

Taller
Análisis del riesgo proveniente del cambio climático y la pérdida de naturaleza
19 – 21 de junio de 2024 Ciudad de México

Ejemplos de uso de ClimRisk
distribución geoespacial

Dr. Miguel Angel Altamirano del Carmen
M. en C. Oscar Calderón Bustamante

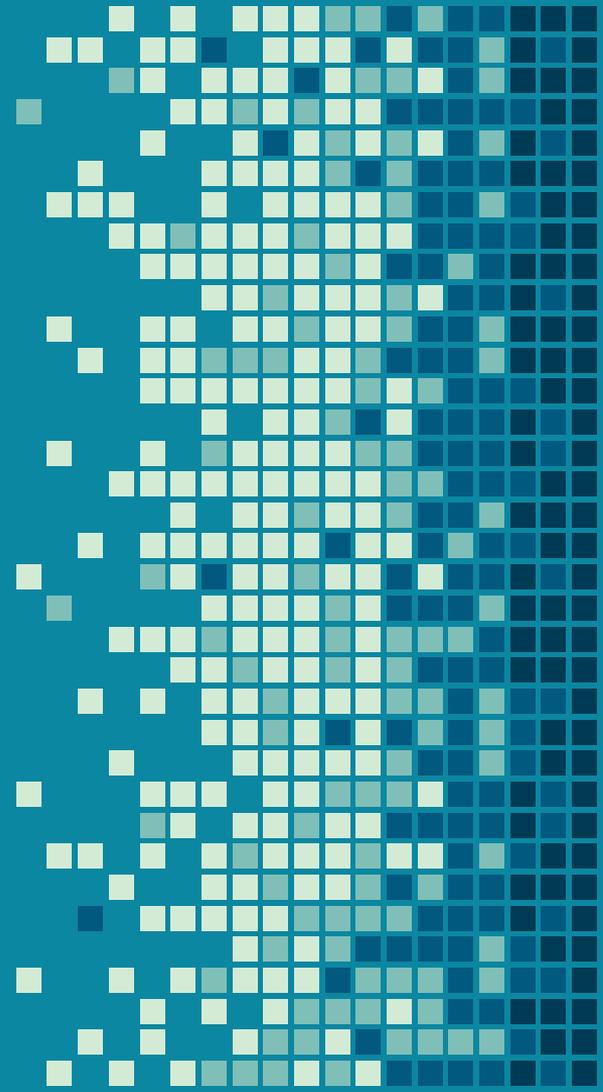
Distribución geoespacial

Unidades geoespaciales

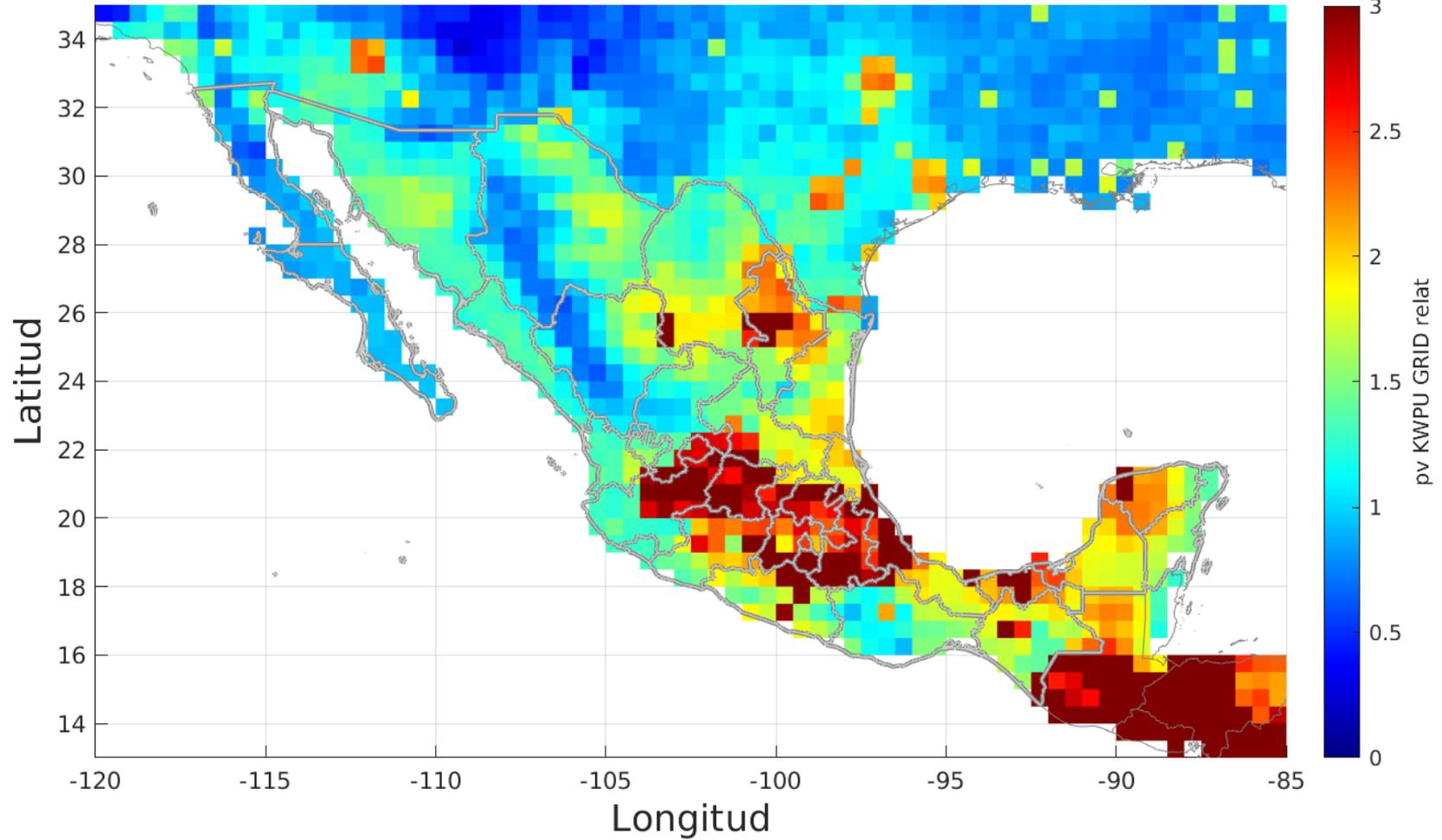
- Región
- País
 - Estado
 - Municipio
 - Cuenca hidrográfica
 - Localidad
- etc

