

Supplementary information to manuscript acp-2017-101: NO₂ pollution over India observed from space — the impact of rapid economic growth, and a recent decline

Andreas Hilboll^{1,2}, Andreas Richter¹, and John P. Burrows¹

¹Institute of Environmental Physics, University of Bremen, D-28359 Bremen, Germany

²MARUM – Center for Marine Environmental Sciences, University of Bremen, D-28359 Bremen, Germany

Correspondence to: Andreas Hilboll (hilboll@uni-bremen.de)

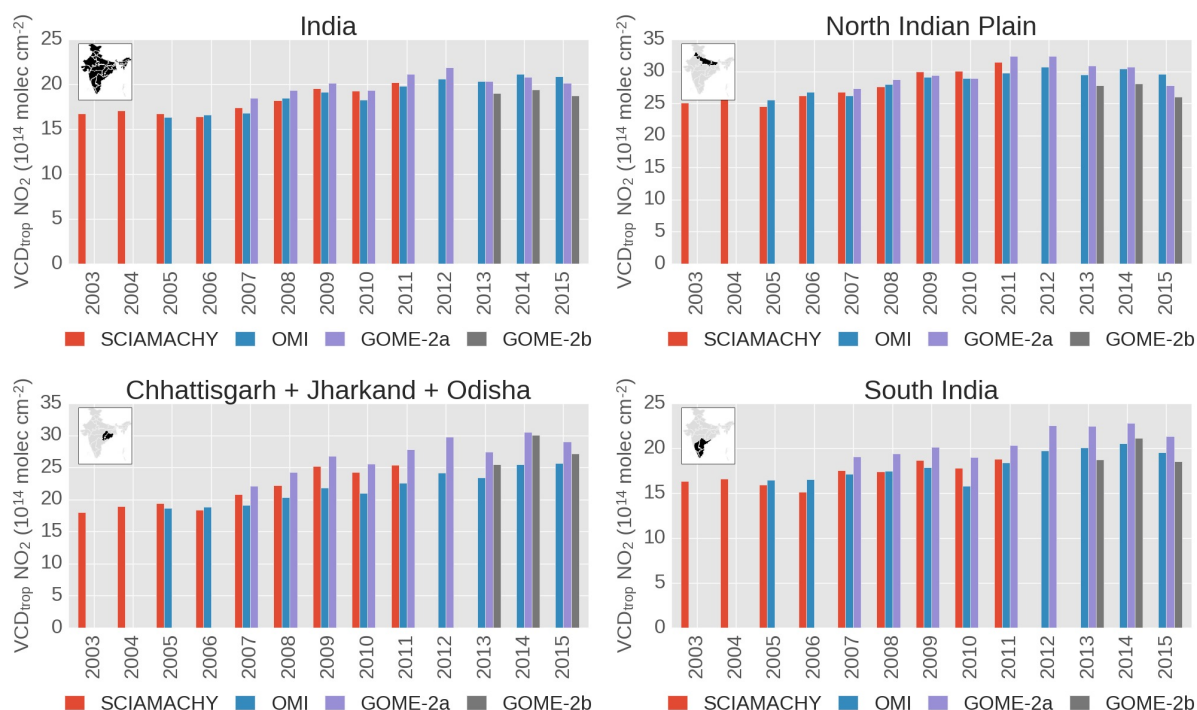


Figure 1. Annual mean tropospheric NO₂ columns as observed by the satellite instruments SCIAMACHY/ENVISAT, OMI/Aura, GOME-2/MetOp-A, and GOME-2/MetOp-B, using the data retrieval from the Tropospheric Emission Monitoring Internet Service (TEMIS): All of continental India (top left), North Indian Plain (Haryana, Punjab, Bihar, Uttar Pradesh, Delhi, top right), Chhattisgarh, Jharkhand, and Odisha (bottom left), and South India (Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh, bottom right). All data files were downloaded in the newest available version on 17 May 2016 (data version 2.0 for SCIAMACHY and OMI, version 2.1 for GOME-2/MetOp-A, and version 1.1 for GOME-2/MetOp-B). Maps created with Cartopy (<http://scitools.org.uk/cartopy>) v0.14.2 using Natural Earth data.

