

Type of the Paper (Article)

Greening and Browning Trends of Vegetation in India and Their Responses to Climatic and Non-Climatic Drivers

Bikash Ranjan Parida ^{1,*}, Arvind Chandra Pandey ¹ and N.R. Patel ²

¹ Department of Geoinformatics, School of Natural Resource Management, Central University of Jharkhand, Ranchi–835205; bikashrp@gmail.com; arvindchandrap@yhaoo.com

² Department of Agriculture & Soil, Indian Institute of Remote Sensing, Indian Space Research Organisation, Dehradun-248001; nrpatel@iirs.gov.in

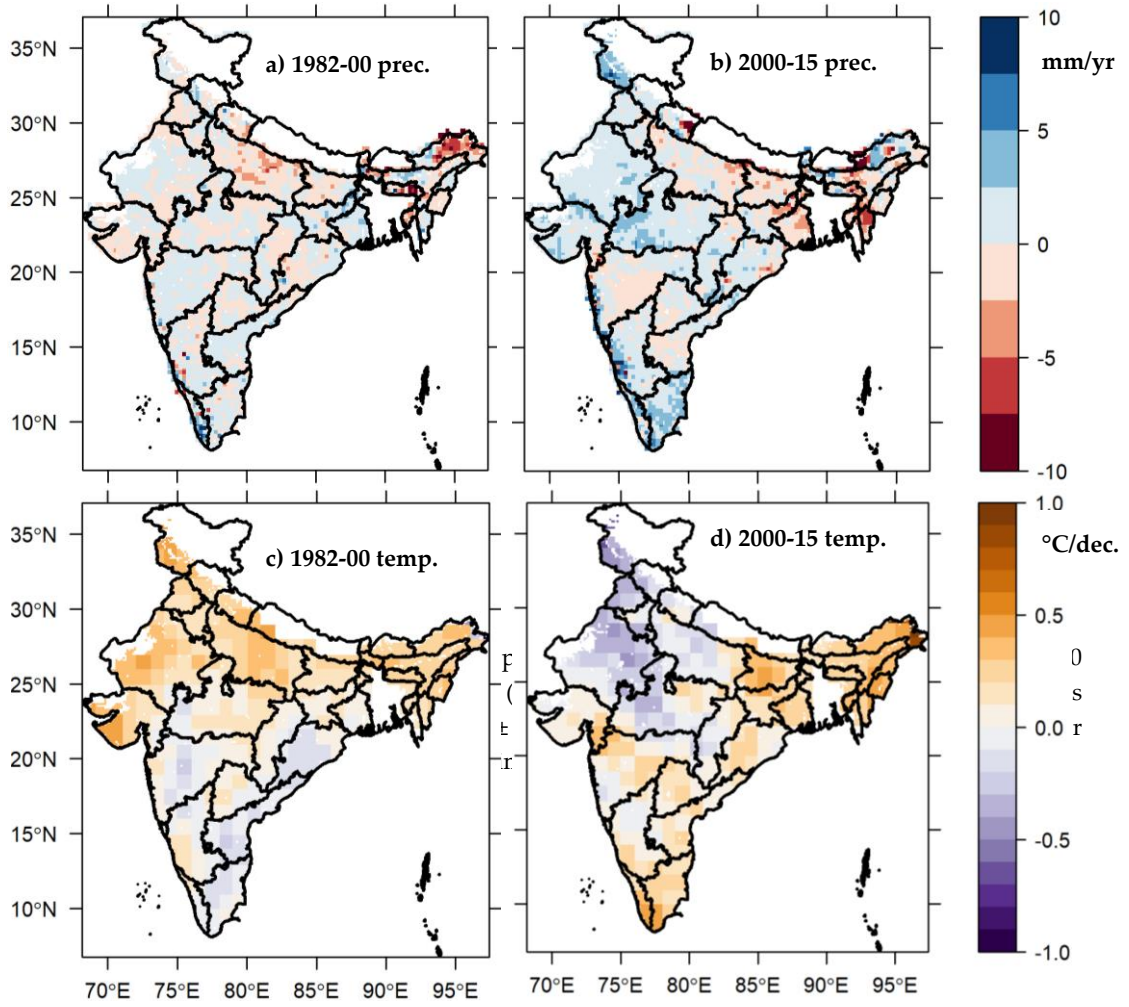
* Correspondence: bikashrp@gmail.com; Tel.: +91-8130848255 (B.R.P.)

