

SUPPLEMENT of ATTRICI 1.0 - Counterfactual Climate for Impact Attribution

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June 26, 2020

Contents

1	Plots for Giorgi regions for GSWP3-W5E5	2
2	Maps of differences between late and early period for GSWP3	60
3	Plots for Giorgi regions for GSWP3	62

1 Plots for Giorgi regions for GSWP3-W5E5

We here present figures for all Giorgi regions as defined in Giorgi (2000) analogously to Figures 6-8 (Southern South America) and 9-11 (Northern Europe) in the main text.

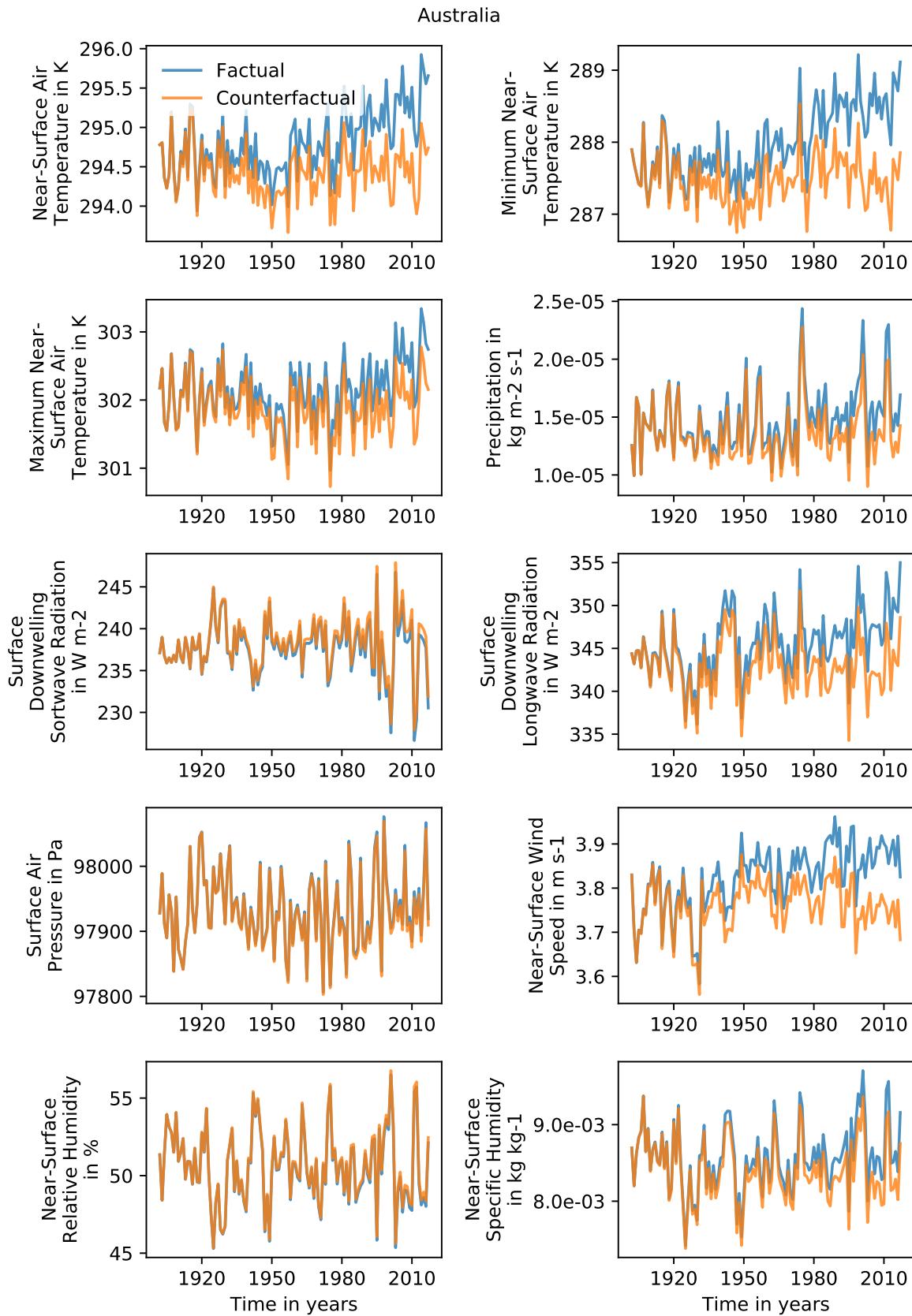


Figure A1: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Australia for the GSWP3-W5E5 dataset.

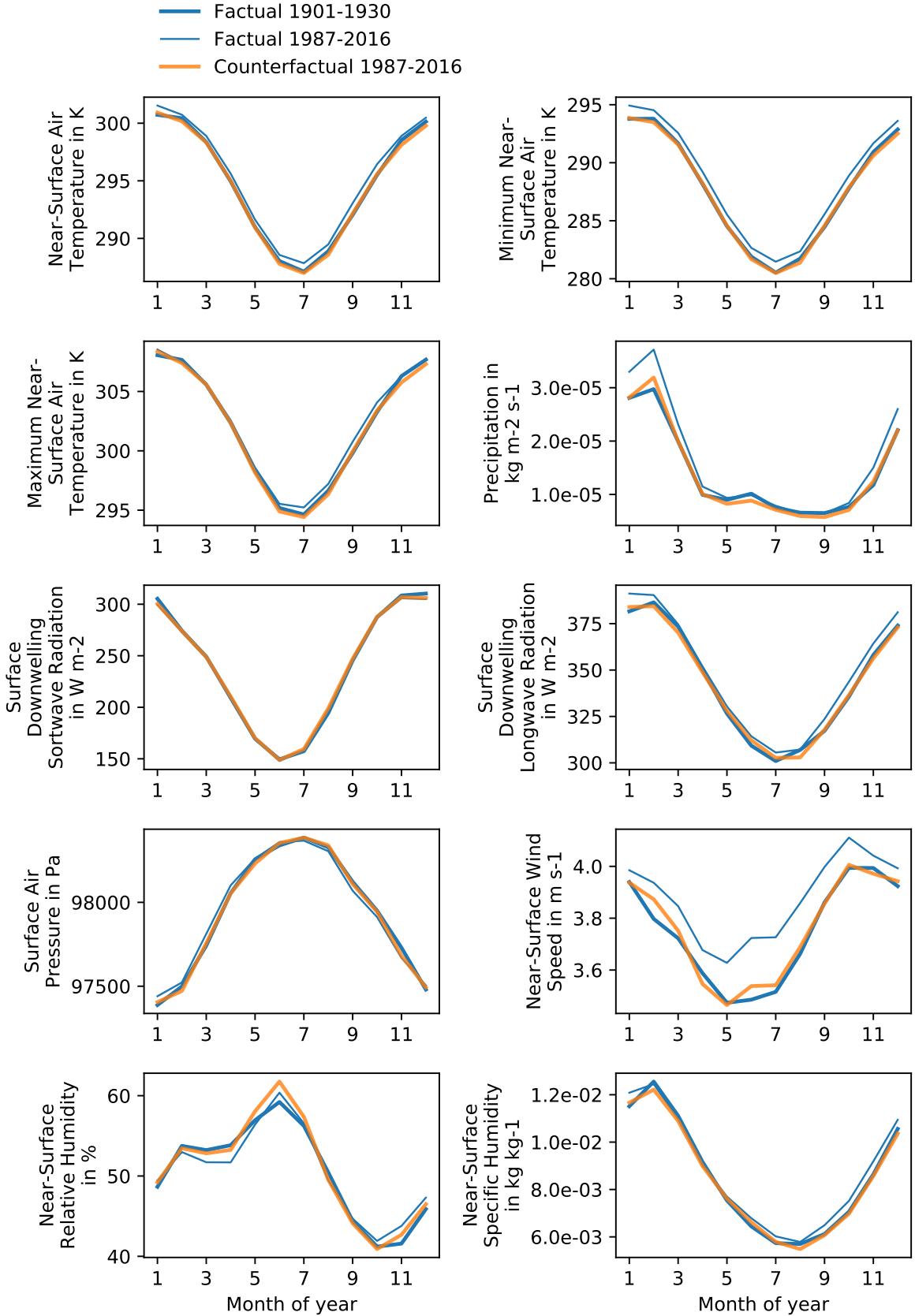


Figure A2: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Australia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

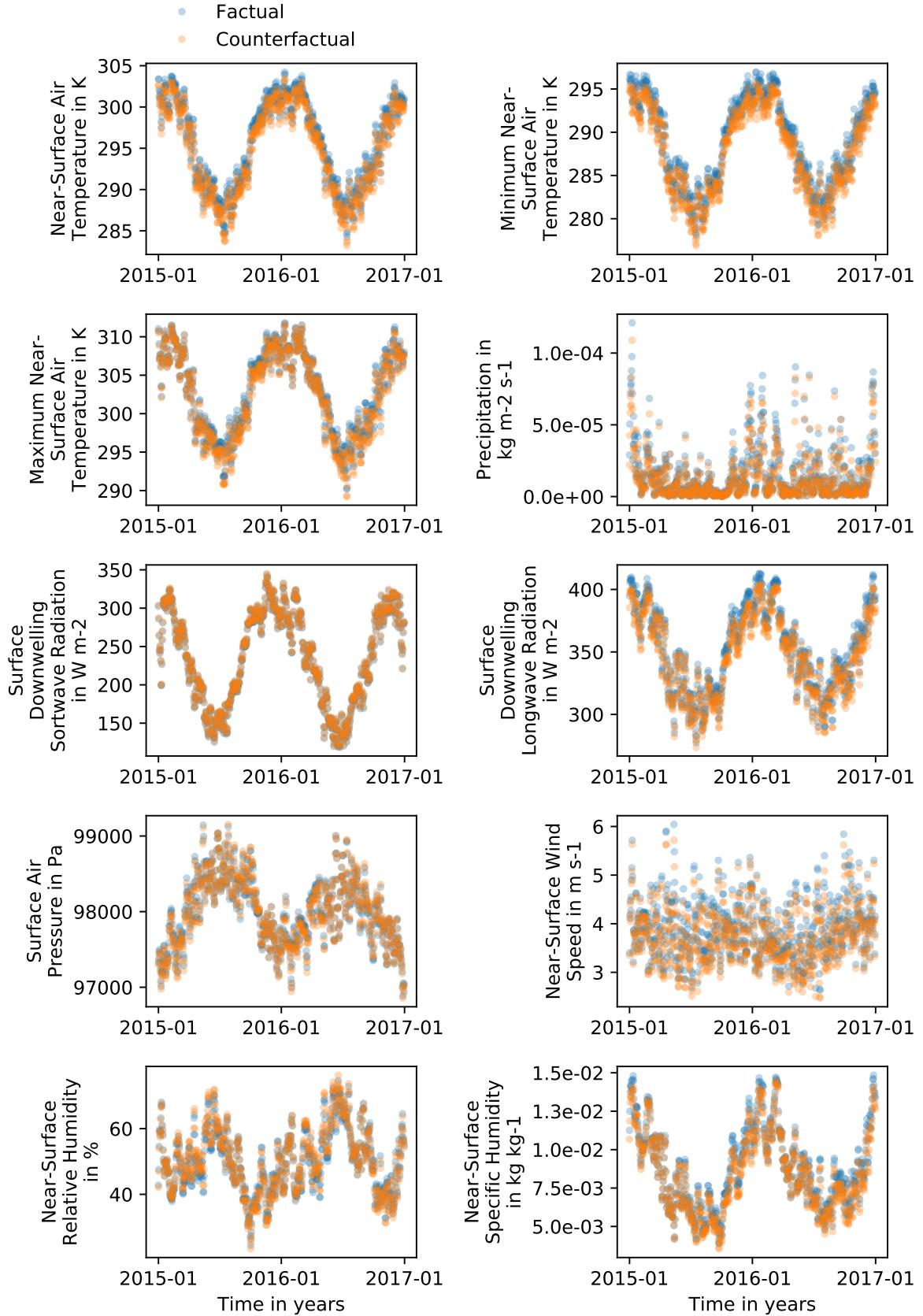


Figure A3: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Australia.

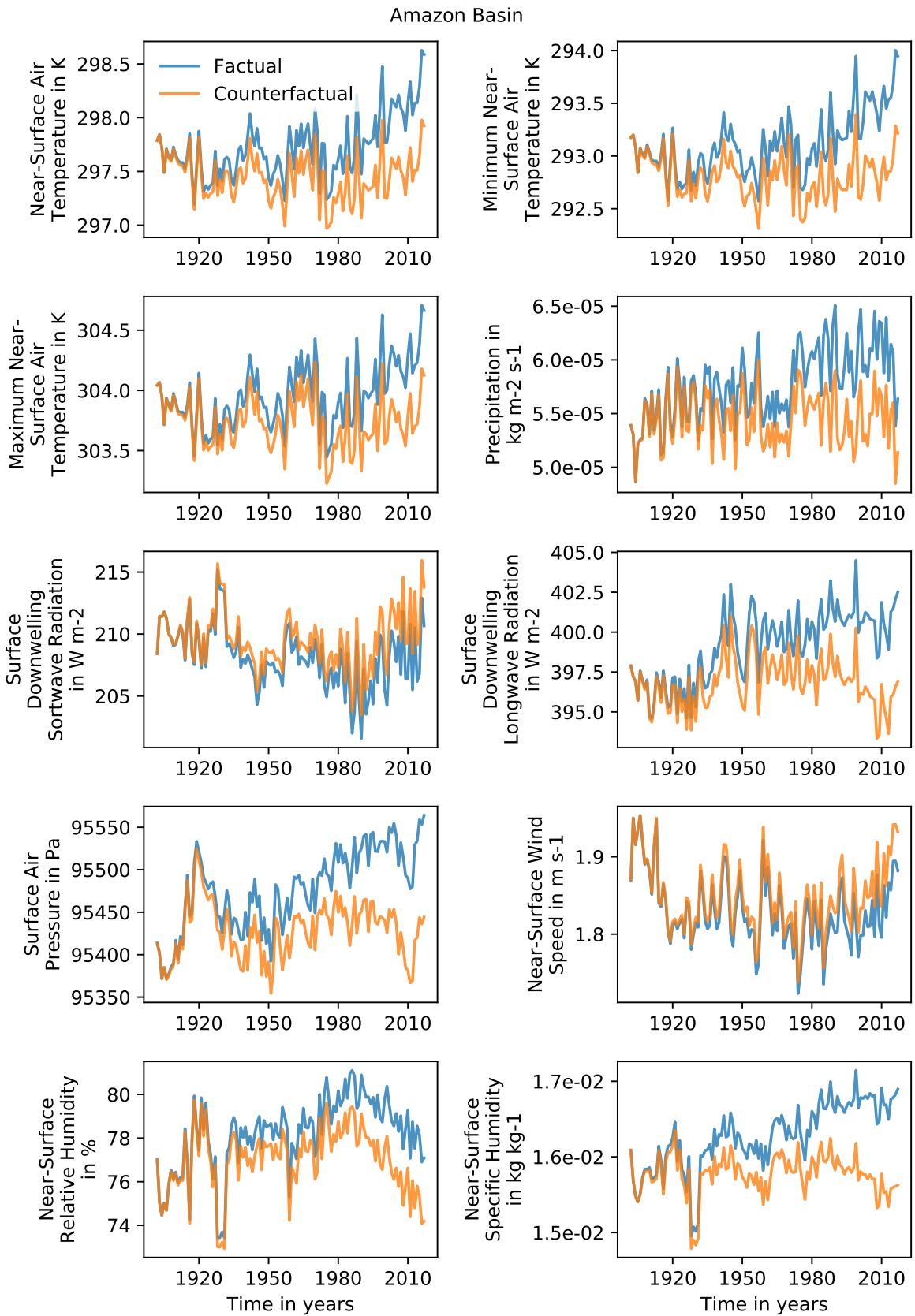


Figure A4: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Amazon Basin for the GSWP3-W5E5 dataset.

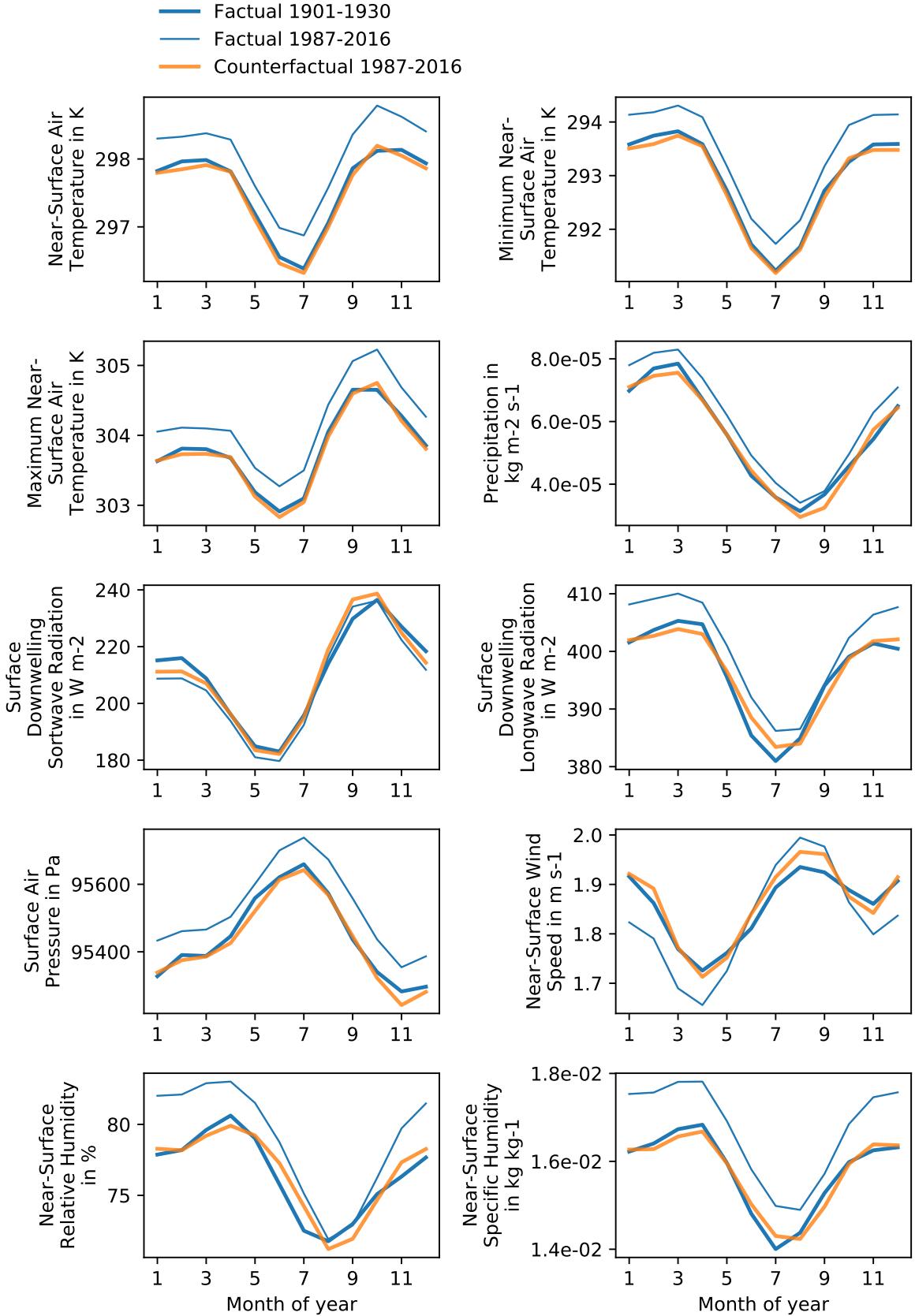


Figure A5: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Amazon Basin. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

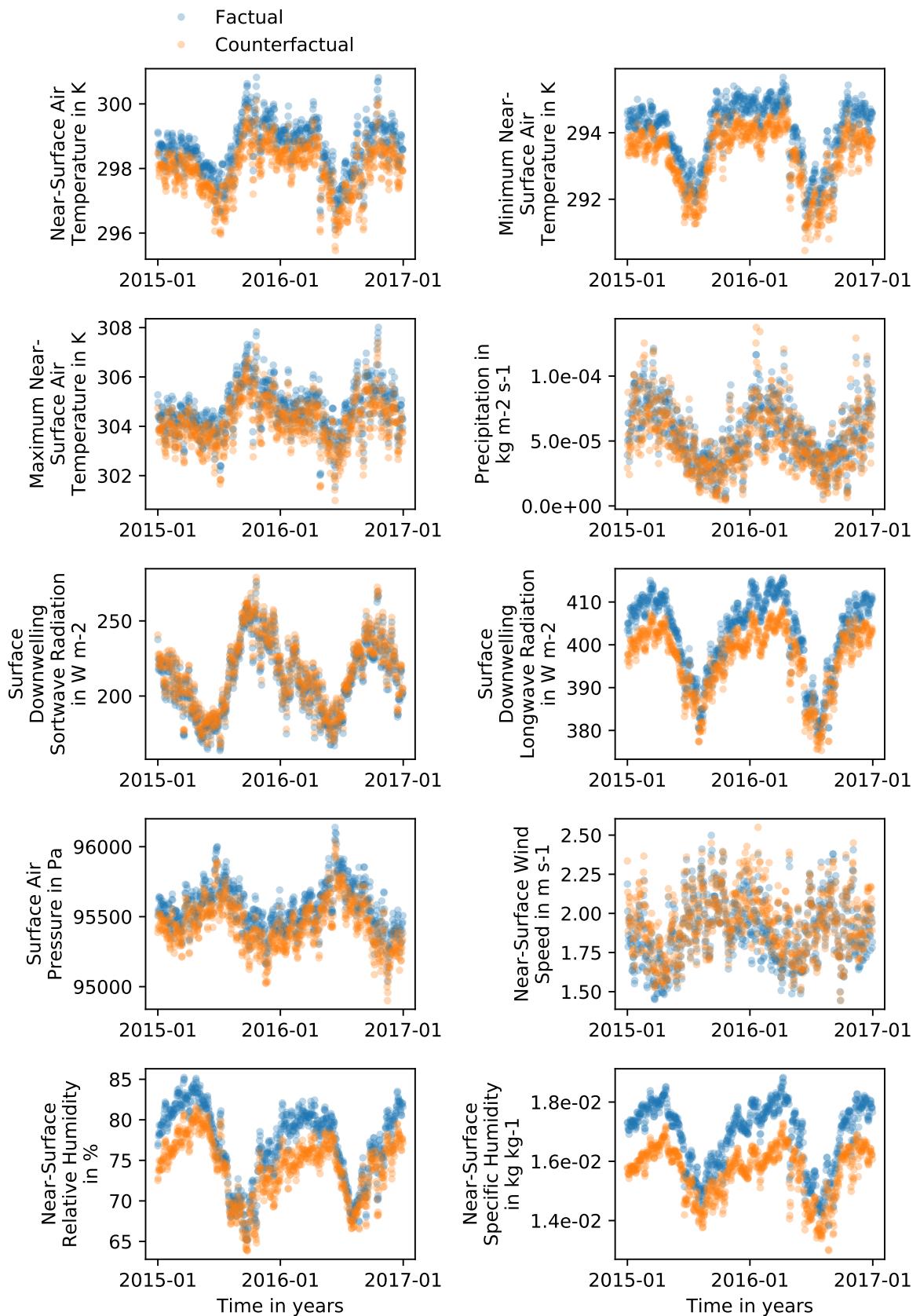


Figure A6: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Amazon Basin.

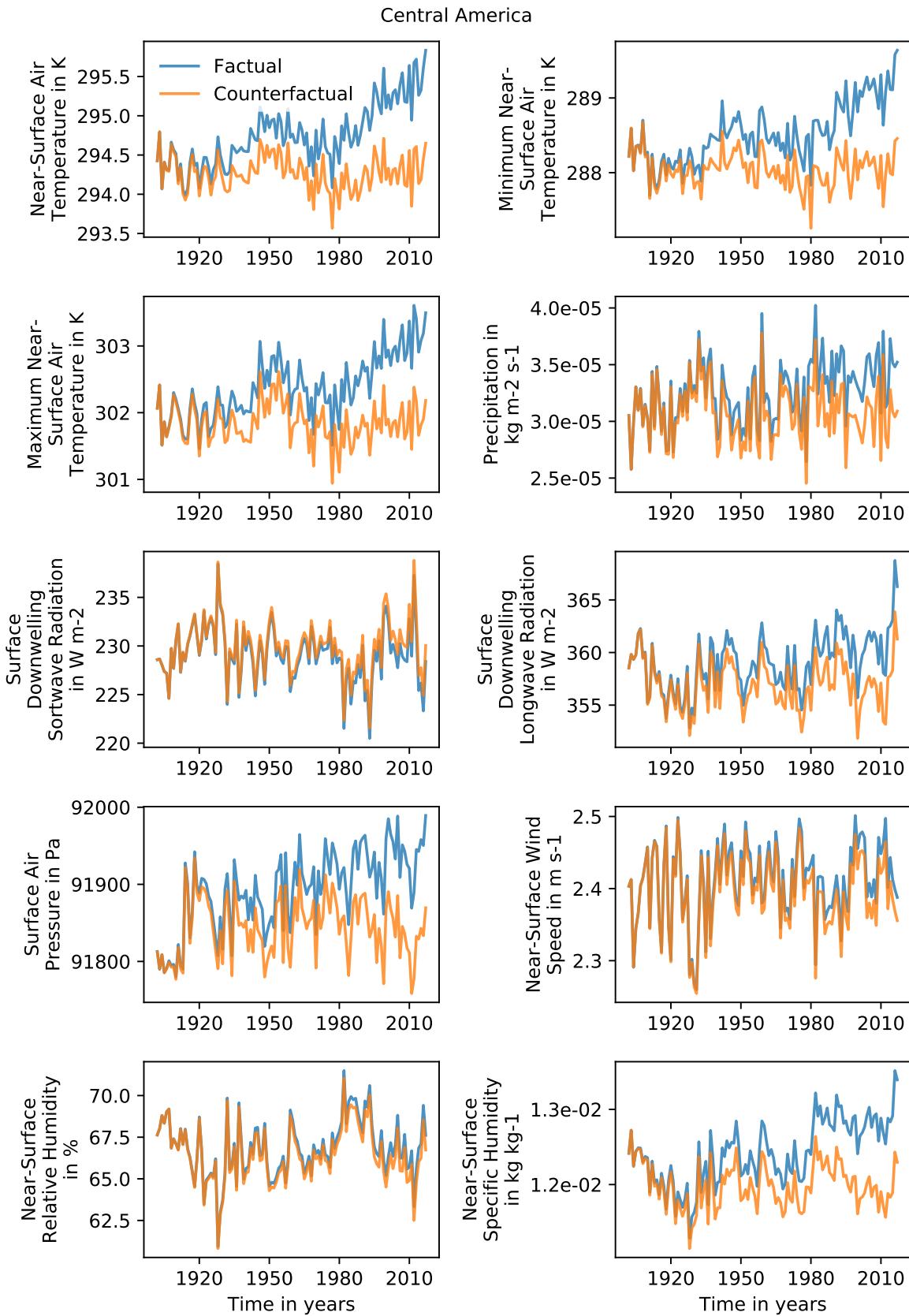


Figure A7: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central America for the GSWP3-W5E5 dataset.

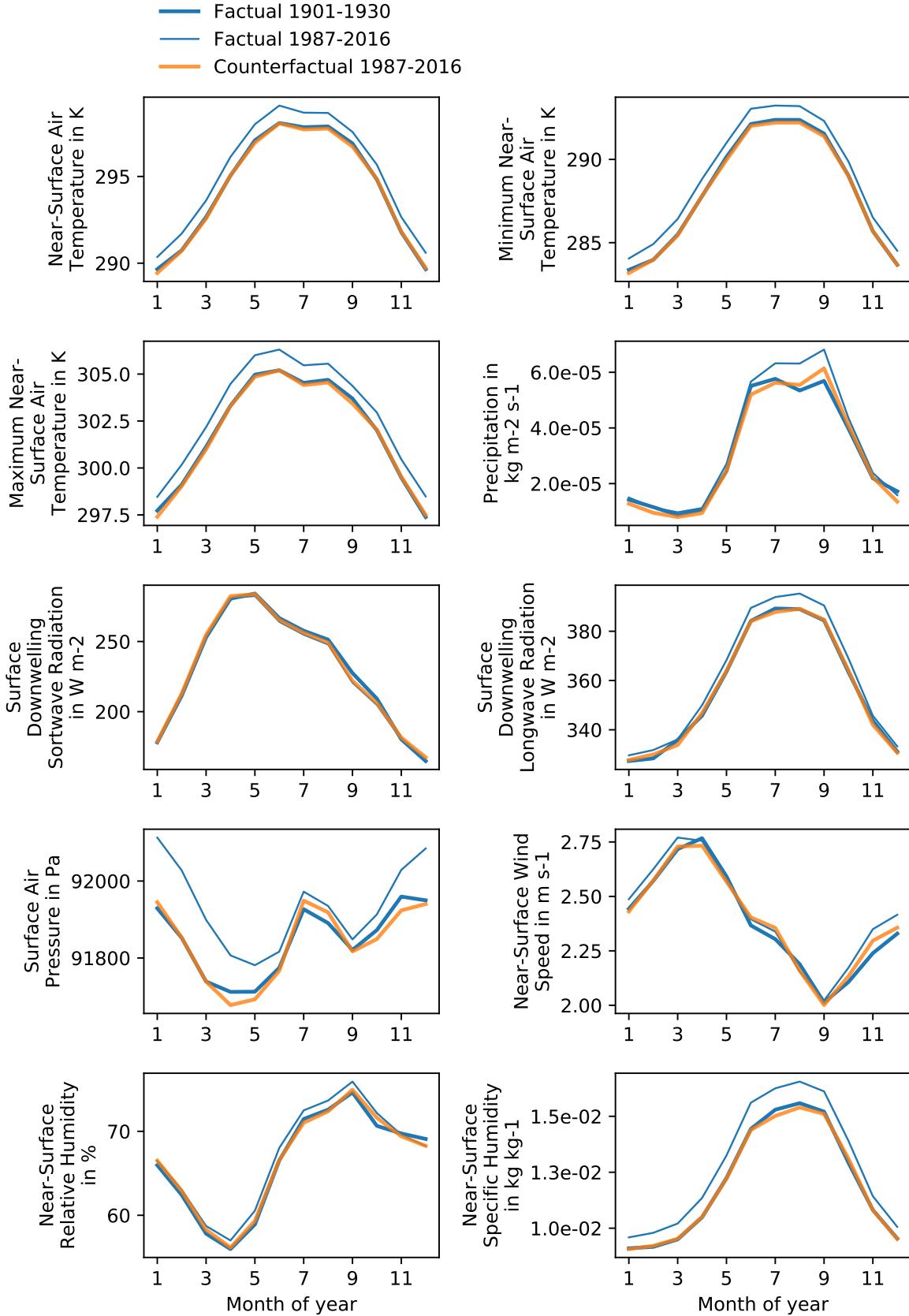


Figure A8: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Central America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

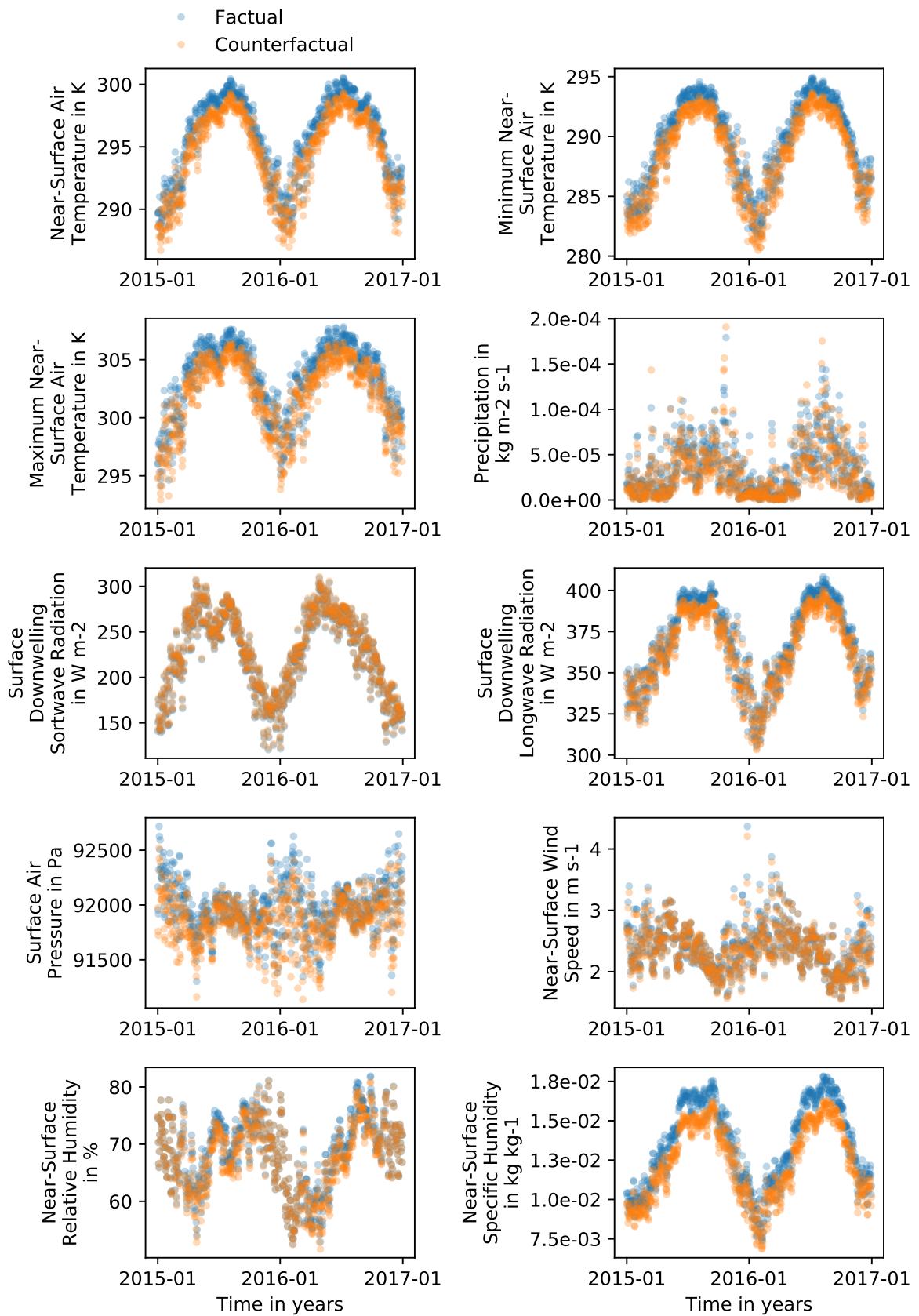


Figure A9: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Central America.

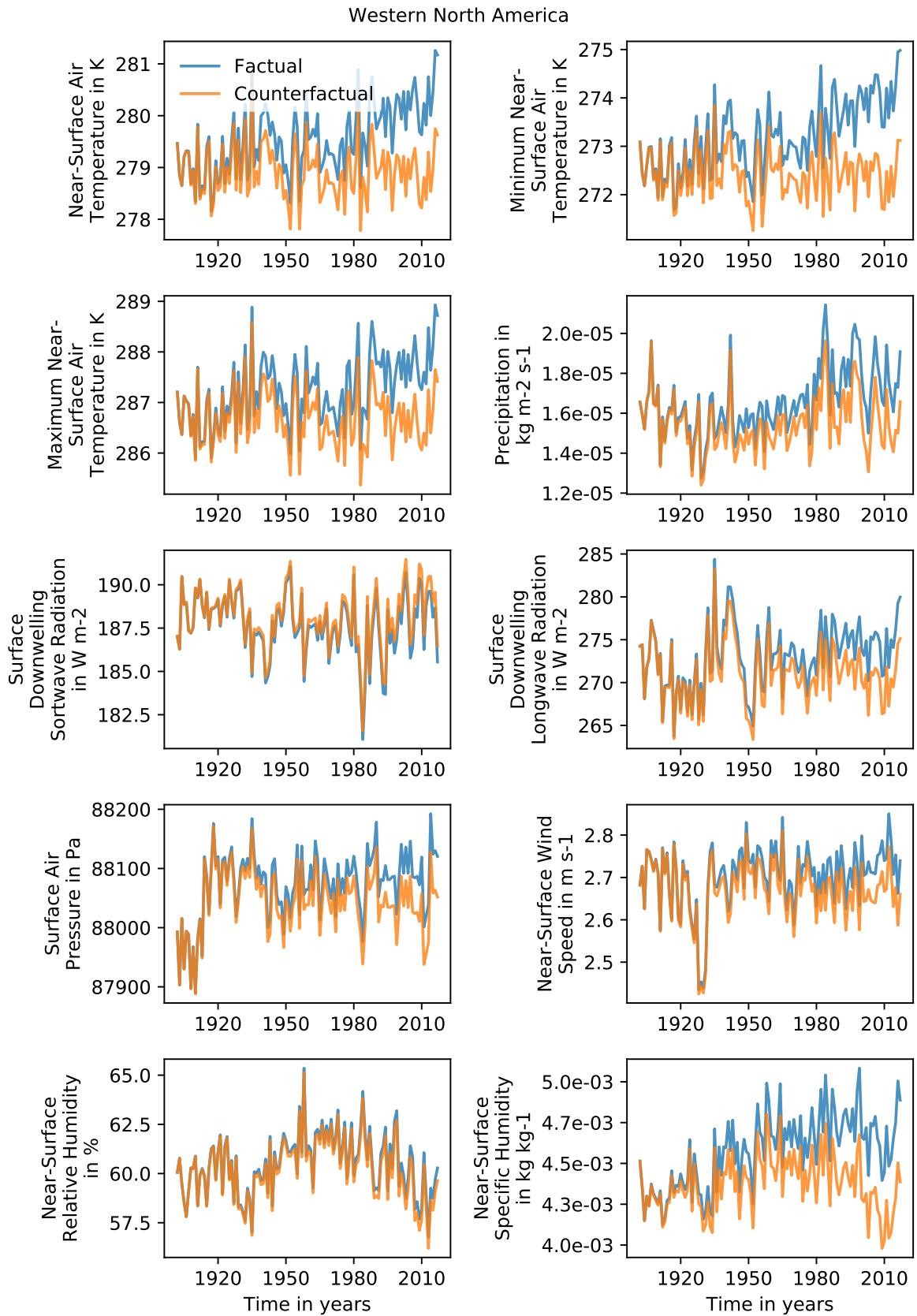


Figure A10: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Western North America for the GSWP3-W5E5 dataset.

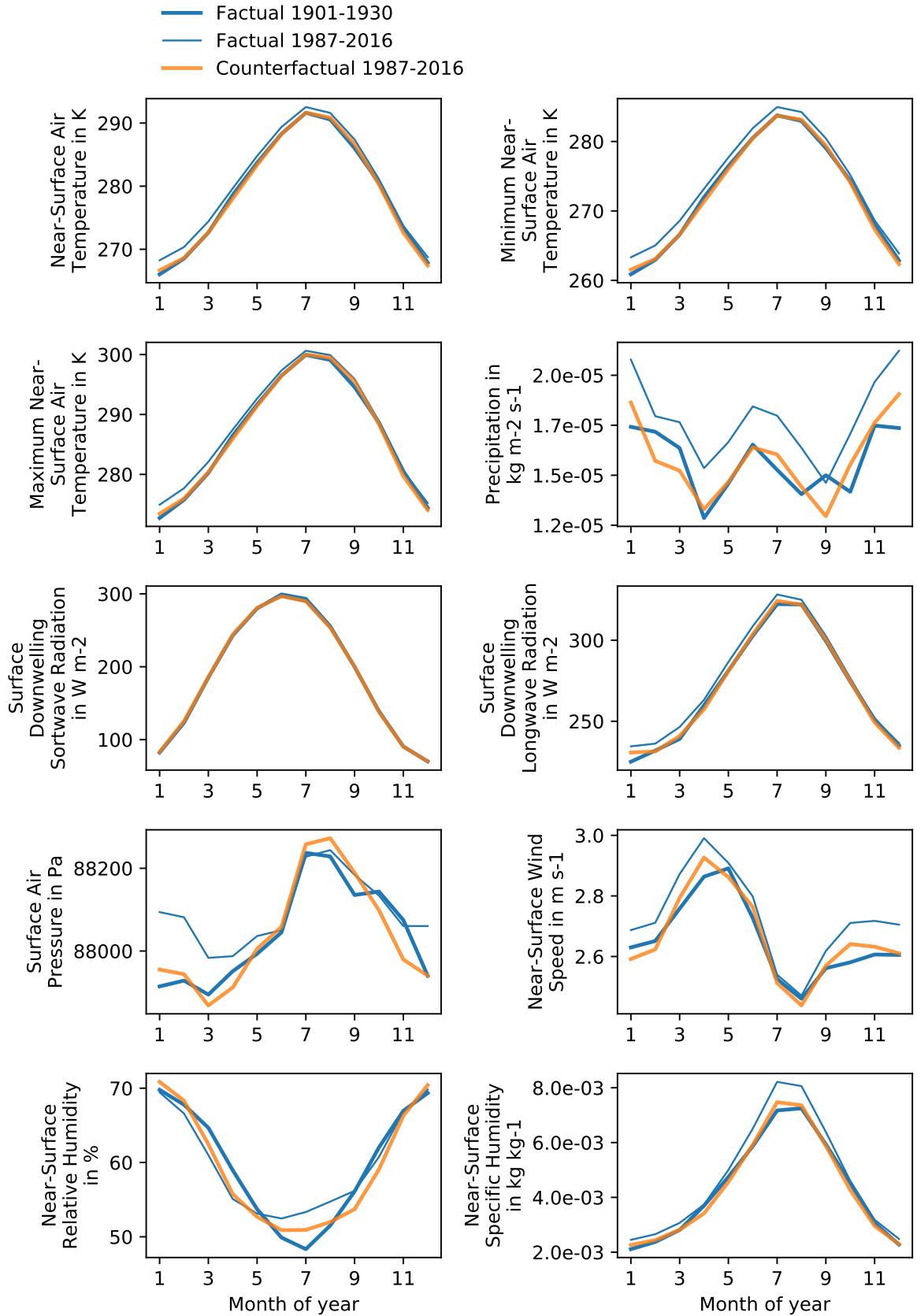


Figure A11: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Western North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

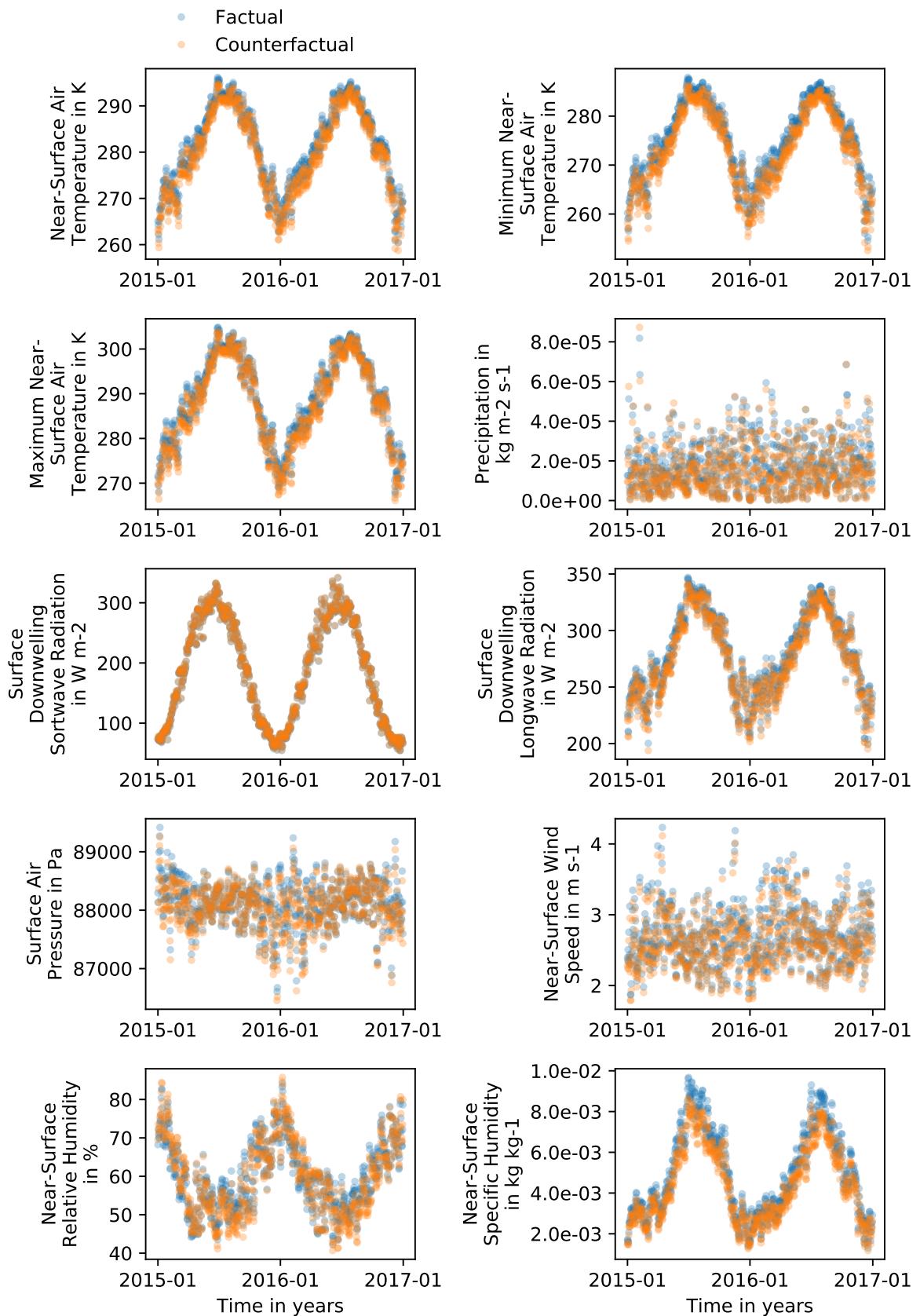


Figure A12: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Western North America.

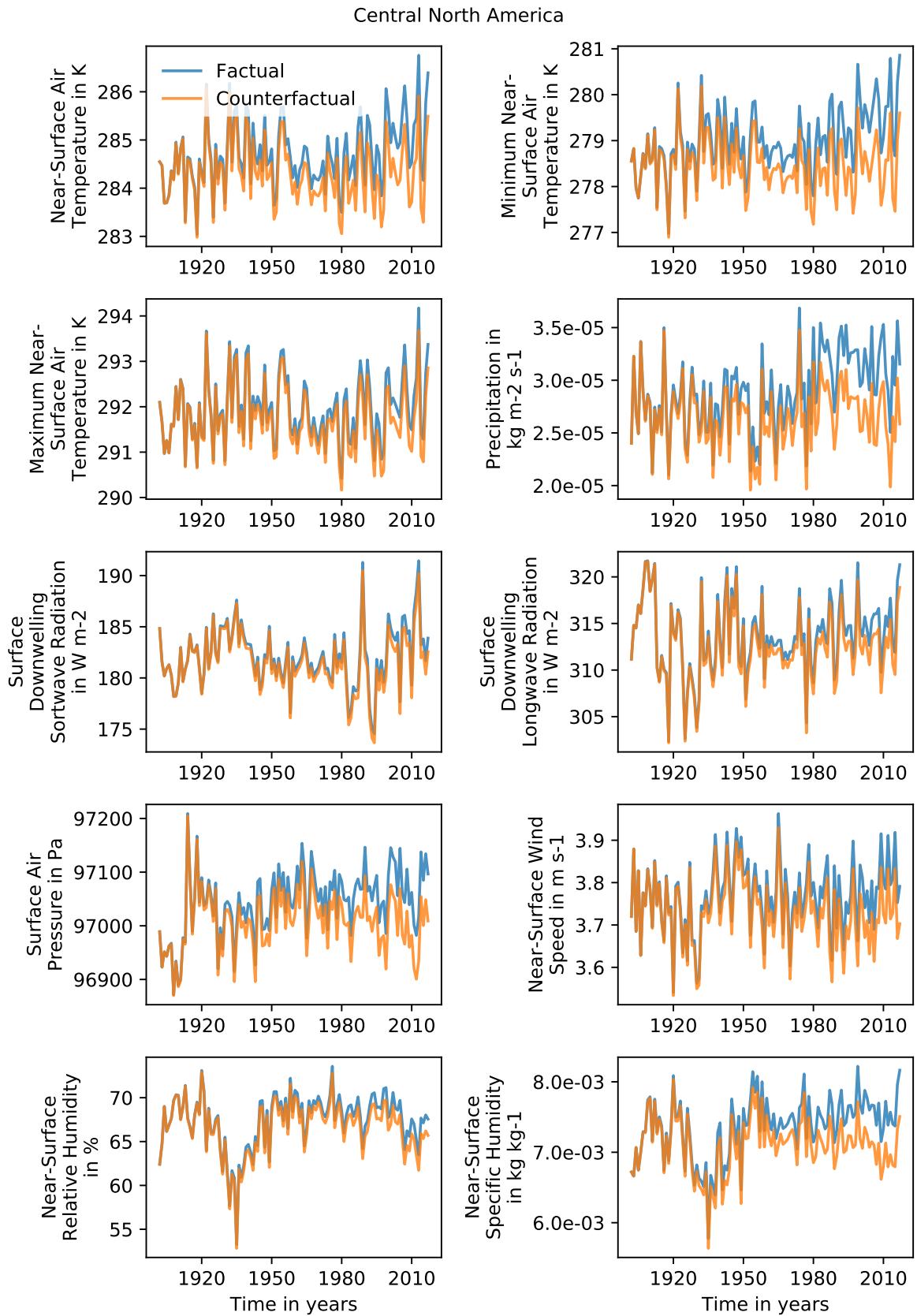


Figure A13: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central North America for the GSWP3-W5E5 dataset.

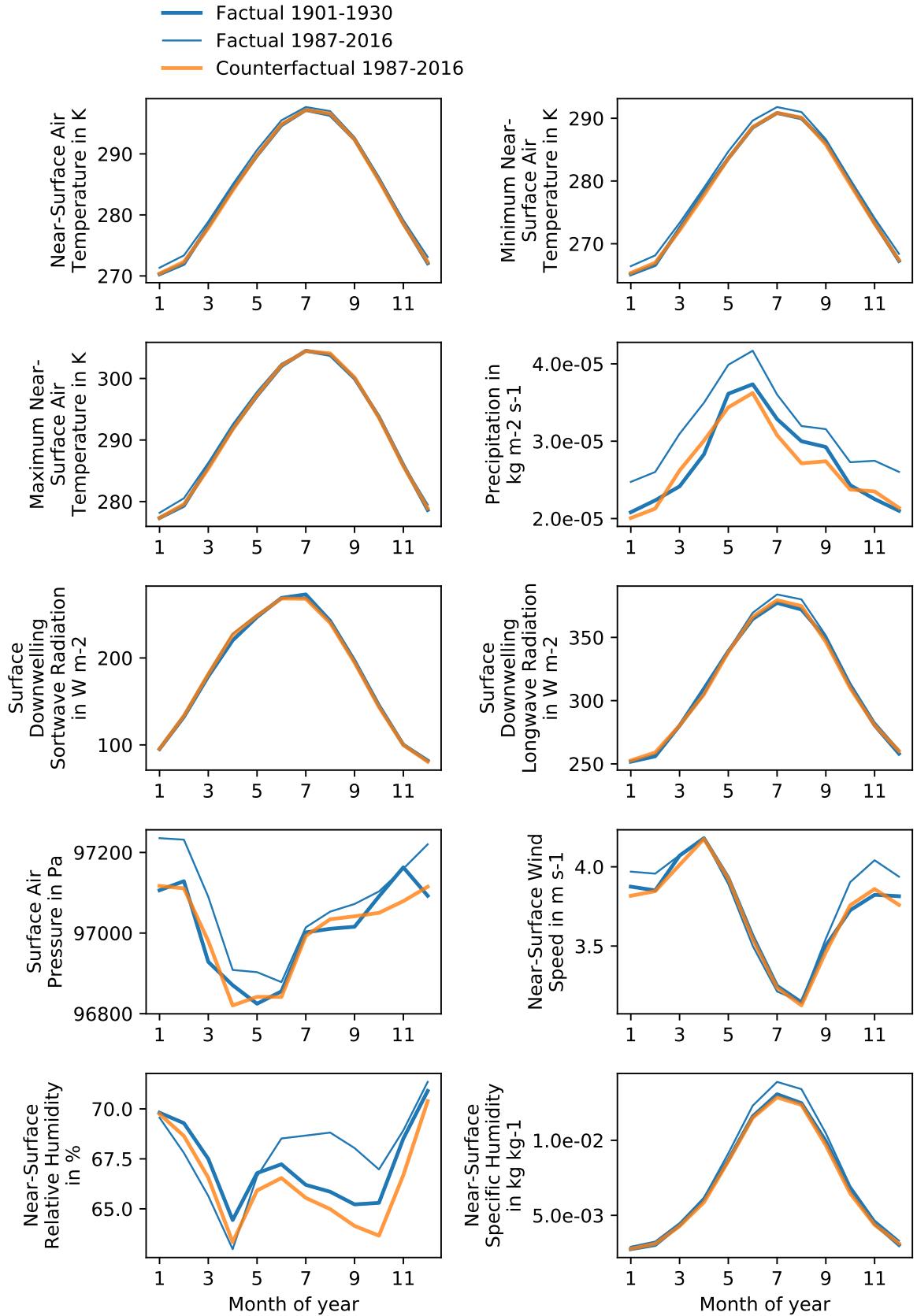


Figure A14: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Central North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

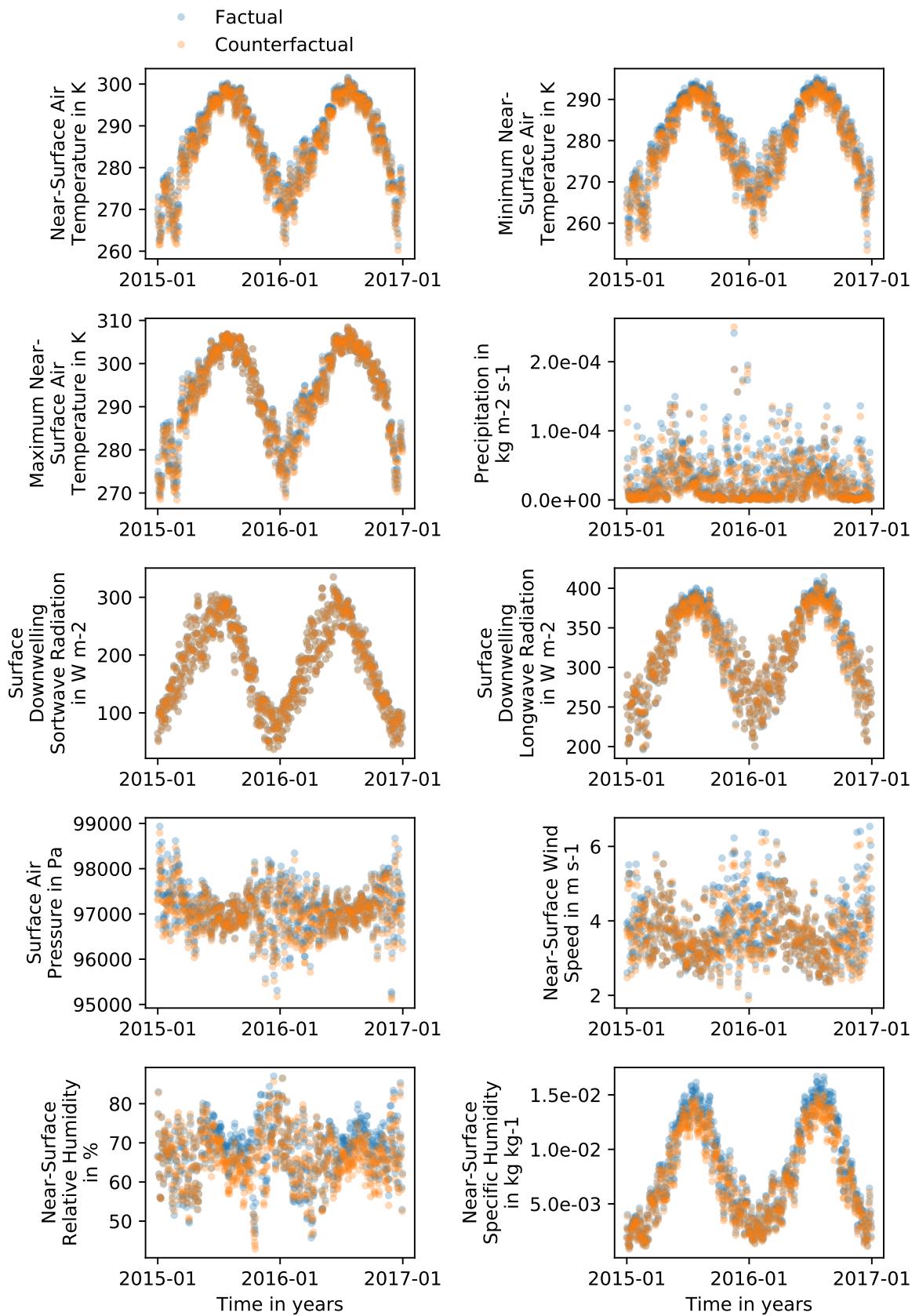


Figure A15: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Central North America.

