

Supplementary Material

Table S1. Population growth in the tropical climate regions in Mexico by size of population center from 1980 to 2050.

year	Size of population centers (inhabitants)			R ² adjusted
	Rural	Peri-urban	Urban	
1980	8,023,190	2,558,578	4,142,450	
1990	9,056,281	3,383,737	6,532,060	
2000	9,780,392	4,078,202	8,605,378	Rural=0.990
2010	10,488,105	4,877,022	10,607,576	Peri-
2020	11,154,843	5,413,067	12,221,174	urban=0.98
2030	11,585,991	5,851,721	13,617,086	Urban=0.996
2040	11,955,023	6,245,739	14,857,283	
2050	12,270,890	6,599,662	15,959,135	

Bold letters are population projections. The unmarked letters are historical data obtained from the corresponding population censuses [1].

Due to the lack of disaggregated information from official sources, we calculated our own population growth projections of population centers by size. A simple linear regression was used due to lack of information on other variables needed to project growth more accurately.

The simple linear regression is based on the behavior of the historical data, which presented adjusted R² values greater than 0.900. For this reason, the projections are considered reliable. Additionally, comparing with the total population growth of the tropical climate region reported by CONAPO (Spanish acronym for National Population Council) projected to the year 2050 up to 34,712,336 inhabitants [2], our projections were 34,829,687 inhabitants, that is only 0.3% higher than CONAPO. Regarding growth by location type, our results show an increasing population tendency in urban areas and a decreasing tendency in rural areas, like the projections tendencies reported by the United Nations [3].

Table S2. Projection of the population growth in the tropical climate regions in Mexico from 2020 to 2050

year	Projection of the population growth		
	Rural	Peri-urban	Urban
2020	11,154,843	5,413,067	12,221,174
2021	11,197,958	5,456,932	12,360,765
2022	11,241,073	5,500,798	12,500,356
2023	11,284,187	5,544,663	12,639,948
2024	11,327,302	5,588,529	12,779,539
2025	11,370,417	5,632,394	12,919,130
2026	11,413,532	5,676,260	13,058,721
2027	11,456,646	5,720,125	13,198,312
2028	11,499,761	5,763,991	13,337,904
2029	11,542,876	5,807,856	13,477,495
2030	11,585,991	5,851,721	13,617,086
2031	11,622,894	5,891,123	13,741,106
2032	11,659,797	5,930,525	13,865,125
2033	11,696,701	5,969,927	13,989,145
2034	11,733,604	6,009,328	14,113,165
2035	11,770,507	6,048,730	14,237,184
2036	11,807,410	6,088,132	14,361,204
2037	11,844,314	6,127,534	14,485,224
2038	11,881,217	6,166,935	14,609,244
2039	11,918,120	6,206,337	14,733,263
2040	11,955,023	6,245,739	14,857,283
2041	11,986,610	6,281,131	14,967,468
2042	12,018,197	6,316,523	15,077,654
2043	12,049,783	6,351,916	15,187,839
2044	12,081,370	6,387,308	15,298,024
2045	12,112,957	6,422,700	15,408,209
2046	12,144,543	6,458,092	15,518,394
2047	12,176,130	6,493,485	15,628,580
2048	12,207,717	6,528,877	15,738,765
2049	12,239,303	6,564,269	15,848,950
2050	12,270,890	6,599,662	15,959,135

Note: Annual growth projections were obtained with our population growth calculations

References

1. Instituto Nacional de Geografía y Estadística (INEGI) Censo de Población y Vivienda 2020 Available online: <https://www.inegi.org.mx/programas/ccpv/2020/#Microdatos> (accessed on 18 September 2023).
2. Consejo Nacional de población (CONAPO) Proyecciones de La Población de México y de Las Entidades Federativas 2016-2050 Available online: <https://datos.gob.mx/busca/dataset/proyecciones-de-la-poblacion-de-mexico-y-de-las-entidades-federativas-2016-2050> (accessed on 10 March 2021).
3. United Nations World Urbanization Prospects 2018 Available online: <https://population.un.org/wup/> (accessed on 16 August 2023).