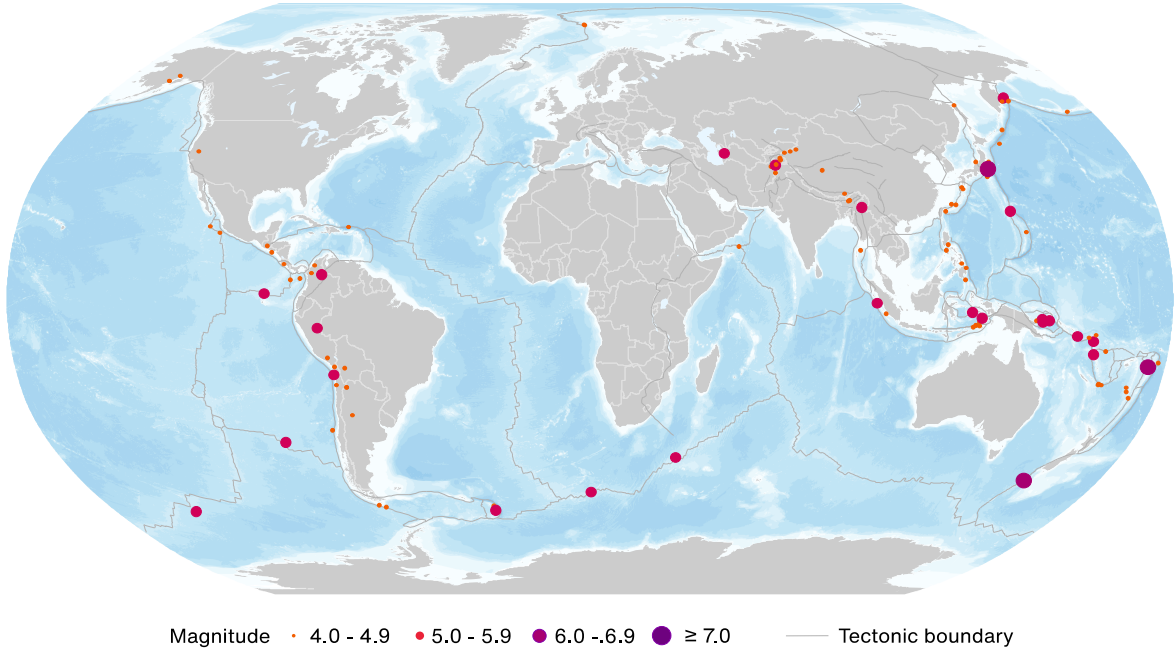
Storm Name	Location	Winds	Location from Nearest Land Area
TD Two	27.3N, 86.5W	35	255 mi (410 km) SW from Tallahassee, United States
TS Mawar	28.3N, 131.3E	50	265 mi (425 km) NE from Naha, Japan

* TD: Tropical Depression, TS: Tropical Storm, HU: Hurricane, TY: Typhoon, CY: Cyclone

** N: North, S: South, E: East, W: West, NW: Northwest, NE: Northeast, SE: Southeast, SW: Southwest

Source: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center (NOAA)