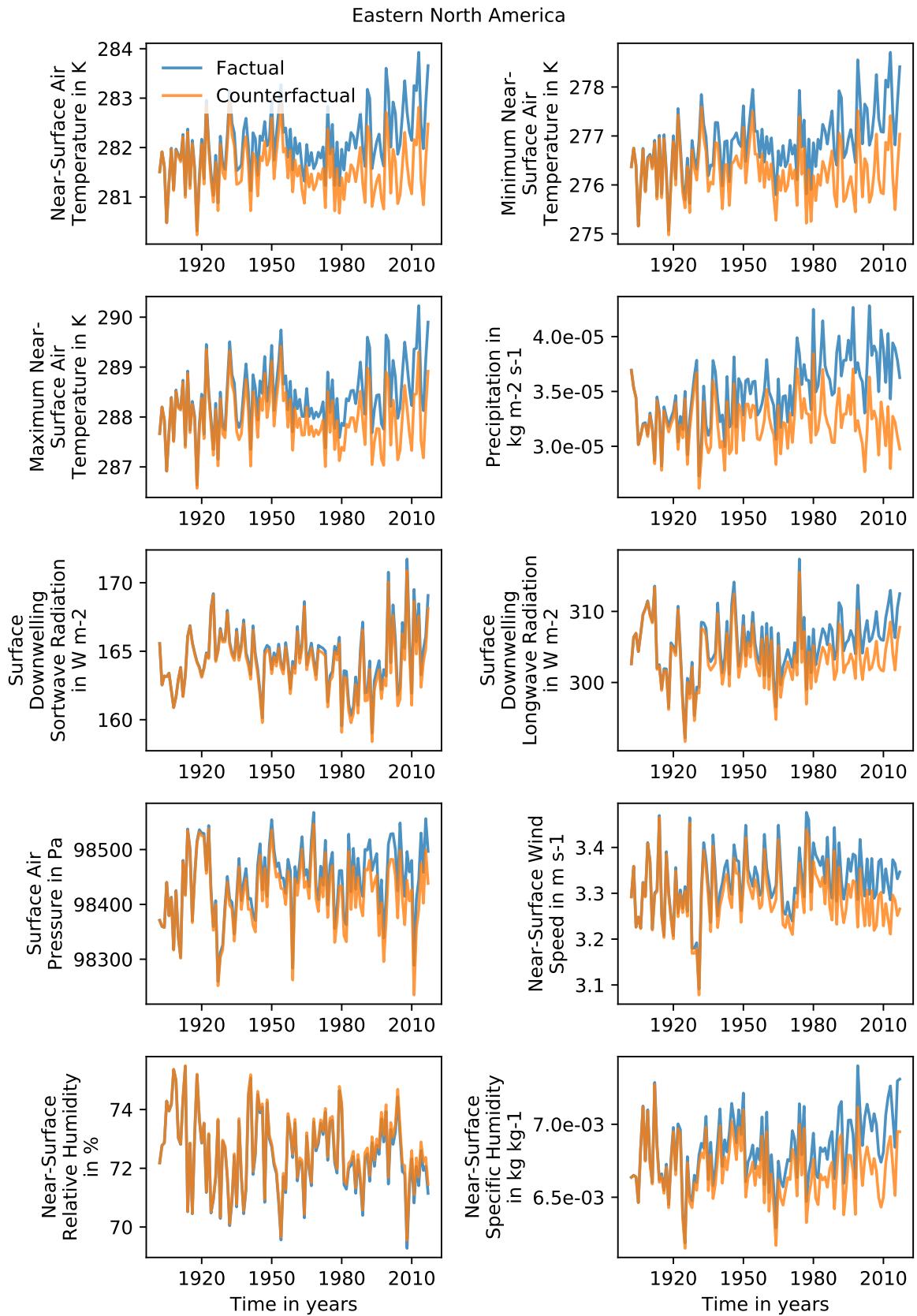


Figure A16: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Eastern North America for the GSWP3-W5E5 dataset.

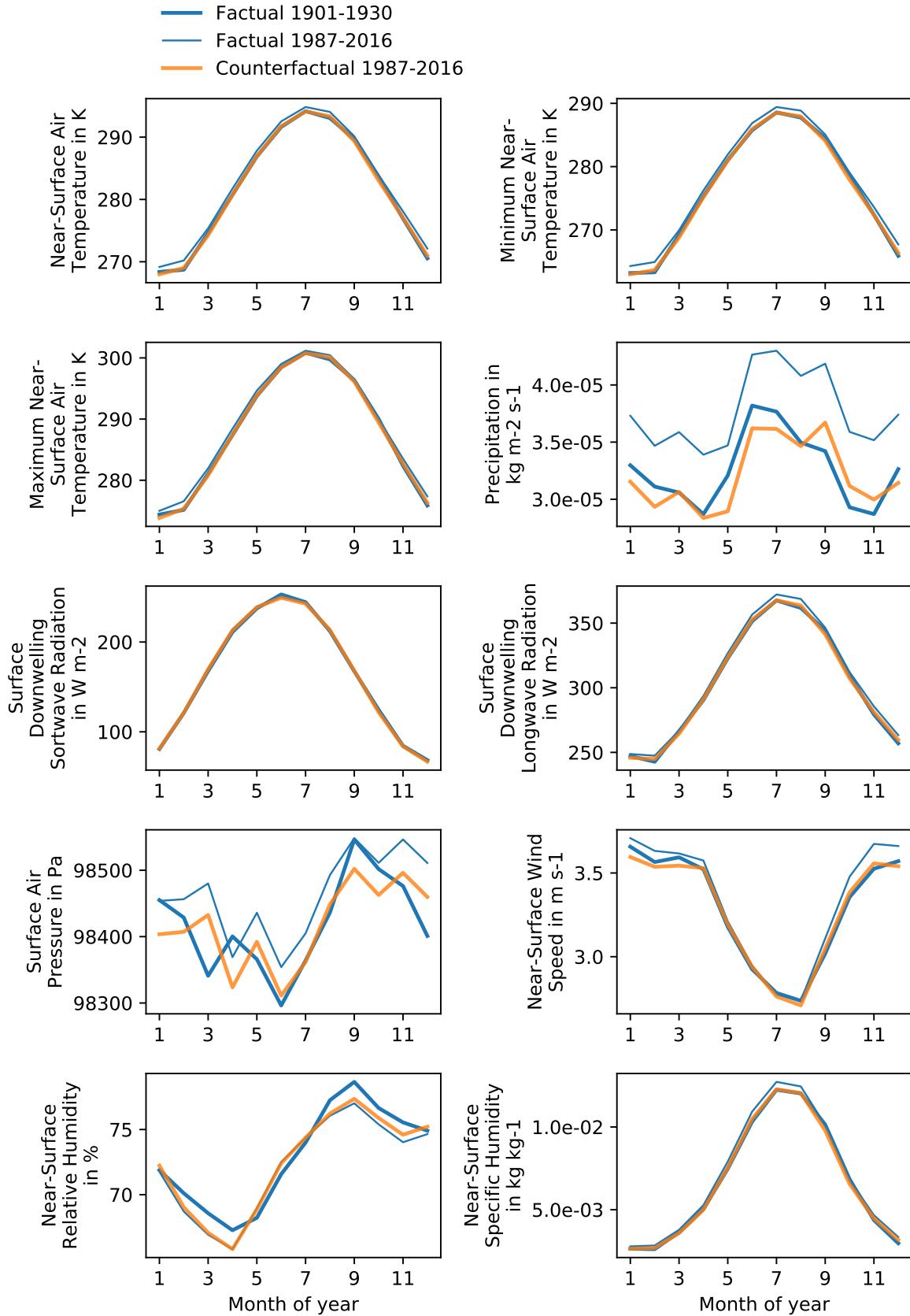


Figure A17: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Eastern North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

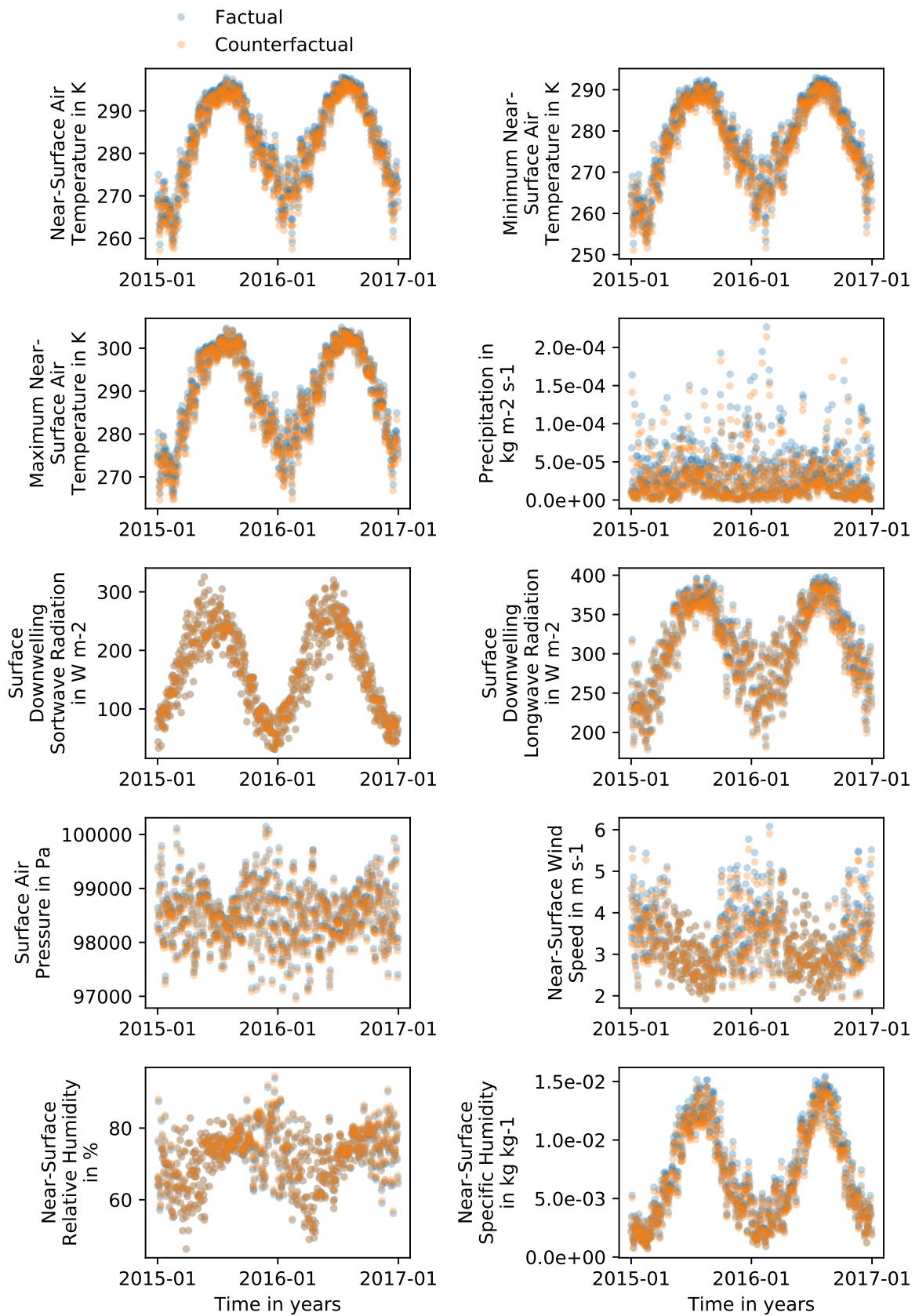


Figure A18: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Eastern North America.

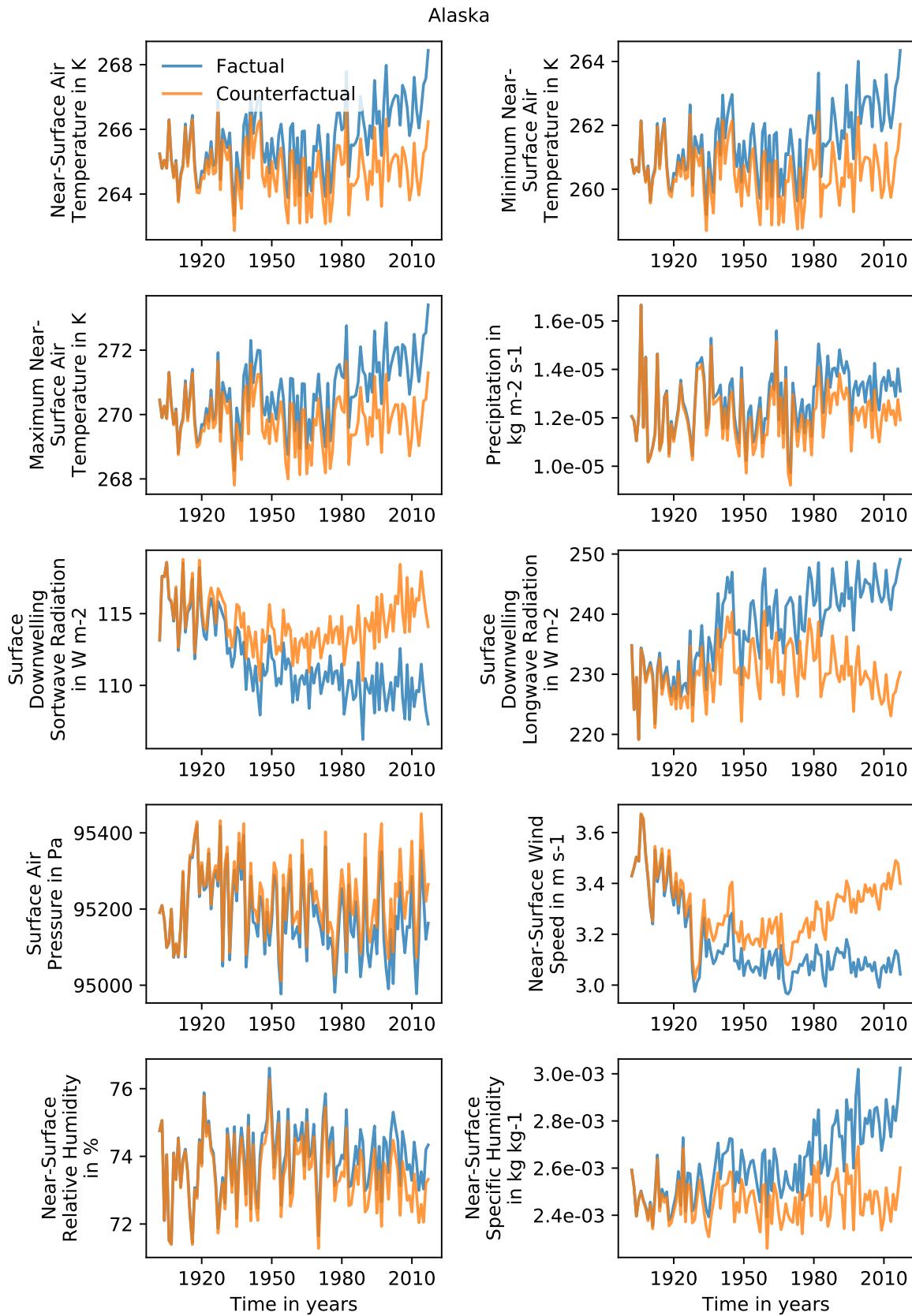


Figure A19: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Alaska for the GSWP3-W5E5 dataset.

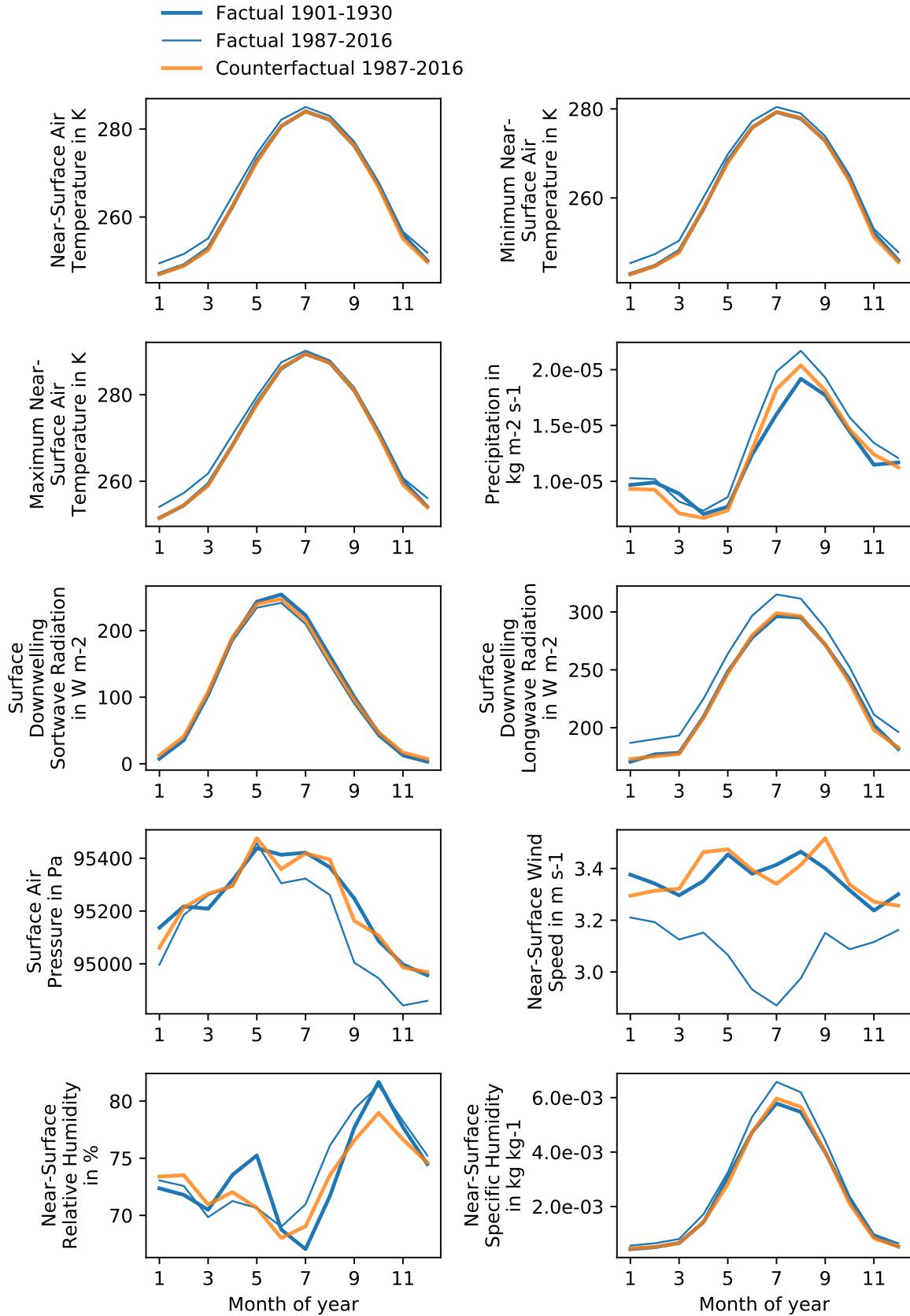


Figure A20: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Alaska. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

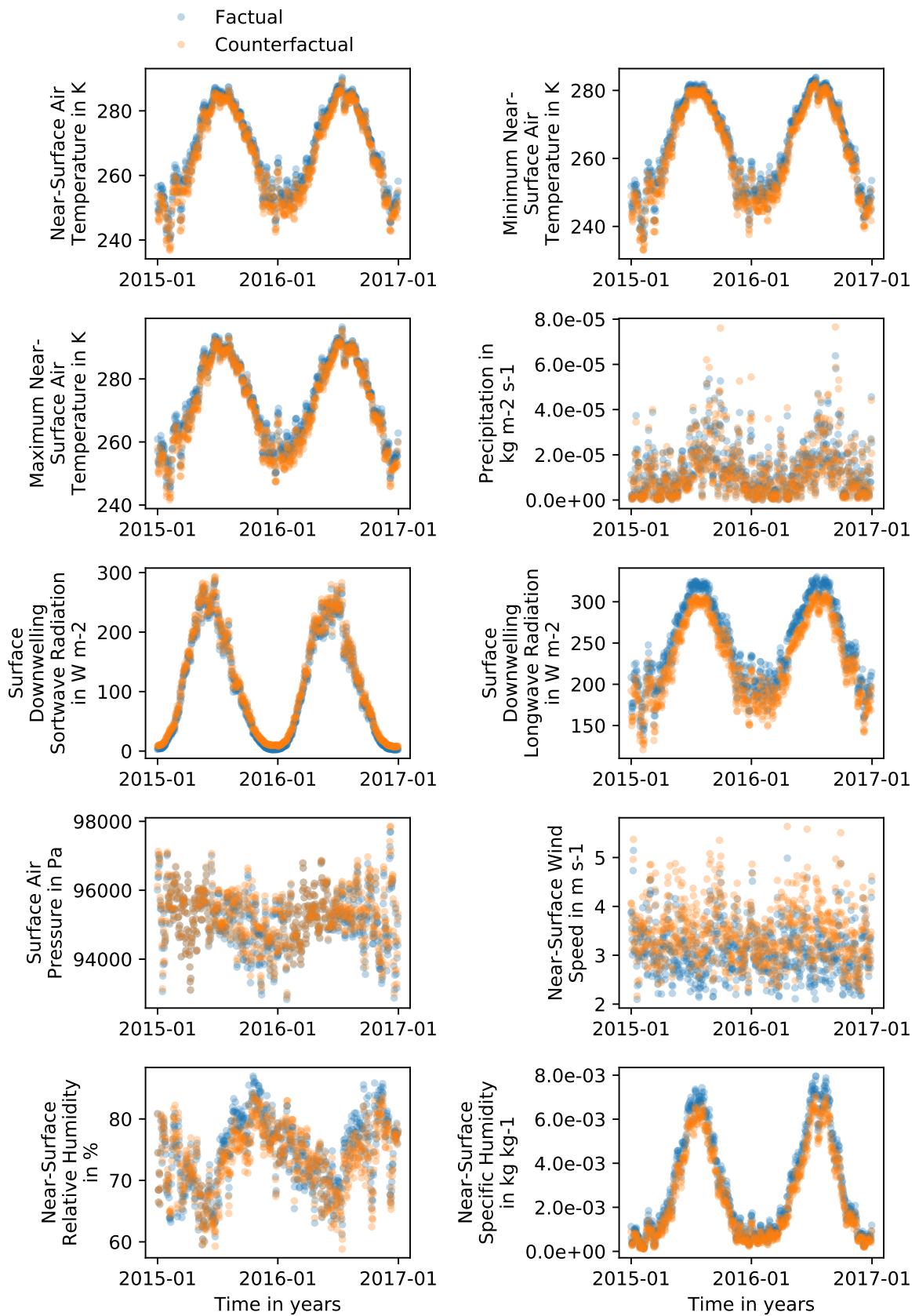


Figure A21: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Alaska.

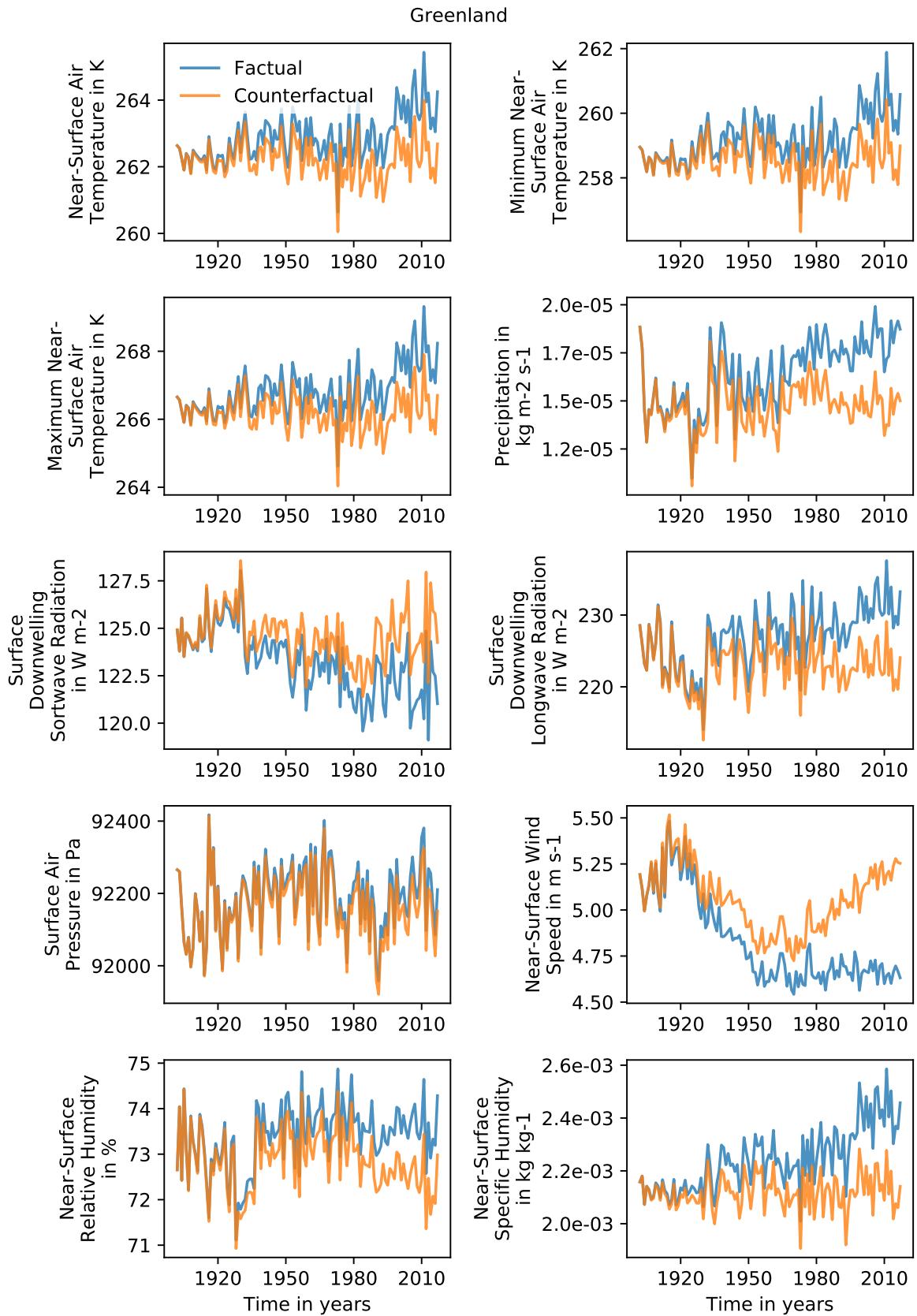


Figure A22: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Greenland for the GSWP3-W5E5 dataset.

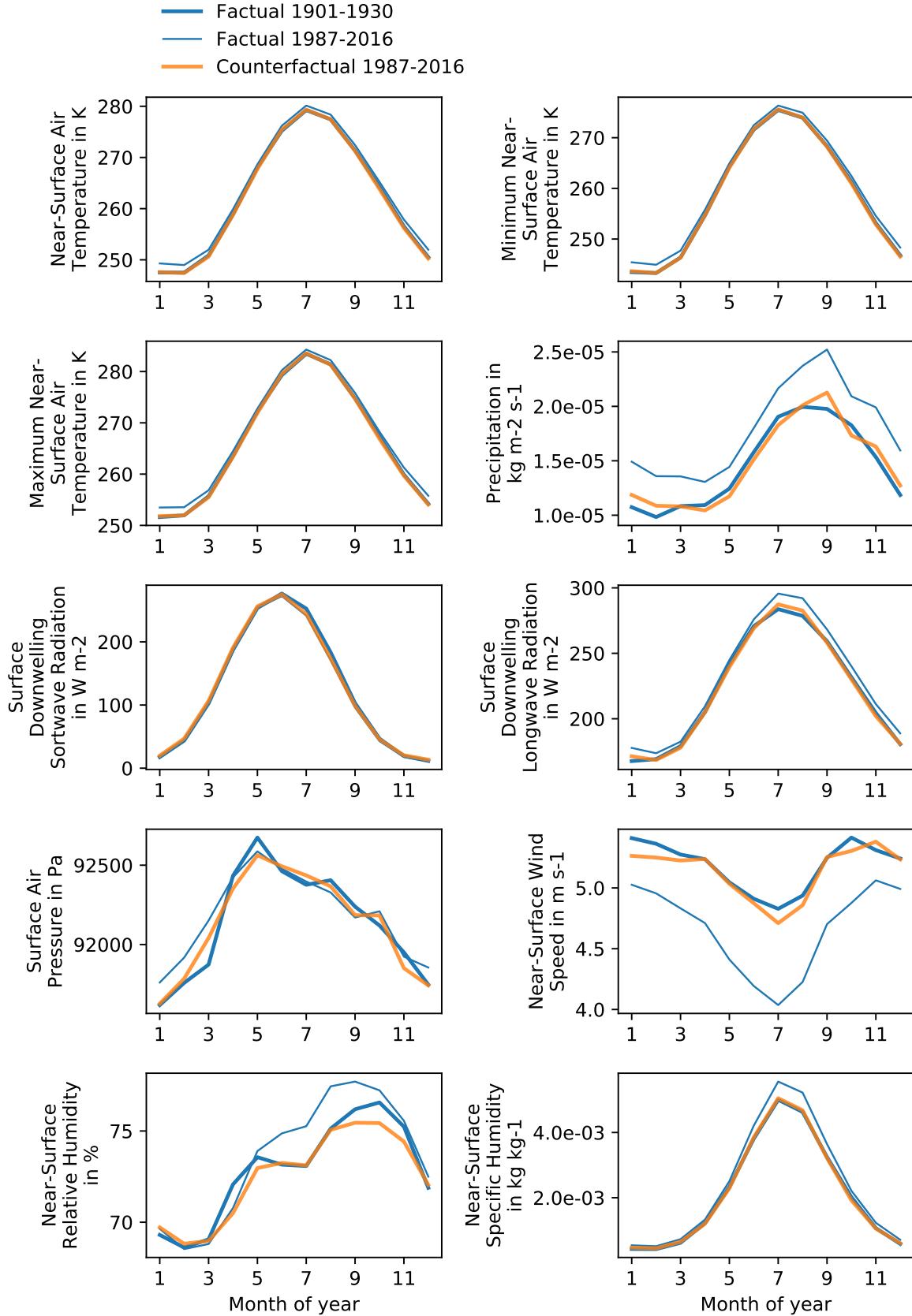


Figure A23: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Greenland. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

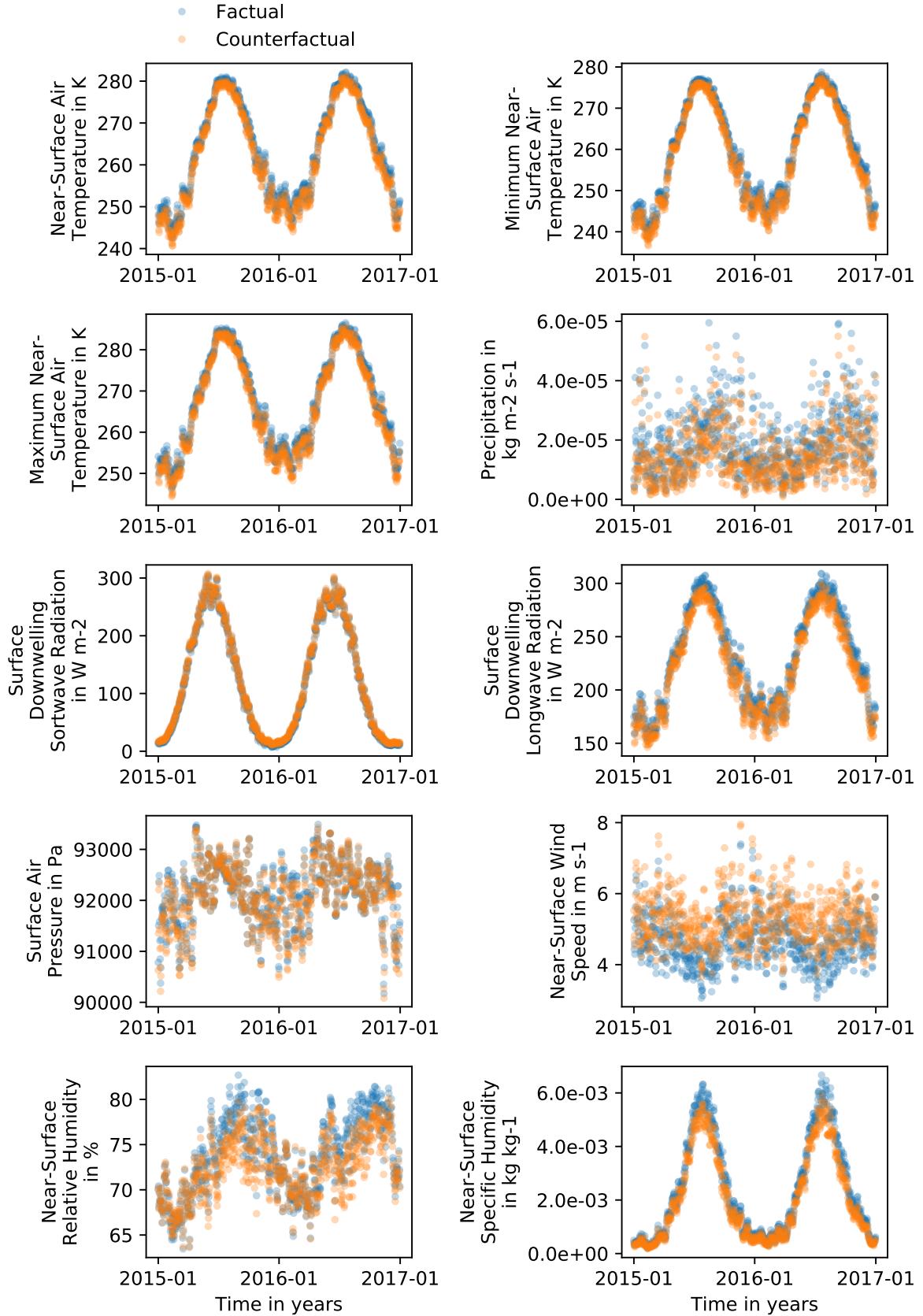


Figure A24: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Greenland.

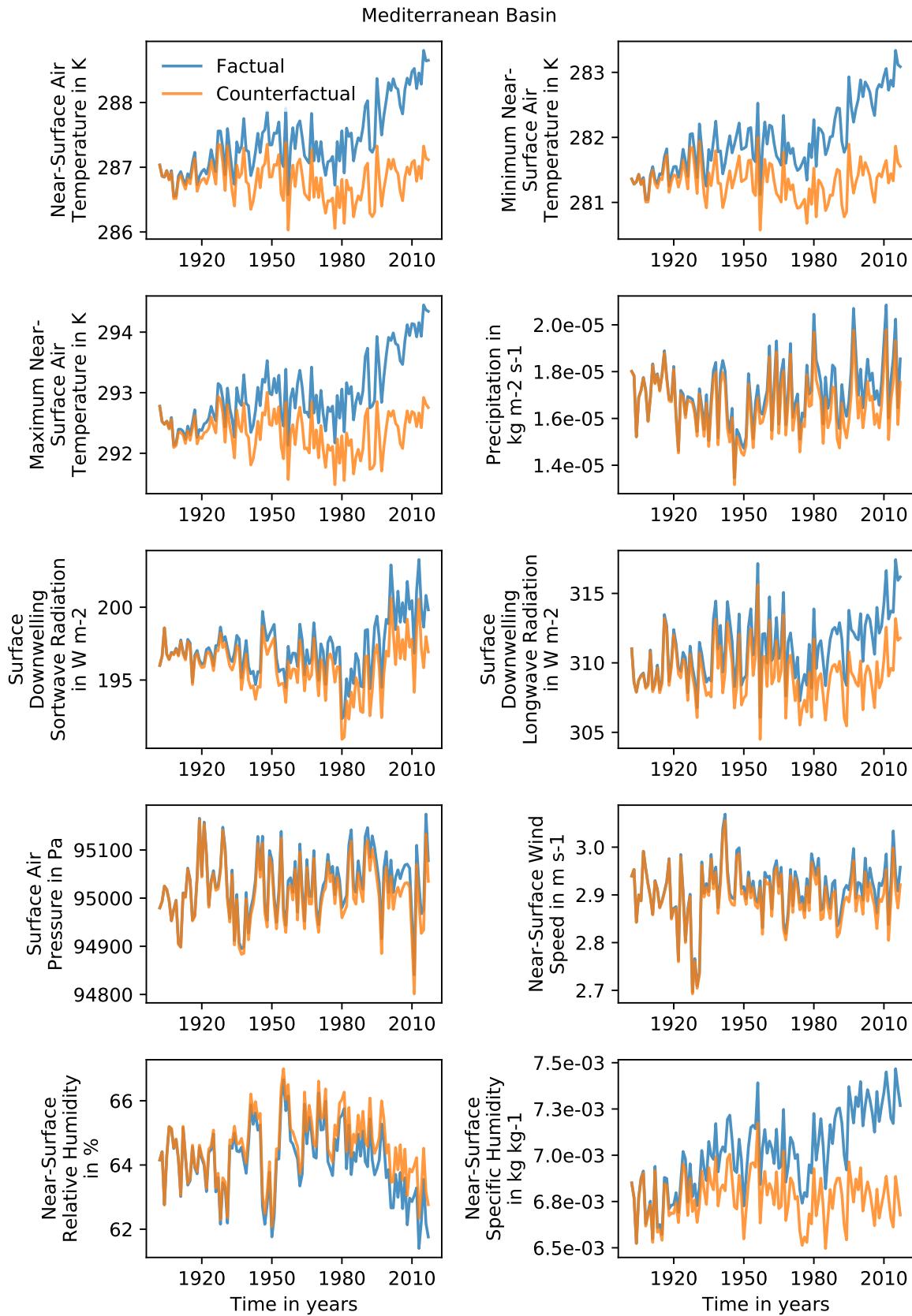


Figure A25: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for the GSWP3-W5E5 dataset.

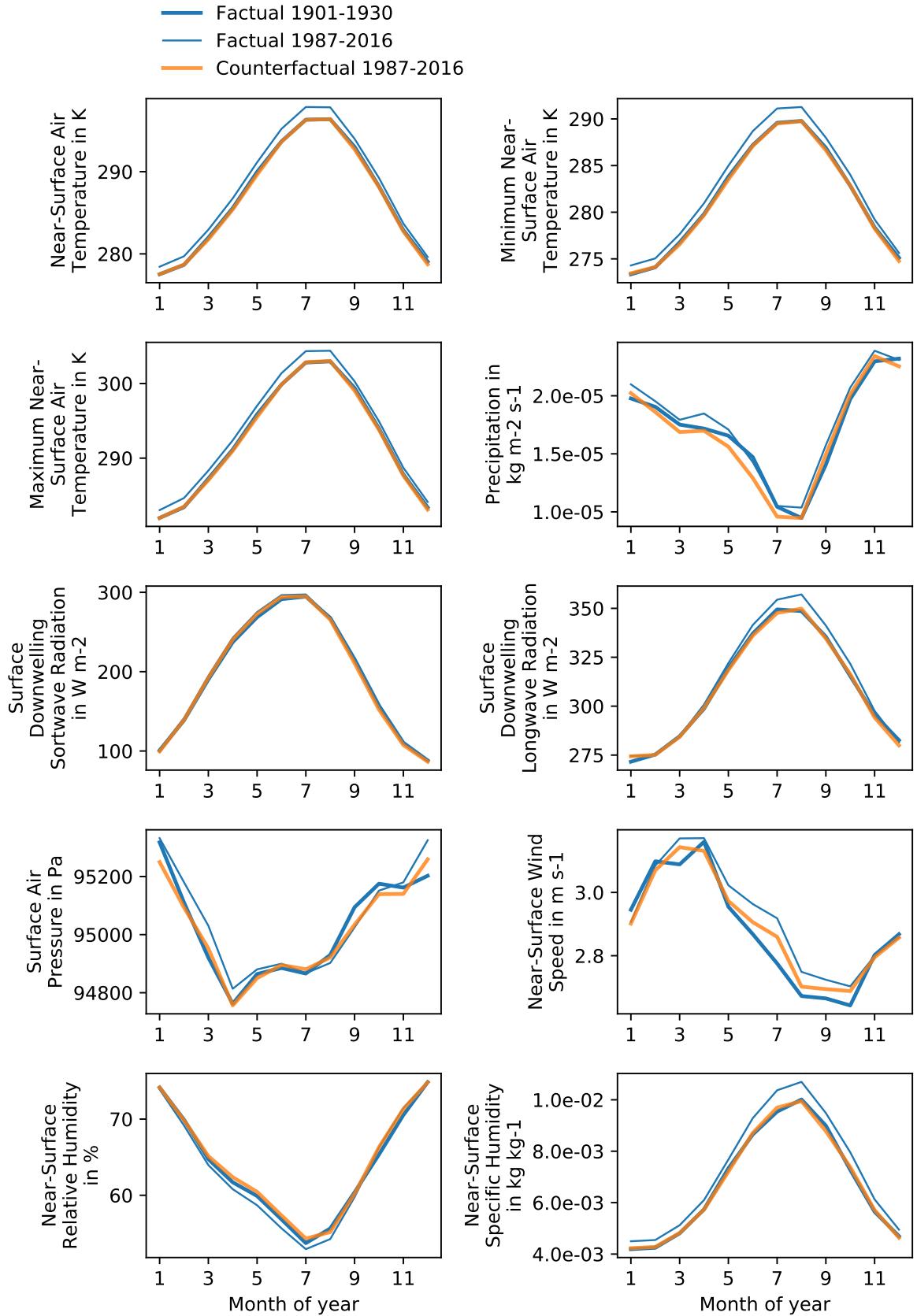


Figure A26: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Mediterranean Basin. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

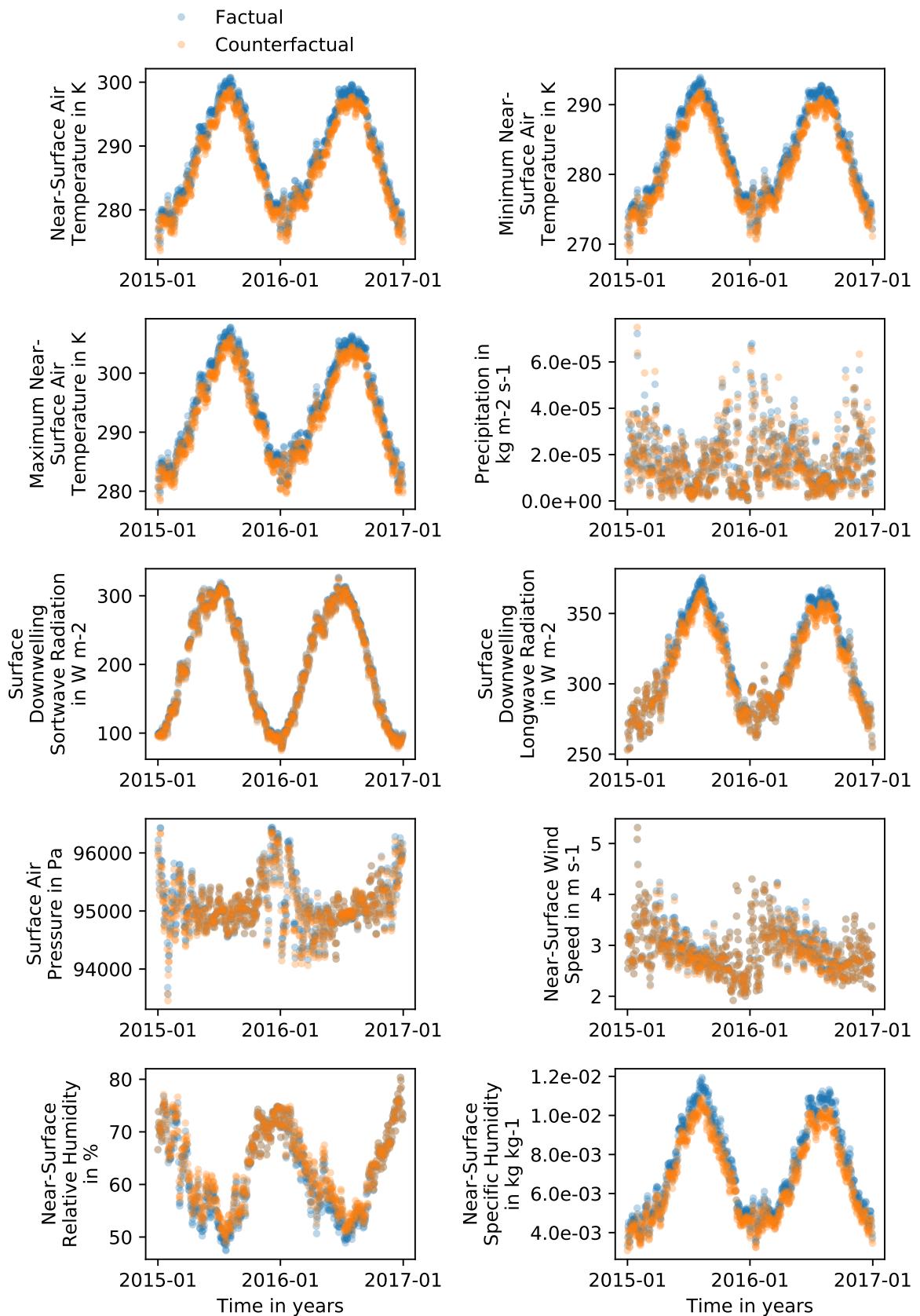


Figure A27: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Mediterranean Basin.

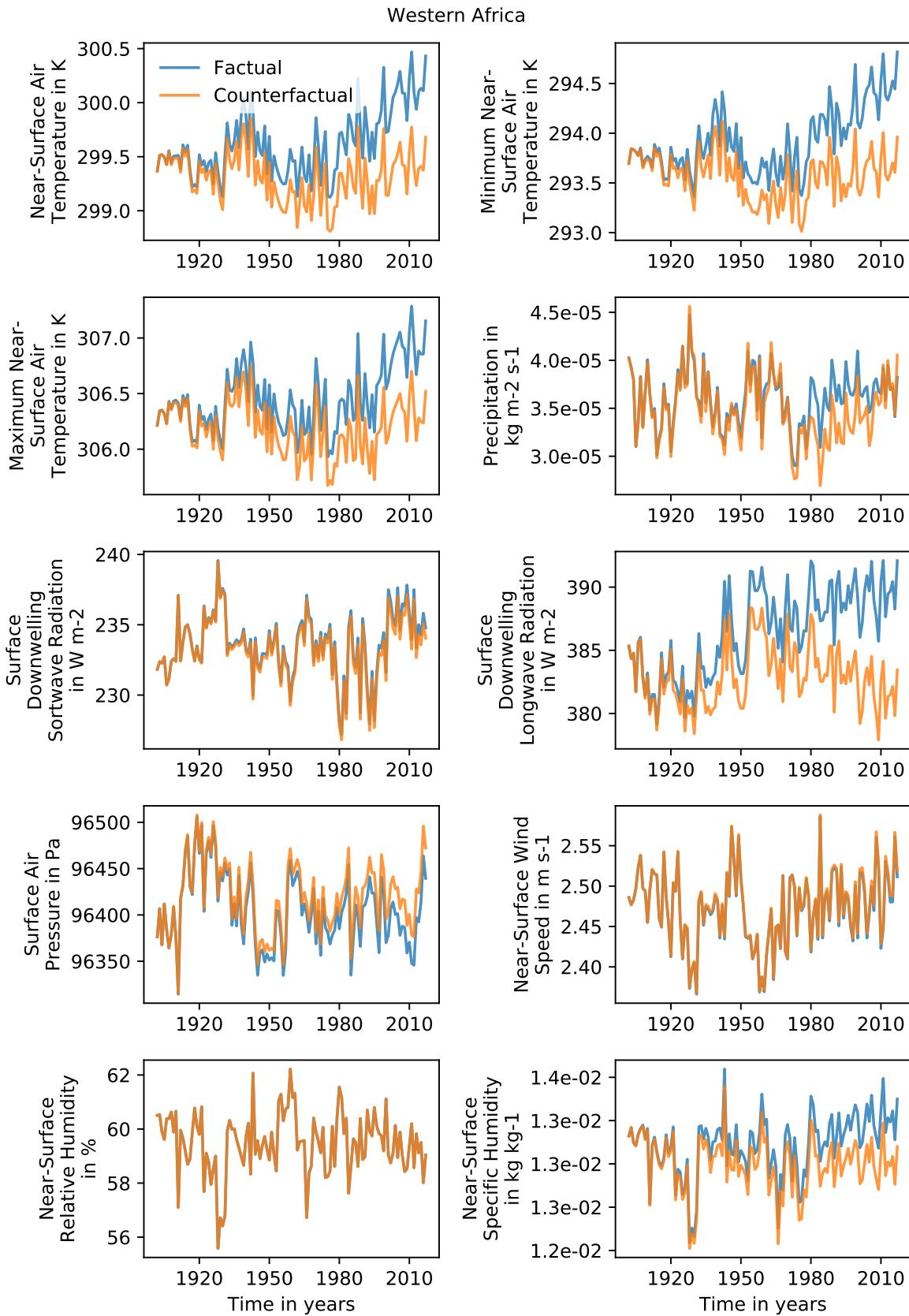


Figure A28: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Western Africa for the GSWP3-W5E5 dataset.

