

CLIMATE CHANGE RELATED RISKS VULNERABILITY ASSESSMENT

2020

Sustainability



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Glossary

GeoTIFF file: Image file format that allows the geographic components of images to be shown by incorporating geodetic systems and cartographic projections. Using this format the user can create maps from images. (Ariza, Pinilla , & Tovar , 1999).

CNRM-CM5: Earth system model designed to generate climate simulations. It allows to simulate the present climate and its variability in different time scales (months and centuries). It is used to generate experiments in the framework of the CMP5 "Coupled Model Intercomparison Project" that serves as the basis for the IPCC evaluation report. (National Centre for Meteorological Research, 2014)

Cryosphere: The cryosphere refers to the frozen components of the Earth (glaciers, sea ice and permafrost). (IPCC, 2019)

Radiative forcing: A measure of how the balance of the Earth's atmospheric system behaves when factors affecting the climate are altered. In the same way, it can be understood as the rate of change between the energy, coming from sunlight, absorbed by the Earth and the energy radiated back to space. (IPCC, 2007).

GHG: Greenhouse Gases

IPCC: Intergovernmental Panel on Climate Change

QGIS: Free software, Geographic Information System

RCP: Representative Concentration Pathways. Scenarios that include time series of emissions and concentrations of greenhouse gases (GHG), aerosols and chemically active gases, as well as land use. Each RCP provides only one of many possible scenarios that would lead to the specific radiative forcing characteristics and the path taken over time to achieve that result. (Data Distribution Centre, IPCC, n.d.)

RCP 8.5: Scenario that proposes the highest generation of GHG emissions, is commonly known as the "business as usual" scenario in which society makes no effort to reduce GHG emissions. Under this scenario, global temperature increases 4.3 °C above pre-industrial levels, by 2100 (Climate Nexus, n.d.).

RCP 4.5: It is the scenario with relatively ambitious emission reductions. In this case, emissions increase until 2040 and from there they begin to decrease. In this scenario, the temperature increase oscillates between 1.5 and 2 ° C above pre-industrial levels. (TCFD, 2017).

RCP 2.6: It is the scenario where there are very few GHG emissions. In this scenario, it is necessary for emissions to begin to decrease as of 2020, reaching zero in 2100. Under this scenario, the global temperature would remain below 2 ° C (TCFD, 2017).

Introduction

The effects of climate change bring relevant impacts to the infrastructure in short, medium and long term, therefore implementing a vulnerability assessment of our properties in the face of different climate change scenarios is crucial to identify the physical and transition risks related to this phenomenon and achieve an early transition to resilient buildings. In this sense, in January 2020, FUNO® began its vulnerability assessment to climate change risks, which is composed of three stages:

1. Climate change related risks identification:
This stage consisted in identifying transition and physical risks related to climate change, the latter were analysed based on the behaviour of temperature and precipitation in two-time horizons (2015-2039 and 2045-2069), two Representative Concentration Pathways (RCP 4.5 and RCP 8.5) and the current vulnerability of 534 properties to physical risks related to climate such as:
 - Heat waves
 - Tropical Cyclones
 - Floods
 - Droughts
 - Sea level rise
2. Physical, operational and financial impacts:
Based on the identification of climate change related risks, the possible physical and operational impacts to our properties were established, and were determined based on the key elements to maintain the operation of our properties such as: adequate infrastructure and water and energy supply. Likewise, this stage includes the identification of the financial implications associated with the physical and operational impacts on our properties.
3. Defining strategies towards a resilient portfolio
This last stage consists on defining and planning strategies that mitigate the physical and operational impacts related to climate change through the installation of technologies, updating of equipment and development of climate adaptation projects that allow our properties to achieve an early transition towards resilient buildings.

In that sense, this document shows the methodology, development and results derived from the first two stages of the FUNO® vulnerability assessment, and aims to communicate to our stakeholders the climate change related risks to our properties.

Methodology

For this assessment, we used the geographic information system QGIS to process GeoTIFF files that contain information on regional climate change scenarios obtained from the CNRM-CM5 climate model constructed by the Centre for Atmospheric Sciences of the National Autonomous Mexico's University (UNIATMOS, 2020). The data contained and processed in these images correspond to the monthly averages of the following climatic variables:

- Mean temperature
- Maximum temperature
- Minimum temperature

- Precipitation [mm]
- Precipitation change [%]

The changes in these variables were analysed throughout Mexico in two-time horizons (2015-2039 and 2045-2069) under two Representative Concentration Pathways, RCP 4.5 and RCP 8.5. These routes were chosen to be able to identify, on the one hand, the impacts of climate change in a scenario in which efforts to reduce emissions are zero and the increase in temperature exceeds 4 °C (RCP 8.5) and on the other hand the possible effects of climate change in a scenario where global efforts to reduce the concentration of GHG in the atmosphere are important and it is possible to limit the increase in temperature between 1.5 and 2 °C above pre-industrial levels (RCP 4.5).

Based on these scenarios and the variables described above, we defined maps using geographical coordinates of 534 properties. With the QGIS analysis tools, we identified the specific values of each variable at every property location, in order to identify the effect of changes in temperature and precipitation in our operations. These values were correlated with the current vulnerability and risk indicators of the National Risk Atlas of the following phenomena (CENAPRED, 2020):

- Heat waves
- Tropical Cyclones
- Floods
- Droughts

From the above, we obtained the vulnerability values associated with our properties. The number of properties exposed to each vulnerability category is shown in the following sections

Physical climate change related risks

Temperature

Temperature increasing as a consequence of climate change has a direct impact on hydrometeorological phenomena, because it increases their intensity and therefore the impacts on our properties.

In Annex I, shown the maps that correlate the location of our properties with the distribution of the mean, maximum and minimum temperature in Mexico in the face of the two analysed climate change scenarios.

In the next table, we shown the number of properties whose annual average, of mean, maximum and minimum temperature is between -10 to 46 °C in the two periods and Representative Concentration Pathways studied:

Period		RCP 4.5	RCP 8.5		RCP 4.5	RCP 8.5		RCP 4.5	RCP 8.5
2015-2039	Mean temperature (°C)	Number of properties		Maximum temperature (°C)	Number of properties		Minimum temperature (°C)	Number of properties	
	-10-3.9999	0	0	-10-3.9999	0	0	-10-3.9999	0	0
	4-17.9999	211	209	4-17.9999	0	0	4-17.9999	465	465
	18-31.9999	323	325	18-31.9999	496	496	18-31.9999	69	69
	32-45.9999	0	0	32-45.9999	38	38	32-45.9999	0	0
	≥46	0	0	≥46	0	0	≥46	0	0
2045-2069	Temperatura media (°C)	Number of properties		Maximum temperature (°C)	Number of properties		Minimum temperature (°C)	Number of properties	
	-10-3.9999	0	0	-10-3.9999	0	0	-10-3.9999	0	0
	4-17.9999	116	70	4-17.9999	0	0	4-17.9999	435	408

