

Supplementary:

Table S1 Slopes of the partial correlation coefficients between mean annual NDVI and the diurnal temperature (T_{\max} and T_{\min}) for each 17-year moving window across latitudes intervals. (The slope represents the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t-test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

| Latitudes | $R_{\text{NDVI-Tmax}}$ | | $R_{\text{NDVI-Tmin}}$ | |
|--------------|------------------------|-------|------------------------|-------|
| | Slope | p | Slpoe | p |
| 60° - 90°N | 0.012 | 0.209 | -0.023 | 0.008 |
| 30° - 60°N | 0.002 | 0.861 | -0.023 | 0.124 |
| 00° - 30°N | -0.014 | 0.130 | 0.001 | 0.953 |
| -30° - 00°S | 0.006 | 0.351 | -0.021 | 0.012 |
| -60° - -30°S | -0.051 | 0.000 | 0.032 | 0.000 |

Table S2 Slopes of the partial correlation coefficients between mean NDVI and the diurnal temperature (T_{\max} and T_{\min}) in spring for each 17-year moving window across latitudes intervals. (The slope represents the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t-test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

| Latitudes | $R_{\text{NDVI-Tmax}}$ | | $R_{\text{NDVI-Tmin}}$ | |
|--------------|------------------------|-------|------------------------|-------|
| | Slope | p | Slpoe | p |
| 60° - 90°N | -0.011 | 0.305 | 0.003 | 0.722 |
| 30° - 60°N | -0.031 | 0.002 | -0.008 | 0.453 |
| 00° - 30°N | 0.014 | 0.073 | -0.040 | 0.000 |
| -30° - 00°S | -0.010 | 0.065 | 0.009 | 0.178 |
| -60° - -30°S | -0.055 | 0.000 | 0.035 | 0.000 |

Table S3 Slopes of the partial correlation coefficients between mean NDVI and the diurnal temperature (T_{\max} and T_{\min}) in summer for each 17-year moving window across latitudes intervals. (The slope represents the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t-test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t -test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

| Latitudes | $R_{NDVI-T_{max}}$ | | $R_{NDVI-T_{min}}$ | |
|--------------|--------------------|-------|--------------------|-------|
| | Slope | p | Slope | p |
| 60° - 90°N | 0.010 | 0.267 | -0.022 | 0.001 |
| 30° - 60°N | -0.001 | 0.839 | -0.007 | 0.387 |
| 00° - 30°N | -0.020 | 0.037 | -0.001 | 0.917 |
| -30° - 00°S | 0.029 | 0.002 | 0.004 | 0.603 |
| -60° - -30°S | -0.029 | 0.003 | 0.023 | 0.014 |

Table S4 Slopes of the partial correlation coefficients between mean NDVI and the diurnal temperature (T_{max} and T_{min}) in autumn for each 17-year moving window across latitudes intervals. (The slope represents the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t -test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

| Latitudes | $R_{NDVI-T_{max}}$ | | $R_{NDVI-T_{min}}$ | |
|--------------|--------------------|-------|--------------------|-------|
| | Slope | p | Slope | p |
| 60° - 90°N | -0.009 | 0.213 | 0.002 | 0.830 |
| 30° - 60°N | 0.021 | 0.009 | -0.017 | 0.043 |
| 00° - 30°N | 0.057 | 0.000 | -0.048 | 0.000 |
| -30° - 00°S | -0.005 | 0.260 | -0.002 | 0.622 |
| -60° - -30°S | -0.083 | 0.173 | -0.007 | 0.073 |

Table S5 Slopes of the partial correlation coefficients between mean NDVI and the diurnal temperature (T_{max} and T_{min}) in winter for each 17-year moving window across latitudes intervals. (The slope represents the change trend in the correlations between the vegetation greenness and diurnal warming during the period 1982–2015. A positive slope indicates a positive growth response to temperature, while a negative slope indicates a weakening relationship with diurnal warming. p indicates the statistically significance level of the change trend tested by a two-tailed t -test at the 0.05 level. N and S indicates the Northern and southern hemisphere, respectively.)

| Latitudes | R _{NDVI-Tmax} | | R _{NDVI-Tmin} | |
|--------------|------------------------|----------|------------------------|----------|
| | Slope | <i>p</i> | Slope | <i>p</i> |
| 60° - 90°N | -0.003 | 0.787 | -0.000 | 0.992 |
| 30° - 60°N | 0.041 | 0.000 | -0.036 | 0.000 |
| 00° - 30°N | -0.009 | 0.069 | -0.010 | 0.026 |
| -30° - 00°S | 0.016 | 0.028 | -0.025 | 0.001 |
| -60° - -30°S | -0.025 | 0.000 | 0.027 | 0.000 |