Supplementary Material

A Closer Look at the Role of the Cyprus Low on Dust Events in the Negev Desert

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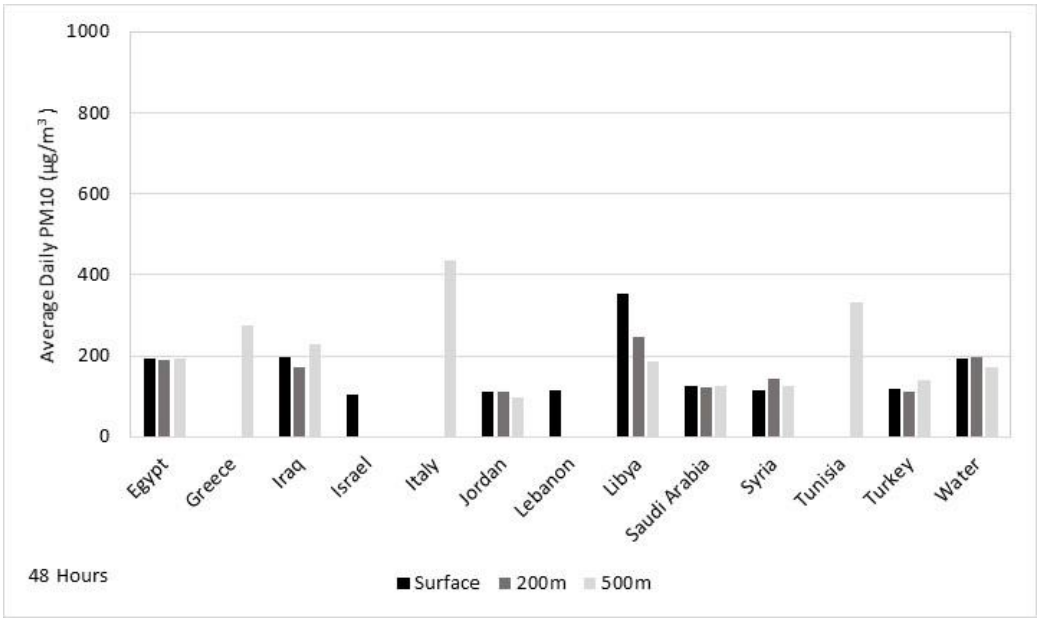
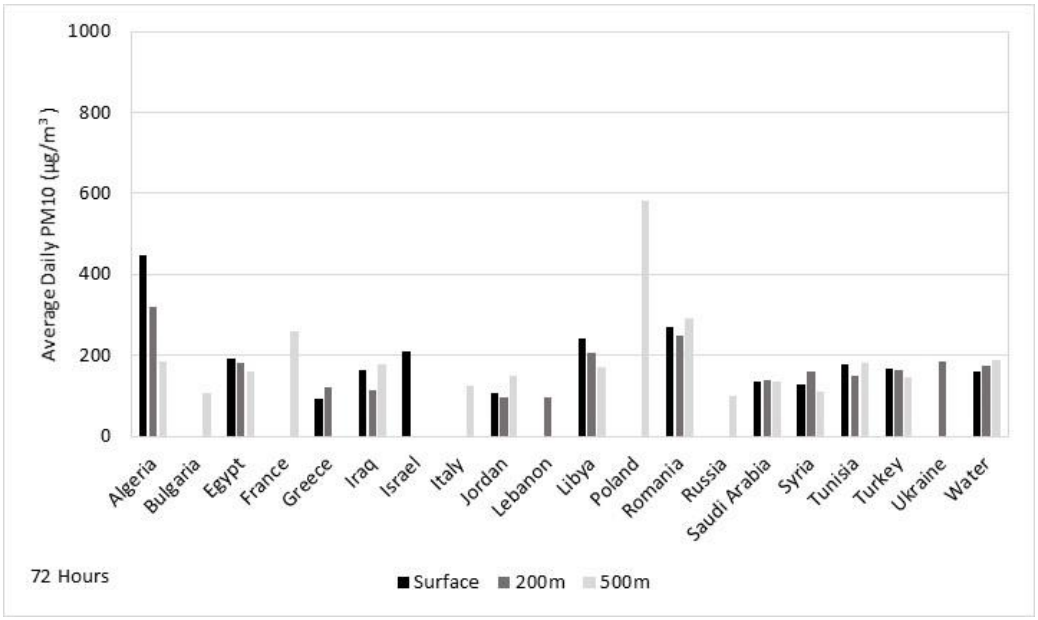
Table S1. Average PM_{10} concentration ($\mu g/m^3$) within each cluster (0m and 500m). Standard deviations are in parentheses. .