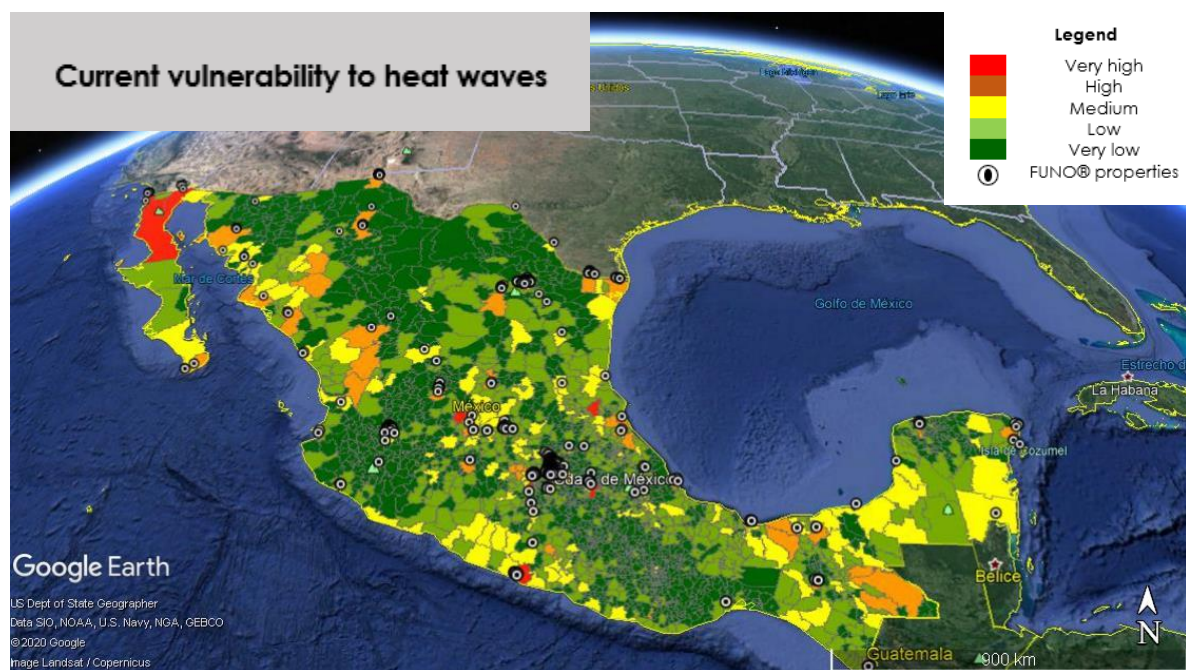
	18-31.9999	418	464	18-31.9999	485	475	18-31.9999	99	126
	32-45.9999	0	0	32-45.9999	49	59	32-45.9999	0	0
	≥46	0	0	≥46	0	0	≥46	0	0

In annex II we shown month by month the number of properties exposed to each temperature range.

Heat waves

A heat wave is defined as a period of excessive temperature that, combined with humidity, is maintained for several consecutive days (CENAPRED).

Based on the information and maps available on the website of the National Centre for Disaster Prevention of Mexico and its National Risks Atlas, the current vulnerability of our properties to heat waves is distributed as follows:



Vulnerability		Number of exposed properties
■	Very high	33
■	High	199
■	Medium	208
■	Low	61
■	Very low	33

The properties that currently face very high and high vulnerabilities to heat waves have a greater probability to be more vulnerable in the future because of the increase in temperature due to climate change. To identify the future vulnerability under climate change scenarios we made a correlation between current vulnerabilities and maximum temperature ranges equal to or greater than 32 °C under the analysed RCPs, getting the following results:

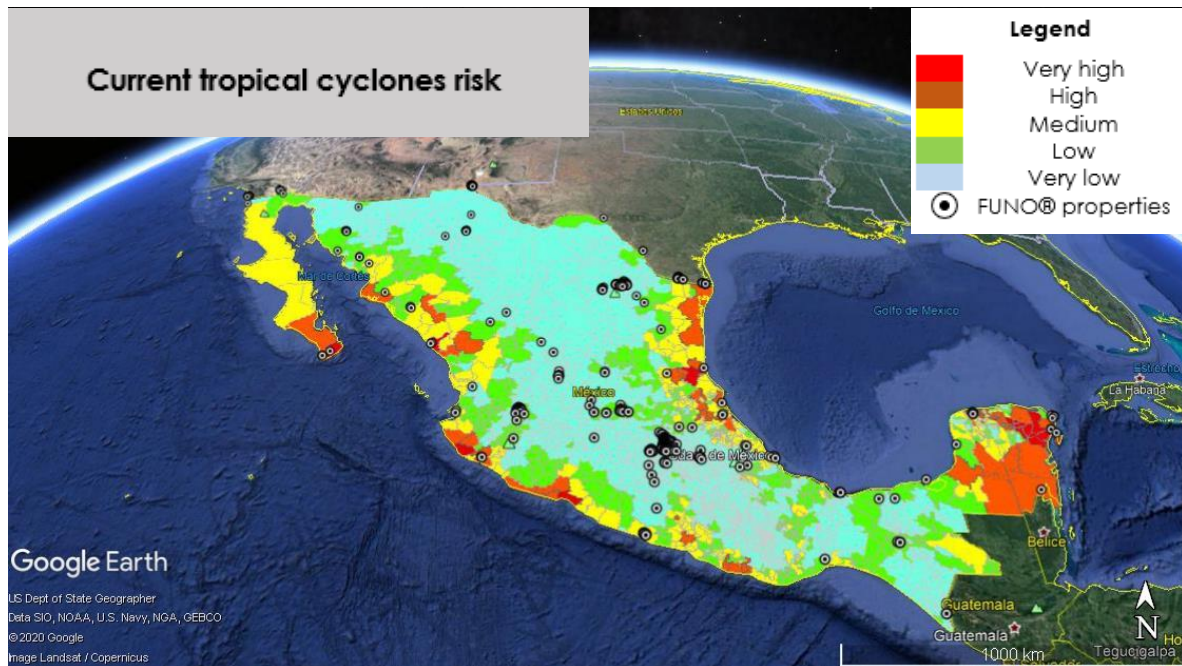
Number of properties with greater vulnerability to heat waves	2015-2039		2045-2069	
	RCP4.5	RCP 8.5	RCP 4.5	RCP 8.5
	224	233	250	257

Operational risks and financial impacts

Operational risks and impacts	Estimated financial impact	Adaptation and resilience strategies
Increased demand for air conditioning	\$1,272,367,413	<div style="display: flex; align-items: center;"> <div style="width: 10px; height: 10px; background-color: orange; margin-right: 5px;"></div> Low emissions air conditioning systems and upgrades¹ </div>
Increase in energy demand for air conditioning		

Tropical Cyclones

One of the most relevant effects of climate change is the increase in the intensity and frequency of extreme hydrometeorological phenomena, such is the case of tropical cyclones and hurricanes. According to the National Risk Atlas (CENAPRED, 2020), until 2015, the risk from these phenomena in Mexico was distributed as follows:



Risk	Number of properties currently exposed
Very high	8
High	30
Medium	41
Low	87
Very low	368

¹ Proposed strategy

As in the case of heat waves, the increase in temperature is one of the variables that directly affects the behaviour of tropical cyclones, since as oceanic temperature increases, the intensity and frequency of these phenomena will also increase. In this sense, the **79 properties** that are currently at very high, high and medium risk from tropical cyclones will be the most exposed to these phenomena at climate change scenarios.

