Supplementary Materials: Spatial Distribution of *Aedes aegypti* Oviposition Temporal Patterns and Their Relationship with Environment and Dengue Incidence

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Table S1. List of Sentinel 2 scenes used.

| Period	Date	Scene name	Cloud %
2017/2018	2017-11-14	S2B_MSIL1C_20171114T142029_N0206_R010_T20JLL_20171114T185810	0.0
	2017-12-14	S2B_MSIL1C_20171214T142029_N0206_R010_T20JLL_20171214T173517	0.0
	2018-01-15	S2A_MSIL1C_20180115T141041_N0206_R110_T20JLL_20180115T173441	0.0
	2018-02-14	S2A_MSIL1C_20180214T141041_N0206_R110_T20JLL_20180214T203900	0.0
	2018-03-21	S2B_MSIL1C_20180321T141039_N0206_R110_T20JLL_20180321T173031	0.0
2018/2019	2018-11-14	S2A_MSIL1C_20181114T142031_N0207_R010_T20JLL_20181114T175244	1.0
	2018-12-14	S2A_MSIL1C_20181214T142031_N0207_R010_T20JLL_20181214T173648	1.0
	2019-01-20	S2A_MSIL1C_20181214T142031_N0207_R010_T20JLL_20181214T173648	5.0
	2019-02-14	S2A_MSIL1C_20181214T142031_N0207_R010_T20JLL_20181214T173648	0.0
	2019-03-24	S2A_MSIL1C_20190324T142041_N0207_R010_T20JLL_20190324T205705	6.0
2019/2020	2019-11-29	S2A_MSIL1C_20190324T142041_N0207_R010_T20JLL_20190324T205705	9.0
	2019-12-09	S2A_MSIL1C_20191209T141731_N0208_R010_T20JLL_20191209T173854	1.0
	2020-01-28	S2A_MSIL1C_20200128T141651_N0208_R010_T20JLL_20200128T173915	0.0
	2020-02-12	S2B_MSIL1C_20200212T141649_N0209_R010_T20JLL_20200212T174151	7.0
	2020-03-20	S2B_MSIL1C_20200320T141049_N0209_R110_T20JLL_20200320T173058	0.0
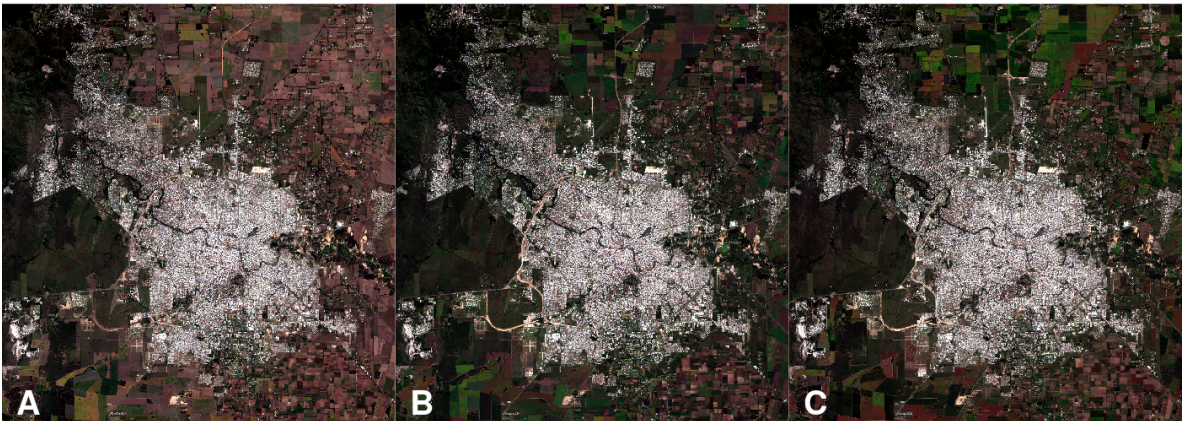
Figure S1. Natural color Sentinel 2 band combinations for years 2017-2018 (A), 2018-2019 (B) and 2019-2020 (C) for Córdoba city and surroundings (RBG 4,3,2).