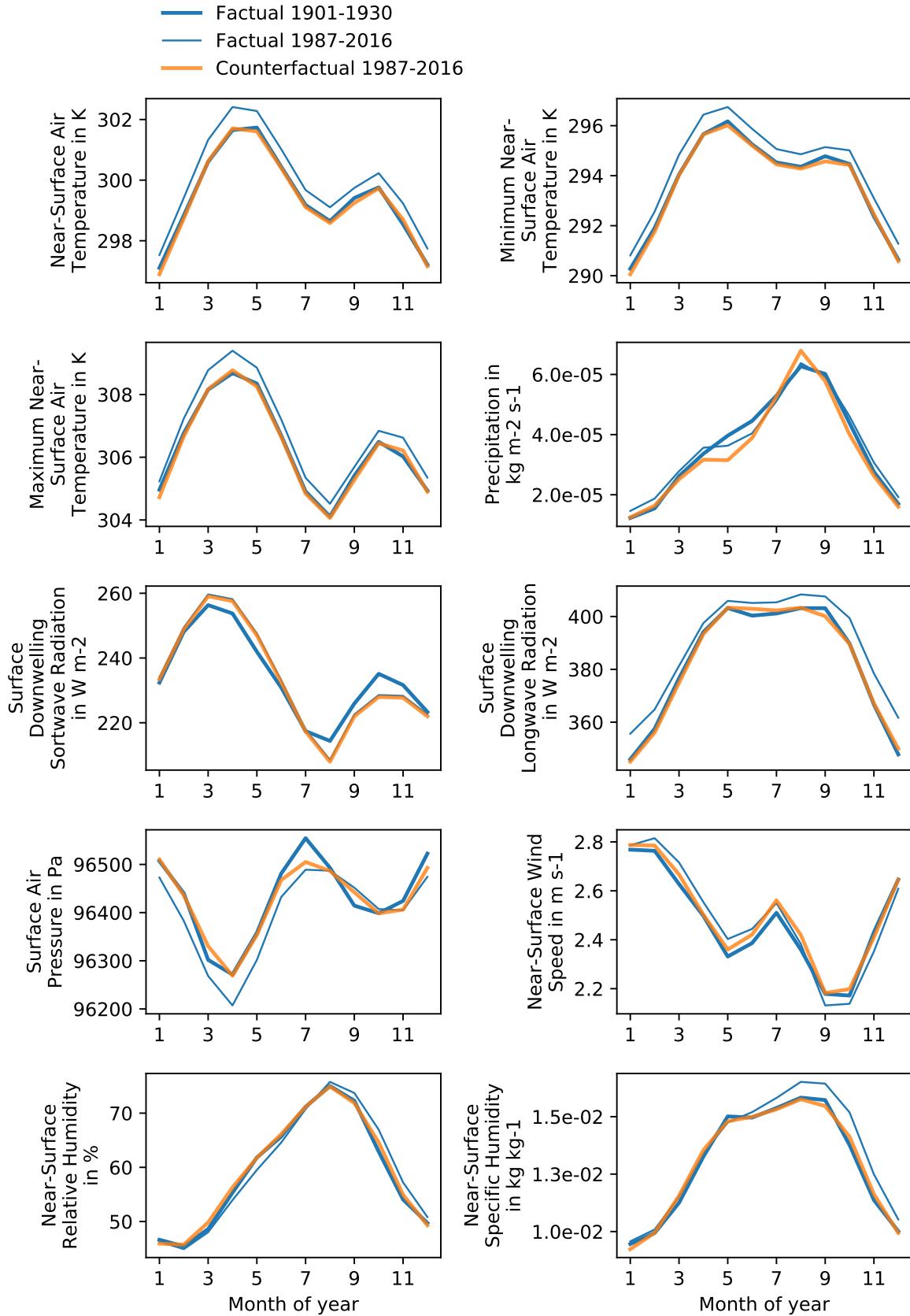


Figure A29: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Western Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

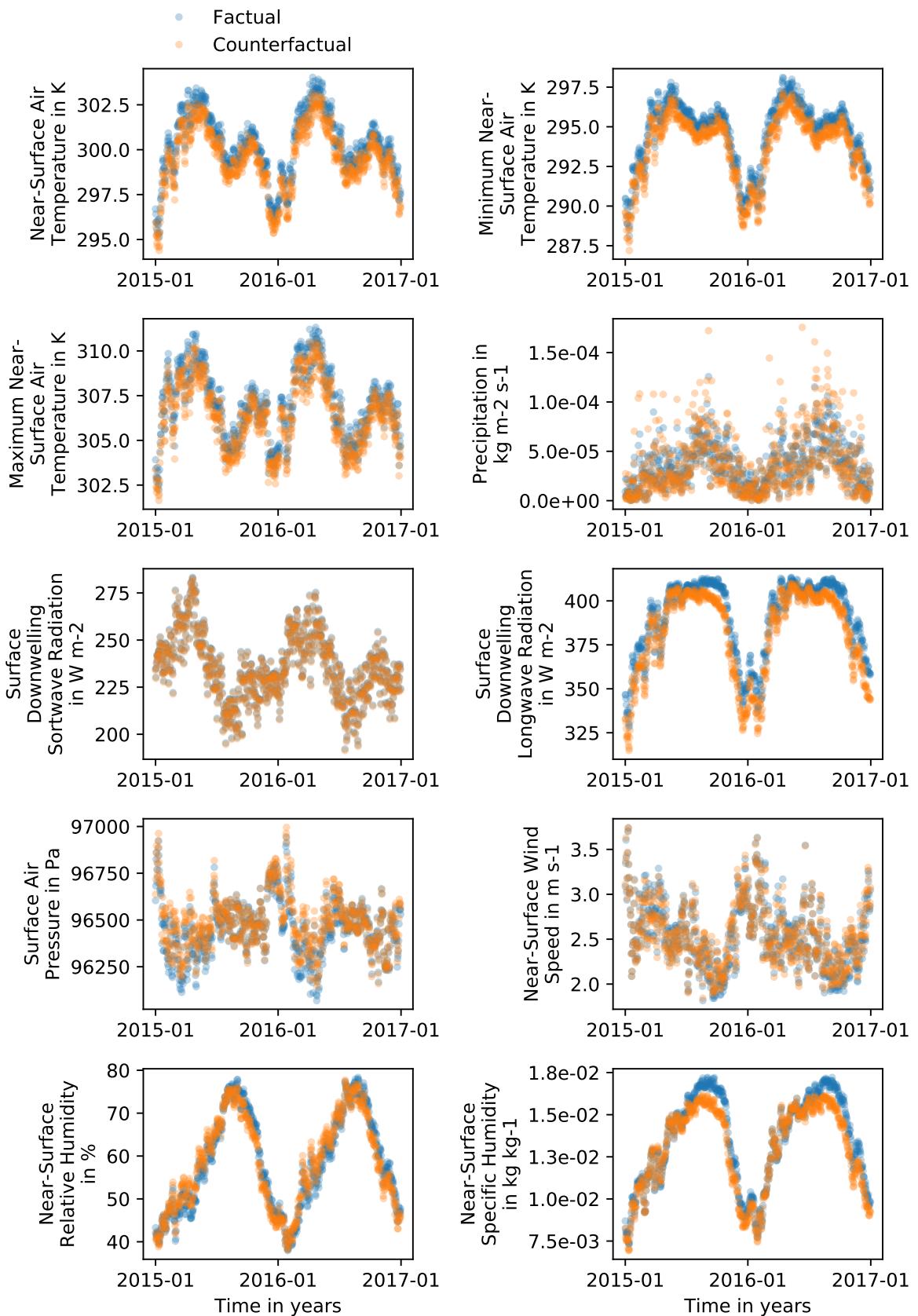


Figure A30: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Western Africa.

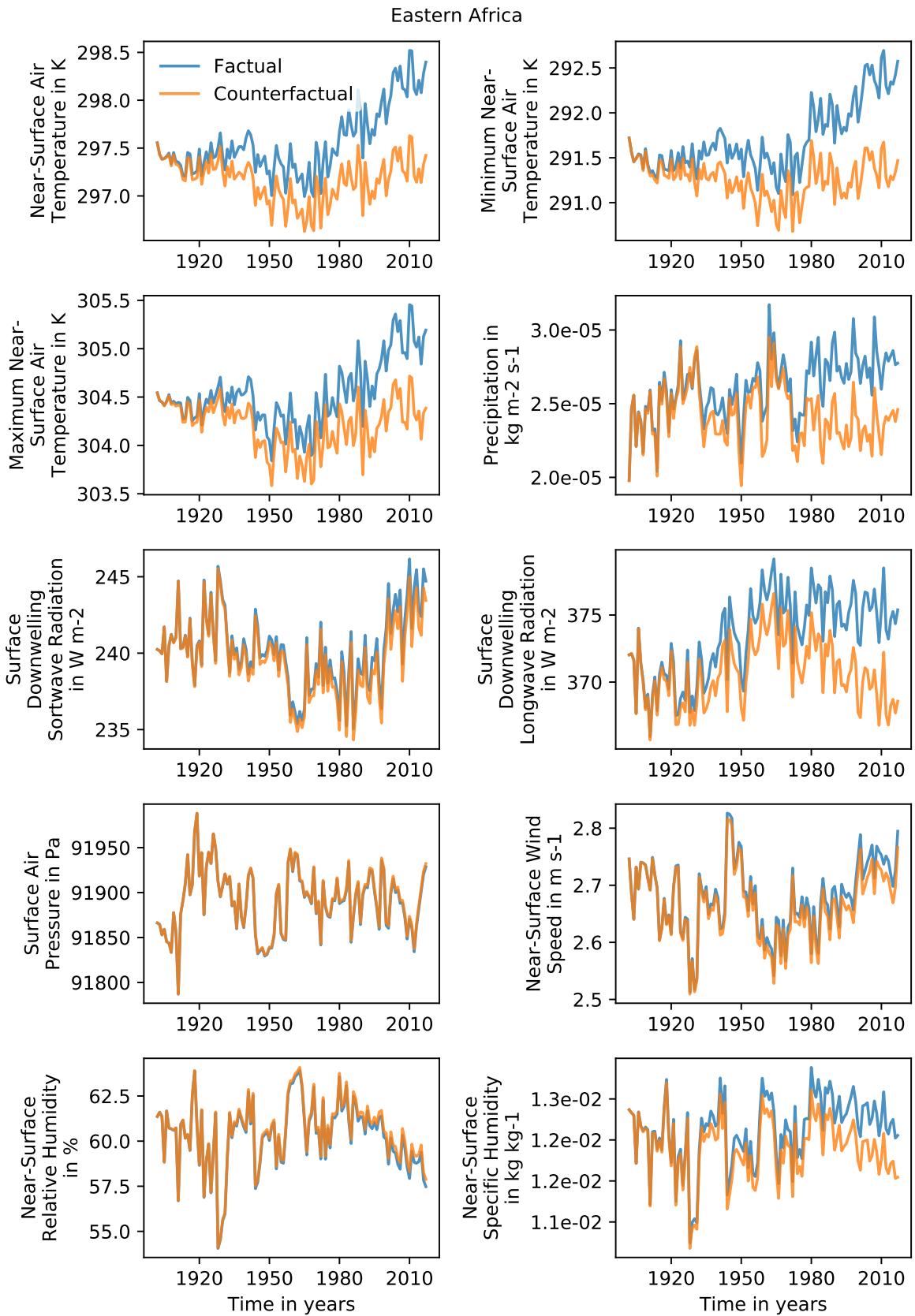


Figure A31: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Eastern Africa for the GSWP3-W5E5 dataset.

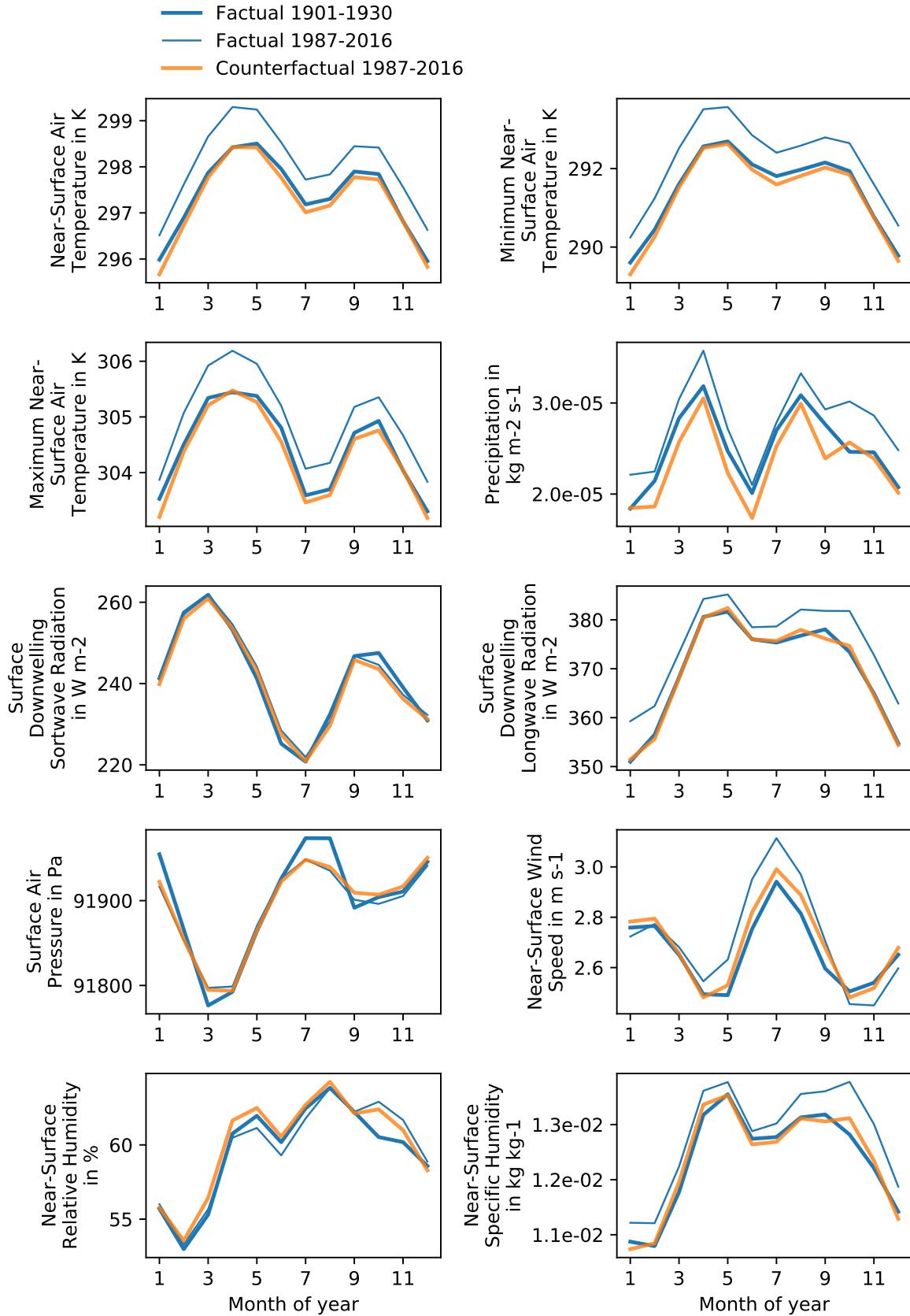


Figure A32: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Eastern Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

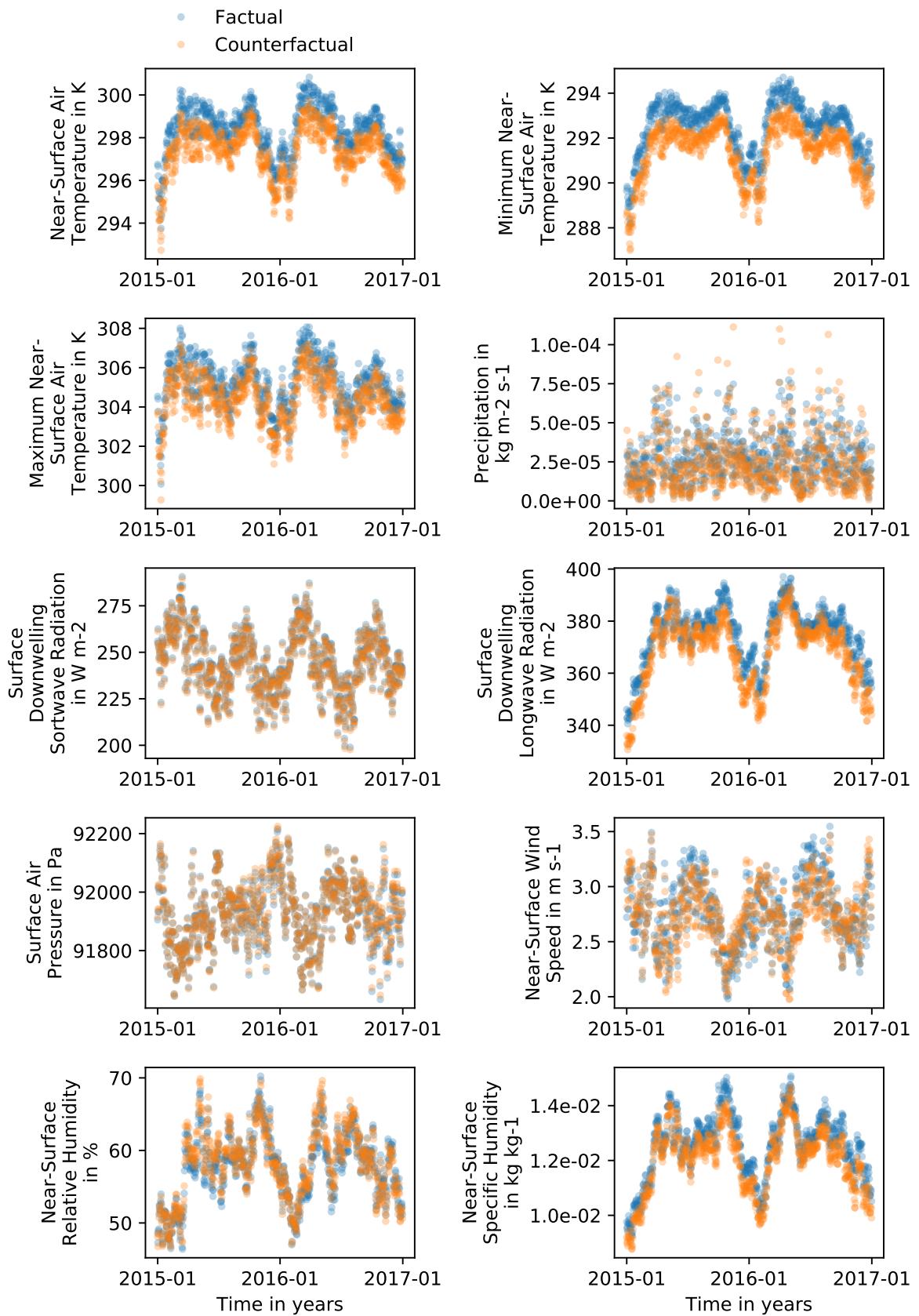


Figure A33: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Eastern Africa.

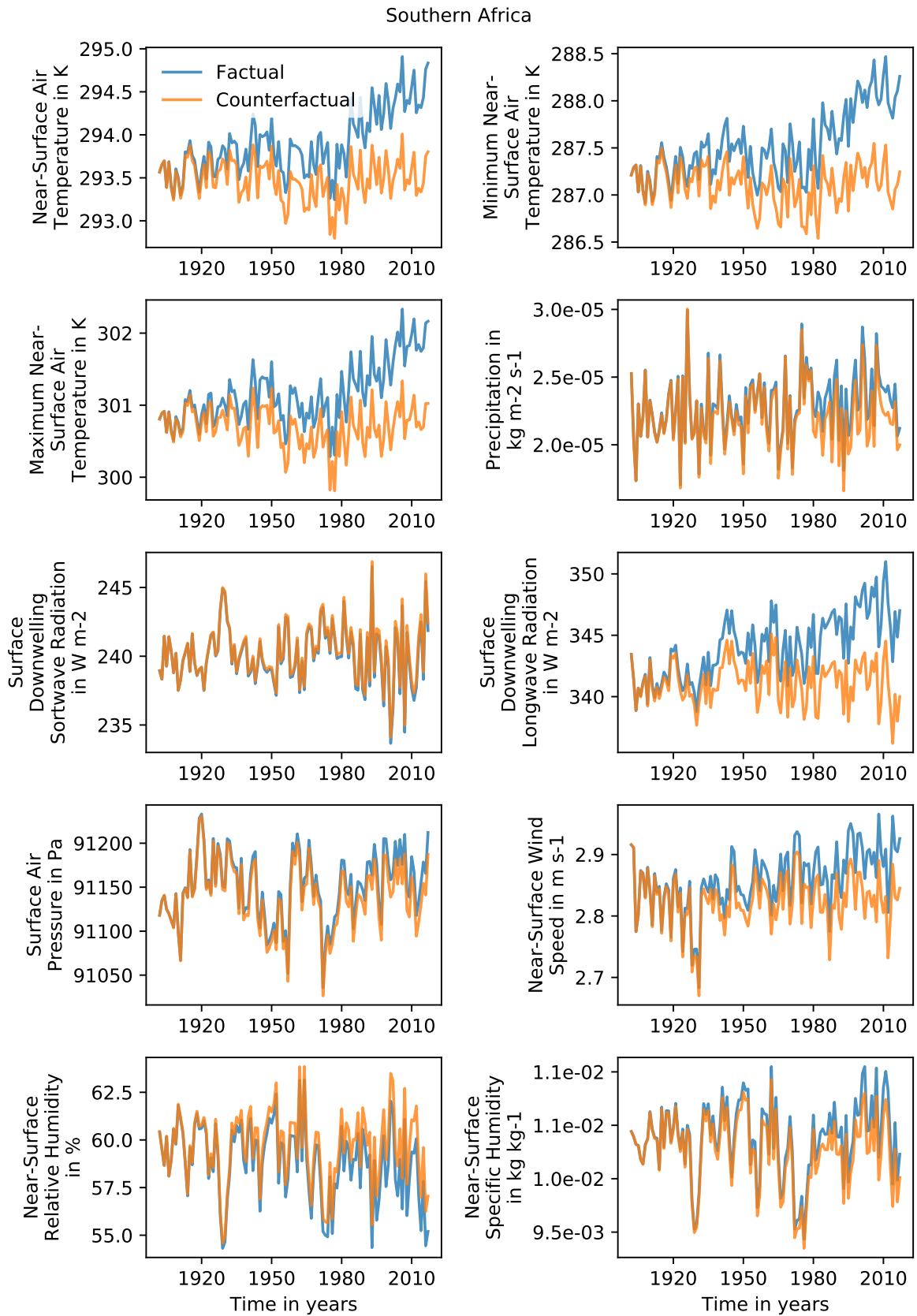


Figure A34: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Southern Africa for the GSWP3-W5E5 dataset.

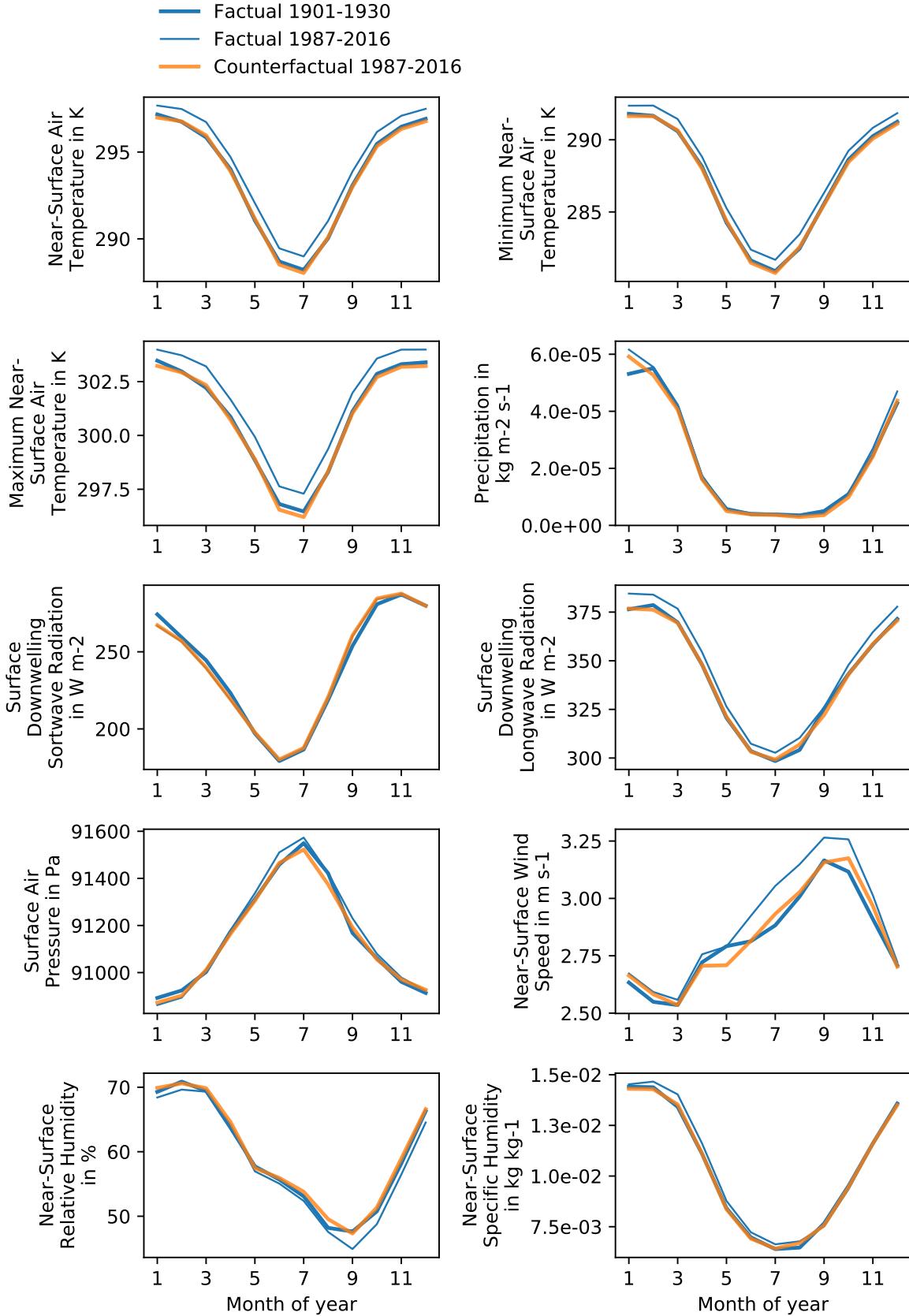


Figure A35: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Southern Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

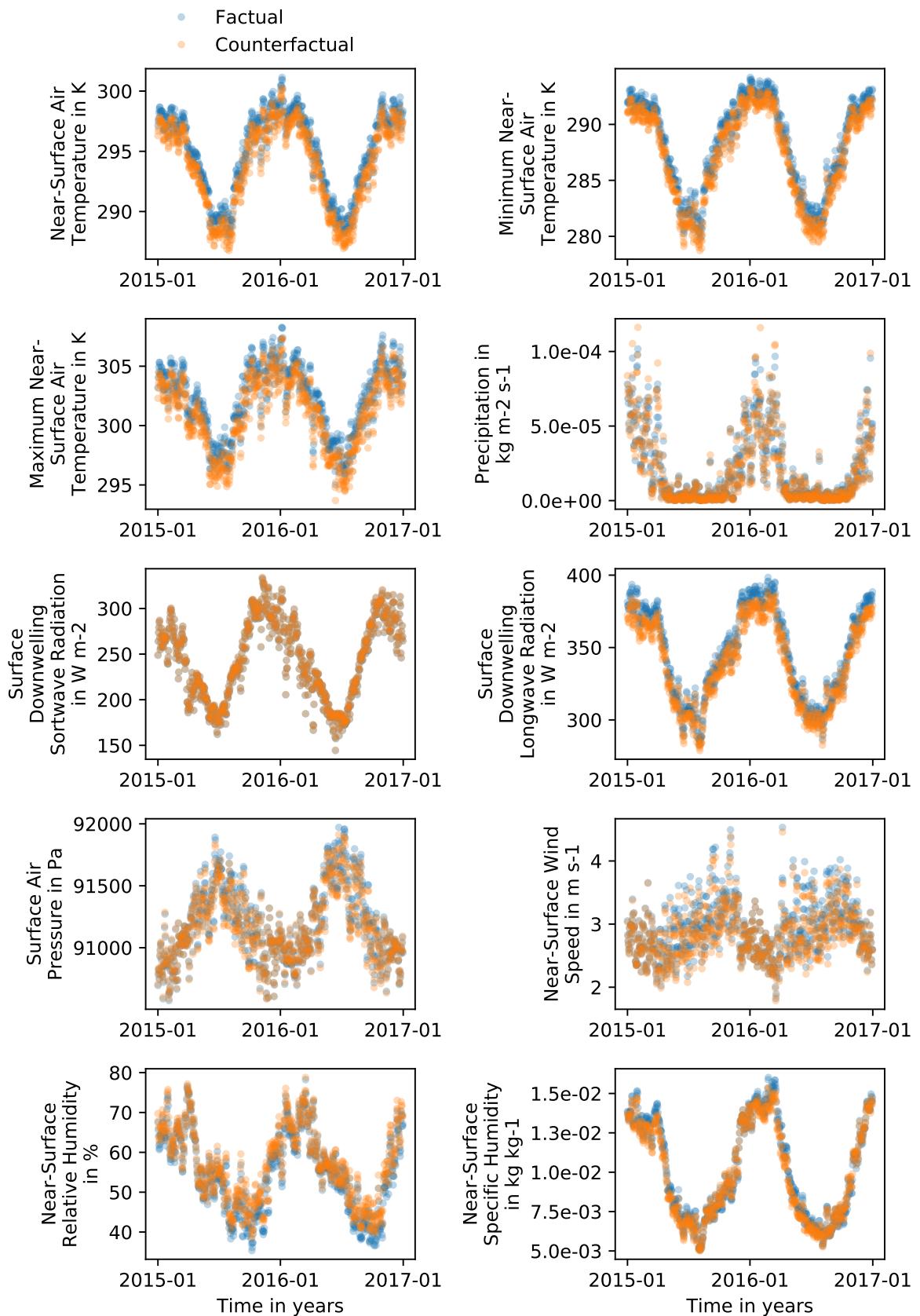


Figure A36: Factual (blue) and counterfactual (orange) daily values for the last two years (2015–2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Southern Africa.

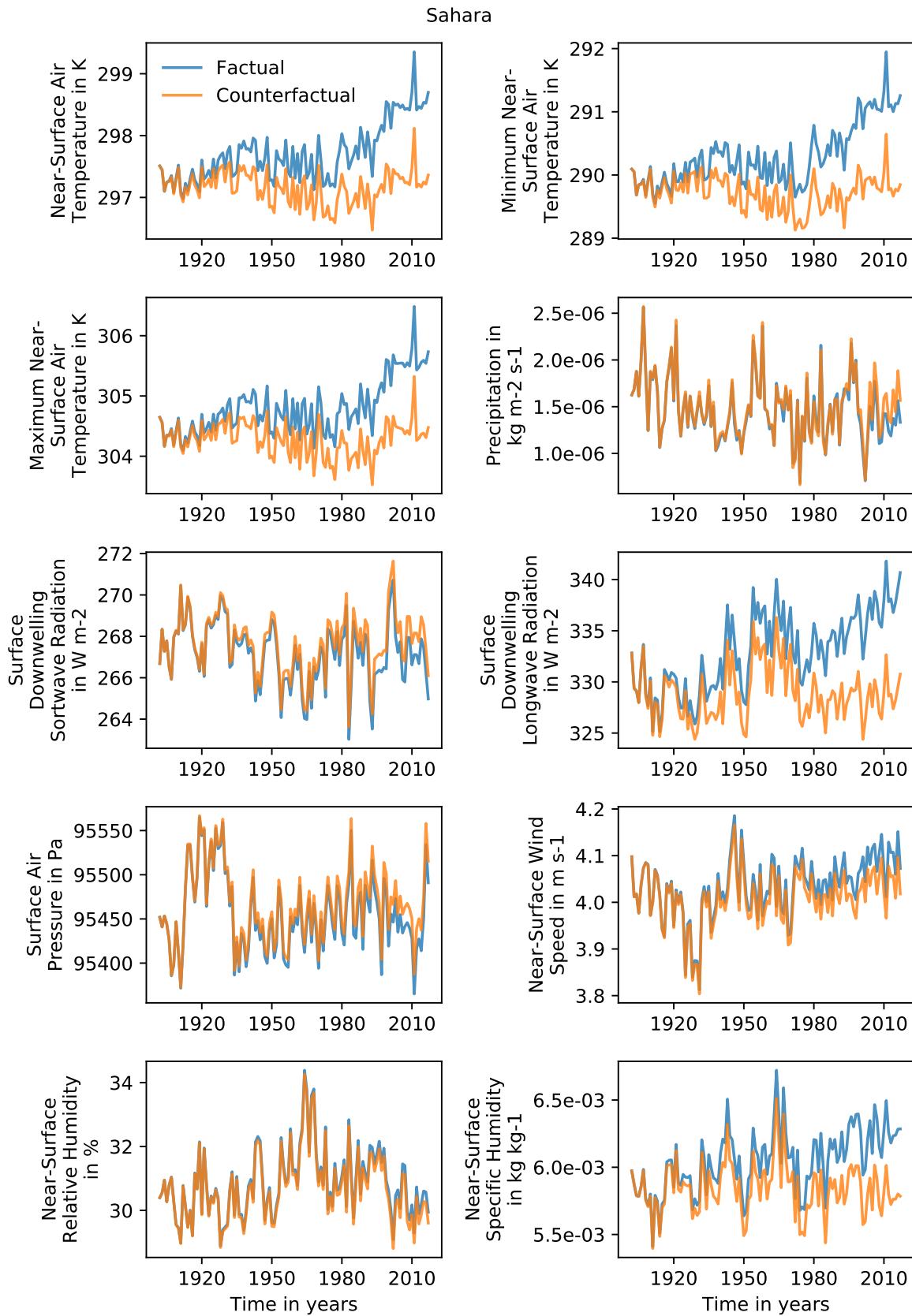


Figure A37: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Sahara for the GSWP3-W5E5 dataset.

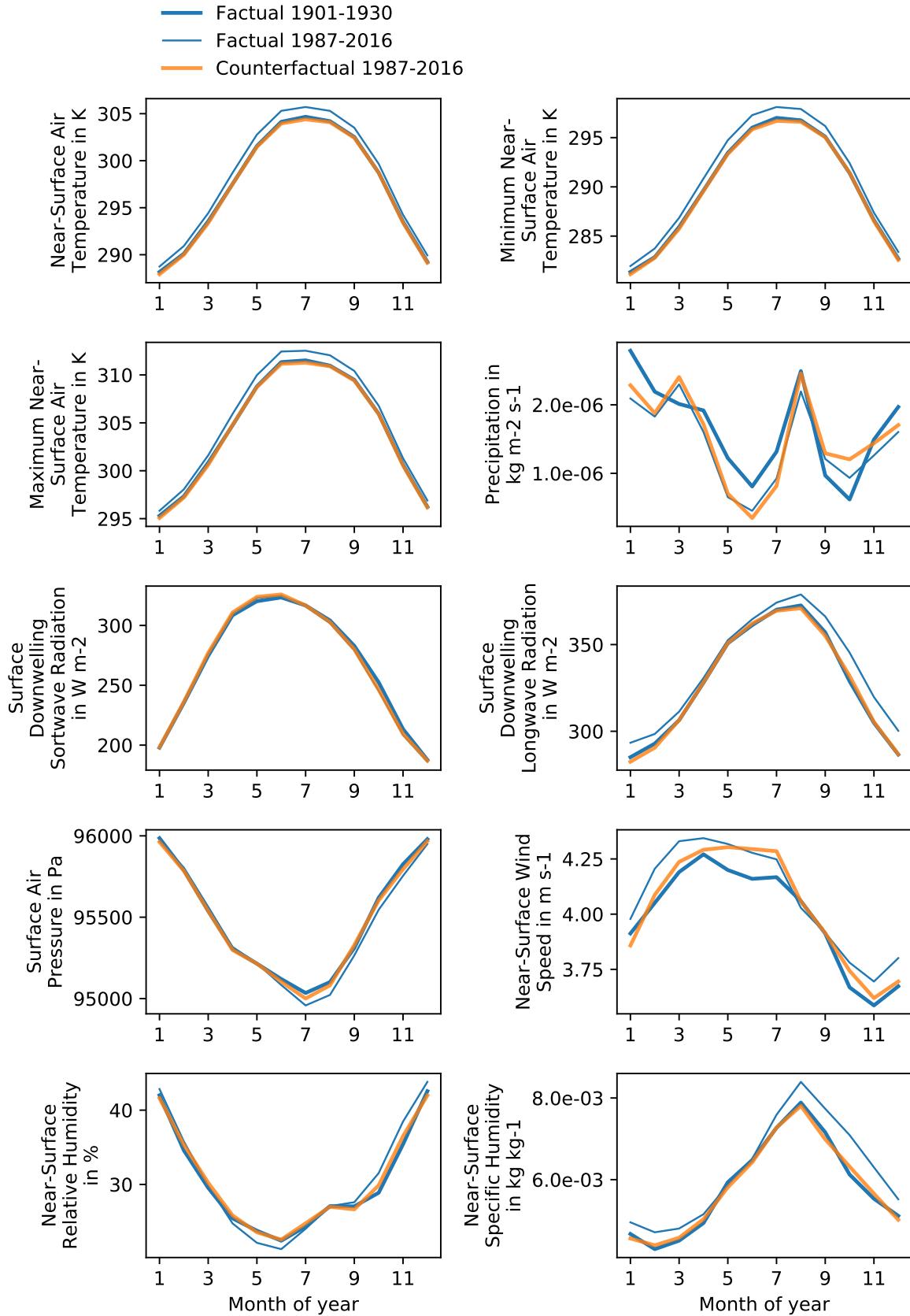


Figure A38: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Sahara. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

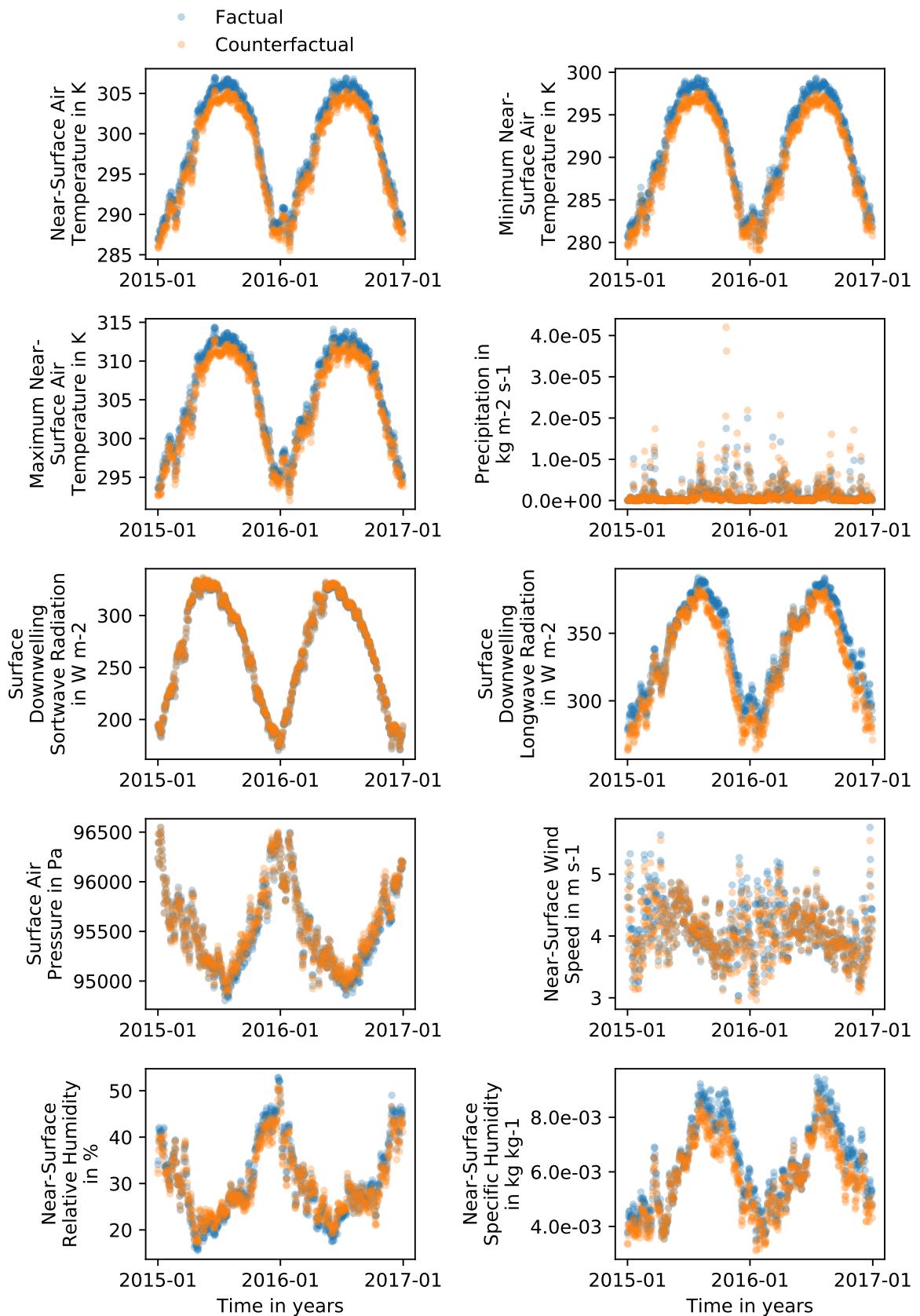


Figure A39: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Sahara.

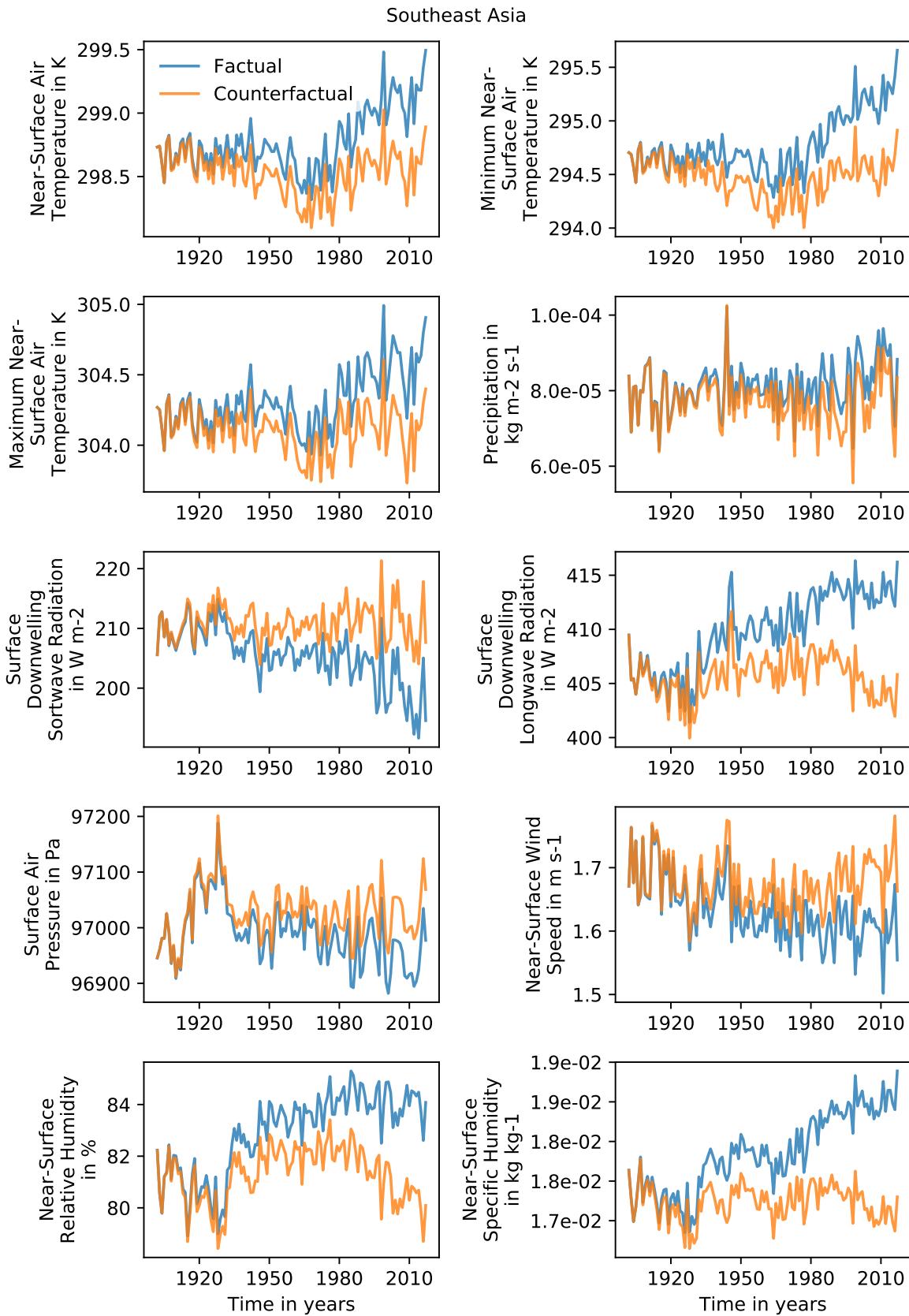


Figure A40: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Southeast Asia for the GSWP3-W5E5 dataset.

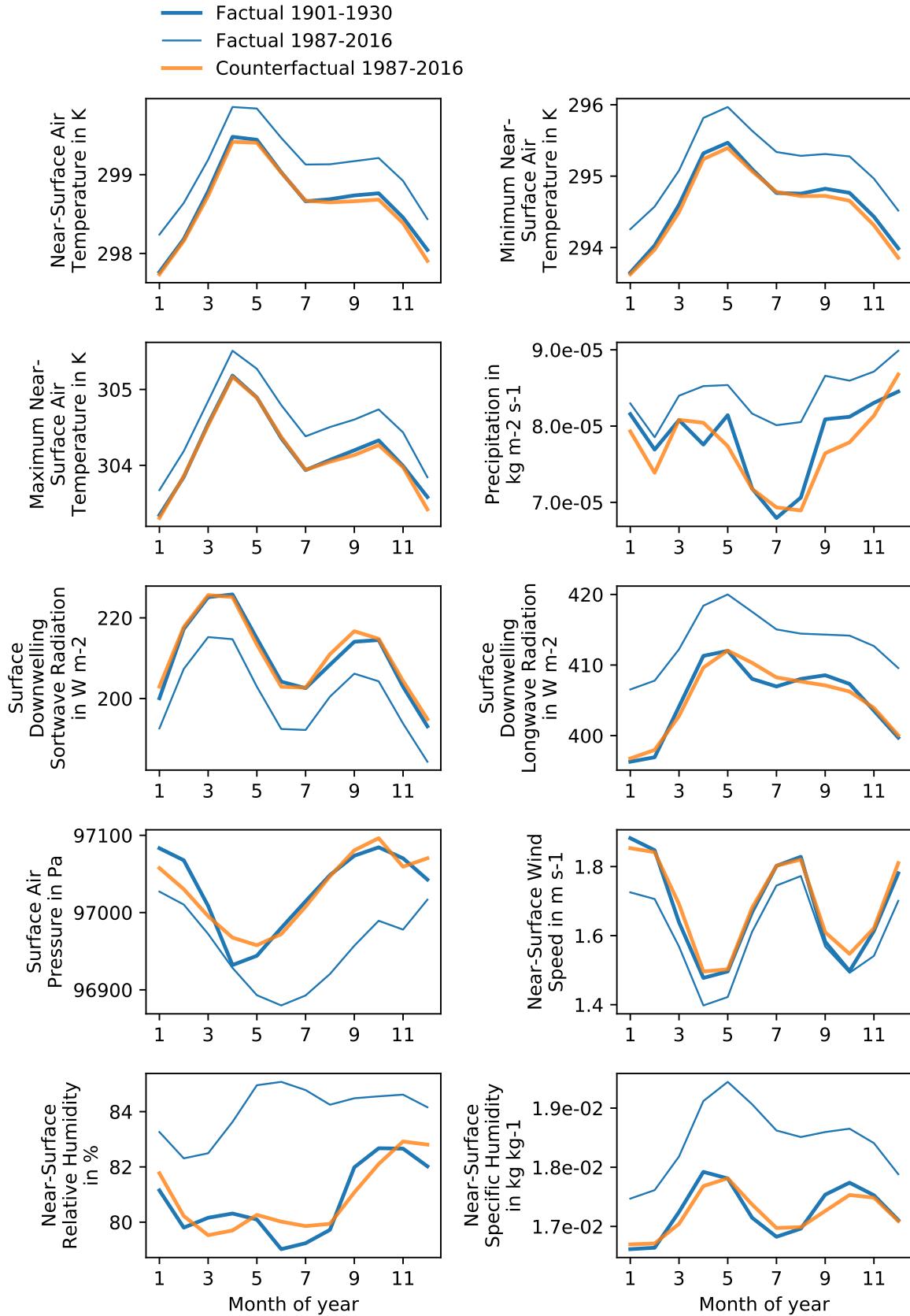


Figure A41: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Southeast Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

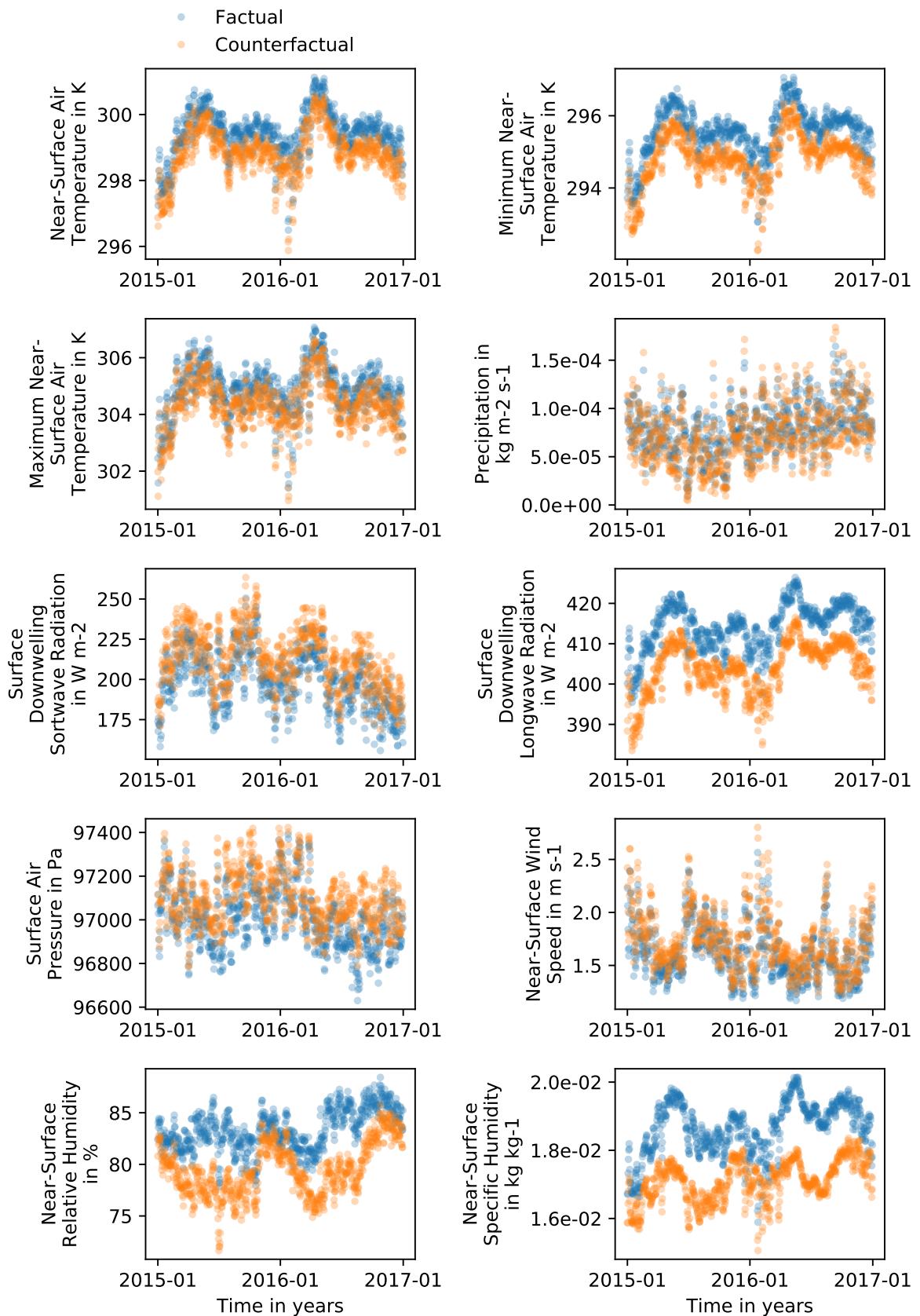


Figure A42: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Southeast Asia.

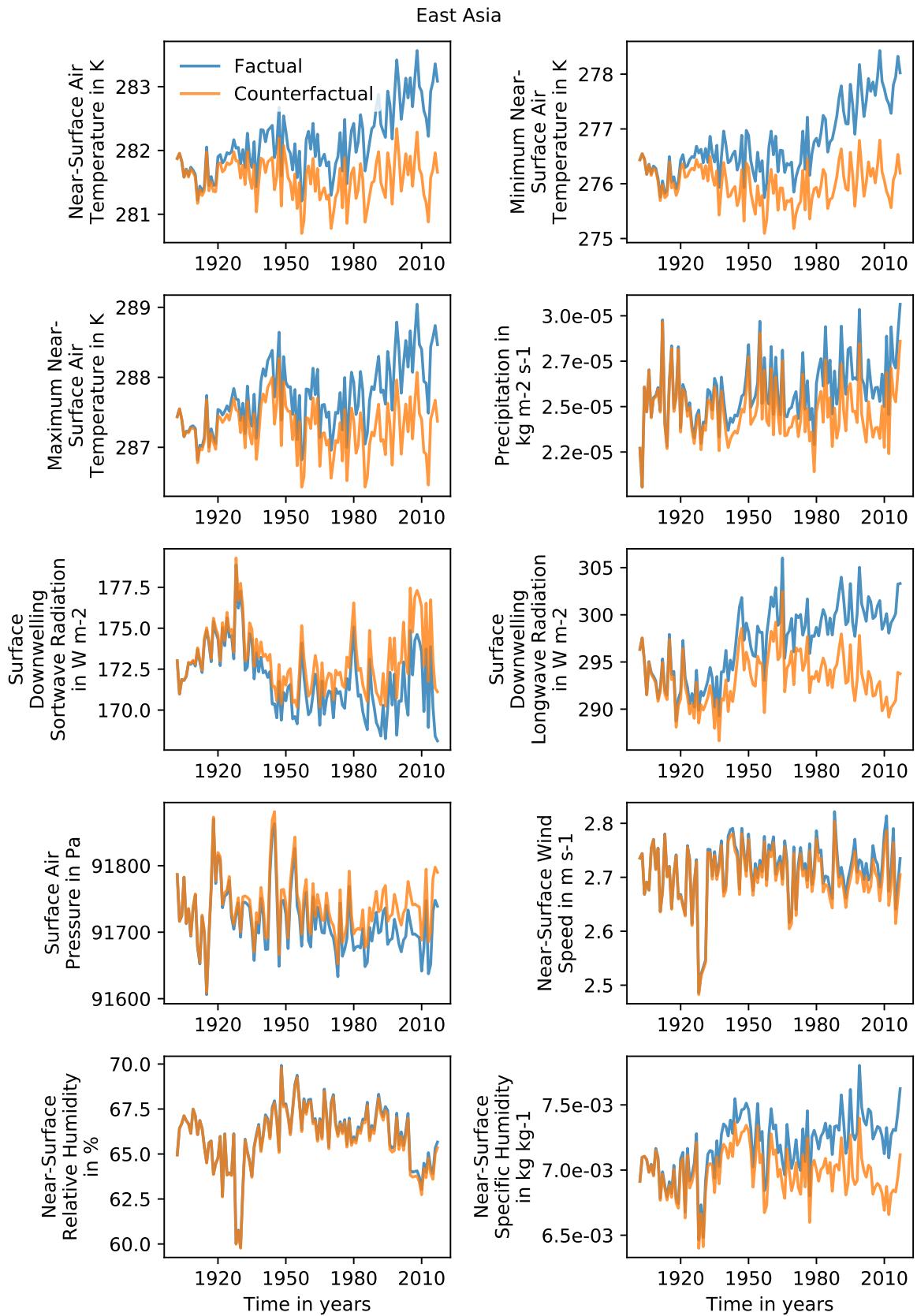


Figure A43: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for East Asia for the GSWP3-W5E5 dataset.

