

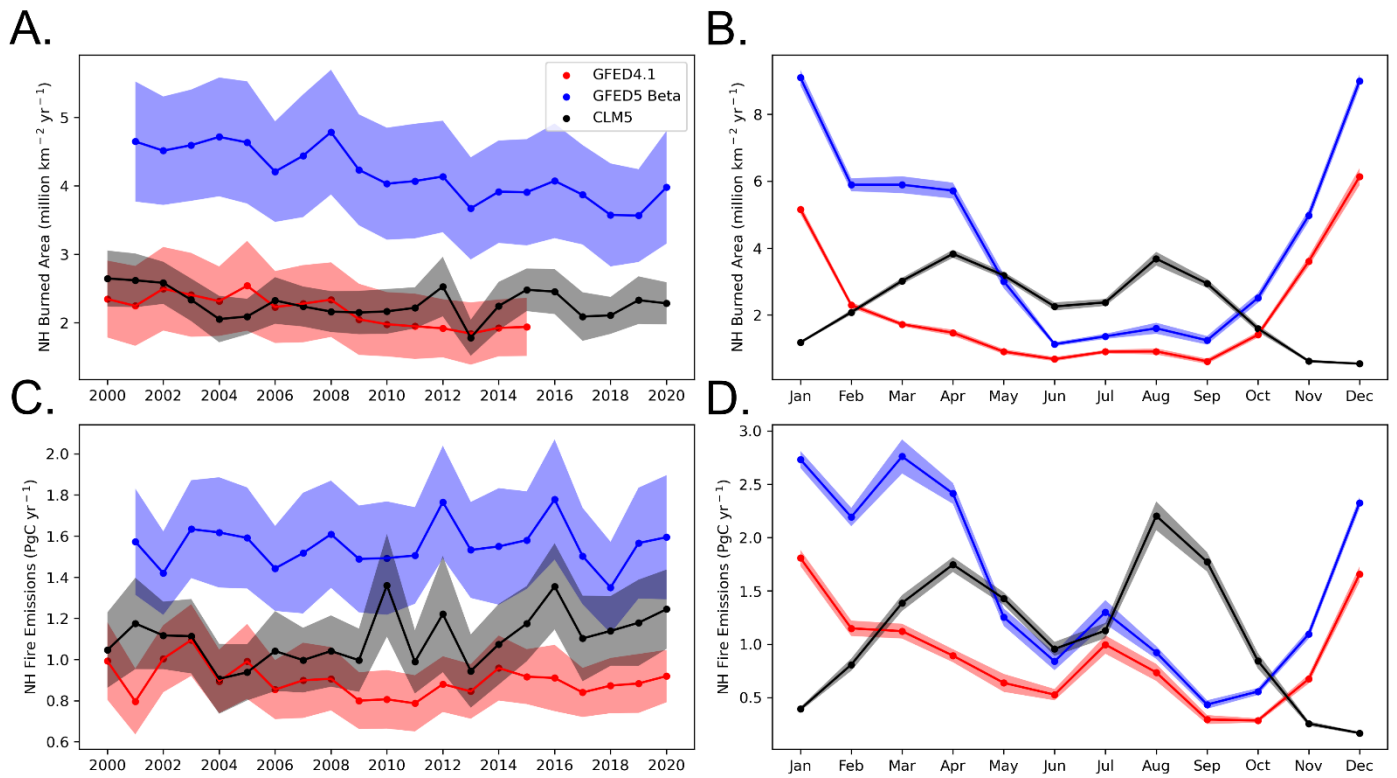


Figure S1 – Trends in northern hemisphere burned area (A) and fire emissions (C), and seasonal cycles of the same variables (B, D) from CLM5, GFED4.1s, and GFED5. Seasonal cycles were computed over the period 2000-2016 owing to data availability for GFED4.1s. Shading in A and C represents the standard error of the annual mean for each year. Shading in B and D represents the standard error of the monthly mean across the 2000-2016 time period.