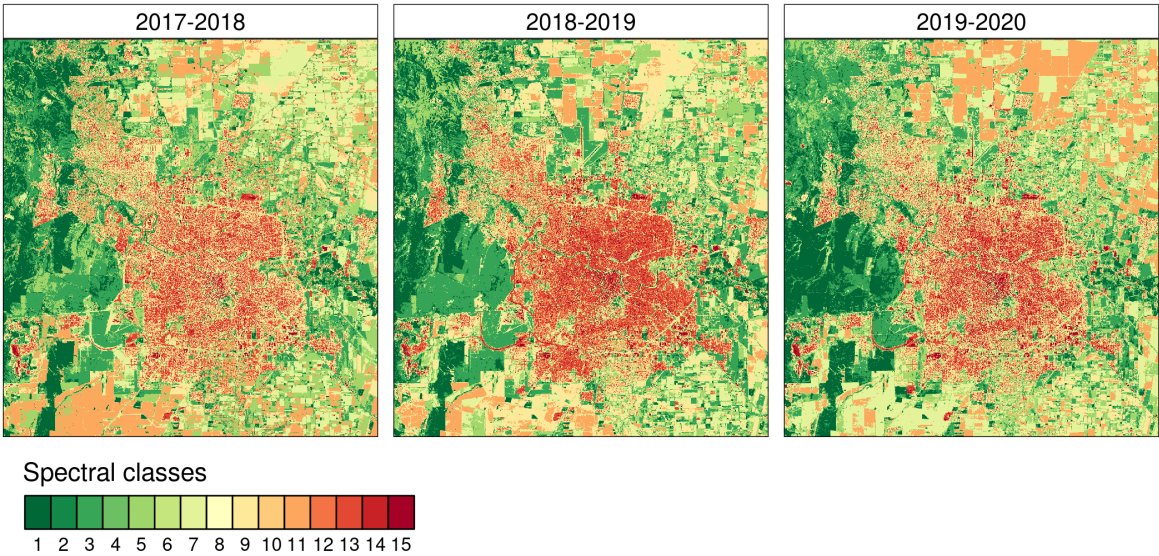

Figure S2. Unsupervised classification for years 2017-2018, 2018-2019 and 2019-2020 for Córdoba city and surroundings.

Table S2. Variables derived from satellite image analysis used for modeling the cluster type in Córdoba (Argentina).

| Variable	Description	Example name
EVI Average	Average of Enhanced Vegetation Index (EVI) in an area of 50 or 100 m radio.	evi_av_9
EVI Standard Deviation	Standard deviation of Enhanced Vegetation Index (EVI) in an area of 50 or 100 m radio.	evi_sd_9
LSWI Average	Average of Land Surface Water Index (LSWI) in an area of 50 or 100 m radio.	lswi_av_9
LSWI Standard Deviation	Standard deviation of Land Surface Water Index (LSWI) in an area of 50 or 100 m radio.	lswi_sd_9
NDBI Average	Average of Normalized Difference Built-up Index (NDBI) in an area of 50 or 100 m radio.	ndbi_av_9
NDBI Standard Deviation	Standard deviation of Normalized Difference Built-up Index (NDBI) in an area of 50 or 100 m radio.	ndbi_sd_9
NDVI Average	Average of Normalized Difference Vegetation Index (NDVI) in an area of 50 or 100 m radio.	ndvi_av_9
NDVI Standard Deviation	Standard deviation of Normalized Difference Vegetation Index (NDVI) in an area of 50 or 100 m radio.	ndvi_sd_9
NDWI Average (McFeters)	Average of Normalized Difference Water Index (NDWI) in an area of 50 or 100 m radio.	ndwi_mf_av_9
NDWI Standard Deviation (McFeters)	Standard deviation of Normalized Difference Water Index (NDWI) in an area of 50 or 100 m radio.	ndwi_mf_sd_9
