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Figure 17.16 Estimates of global mean surface temperature (GMST) using averages of CMIP3(blue) and CMIP5(yellow) models using (a) both anthropogenic and natural forcings; (b) only natural forcings; and (c) only anthropogenic forcings compared to observed temperatures from 1850 to present. The red line is an average of CMIP5 predictions. CMIP3 models were not available for (c). <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter10_FINAL.pdf>

Figure 17.17 Comparison of model predictions to observed temperature on each of the continents.

<https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter10_FINAL.pdf>

Figure 17.18 Comparison of CMIP5 model results when performed with only natural forcings and using both natural and anthropogenic forcings to observed global temperature of the ocean, land, ocean and land and ocean heat content.

<https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter10_FINAL.pdf>

Figure 17.19 Change in global surface temperature (annual average) as observed and simulated using human and natural and only natural factors (both 1850-2020) °C <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 18.1 Representative concentration pathways or RPC’s. Note that the name of the RPC; for example, RPC 8.5 refers to the radiative forcing in the year 2100.

<https://link.springer.com/article/10.1007/s10584-011-0148-z>

Figure 18.2 Climate change scenarios to be used in AR6.

<https://climatescenarios.org/primer/mitigation/>

Figure 18.3 Observed and projected global surface temperature change 1850 – 2300. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.4 Observed and projected global surface and sea temperature change 1850 – 2100. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.5 Projected annual mean surface air temperature change from 1986-2005 average. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.6 Historical and projected annual minimum of daily minimum, annual warmest daily of daily warmest, days of frost (below 0°C) and days of tropical nights (above 20°C). <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.7 Projected annual mean near-surface soil moisture change (2018-2100) <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.8 Projected annual mean runoff change (2018-2100). <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.9 Observed and projected world surface and sea precipitation change 1850 – 2100. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.10 Observed and projected global surface and sea evaporation change 2081-2100. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.11 Sea ice extent northern hemisphere and southern hemisphere for February and September observed and projected. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.12 Sea ice concentrations for Arctic and Antarctic, 1986-2005 average, projected for February and September using RCP4.5 and 8.5. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.13 Snow cover extent range, historical and projected to 2100. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.14 Near-surface permafrost area, historical and projected to 2100. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 18.15 projected global sea level rise. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter13_FINAL.pdf>

Figure 18.16 (a) Simulated changes in dissolved O2 (mean and model range as shading) relative to 1990s for RCP2.6, RCP4.5, RCP6.0 and RCP8.5. (b) Multi-model means dissolved O2 (μmol m–3) in the main thermocline (200 to 600 m depth average) for the 1990s, and changes in 2090s relative to 1990s for RCP2.6 (c) and RCP8.5 (d). To indicate consistency in the sign of change, regions are stippled where at least 80% of models agree on the sign of the mean change. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter06_FINAL.pdf>

Figure 18.17 Historical and projected pH and dissolved CO2. <https://www.pmel.noaa.gov/pubs/PDF/feel2899/feel2899.pdf>

Figure 18.18 Past and future changes to the ocean and cryosphere. <https://www.ipcc.ch/srocc/>

Figure 18.19 Climate change and the jet stream. <http://www.climatecentral.org/gallery/graphics/climate-change-the-jet-stream>

Figure 18.20 Annex 1 AR5 WG1 Atlas of global and regional climate projections.

<https://www.ipcc.ch/report/ar5/wg1/>

Figure 19.1 Current global extinction risk in different species groups. <https://www.ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf>

Figure 19.2 Maximum speed at which species can move. https://www.ipcc.ch/site/assets/uploads/2018/02/ar5\_wgII\_spm\_en.pdf

Figure 20.1 Energy budget as affected by humans.

Figure 20.2 Hydrological cycle. <http://www.physicalgeography.net/fundamentals/5c_1.html>

Figure 20.3 Carbon Cycle. (Office of Biological and Environmental Research of the U.S. Department of Energy Office of Science).

Figure 20.4 Observed and projected global surface temperature change 1850 – 2300. <https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf>

Figure 20.5 Representative concentration pathways or RPC’s. Note that the name of the RPC; for example, RPC 8.5 refers to the radiative forcing in the year 2100. (See Strategies for mitigation of climate change: a review.

<https://link.springer.com/article/10.1007/s10584-011-0148-z> )

Figure 20.6 Greenhouse gas emissions to achieve the RCP outcomes. <https://www.climatechangeinaustralia.gov.au/en/climate-campus/modelling-and-projections/projecting-future-climate/greenhouse-gas-scenarios/>

Figure 20.7 (also Figure 15.9) Detailed global emissions by sector.

<https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter1.pdf>

Figure 21.1 Climate change scenarios to be used in AR6.

<https://climatescenarios.org/primer/mitigation/>

Figure 21.2 Change in global surface temperature (annual average) as observed and simulated using human and natural and only natural factors (both 1850-2020) °C <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.3 Future and annual emissions of CO2 for five scenarios used in AR6 WG1 simulations <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.4 Emissions of other GHG contributors including methane and nitrous oxide and the aerosol, sulfur dioxide <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.5 Global surface temperature change relative to 1850-1900 also from AR6 WG1 simulations <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.6 September Arctic Sea ice area also from AR6 WG1 simulations <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.7 Global Ocean surface pH also from AR6 WG1 simulations <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.8 Global mean sea level change relative to 1900 also from AR6 WG1 simulations <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.9 Global surface temperature increase since 1850-1900 °C as a function of cumulative CO2 emissions (GtCO2) from <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf>.

Figure 21.10 Selection of model projections using CMIP6, CMIP5 or regional models, CORDEX.

Figure 21.11 Selection of variable of interest as it relates to the atmosphere, ocean or other variables.

Figure 21.12 Selection of Value and Period – specifically period, scenario and baseline.

Figure 21.13. Selection of season of interest.

Figure 21.14 Selection of WG1 reference-regions and level of uncertainty.