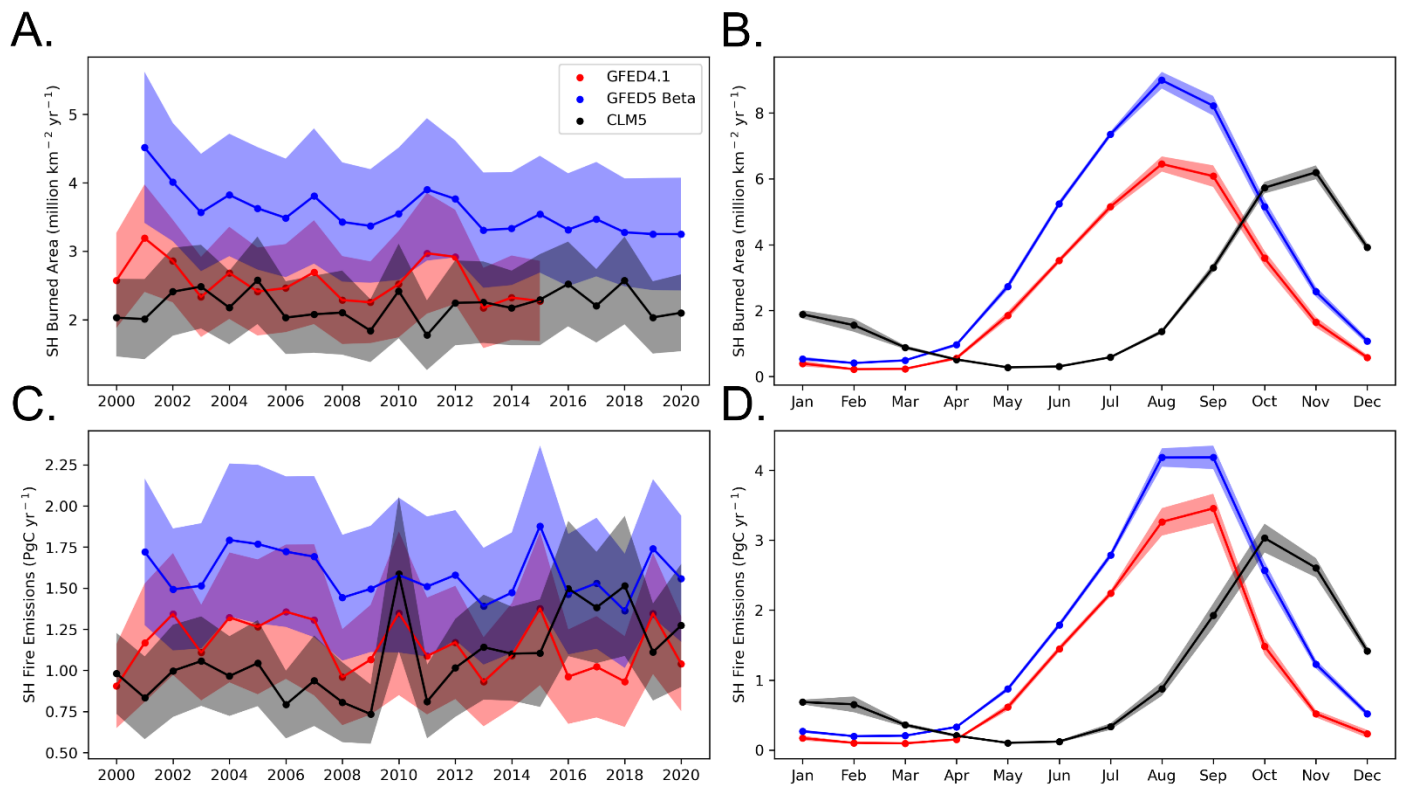