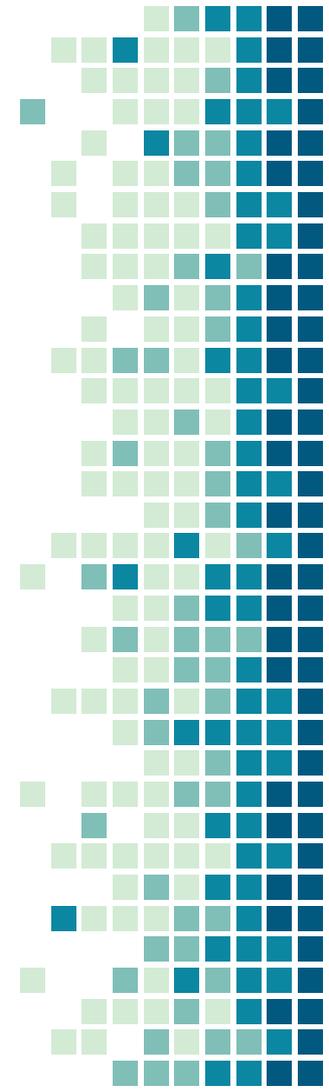
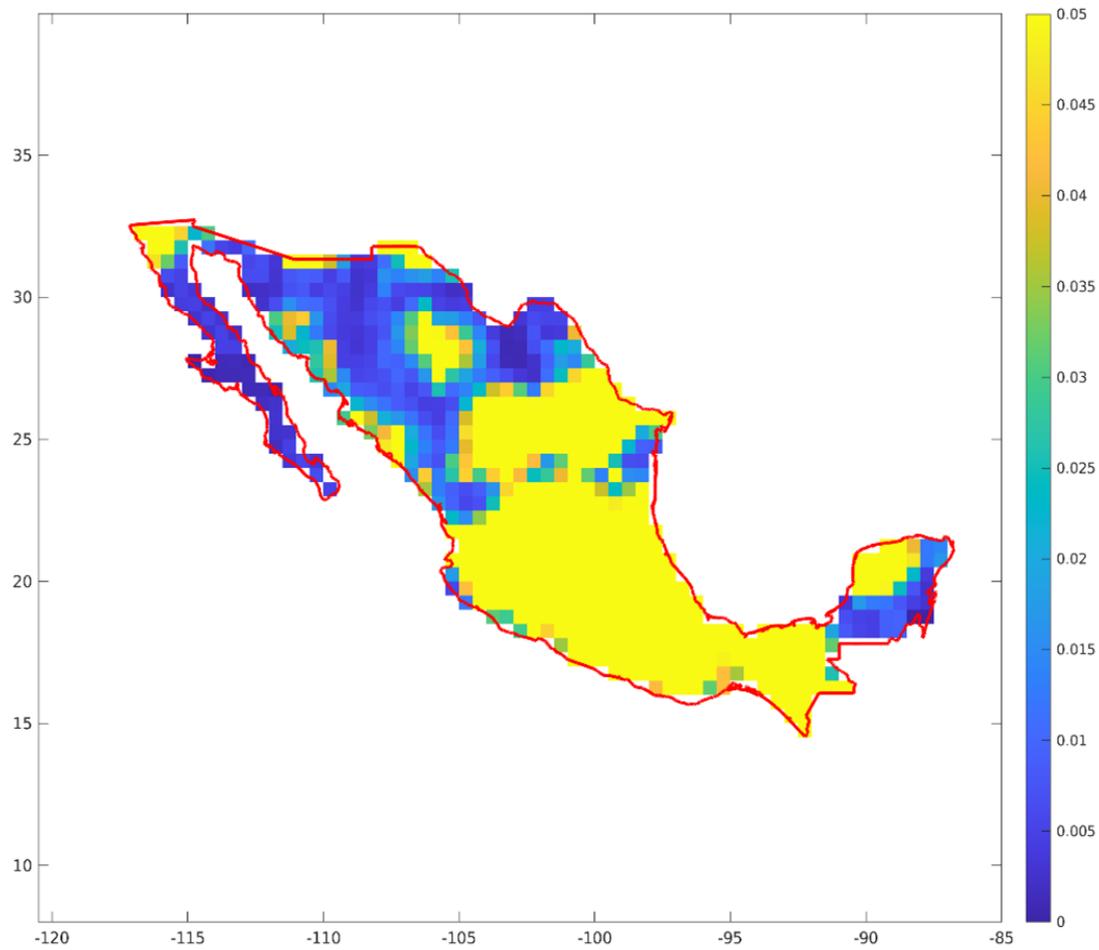


“ *Nivel país, estado* ”



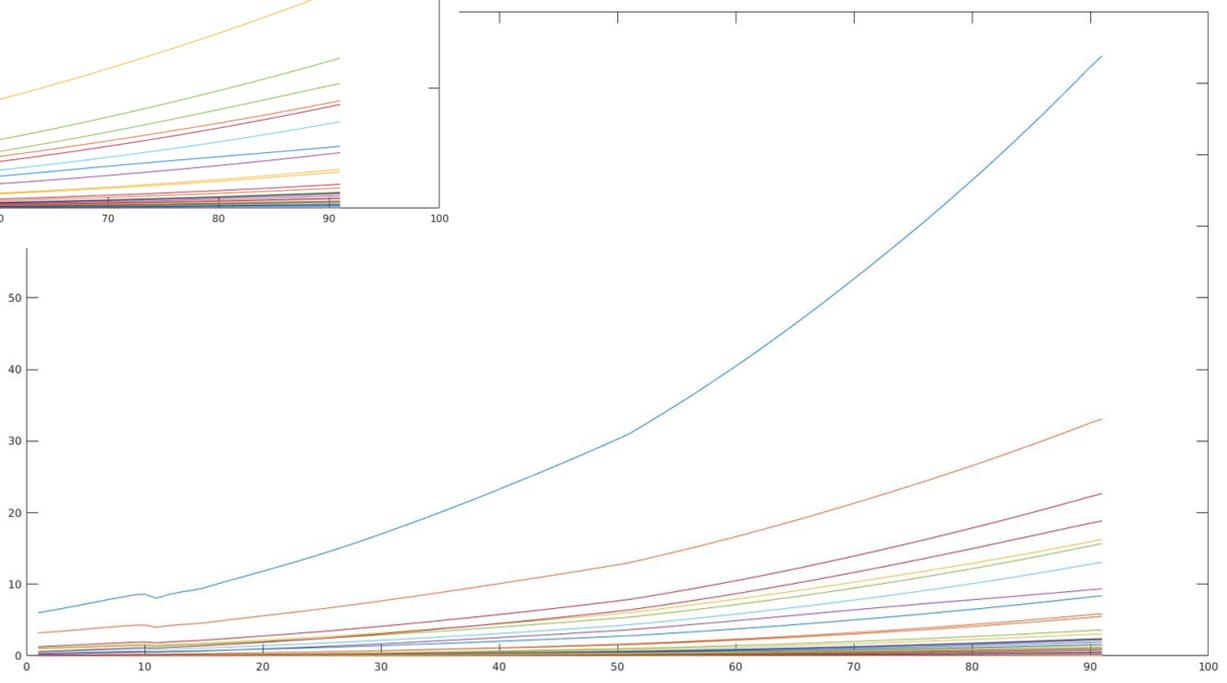
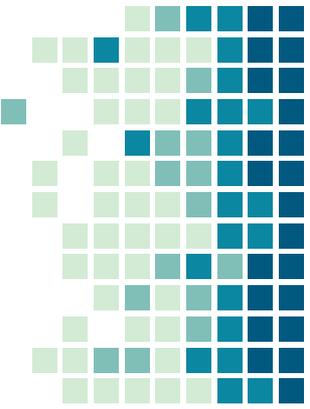
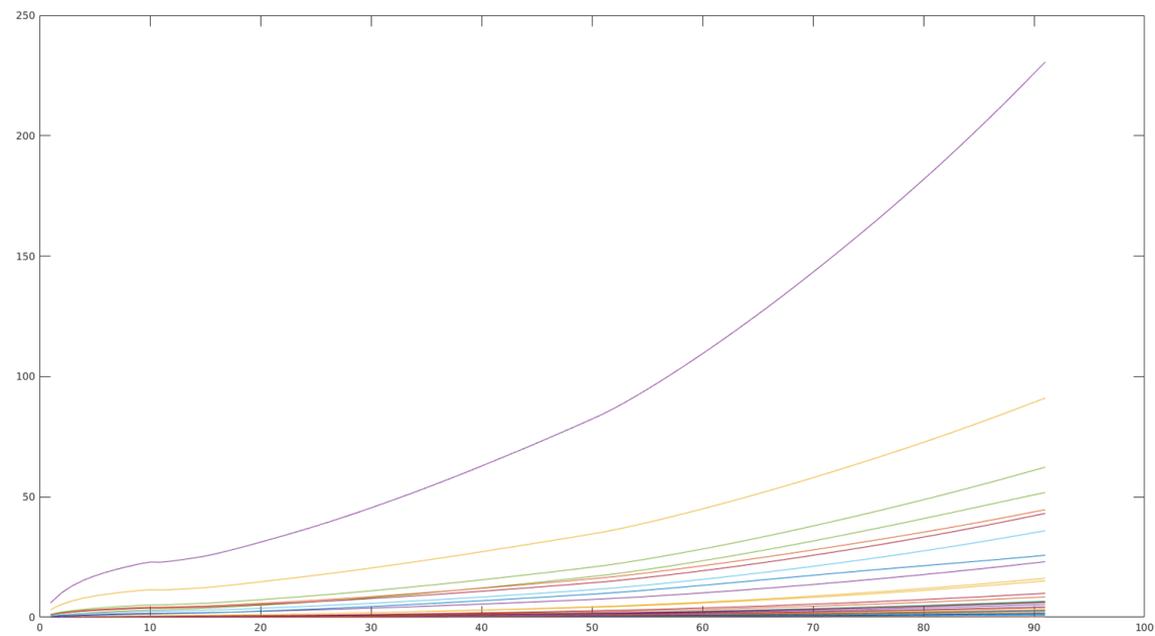
pv KWPU GRID relat





