



Supplement of

Assessing the climate and air quality effects of future aerosol mitigation in India using a global climate model combined with statistical downscaling

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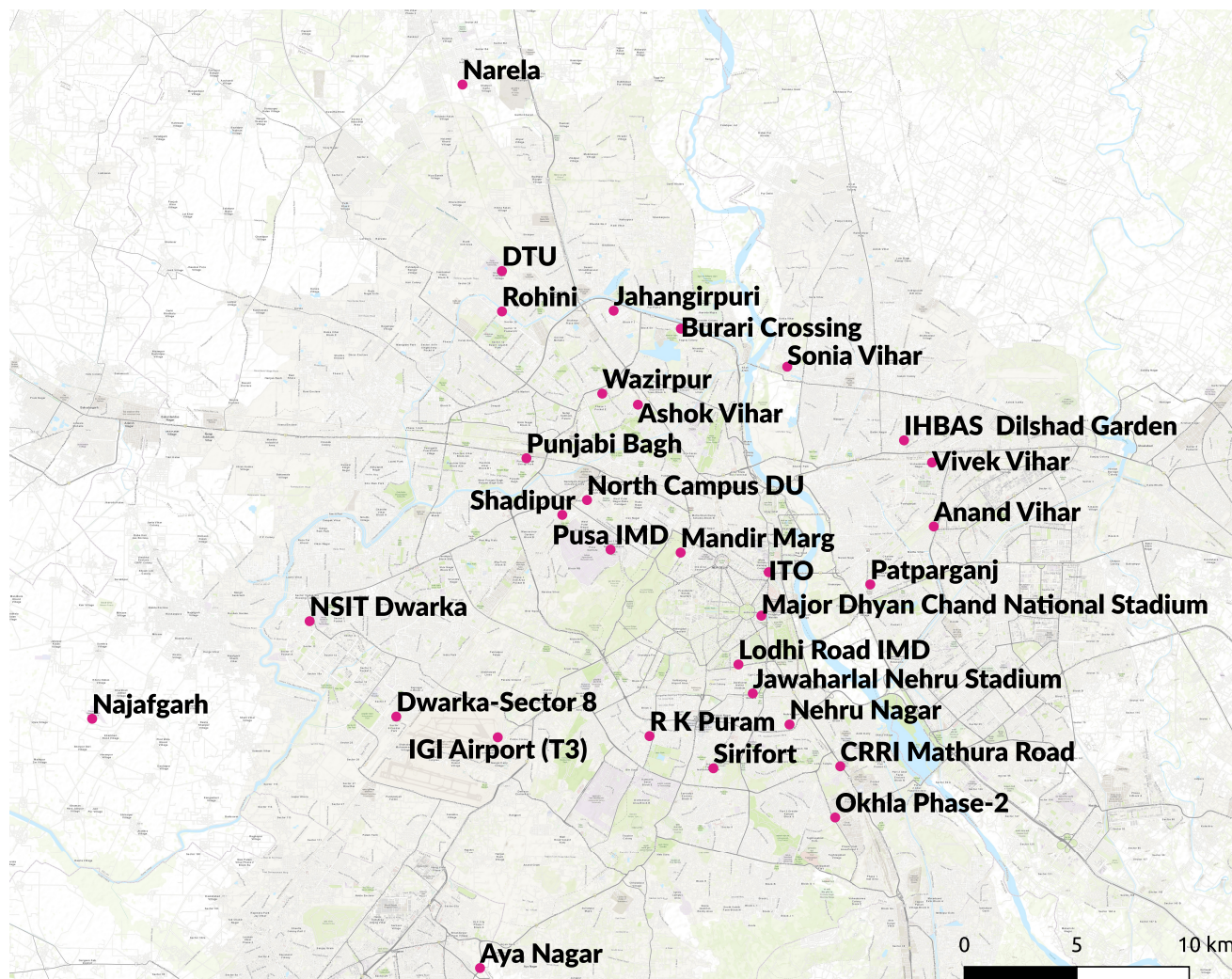


Figure S1. A map of New Delhi with ground measurement stations marked with pink points. The map was created with the QGIS 3.22.4 software (QGIS Development Team, 2022).

