Supplementary material

Spread of SARS-CoV-2 through Latin America and the Caribbean region: a look from its economic conditions, climate and air pollution indicators

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Table S1. Total cases of COVID-19 for each city and it total in each country where it is located. In addition, the fraction that each city has in comparison to it country. The last column shows the infection rate by COVID-19 of each city.

Cities analyzed	Total cases	Total cases nationwide	Fraction of total cases nationwide in each city	Infection rate by covid-19 in each city (per 100,000 inhabitants)
Mexico City	24429	84627	28.87	275.88
Santo Domingo	4489	16908	26.55	173.92
San Juan	1070	3718	28.78	43.18
Bogotá	10388	26688	38.92	140.13
Guayaquil	9762	38571	25.31	367.82
Manaus	18293	465166	3.93	839.13
Lima	99050	148285	66.80	1023.88
São Paulo	60131	465166	12.93	493.85
Santiago	80504	94858	84.87	1286.62
Buenos Aires	8242	14702	56.06	269.08

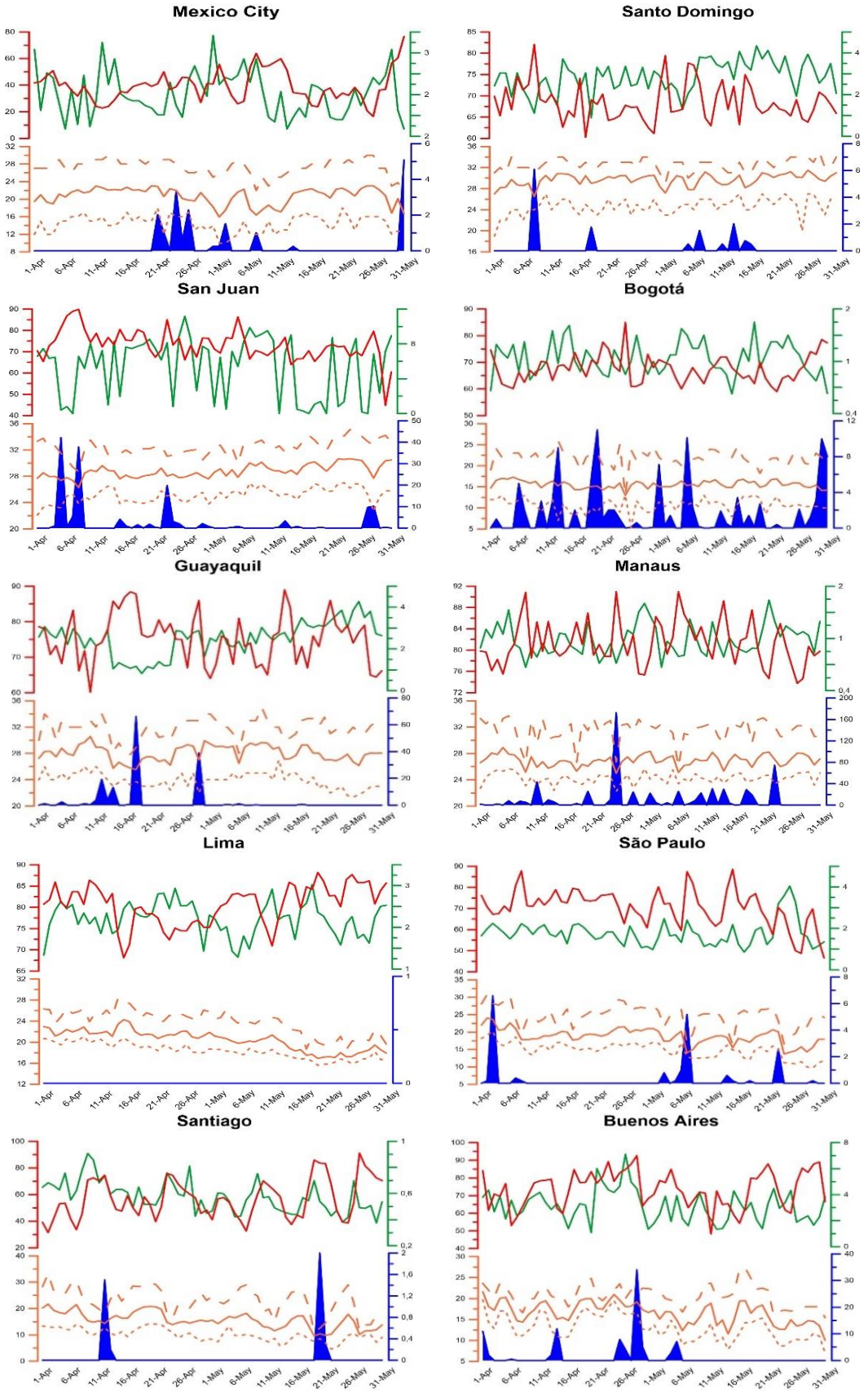

Fig. S1. Daily variation of the analyzed climate indicators over each city of Latin America and the Caribbean. Line colors represent, red: relative humidity (%); green: wind speed (m/s); blue: rainfall (mm); solid orange: average temperature (°C); short discontinuous orange: minimum temperature (°C); and long discontinuous orange: maximum temperature (°C).