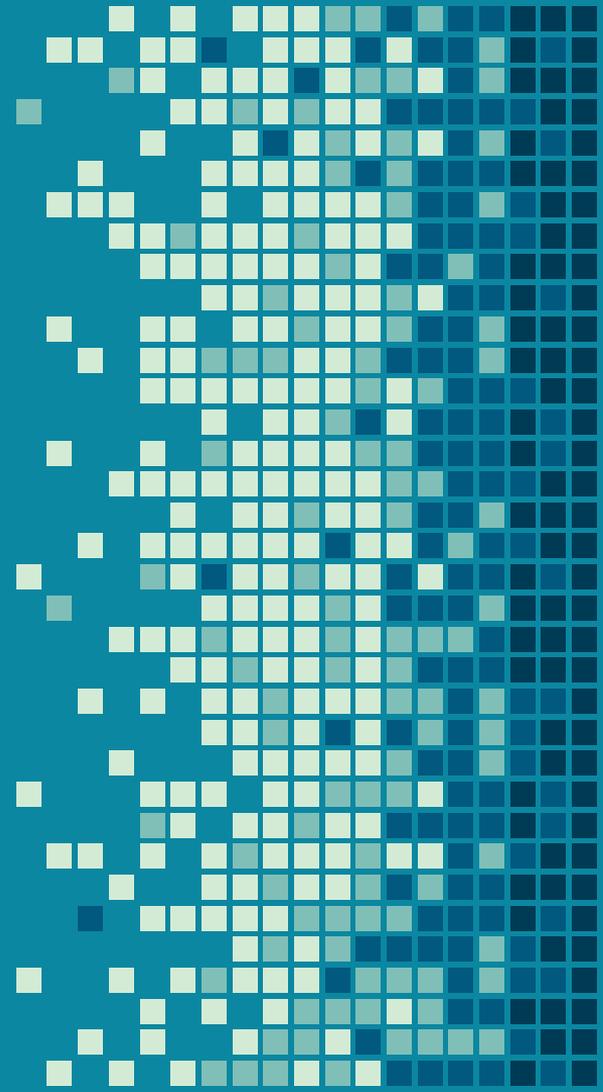


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3	BAJA CALIFORNIA	0.0345400656728891	0.0602884236234453	0.0802290540463276	0.0963981803198065	0.110185933198011	0.122537976037877
4	BAJA CALIFORNIA SUR	0.00125273546147472	0.00217039946677141	0.00286807372553564	0.00342327036187901	0.0038882402740439	0.00429809671554651
5	CAMPECHE	0.00585970346660307	0.0103833426482931	0.0140070020951971	0.0170385732866312	0.0196946993174242	0.022126724233528
6	COAHUILA DE ZARAGOZA	0.0444925786211838	0.0791752965323992	0.107216743691381	0.130878097518389	0.151765585869358	0.171010627598183
7	COLIMA	0.00283790138483435	0.00496331062613066	0.00661639954011928	0.0079617946110895	0.00911231534853423	0.0101449431332617
8	CHIAPAS	0.0554325452318817	0.0976006980445988	0.130909076943136	0.158419822801121	0.182258698038314	0.2038932228497
9	CHIHUAHUA	0.0641454989408589	0.110897412546843	0.146253868161237	0.174242059467321	0.197569027707085	0.218048690325209
0	CIUDAD DE MÉXICO	3.18957072120446	5.36453233819891	6.89341367330794	8.01212224067678	8.87186672578195	9.56975340500711
1	DURANGO	0.031334041622076	0.0554084338267708	0.0746096740523167	0.0906132650710822	0.104592712699005	0.117364566884306
2	GUANAJUATO	0.243761682535474	0.437313054456624	0.597538119950143	0.736524258619968	0.86291871845486	0.98287765427594
3	GUERRERO	0.0686999511316184	0.122722608883882	0.166721791549053	0.204066970419869	0.237177585346681	0.267772841684693
4	HIDALGO	0.577815539829657	0.999187548865687	1.31746562143329	1.56799944893311	1.77449044402297	1.95295262728637
5	JALISCO	1.2722481167421	2.17155629251074	2.83023322852726	3.33471506318303	3.74156766841731	4.08783469879998
6	MEXICO	6.00877823093418	10.1877572499309	13.1917890254149	15.4444539418363	17.2203998849879	18.6981242507453
7	MICHOACAN DE OCAMPO	0.112080231934711	0.199805520011647	0.271010228790138	0.331312542776318	0.384720749565478	0.434069968405601
8	MORELOS	1.09754832870838	1.86238358175539	2.41329901089425	2.82742364120024	3.15487415559684	3.42825167913117
9	NAYARIT	0.0100642596525251	0.017940257008316	0.0243311976155639	0.0297412804726192	0.03453009943371	0.0389518230890989
0	NUEVO LEON	0.997697012062275	1.69255256982986	2.19304269293761	2.56949088406537	2.86756287674301	3.116941611718
1	OAXACA	0.0543159459763735	0.0960136907652601	0.129240524102086	0.156906557409055	0.181048576408985	0.203082888189982
2	PUEBLA	0.619208889077004	1.08355622143835	1.44784975448004	1.74882588123382	2.01099322087027	2.25054496973722
3	QUERETARO DE ARTEAGA	0.0387149032417763	0.068809370739233	0.0930803751135886	0.113517255455682	0.131529354839691	0.148107510469684
4	QUINTANA ROO	0.00259578761935514	0.00453218241559345	0.00603218252246461	0.0072481351217049	0.00828411433028243	0.0092109296211384
5	SAN LUIS POTOSI	0.0634682428065264	0.112567994012249	0.151983185187244	0.185027277214424	0.21403621483152	0.240644693855466
6	SINALOA	0.0151367123292479	0.0263048851998783	0.0348599638973869	0.0417199000180956	0.0475067623528311	0.0526406367634309
7	SONORA	0.0215925817393614	0.037504373783334	0.0496778598258212	0.0594274422716418	0.0676432061994435	0.0749257907874658
8	TABASCO	0.0284862762222305	0.0499421551125428	0.066725400438967	0.0804601305630867	0.0922644642955714	0.102904521716633
9	TAMAULIPAS	0.0304891611277538	0.0528167606738149	0.0697878901625064	0.0832914466278409	0.0946006175557688	0.104570906698407
0	TLAXCALA	0.382798828719002	0.660368082207173	0.86898904375088	1.03277772670278	1.1678250618068	1.28488656029188
1	VERACRUZ	0.131260834103648	0.23104719429618	0.309820001356105	0.374847039716456	0.431170835854687	0.48227105356242
2	YUCATAN	0.0246641298712521	0.0433636797800382	0.0580842885131217	0.0702022623197383	0.0806702811395344	0.0901443161874069
3	ZACATECAS	0.0360466335922294	0.0649706338393984	0.0889766019320595	0.109702000130032	0.128349018889772	0.145788064142188