Cluster (0 m)	Dust Days (*n*)	Avg. PM_{10} ($\mu g/m^3$)
1	19	377.2 (427.1)
2	89	183.4 (134.6)
3	13	257.8 (298.4)
4	63	249.5 (273.5)
5	21	185.0 (202.8)
6	102	135.1 (119.7)
7	16	498.6 (762.2)
8	25	231.8 (177.7)
9	54	102.1 (67.8)
10	123	181.0 (213.1)
11	104	117.5 (70.4)
Total	629	181.2 (227.1)
Cluster (500 m)	**Dust Days (*n*)**	**Avg. PM_{10} ($\mu g/m^3$)**
1	97	184.3 (198.3)
2	21	302.0 (263.2)
3	20	585.3 (751.3)
4	50	180.4 (208.1)
5	40	176.9 (121.6)
6	77	137.5 (84.2)
7	30	201.4 (211.8)
8	84	152.1 (178.8)
9	59	128.5 (134.0)
10	36	189.9 (155.3)
11	90	116.1 (79.9)
12	25	308.6 (295.0)
Total	629	181.2 (227.1)

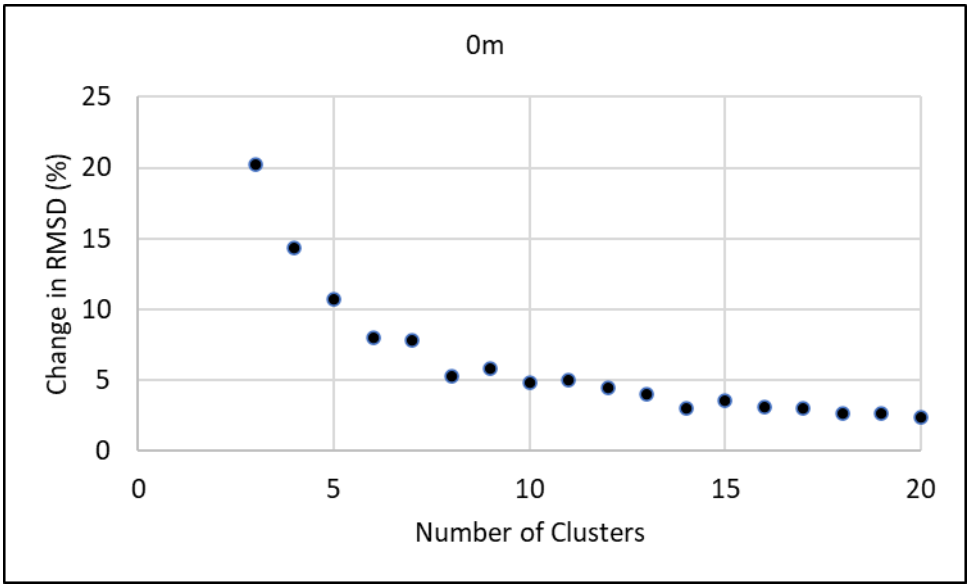


(**a**)

