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Update of Weekly Report on Global Climate Extreme Events**1. “Weekly Report on Global Extreme Climate Events” Update**

Localized extreme climate events can have indirect effects over wide areas due to the influence of intensive international socio-economic activity. Against such a background, TCC/JMA provides weekly, monthly, seasonal and annual reports on extreme climate conditions worldwide.

On 29 June 2022, the Weekly Report on Global Extreme Climate Events (published on the TCC/JMA website at <https://www.data.jma.go.jp/tcc/tcc/products/climate/weekly/> every Wednesday) was revamped to provide more user-friendly information incorporating new data and maps.

HTML and CSV format data are now provided for all weather stations recording extreme climate conditions (see Figure 1-1). New maps are also provided to show the geographical distribution of [stations recording extremely high/low temperatures](#) and [extremely heavy/light precipitation](#) (see Figure 1-2).

The summary describes major extreme climate events (e.g., high/low temperatures over wide areas, heavy/light precipitation bringing significant social impacts) and weather-related disasters. New data and maps additionally provide detailed information for specific stations based on user demand.

The list below shows weekly mean temperatures for extreme warm/cold climate conditions, extreme weekly precipitation totals for wet climate conditions, and extreme precipitation totals during a 30-day period for dry climate conditions reported by weather stations.

Stations Recording Extreme Climate Conditions (13 JUL. 2022 - 19 JUL. 2022)

[Extremely High Temperature](#) | [Extremely Low Temperature](#) | [Extremely Heavy Precipitation](#) | [Extremely Light Precipitation](#)

[Extremely High Temperature \(csv\)](#) | [Extremely Low Temperature \(csv\)](#) | [Extremely Heavy Precipitation \(csv\)](#) | [Extremely Light Precipitation \(csv\)](#)

| Element | Description |
|------------|--|
| Temp. (C) | Weekly mean temperature (°C) |
| Anom. (C) | Weekly mean temperature anomaly (°C) |
| Anom* | Normalized weekly mean temperature anomaly using standard deviation |
| Prec. (mm) | Weekly precipitation total (mm) |
| Ratio (%) | Ratio of total weekly (for extreme wet condition)/monthly (for extreme dry condition) precipitation to the climatological normal (%) |
| Ratio* (%) | Ratio of total weekly precipitation to empirical thresholds for extreme heavy rain (%) |

For more information on Ratio*, see the [Commentary on Extreme Climate Reports](#).

The base period for climatological normal and standard deviation is 1991 - 2020.

STATIONS IN EXTREMELY WARM CONDITION (T/SD>3.0) (13 JUL. 2022 - 19 JUL. 2022)

| WMO No. | Station Name | Country | Lon | Lat | Temp. (C) | Anom. (C) | Anom* |
|---------|--------------|---------|-------|-------|-----------|-----------|-------|
| 01007 | NY-ALESUND | NORWAY | 11.93 | 78.92 | 10.6 | 4.8 | 5.3 |

Extreme Climate Monitoring

- [Weekly Report](#)
- [Monthly Report](#)
- [Seasonal Report](#)
- [Annual Report](#)
- [Reports on Specific Events](#)
- [Commentary](#)

Relevant Charts -Weekly-

- [World Climate Charts](#)
 - ▶ [Mean Temperature](#)
 - ▶ [Temperature Anomaly](#)
 - ▶ [7-day Precipitation](#)
 - ▶ [7-day Precipitation Ratio](#)
 - ▶ [30-day Precipitation](#)
 - ▶ [30-day Precipitation Ratio](#)
 - ▶ [Extremely high/low temperature stations](#)
 - ▶ [Extremely heavy/light precipitation stations](#)

Figure 1-1 Data on stations recording extreme climate conditions in HTML and CSV format
Click the links in the red box to access CSV data.