Operational risks and financial impacts

Operational risks and impacts	Estimated financial impact	Adaptation and resilience strategies
Temporary loss of power supply	\$1,325,255,678	<ul style="list-style-type: none"> Strengthening of structure in coastal areas² Implementation of coastal barriers in coastlines²
Damage to infrastructure		
Temporary closure of the property due to damage		
Partial loss of property		

Precipitation

Precipitation variations

Climate change brings with it different variations in precipitation patterns (increase or decrease on the amount of precipitation) which directly affects the frequency and intensity of floods and droughts

Using RCP 4.5 and RCP 8.5, we identify the number of properties whose average annual precipitation and its percentage change are in ranges between 0 and 900 mm and -100 and 200% respectively, for the two analysed time horizons, getting the following results:

Period		RCP 4.5	RCP 8.5
2015-2039	Precipitation (mm)	Number of properties	
	0	0	0
	0.1-82.7272	476	469
	82.7273-164.4545	52	58
	164.4546-246.1818	6	7
	246.1819-327.9090	0	0
	327.9091-409.6363	0	0
	409.6364-491.3636	0	0
	491.3637-573.09	0	0
	573.10-654.8181	0	0
	654.8182-736.545	0	0
	736.546-818.27	0	0
	818.28-899.99	0	0
	900	0	0
2045-2069	Precipitation (mm)	Number of properties	
	0	0	0
	0.1-82.7272	480	477
	82.7273-164.4545	49	50
	164.4546-246.1818	5	7
	246.1819-327.9090	0	0
	327.9091-409.6363	0	0
	409.6364-491.3636	0	0
	491.3637-573.09	0	0
	573.10-654.8181	0	0
	654.8182-736.545	0	0
	736.546-818.27	0	0
	818.28-899.99	0	0
	900	0	0

² Proposed strategy

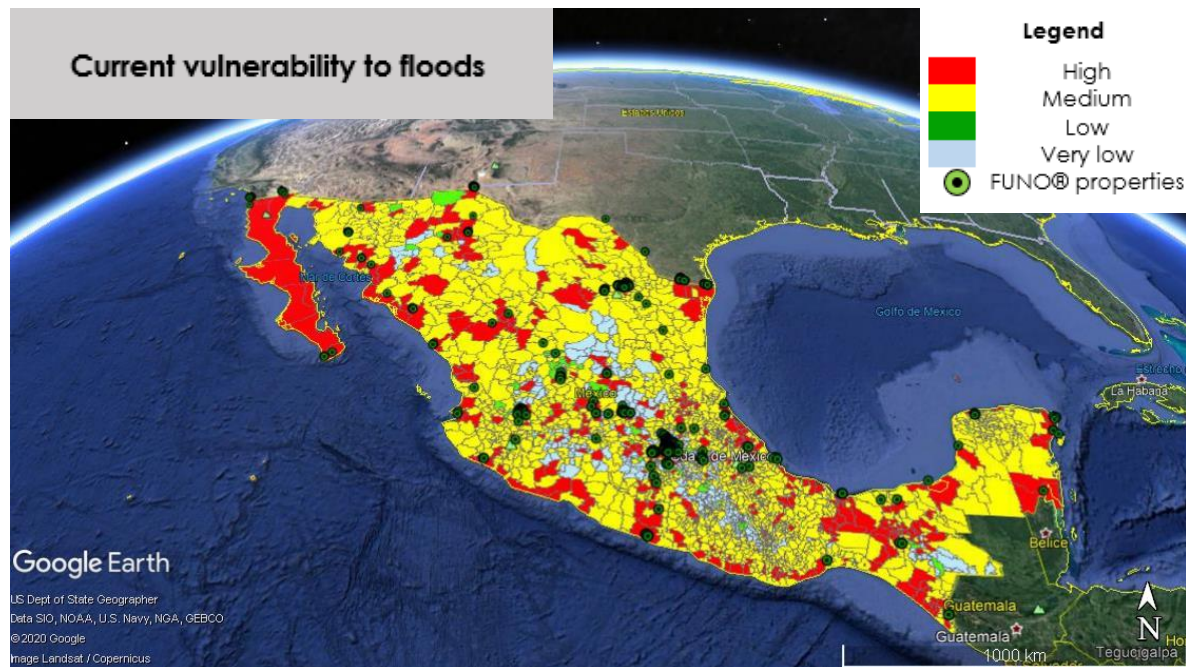
Period		RCP 4.5	RCP 8.5
2015-2039	Precipitation variation (%)	Number of properties	
	-100%	0	0
	-99% a -1%	426	452
	0%	2	0
	1% a 100%	106	82
	101%-150%	0	0
	151%-199%	0	0
	200%	0	0
2045-2069	Precipitation variation (%)	Number of properties	
	-100%	0	0
	-99% a -1%	476	412
	0%	0	1
	1% a 100%	58	121
	101%-150%	0	0
	151%-199%	0	0
	200%	0	0





Annex II shows month by month the number of properties exposed to precipitation ranges indicated above.

Floods

One of the most relevant climate change related risks for the infrastructure, and therefore for our properties, is the increasing in the frequency of floods. Many of the cities in which our properties are located do not have efficient drainage systems to discharge large amounts of precipitation, which means that, in the face of climate change scenarios with significant increases in precipitation, vulnerability to floods would be greater.

Based on National Risks Atlas data (CENAPRED, 2020), the vulnerability of our properties is currently distributed as follows:





	Vulnerability	Number of properties
	High	377
	Medium	147
	Low	9
	Very low	1

We made a correlation between the current vulnerability of our properties and the increase in precipitation under climate change scenarios, from this we obtained the following results:

Period		RCP 4.5	RCP 8.5
2015-2039	Flood vulnerability under climate change scenarios	Number of properties	
	High	144	363 ³
	Medium	271	94
	Low	109	76
	Very low	10	1
2045-2069	Flood vulnerability under climate change scenarios	Number of properties	
	High	137	151
	Medium	263	258
	Low	124	117
	Very low	10	8

Operational risks and financial impacts

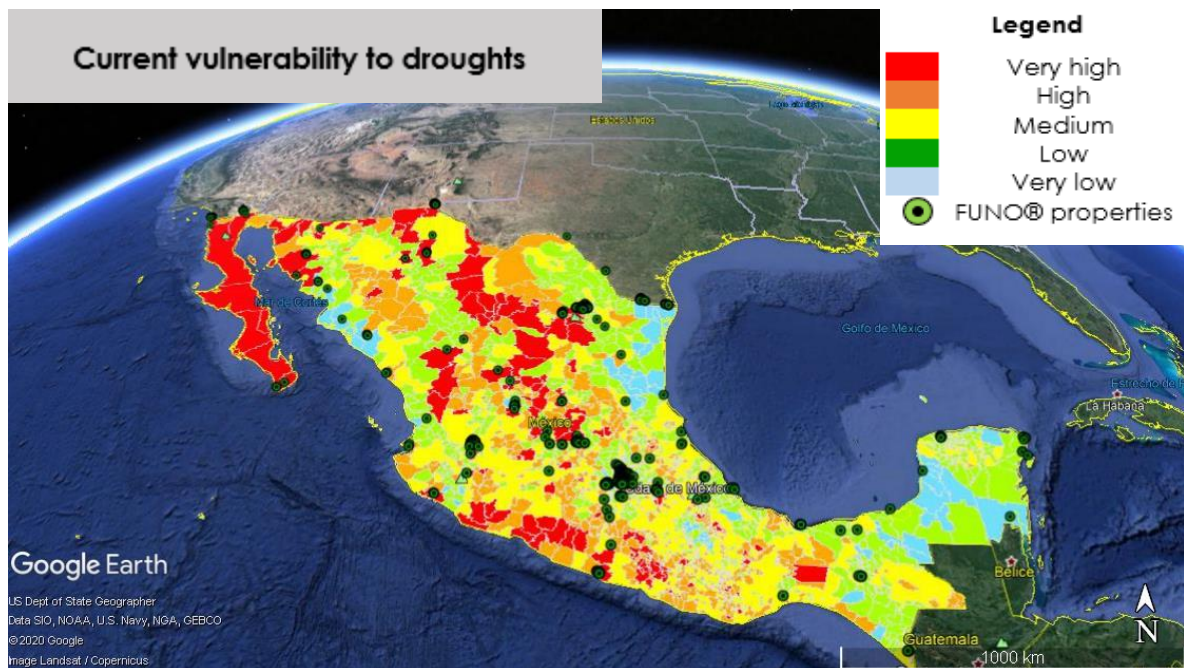
Operational risks and impacts	Estimated financial impact	Adaptation and resilience strategies
Damage to infrastructure	\$662,627,839	 Redesign of drainage facilities ⁴  Strengthening action protocols against floods ⁴
Temporary closure of the property due to damage		
Partial loss of property		