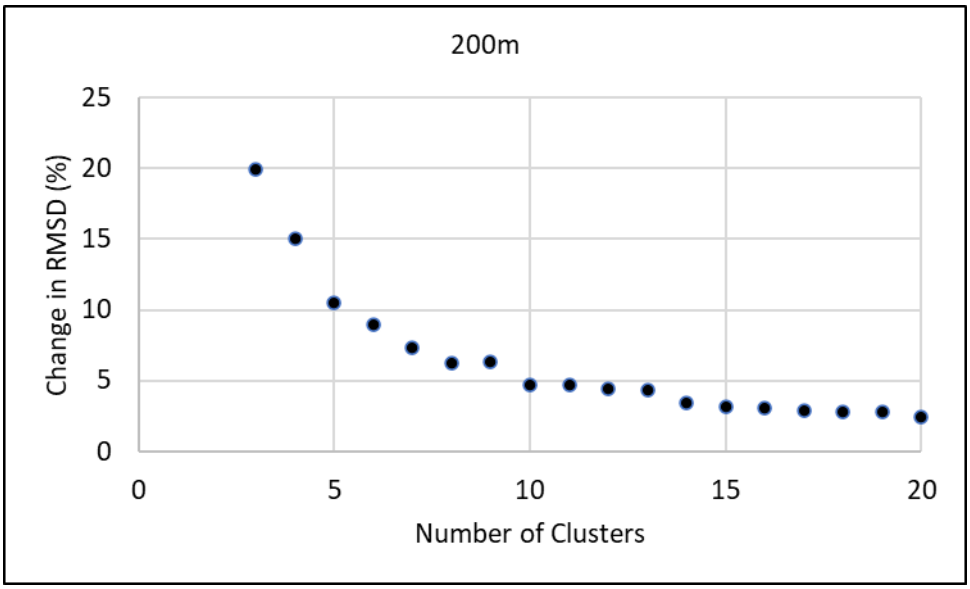


(**b**)

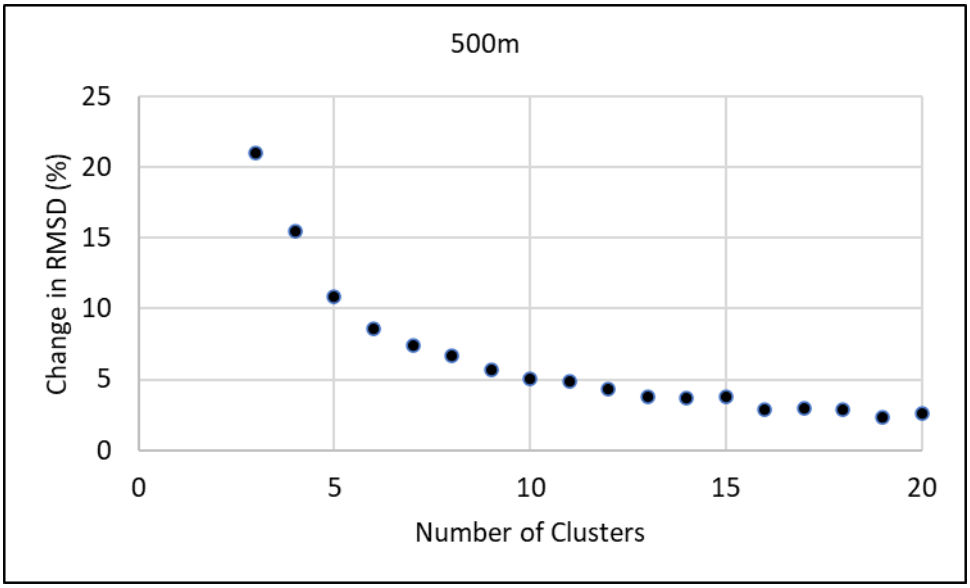
Figure S1. Average dust event PM_{10} values in Be'er Sheva based on location of air 48 h (**a**) and 72 h (**b**) prior to arrival in Be'er Sheva. Based on 48 and 72-h back trajectories at 0m, 200m, and 500m. Minimum of 5 days.


0m
Change in RMSD (%)
25
20
15
10
5
0
0
5
10
15
20
Number of Clusters

(**a**)

