

Supplementary Tables and Figures

Table S1. Statistics of Atmospheric inputs over Landsat 8 series.

Variable	min	mean	max	std	cv
<i>Lup</i>	0.66	1.08	1.37	0.17	16.06%
<i>Ldown</i>	1.29	2.70	5.70	0.76	28.41%
<i>t</i>	0.49	0.77	0.89	0.07	9.42%

S2 Time series Aerosol Optical Thickness statistics

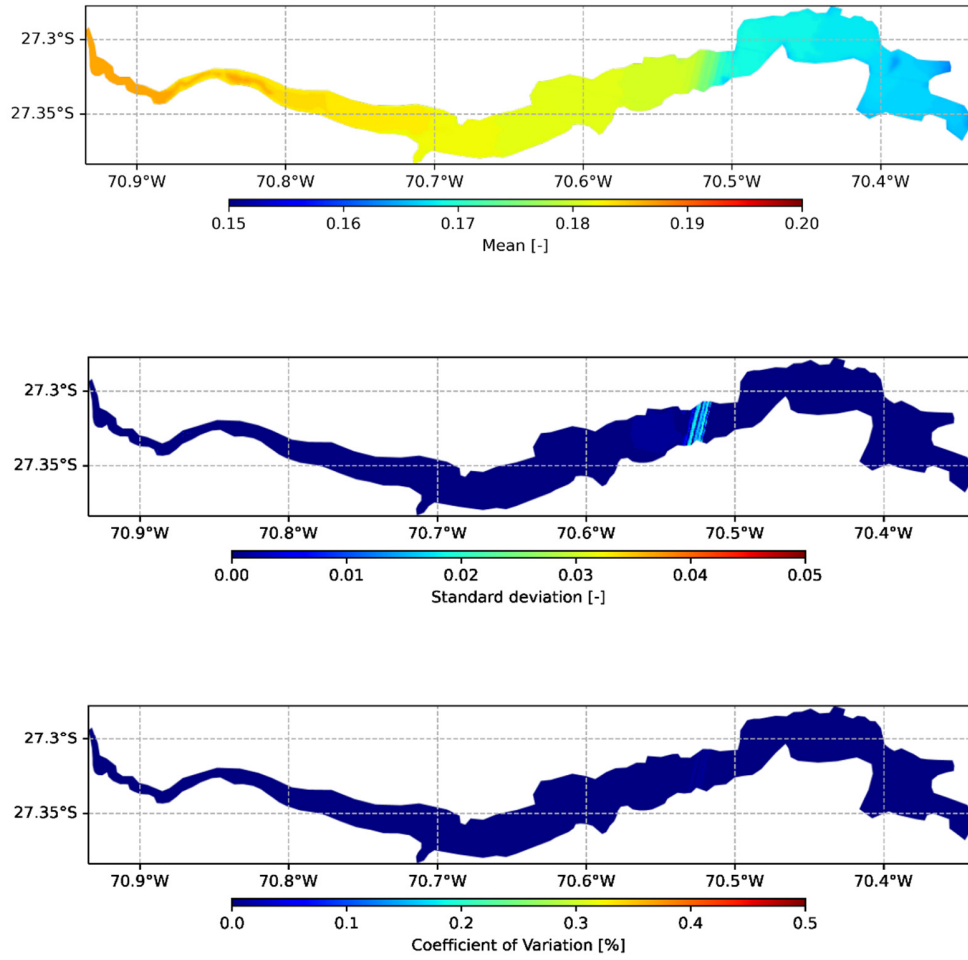


Figure S1. Mean, Standard Deviation and Coefficient of Variation of Aerosol Optical Thickness (AOT) retrieved from Sen2Cor for all images during study period over Copiapó valley.