Droughts

One of the direct impacts of droughts is the reduction of water availability, therefore when in a climate change scenario, precipitation is reduced in areas with high vulnerability to droughts, water availability decreases substantially. Based on data from the Mexico's National Risk Atlas and the locations of our properties, the current droughts vulnerability of our properties is distributed as follows:

³ This scenario is the one with more properties in locations with increase in precipitation most of the year

⁴ Proposed strategy



	Vulnerability	Number of properties
	Very high	168
	High	112
	Medium	134
	Low	74
	Very low	46

By correlating the current droughts vulnerability of our properties with climate change scenarios where there is a decrease in precipitation for most of the year (more than six months), we obtain that:

Period		RCP 4.5	RCP 8.5
2015-2039	Droughts vulnerability under climate change scenarios	Number of properties	
	Very high	247	205
	High	159	174
	Medium	51	63
	Low	67	59
	Very low	10	33
2045-2069	Droughts vulnerability under climate change scenarios	Number of properties	
	Very high	258	270
	High	147	142
	Medium	76	70
	Low	43	50
	Very low	10	2

Operational risks and financial impacts

Operational risks and impacts	Estimated financial impact	Adaptation and resilience strategies
Reduction of water availability	\$4,365,930,723	<ul style="list-style-type: none"> 36 waste water treatment plants installed⁵ Rain water harvesting systems for the use of sporadic precipitation⁶ Water efficiency technologies⁶
Increase in water supply prices		

Sea level rise

As consequence of the increase in global mean temperature, its estimated the accelerated increase in the melting rate of glaciers and other elements of the cryosphere, and because of it a sea level rise. To assess the impacts of the increase in mean sea level on our properties, we used the “Surging the seas” platform of the “Climate Central” (Climate Central, 2020) this tool shows the estimated years in which sea level rise will be greater or equal to 1ft on the Mexican coasts under different climate change scenarios. This information was taken into account for the coastal areas where our properties are located. In this sense, the impacts of sea level rise would be distributed as follows:

	1ft=0.3048 m			3ft=0.9144 m			5ft=1.524 m		
	RCP8.5	RCP4.5	RCP2.6	RCP8.5	RCP4.5	RCP2.6	RCP8.5	RCP4.5	RCP2.6
Ensenada	2060	2060	2070	2130	2160	2200	2180	>2200	>2200
Bahía de San Quintin	2060	2060	2060	2120	2140	2180	2170	>2200	>2200
La Paz	2060	2060	2060	2120	2150	2180	2170	>2200	>2200
Cabo San Lucas	2060	2060	2070	2120	2150	2190	2180	>2200	>2200
Guaymas	2050	2050	2060	2110	2130	2180	2160	2200	>2200
Mazatlán	2060	2060	2070	2120	2150	2170	2170	>2200	>2200
Manzanillo	2060	2060	2060	2120	2140	2190	2170	>2200	>2200
Acapulco	2060	2060	2070	2120	2150	2200	2170	>2200	>2200
Ciudad Madero	2050	2050	2050	2100	2120	2140	2150	2190	>2200
Tuxpan	2050	2050	2050	2100	2120	2150	2150	2200	>2200
Alvarado	2060	2060	2060	2120	2150	2190	2170	>2200	>2200
Coatzacoalcos	2050	2060	2060	2110	2140	2170	2160	>2200	>2200
Ciudad del Carmen	2040	2050	2050	2100	2110	2140	2150	2190	>2200
Salina Cruz	2060	2070	2070	2120	2160	2200	2180	>2200	>2200
Puerto Progreso	2040	2050	2050	2100	2110	2130	2140	2180	>2200

⁵ Implemented strategy

⁶ Proposed strategy



Points where sea level rise is estimated (Climate Central, 2020)

Based on the above, it is estimated that 36 properties located on the coast are exposed to risks related to sea level rise under climate change scenarios.

Operational risks and financial impacts

Operational risks and impacts	Estimated financial impact	Adaptation and resilience strategies
<ul style="list-style-type: none"> Partial loss of properties or tenants in coastal areas Need for renovations with adaptation strategies 	\$10,913,560,671	<ul style="list-style-type: none"> Natural coast containment barriers⁷

Transition risks towards a low emissions economy

Following the recommendations of the “Task Force on Climate Related Financial Disclosure” (TCFD), the transition risks to a low carbon economy were identified under the scenario given by the “Deep Decarbonization Pathways Project” (DDPP) whose approach is consistent with limiting global temperature rise below 2 ° C. This scenario shows the deep decarbonization routes to be followed by the 16 countries that represent 74% of global GHG emissions, including Mexico, as well as the necessary changes in infrastructure to achieve decarbonization (SDSN & IDDRI, 2015). In this sense, the main risks for FUNO® in this scenario are:

Risks	Impacts	Financial impacts	Mitigation strategies
Changes in national regulations	Possible obligation to report annual GHG emissions to authorities	In process	<ul style="list-style-type: none"> Constant measurement and monitoring of our

⁷ Proposed strategy

regarding GHG emissions reporting			carbon footprint since 2016 ⁸ ■ Public reporting and transparency of our carbon footprint ¹⁰
Need to reduce energy demand and energy intensity at national level	Implementation of energy saving and efficiency processes and equipment		■ Installation of compensation and harmonic filters and automation and control systems in our properties ¹⁰
Reduce the use of energy from fossil sources	<ul style="list-style-type: none"> ■ Increase the renewable energy matrix in our properties ■ Uncertainty of the regulations of the national electricity market ■ Possible increase on the cost of renewable energy ■ Replacement of equipment that operates with renewable energy 		<ul style="list-style-type: none"> ■ Development of renewable energy and/or acquisition projects⁹ ■ Search for renewable energy providers with low risk contracts⁹ ■ Installation of equipment and technologies compatible with biofuels⁹
Increase in the number of electric cars national wide	Greater investment in the installation of additional charging stations in our properties		■ Promote the construction of alliances with the automotive sector for the joint installation of charging stations ¹⁰
Demand for low carbon infrastructure	Greater investment in remodelling to increase the number of properties with low carbon infrastructure		■ Setting up goals related to certified sqm under different such as: LEED, and EDGE certifications ¹⁰

The implications associated with the transition risks were determined based on the three decarbonization pillars of the DDPP scenario:

- Energy conservation and efficiency
- Electricity decarbonization
- Change the end use of energy to low carbon energy

⁸ Implemented strategy

⁹ Proposed strategy

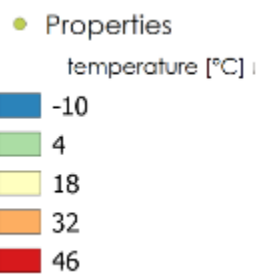
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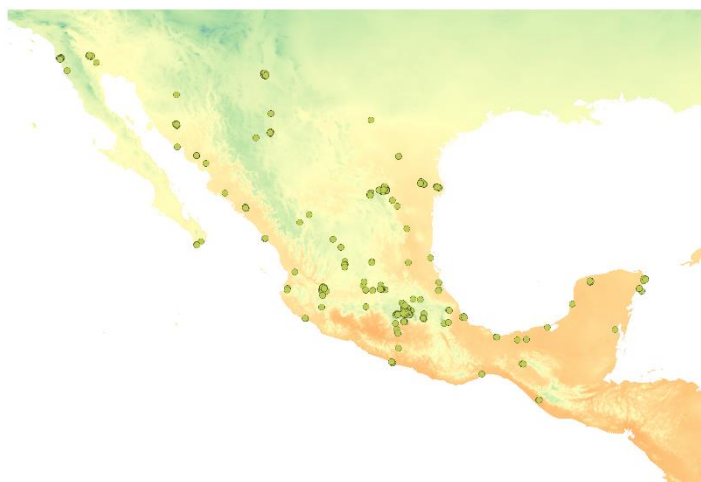
Annex

