
**NASA GISS**

**Fig. S2.1.** NASA GISS surface temperature (~2-m air temperature over land, sea surface temperature over ocean; °C) annual anomaly for 2016 relative to the 1981–2010 base period.

**HadCRUT 4.5**

**Fig. S2.2.** HadCRUT4.5 surface temperature (~2-m air temperature over land, sea surface temperature over ocean; °C) annual anomaly for 2016 relative to the 1981–2010 base period.
Fig. S2.3. ERA-Interim surface air temperature (2-m; °C) annual anomaly for 2016 relative to the 1981–2010 base period.
Fig. S2.4. TN90p and TN10p (warm and cool nights) annual anomalies in 2016 (GHCNDEX), in days.
Fig. S2.5. Time series for TN90p and TN10p (warm and cool nights; in days).
Fig. S2.6. Seasonal anomalies for (a) TX90p, (b) TX10p, and on the next page, (c) TN90p and (d) TN10p (GHCNDEX; in days).
Fig. S2.7. Annual anomalies from ERA-Interim for TX90p, TX10p, TN90p, and TN10p (in days).
Fig. S2.8. Rank plot over the period 1951–2016 of TX10p and TN10p.
**Fig. S2.9.** 1979–2015 trend of midtropospheric temperature (°C decade$^{-1}$) over oceans 30°N–30°S from four satellite datasets and the ERA-I reanalyses.

**Fig. S2.10.** Temperature trends (°C decade$^{-1}$) for the tropics at various tropospheric levels for 1979–2016. The top box indicates trends for the tropical atmospheric layer known as the midtroposphere (TMT) and includes satellite observations. The CMIP-5 (rcp4.5) model output of 102 runs was used for the mean and range of model trends. The horizontal dashed lines represent the range within which 95% of the model trends occurred.
Fig. S2.11. Annual gridded TLS anomalies (°C) in 2016 from MERRA-2.

Fig. S2.12. (a) Annual trends (°C decade⁻¹) from 1994–2016 at all latitudes for the CFSR, MERRA-2, ERA-I, and JRA-55 reanalyses and (b), annual trends (°C decade⁻¹) from 1994–2016 at all latitudes for the UAH, RSS, and NOAA TLS CDRs.
Fig. S2.13. Annual average anomaly for 2016 surface specific humidity (g kg$^{-1}$) from ERA-Interim (1981–2010 base period).

Fig. S2.15. Global seasonal cloudiness anomaly map (%) for 2016 generated from the 30-year PATMOS-x/AVHRR cloud climatology (1981–2010 base period).

Fig. S2.16. Monthly soil moisture anomalies (m$^3$ m$^{-3}$) for 2016 (base period: 1991–2015). Data were masked as missing where retrievals are either not possible or of very low quality (dense forests, frozen soil, snow, ice, etc.). (Source: ESA CCI Soil Moisture.)
Fig. S2.17. Global map of fire activity in 2016 in terms of carbon consumption. (Source: GFASv1.3.)
Online table 7.1 and 7.2 supplement main report section 7c: Central America and the Caribbean

**Online Table 7.1.** Summary of events and impacts, including number of fatalities (f), missing people (m), affected people (a), injured people (i), number of affected families (h), and damaged houses (d), by country and specific region. [Data sources, Guatemala: www.redhum.org; Belize: www.cdema.org; Central America: National Weather Services and National Emergency Committees communications and regional newspapers].

<table>
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<tr>
<th>Country</th>
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<th>Hydrometeorological Conditions</th>
<th>Impacts</th>
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### OnLine Table 7.1. (cont.) Summary of events and impacts, including number of fatalities (f), missing people (m), affected people (a), injured people (i), number of affected families (h), and damaged houses (d), by country and specific region. [Data sources, Guatemala: www.redhum.org; Belize: www.cdema.org; Central America: National Weather Services and National Emergency Committees communications and regional newspapers].

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**Online Table 7.2. Record seasonal temperatures (°C) for some Caribbean locations.**

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**REFERENCES**