NDWI Average (Xu)	Average of Normalized Difference Water Index (NDWI) in an area of 50 or 100 m radio.	ndwi_x_av_9
NDWI Standard Deviation (Xu)	Standard deviation of Normalized Difference Water Index (NDWI) in an area of 50 or 100 m radio.	ndwi_x_sd_9
Angular Second Moment (ASM)	Angular second moment estimated over a synthetic panchromatic band in an area of 50 or 100 m radio.	ASM_9
Contrast	Contrast estimated over a synthetic panchromatic band in an area of 50 or 100 m radio.	Contr_9
Correlation	Correlation estimated over a synthetic panchromatic band in an area of 50 or 100 m radio.	Corr_9
Entropy	Entropy estimated over a synthetic panchromatic band in an area of 50 or 100 m radio.	Entr_9
Inverse Difference Moment (IDM)	Inverse difference moment estimated over a synthetic panchromatic band in an area of 50 or 100 m radio.	IDM_9
Richness	Number of different land cover classes in an area of 50 or 100 m radio.	rich_9
Interspertion	Proportion or cells belonging to land cover classes different to that of the central pixel in an area of 50 or 100 m radio.	intersp_9
Mode	Most common land cover class in an area of 50 or 100 m radio.	mode_9
Diversity Simpson	Simpson diversity index estimated over land cover classes in an area of 50 or 100 m radio.	Simpson_9
Diversity Shannon	Shannon diversity index estimated over land cover classes in an area of 50 or 100 m radio.	Shannon_9
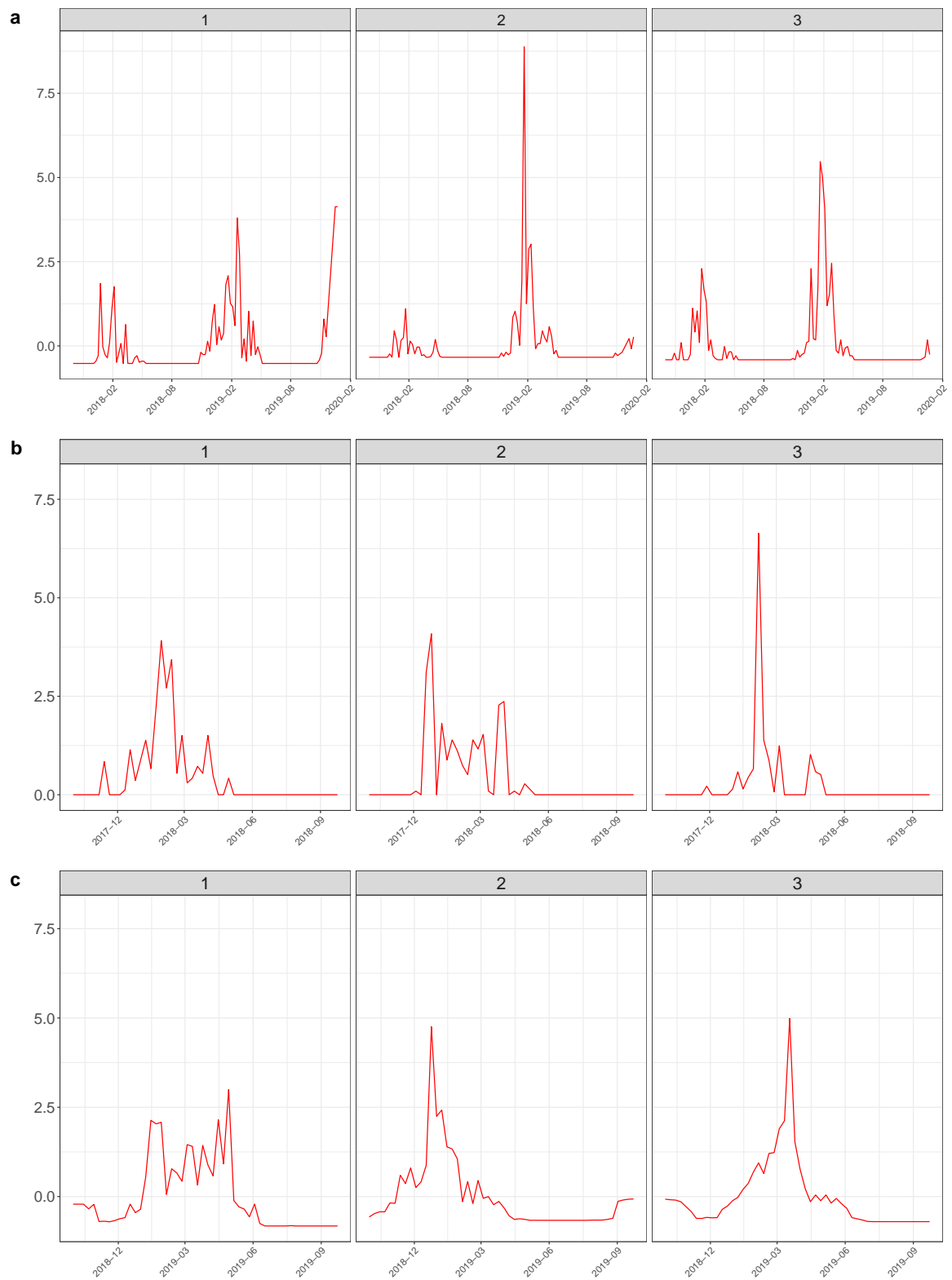
Figure S3. Centroid time series of the clusters obtained for a) the full series, b) 2017-2018 and c) 2018-2019. Values are normalized.