References

- 5 QGIS Development Team: QGIS Geographic Information System, QGIS Association, <https://www.qgis.org>, 2022.

Station name	latitude	longitude	operator	N%2016	N%2017	N%2018	N%2019	N%2020
Narela	28.823	77.102	DPCC	0	0	87.8	97.9	93.9
DTU	28.749	77.120	CPCB	13.2	64.7	92.7	94.5	93.9
Jahangirpuri	28.733	77.171	DPCC	0	0	89	98	96.5
Rohini	28.733	77.120	DPCC	0	0	86.3	98.5	96
Burari Crossing	28.726	77.201	IMD	0.3	29	65.7	75	0
Sonia Vihar	28.711	77.249	DPCC	0	0	88.8	97.4	94.9
Wazirpur	28.700	77.165	DPCC	0	0	89.2	98	95.7
Ashok Vihar	28.695	77.182	DPCC	0	0	89.5	98.7	90.2
IHBAS Dilshad Garden	28.681	77.303	CPCB	25.8	16.1	89.9	95	97.6
Punjabi Bagh	28.674	77.131	DPCC	70.7	15.8	95.7	96.2	93.8
Vivek Vihar	28.672	77.315	DPCC	0	0	86.2	96.5	97.6
North Campus DU	28.657	77.159	IMD	0.8	17.8	90.7	83.6	86.8
Shadipur	28.651	77.147	CPCB	67.7	22	93.5	95.4	96.7
Anand Vihar	28.647	77.316	DPCC	80	55.9	79.8	95.4	83
Pusa	28.638	77.169	IMD	0	20.1	91.8	96.7	83.2
Mandir Marg	28.636	77.201	DPCC	43	16.4	95.9	95.3	90.5
ITO	28.629	77.241	CPCB	15.2	76.9	86.8	95.	86.6
Patparganj	28.624	77.287	DPCC	0	0	89.3	98.1	97.2
Major Dhyan Chand National Stadium	28.611	77.238	DPCC	0	0	90.5	98.6	97.6
NSIT Dwarka	28.609	77.033	CPCB	66.1	84.1	98.1	98.9	96.8
Lodhi Road	28.592	77.227	IMD	0	19.7	91.8	92.4	91.6
Jawaharlal Nehru Stadium	28.580	77.234	DPCC	0	0	86.6	97.5	95.8
Dwarka-Sector 8	28.571	77.072	DPCC	0	0	89.9	99	96.9
Najafgarh	28.570	76.934	DPCC	0	0	88.8	94.1	86
Nehru Nagar	28.568	77.251	DPCC	0	0	89.2	99	97.6
R K Puram	28.563	77.187	DPCC	82.5	46.3	94	78	90.1
IGI Airport (T3)	28.563	77.118	IMD	0.3	22	96.2	87.9	98.1
CRRI Mathura Road	28.551	77.274	IMD	0.3	16.9	93	96.5	98.9
Sirifort	28.550	77.216	CPCB	14.2	71.3	0	0	0
Okhla Phase-2	28.531	77.271	DPCC	0	0	88.9	96.9	98.4
Aya Nagar	28.471	77.110	IMD	0	19.4	86.2	92	93.4

Table S1. A list of ground measurement stations and their longitudinal and latitudinal coordinates. The operator column indicates the operator of the station, either Delhi Pollution Control Committee (DPCC), Central Pollution Control Board (CPCB) or India Meteorological Department (IMD). The list is sorted from the northernmost station to the southernmost. The "N%20xx" values indicate the data coverage percentage for the corresponding year. The data coverage percentage was calculated based on the original 30 min measurement data.