Received: 13 July 2020; Accepted: 7 August 2020; Published: date

Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1

Figure S1. Trends as estimated using Sen's slope (in mm/year) for the two focal periods (a) 1982–2000 and (b) 2000–2015 for precipitation, whereas (c-d) represents temperature trends (°C/year). Trends are statistically significant when it exceeds ± 0.5 mm/year for rainfall whereas ± 0.1 °C/decade for temperature ($p < 0.1$). The Sen's slope was estimated using the IMD-based annual mean data.

Figure S2. Trends as estimated using Sen's slope (in $Wm^{-2}/year$) for the two focal periods (a) 1982–2000 and (b) 2000–2015 for incoming solar radiation (SR), whereas (c-d) represents soil moisture (SM) (mm/year). Trends are statistically significant when it exceeds ± 0.25 $Wm^{-2}/year$ for solar radiation, whereas ± 1.25 mm/year for soil moisture ($p < 0.1$).



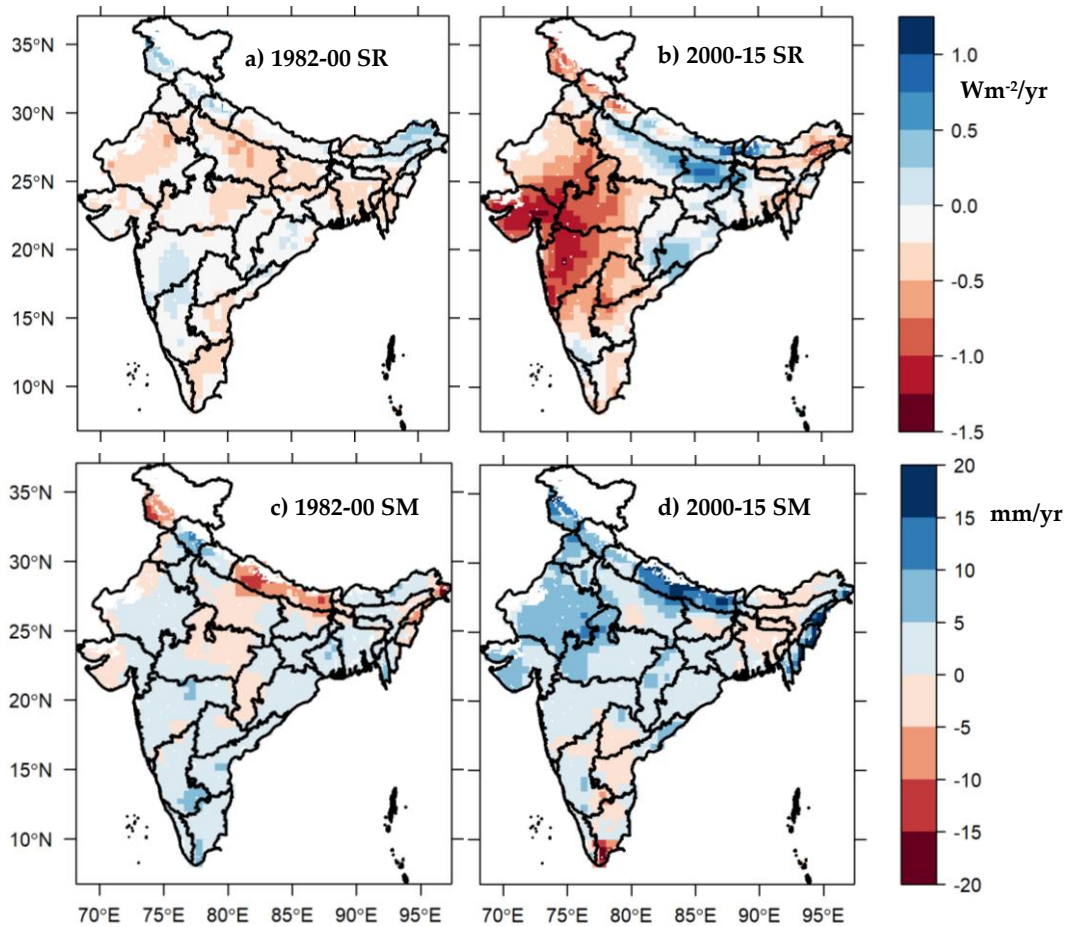


Figure S2. Trends as estimated using Sen's slope (in $\text{Wm}^{-2}/\text{year}$) for the two focal periods (a) 1982–2000 and (b) 2000–2015 for incoming solar radiation (SR), whereas (c-d) represents soil moisture (SM) (mm/year). Trends are statistically significant when it exceeds $\pm 0.25 \text{ Wm}^{-2}/\text{year}$ for solar radiation, whereas $\pm 1.25 \text{ mm}/\text{year}$ for soil moisture ($p < 0.1$).