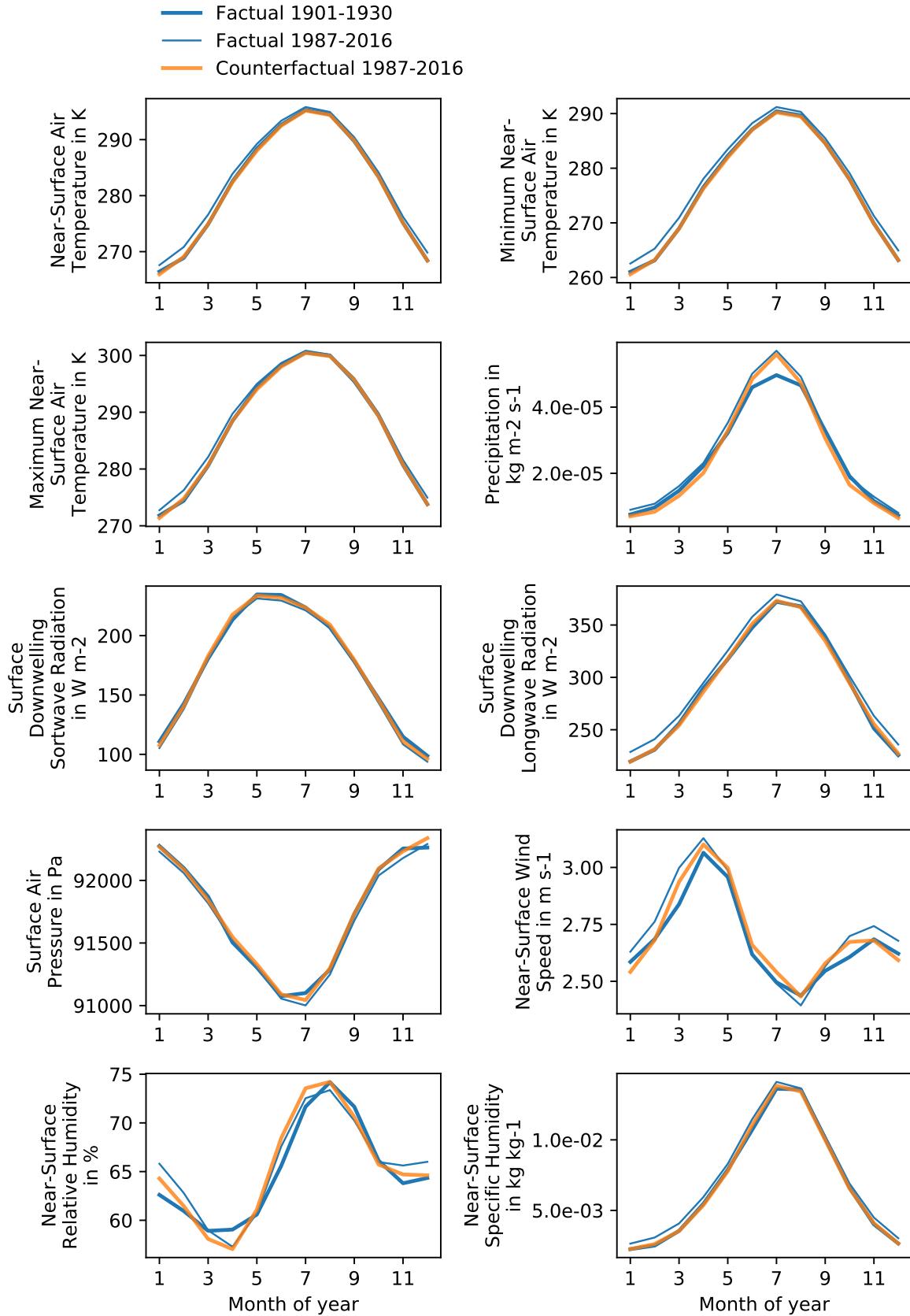


Figure A44: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for East Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

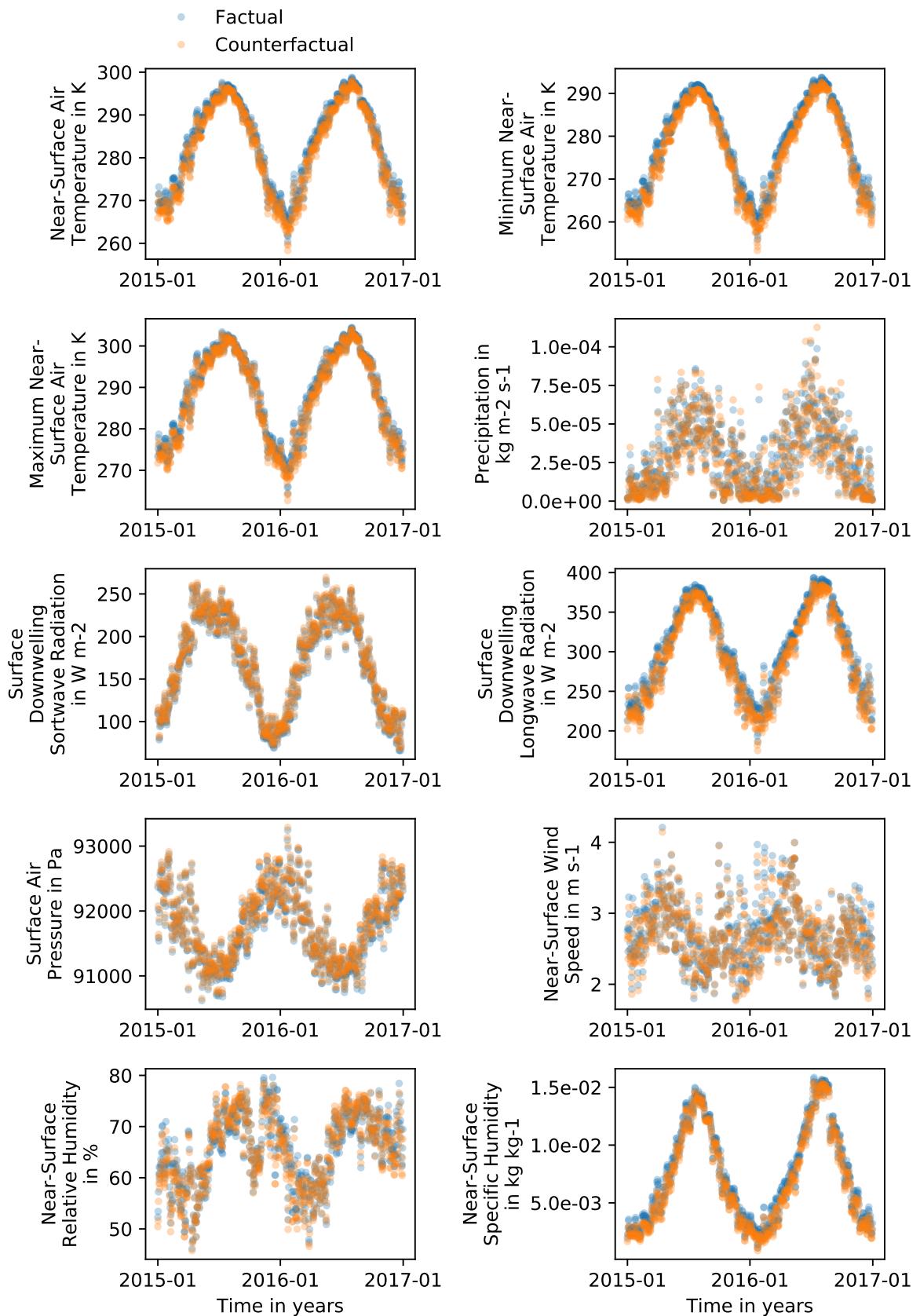


Figure A45: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for East Asia.

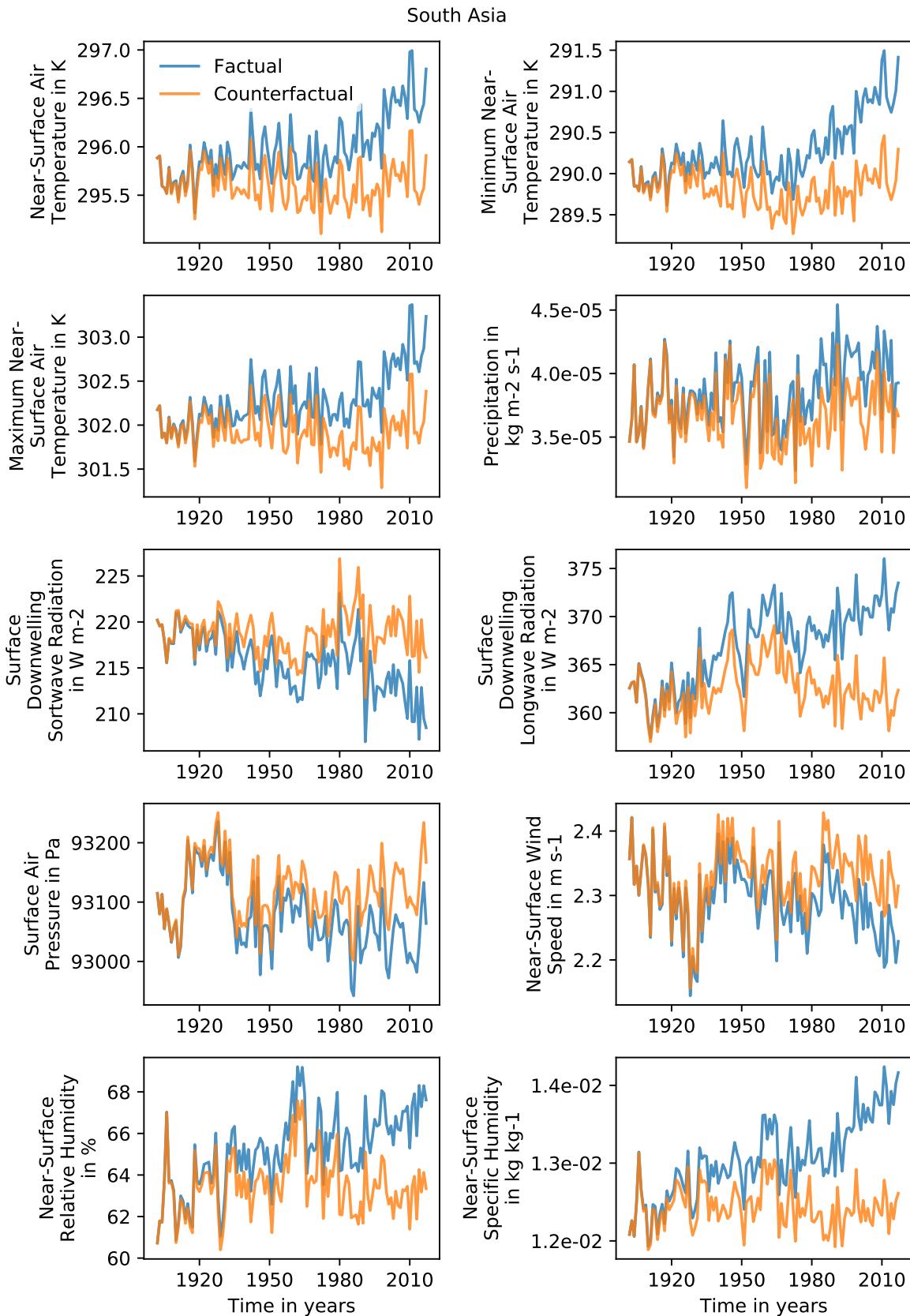


Figure A46: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for the GSWP3-W5E5 dataset.

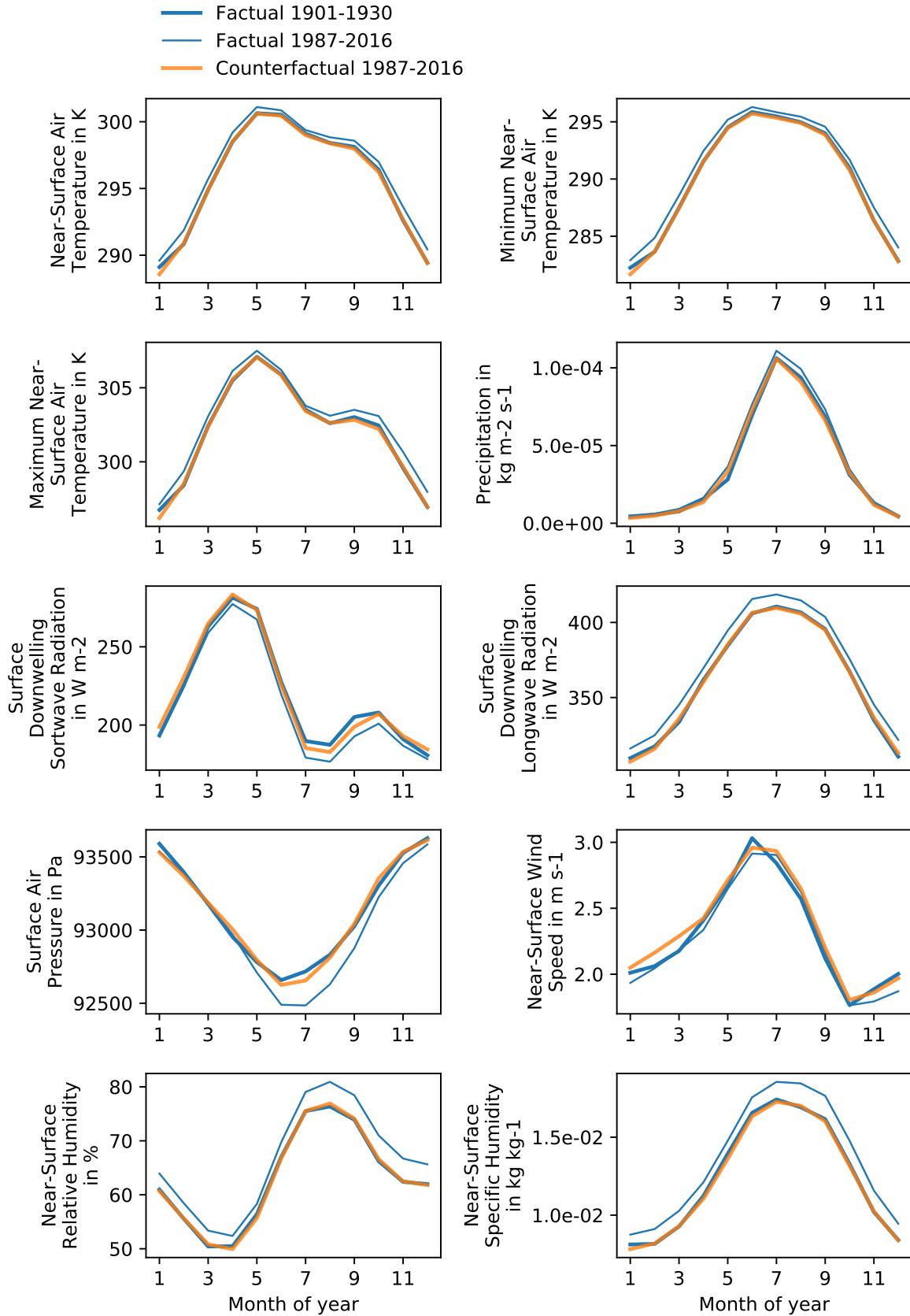


Figure A47: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for South Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

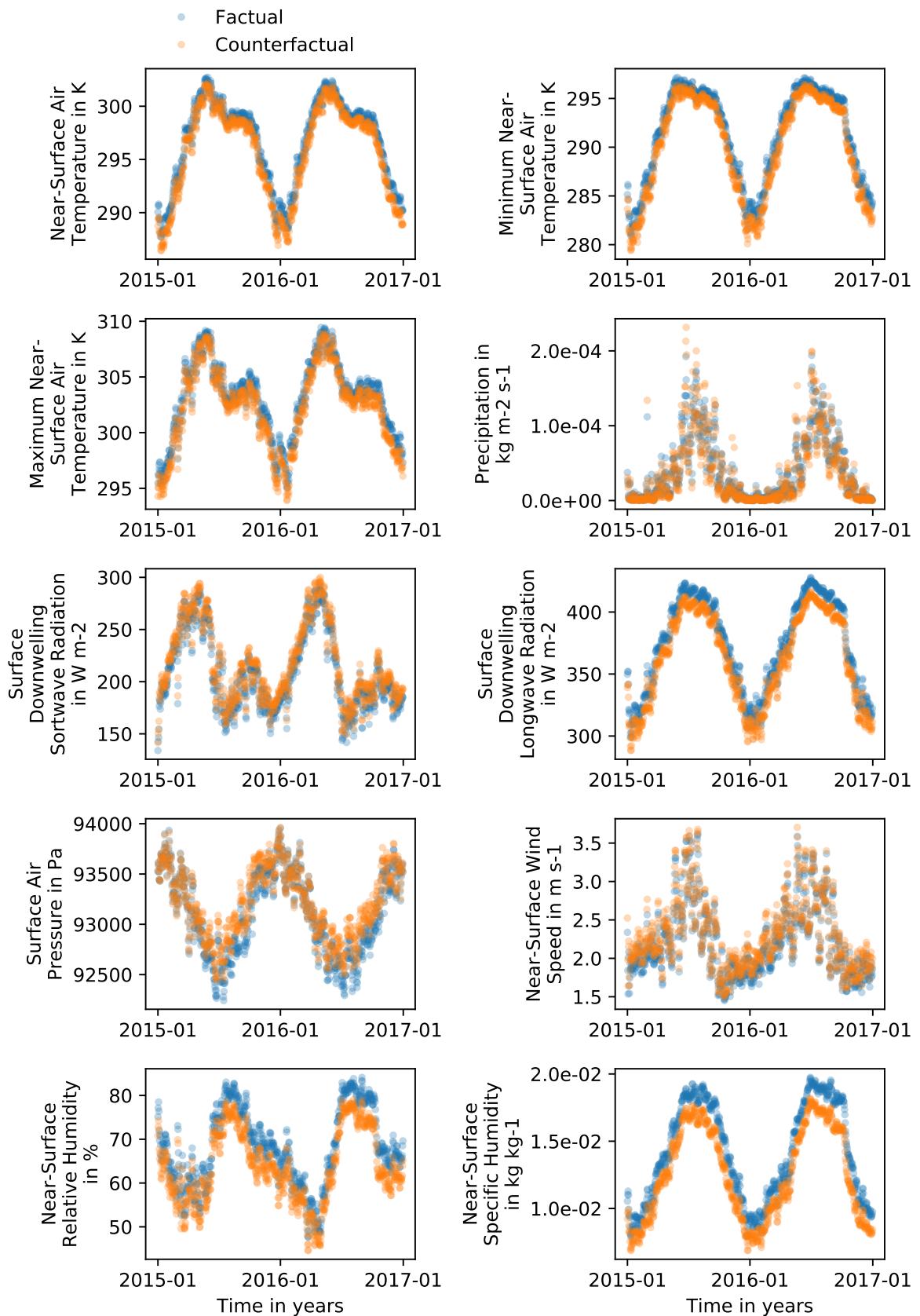


Figure A48: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for South Asia.

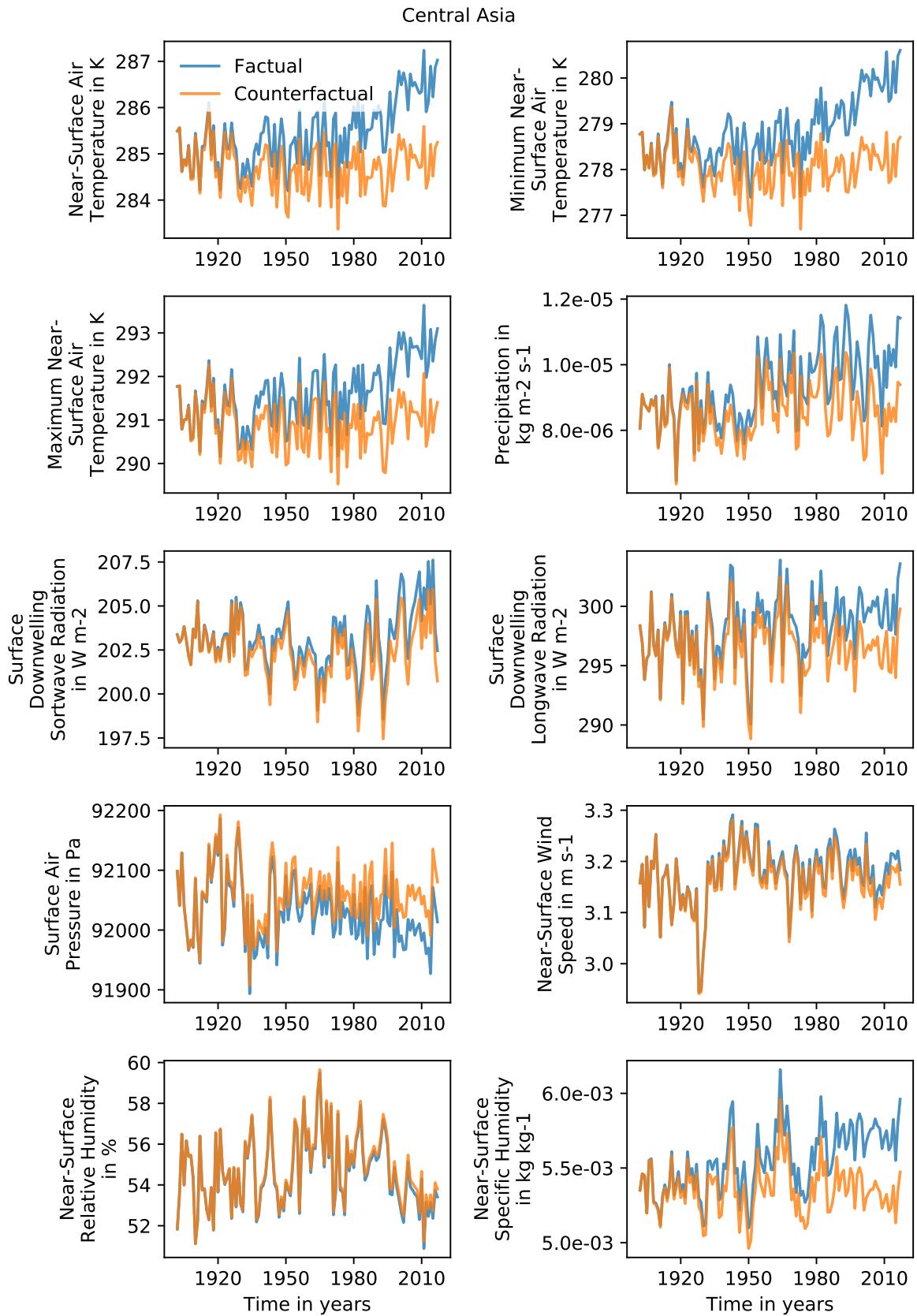


Figure A49: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central Asia for the GSWP3-W5E5 dataset.

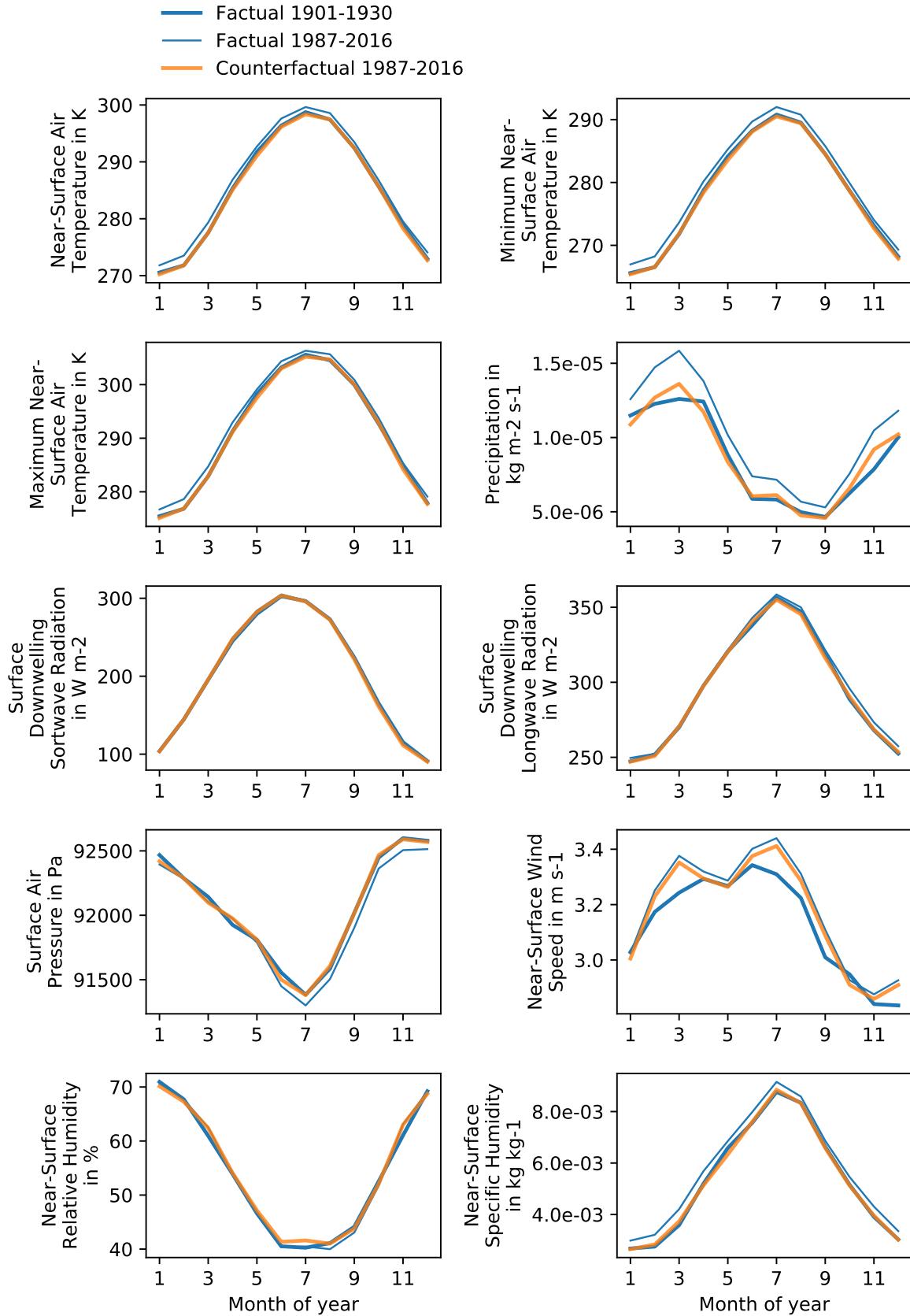


Figure A50: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Central Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

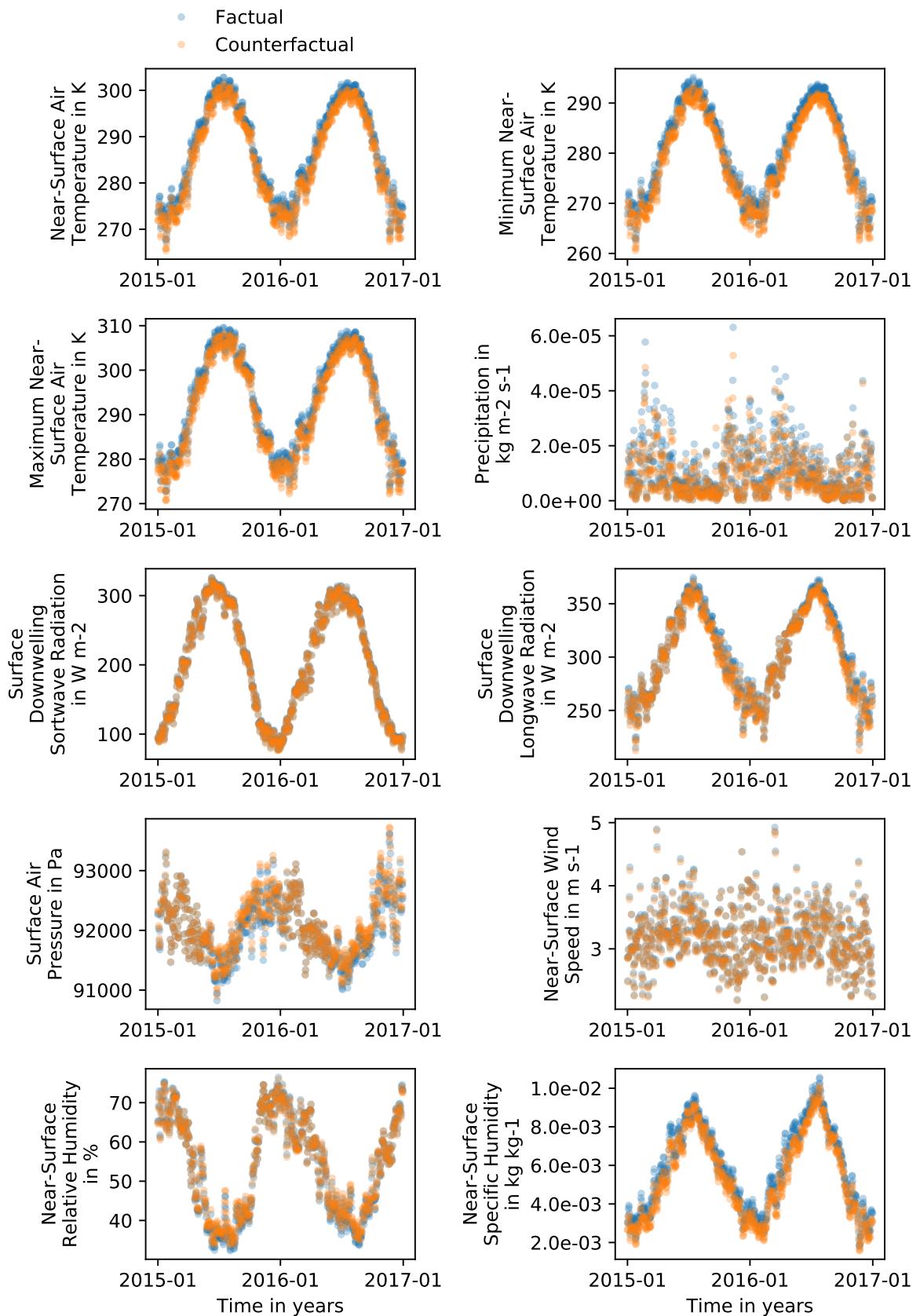


Figure A51: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Central Asia.

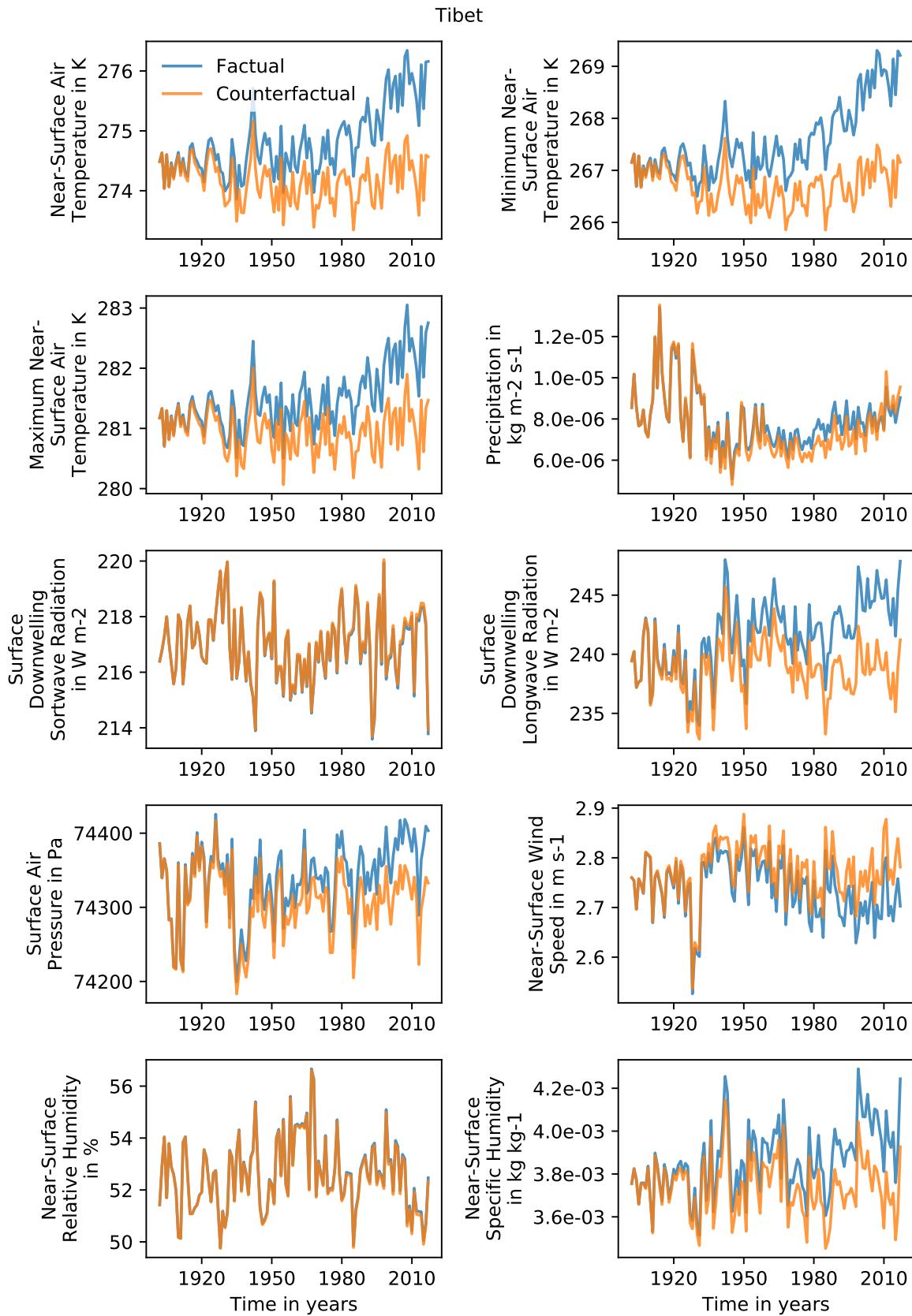


Figure A52: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Tibet for the GSWP3-W5E5 dataset.

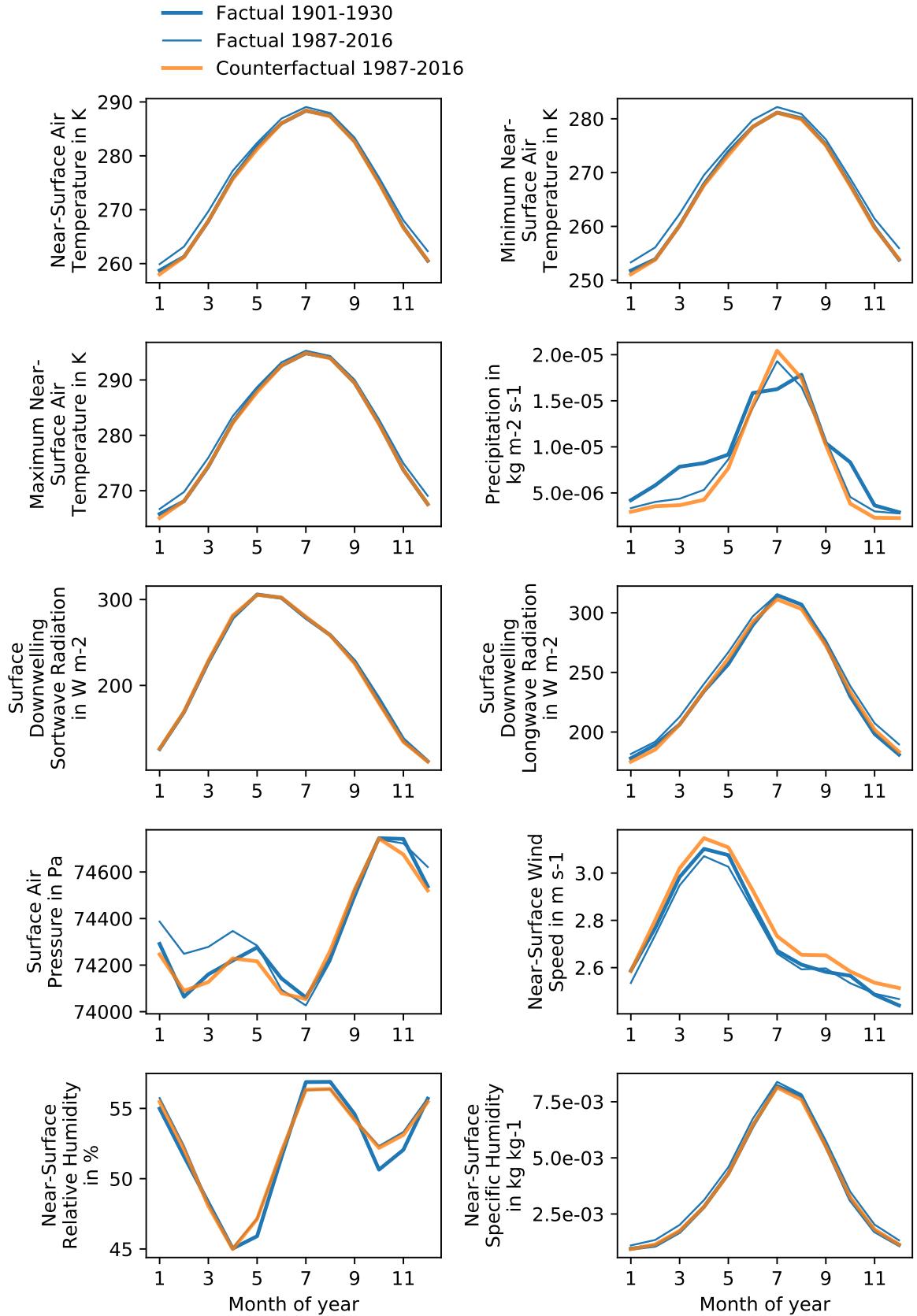


Figure A53: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for Tibet. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

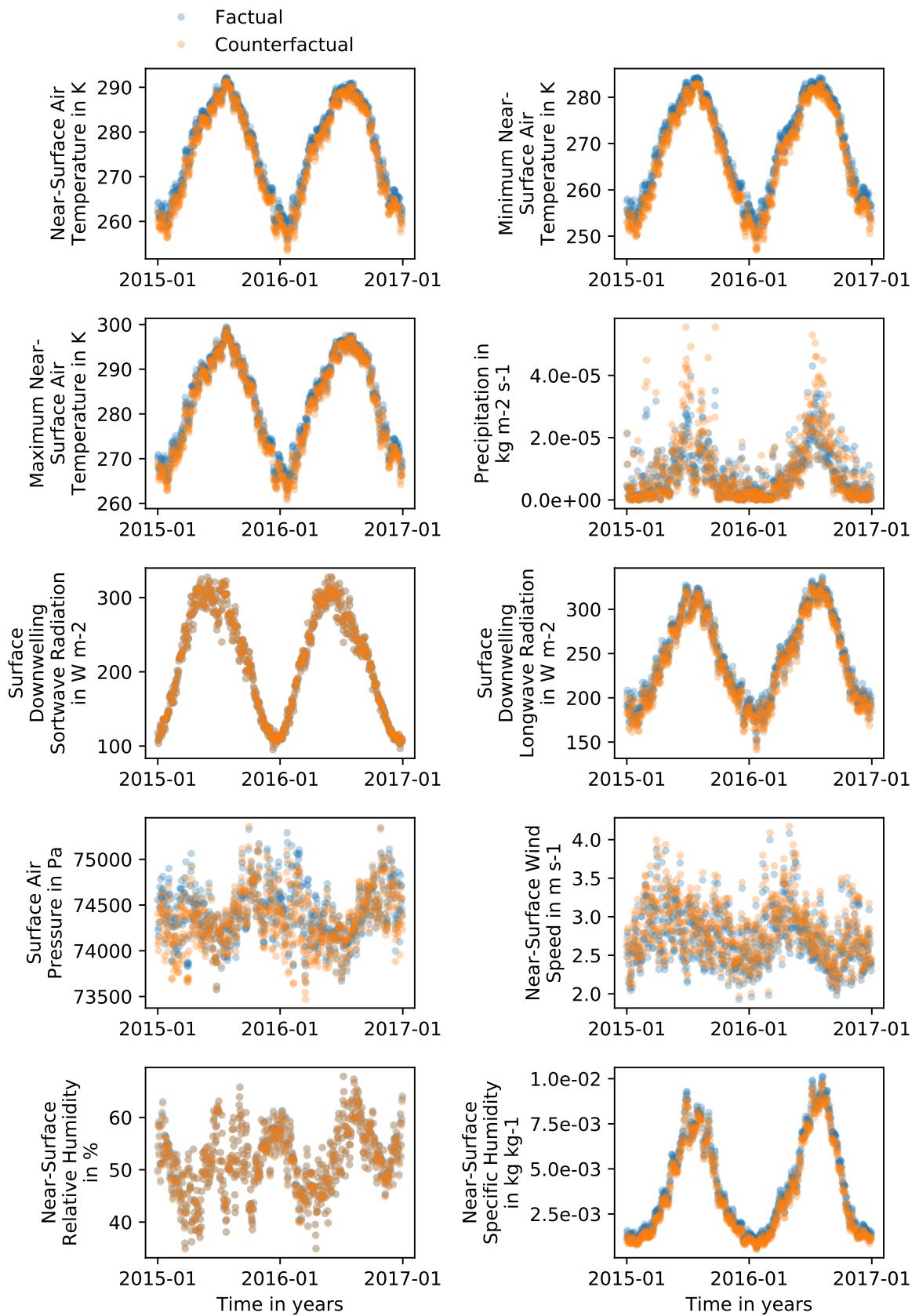


Figure A54: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for Tibet.

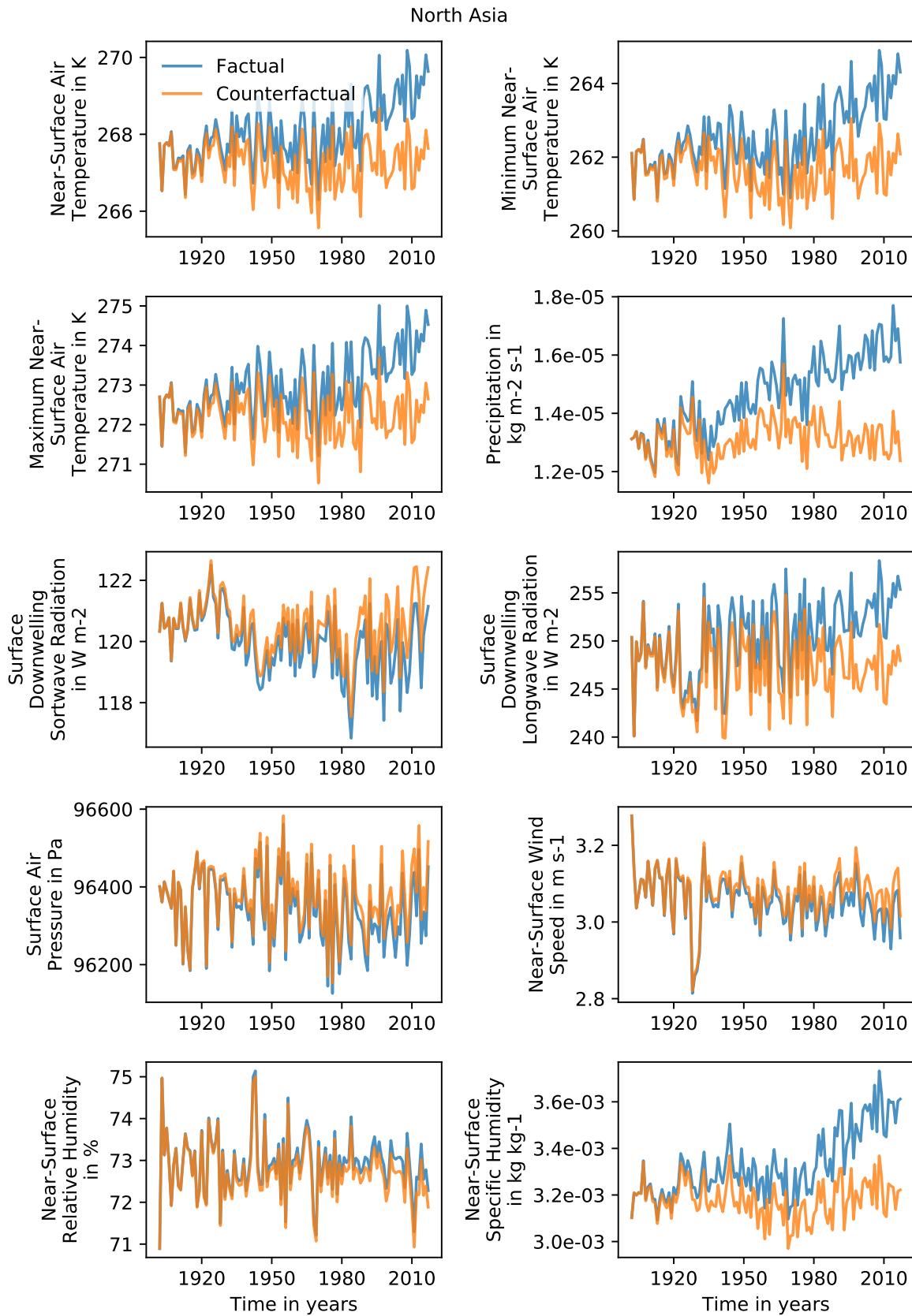


Figure A55: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for North Asia for the GSWP3-W5E5 dataset.

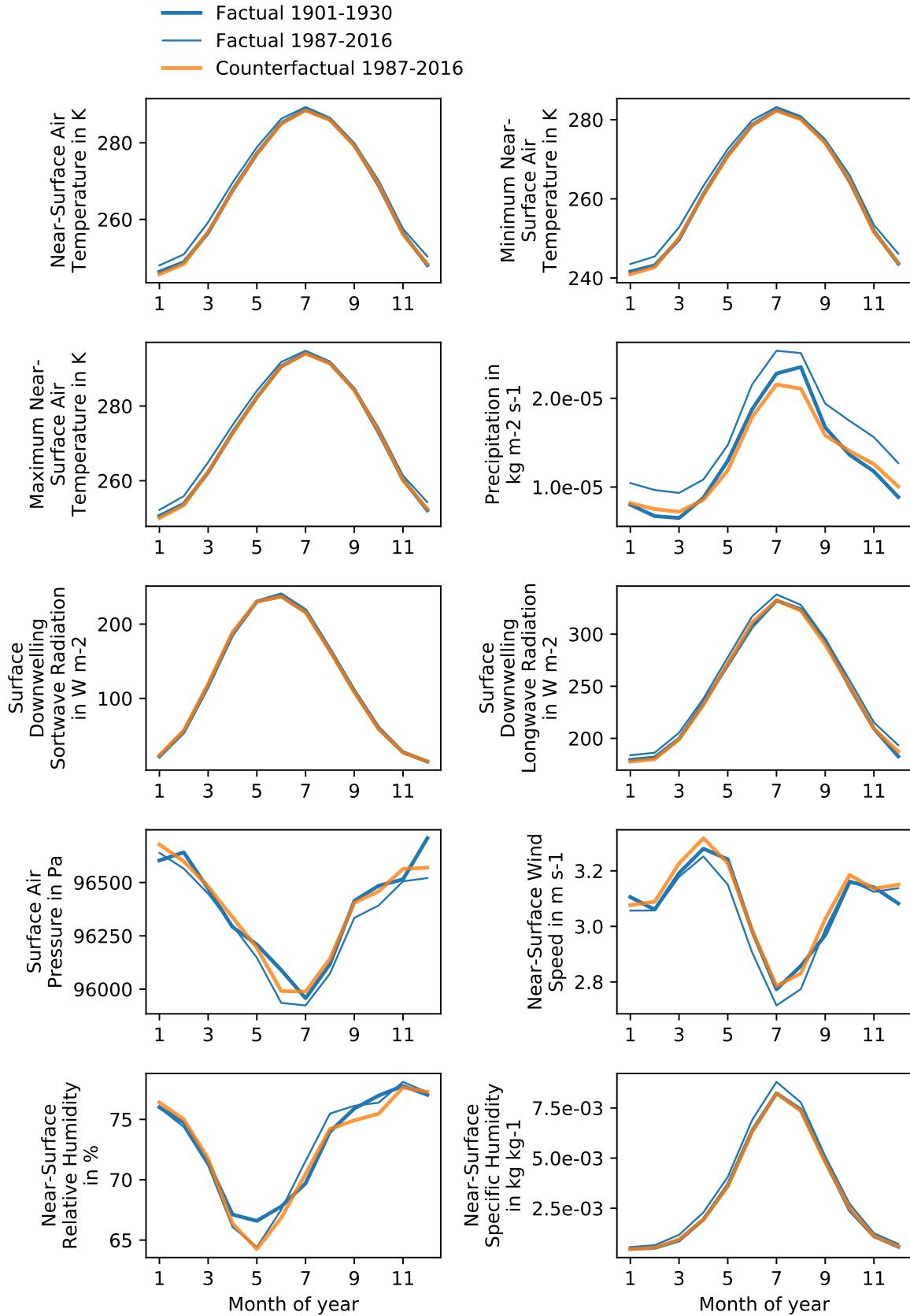


Figure A56: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3-W5E5 dataset for North Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

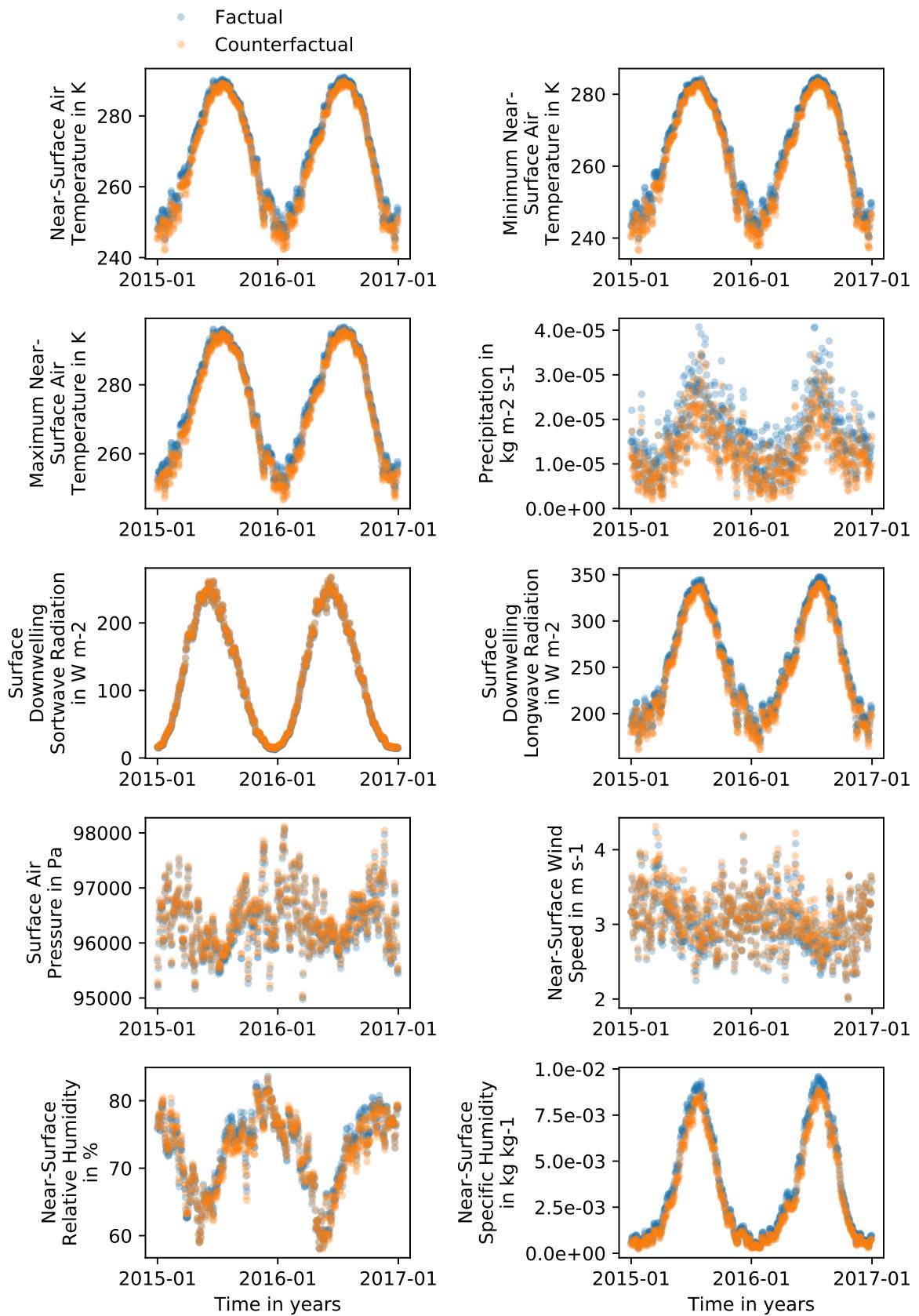


Figure A57: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3-W5E5 dataset for North Asia.

2 Maps of differences between late and early period for GSWP3

We here present maps that are analogous to Figure 4 and 5 in the main paper, but for GSWP3 instead of GSWP3-W5E5.

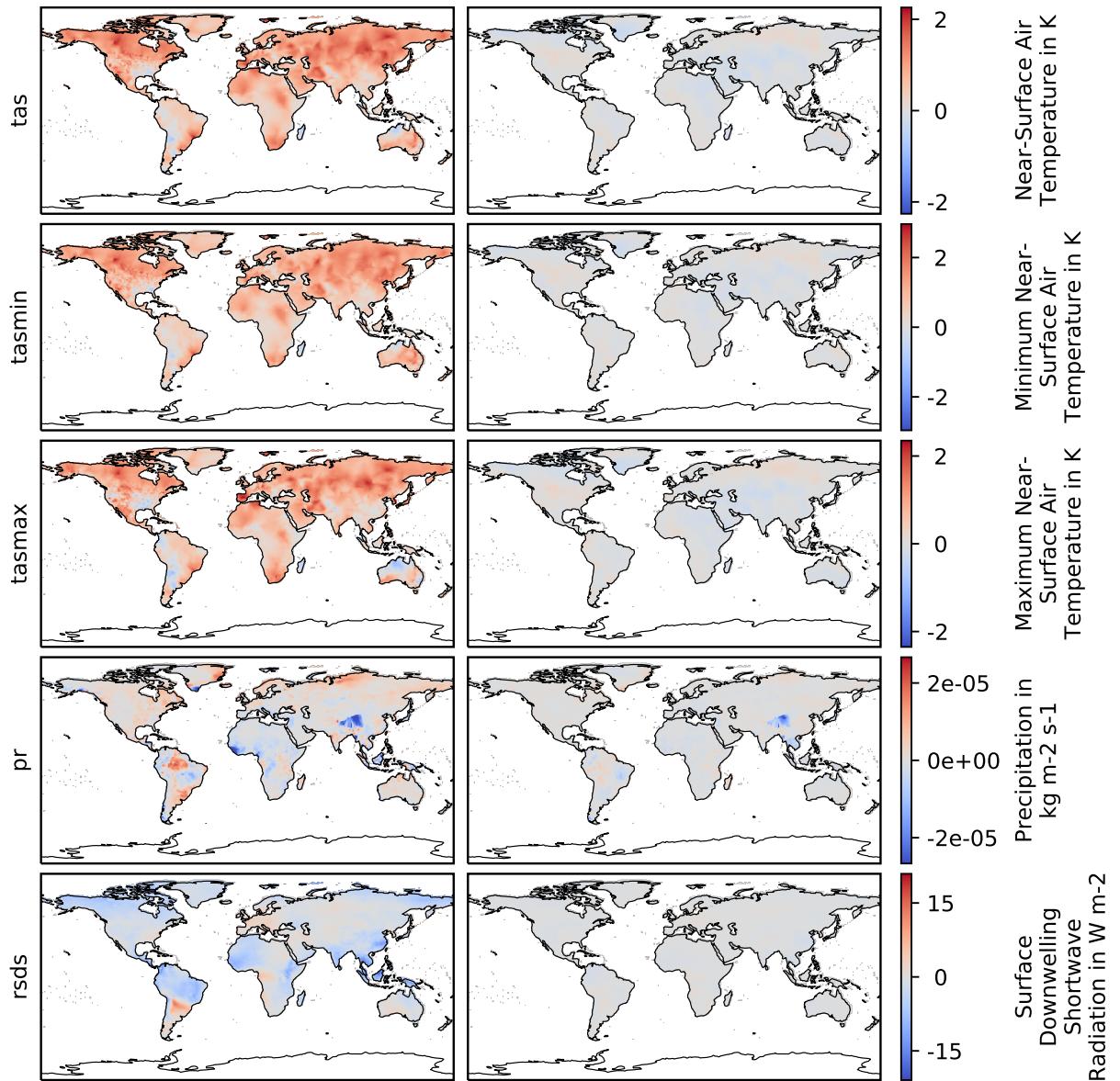


Figure A58: Differences between multi-year averages over the late (1981-2010) and early (1901-1930) time period for the factual (left) and counterfactual (right) GSWP3 dataset. Results are shown for tas, tasmin, tasmax, pr and rsds from the top to the bottom. Note that the color scale is capped for precipitation, i.e., values below $-2\text{e-}5$ and above $2\text{e-}5 \text{ kg m}^{-2} \text{ s}^{-1}$ are displayed in dark blue and red, respectively.