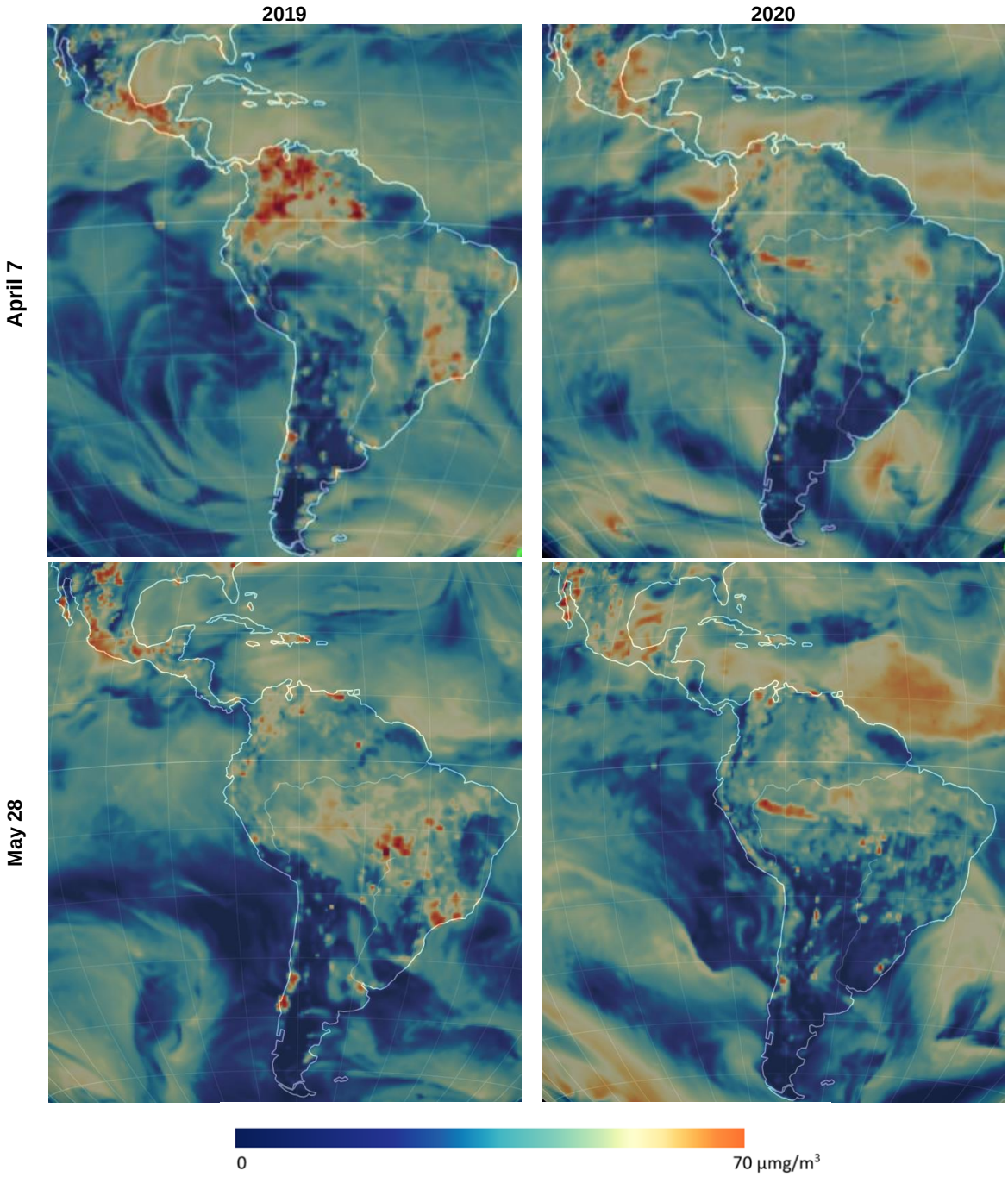

Fig. S2. Satellite images obtained on April 7 and on May 28 (2019 and 2020), showing PM_{10} levels over Latin America and the Caribbean (LAC) region. Source: Earth (CAMS/Copernicus/European Commission + ECMWF) (Copernicus Earth, 2020).