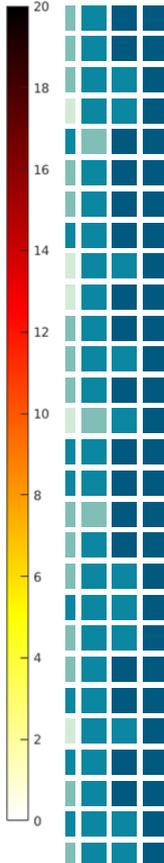
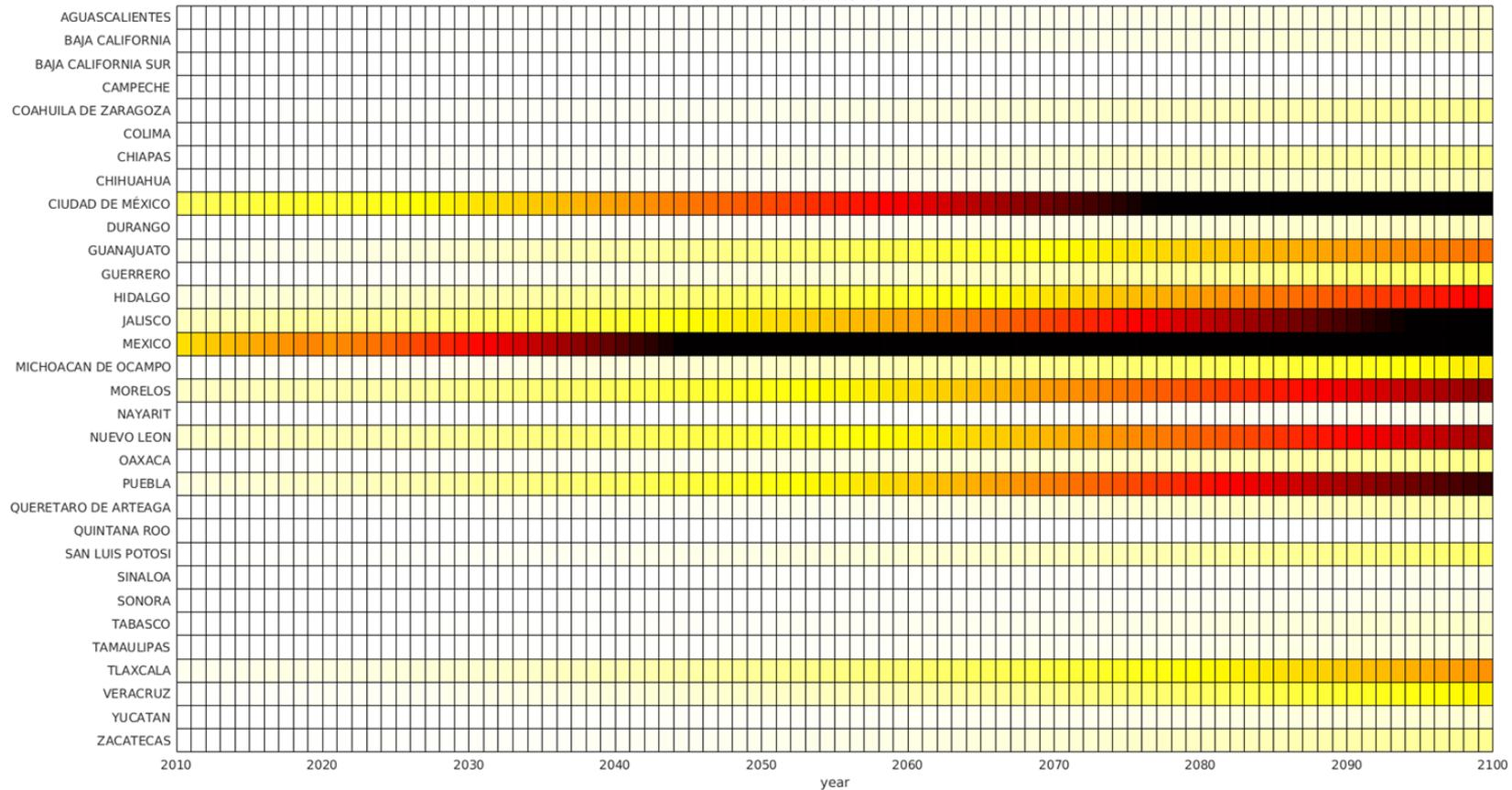


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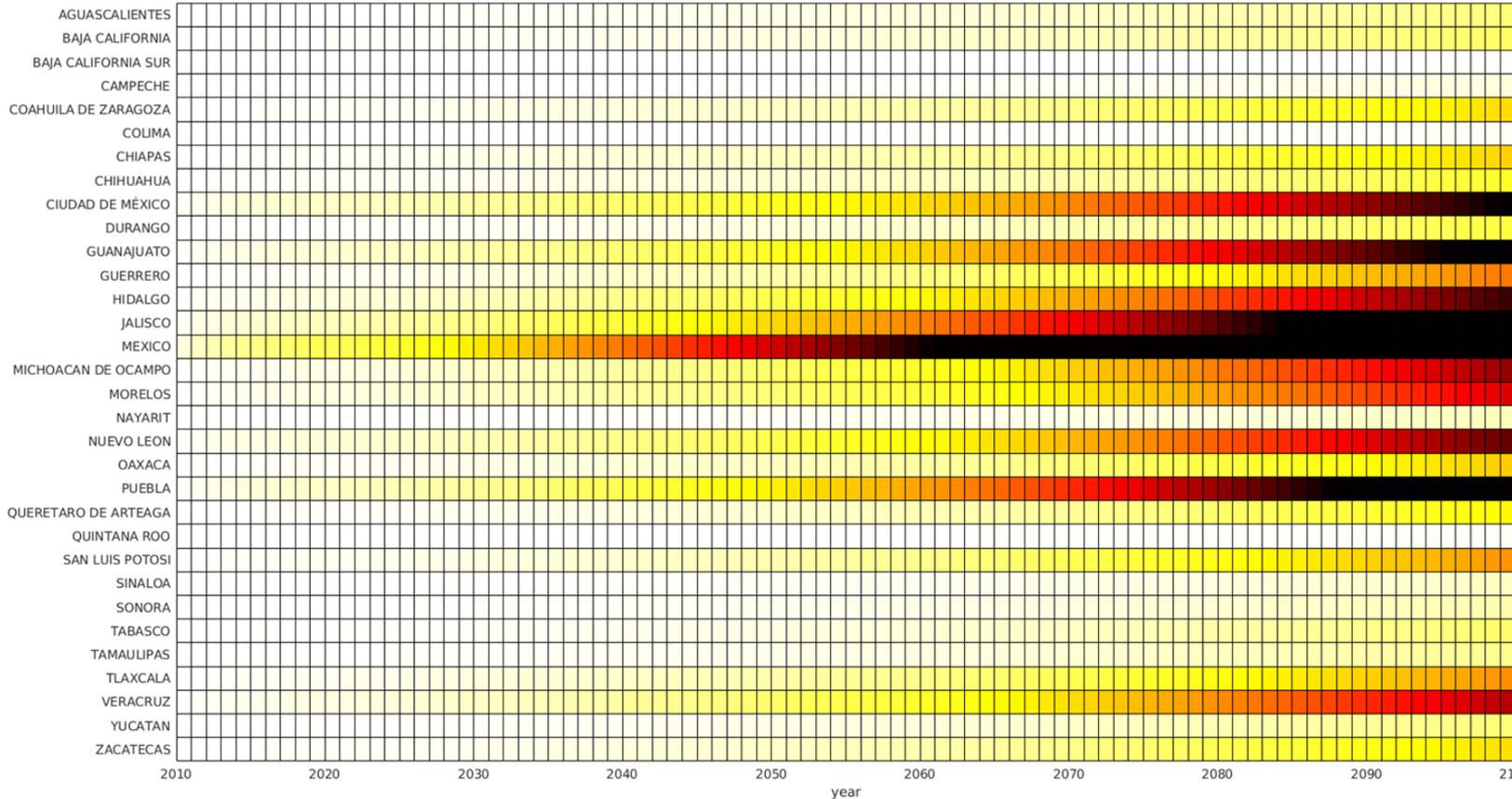
- *Diagrama Hovmöller*