I. Map repository

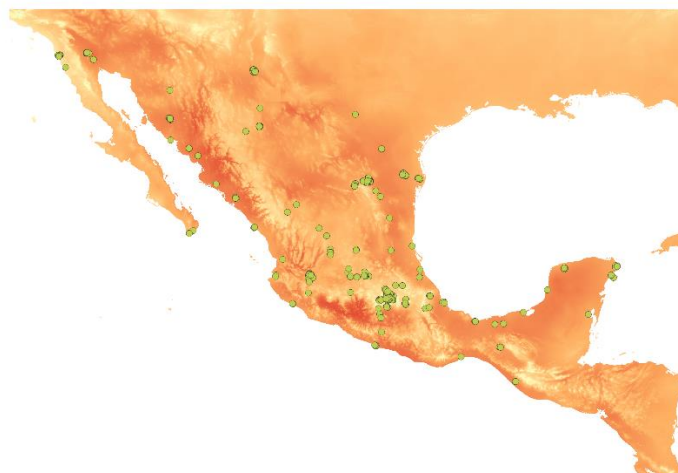
Temperature



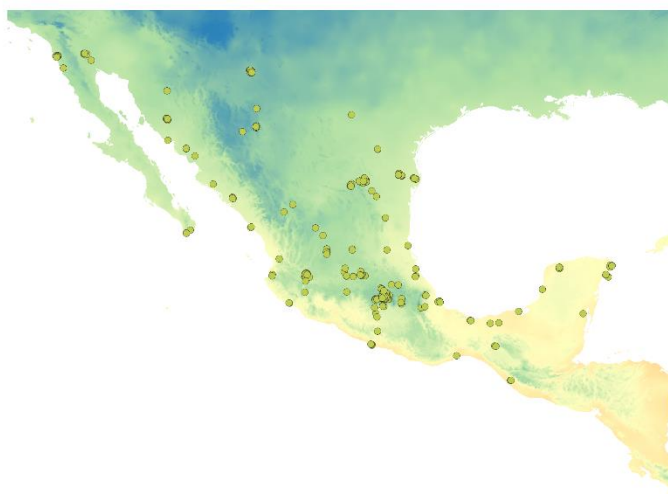
Mean temperature [°C]
RCP 4.5
2015-2039
March



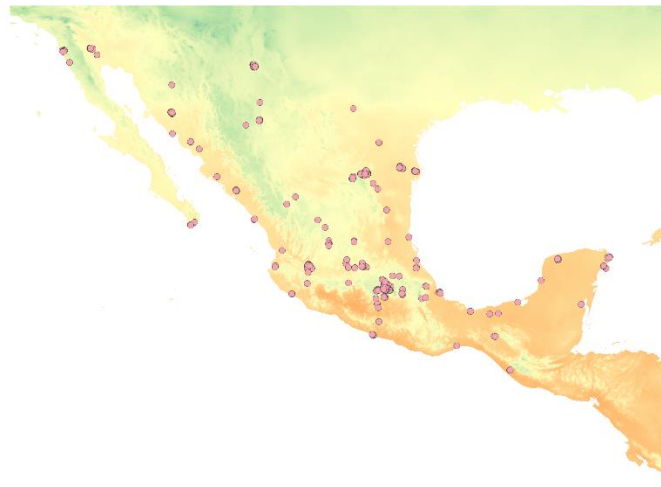
Maximum temperature [°C]
RCP 4.5
2015-2039
May



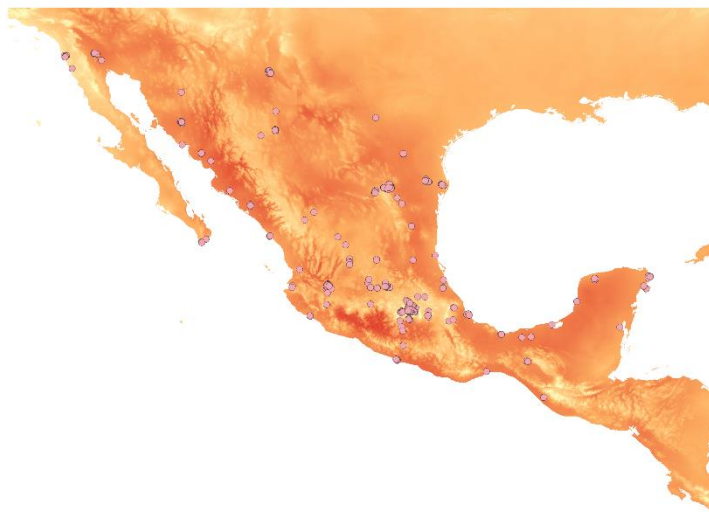
Minimum temperature [°C]
RCP4.5
2015-2039
December



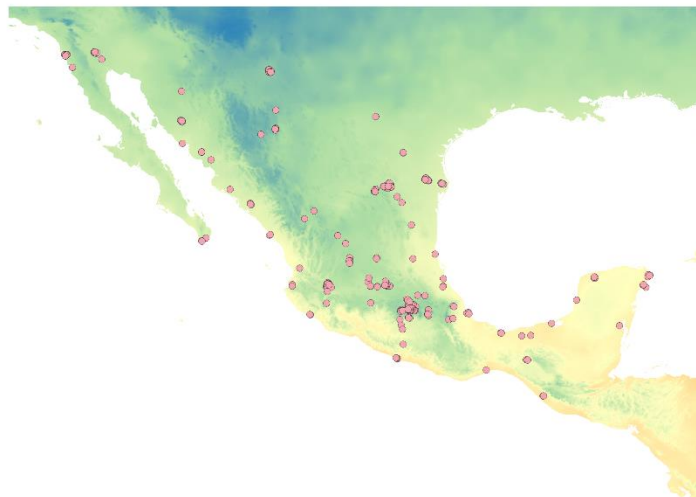
Mean temperature [°C]
RCP 4.5
2045-2069
March



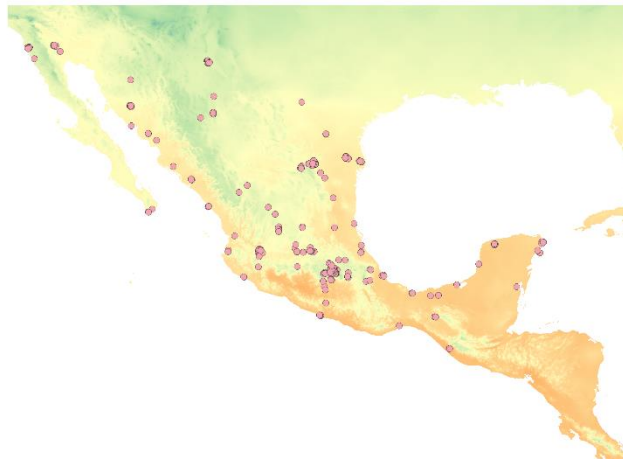
Maximum temperature[°C]
RCP 4.5
2045-2069
May