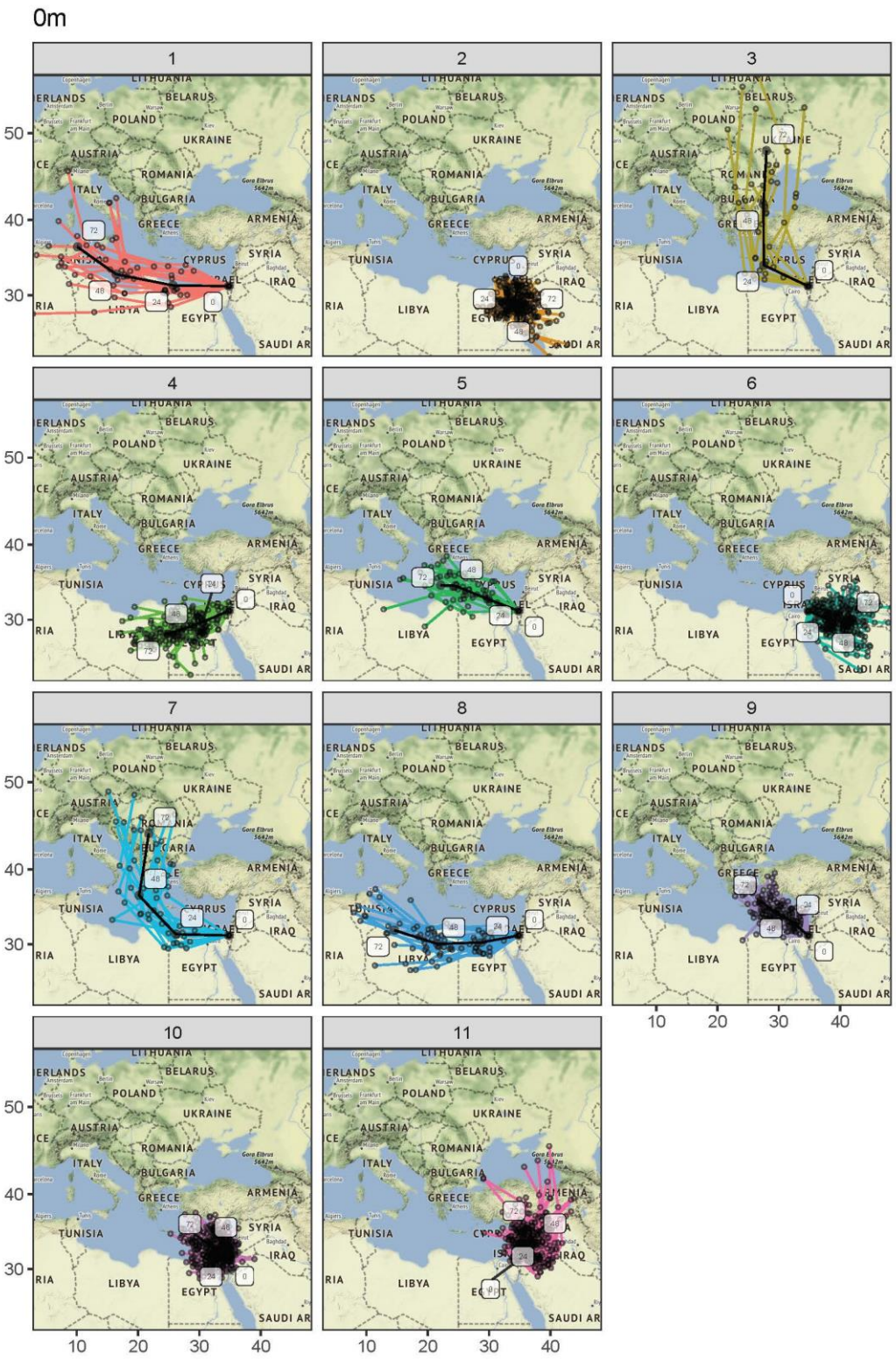

200m
Change in RMSD (%)
25
20
15
10
5
0
0
5
10
15
20
Number of Clusters

(**b**)