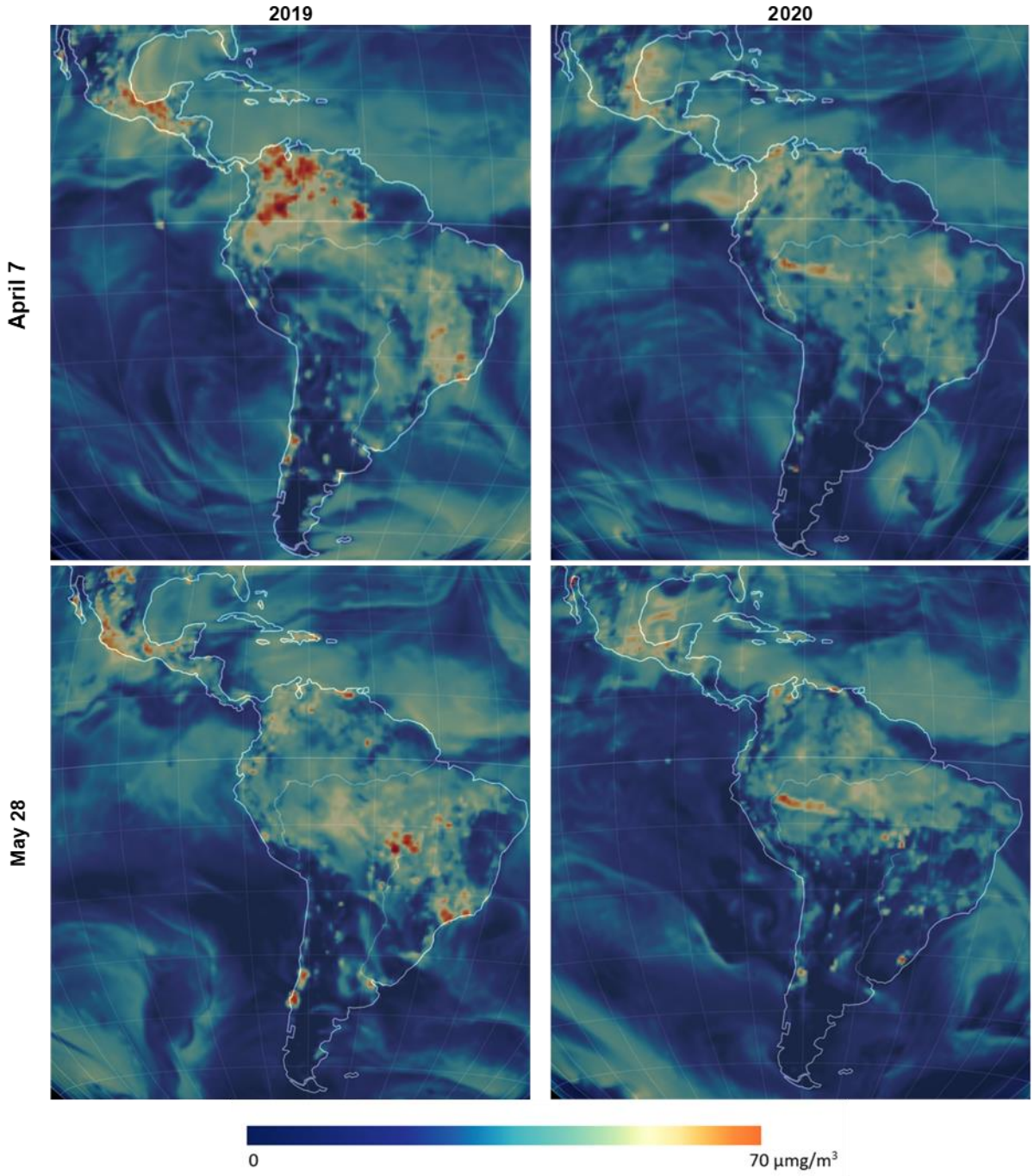

Fig. S3. Satellite images obtained on April 7 and on May 28 (2019 and 2020), showing $PM_{2.5}$ levels over Latin America and the Caribbean (LAC) region. Source: Earth (CAMS/Copernicus/European Commission + ECMWF) (Copernicus Earth, 2020).

Fig S2 and Fig S3 show the levels observed for the same day from 2019 and 2020 for PM_{10} and $PM_{2.5}$, respectively. By 2020, lower snow levels were observed and related to the pandemic lockdowns established in the different LAC countries. These observations are consistent with previous studies carried out during the lockdown measures established in São Paulo and Rio de Jainero in Brazil (Dantas et al. 2020; Nakada et al. 2020).

Table S2. Empirical results of the Pearson correlation coefficient (*r*) between socioeconomic variables and contagion rate for COVID-19 in LAC cities analyzed.

Socioeconomic variables	***r***	***p value***	**Confidence interval (%)**
Gini index	0.51	0.1354	86.5
Urban poverty rate*	-0.77	0.0149	98.5
Urban extreme poverty rate*	-0.79	0.0112	98.9

*Correlation for poverty and extreme poverty does not consider the city of San Juan (Puerto Rico), because ELAC did not report its data ECLAC, 2020.

References

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