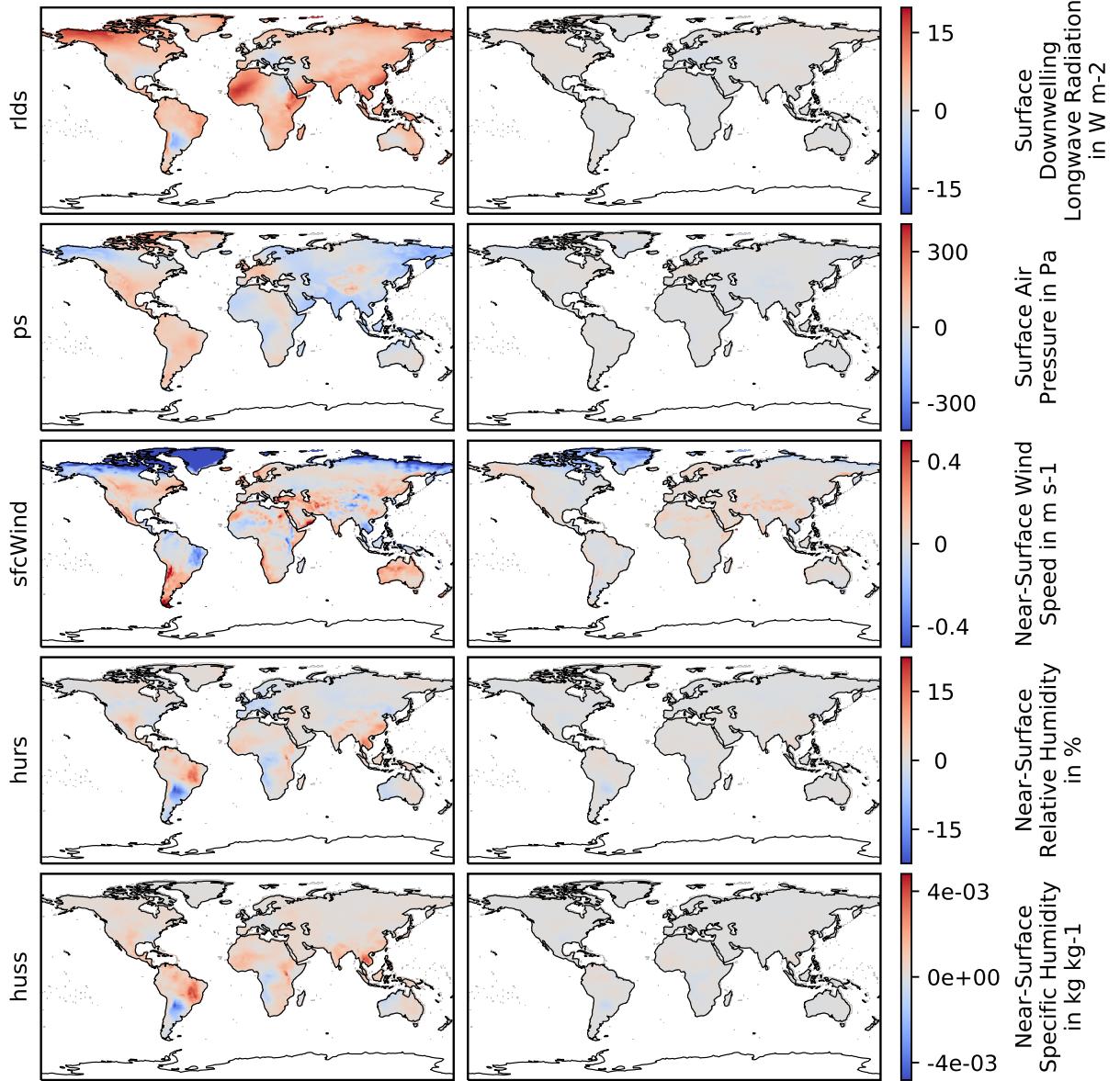


Figure A59: Differences between multi-year averages over the late (1981-2010) and early (1901-1930) time period for the factual (left) and counterfactual (right) GSWP3 dataset. Results are shown for rlds, ps, sfcWind, hurs and huss from the top to the bottom. Note that the color scale is capped for wind, i.e., values below -0.5 and above 0.5 m s^{-1} are displayed in dark blue and red, respectively.

3 Plots for Giorgi regions for GSWP3

We here present figures for all Giorgi regions as defined in Giorgi (2000) analogously to Figures 6-8 (Southern South America) and 9-11 (Northern Europe) in the main text.

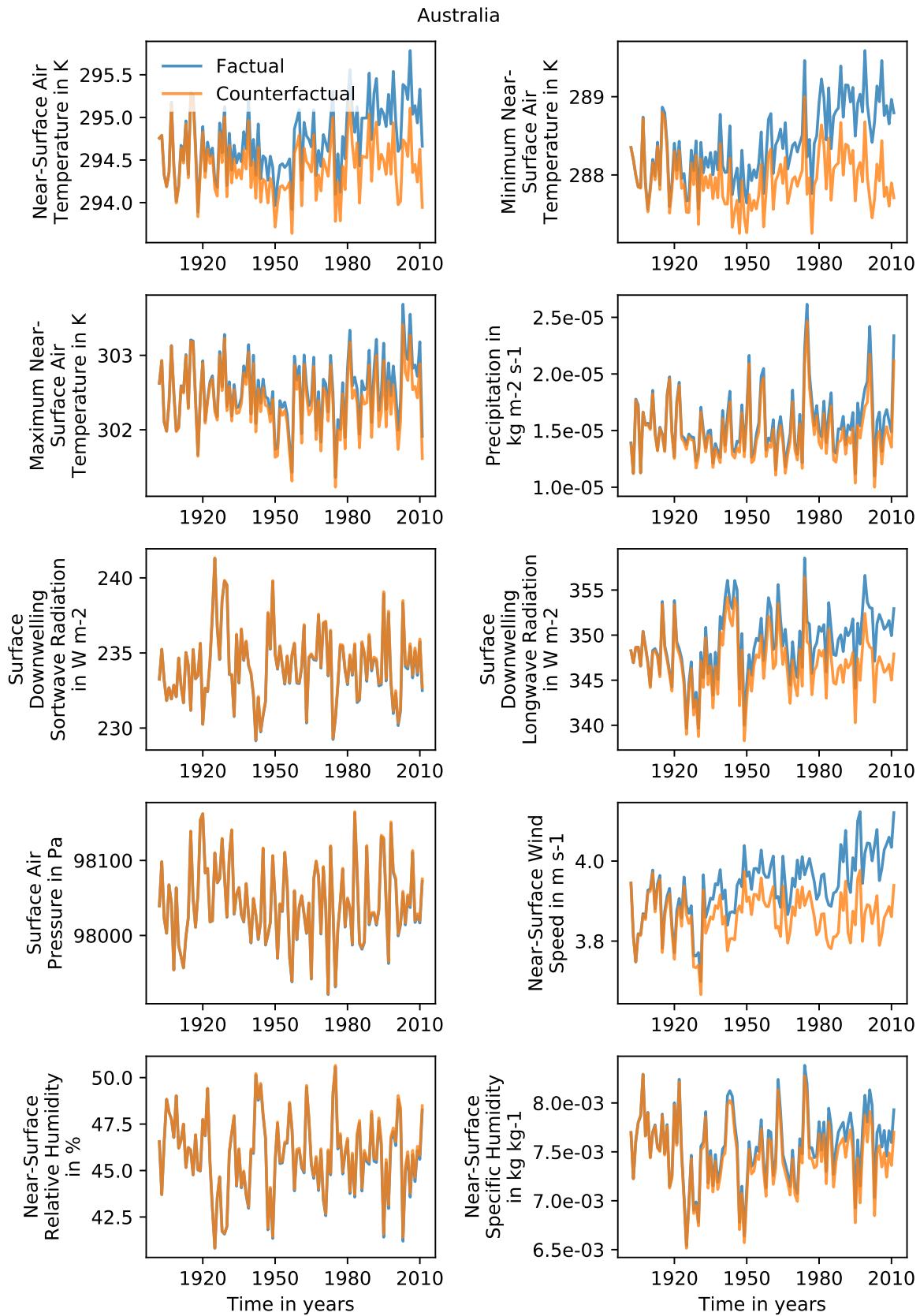


Figure A60: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Australia for the GSWP3 dataset.

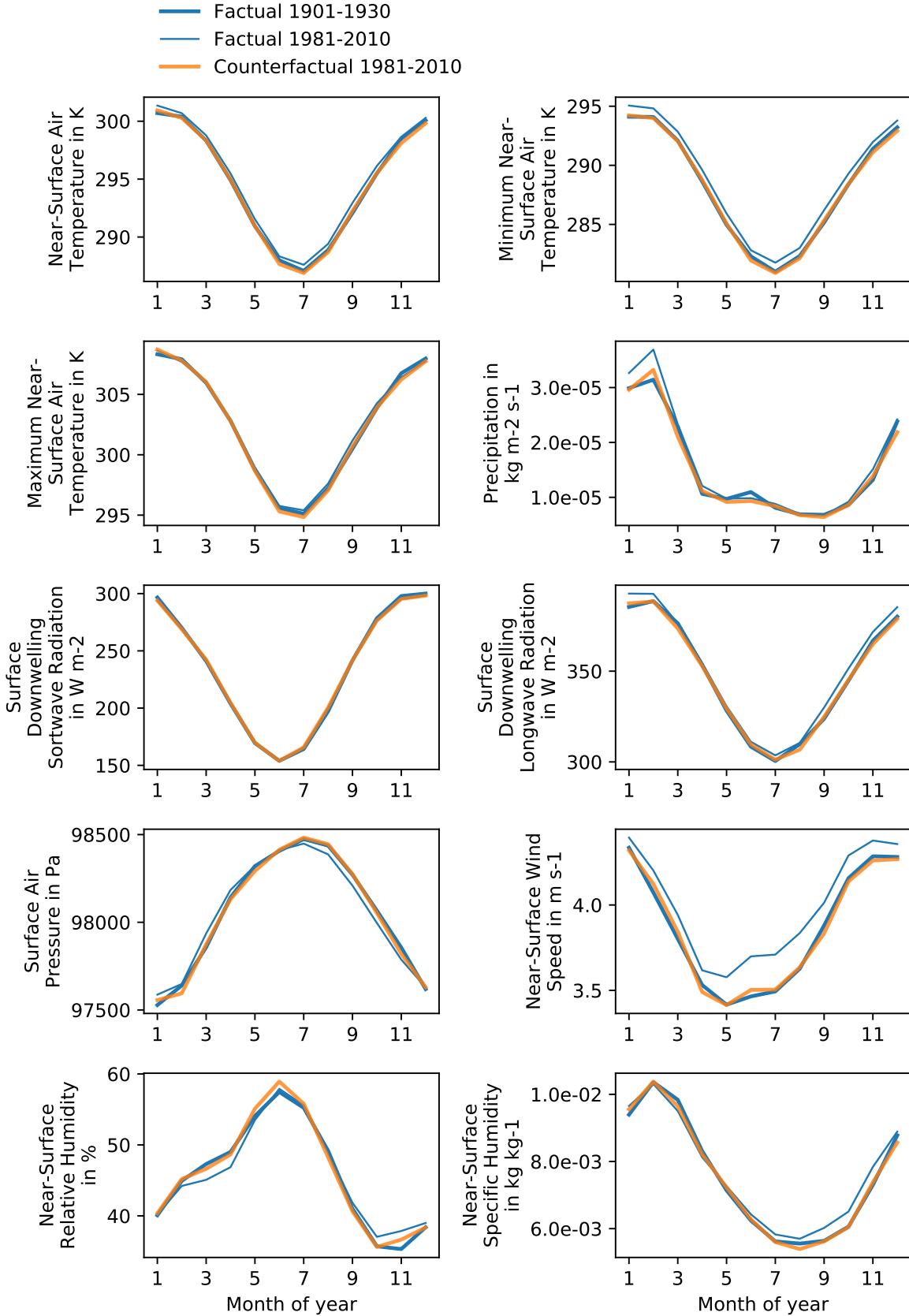


Figure A61: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Australia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

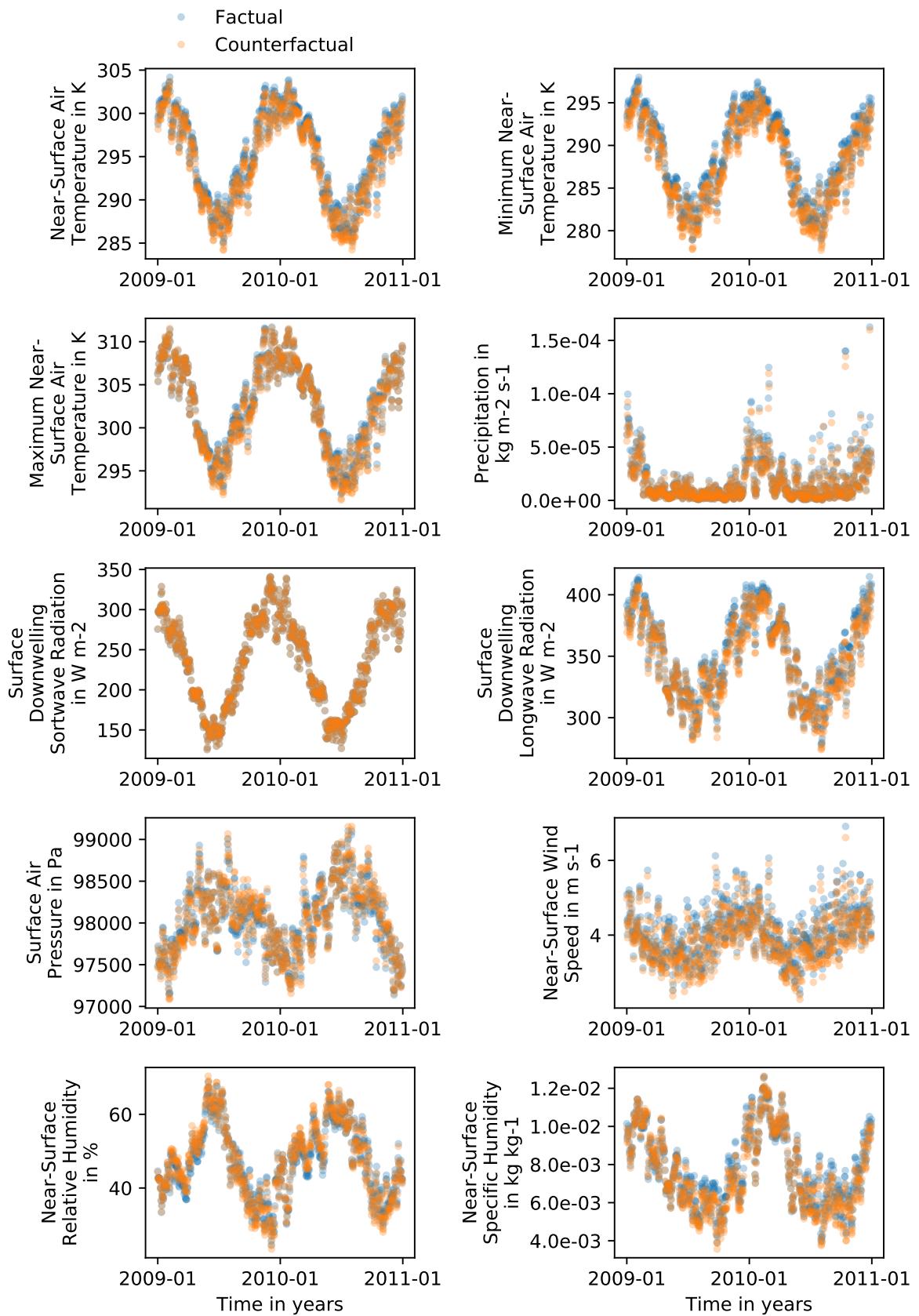


Figure A62: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Australia.

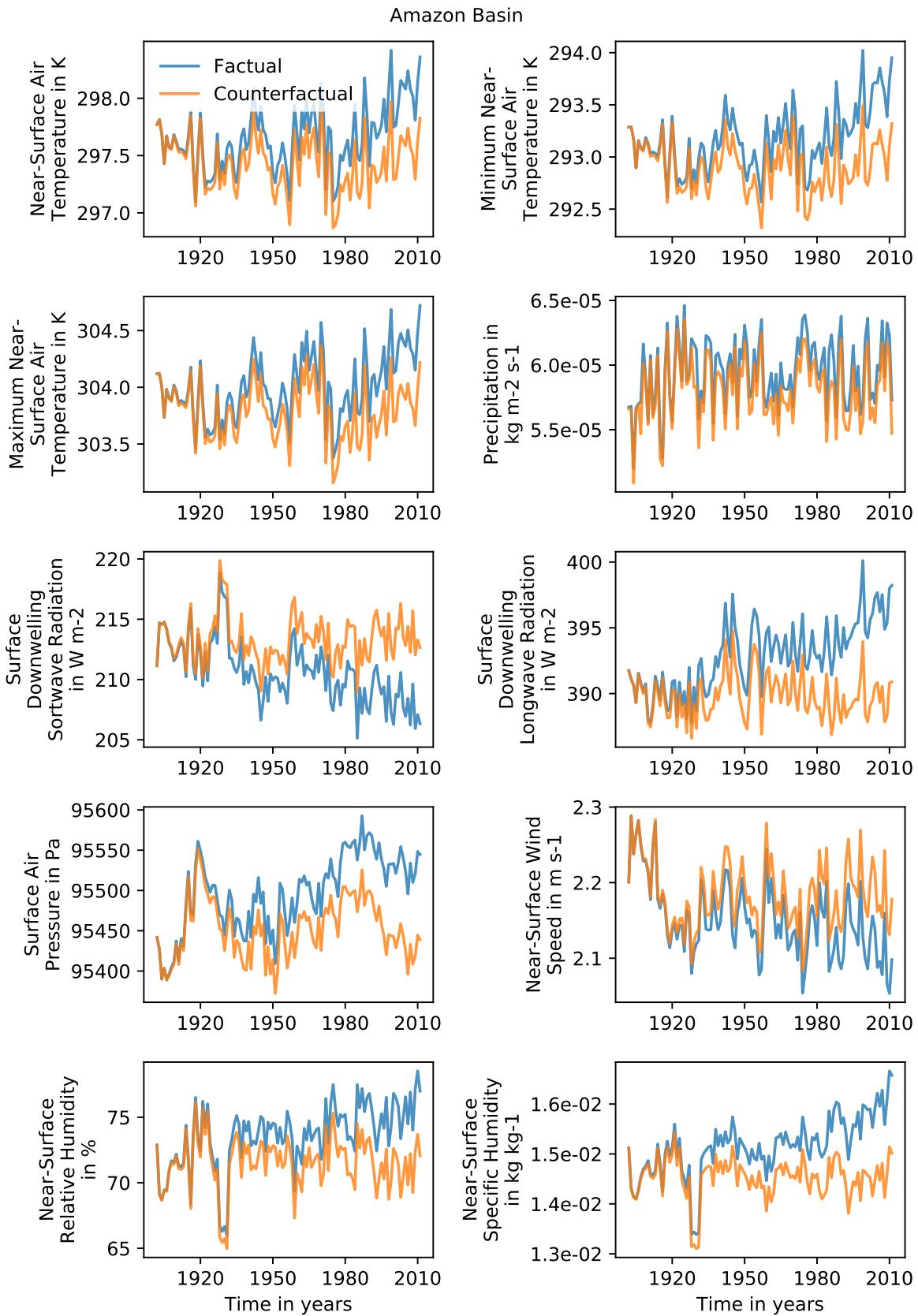


Figure A63: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Amazon Basin for the GSWP3 dataset.

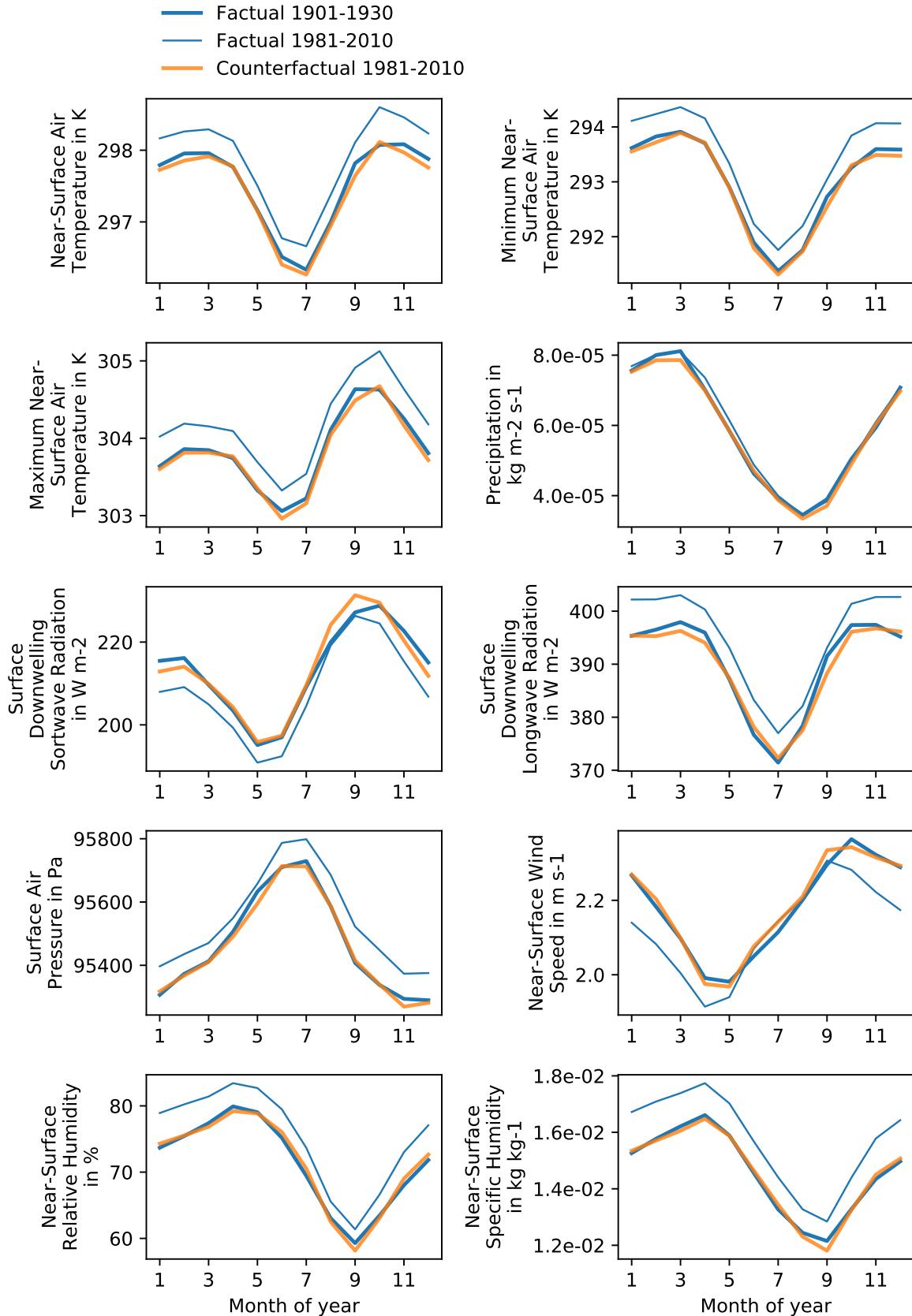


Figure A64: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Amazon Basin. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

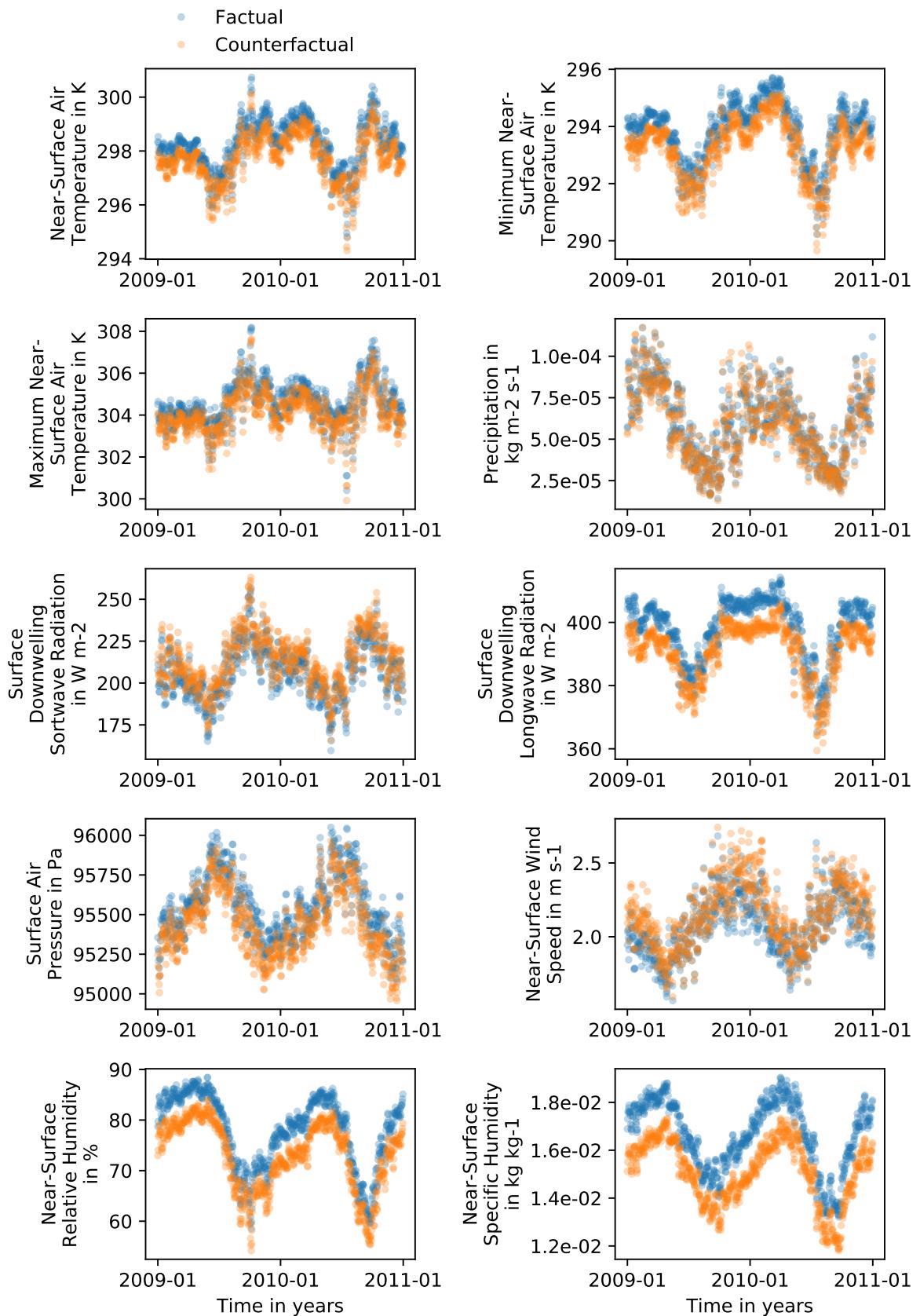


Figure A65: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Amazon Basin.

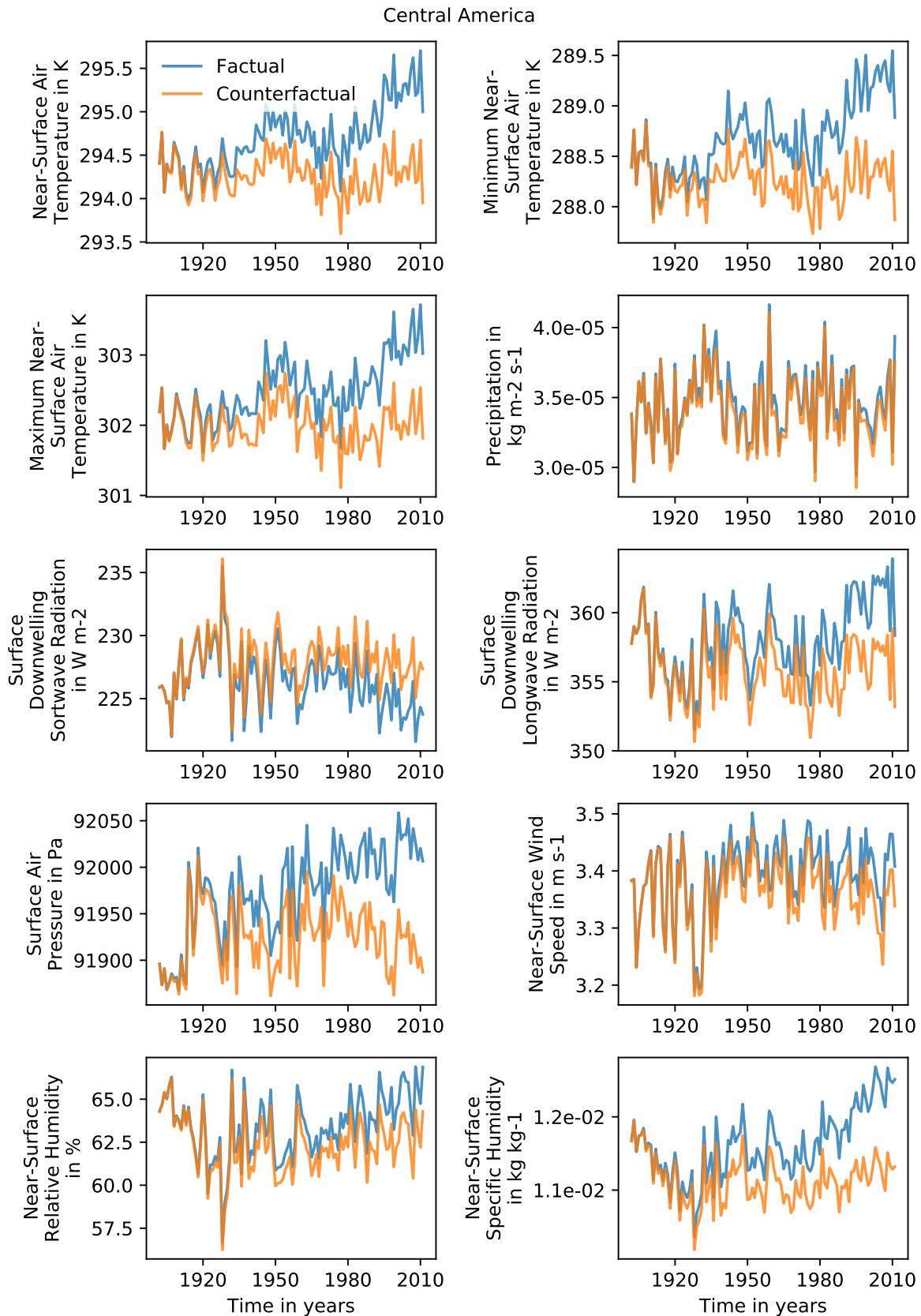


Figure A66: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central America for the GSWP3 dataset.

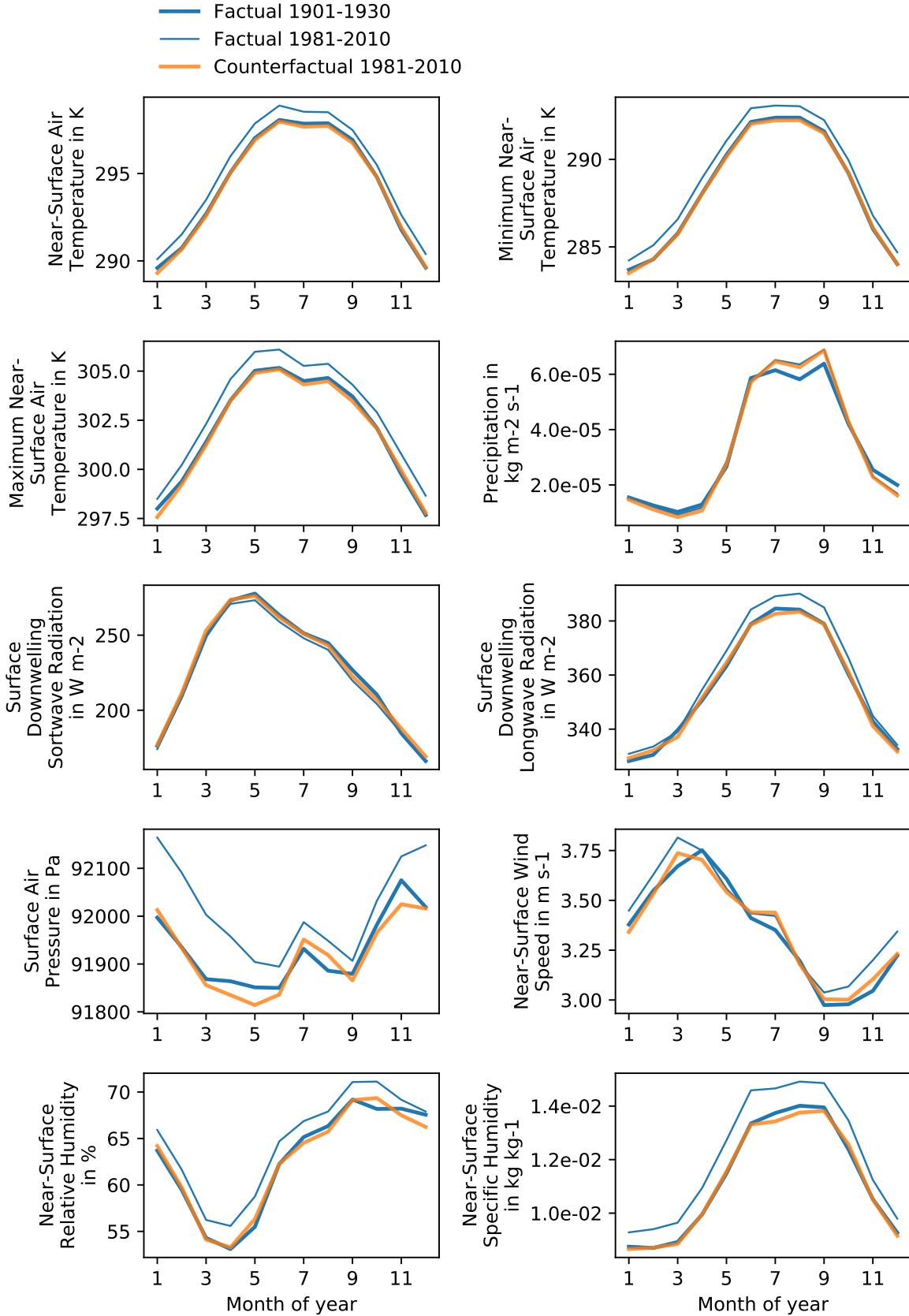


Figure A67: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Central America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

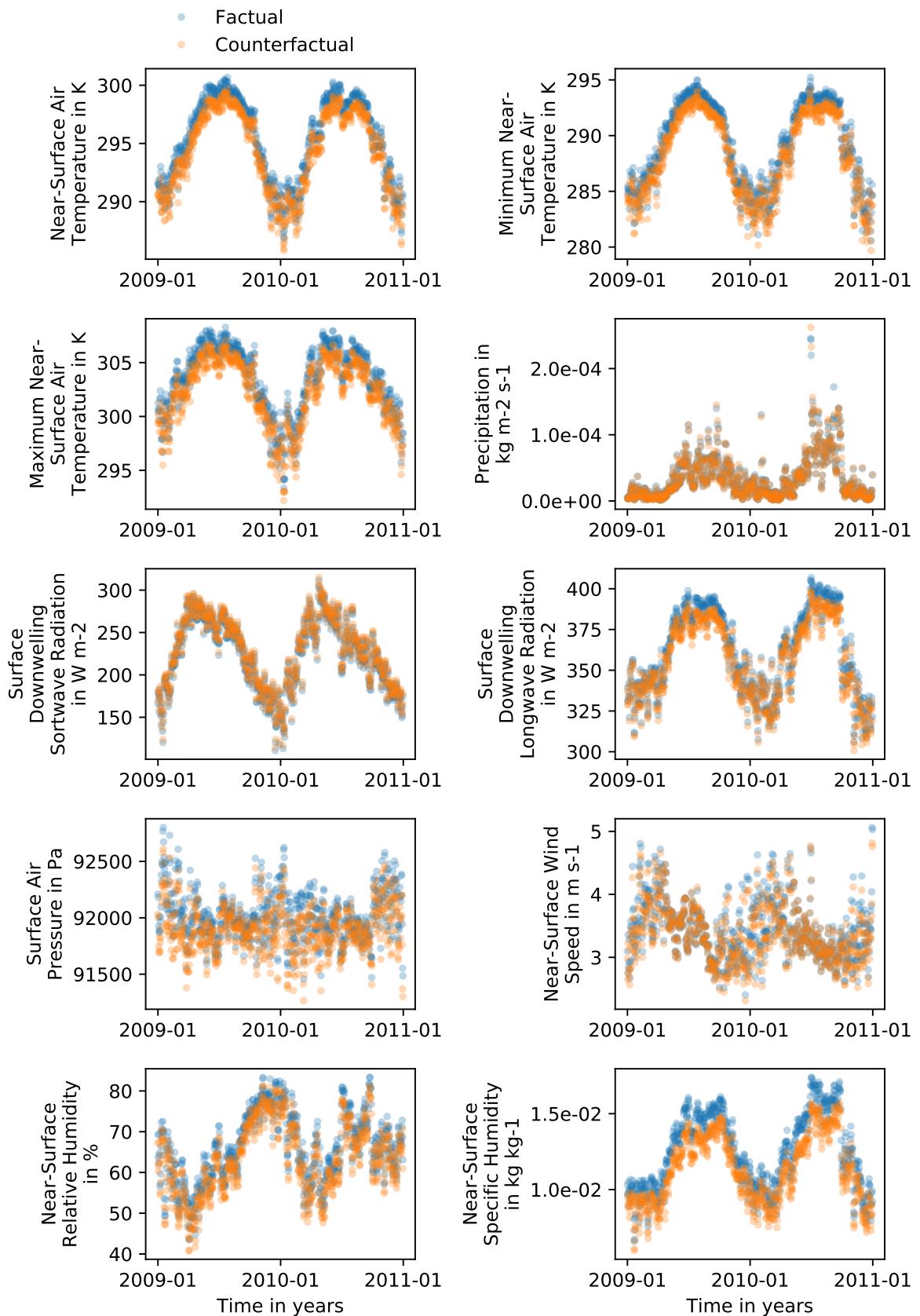


Figure A68: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Central America.

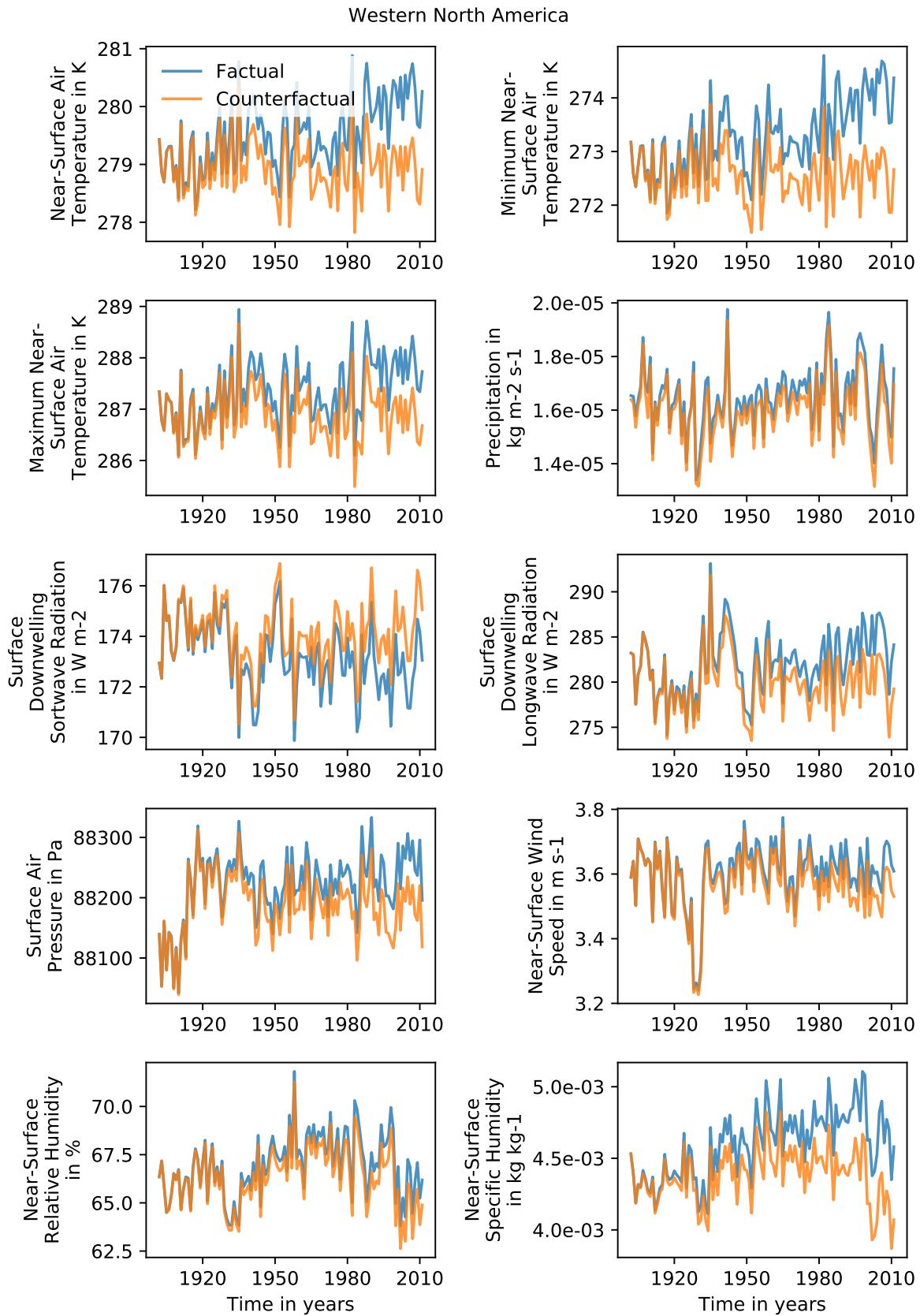


Figure A69: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Western North America for the GSWP3 dataset.

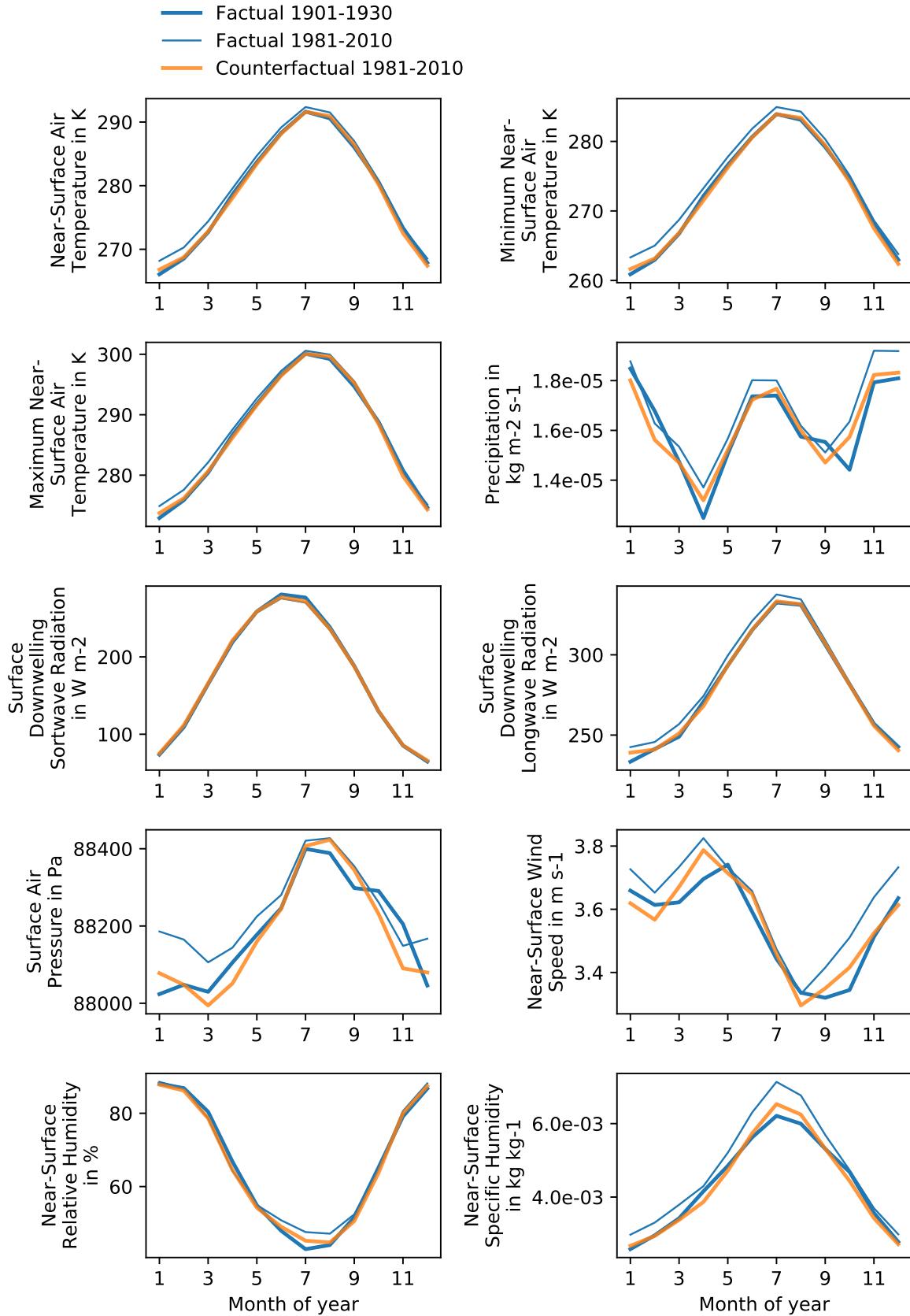


Figure A70: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Western North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

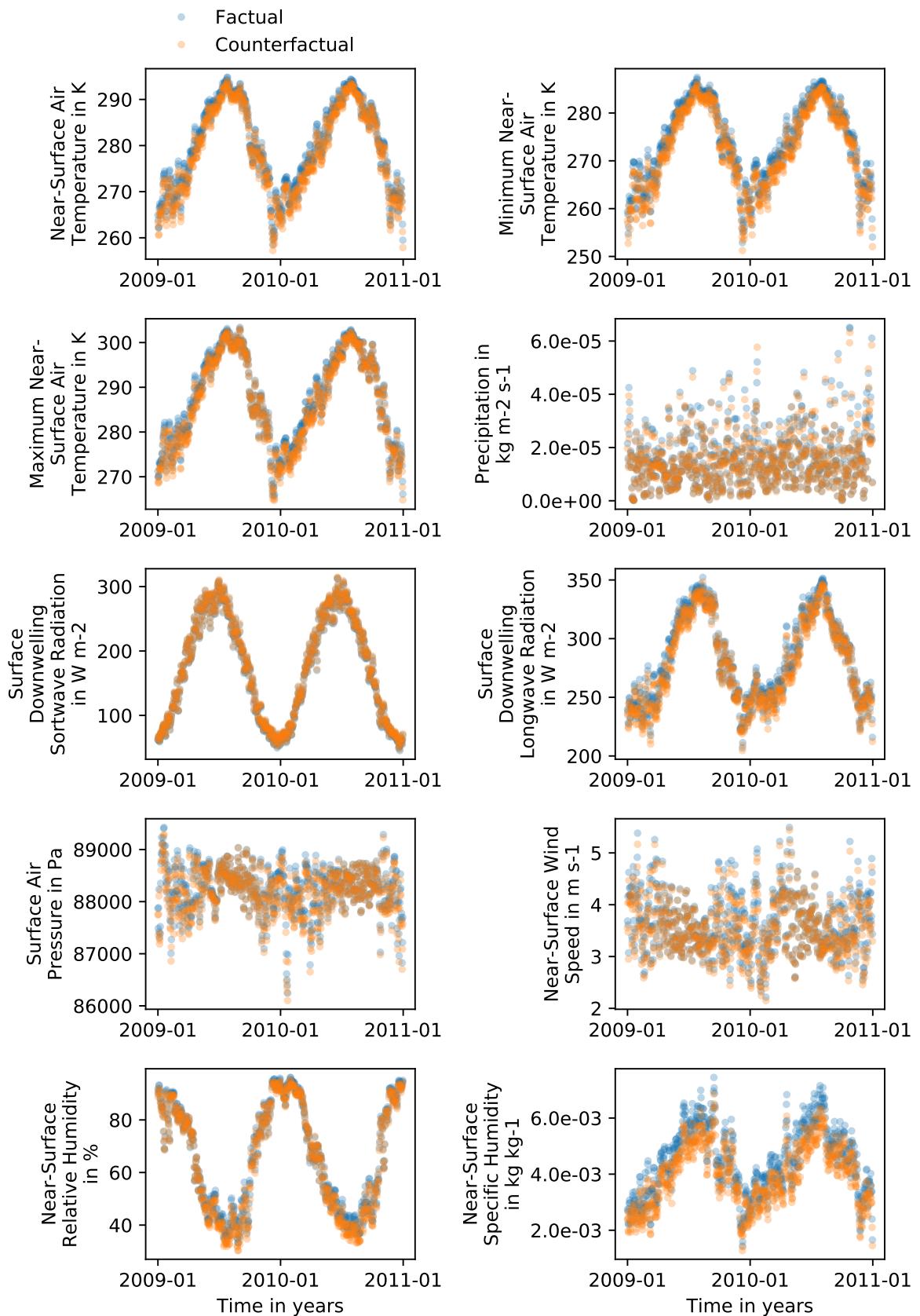


Figure A71: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Western North America.

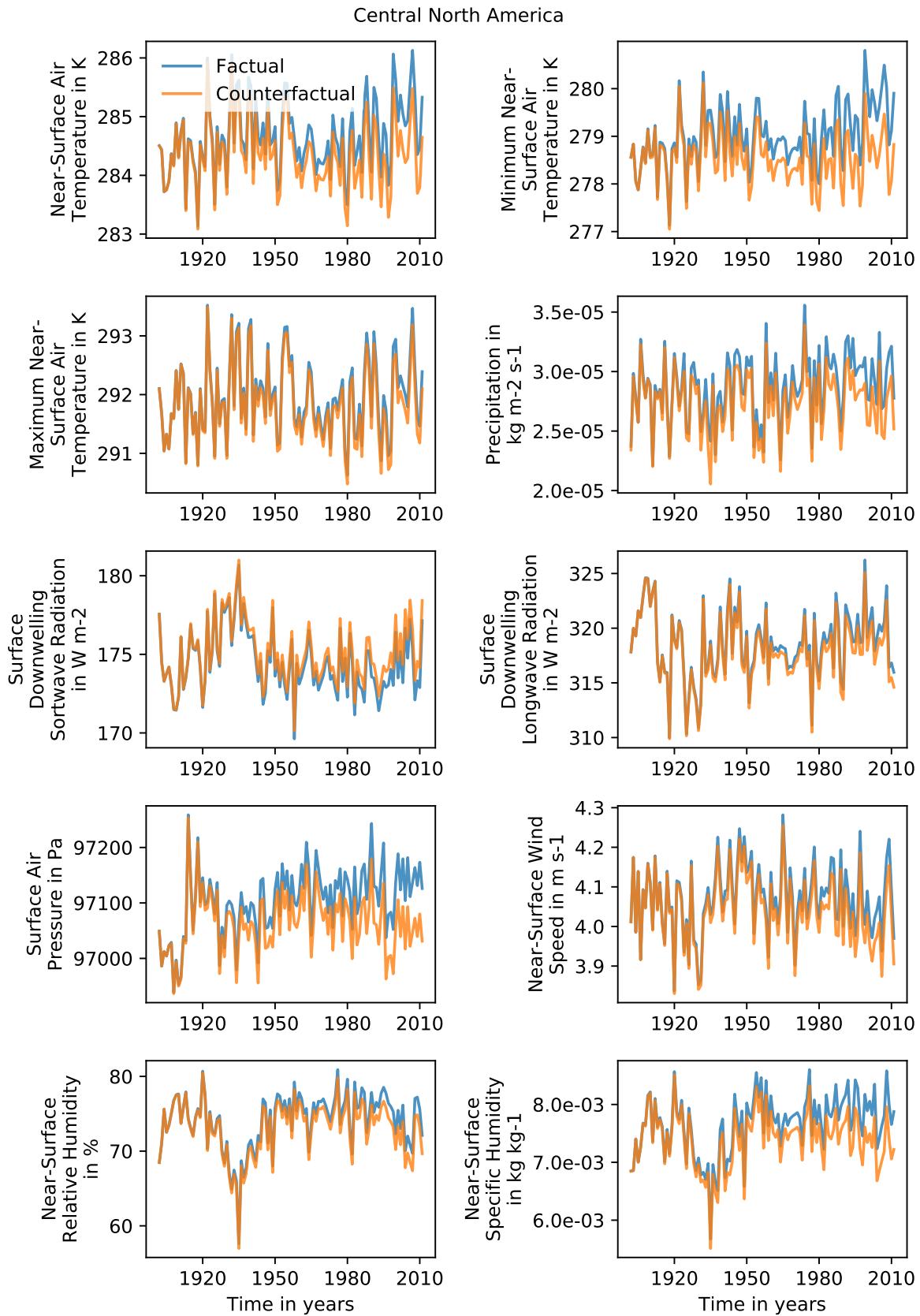


Figure A72: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central North America for the GSWP3 dataset.

