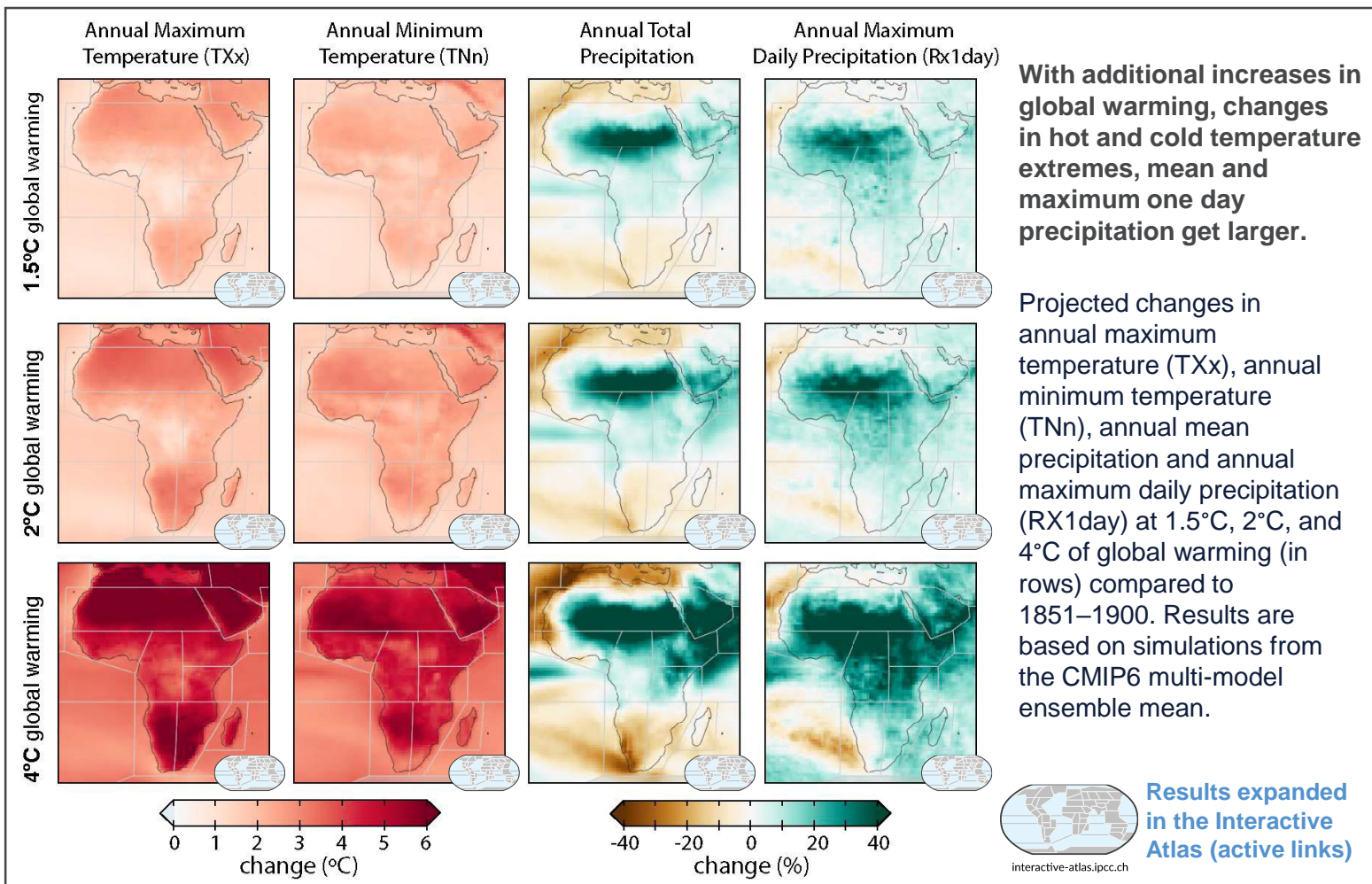


Regional fact sheet - Africa

Common regional changes

- Mean temperatures and hot extremes have **emerged** above natural variability, relative to 1850–1900, in all land regions in Africa (*high confidence*).
- The rate of surface temperature increase has generally been more rapid in Africa than the global average, with **human-induced** climate change being the dominant driver (*high confidence*).
- Observed** increases in hot extremes (including heatwaves) and decreases in cold extremes (including cold waves) **are projected** to continue throughout the 21st century with additional global warming (*high confidence*).
- Marine heatwaves **have become** more frequent since the 20th century and **are projected** to increase around Africa (*high confidence*).
- Relative sea level **has increased** at a higher rate than global mean sea level around Africa over the last 3 decades. Relative sea-level rise **is likely to virtually certain to continue** around Africa, contributing to increases in the frequency and severity of coastal flooding in low-lying areas to coastal erosion and along most sandy coasts (*high confidence*).
- The frequency and intensity of heavy precipitation events **are projected** to increase almost everywhere in Africa with additional global warming (*high confidence*).