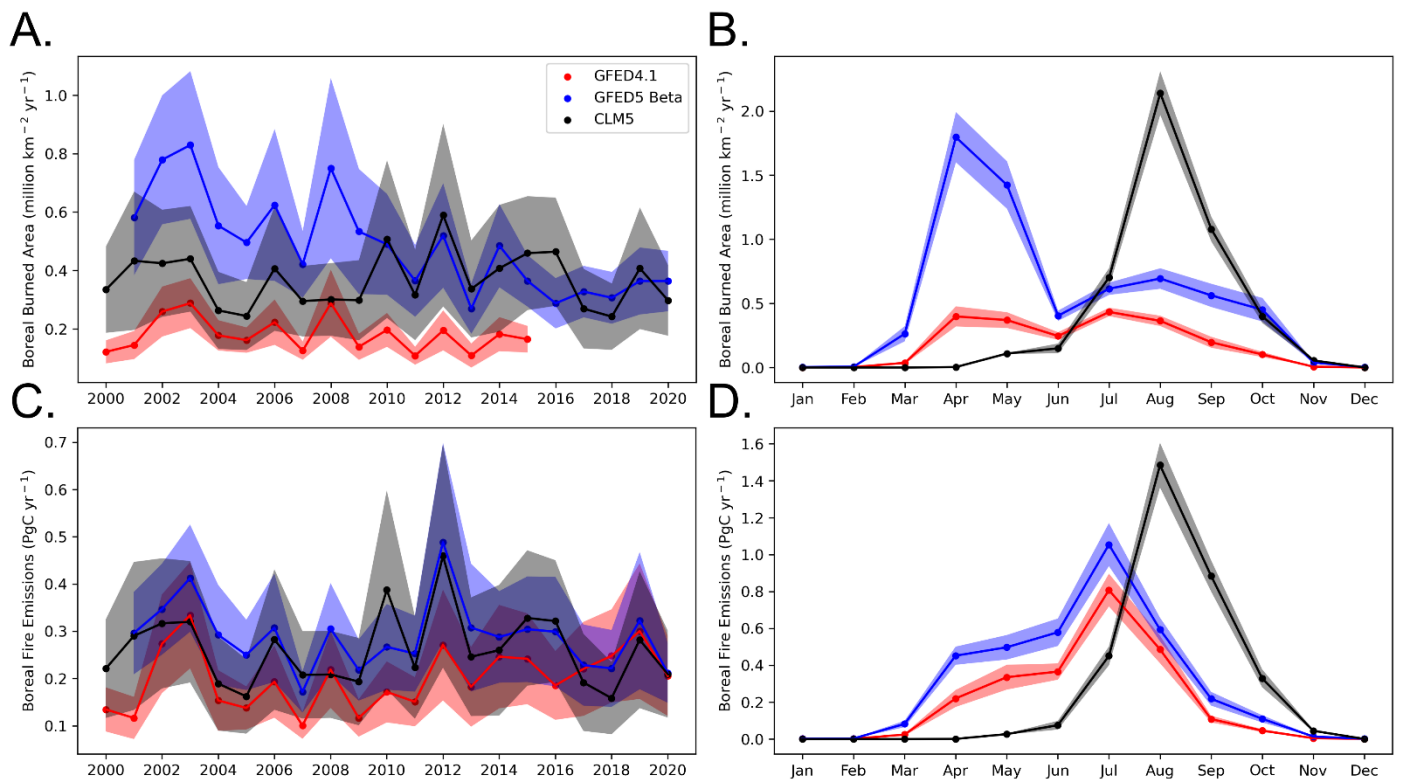