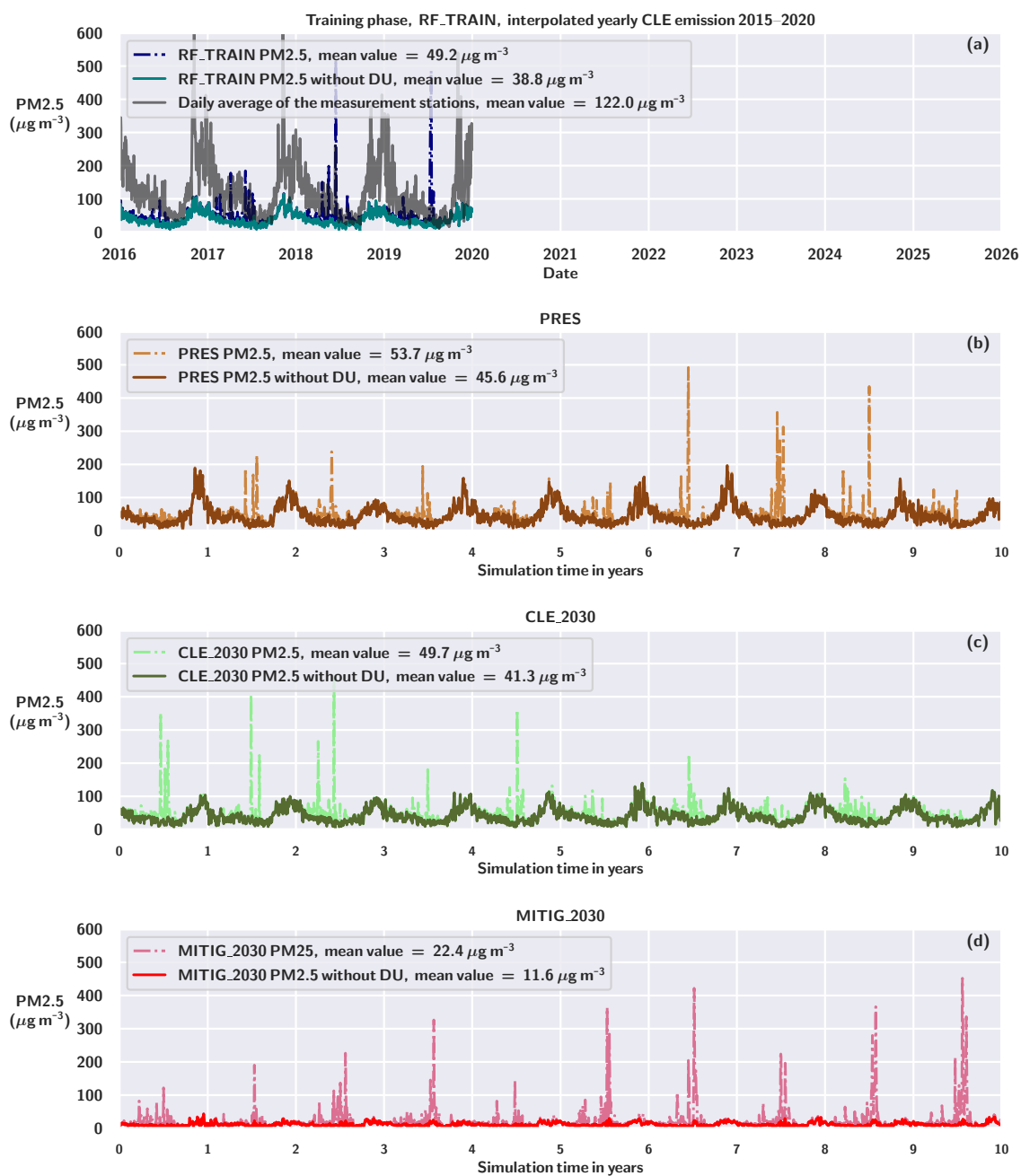


Figure S2. PM2.5 concentrations from ECHAM-HAMMOZ simulations for New Delhi with and without mineral dust component for (a) RF_TRAIN (b) PRES (c) CLE_2030 and (d) MITIG_2030. The average concentrations of the daily values for measurement stations are shown in (a)