DOLLARS RU



DOLLARS RP



2010

2020

2030

2040

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2060

2070

2080

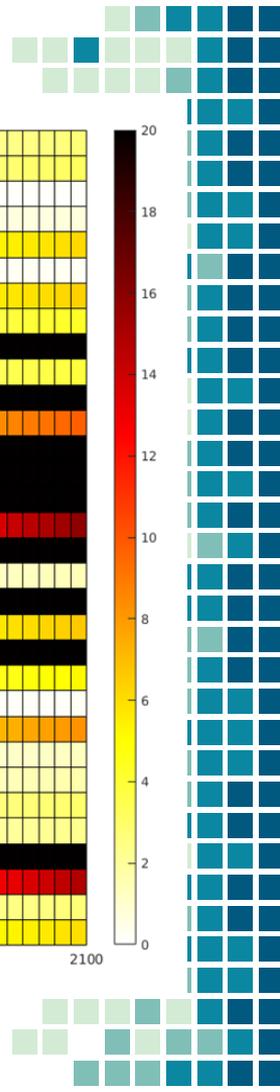
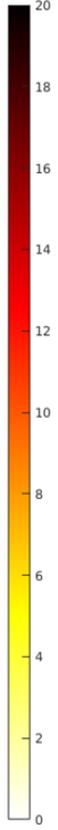
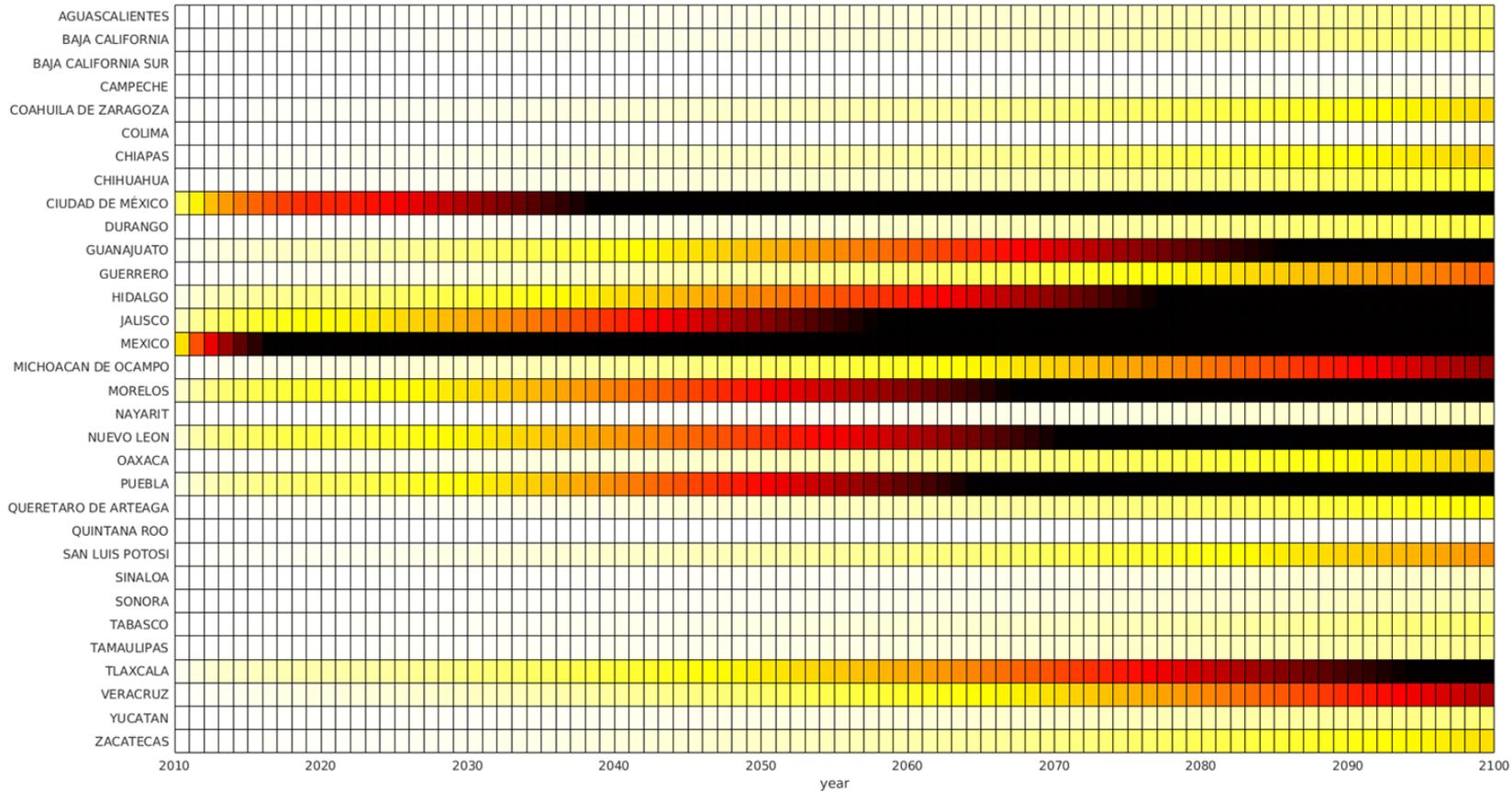
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2100

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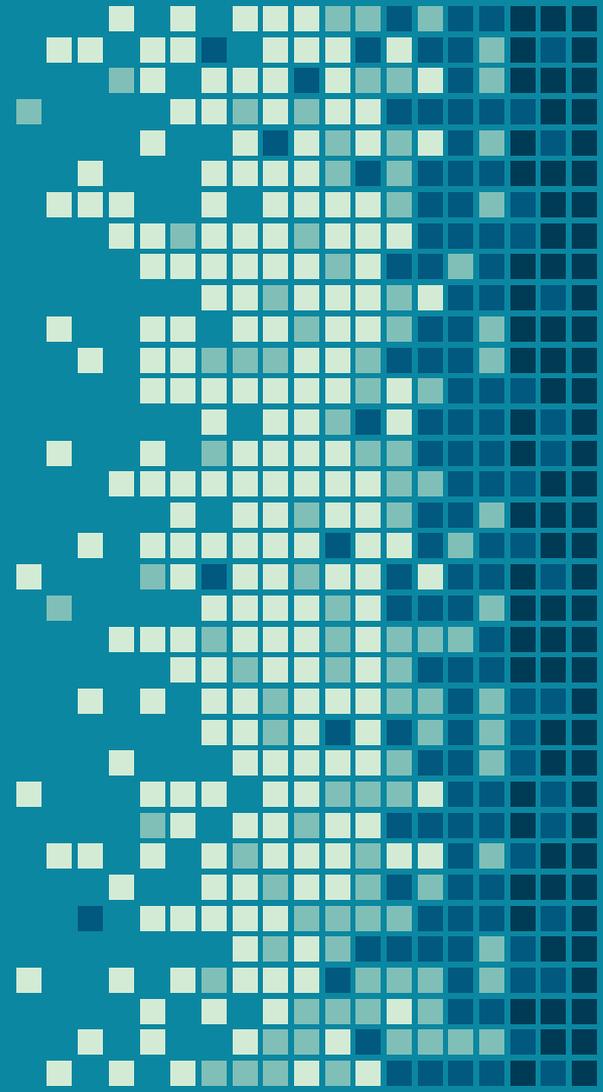
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DOLLARS RPU