Table S3. Clustering comparisons by means of dissimilarity measures.

comparison	euclidean	manhattan	comemberships	symdiff	Rand	VI
			Dissimilarity measure			
Full-1718	12.649	160	101.094	5110	0.503	1.825
Full-1819	11.662	136	99.94	4994	0.492	1.583
1718-1819	13.191	174	101.232	5124	0.505	1.851
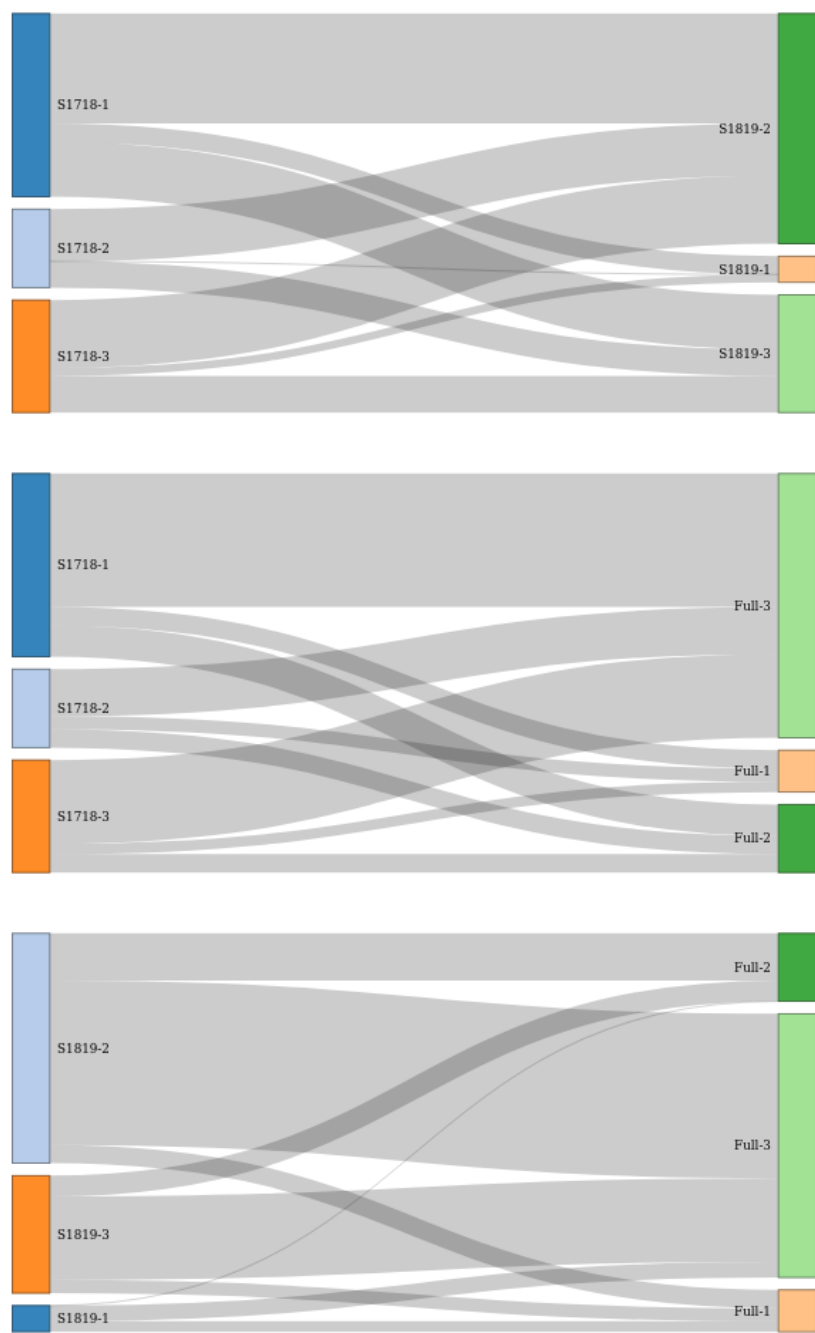
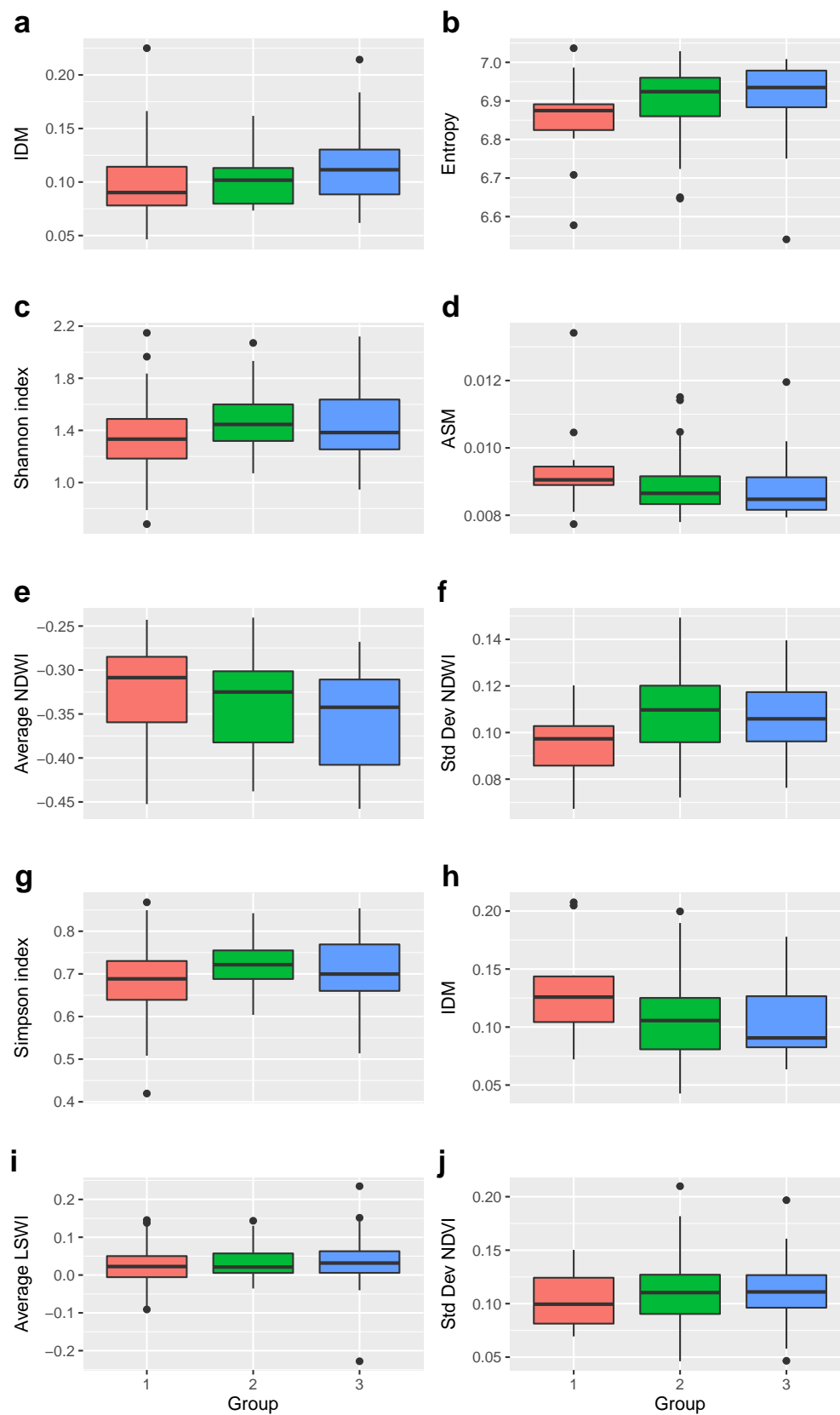**Figure S4.** Clusters flow among different periods.