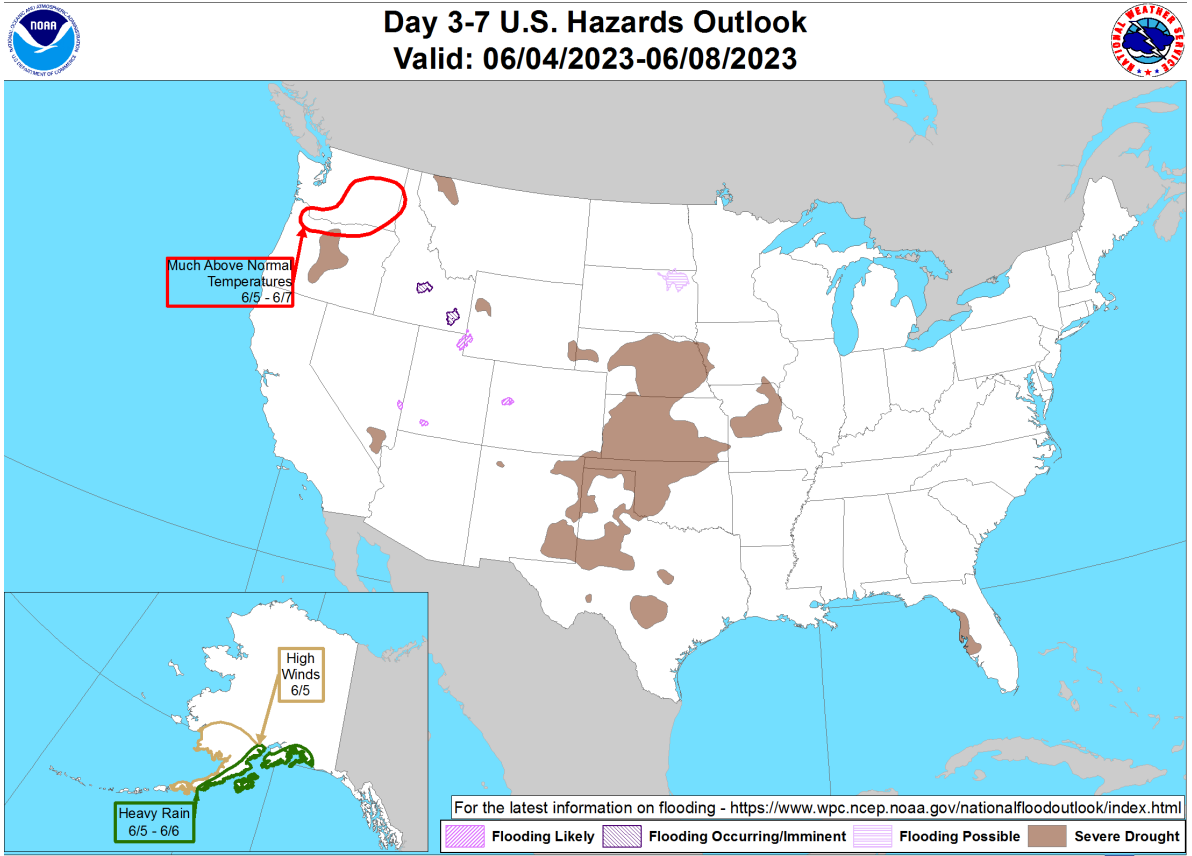
Global Earthquake Activity ($\geq M4.0$): May 26 - June 1



Date (UTC)	Location	Magnitude	Epicenter
5/26/2023	35.52N, 140.52E	6.1	13 km (8 mi) SE of Narutō, Japan
5/27/2023	18.48S, 175.18W	6.0	12 km (7 mi) W of Neiafu, Tonga
5/31/2023	49.58S, 163.84E	6.3	Auckland Islands, New Zealand region