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Nivel puntual

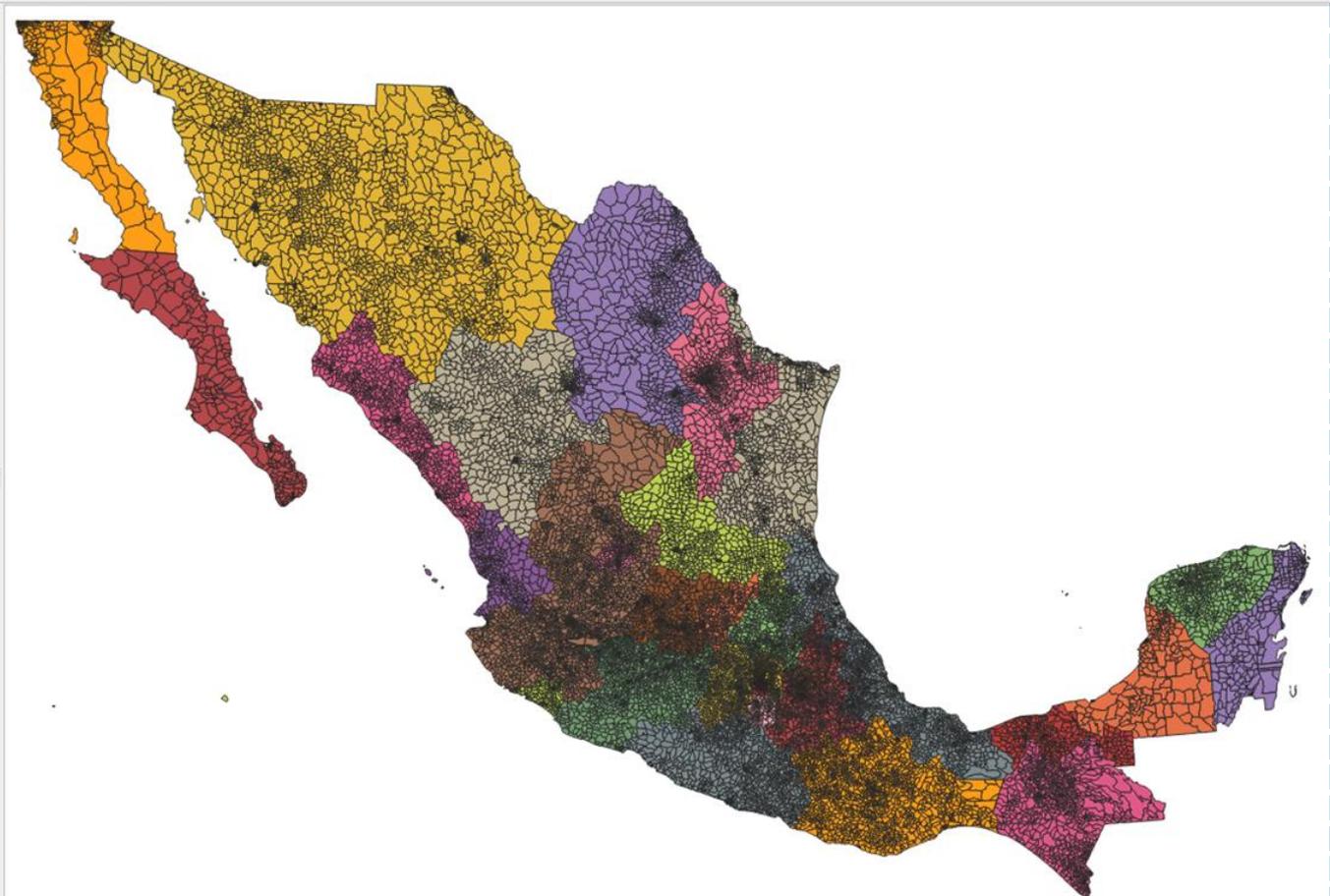




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- Favorites

- Layers
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 - CP_30Ver_v10
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 - CP_28Tmps_v10
 - CP_27Tab_v10
 - CP_26Son_v10
 - CP_25Sin_v10
 - CP_24SLP_v10
 - CP_23Qroo_v10
 - CP_22Gro_v10
 - CP_21Pue_v10
 - CP_20Oax_v10
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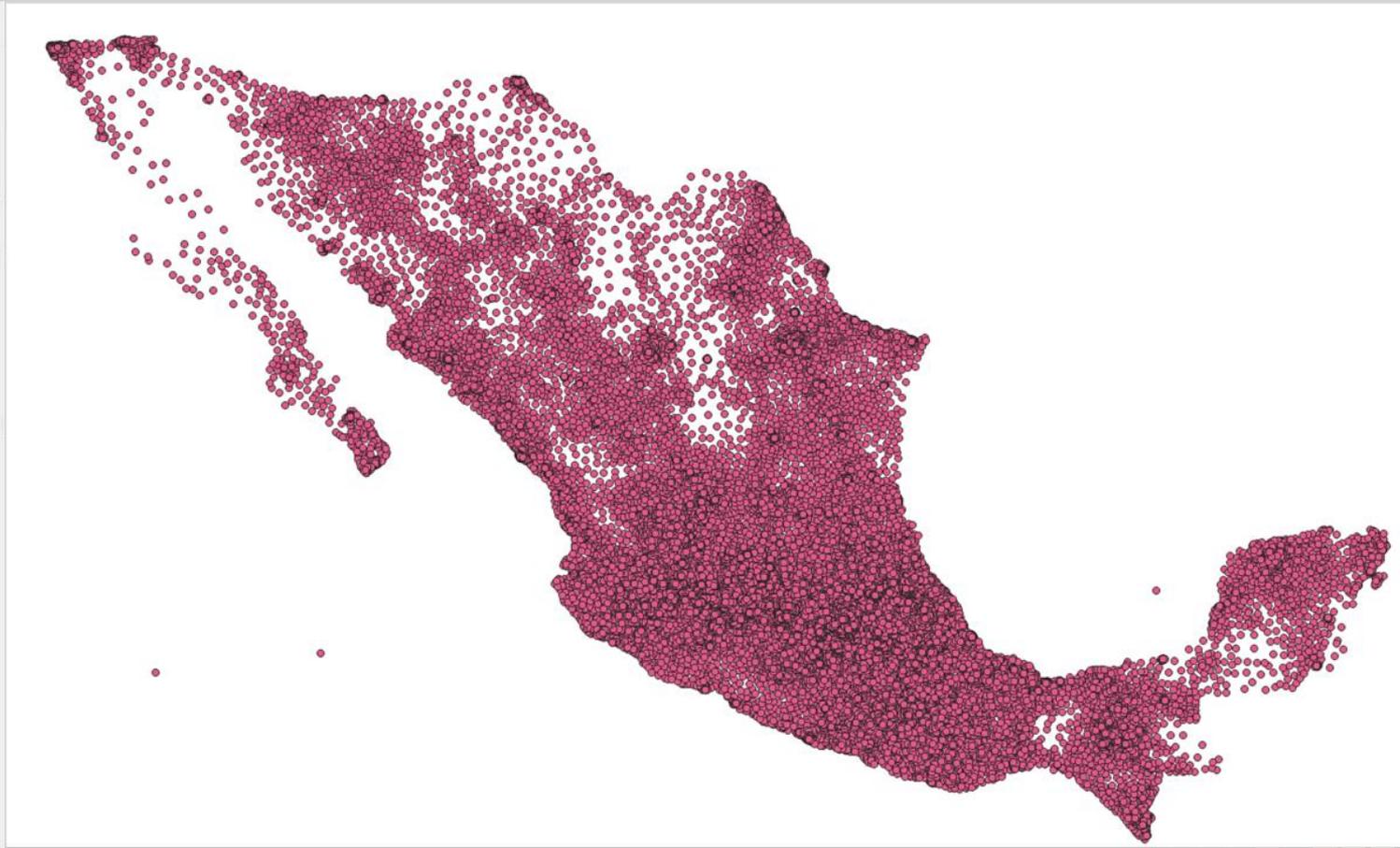


