

Objectives

- Map 20-year (2003-2023) averaged rate of change in LAI (leaf area index) and LST (land surface temperature).
- Create time series
- Find correlation between rate of change in LAI and LST.

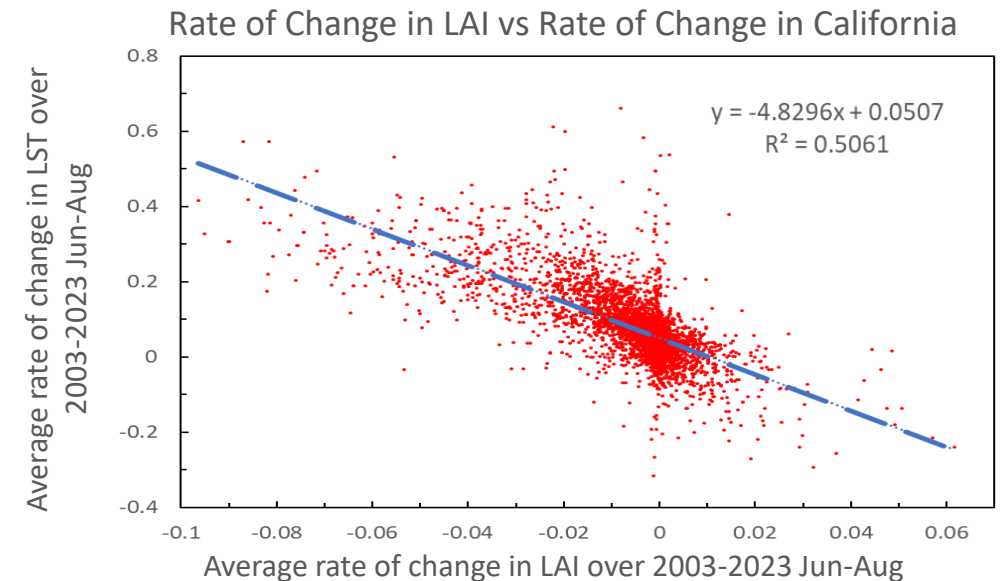
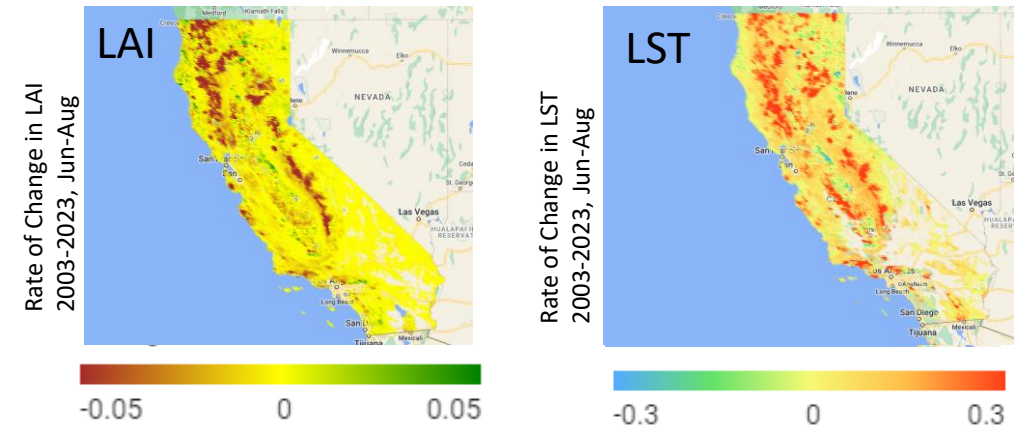
Methodology

- Data from Google Earth Engine (MYD11A2.061 and MCD15A3H.061)
- Pixel by pixel linear regression method to find both rate of change in LAI and LST over 2003-2023 summer (Jun, Jul, Aug)
- Extract pixel values to graph LAI vs LST

Results

- Rate of change for LAI range: -0.1 – 0.07
- Rate of change for LST range: -0.4 – 0.7
- LAI and LST had most visible correlation in **California**

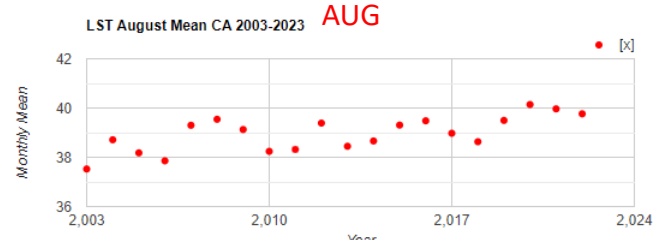
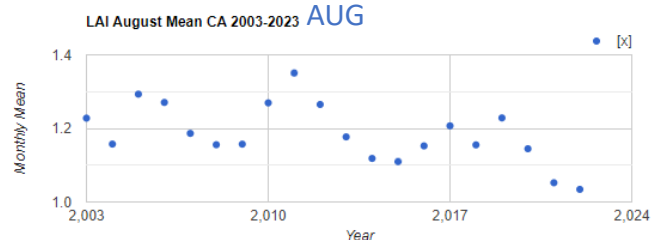
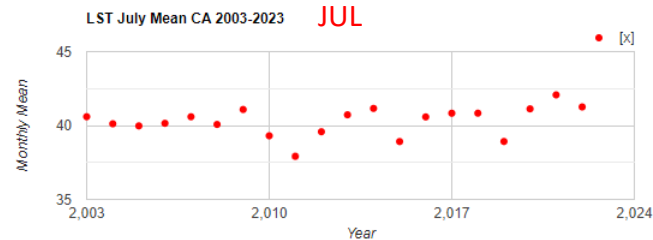
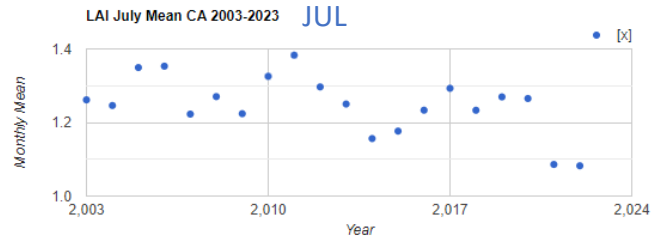
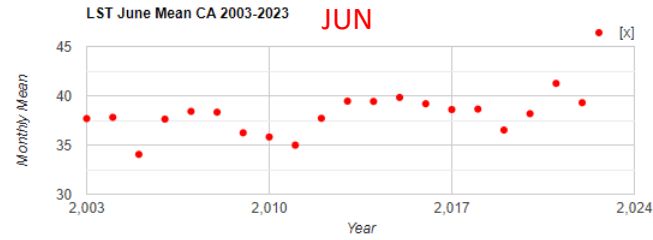
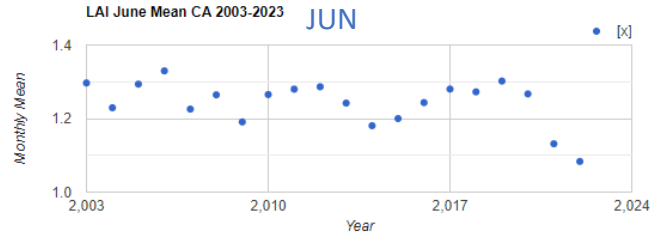
Average rate of change in LST and LAI over 2003-2023 (Jun - Aug) in California, 5km Resolution



Time Series for California 2003-2023, June-August Monthly Mean

LAI

LST



Rate of Change 2003-2023, June-August, 50km Resolution