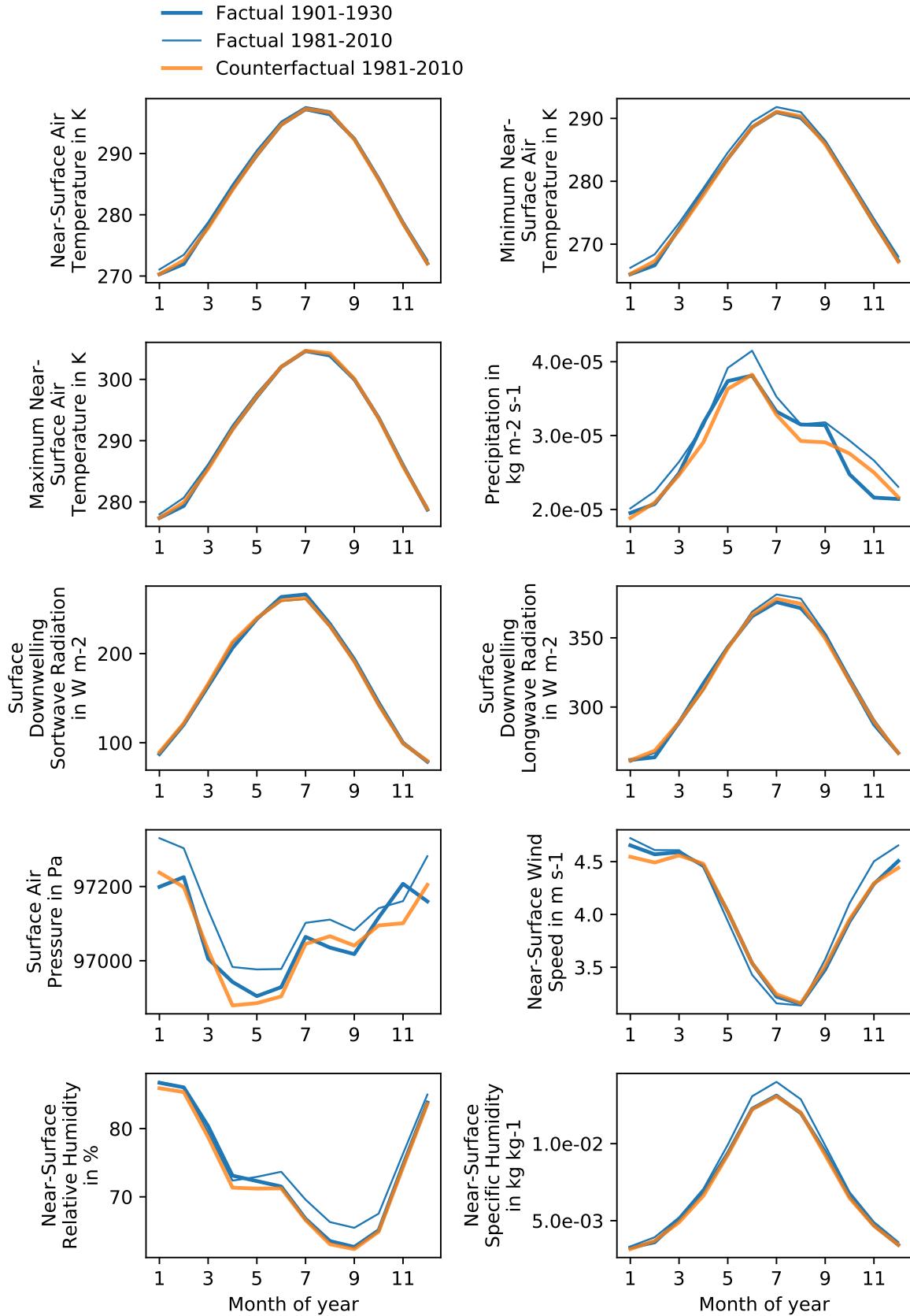


Figure A73: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Central North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

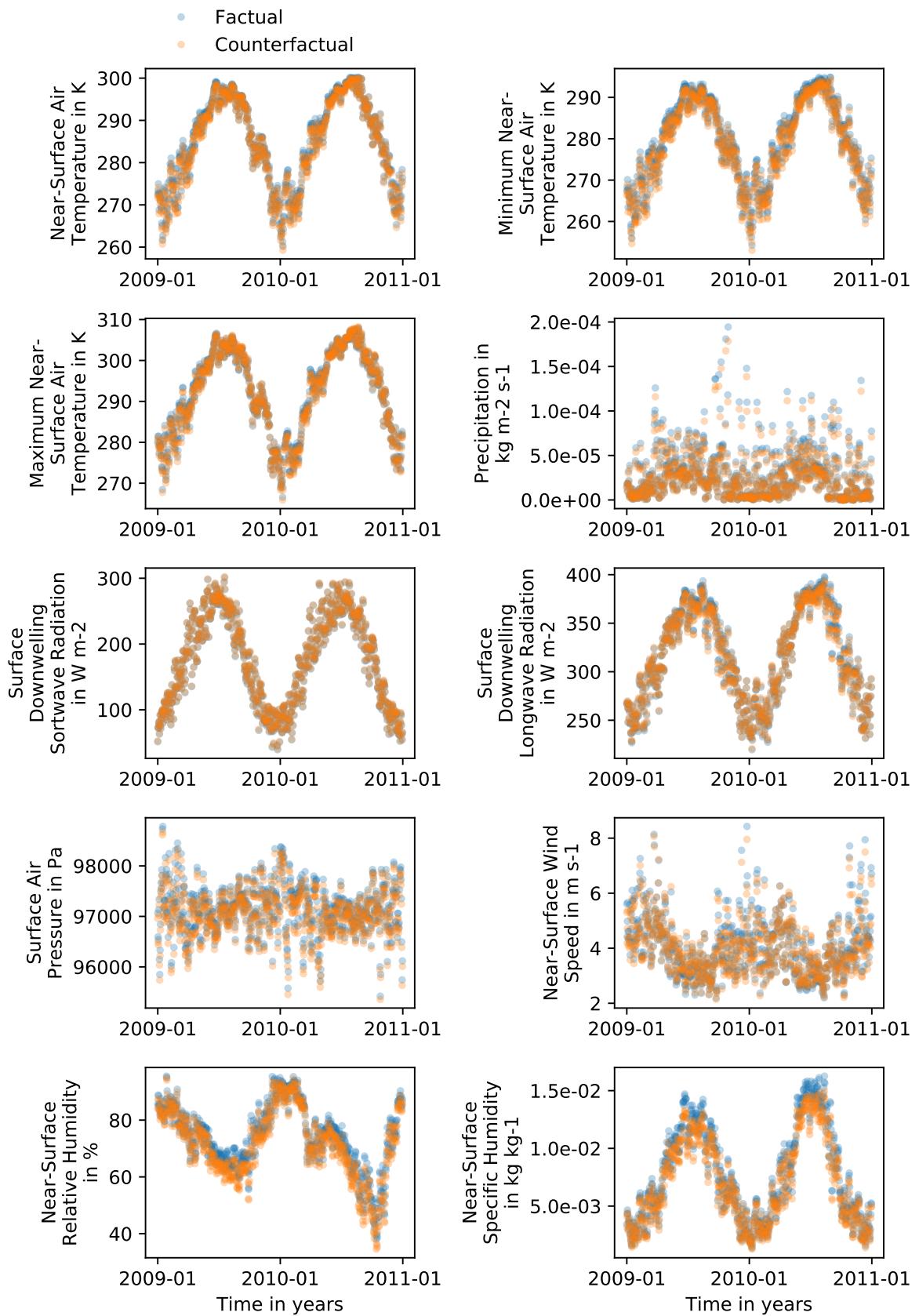


Figure A74: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Central North America.

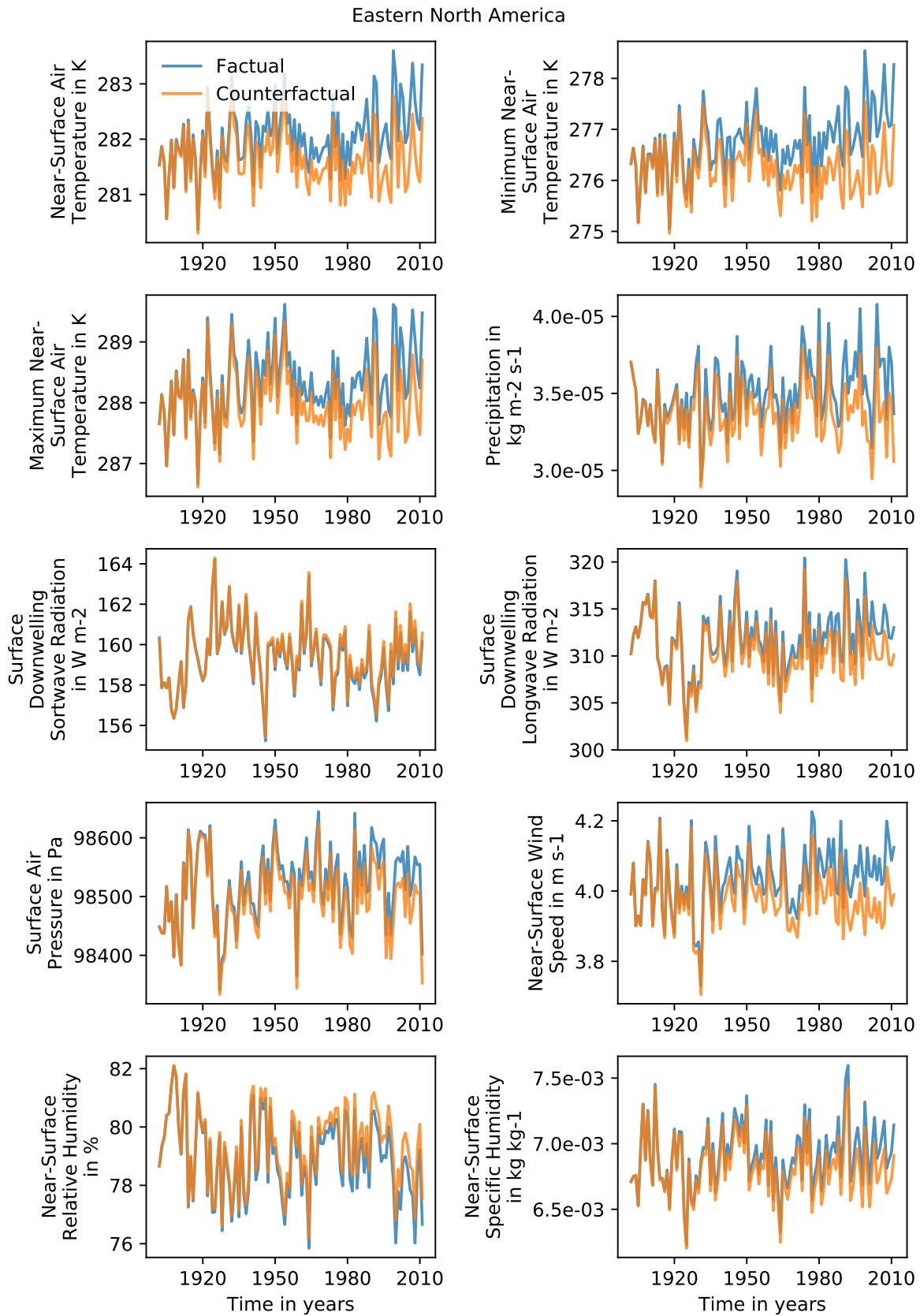


Figure A75: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Eastern North America for the GSWP3 dataset.

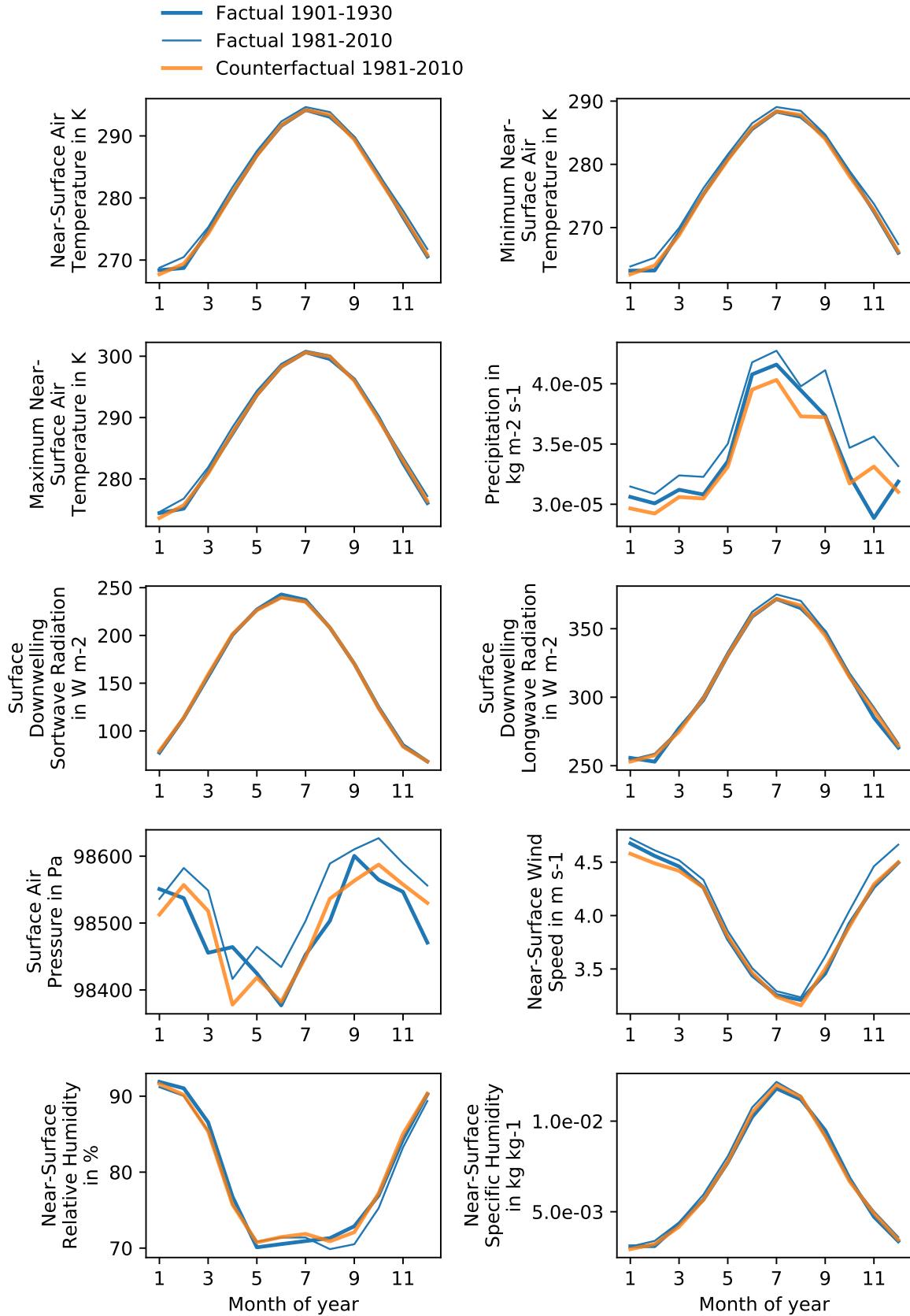


Figure A76: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Eastern North America. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

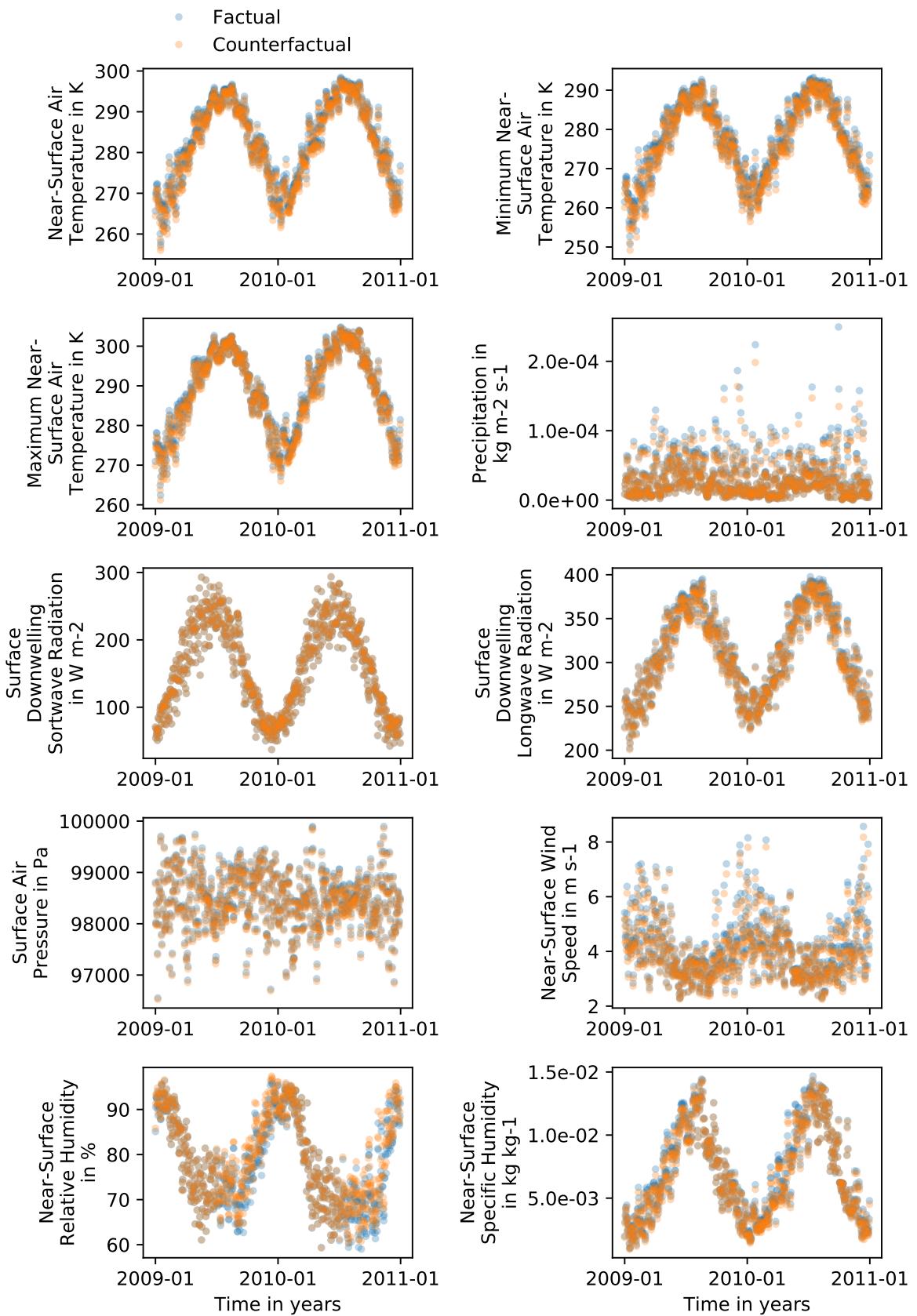


Figure A77: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Eastern North America.

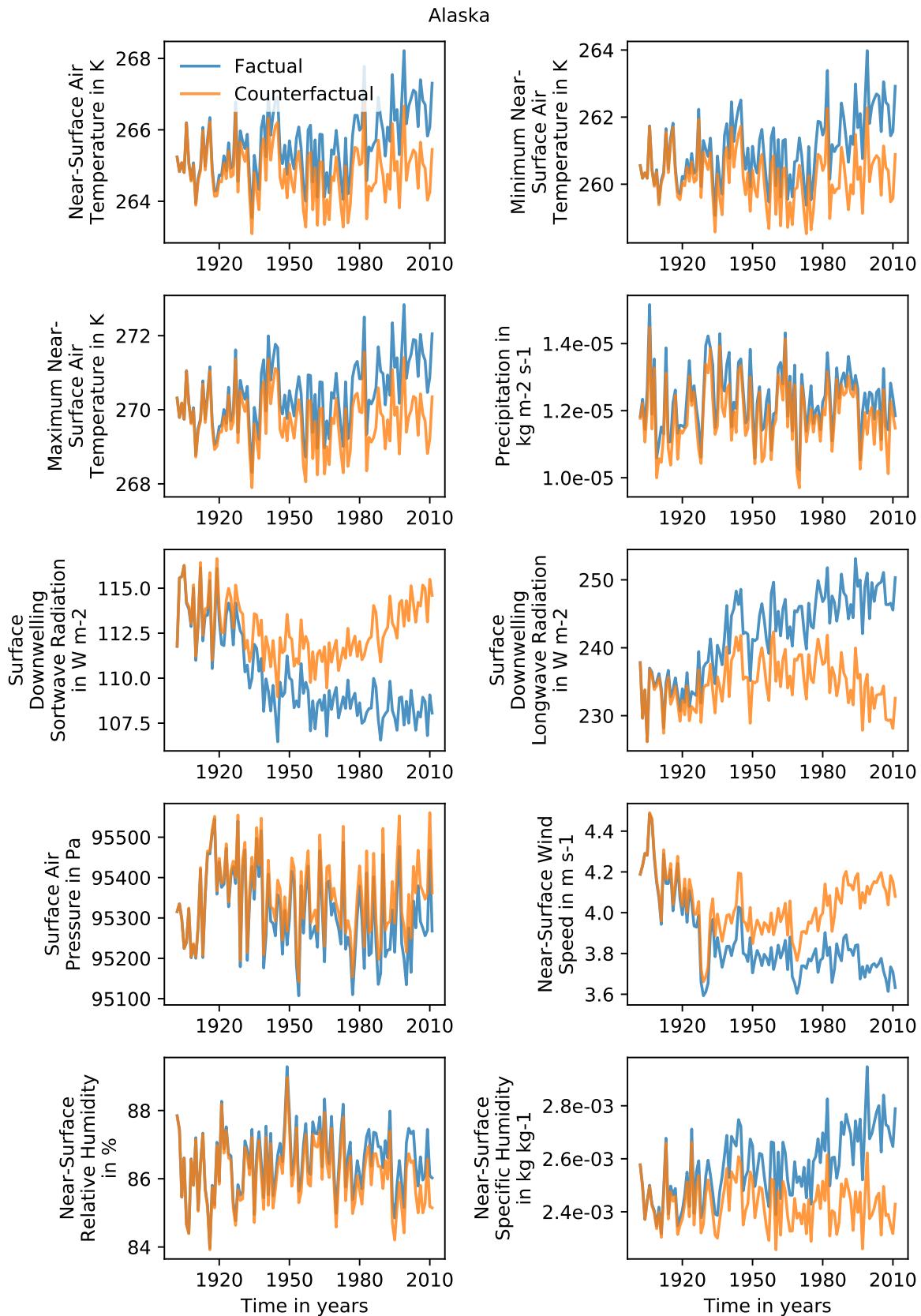


Figure A78: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Alaska for the GSWP3 dataset.

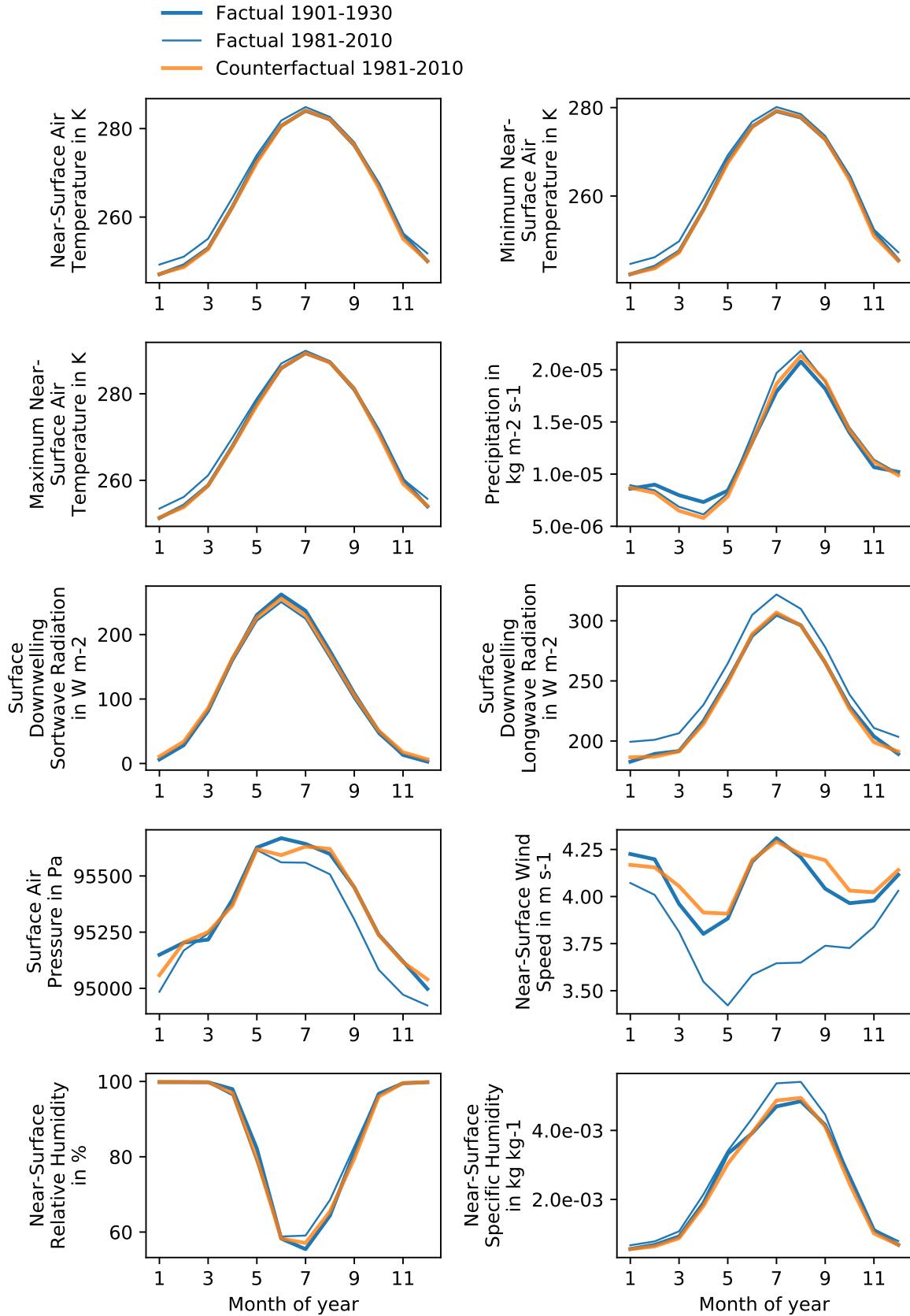


Figure A79: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Alaska. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

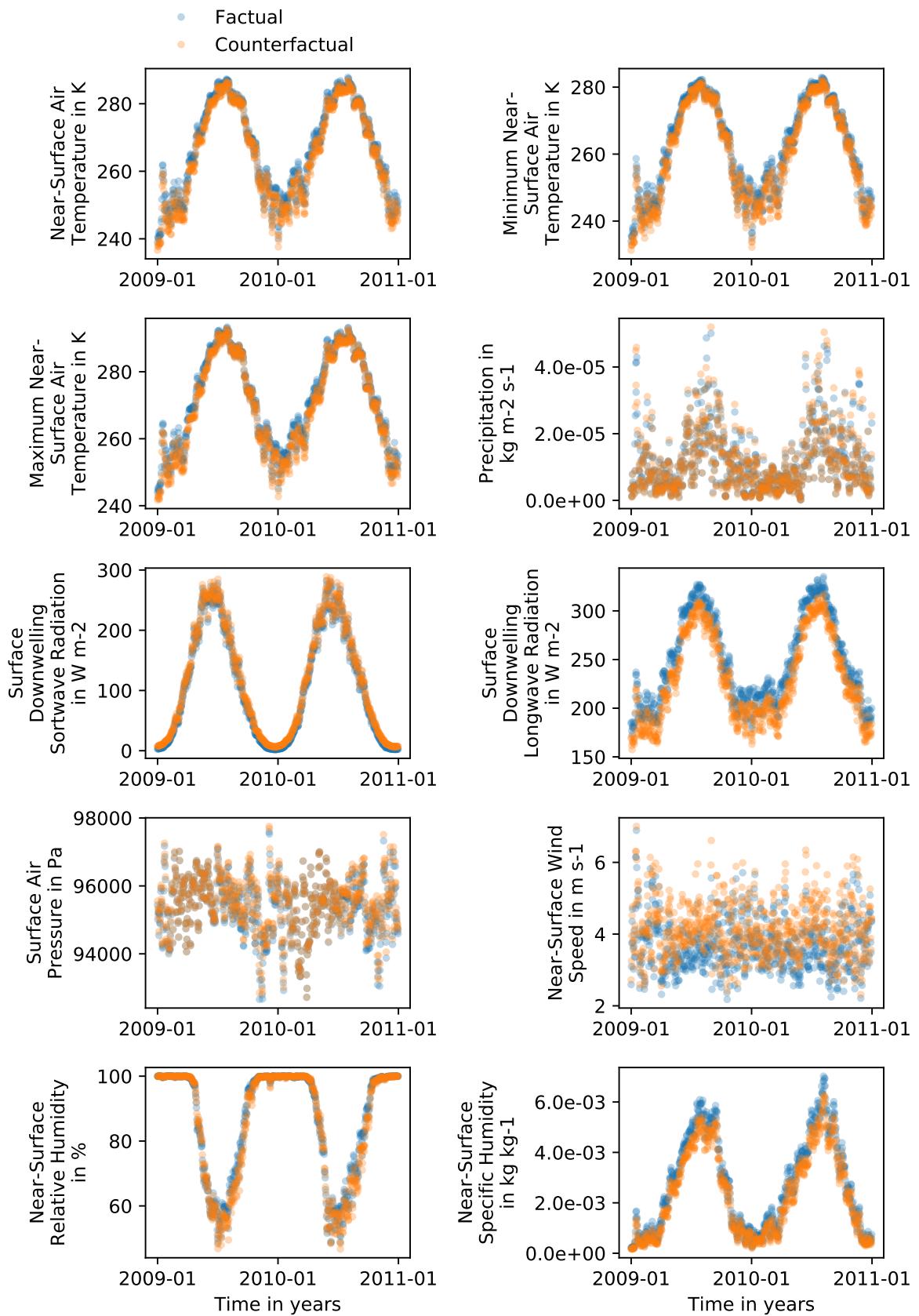


Figure A80: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Alaska.

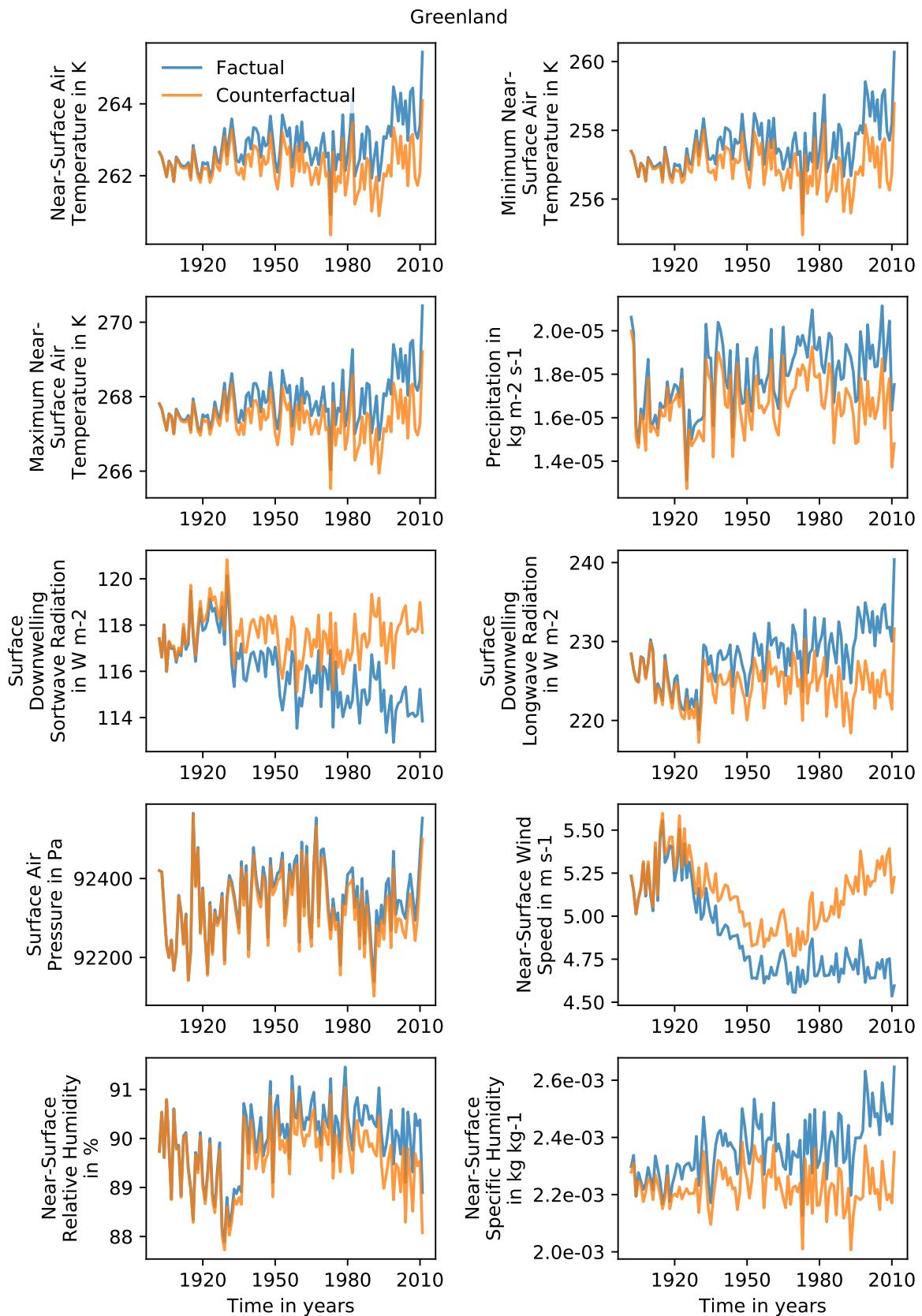


Figure A81: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Greenland for the GSWP3 dataset.

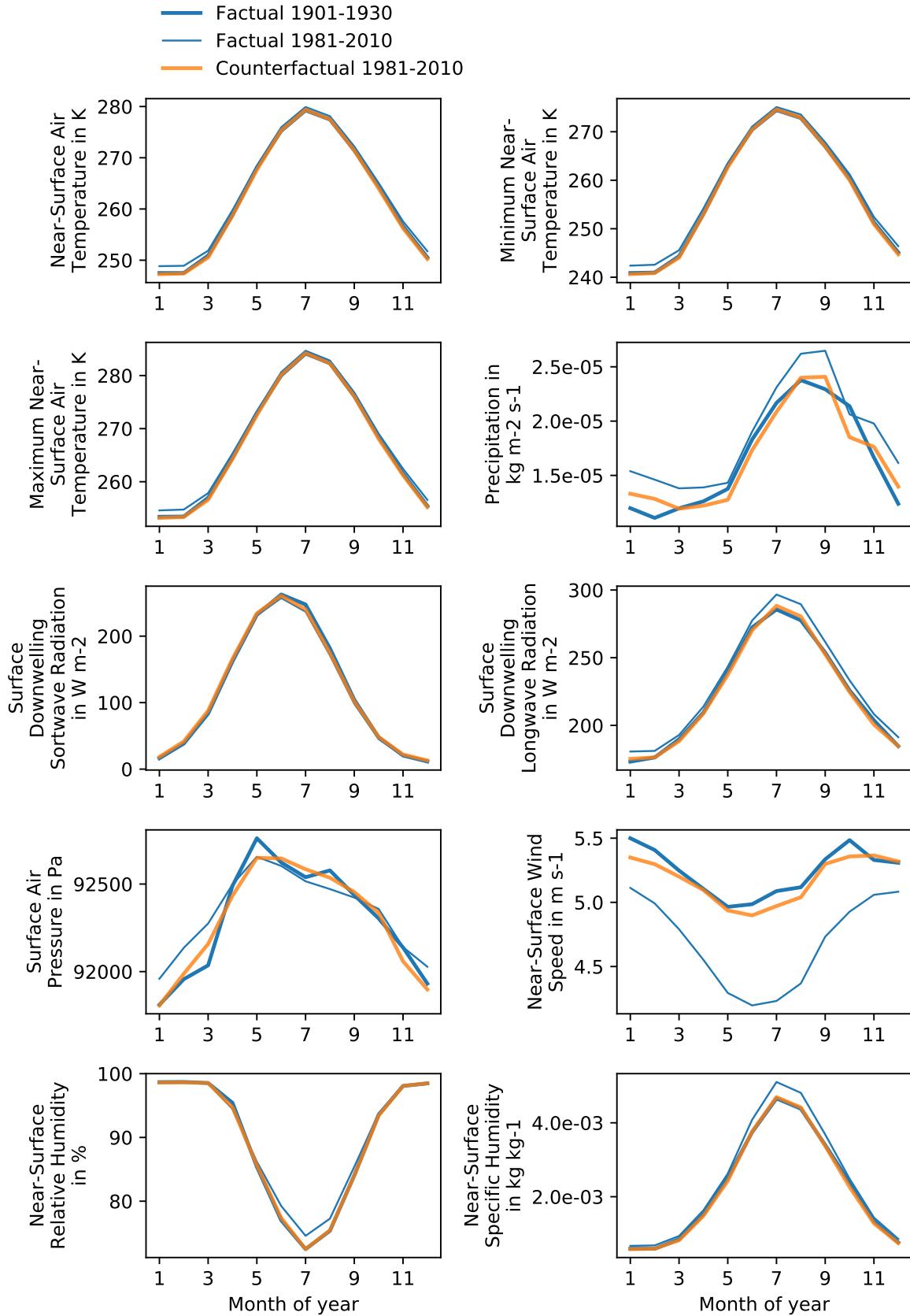


Figure A82: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Greenland. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

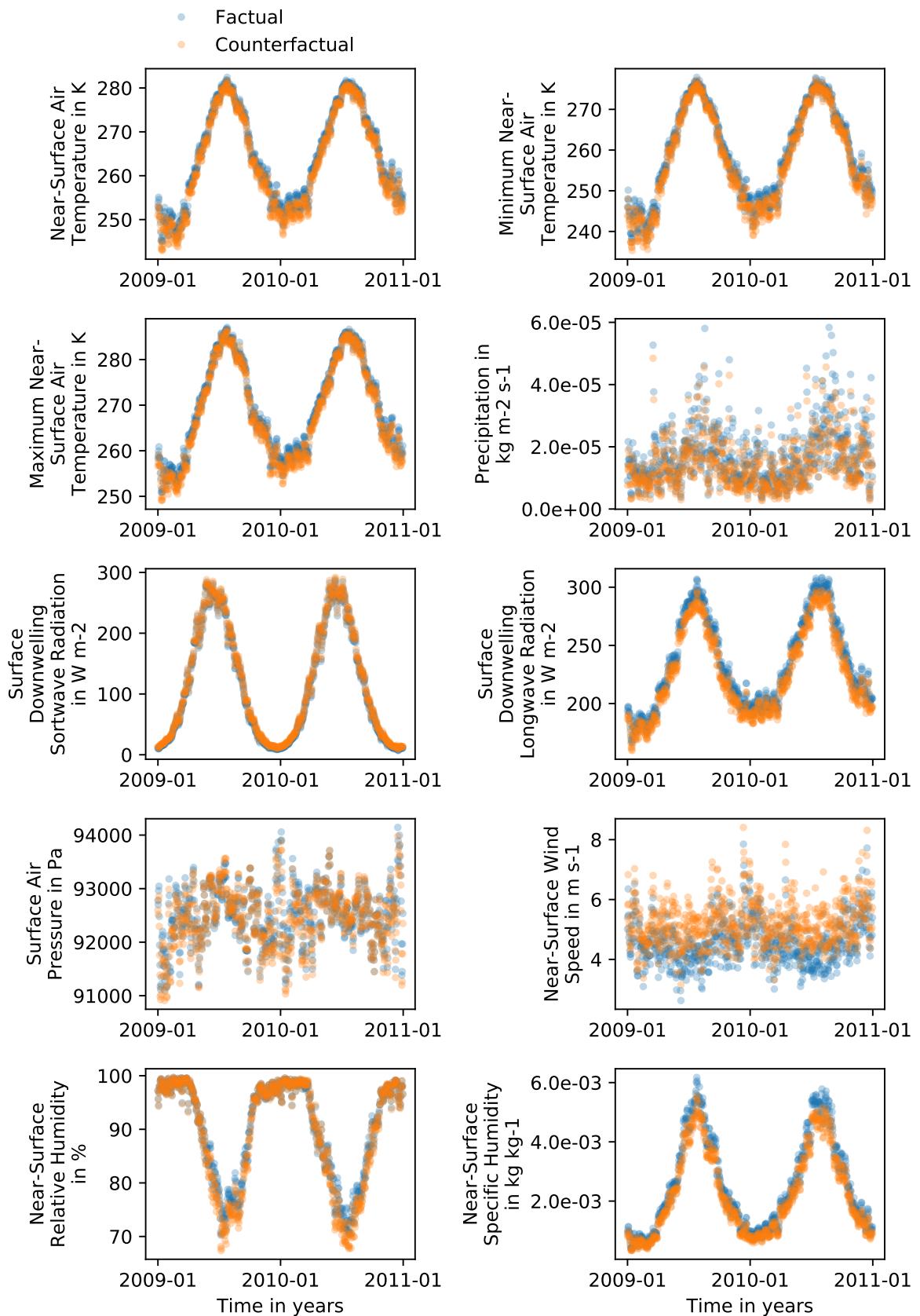


Figure A83: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Greenland.

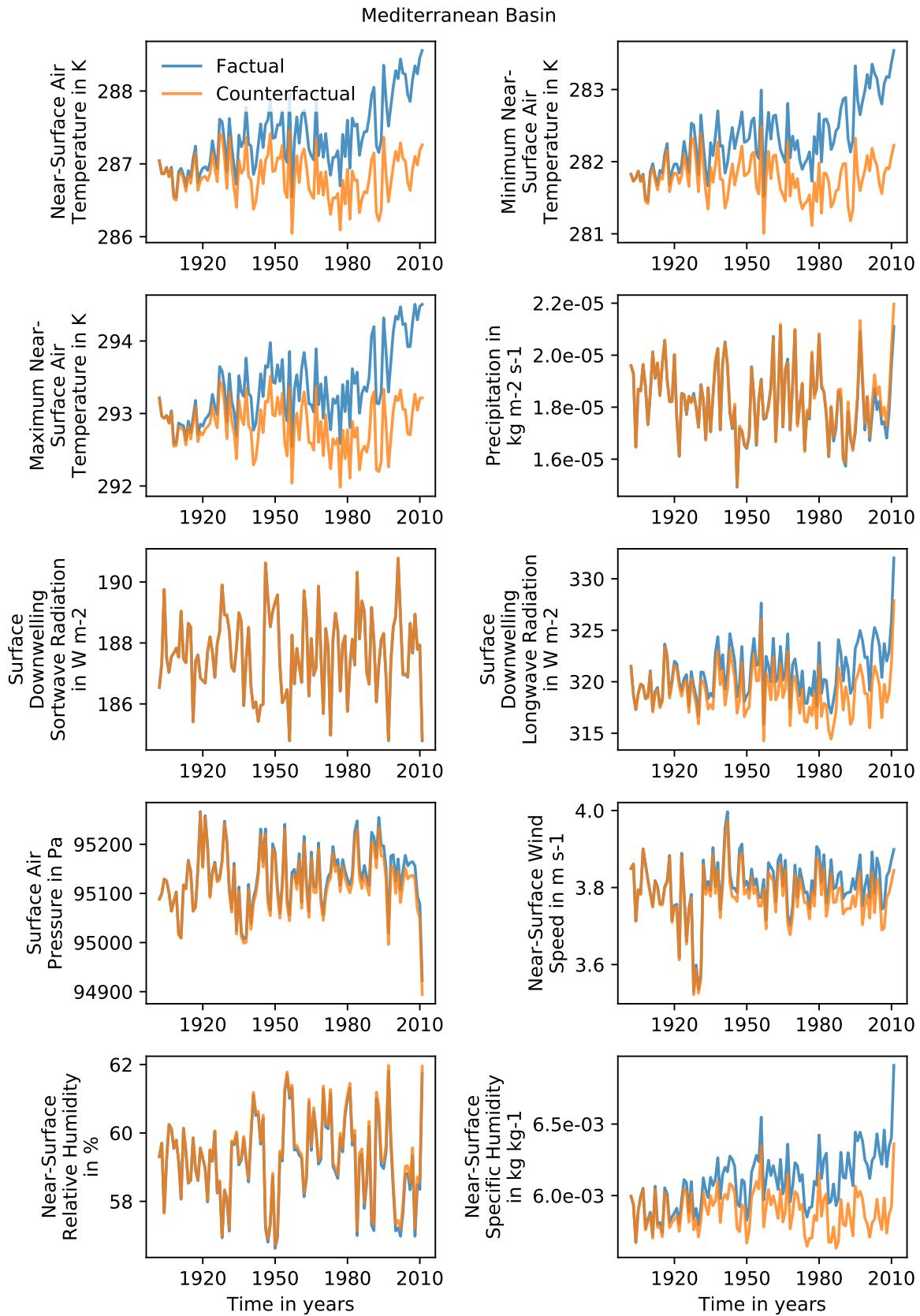


Figure A84: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for the Mediterranean Basin for the GSWP3 dataset.

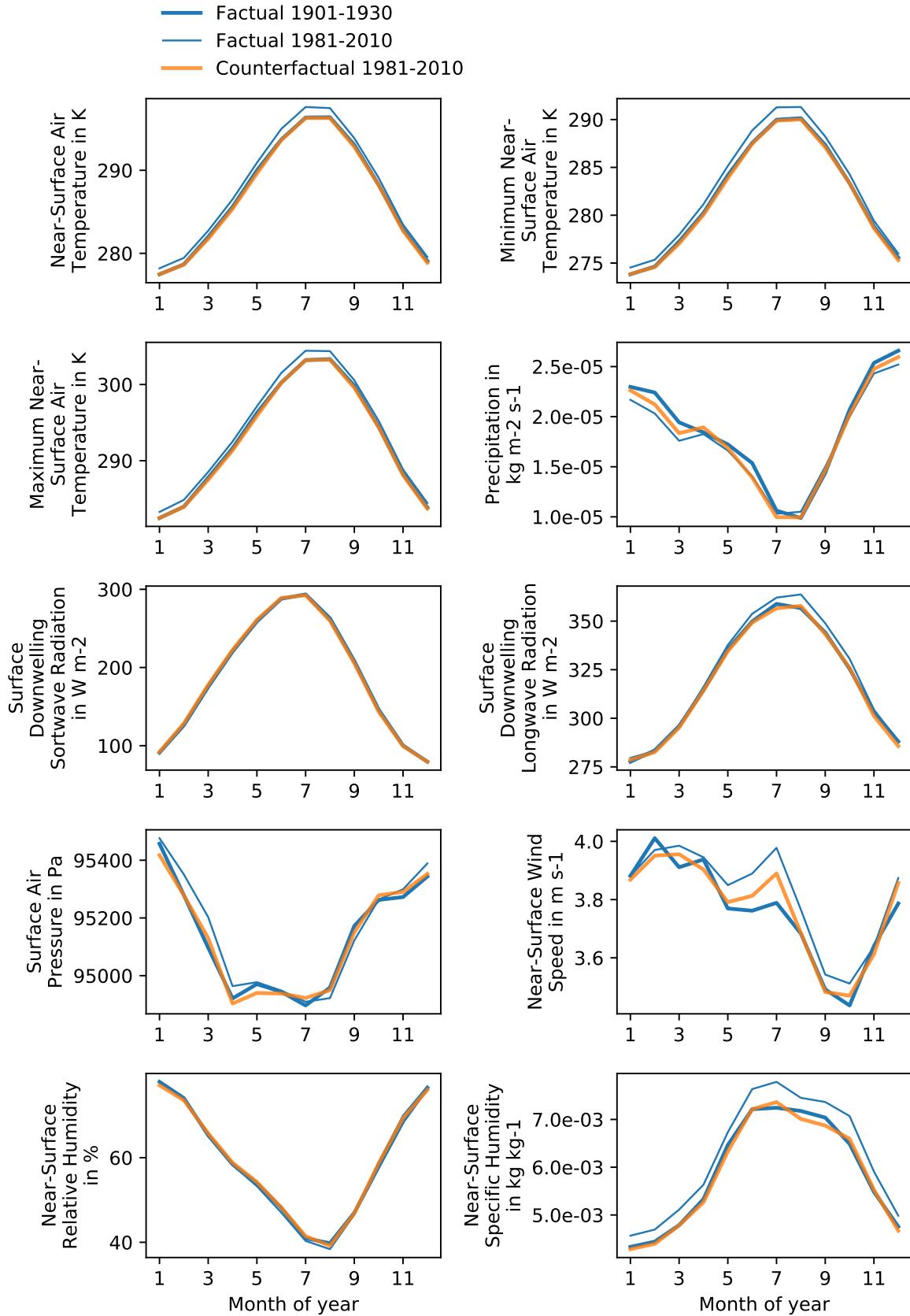


Figure A85: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Mediterranean Basin. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

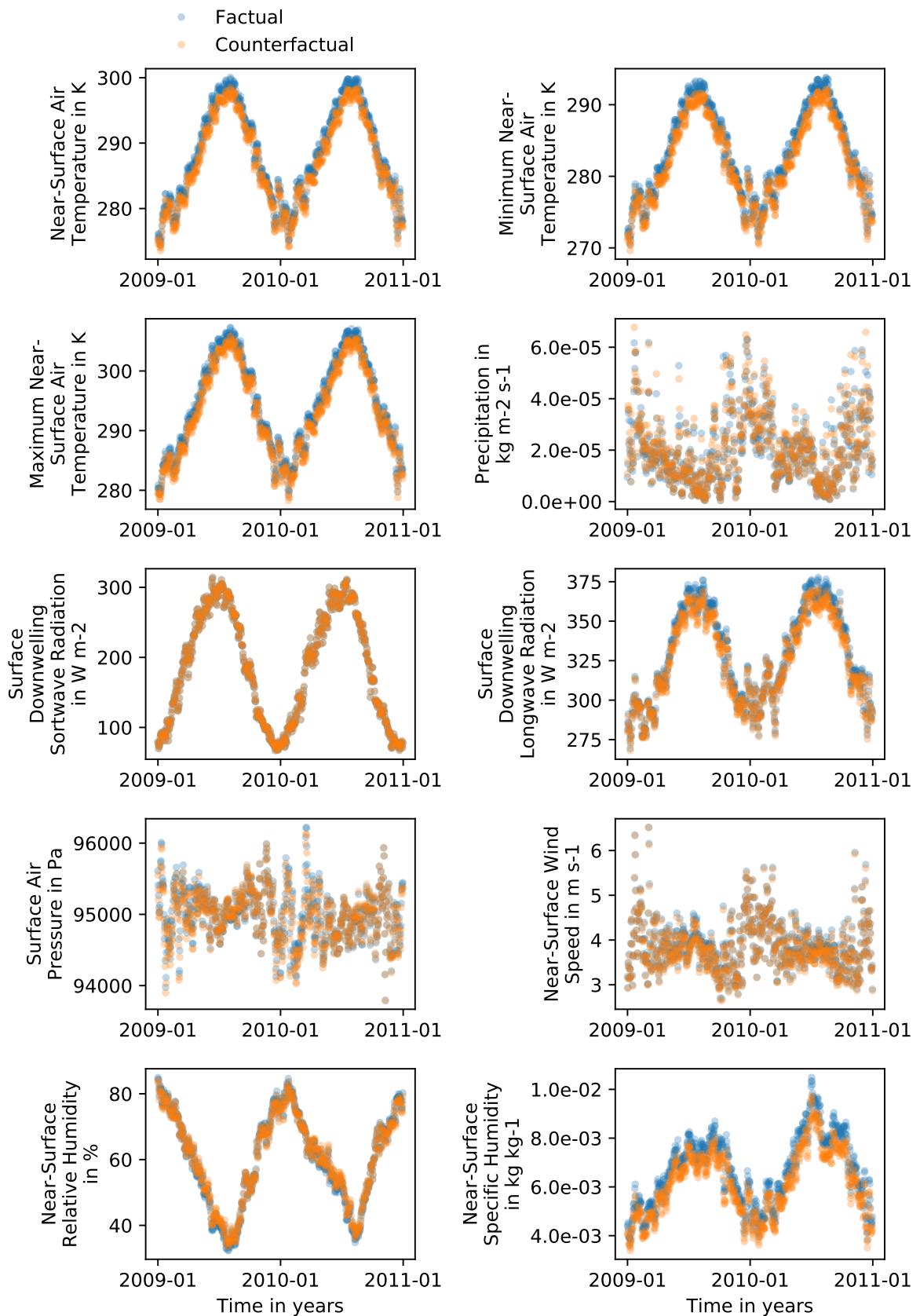


Figure A86: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Mediterranean Basin.

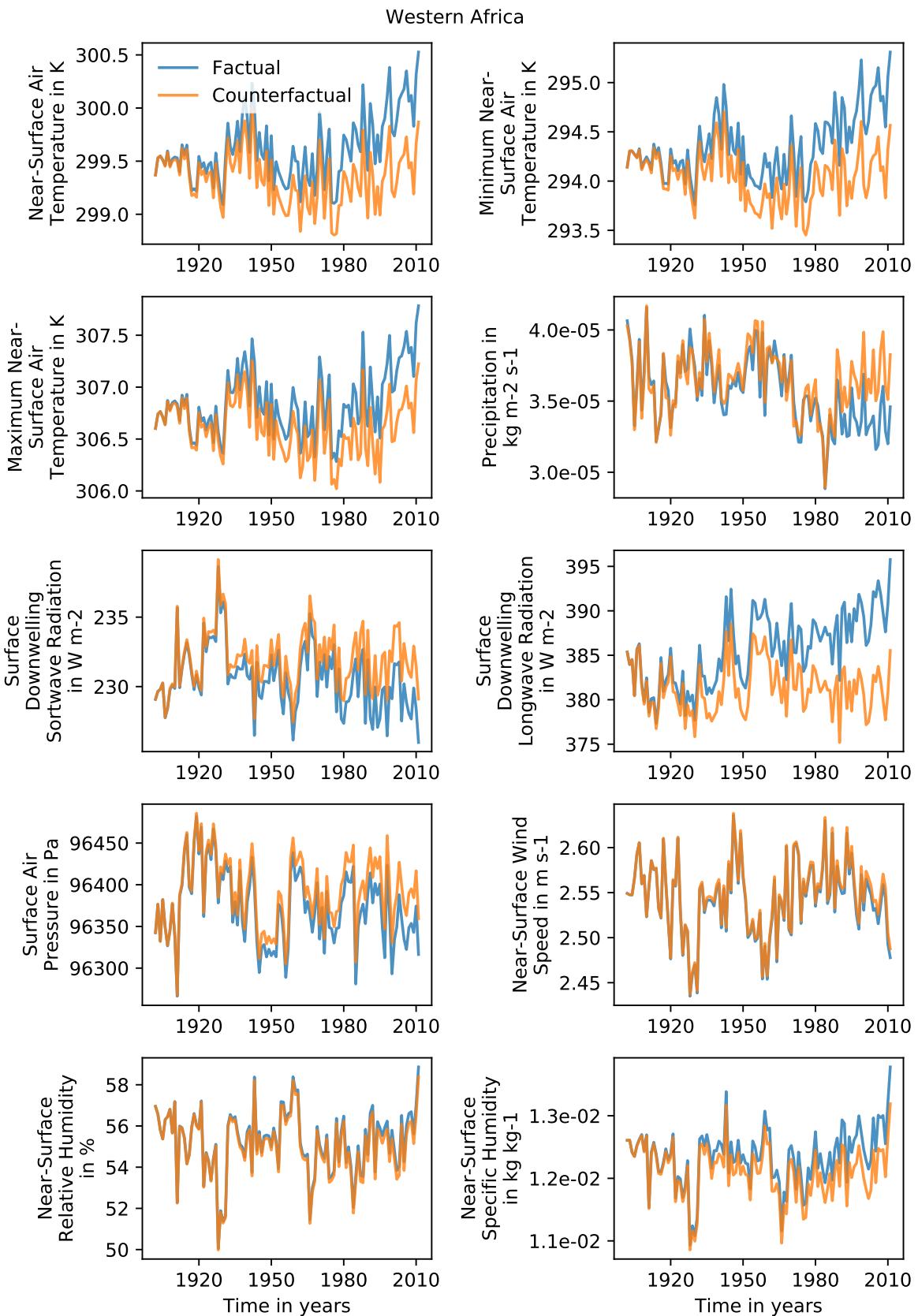


Figure A87: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Western Africa for the GSWP3 dataset.