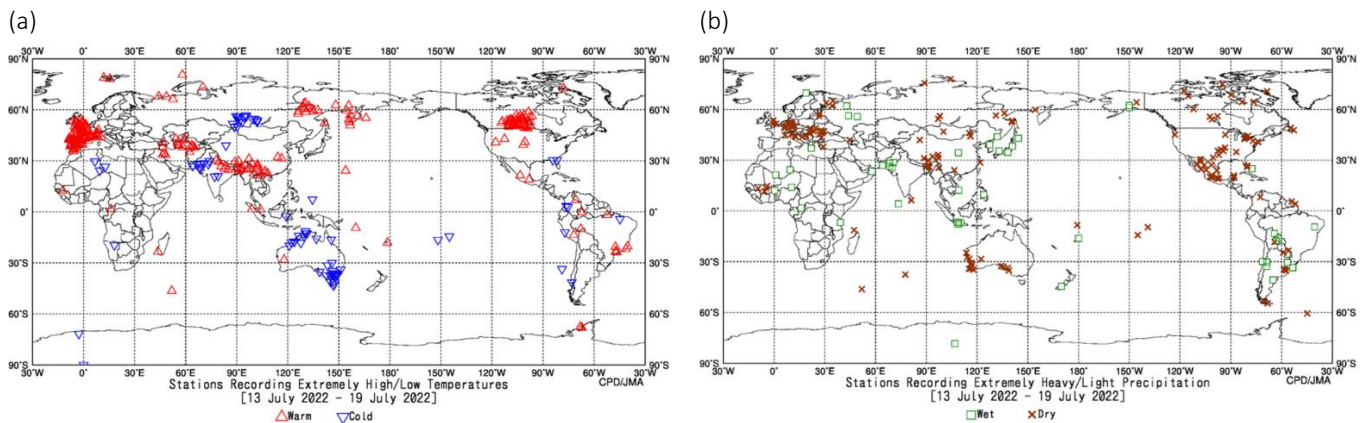


Figure 1-2 New maps showing (a) stations recording extremely high/low temperatures and (b) stations recording extremely heavy/light precipitation

Weather stations reporting extreme climate conditions ((a) warm/cold and (b) wet/dry) are marked as per the legend in the chart.

(OKUNAKA Yuka and NAKAMURA Tetsu, Tokyo Climate Center)

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Climate characteristics and factors behind record-high temperatures in late June/early July 2022 and subsequent weather conditions

TCC issued a press release regarding climate characteristics and factors behind record high temperatures in late June/early July and subsequent weather conditions. An abstract of the press release and the download link for the full article are as follows.

- The seasonal temperature in summer of 2022 was higher than normal across Japan. Especially the period from late June to early July was characterized by record high temperatures in eastern and western parts of the country (Figure A1). Heavy rain occurred in many areas in mid-July. From late July to mid-August northern Japan also experienced heavy rain, and high temperatures were observed in western Japan and elsewhere.
- The conditions observed are mainly attributed to the followings:
 - The record-high temperatures observed in late June and early July are attributed to the meandering northward of the upper-level subtropical jet stream (STJ) near Japan and a record strengthening of both the upper-level high and the Pacific High at the surface for this time of year, combined with a persistent warming trend.
 - Factors contributing to the subsequent heavy rainfall in various areas in mid-July include a persistent blocking high to the north of Japan and a meandering southward of the STJ near Japan, which made the area susceptible to upper-level cold air.
 - From late July to mid-August, the STJ moved northward and tended to maintain a front near northern Japan that produced heavy rainfall, while high temperatures persisted in western Japan and elsewhere.

URL: https://www.data.jma.go.jp/tcc/tcc/news/press_20220914.pdf

(TAKAHASHI Kiyotoshi, Tokyo Climate Center)

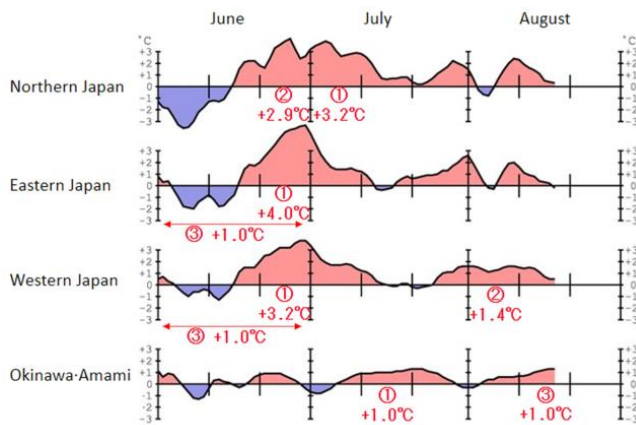


Figure 2-1. Time-series representations of 5-day running mean temperature anomalies [°C] for June-August 2022

The base period for the normal is 1991 - 2020. The red circled numbers and values indicate the rank from highest average temperatures since 1946 and anomalies for each month and each ten-day period (up to the top three).