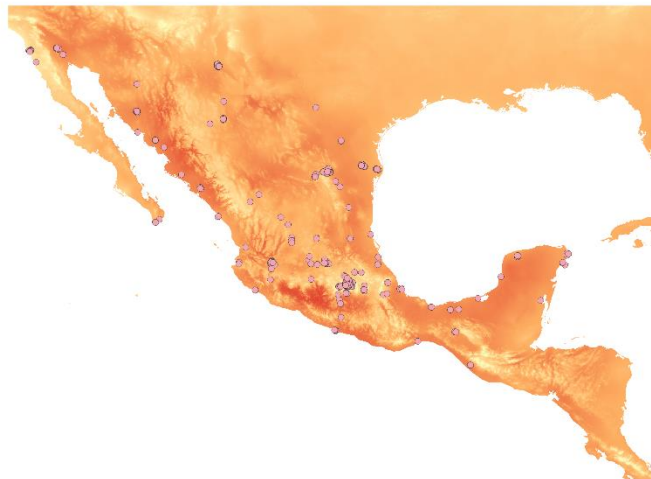
Minimum temperature[°C]
RCP 4.5
2045-2069
December



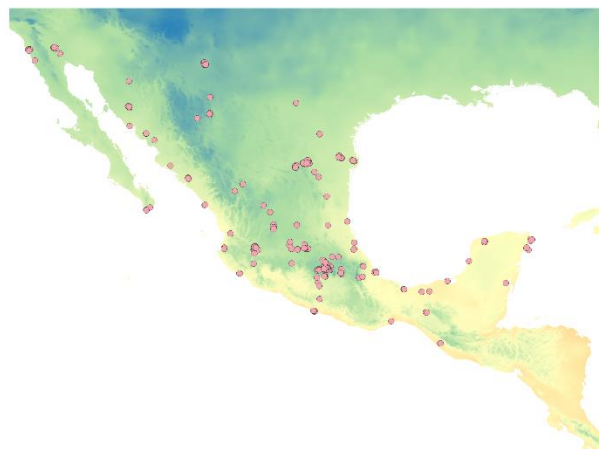
Mean temperature [°C]
RCP 8.5
2015-2039
March



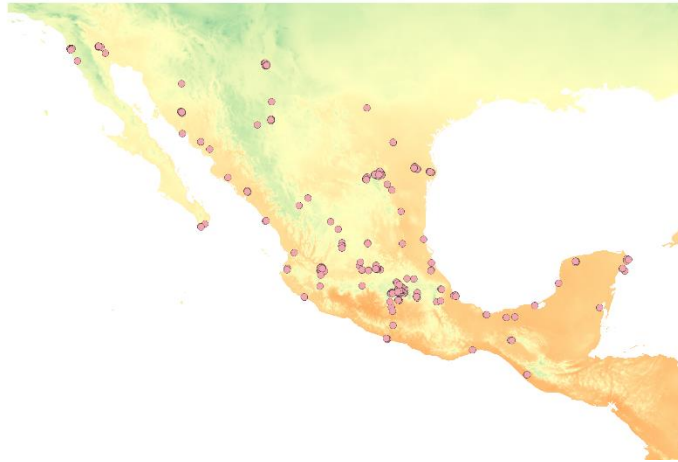
Maximum temperature [°C]
RCP 8.5
2015-2039
May



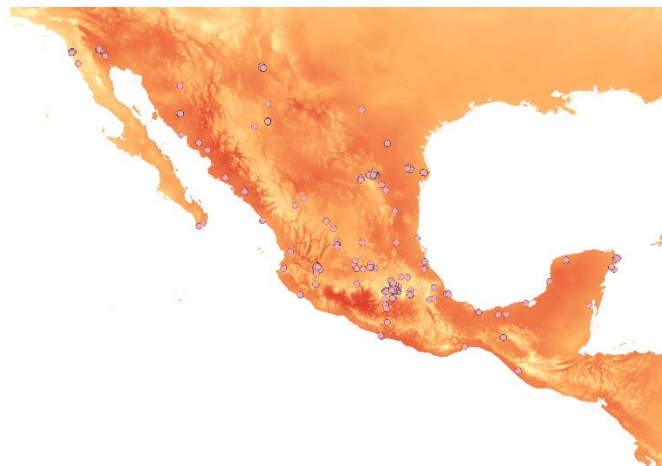
Minimum temperature [°C]
RCP 8.5
2015-2039
December



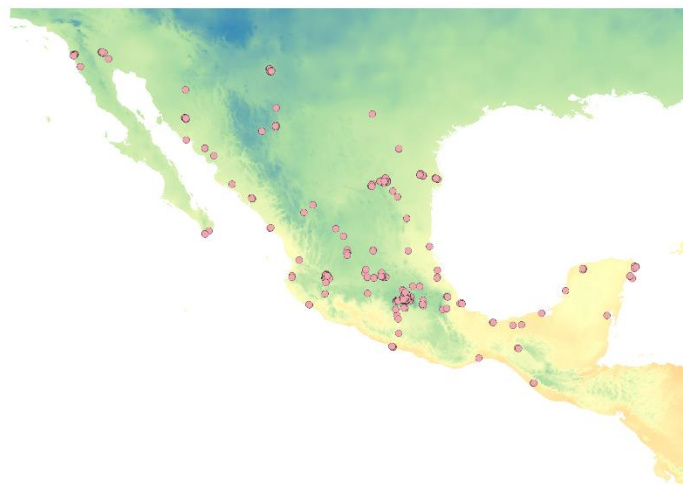
Mean temperature [°C]
RCP 8.5
2045-2069
March