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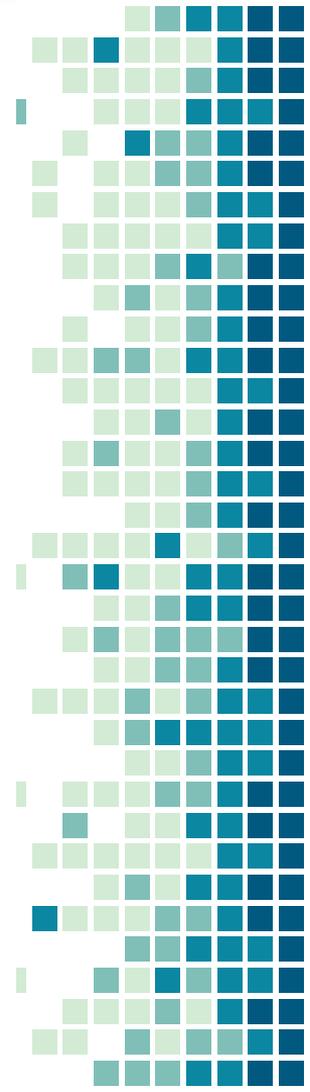
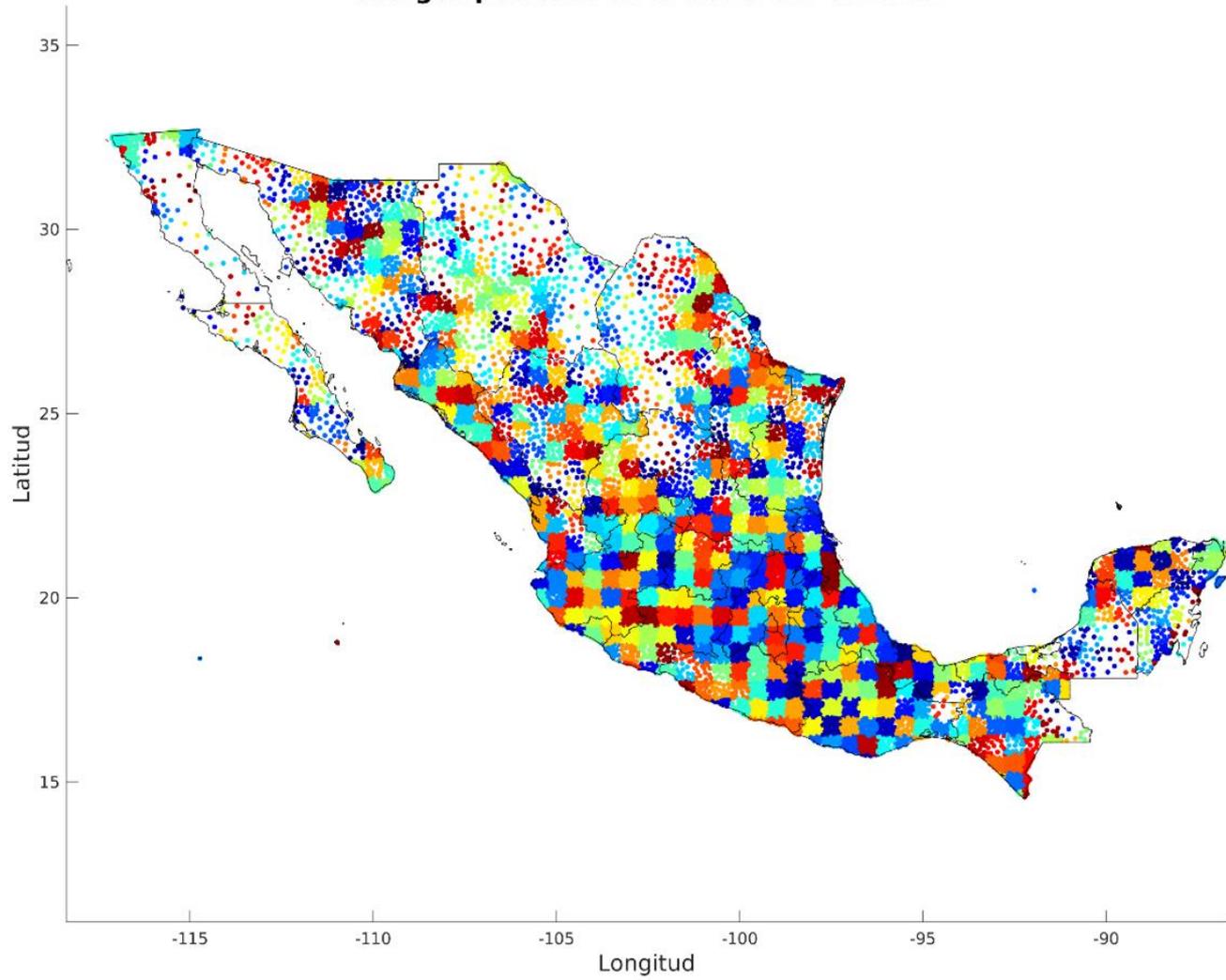
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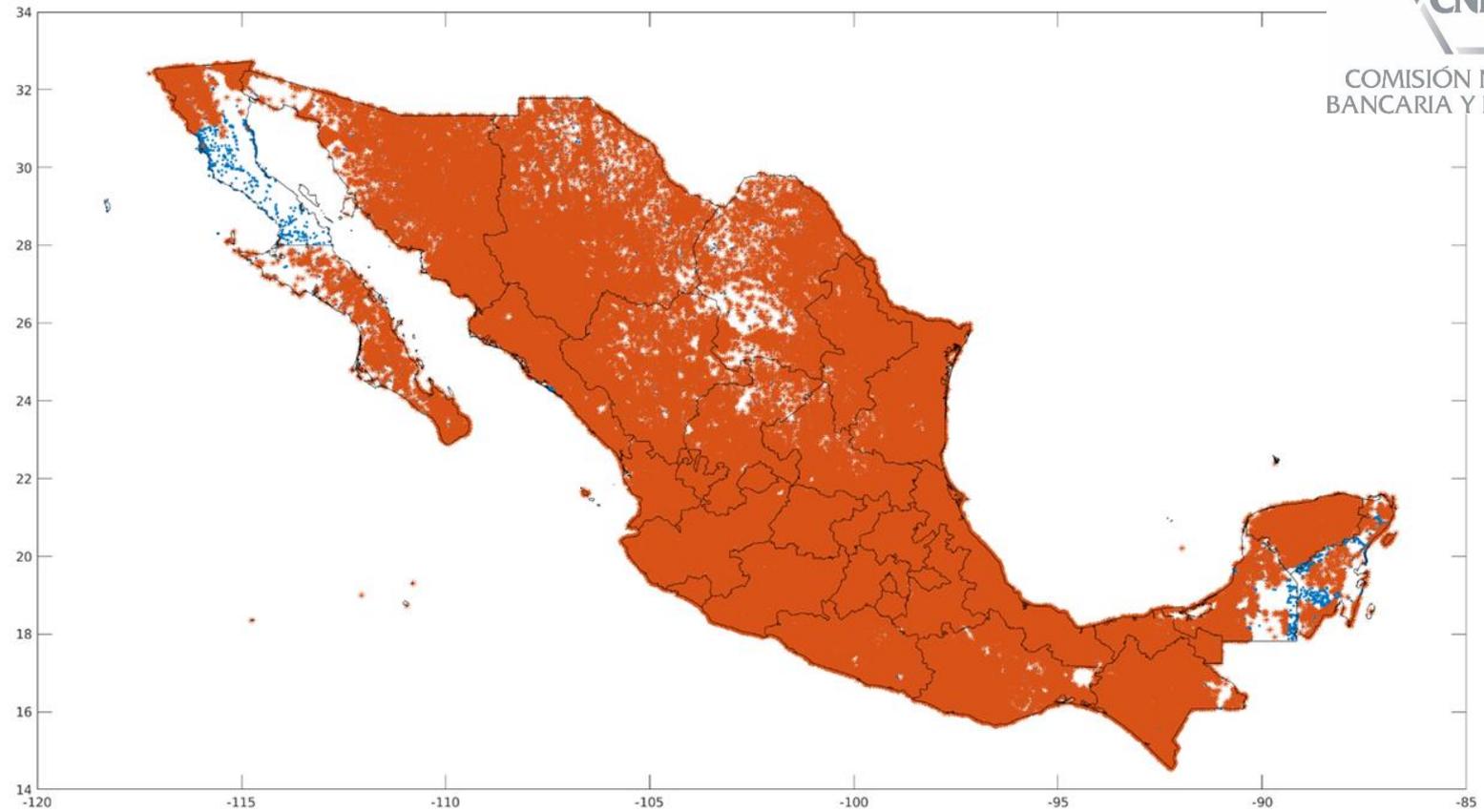


