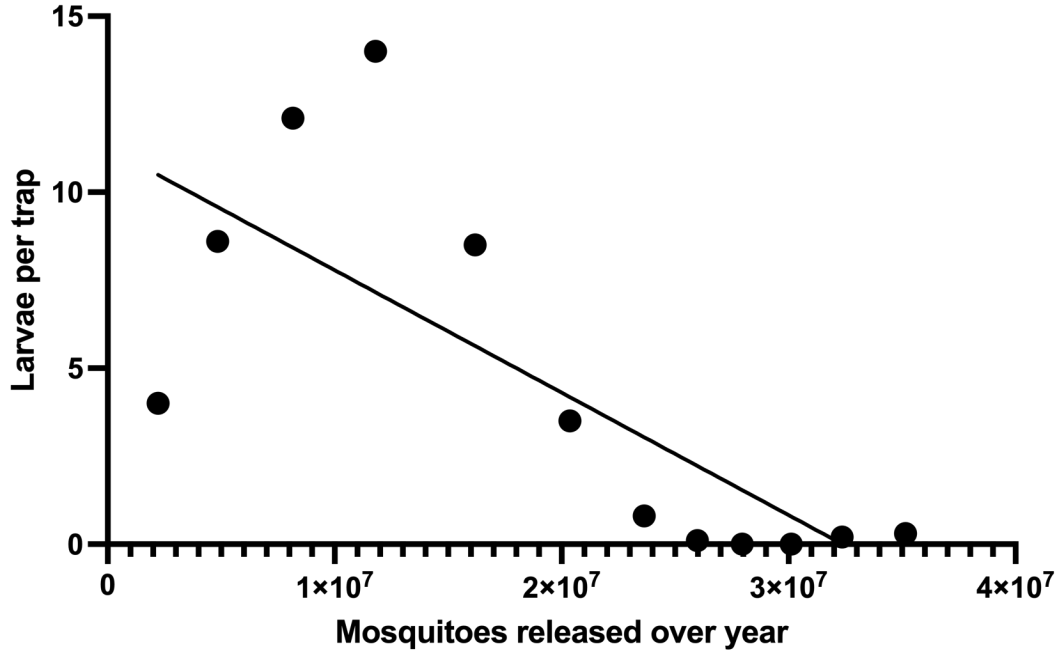

Figure S1. Correlation between releases of NVC sterile male mosquitoes and viable progeny. A linear regression analysis was performed to verify the dependence between mean of viable progeny and amount of NVC mosquitoes released. $P < 0.005$, $R^2 = 0.567$.

Table S2. Climate and demographic characteristics of Ortigueira and the neighboring cities (Source: Brazil population census).

City	Territorial area (Km2)	Population	Demographic density (inhabitants/km2)	HDI*	GDP per capita (reais)	Temperature variation	Umidity	Rain preciptation	Climate**	Bioma	Altitude (meters)
Apucarana	558,389	134,996	216	0,748	25,602	20,1-21	70-75	1,700	STHS	Pluvial	860
Grandes Rios	314,198	5,618	21	0,658	20,909	20,1-21	70-75	1,700	STHS	Pluvial	700
Imbaú	330,703	13,111	34	0,622	16,574	18,1-19	75-80	1,700	STHS	Araucária	940
Londrina	1652,569	569,733	307	0,778	37,912	21,1-22	70-75	1,700	STHS	Pluvial	610
Marilândia do Sul	384,424	8,836	23	0,691	36,487	20,1-21	70-75	1,700	STHS	Pluvial	760
Mauá da Serra	108,324	10,601	79	0,652	29,157	19,1-20	70-75	1,700	STHS	Araucária	1030
Ortigueira	2429,564	22,141	10	0,609	131,023	19,1-20	75-80	1,700	STHS	Araucária	750
Tamarana	472,155	14,797	26	0,621	20,244	20,1-21	70-75	1,700	STHS	Pluvial	750
Telêmaco Borba	1382,861	78,974	51	0,734	45,262	19,1-20	75-80	1,700	STHS	Araucária	740
Tibagi	2951,567	20,522	7	0,664	41,034	18,1-19	75-80	1,700	STMS	Campos	720