Source: United States Geological Survey

U.S. Hazard Outlook



Weather Prediction Center

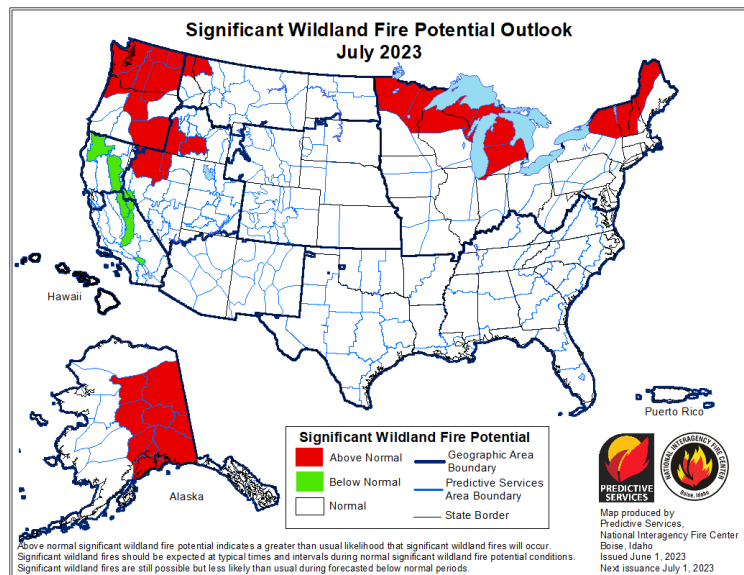
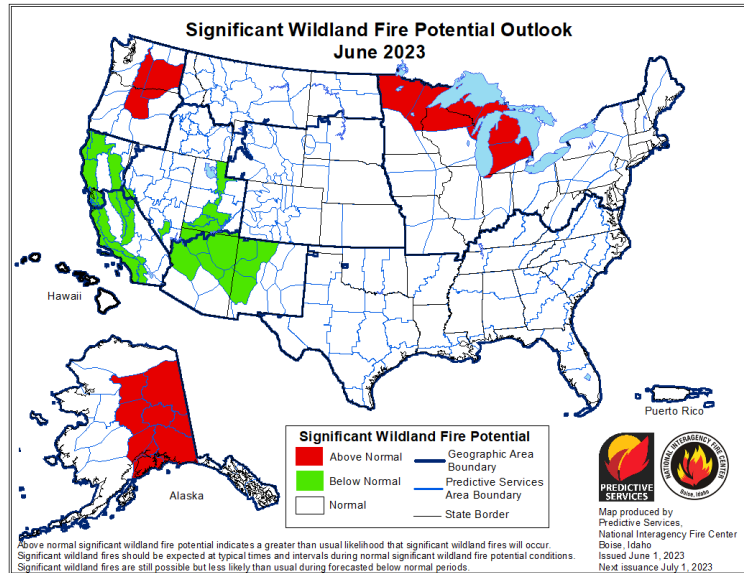
Made: 06/01/2023 3PM EDT

Source: Climate Prediction Center (NOAA)

Follow us: 