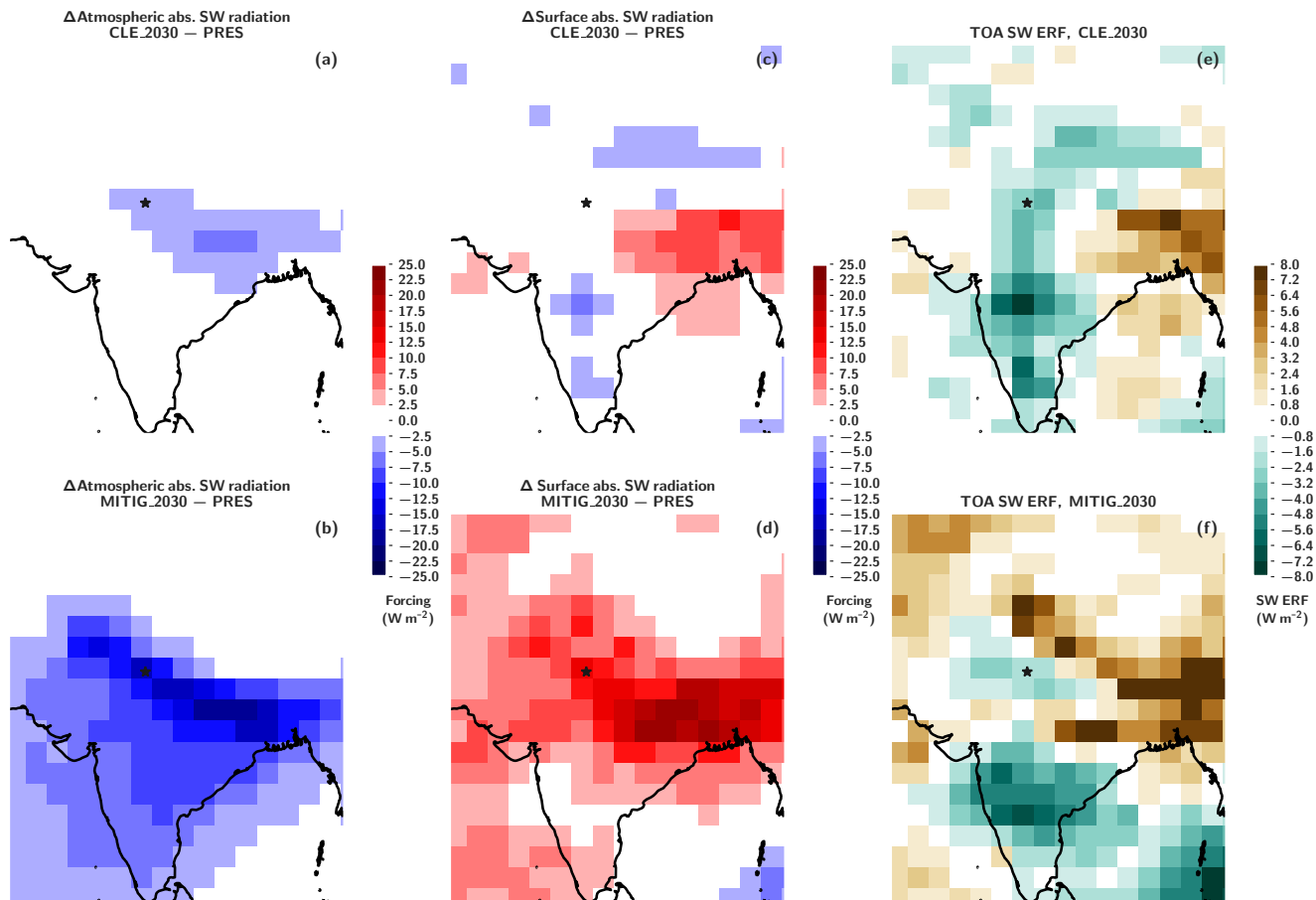


Figure S3. (a) Changes in atmospheric SW radiation absorption, CLE_2030 (b) Changes in atmospheric SW radiation absorption, MITIG_2030 (c) Changes in surface SW radiation absorption, CLE_2030 (d) Changes in surface SW radiation absorption, MITIG_2030 (e) Top-of-atmosphere SW ERF, CLE_2030 (f) Top-of-atmosphere SW ERF, MITIG_2030