Figure S5. Comparison clusters in terms of the five most important variables for models fitted with 50 m radio buffer areas in 2017-2018 (a, c, e, g, i) and 2018-2019 (b, d, f, h, j). References: IDM, inverse difference moment; ASM, angular second moment; NDWI, normalized difference water index; LSWI, land surface water index; NDVI, normalized difference vegetation index; Std Dev, standard deviation.
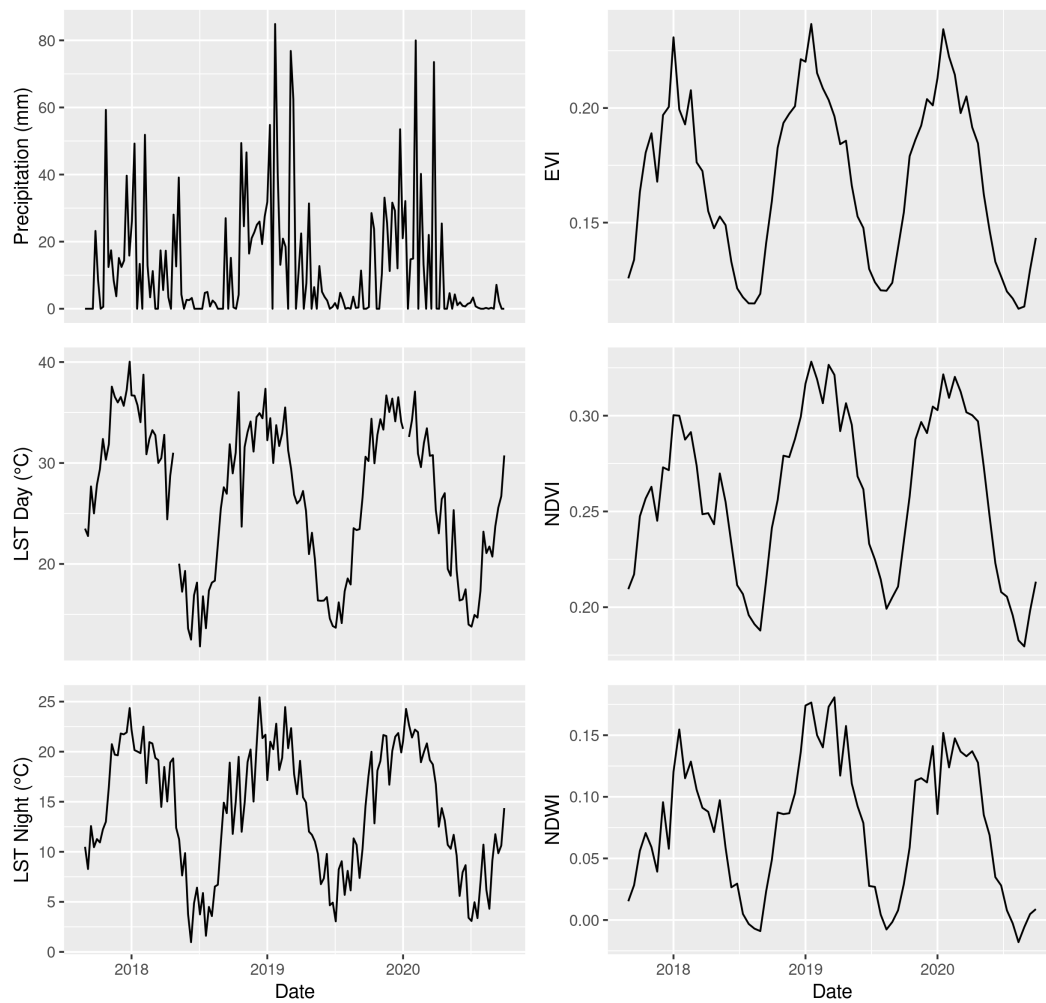
Figure S6. Time series of precipitation, LST day and night, EVI, NDVI and NDWI for the period 2017-2020 in Córdoba city, Argentina.