*HDI: Human development Index

**STHS: Subtropical climate, with hot summers; STMS: Subtropical climate, with mild summers

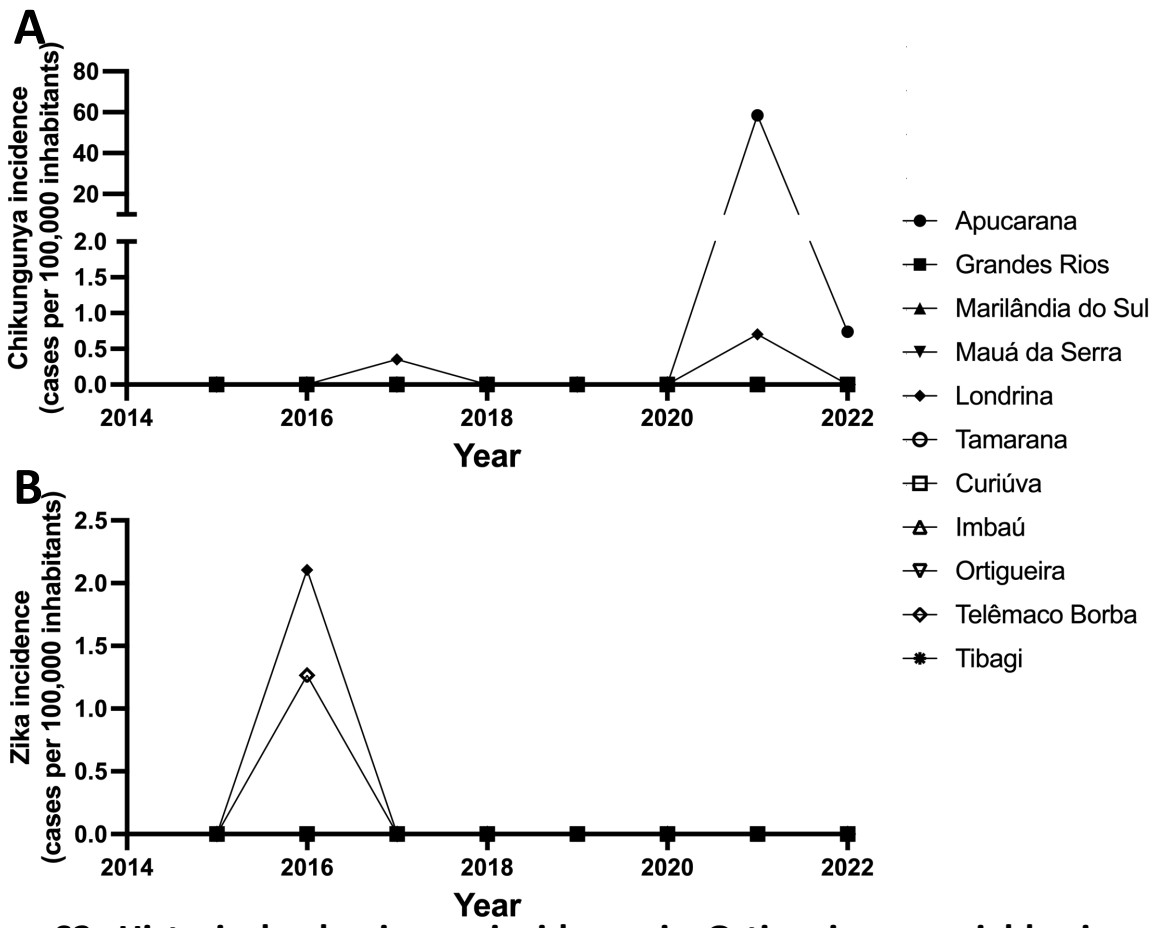

Figure S3. Historical arboviruses incidence in Ortigueira vs neighboring cities. Chikungunya (A) and Zika (B) incidence from 2014 to 2022 (displayed as cases per 100,000 inhabitants) in Ortigueira and other 10 neighboring cities, as indicated. Data source: Brazilian National Disease Surveillance System (SINAN).