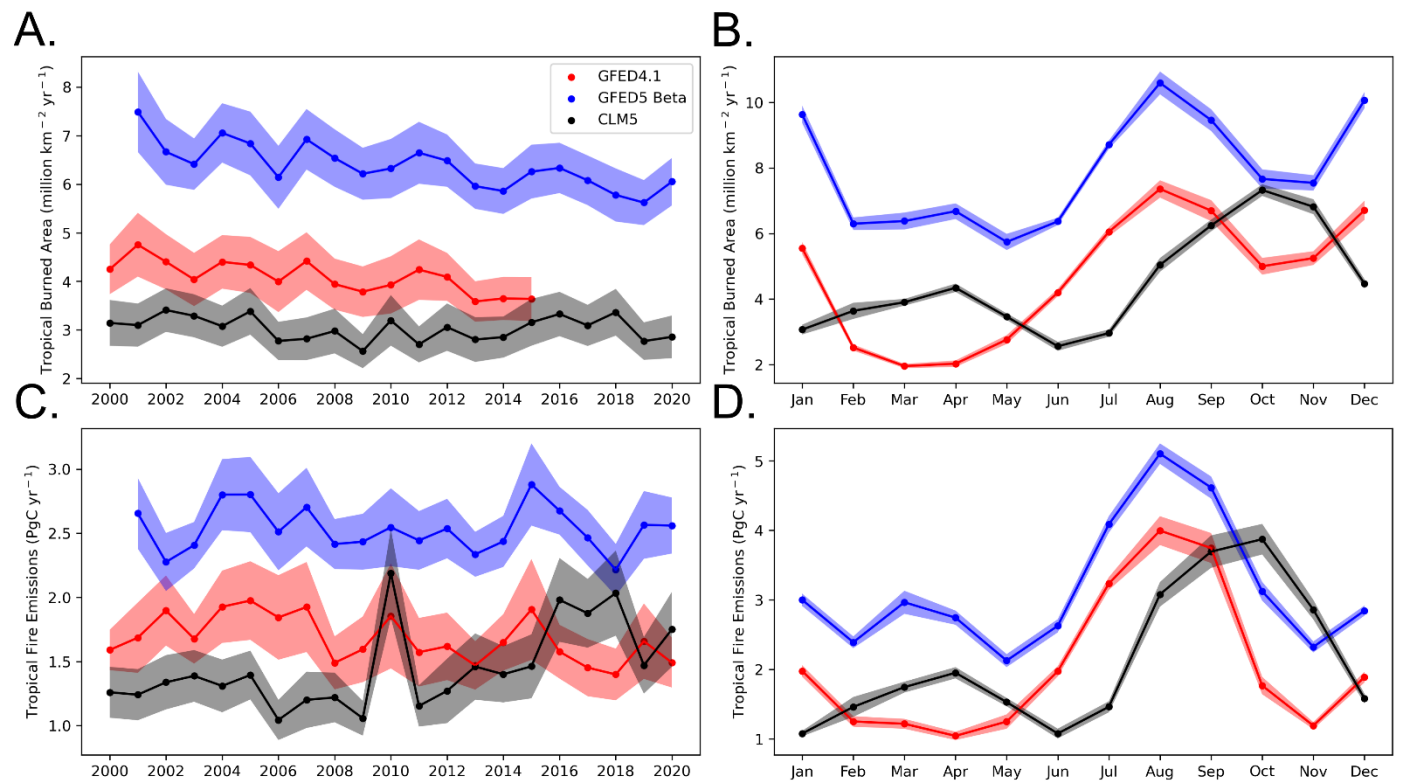