S2 Time series Water Vapor statistics

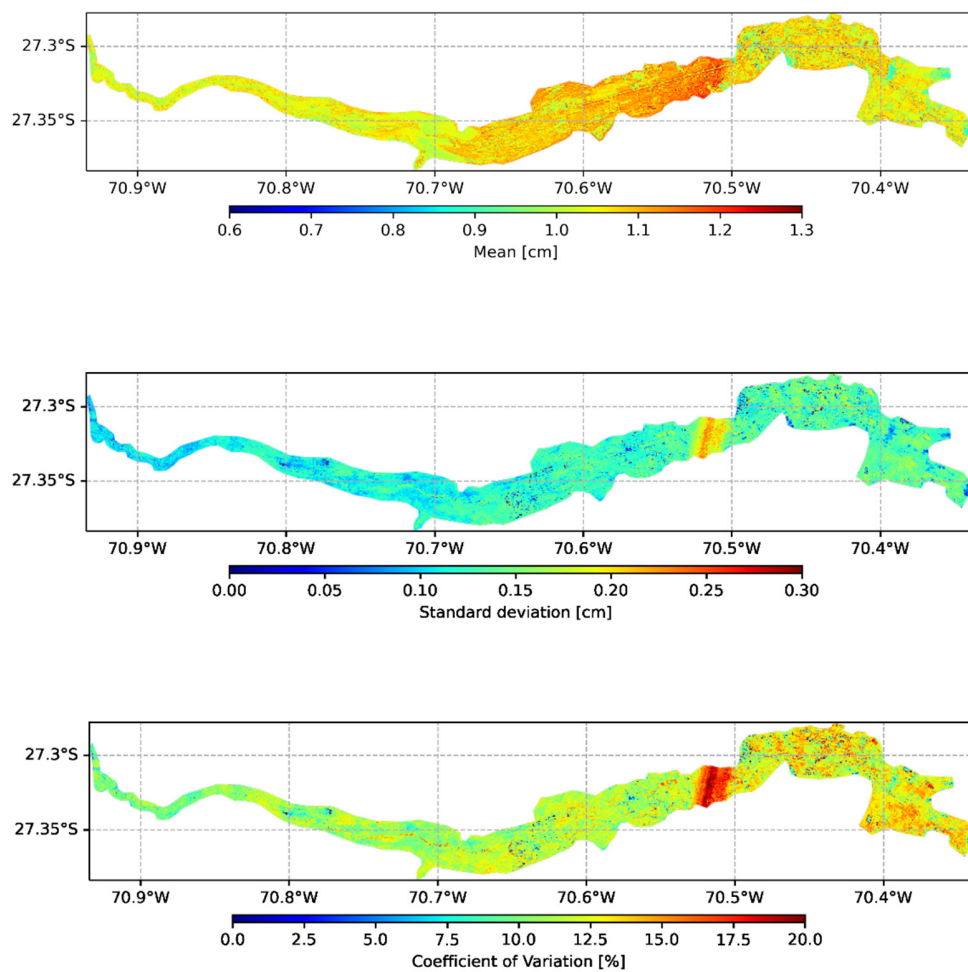


Figure S2. Mean, Standard Deviation and Coefficient of Variation of Water Vapor (WV) retrieved from Sen2Cor for all images during study period over Copiapó valley.

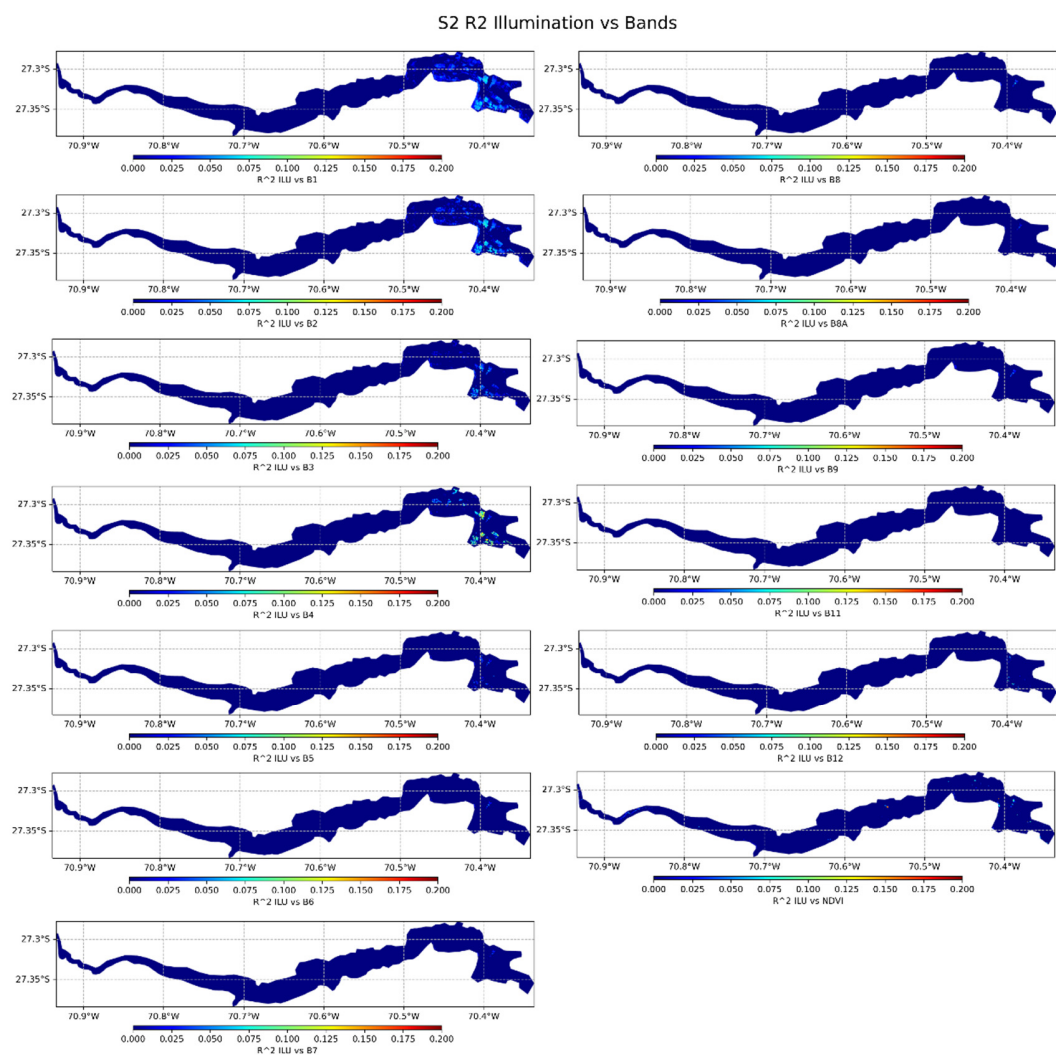


Figure S3. Coefficient of determination (R^2) between Illumination and Sentinel 2 Bands, NDVI during study period in Copiapó valley.