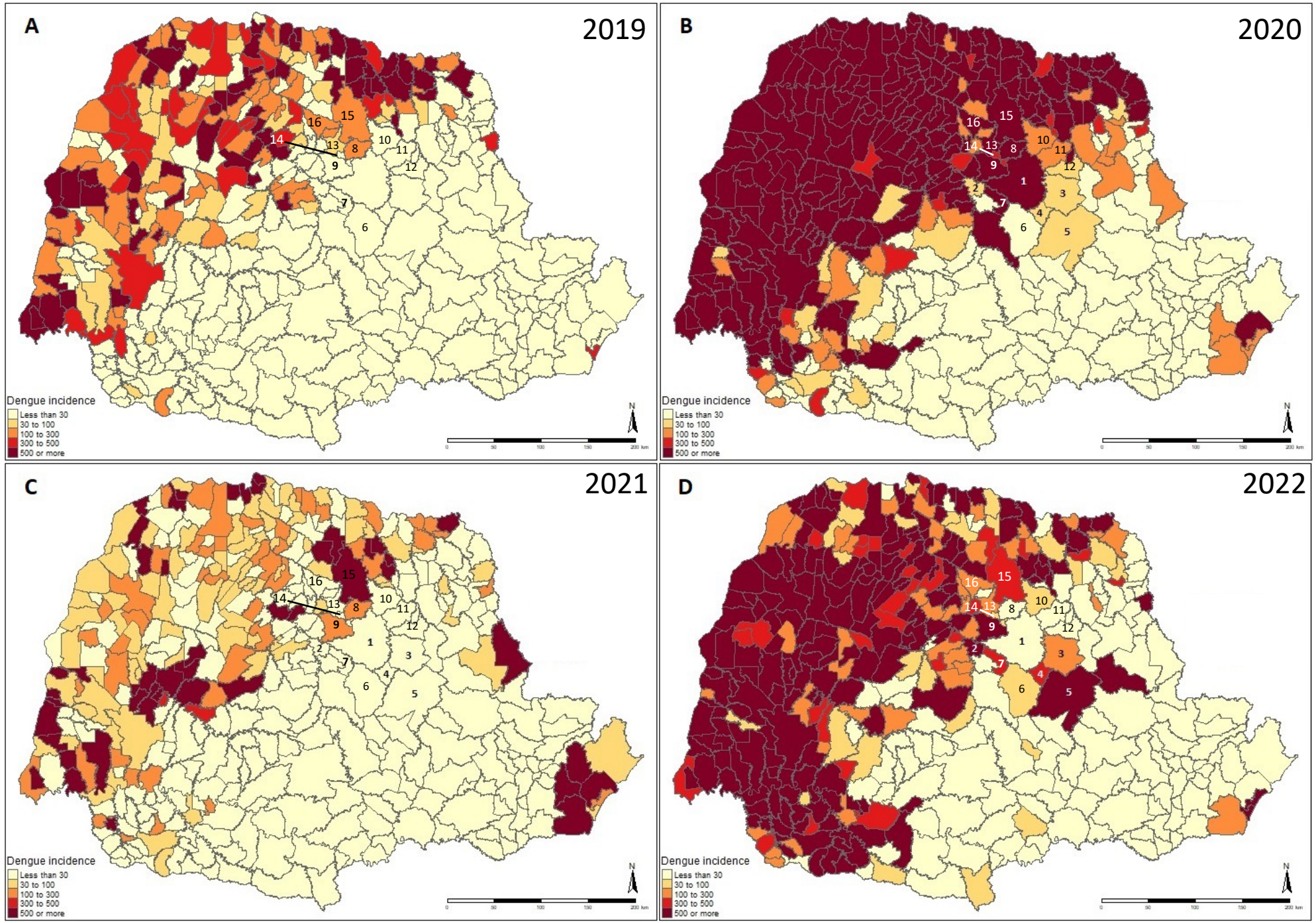

Figure S4. Map of Paraná, Brazil, showing the dengue incidence in each municipality in 2019 (A), 2020 (B), 2021 (C) and 2022 (D).