Figure S2 – Trends in southern hemisphere burned area (A) and fire emissions (C), and seasonal cycles of the same variables (B, D) from CLM5, GFED4.1s, and GFED5. Seasonal cycles were computed over the period 2000-2016 owing to data availability for GFED4.1s. Shading in A and C represents the standard error of the annual mean for each year. Shading in B and D represents the standard error of the monthly mean across the 2000-2016 time period.



**Figure S3 – Trends in boreal burned area (A) and fire emissions (C), and seasonal cycles of the same variables (B, D) from CLM5, GFED4.1s, and GFED5.** Seasonal cycles were computed over the period 2000-2016 owing to data availability for GFED4.1s. Shading in A and C represents the standard error of the annual mean for each year. Shading in B and D represents the standard error of the monthly mean across the 2000-2016 time period.



**Figure S4 – Trends in tropical burned area (A) and fire emissions (C), and seasonal cycles of the same variables (B, D) from CLM5, GFED4.1s, and GFED5.** Seasonal cycles were computed over the period 2000-2016 owing to data availability for GFED4.1s. Shading in A and C represents the standard error of the annual mean for each year. Shading in B and D represents the standard error of the monthly mean across the 2000-2016 time period.

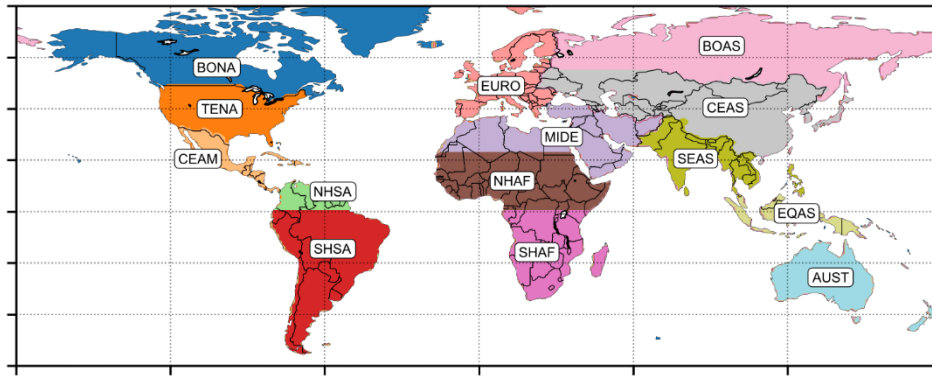
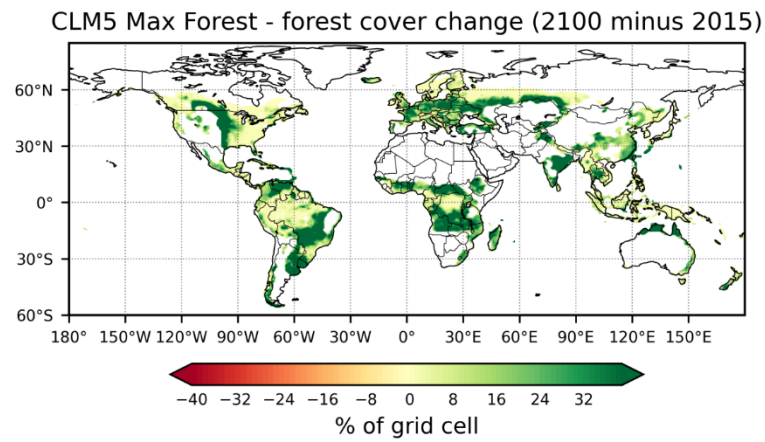


Figure S5 – GFED regions (Van der Werf et al. (2010)) used in this study:

|       |                                   |      |                            |
|-------|-----------------------------------|------|----------------------------|
| BONA  | Boreal North America              | NHAF | Northern Hemisphere Africa |
| TENA  | Temperate North America           | SHAF | Southern Hemisphere Africa |
| CEAM  | Central America                   | BOAS | Boreal Asia                |
| NHSA  | Northern Hemisphere South America | CEAS | Central Asia               |
| SHSHA | Southern Hemisphere South America | SEAS | Southeast Asia             |
| EURO  | Europe                            | EQAS | Equatorial Asia            |
| MIDE  | North Africa/Middle East          | AUST | Australia/New Zealand      |

A.



B.

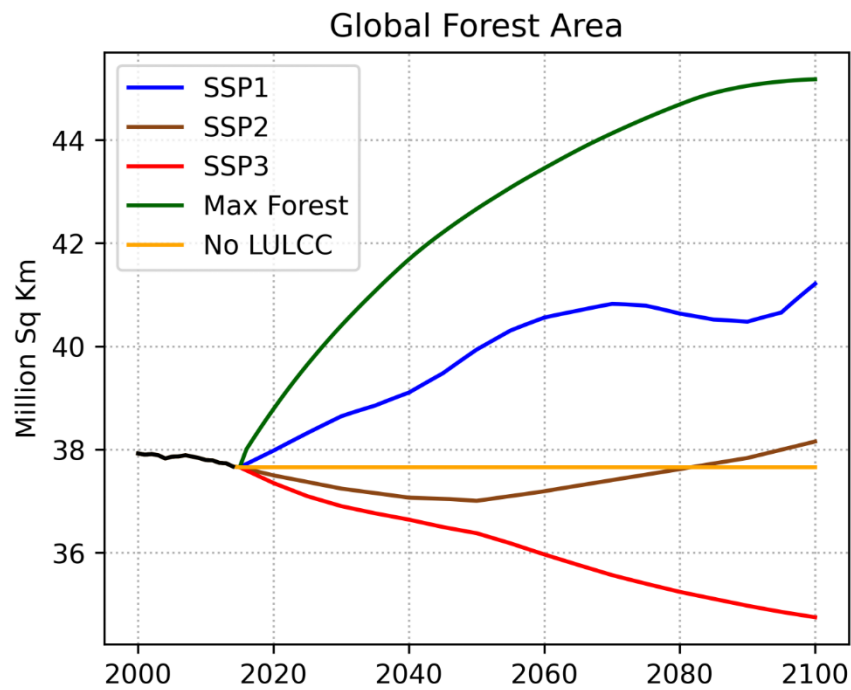


Figure S6: Fractional increase in forest cover change between 2015 and 2100 in the Max Forest scenario (A) and total change in global forest area in Max Forest and selected Shared Socioeconomic Pathway scenarios (B).