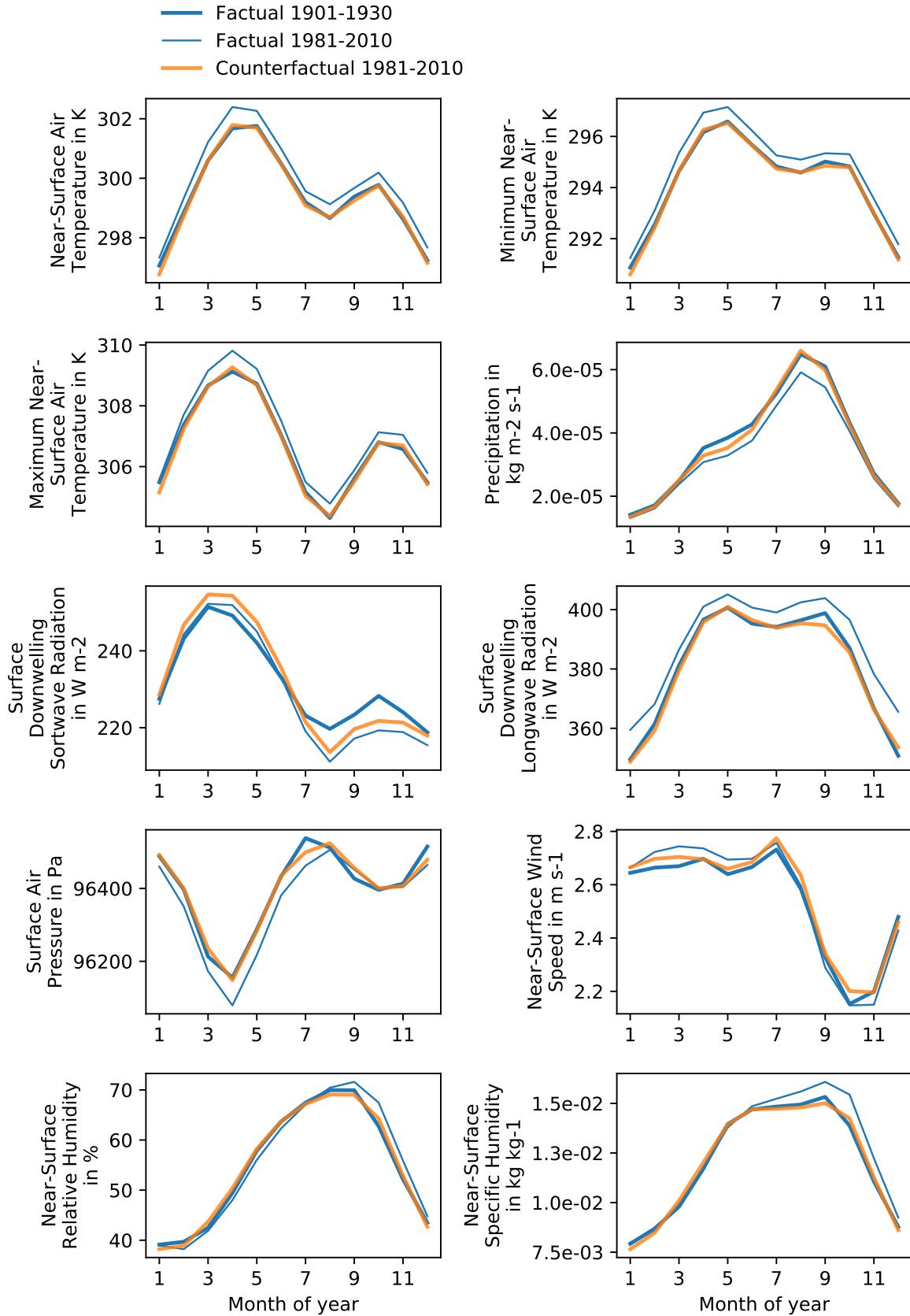


Figure A88: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Western Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

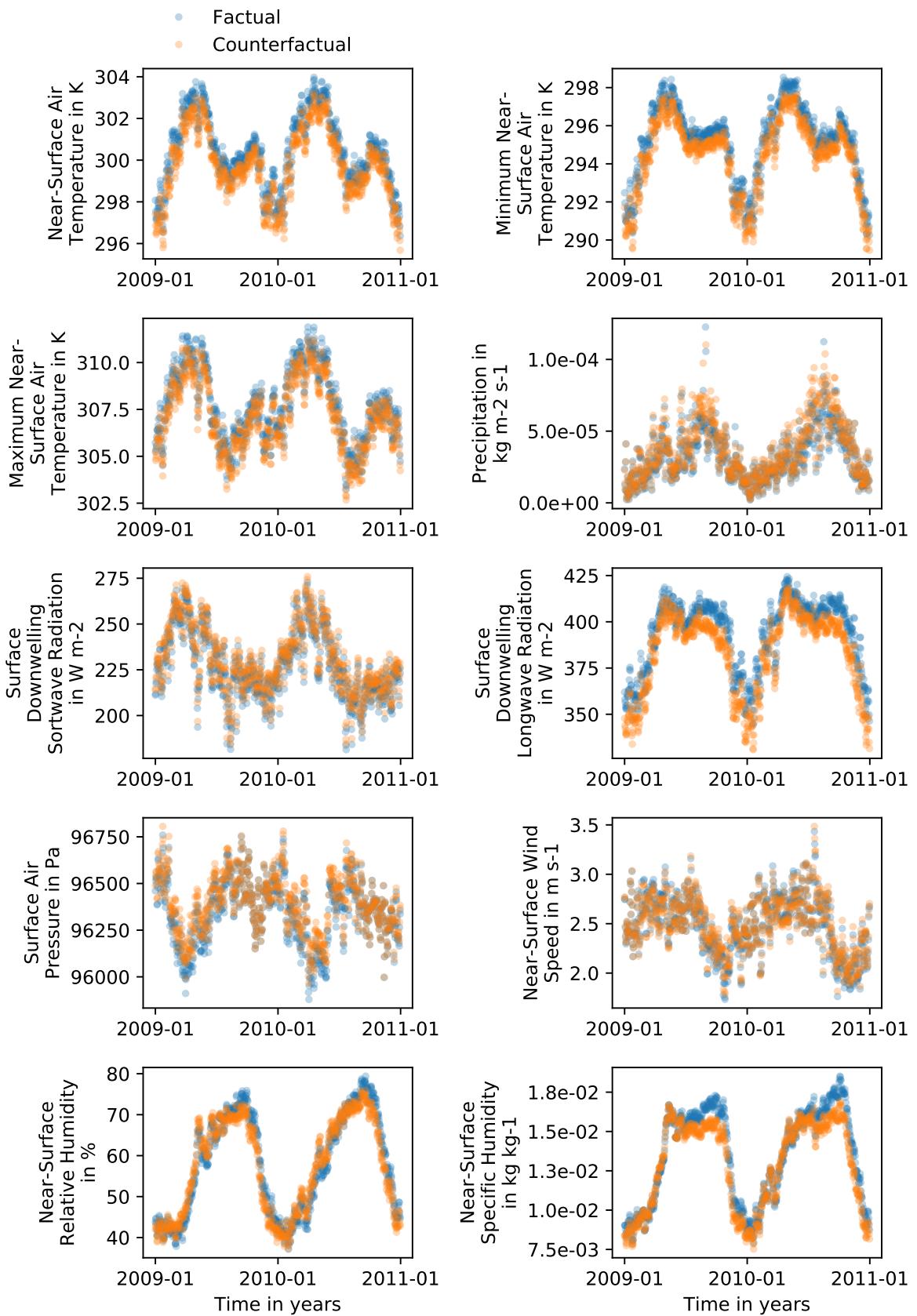


Figure A89: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Western Africa.

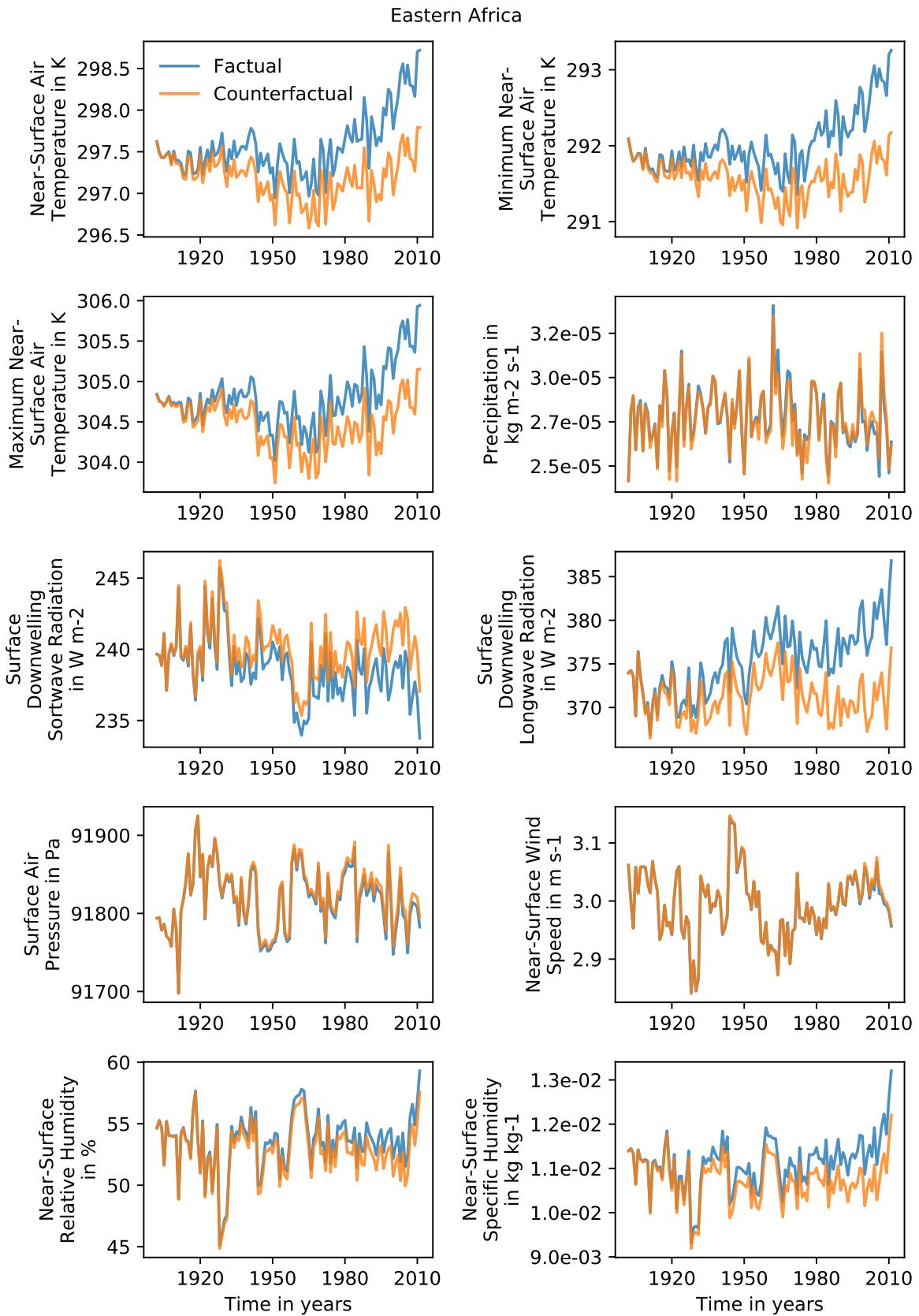


Figure A90: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Eastern Africa for the GSWP3 dataset.

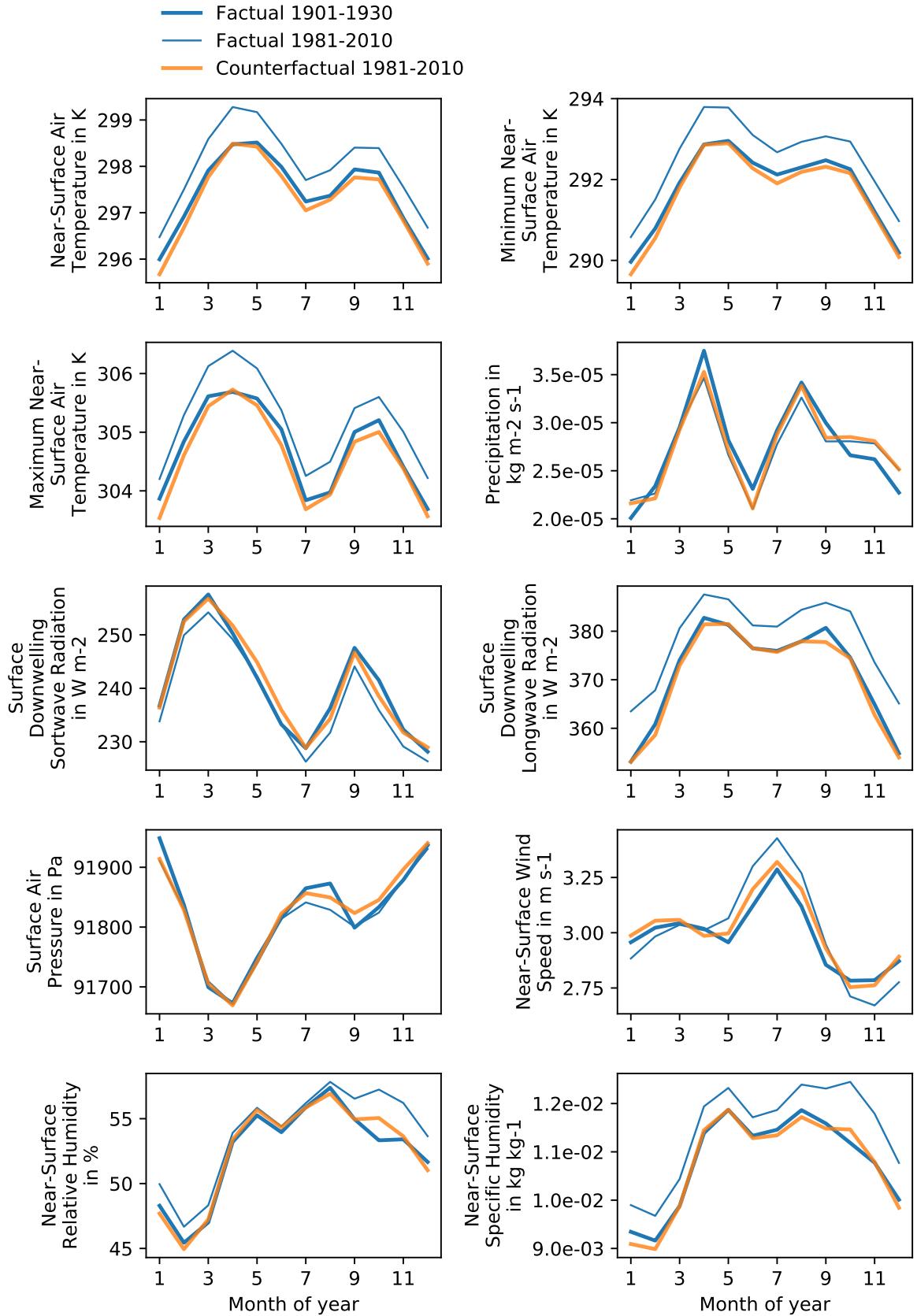


Figure A91: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Eastern Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

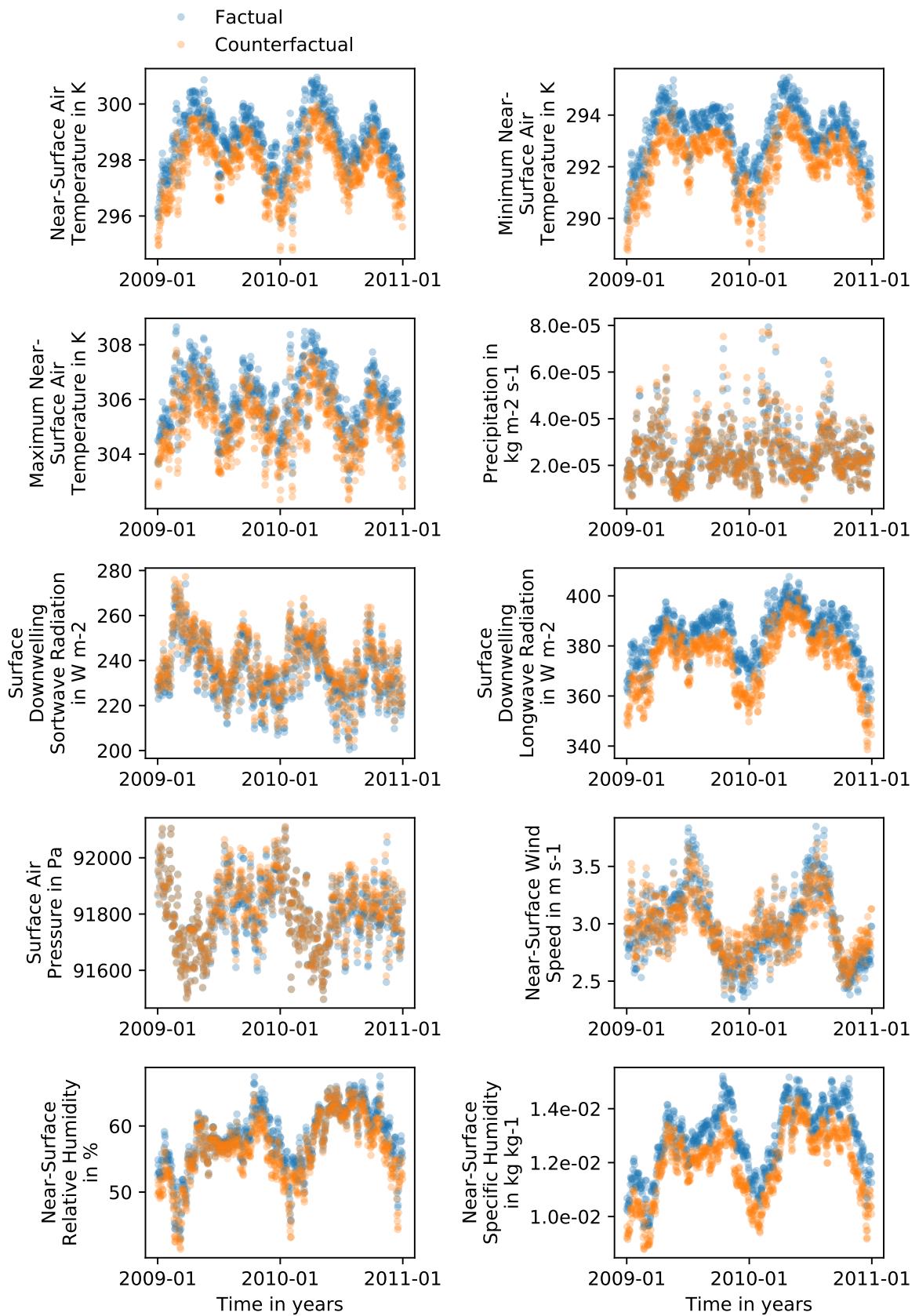


Figure A92: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Eastern Africa.

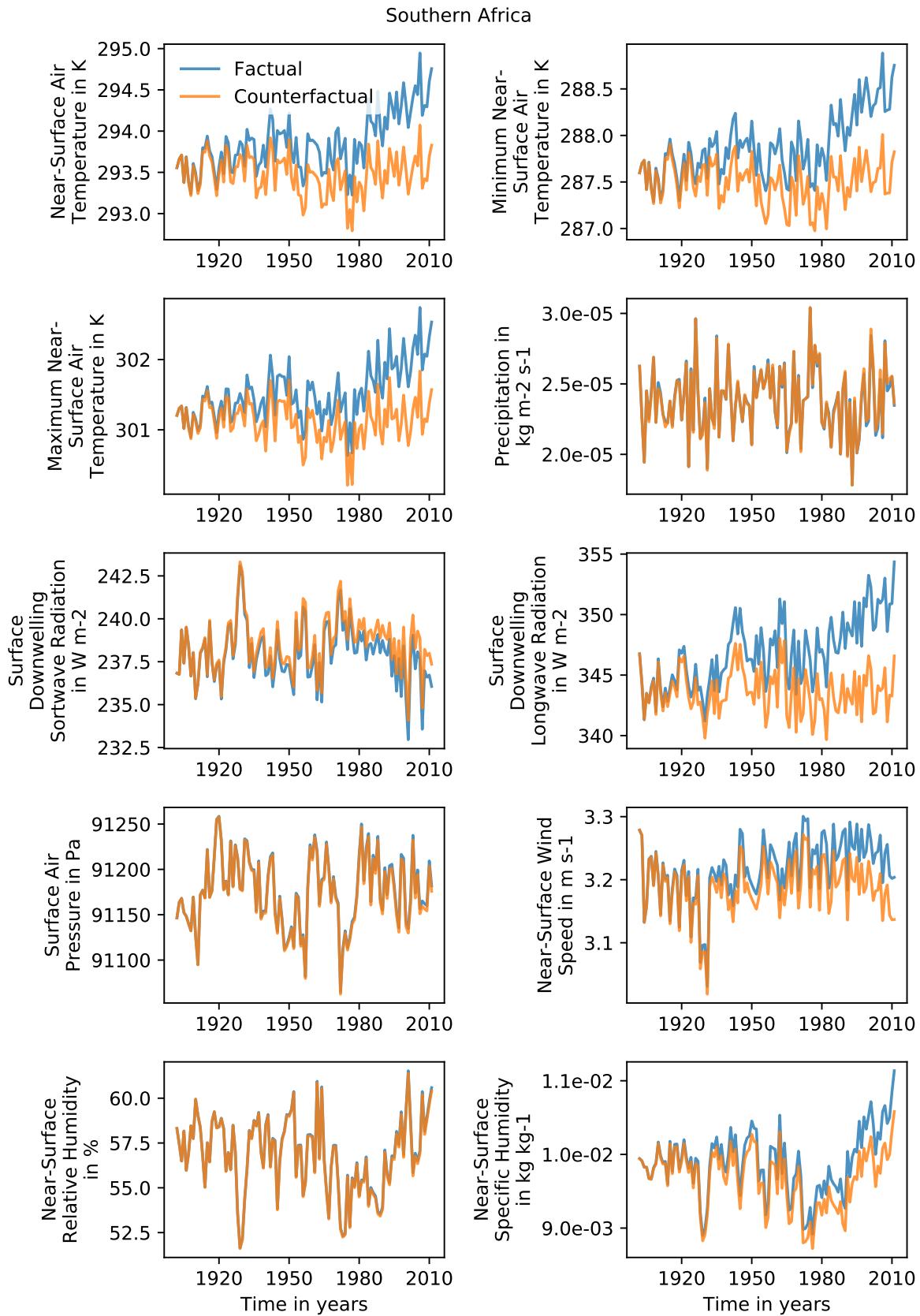


Figure A93: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Southern Africa for the GSWP3 dataset.

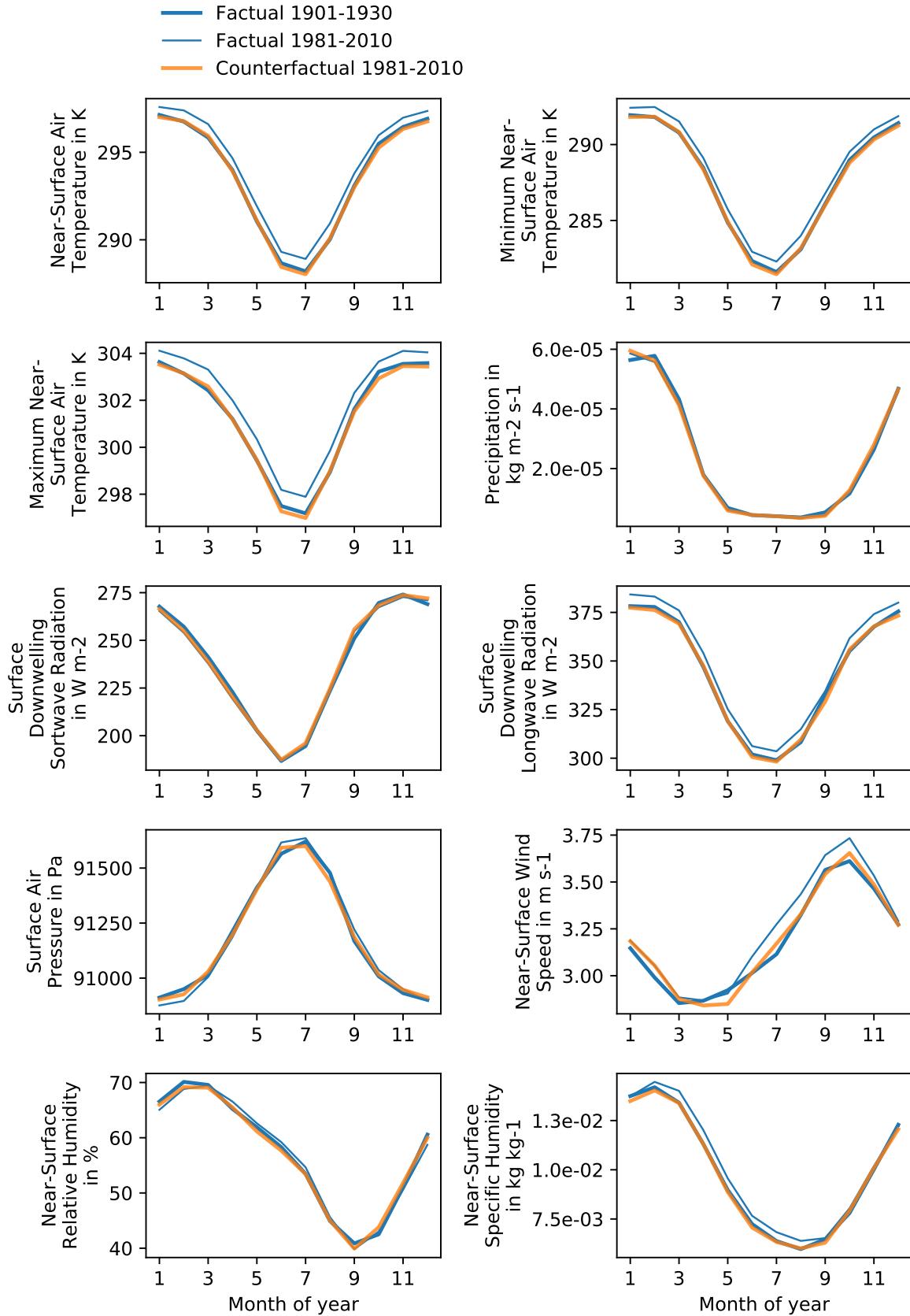


Figure A94: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Southern Africa. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

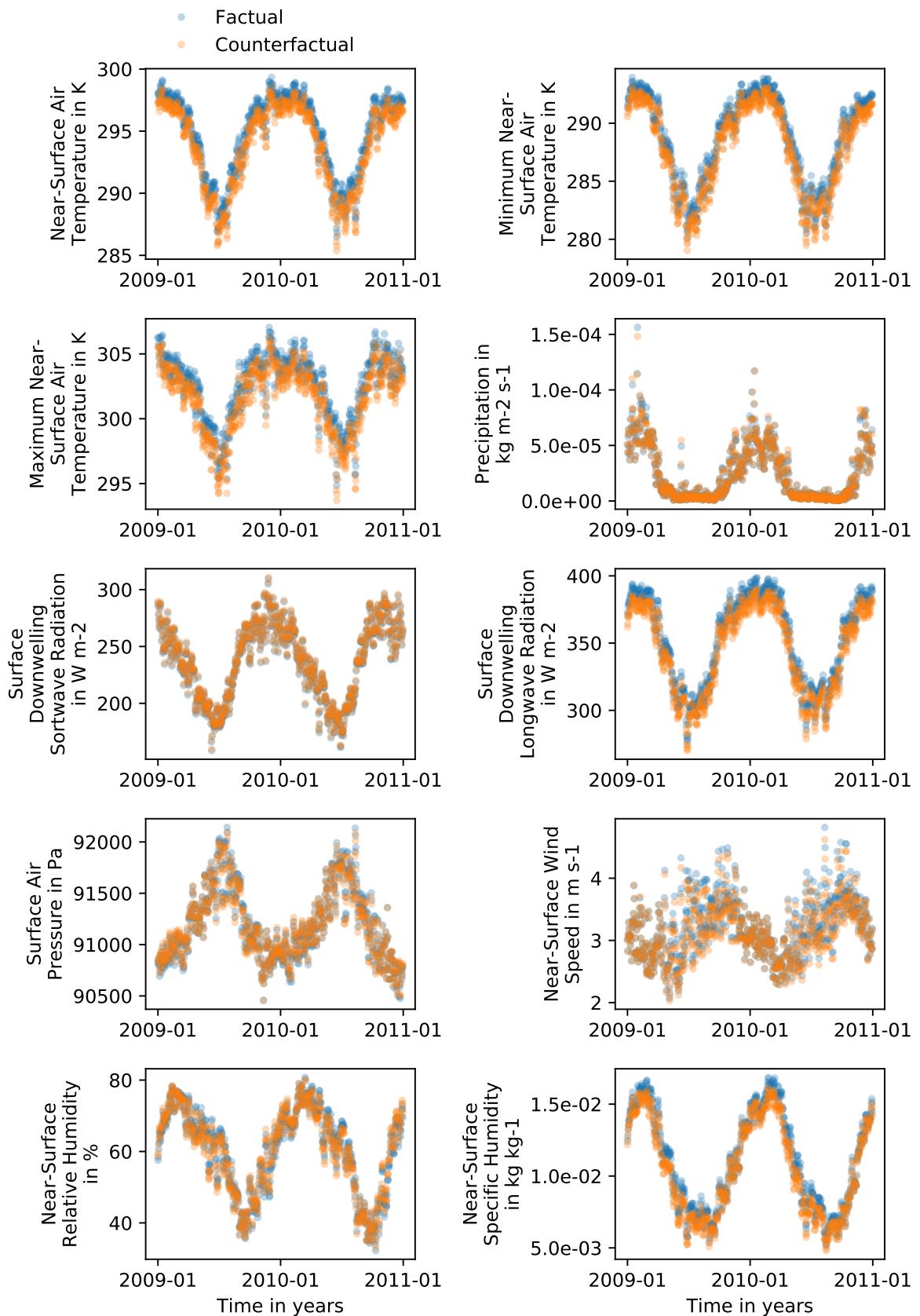


Figure A95: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Southern Africa.

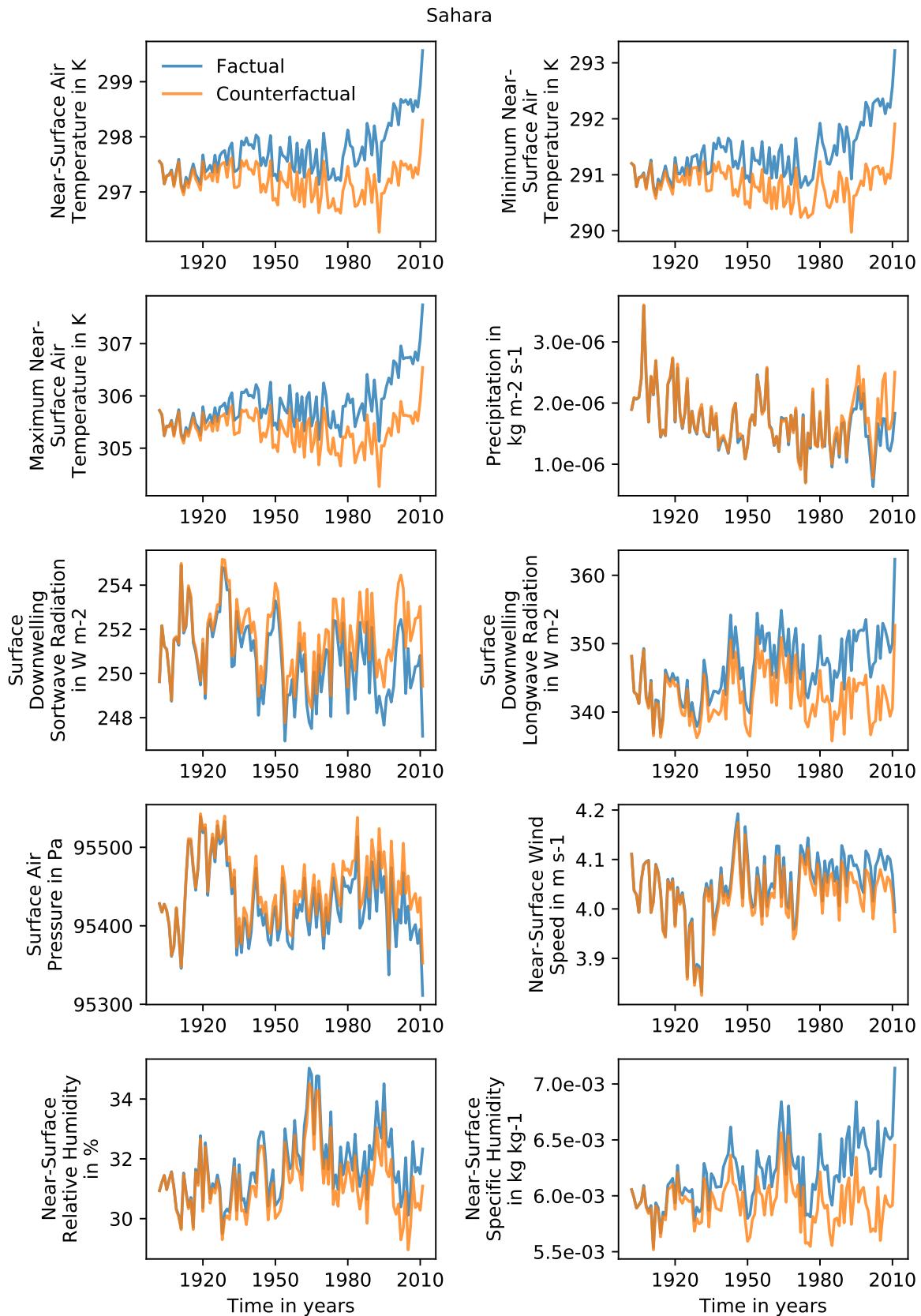


Figure A96: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Sahara for the GSWP3 dataset.

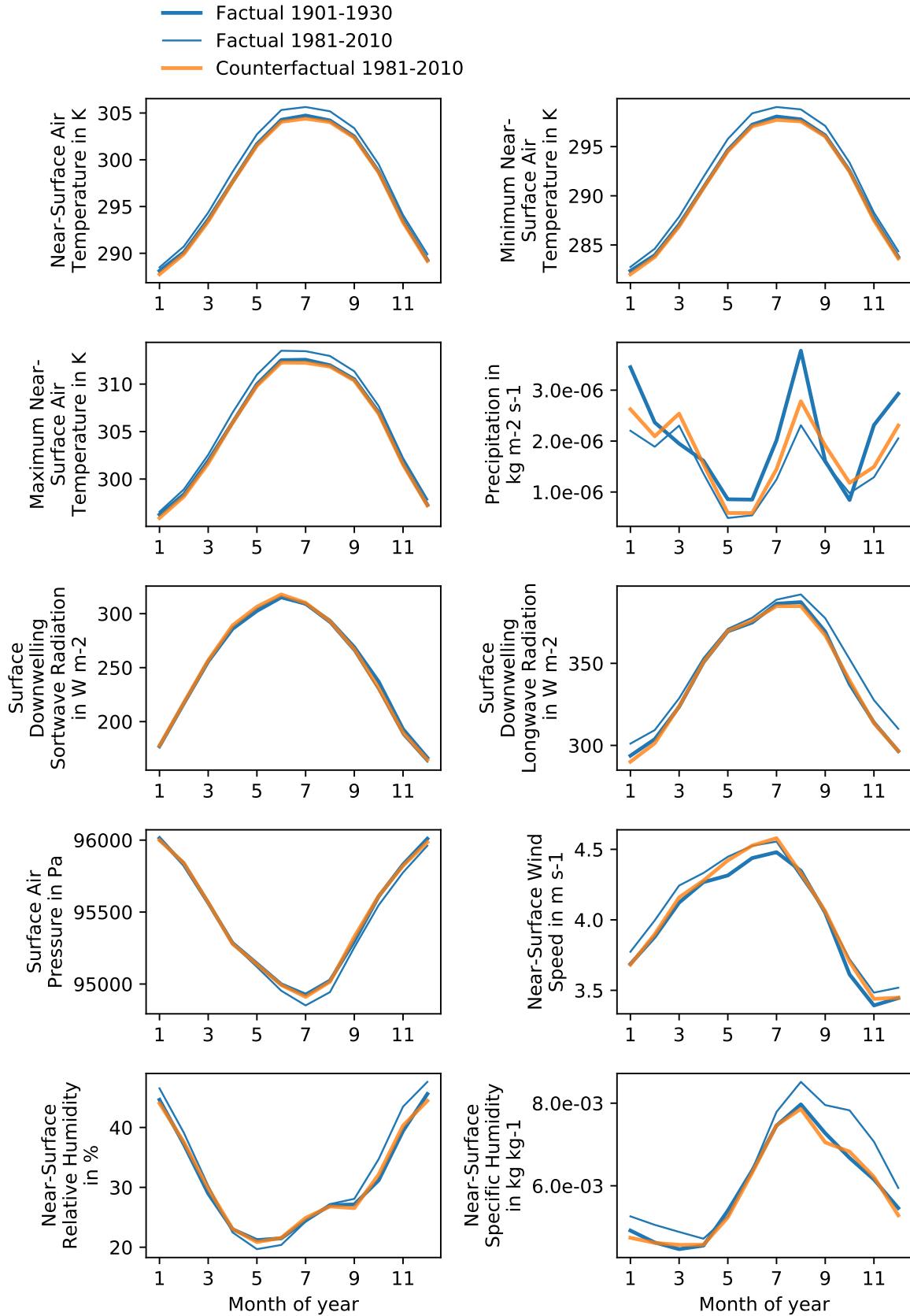


Figure A97: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Sahara. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

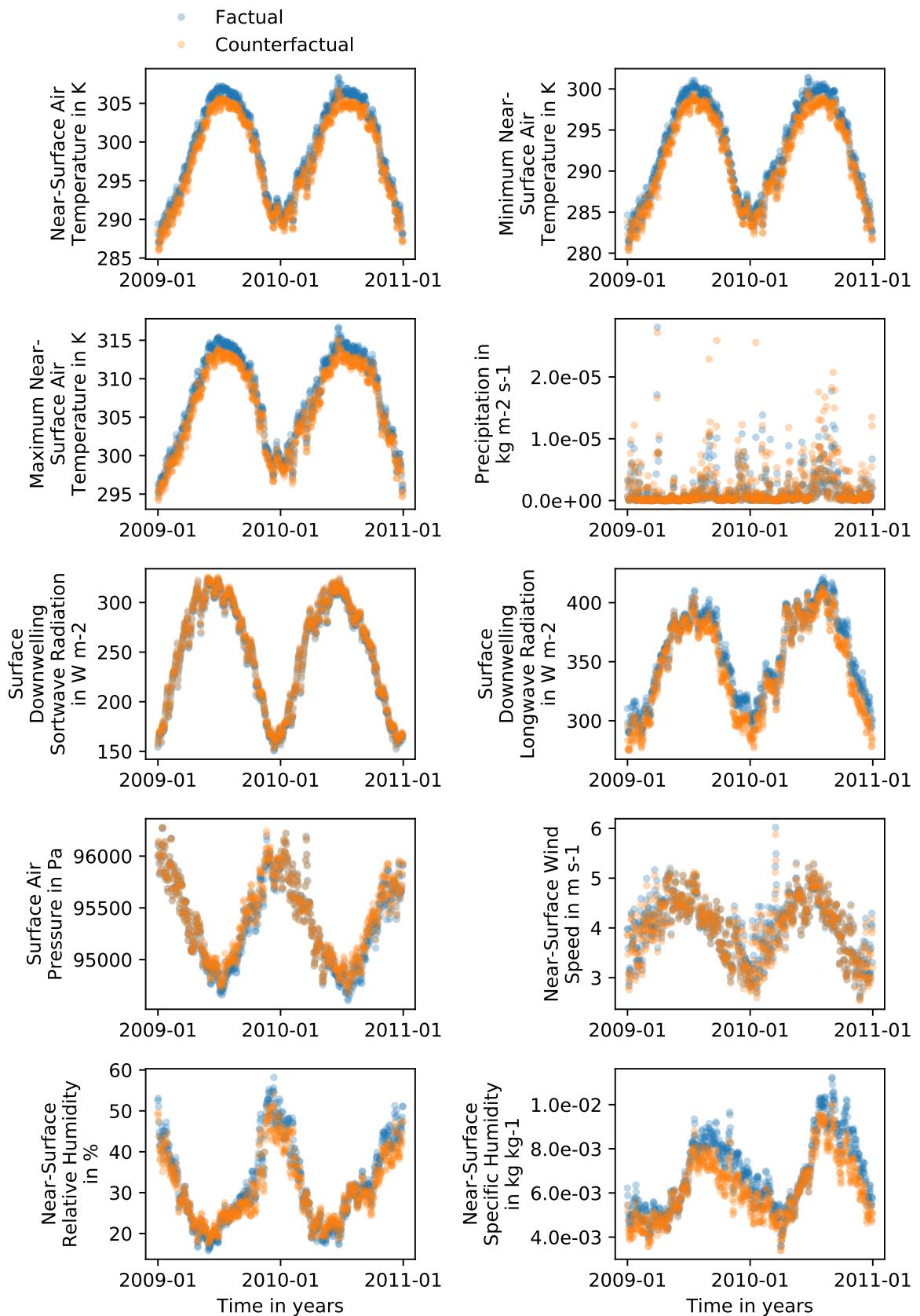


Figure A98: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Sahara.

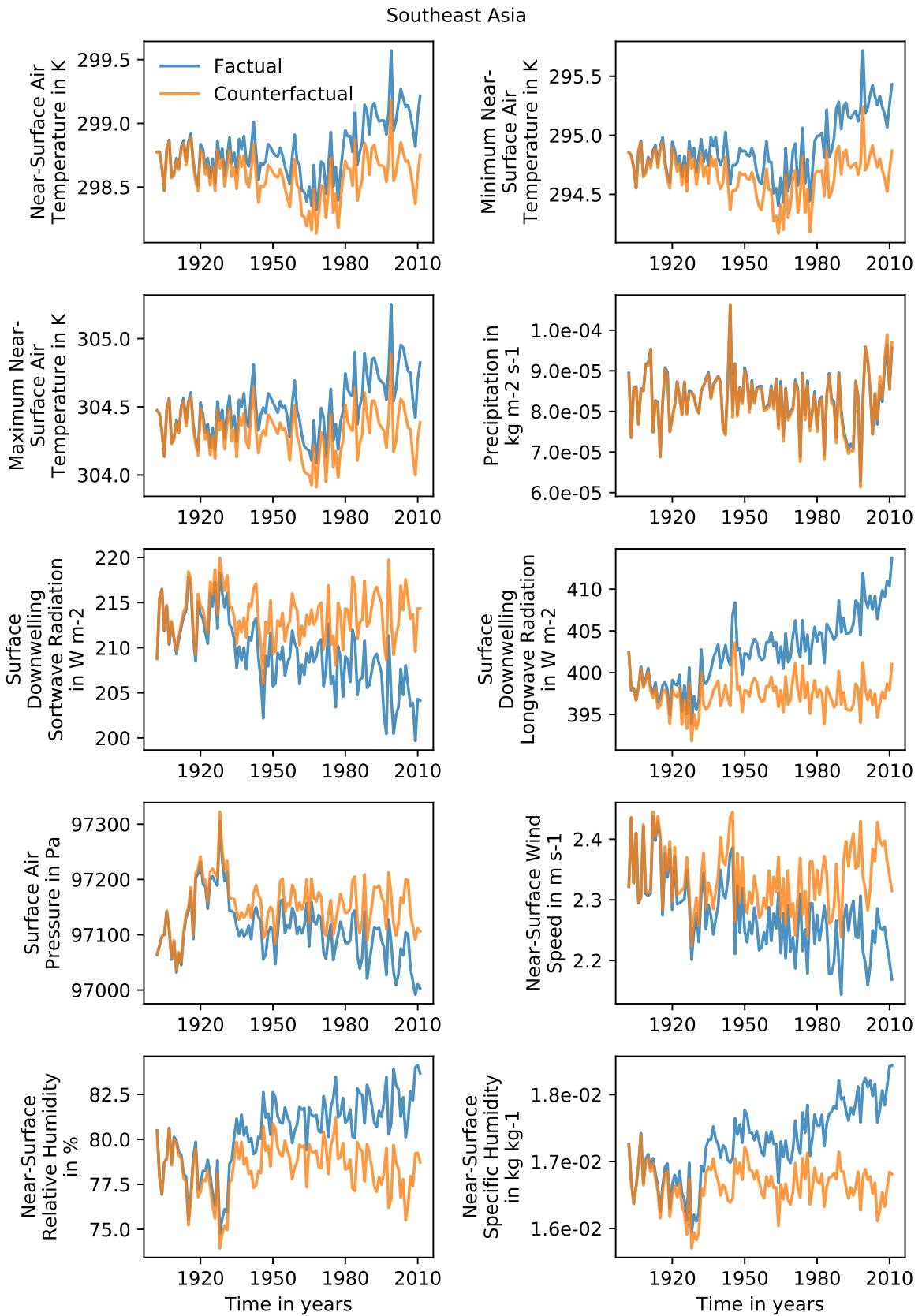


Figure A99: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Southeast Asia for the GSWP3 dataset.

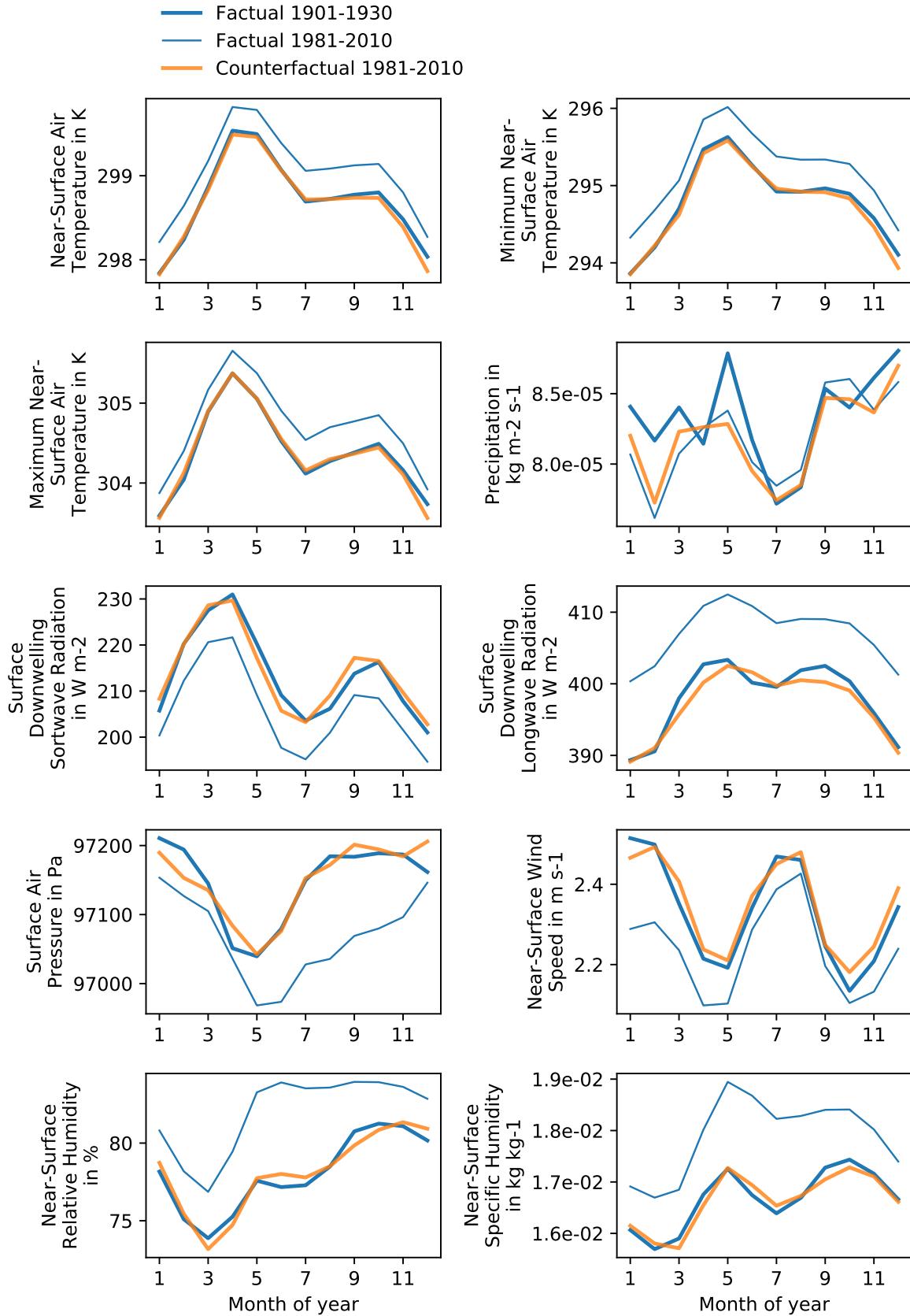


Figure A100: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Southeast Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

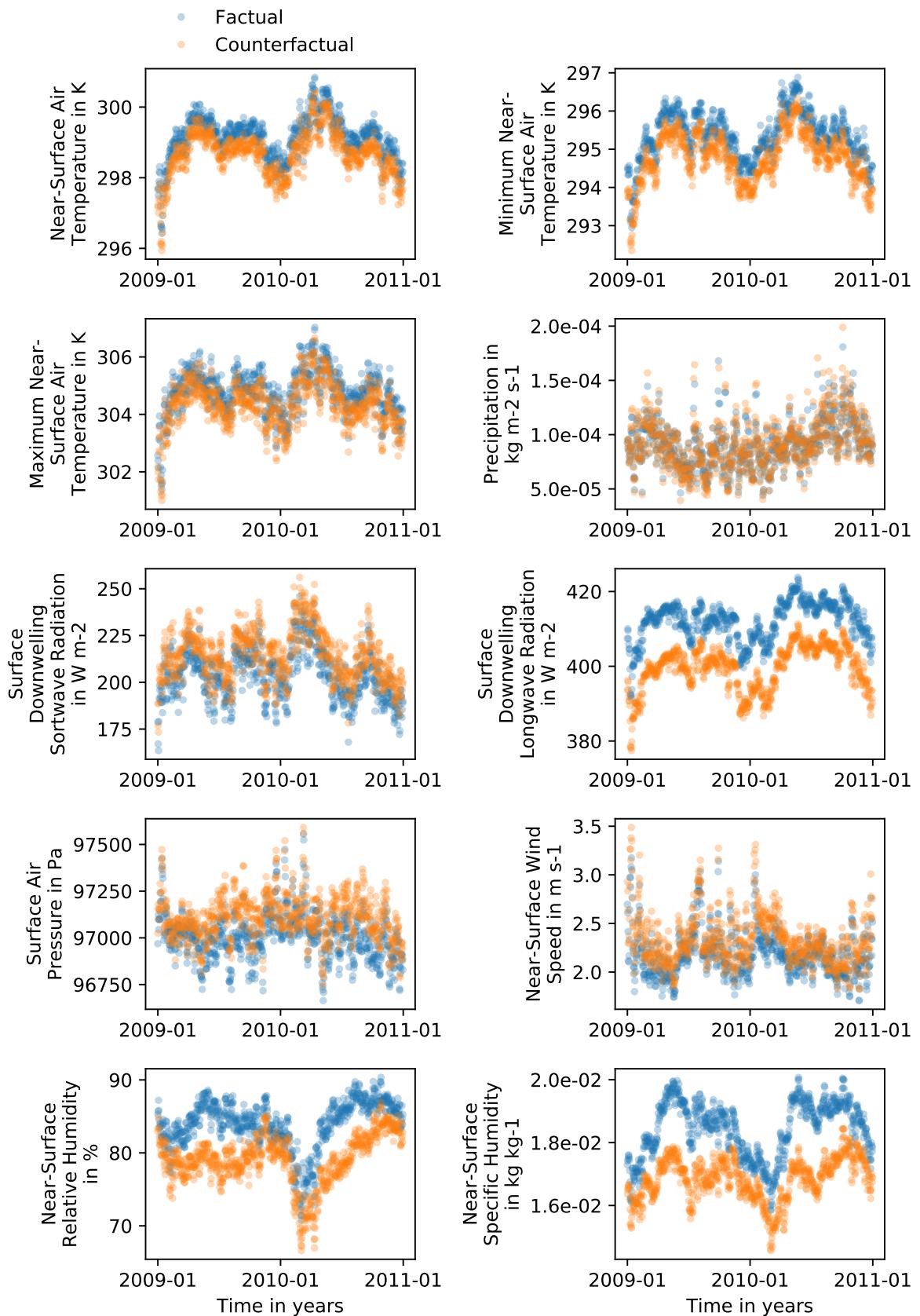


Figure A101: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Southeast Asia.

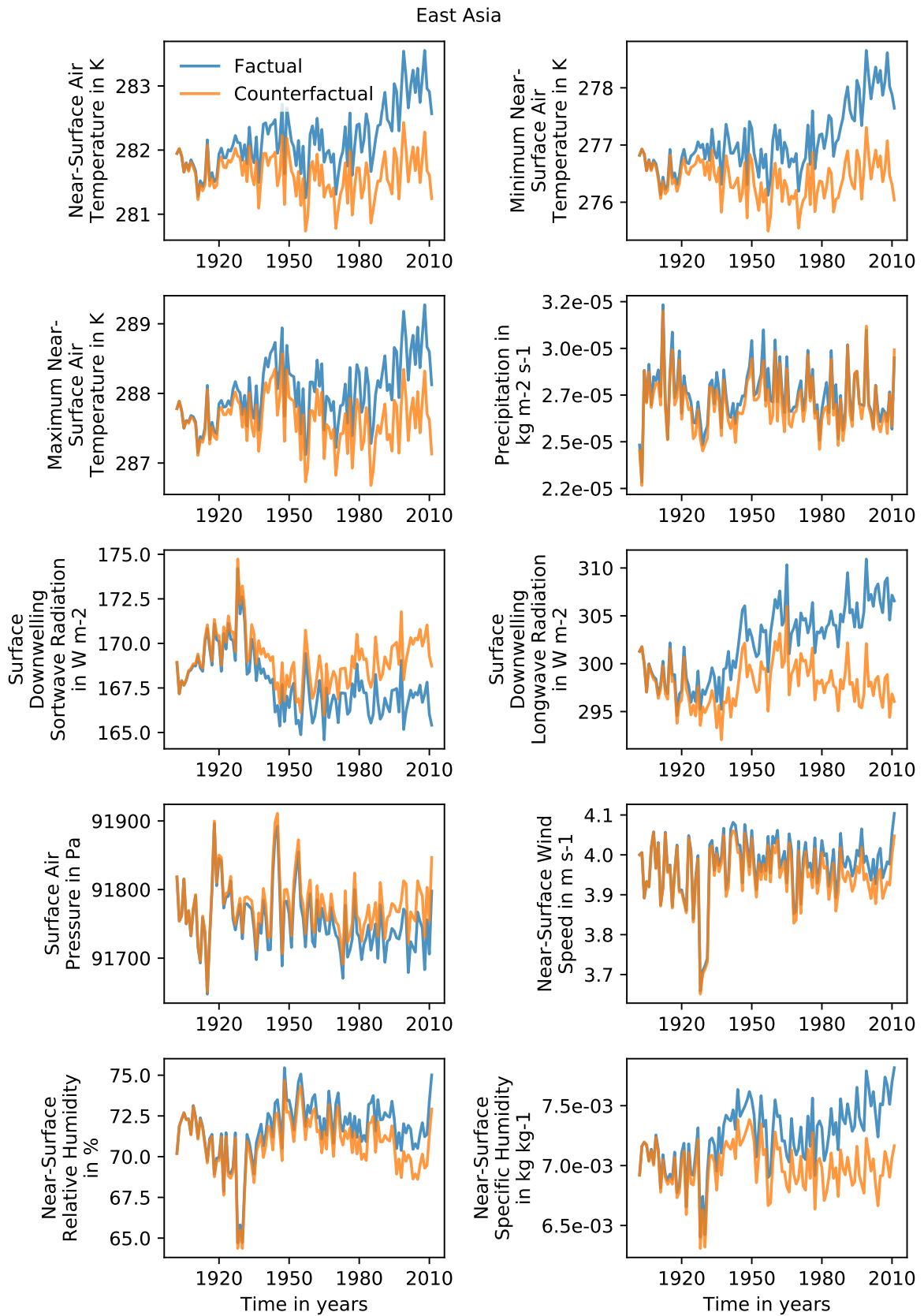


Figure A102: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for East Asia for the GSWP3 dataset.