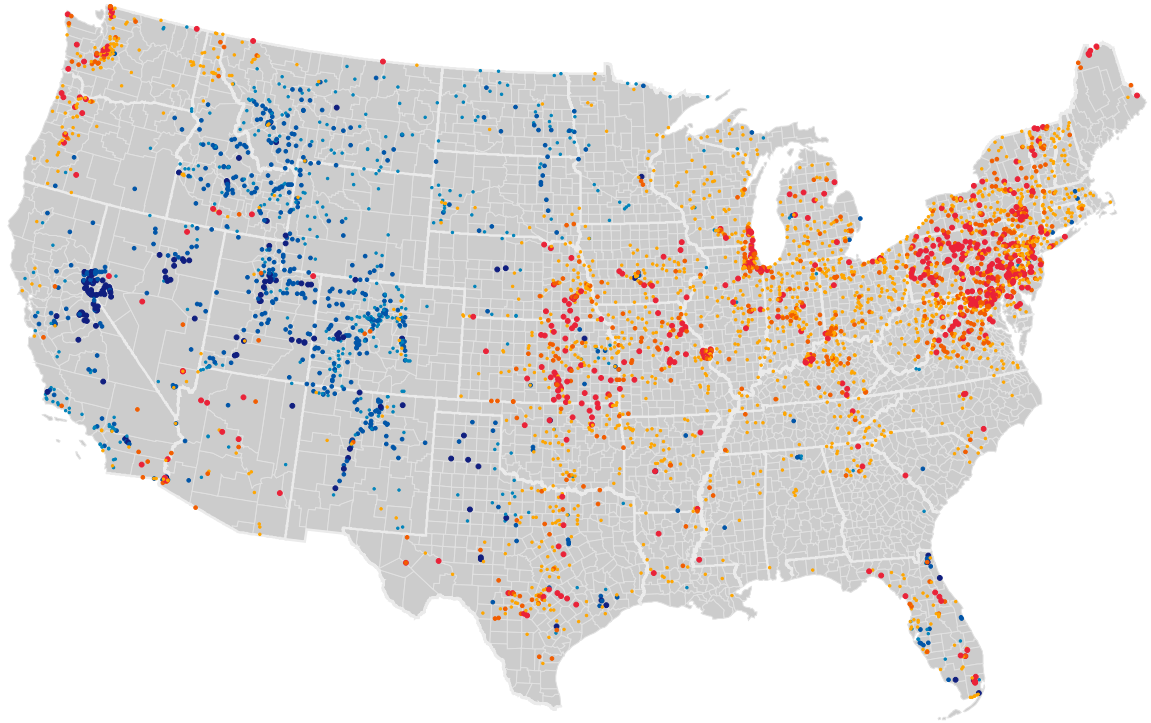
www.wpc.ncep.noaa.gov

U.S. Wildfire: Significant Fire Risk Outlook & Activity



Source: NIFC

U.S. Current Riverine Flood Risk



High Flows (Percentile)	• ≥ 99 / Above floodstage	Hydrological Drought	• Severe Drought
	• 95 - 99		• Moderate Drought
	• 90 - 95		• Below Normal

A $\geq 99^{\text{th}}$ percentile indicates that estimated streamflow is greater than the 99th percentile for all days of the year. This methodology also applies for the other two categories. A stream in a state of severe drought has 7-day average streamflow of less than or equal to the 5th percentile for this day of the year. Moderate drought indicates that estimated 7-day streamflow is between the 6th and 9th percentile for this day of the year and 'below normal' state is between 10th and 24th percentile.

Source: United States Geological Survey

Source Information

Canada: Wildfire (Update)

The Canadian Interagency Forest Fire Centre (CIFFC)

The Royal Canadian Mounted Police (RCMP)

The Canadian Wildland Fire Information System (CWFIS)

Shelburne County blaze 'rolling like a freight train,' more evacuations ordered Wednesday, *CBC*

Tantallon wildfire 50% contained, new fire in Shelburne County, while others out of control, *Halifax Examiner*

Australia: Severe Convective Storm

The Insurance Council of Australia (ICA)

The Bureau of Meteorology

Natural Catastrophes: In Brief

The ASEAN Disaster Information Network

The European Severe Weather Database (ESWD)

Squalls kill 12, injures 40 in the Tonk district of Rajasthan in 24 hours, *The Statesman*

Shounter Pass avalanche kills 11 people from nomadic tribe in Pakistan, *BBC*

Contacts

Michal Lörinc

Head of Catastrophe Insight

michal.lorinc@aon.com

Ondřej Hotový

Catastrophe Analyst

ondrej.hotovy@aon.com

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

© Aon plc 2021. All rights reserved.

The information contained herein and the statements expressed are of a general nature and are not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information and use sources we consider reliable, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Copyright © by Impact Forecasting®

No claim to original government works. The text and graphics of this publication are provided for informational purposes only.

While Impact Forecasting® has tried to provide accurate and timely information, inadvertent technical inaccuracies and typographical errors may exist, and Impact Forecasting® does not warrant that the information is accurate, complete or current. The data presented at this site is intended to convey only general information on current natural perils and must not be used to make

life-or-death decisions or decisions relating to the protection of property, as the data may not be accurate. Please listen to official information sources for current storm information. This data has no official status and should not be used for emergency response decision-making under any circumstances.

Cat Alerts use publicly available data from the internet and other sources. Impact Forecasting® summarizes this publicly available information for the convenience of those individuals who have contacted Impact Forecasting® and expressed an interest in natural catastrophes of various types. To find out more about Impact Forecasting or to sign up for the Cat Reports, visit Impact Forecasting's webpage at impactforecasting.com.

Copyright © by Aon plc. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise. Impact Forecasting® is a wholly owned subsidiary of Aon plc.