Maximum temperature [°C]
RCP8.5
2045-2069
May

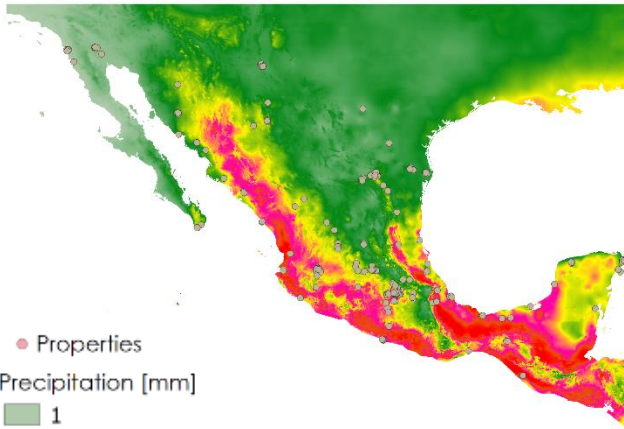


Minimum temperature [°C]
RCP 8.5
2045-2069
December

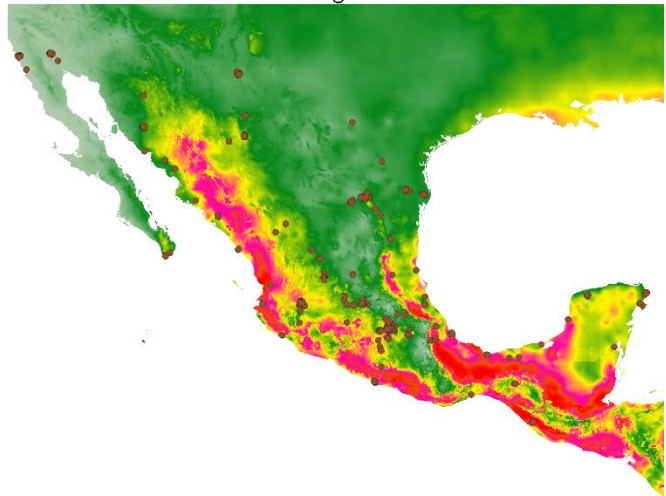


Precipitation

Precipitation [mm]
RCP 4.5
2015-2039
August



Precipitation [mm]
RCP 4.5
2045-2069
August

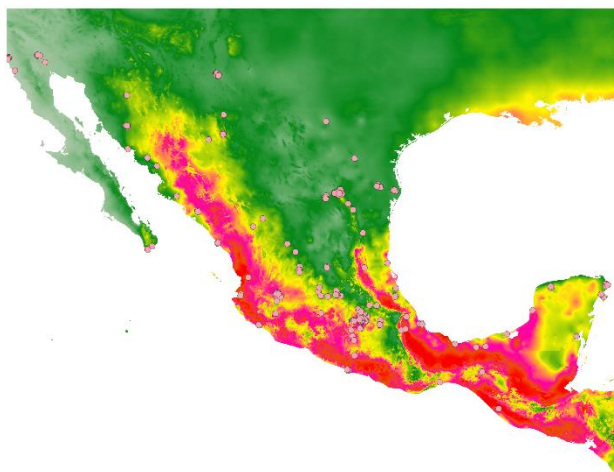


• Properties

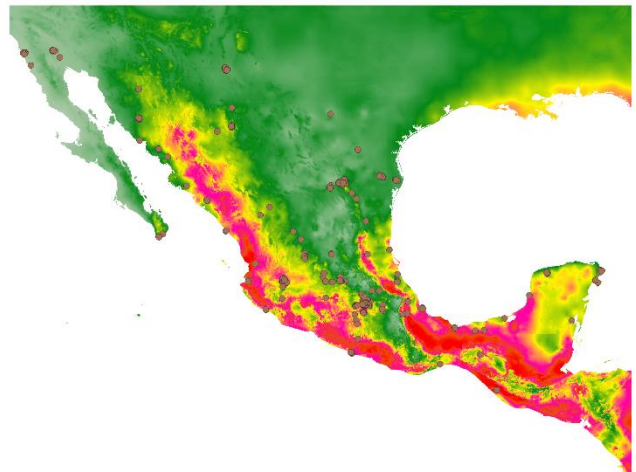
Precipitation [mm]



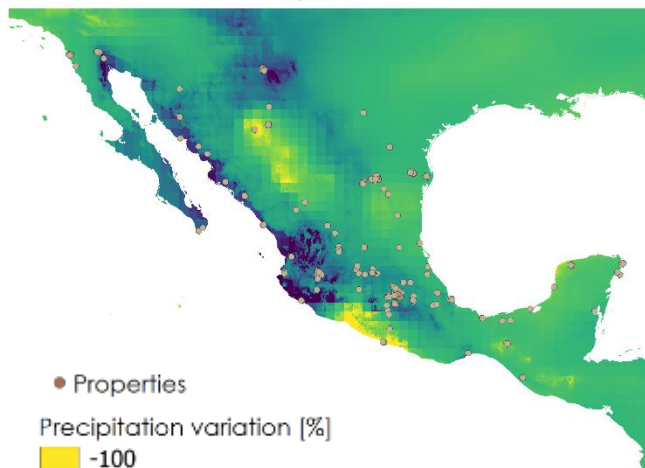
Precipitation [mm]
RCP 8.5
2015-2069
August



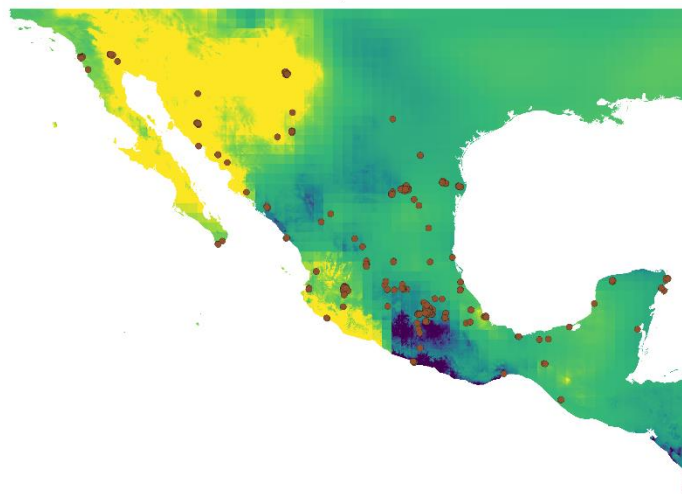
Precipitation [mm]
RCP 8.5
2045-2069
August



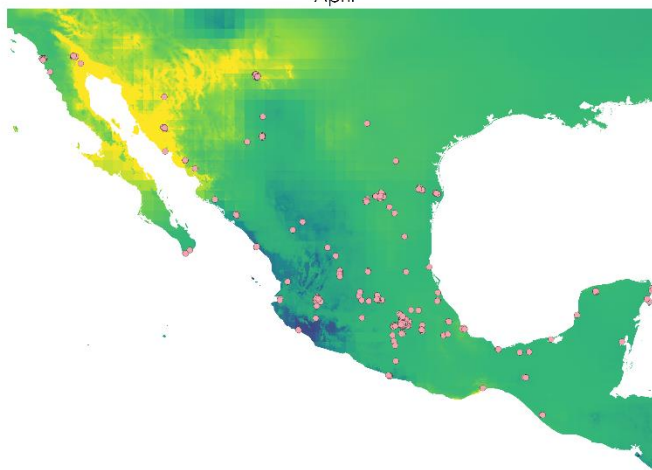
Precipitation variation [%]
RCP 4.5
2015-2039
April



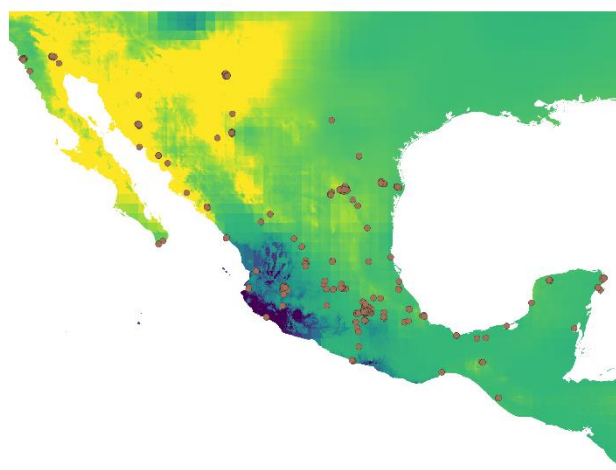
Precipitation variation [%]
RCP 4.5
2045-2069
April



Precipitation variation [%]
RCP 8.5
2015-2039
April



Precipitation variation [%]
RCP 8.5
2045-2069
April



II. Monthly temperatura and precipitation

Period		Mean temperature	Months											
2015 - 2039	RCP 4.5	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
		-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	465	445	210	48	21	26	58	38	81	209	326	463
		18-31.9999	69	89	324	486	513	507	453	481	453	325	208	71
		32-45.9999	0	0	0	0	0	1	23	15	0	0	0	0
	≥46	0	0	0	0	0	0	0	0	0	0	0	0	
	RCP 8.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	456	434	223	38	19	24	41	38	69	209	326	463
		18-31.9999	78	100	311	496	515	509	470	478	461	325	208	71
		32-45.9999	0	0	0	0	0	1	23	18	4	0	0	0
≥46		0	0	0	0	0	0	0	0	0	0	0	0	
2045-2069	RCP 4.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	453	368	135	34	17	16	28	25	33	145	303	431
		18-31.9999	81	166	399	500	517	514	483	487	491	389	231	103
		32-45.9999	0	0	0	0	0	4	23	22	10	0	0	0
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
	RCP 8.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	437	326	84	20	10	15	23	18	24	102	274	399
		18-31.9999	97	208	450	514	524	499	484	482	489	432	260	135
		32-45.9999	0	0	0	0	0	20	27	34	21	0	0	0
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
			Number of properties											