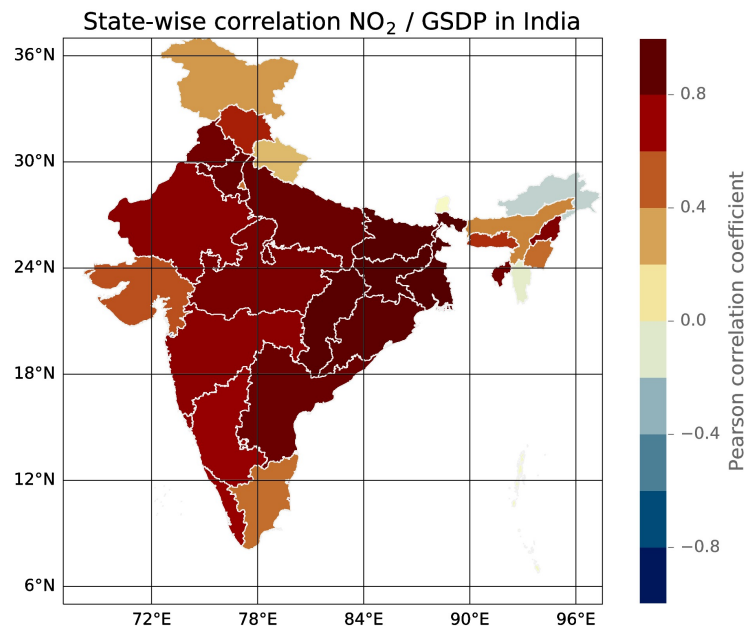
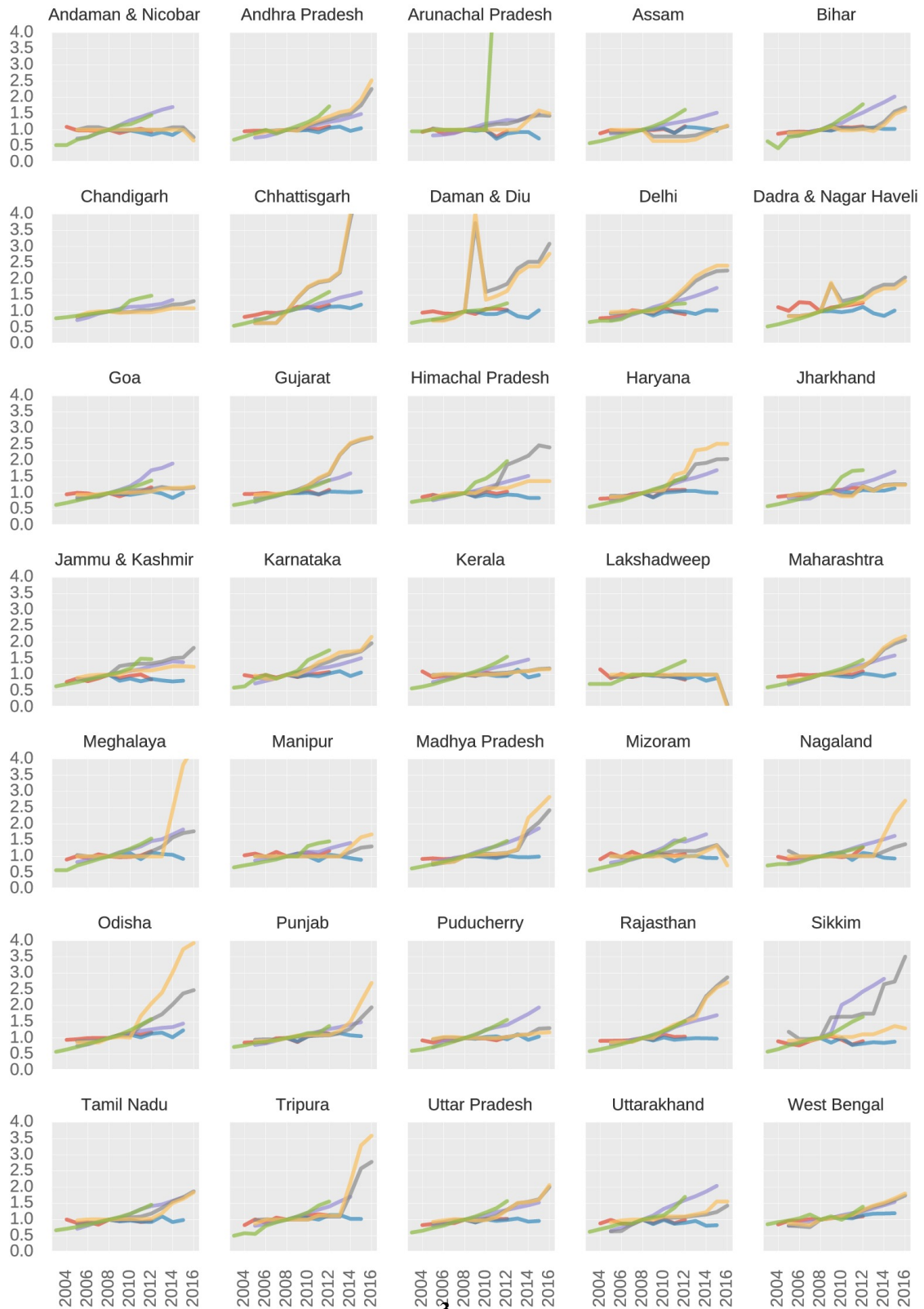


Figure 2. State-wise correlation of VCD_{trop} NO₂ from SCIAMACHY and gross state domestic product (GSDP), for annual values 2003/04–2011/12. Figure created with Cartopy (<http://scitools.org.uk/cartopy>) v0.14.2 using Natural Earth data.