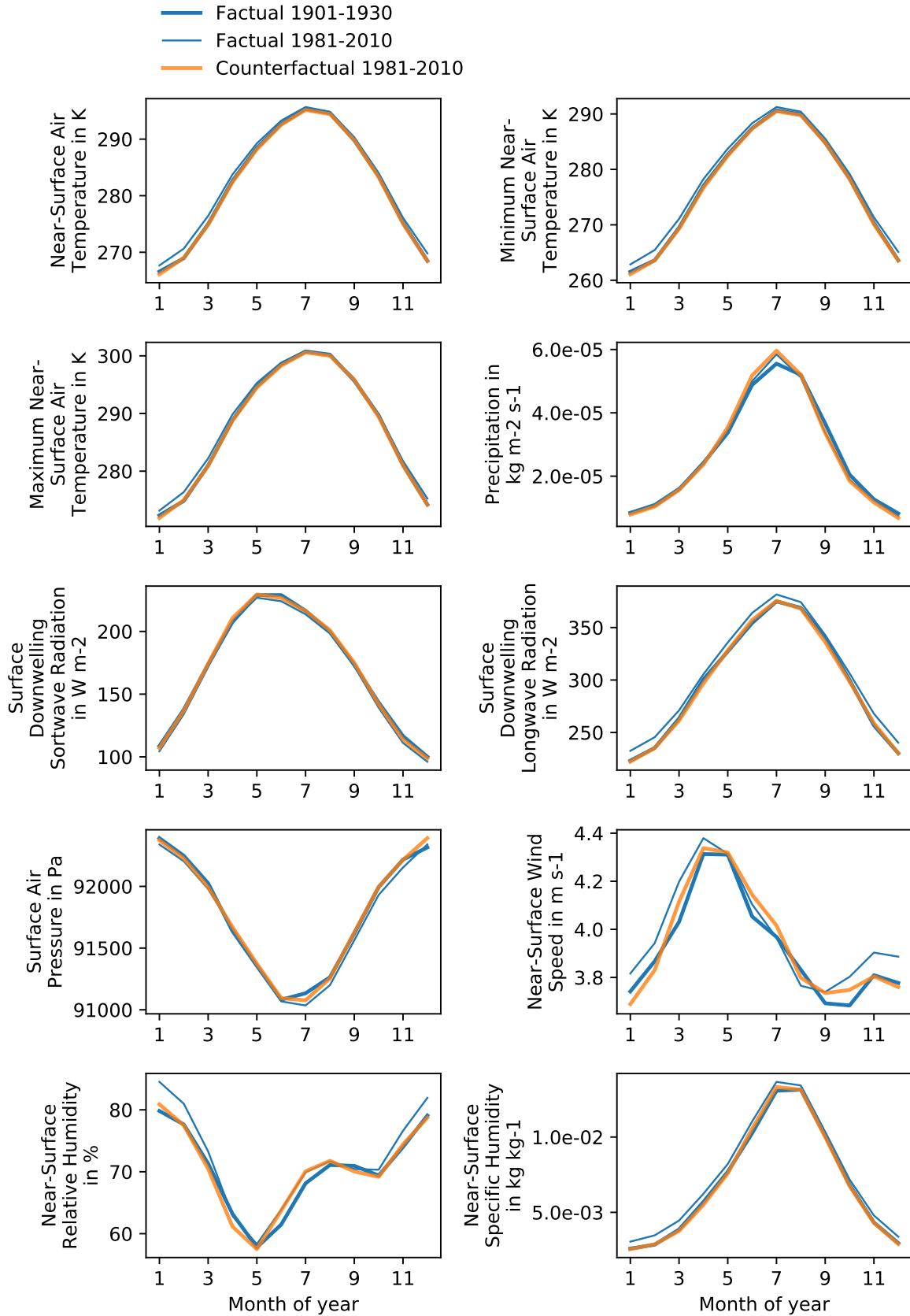


Figure A103: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for East Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

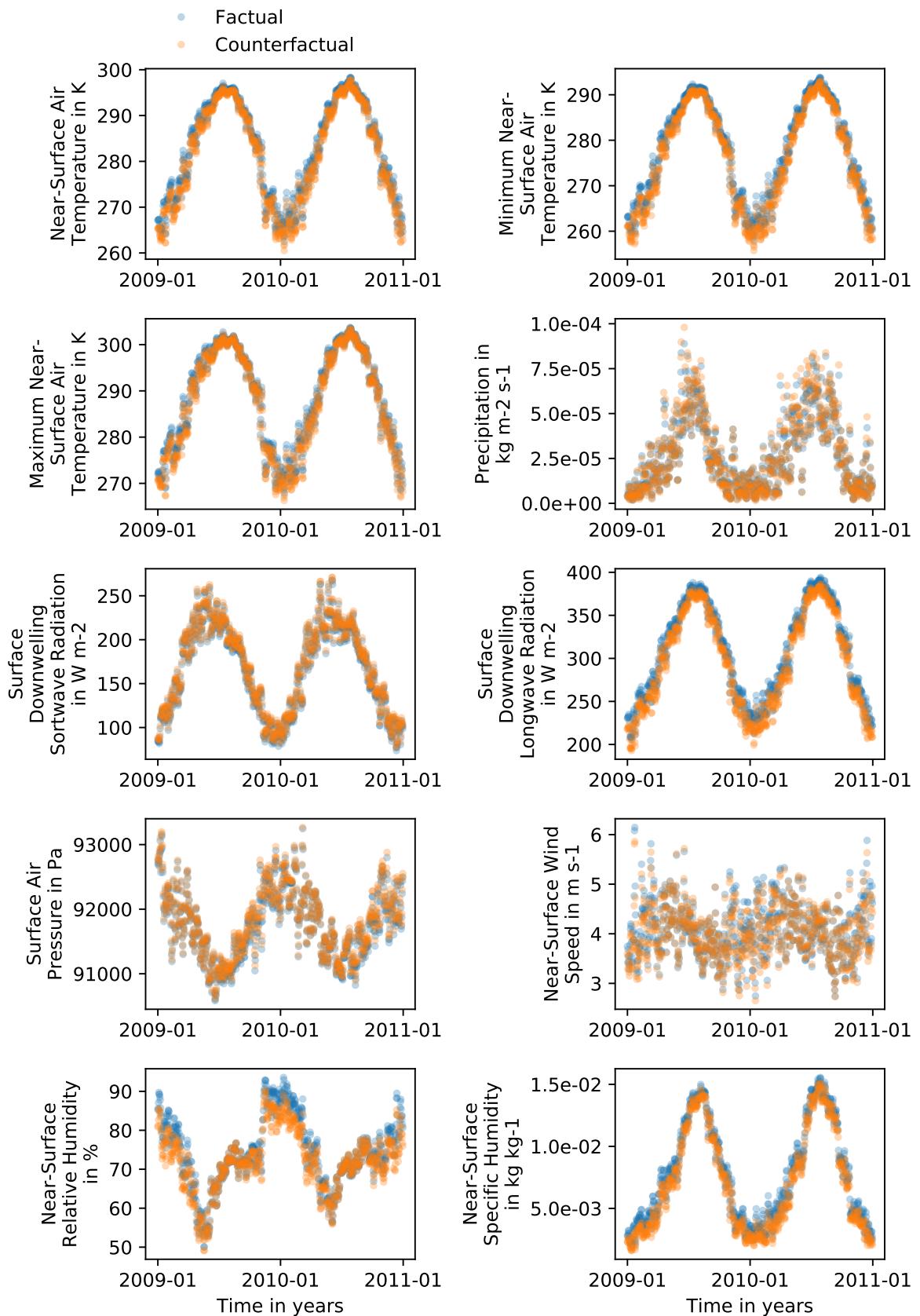


Figure A104: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for East Asia.

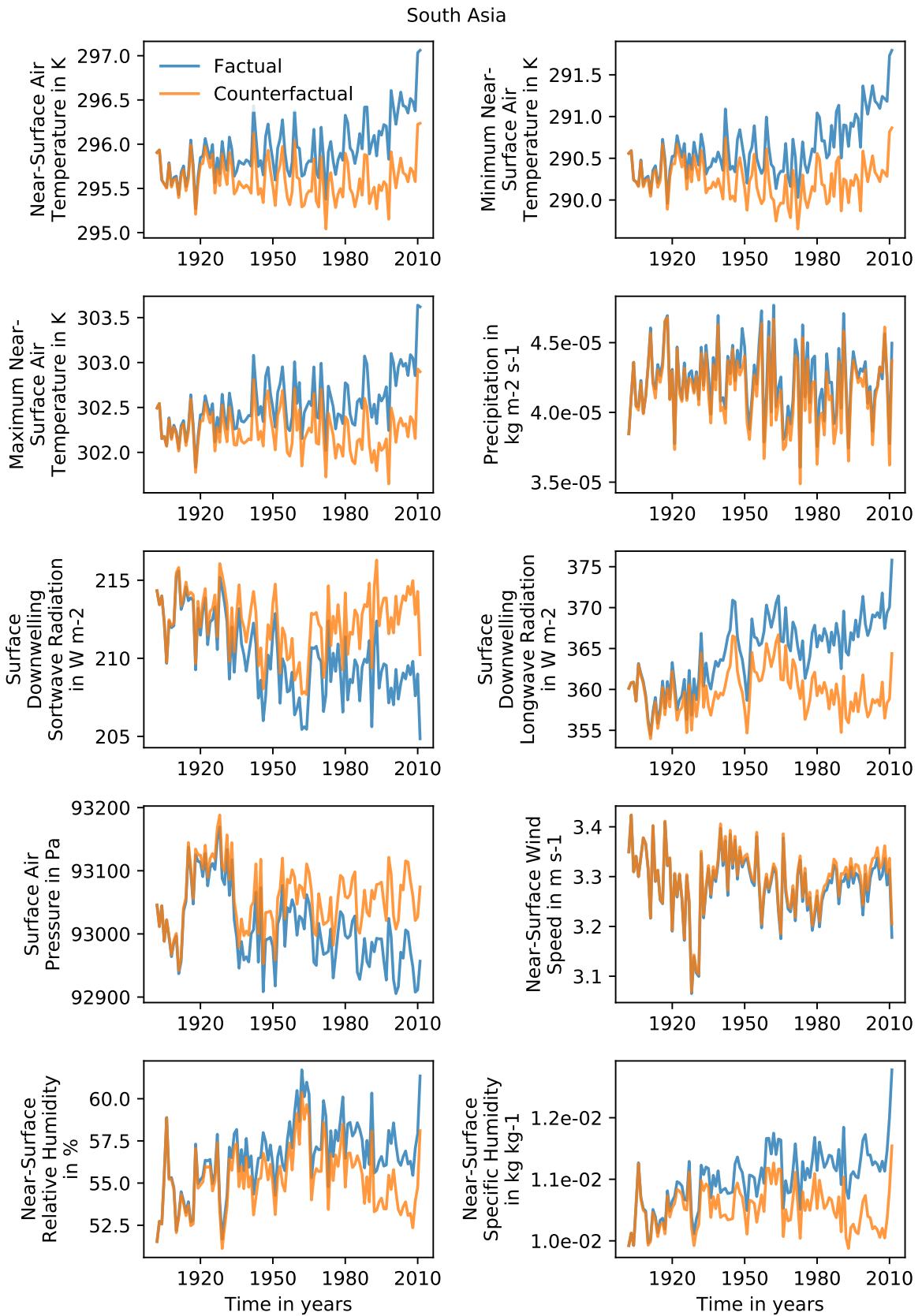


Figure A105: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for South Asia for the GSWP3 dataset.

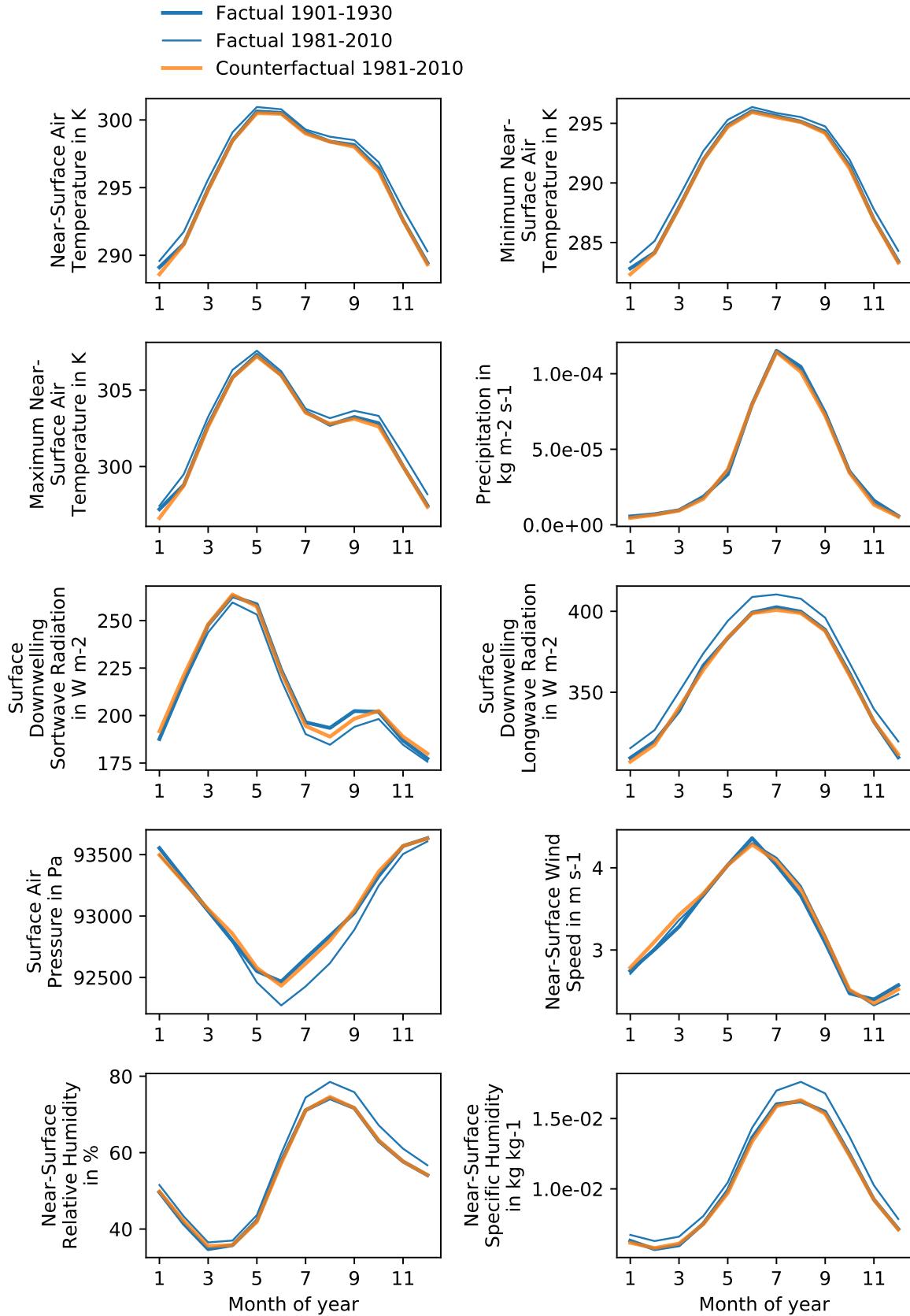


Figure A106: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for South Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

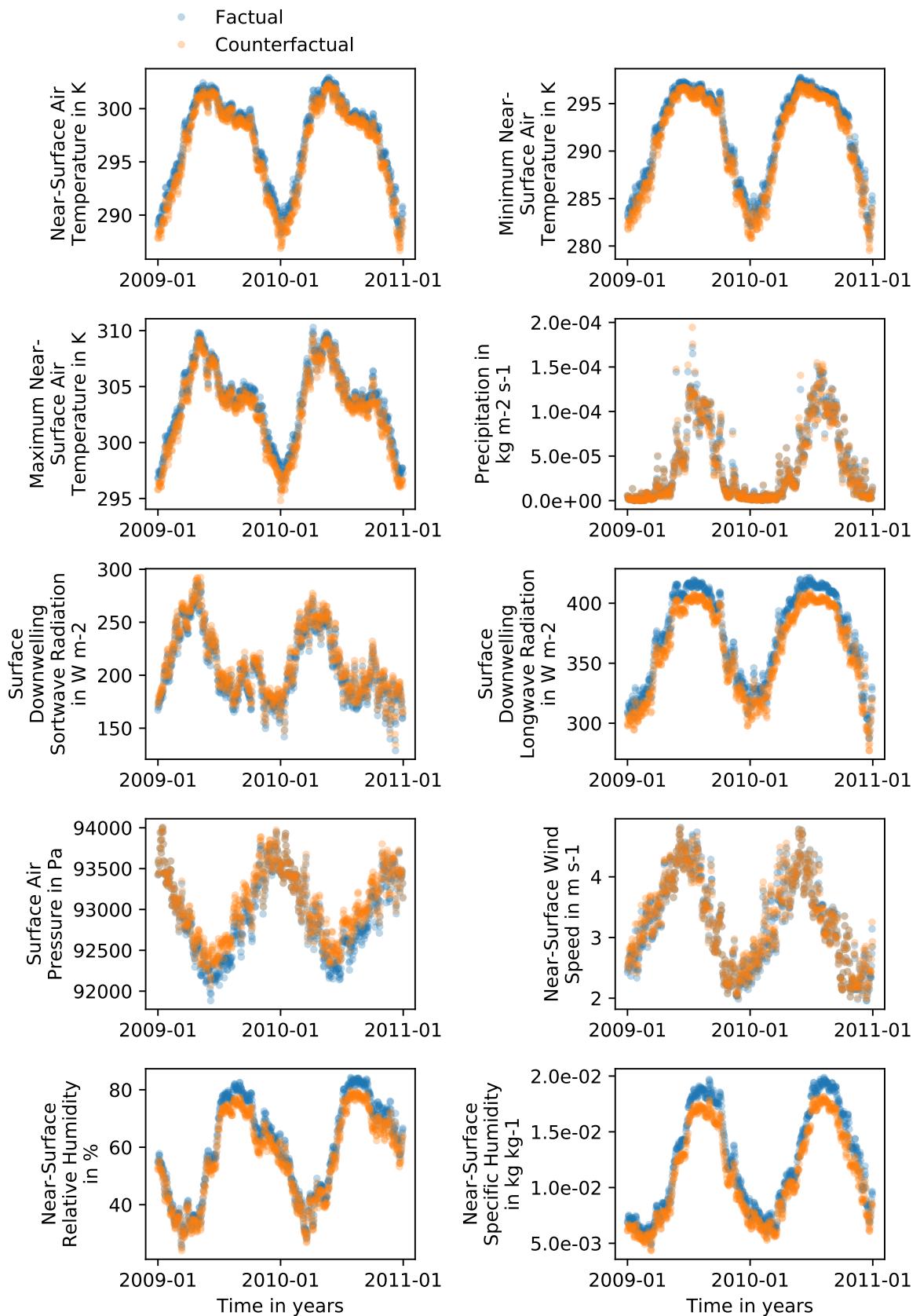


Figure A107: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for South Asia.

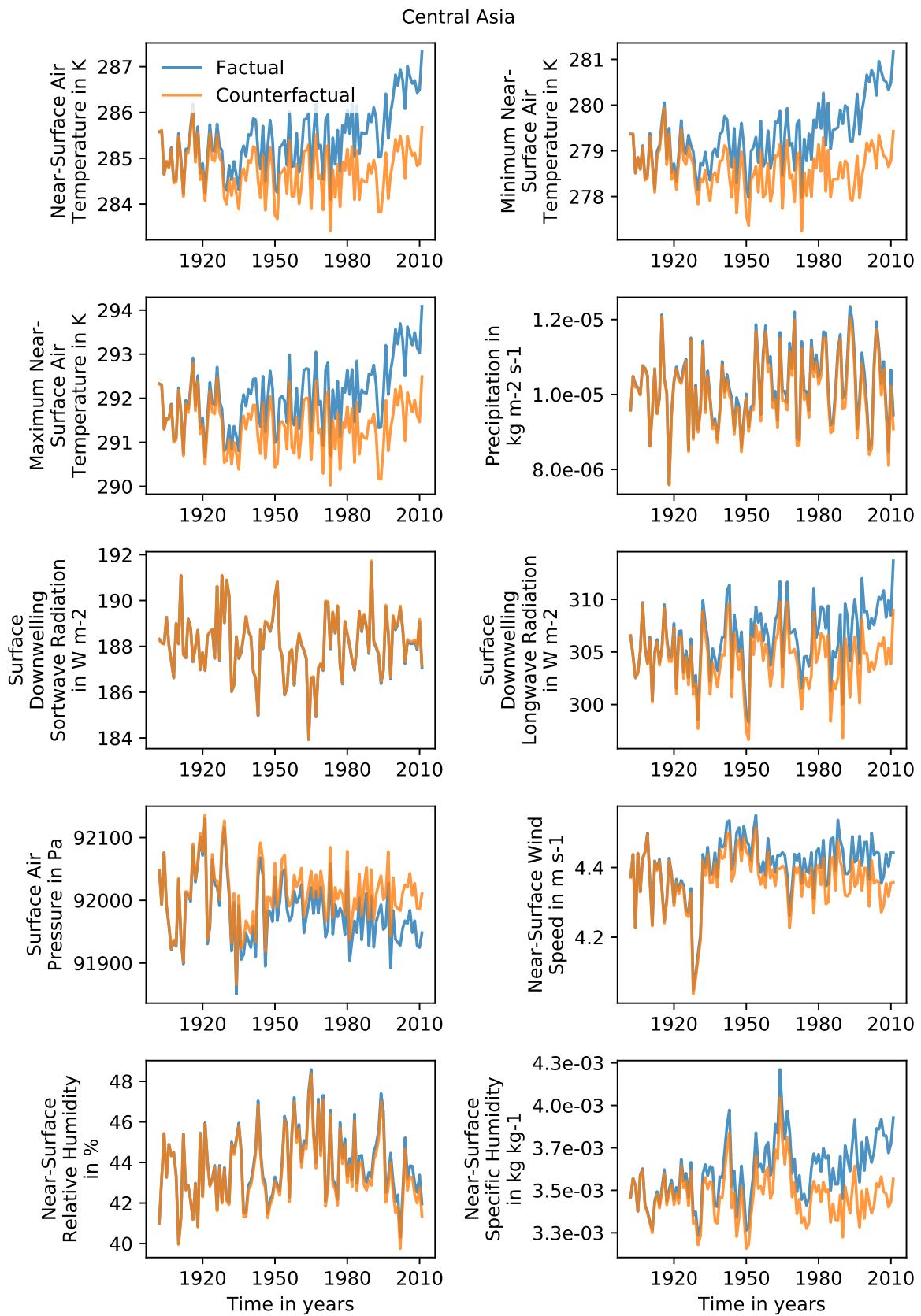


Figure A108: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Central Asia for the GSWP3 dataset.

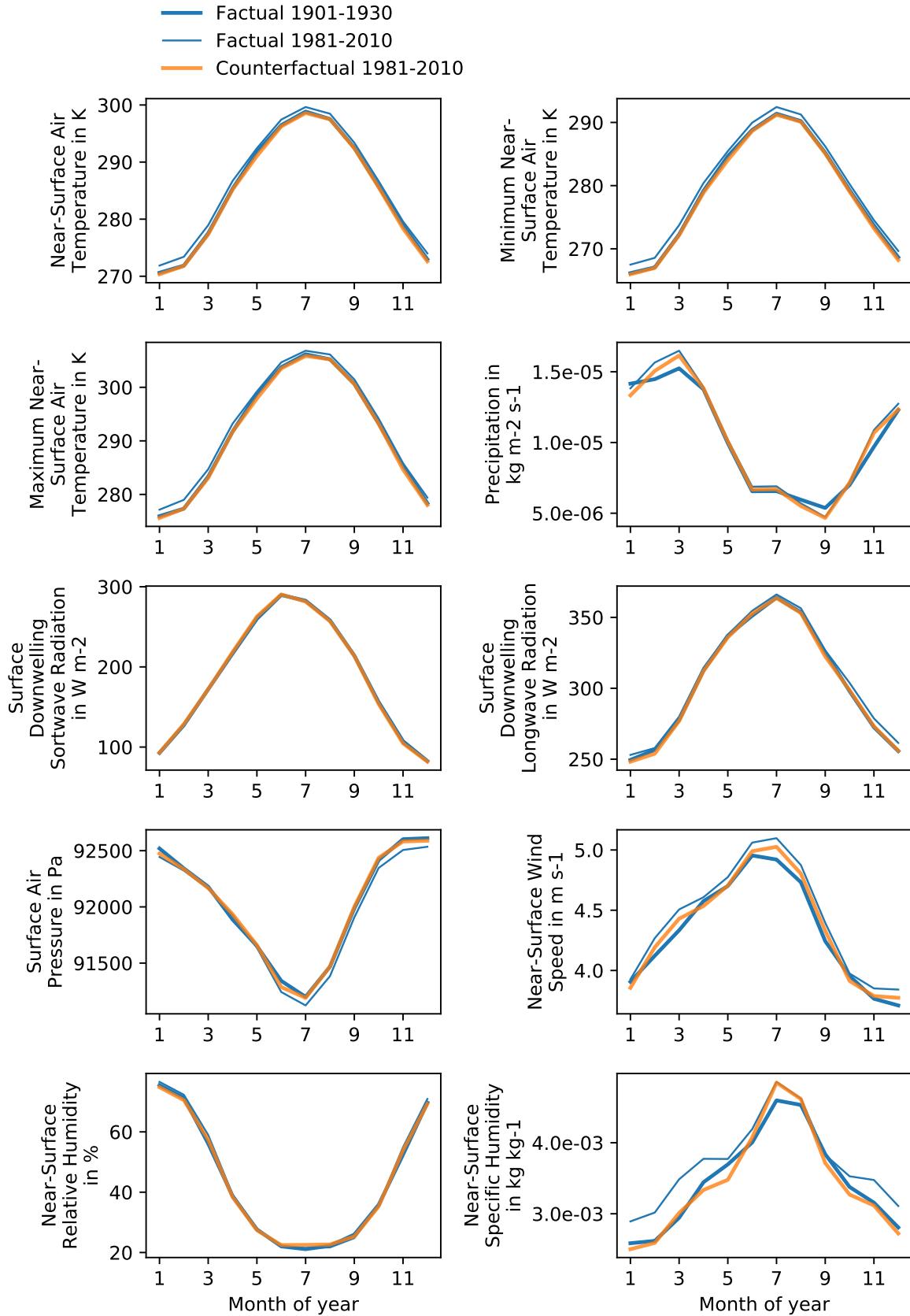


Figure A109: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Central Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

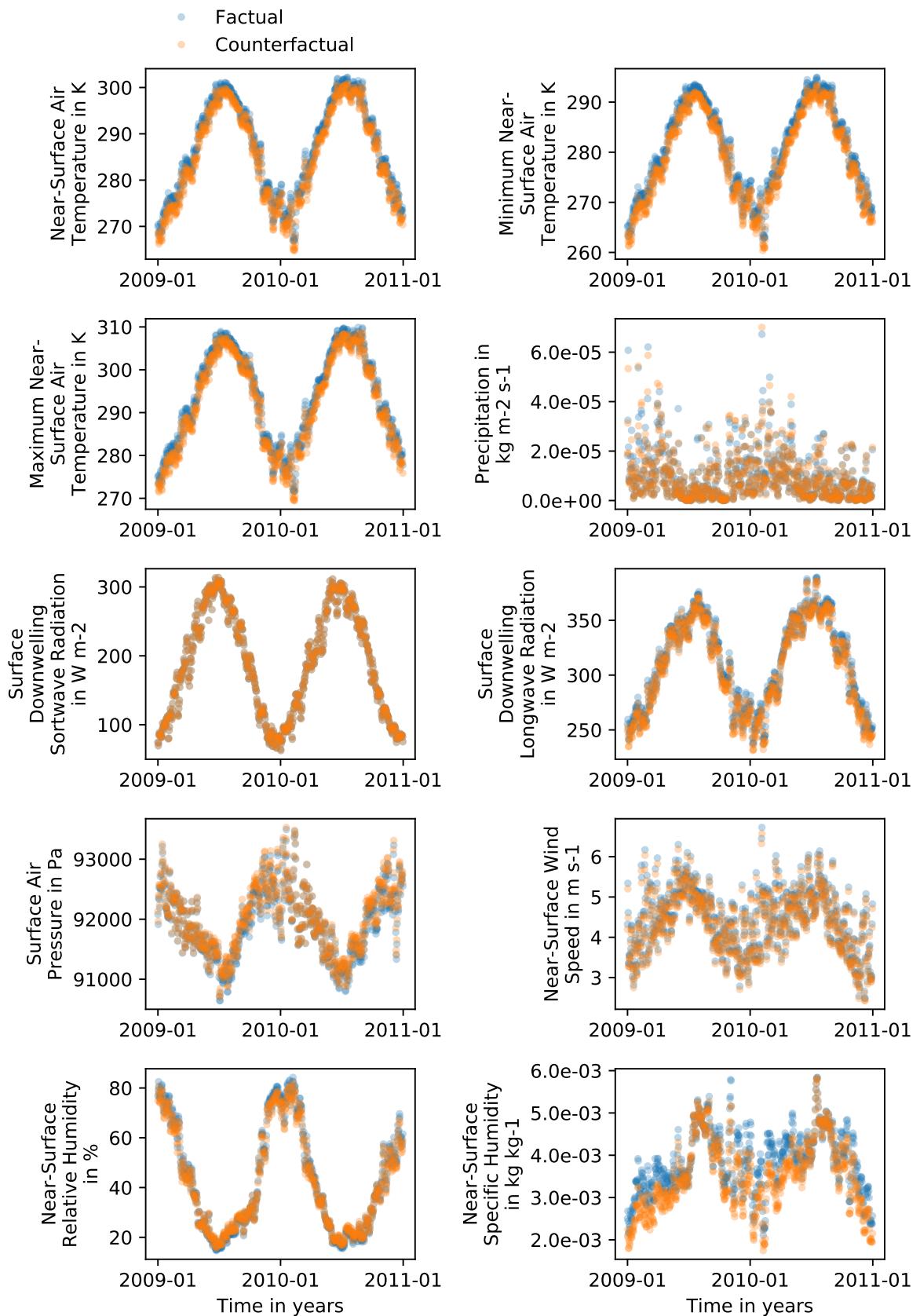


Figure A110: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Central Asia.

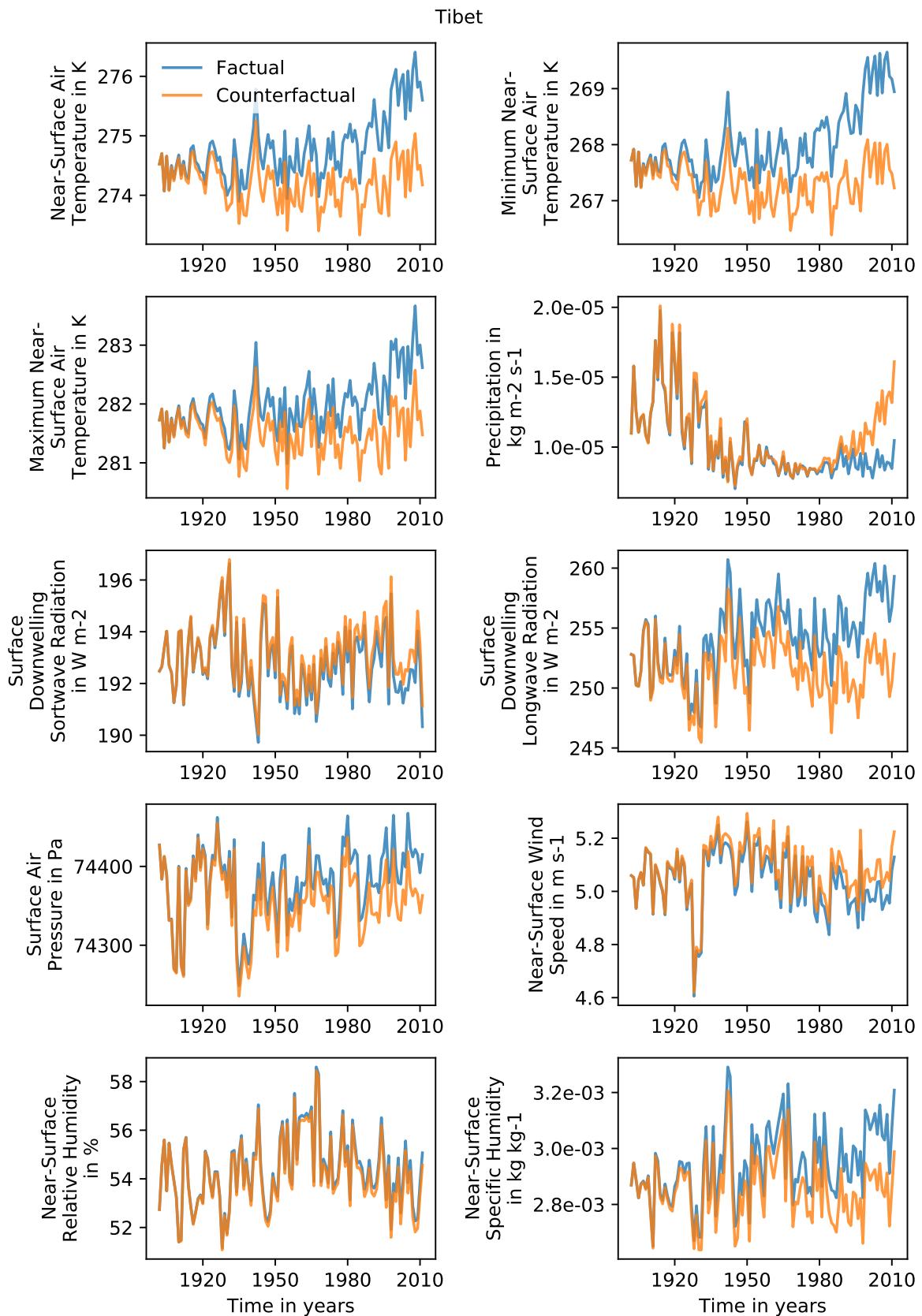


Figure A111: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for Tibet for the GSWP3 dataset.

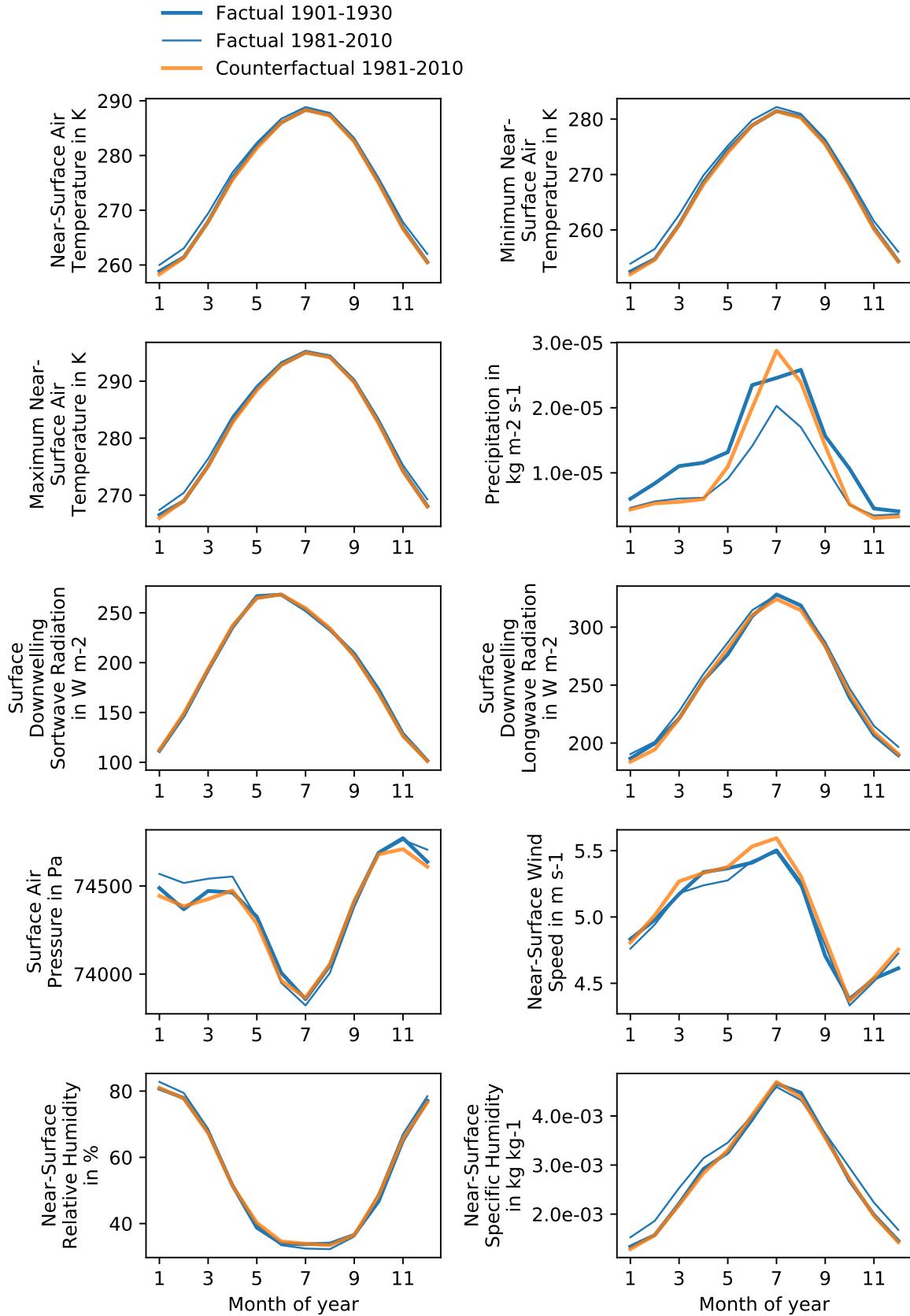


Figure A112: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for Tibet. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

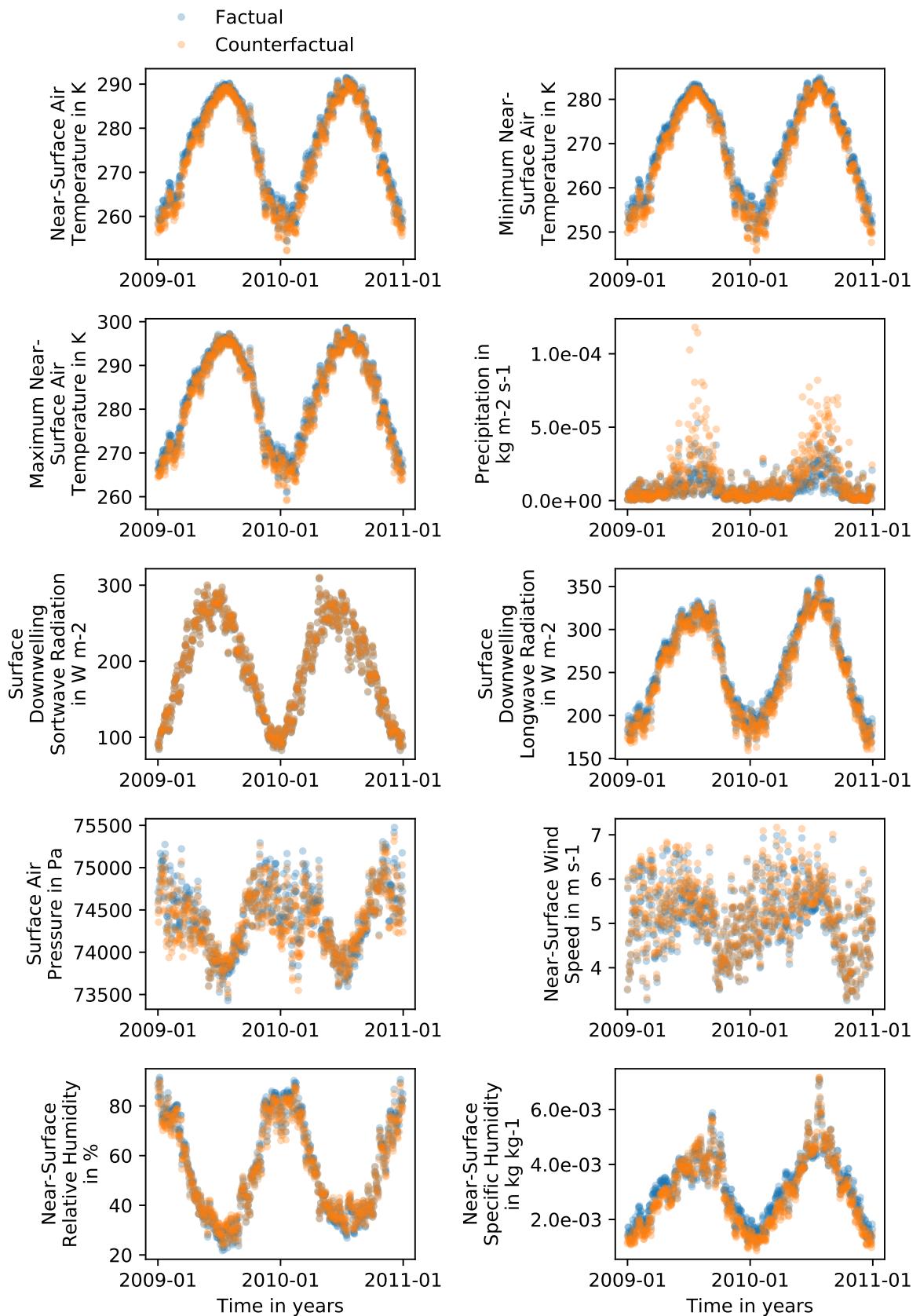


Figure A113: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for Tibet.

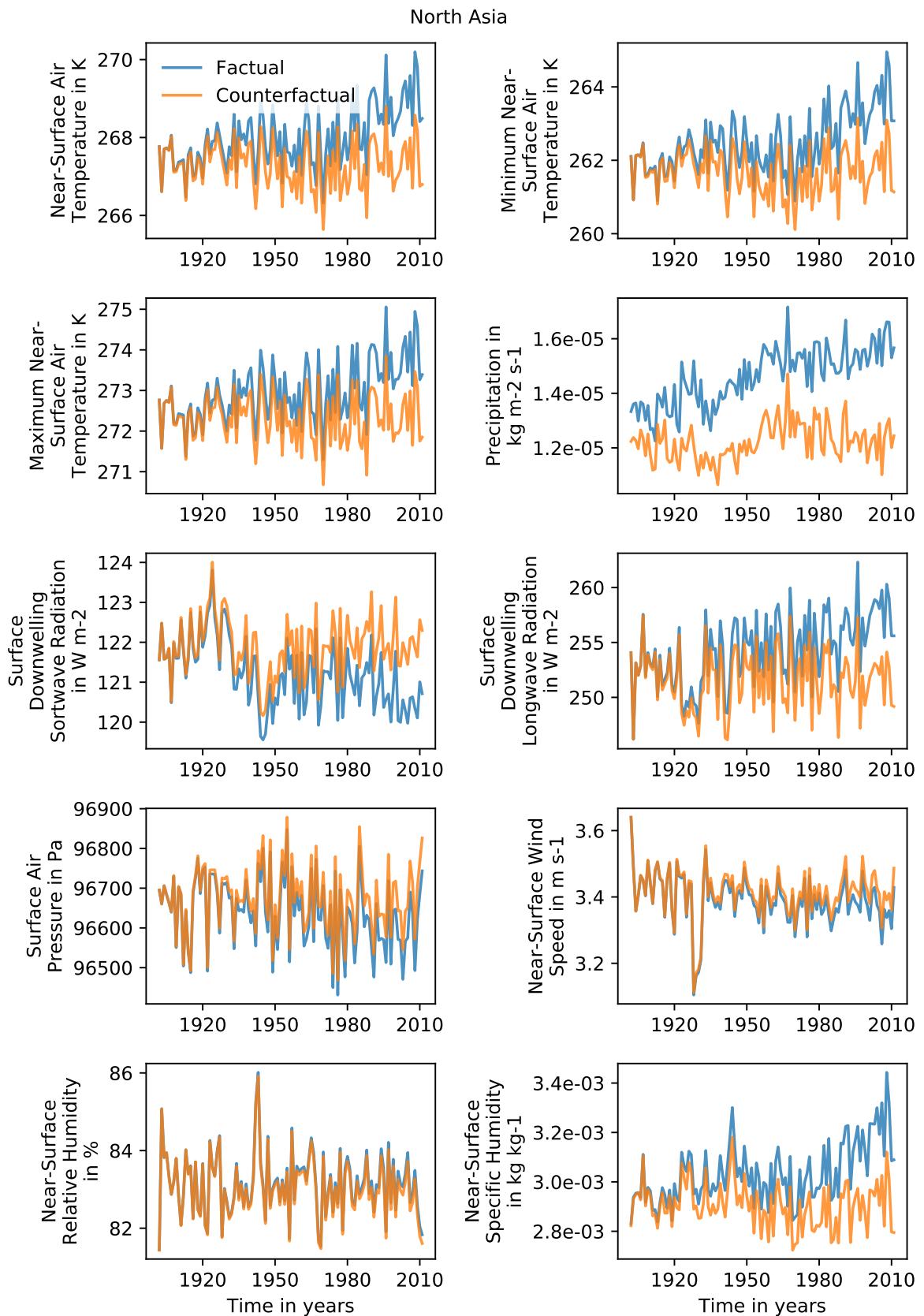


Figure A114: Annual regional mean time series of factual (blue line) and counterfactual (orange line) climate variables for North Asia for the GSWP3 dataset.

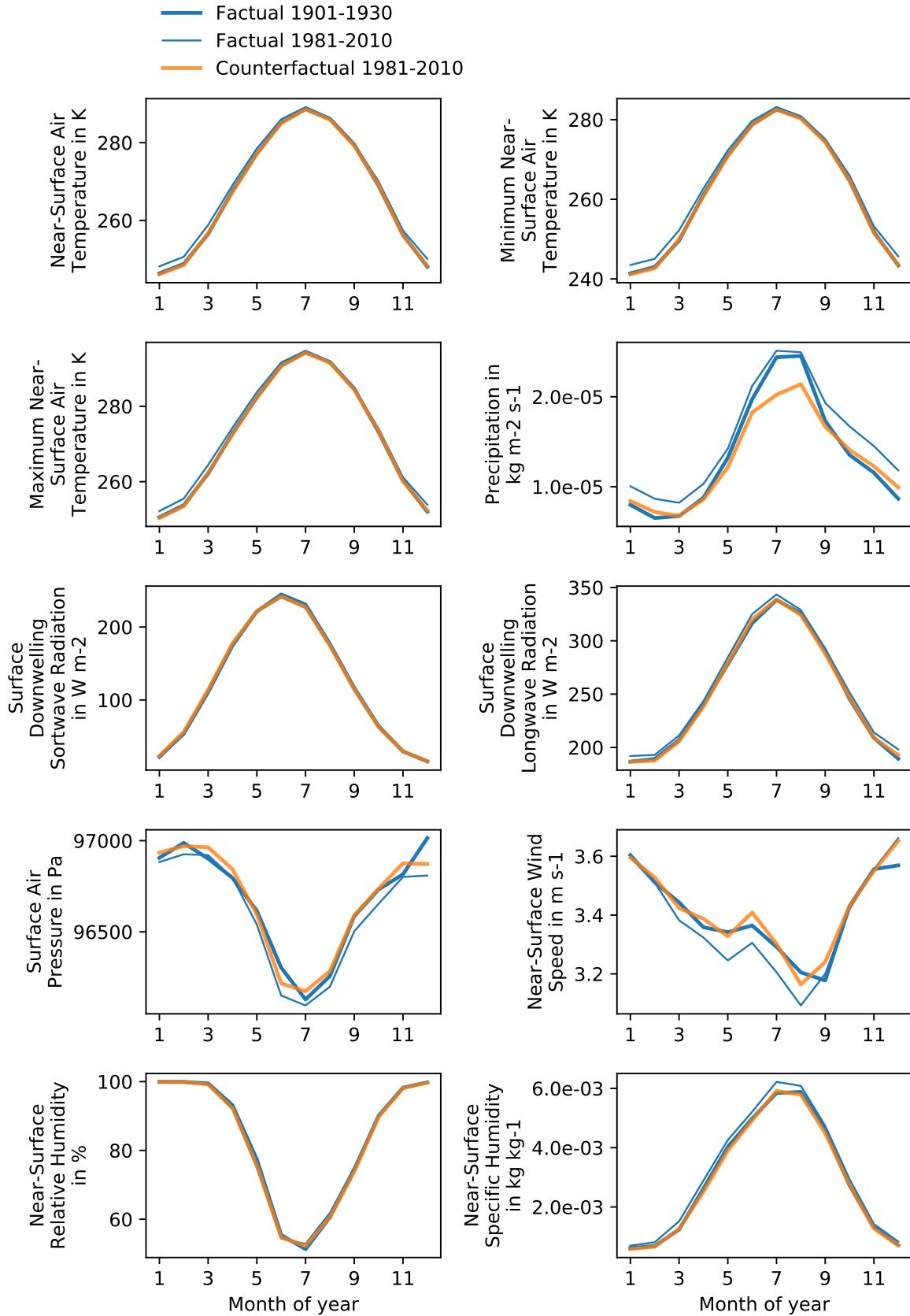


Figure A115: Factual and counterfactual multi-year regional mean annual cycle of the climate variables (different panels) in the GSWP3 dataset for North Asia. To obtain the counterfactual annual cycle (orange line), our method aims to map the late factual (thin blue line) to the early factual (thick blue line) annual cycle.

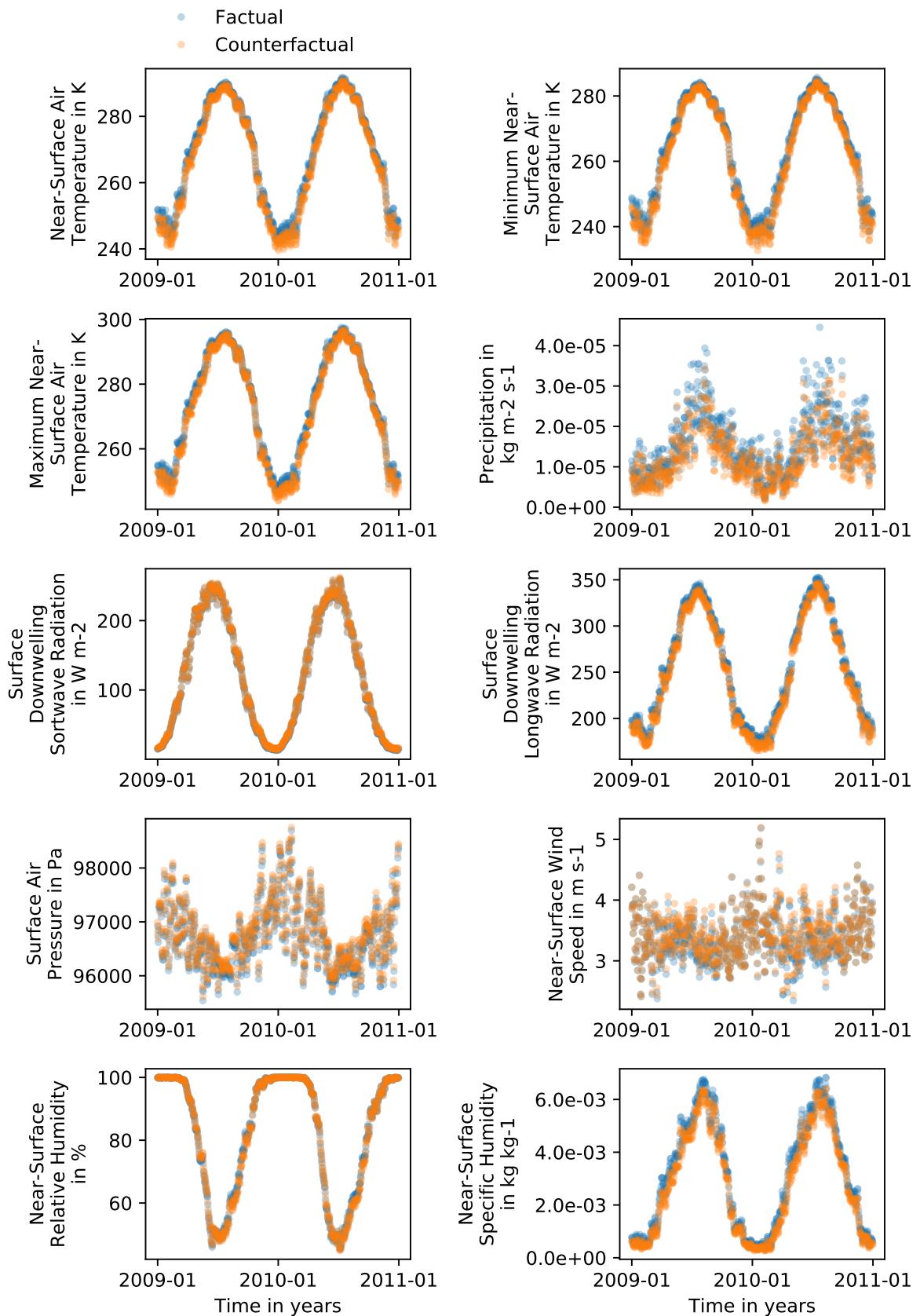


Figure A116: Factual (blue) and counterfactual (orange) daily values for the last two years (2015-2016) and all climate variables (different panels) of the GSWP3 dataset for North Asia.