Links for further details

Common regional change: TS.4.3, Figure TS.23, Atlas 4.2, 12.4.1; Table TS.5

Regions specific changes: TS.4.3.2.1, 8.3.2.4.3, BOX TS.13, 11.9, Tables 11.4-11.6, 12.4.1, Atlas.4,

TXx and TNn: 11.3.5, Figure 11.11,

Total Precipitation: 4.6.1.2, Figure 4.32, TS.1.3.2, Figure TS.5

RX1day: 11.4.5, Figure 11.16

Changes are presented for the mid- 21st century for a global warming of at least 2°C because the signal emerges from natural variability for a wider range of climatic impact-drivers at this higher warming level. All statements are related to changes with least *medium* and *high confidence*.

Mediterranean (North Africa)

- **Projected** decreases in mean precipitation, increases in fire weather conditions and decreases in mean wind speed;
- **Observed** and **projected** increases in aridity, meteorological, hydrological and agricultural and ecological droughts.

West Africa (WAF)

- **Observed** increase in river flooding;
- **Observed** increase in drying and agricultural and ecological droughts;
- Projected increase in meteorological droughts at GWL 4°, mostly in seasonal timescales;
- **Projected** increases in mean wind speed; increase in heavy precipitation and pluvial flooding.

Sahara including parts of the Sahel (SAH)

- **Projected** increases in heavy precipitation and pluvial flooding.



North Eastern Africa (NEAF)

- **Observed** decreases in mean precipitation;
- **Observed** and projected decreases in snow and glaciers;
- **Projected** increases in heavy precipitation and pluvial flooding;
- **Projected** decrease in meteorological drought at 4°C global warming.

South Eastern Africa (SEAF)

- **Projected** increases in frequency and/or the intensity of heavy precipitation and pluvial flooding;
- **Observed** and **projected** decreases in snow and glaciers;
- **Projected** increase of average tropical cyclone wind speeds and associated heavy precipitation and of the proportion of category 4-5 tropical cyclones.

Central Africa (CAF)

- **Observed** decreases in mean precipitation;
- **Observed** decrease in standardized precipitation index (i.e deficit of precipitation);
- **Observed** increase in agricultural and ecological droughts;
- **Projected** increases in heavy precipitation and pluvial flooding;
- increases in river flooding.

East Southern Africa (ESAF)

- **Observed** decreases in mean precipitation;
- **Observed** and **projected** increases in heavy precipitation and pluvial flooding;
- **Observed** and **projected** increase in aridity, agricultural and ecological droughts;
- **Observed** increase in meteorological drought, **projected** increase in meteorological droughts from 1.5°C, higher confidence at higher GWLs;
- **Projected** increases in fire weather conditions; increases in mean wind speed; increase of average tropical cyclone wind speeds and associated heavy precipitation and of the proportion of category 4-5 tropical cyclones.

West Southern Africa (WSAF)

- **Observed** decrease in mean precipitation;
- **Observed** increase in heavy precipitation and pluvial flooding;
- **Observed** and **projected** increase in aridity, agricultural and ecological droughts;
- **Projected** increase in dryness from 1.5°C, higher confidence with increasing global warming;
- **Projected** increases in mean wind speed; increases in fire weather conditions.

Madagascar (MDG)

- **Observed** increases in aridity;
- **Projected** increase in meteorological droughts from 1.5°C, higher confidence at higher GWLs; increases in agricultural and ecological droughts types particularly at higher warming levels;
- **Projected** increases in heavy precipitation and pluvial flooding;
- **Projected** increase of average tropical cyclone wind speeds and associated heavy precipitation and of the proportion of Category 4-5 tropical cyclones.

West African Monsoon (WAFriM)

- Monsoon precipitation is **projected** to increase over the Central Sahel and decrease over the far western Sahel. The monsoon season is **projected** to have a delayed onset and a delayed retreat.
- **Observed** increase in monsoon precipitation during the 20th century due to warming from greenhouse gas emissions masked by the decrease due to cooling from human-caused aerosol emissions (*high confidence*). **Observed** increase since the 1980s are partly due to the growing influence of greenhouse gases and reductions in the cooling effect of human-caused aerosol emissions over Europe and North America.