2007/08 = 1.0



VCD_{trop} NO₂ SCIAMACHY

VCD_{trop} NO₂ GOME-2a

Gr. State Dom. Prod.

Electr. (total)

Electr. (fossil)

Vehicles

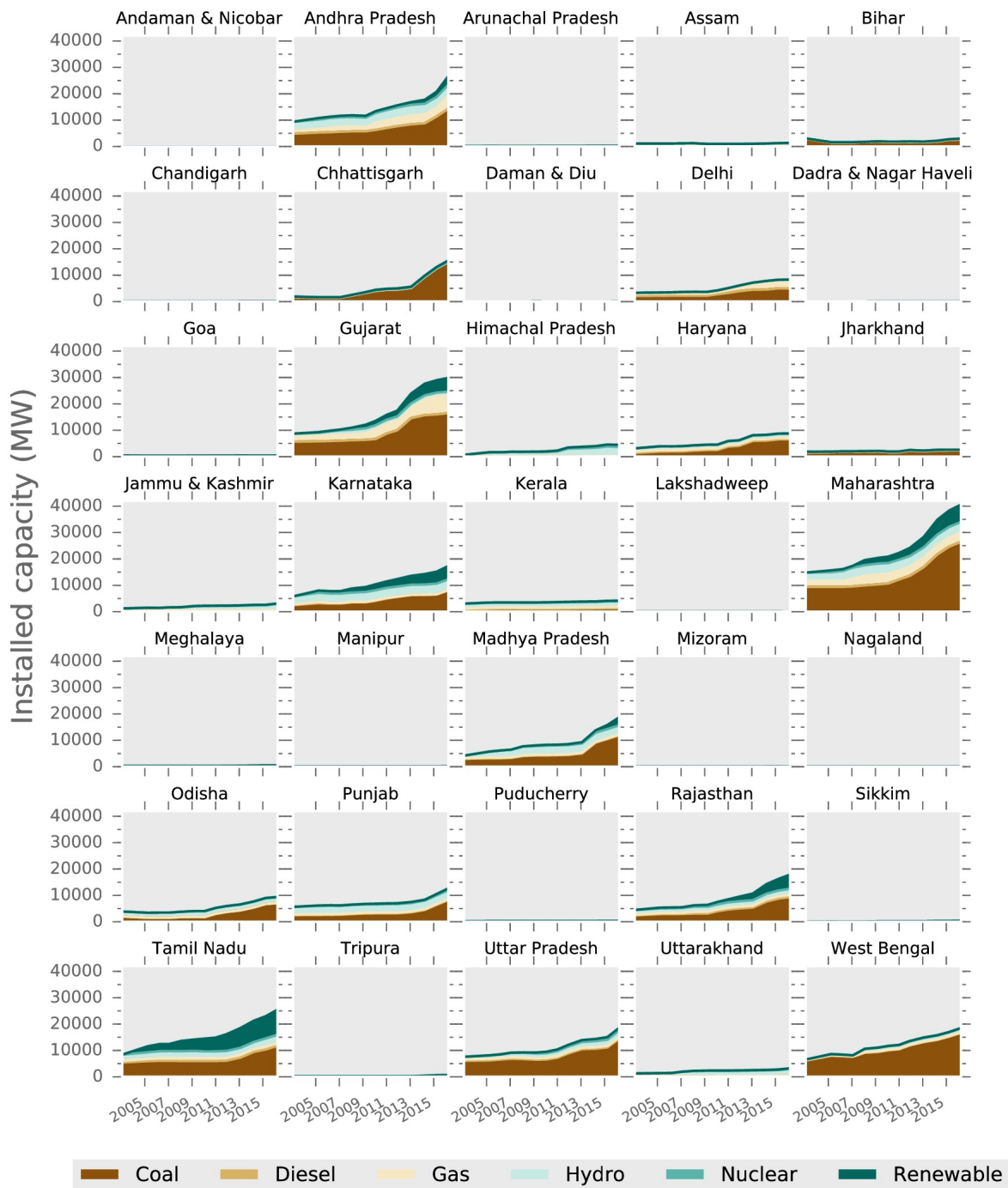


Figure 4. Installed power generation capacity by state.