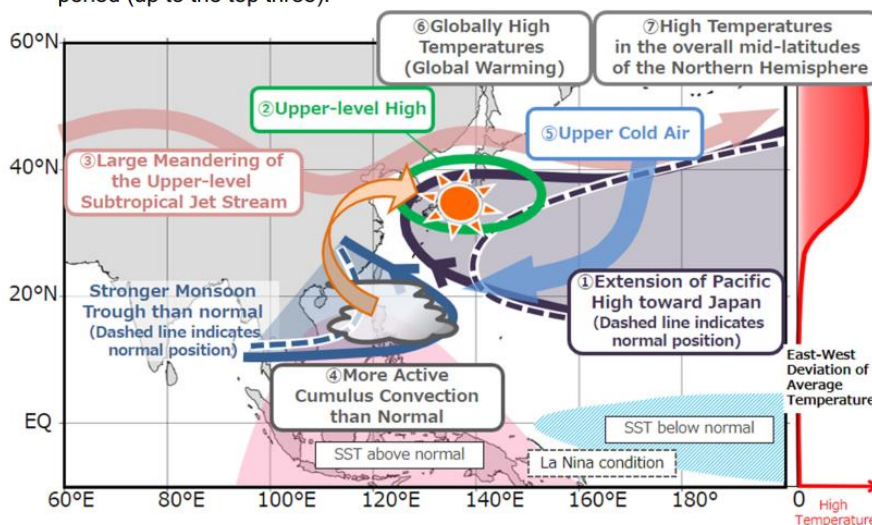


Figure 2-2. Characteristics of atmospheric circulation bringing record-high temperatures in late June and early July

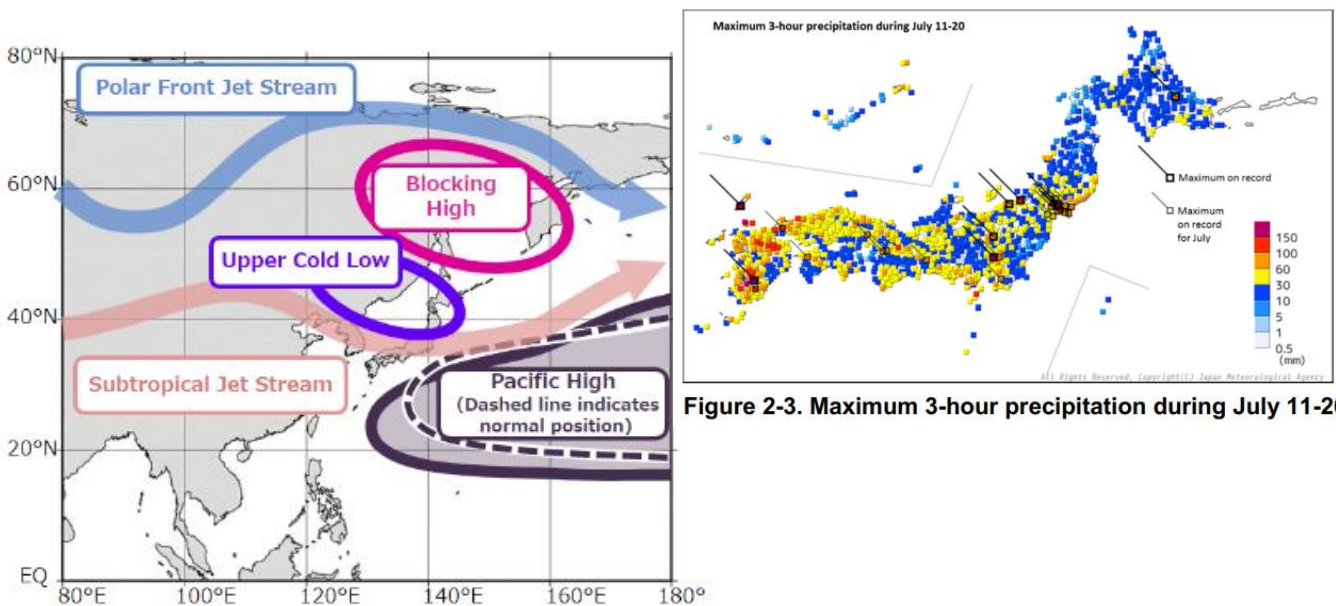


Figure 2-3. Maximum 3-hour precipitation during July 11-20

Figure 2-4 Schematic diagram of the large-scale atmospheric flow that caused the unusual weather conditions in mid-July

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You can find the latest newsletter from the Japan International Cooperation Agency (JICA).

JICA Magazine

<https://jicamagazine.jica.go.jp/en/>

"JICA magazine" is a public relations magazine published by JICA. It introduces the current situations of developing countries around the world, the people who are active in the field, and the content of their activities.

Any comments or inquiry on this newsletter and/or the TCC website would be much appreciated.

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<https://www.data.jma.go.jp/tcc/tcc/index.html>

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