Period		Maximum temperature	Months											
2015 - 2039	RCP 4.5	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
		-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	31	0	0	0	0	0	0	0	0	0	0	31
		18-31.9999	495	525	511	447	299	317	322	322	369	488	514	494
		32-45.9999	8	9	23	87	235	217	212	212	165	46	20	9
	≥46	0	0	0	0	0	0	0	0	0	0	0	0	
	RCP 8.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	31	0	0	0	0	0	0	0	0	0	0	31
		18-31.9999	495	525	510	453	289	314	322	324	350	489	514	494
		32-45.9999	8	9	24	81	245	220	212	210	184	45	20	9
≥46		0	0	0	0	0	0	0	0	0	0	0	0	
2045-2069	RCP 4.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	30	0	0	0	0	0	0	0	0	0	0	30
		18-31.9999	495	522	503	373	257	306	308	312	336	484	514	495
		32-45.9999	9	12	31	161	277	228	226	222	198	50	20	9
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
	RCP 8.5	-10-3.9999	0	0	0	0	0	0	0	0	0	0	0	0
		4-17.9999	27	0	0	0	0	0	0	0	0	0	0	0
		18-31.9999	498	518	483	306	238	299	302	307	336	457	514	523
		32-45.9999	9	16	51	228	296	235	232	227	198	77	20	11
≥46	0	0	0	0	0	0	0	0	0	0	0	0		
			Number of properties											

Period		Minimum temperature	Months											
			Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2015 - 2039	RCP 4.5	-10-3.9999	116	81	9	0	0	0	0	0	0	0	19	57
		4-17.9999	393	427	475	452	366	311	312	301	344	428	461	442
		18-31.9999	25	26	50	82	168	223	222	233	190	106	54	35
		32-45.9999	0	0	0	0	0	0	0	0	0	0	0	0
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
	RCP 8.5	-10-3.9999	102	59	5	0	0	0	0	0	0	0	6	57
		4-17.9999	406	448	477	452	366	311	310	301	343	428	473	442
		18-31.9999	26	27	52	82	168	223	224	233	191	106	55	35
		32-45.9999	0	0	0	0	0	0	0	0	0	0	0	0
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
2045-2069	RCP 4.5	-10-3.9999	73	49	2	0	0	0	0	0	0	0	2	53
		4-17.9999	432	451	479	394	357	290	300	293	312	384	474	444

		18-31.9999	29	34	53	140	177	244	234	241	222	150	58	37
		32-45.9999	73	49	2	0	0	0	0	0	0	0	2	53
		≥46	432	451	479	394	357	290	300	293	312	384	474	444
	RCP 8.5	-10-3.9999	62	30	1	0	0	0	0	0	0	0	1	51
		4-17.9999	437	467	479	390	348	266	280	271	287	380	473	444
		18-31.9999	35	37	54	144	186	268	254	263	247	154	60	39
		32-45.9999	0	0	0	0	0	0	0	0	0	0	0	0
		≥46	0	0	0	0	0	0	0	0	0	0	0	0
Number of properties														

Period		Precipitation (mm)	Months											
			Jan.	Feb	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2015-2039	RCP 4.5	0	3	279	211	8	32	6	0	0	26	0	12	273
		0.1-82.7272	520	253	323	524	434	191	200	148	112	474	505	245
		82.7273-164.45	11	2	0	2	66	250	247	268	327	41	13	13
		164.46-246.181	0	0	0	0	0	76	74	96	51	11	4	3
		246.182-327.90	0	0	0	0	2	9	8	18	10	2	0	0
		327.91-409.63	0	0	0	0	0	2	5	4	4	3	0	0
		409.64-491.36	0	0	0	0	0	0	0	0	4	3	0	0
		491.37-573.09	0	0	0	0	0	0	0	0	0	0	0	0
		573.10-654.81	0	0	0	0	0	0	0	0	0	0	0	0
		654.82-736.545	0	0	0	0	0	0	0	0	0	0	0	0
		736.546-818.27	0	0	0	0	0	0	0	0	0	0	0	0
		818.28-899.99	0	0	0	0	0	0	0	0	0	0	0	0
	900	0	0	0	0	0	0	0	0	0	0	0	0	
	RCP 8.5	0	11	11	11	28	22	26	1	4	1	0	21	59
		0.1-82.7272	514	521	523	504	480	184	189	151	87	474	493	462
		82.7273-164.45	9	2	0	2	30	240	177	236	291	41	16	10
		164.46-246.181	0	0	0	0	0	69	123	117	127	12	1	3
		246.182-327.90	0	0	0	0	2	11	35	18	18	3	3	0
		327.91-409.63	0	0	0	0	0	3	9	8	5	1	0	0
		409.64-491.36	0	0	0	0	0	1	0	0	5	3	0	0
		491.37-573.09	0	0	0	0	0	0	0	0	0	0	0	0
		573.10-654.81	0	0	0	0	0	0	0	0	0	0	0	0
		654.82-736.545	0	0	0	0	0	0	0	0	0	0	0	0
		736.546-818.27	0	0	0	0	0	0	0	0	0	0	0	0
818.28-899.99		0	0	0	0	0	0	0	0	0	0	0	0	
900	0	0	0	0	0	0	0	0	0	0	0	0		
2045-2069	RCP 4.5	0	5	226	21	64	69	3	0	18	0	0	26	134
		0.1-82.7272	524	307	513	468	420	182	198	186	93	457	491	391
		82.7273-164.45	5	1	0	2	43	267	251	249	339	57	13	6
		164.46-246.181	0	0	0	0	0	72	71	63	74	13	3	3
		246.182-327.90	0	0	0	0	2	8	7	17	19	1	1	0
		327.91-409.63	0	0	0	0	0	2	7	1	4	3	0	0
		409.64-491.36	0	0	0	0	0	0	0	0	5	3	0	0
		491.37-573.09	0	0	0	0	0	0	0	0	0	0	0	0
		573.10-654.81	0	0	0	0	0	0	0	0	0	0	0	0
		654.82-736.545	0	0	0	0	0	0	0	0	0	0	0	0
		736.546-818.27	0	0	0	0	0	0	0	0	0	0	0	0
		818.28-899.99	0	0	0	0	0	0	0	0	0	0	0	0
	900	0	0	0	0	0	0	0	0	0	0	0	0	
	RCP 8.5	0	203	315	167	62	45	23	1	0	0	0	15	48
		0.1-82.7272	326	217	367	470	459	180	193	206	92	470	501	471
		82.7273-164.45	5	2	0	2	28	244	238	243	304	43	14	12
		164.46-246.181	0	0	0	0	0	76	78	67	109	14	3	3
		246.182-327.90	0	0	0	0	2	9	17	16	19	3	1	0
		327.91-409.63	0	0	0	0	0	1	7	2	5	2	0	0
		409.64-491.36	0	0	0	0	0	1	0	0	4	2	0	0
		491.37-573.09	0	0	0	0	0	0	0	0	1	0	0	0
		573.10-654.81	0	0	0	0	0	0	0	0	0	0	0	0
		654.82-736.545	0	0	0	0	0	0	0	0	0	0	0	0
		736.546-818.27	0	0	0	0	0	0	0	0	0	0	0	0
818.28-899.99		0	0	0	0	0	0	0	0	0	0	0	0	