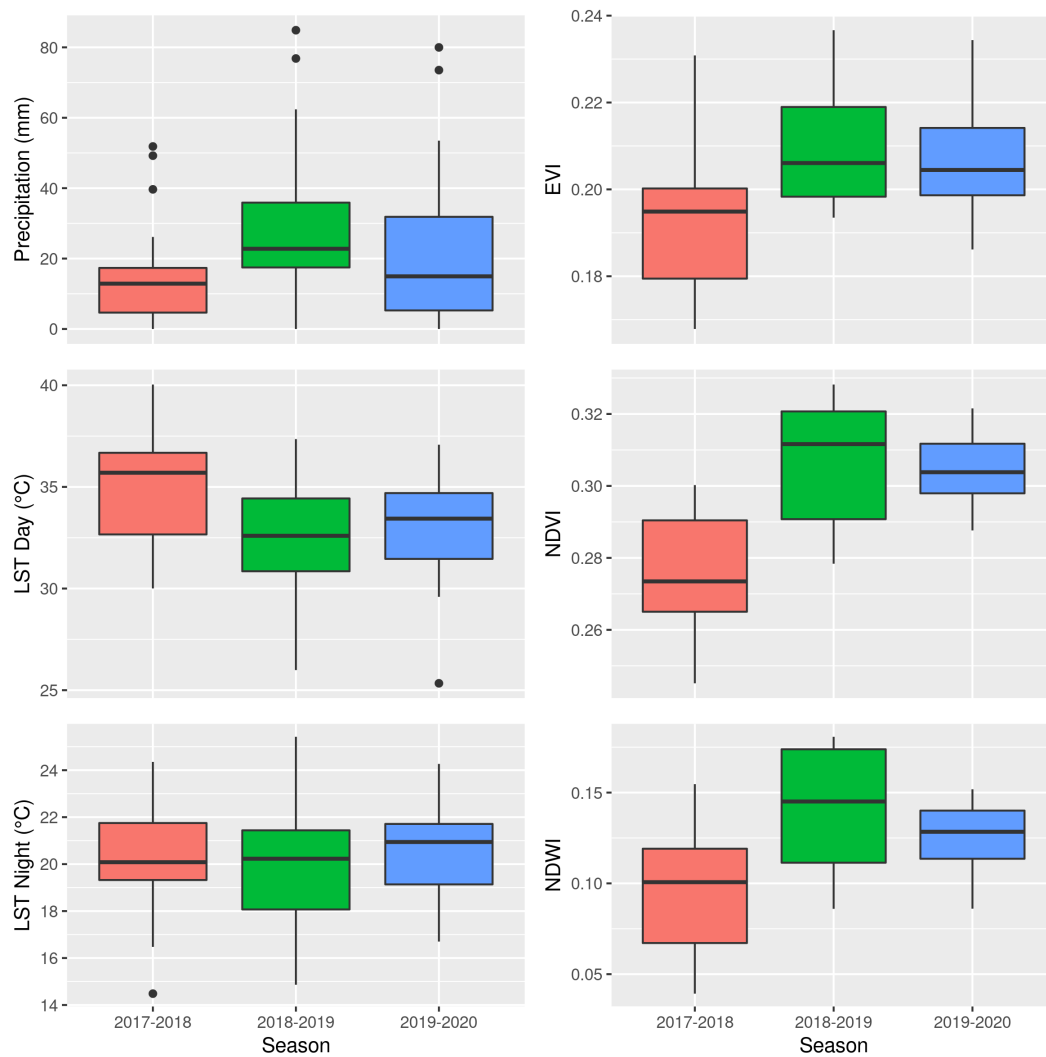
Figure S7. Comparison of precipitation, LST day and night, EVI, NDVI and NDWI for the core mosquito season (November to March) in the periods 2017-2018 and 2018-2019 and 2019-2020 in Córdoba city, Argentina.