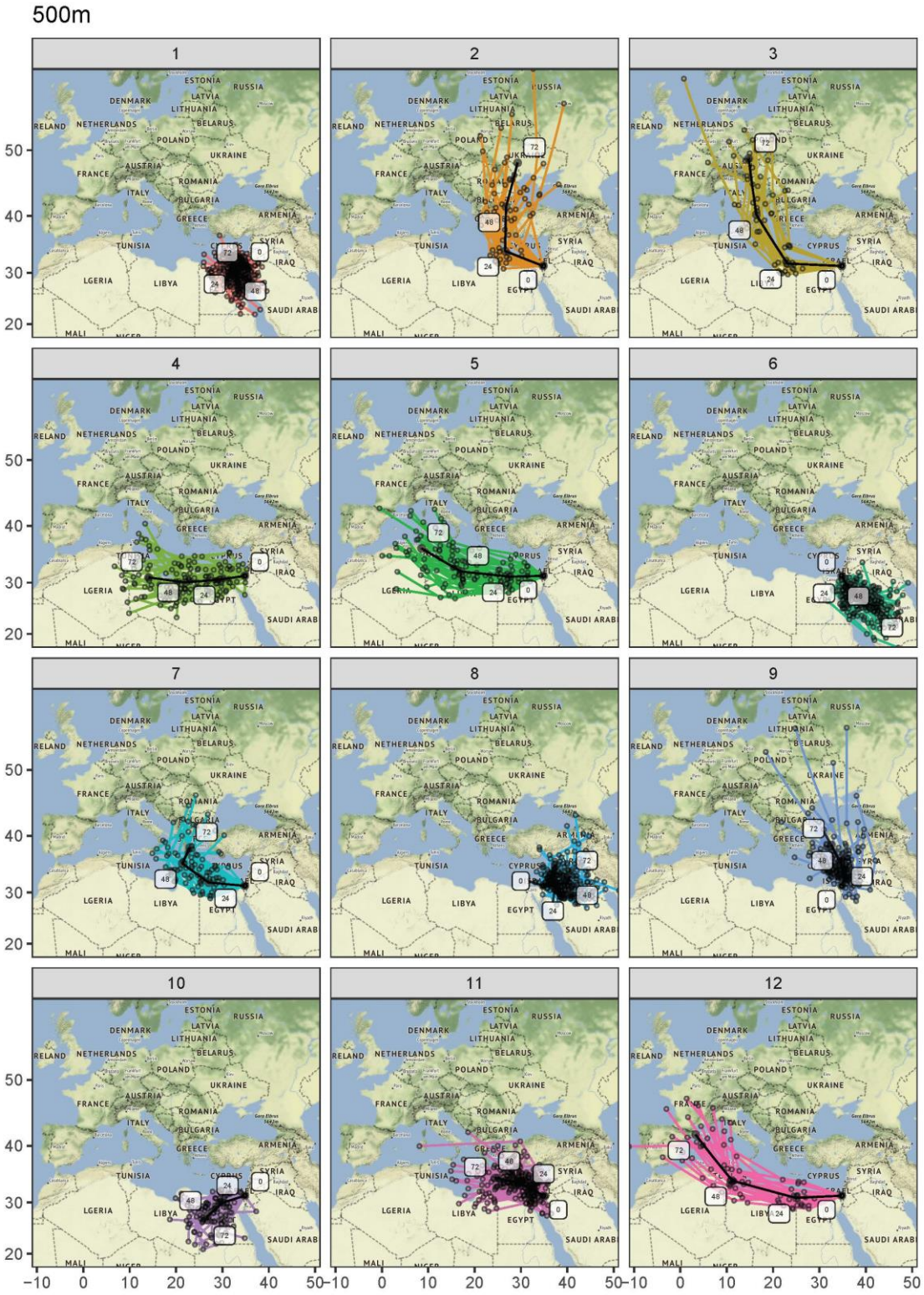


(**c**)

Figure S2. Percent change in root mean square deviation (RMSD) at 0 m (**a**), 200 m (**b**), and 500 m (**c**).


0m
1
2
3
4
5
6
7
8
9
10
11
LITHUANIA
BELARUS
POLAND
UKRAINE
AUSTRIA
ROMANIA
ITALY
BULGARIA
GREECE
ARMENIA
CYPRUS
SYRIA
IRAQ
TUNISIA
LIBYA
EGYPT
SAUDI AR
50
40
30
10
20
30
40

(**a**)



(**b**)

Figure S3. 72-h back trajectory clusters at 0 m (**a**) and 500 m (**b**). Colored lines represent individual back trajectories for each dust day, and black lines depict the average coordinates for each cluster. .