Códigos postales en la malla del Climrisk

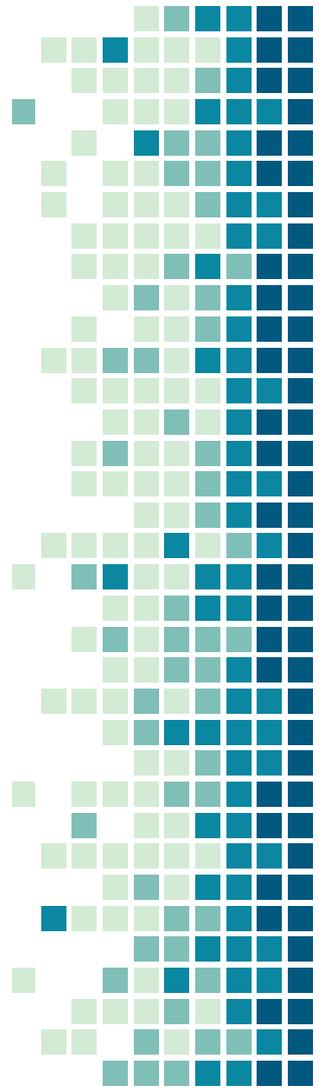
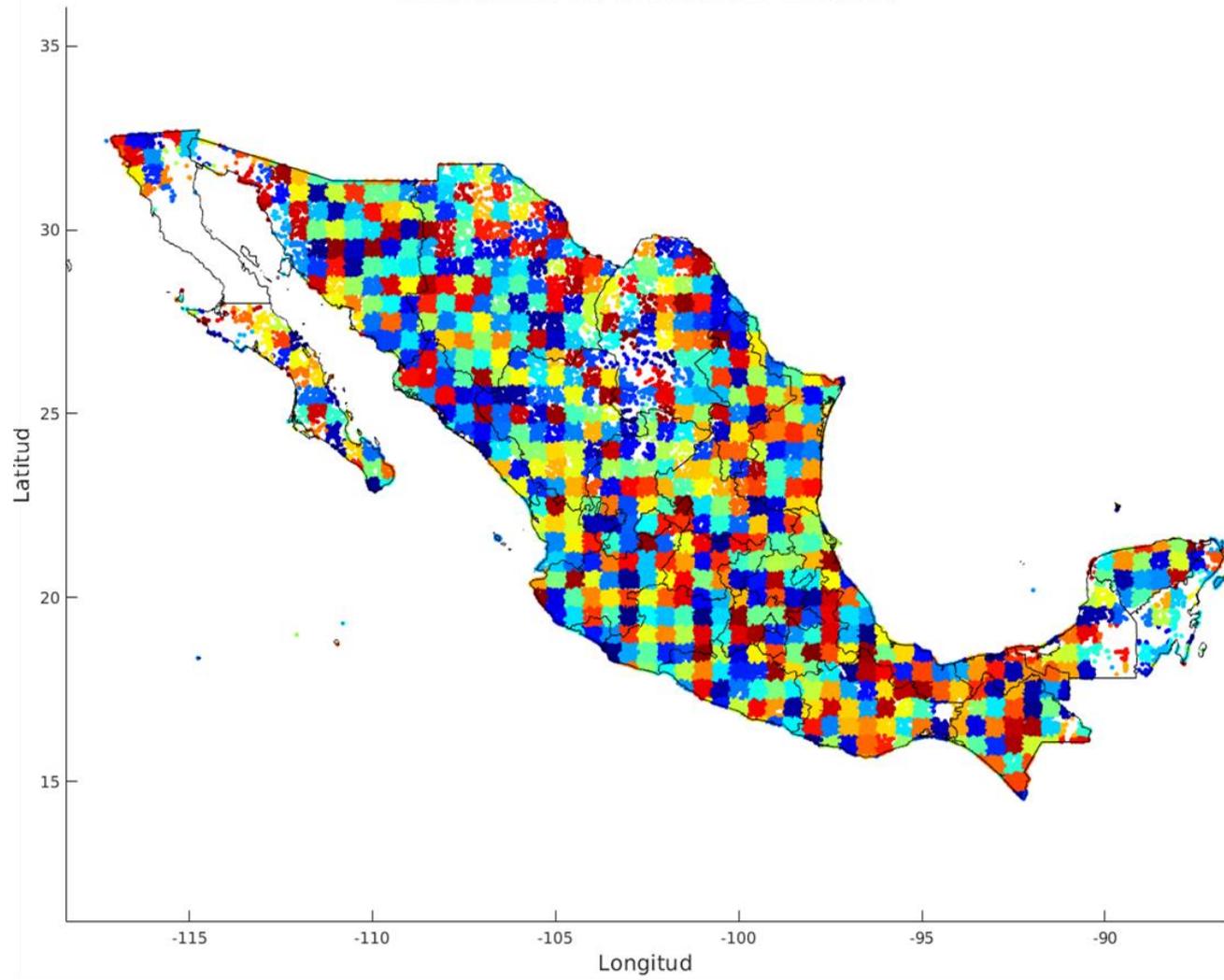




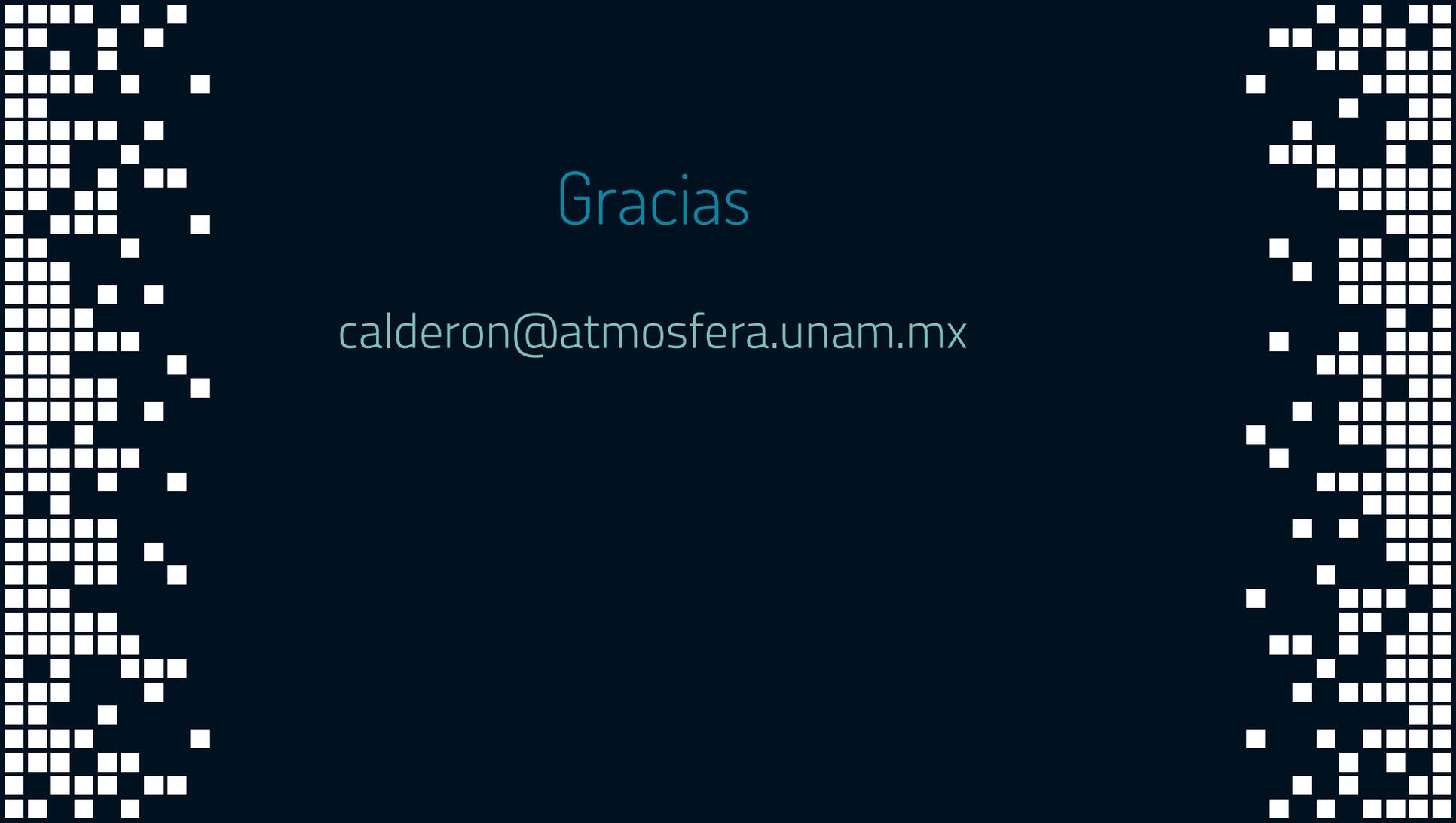
COMISIÓN NACIONAL
BANCARIA Y DE VALORES



Localidades en la malla del Climrisk



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S		
CVE	loc	GNBV	Lon	Lat	index1	index2	CVE_ENT	CVE_MUN	CVE_LOC	NOM_ENT	NOM_MUN	NOM_LOC	ECO_IMP_01	ECO_IMP_02	ECO_IMP_03	ECO_IMP_04	ECO_IMP_05	ECO_IMP_06	ECO_IMP_07	ECO_IMP_08
484010010001	-102.296	21.888	156	225	1	1	1	1	1	Aguascalientes	Aguascalientes	Aguascalientes	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010094	-102.374	21.872	156	225	1	1	94	1	1	Aguascalientes	Aguascalientes	Granja Adellita	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010096	-102.357	21.884	156	225	1	1	96	1	1	Aguascalientes	Aguascalientes	Agua Azul	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010100	-102.373	21.855	156	225	1	1	100	1	1	Aguascalientes	Aguascalientes	Rancho Alegre	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010102	-102.357	21.78	156	225	1	1	102	1	1	Aguascalientes	Aguascalientes	Los Arbolitos [Rancho]	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010104	-102.192	21.945	157	225	1	1	104	1	1	Aguascalientes	Aguascalientes	Ardillas de Abajo (Las Ardillas)	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010106	-102.274	21.802	156	225	1	1	106	1	1	Aguascalientes	Aguascalientes	Arellano	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010112	-102.125	21.747	157	224	1	1	112	1	1	Aguascalientes	Aguascalientes	Bajo los Vázquez	0.00508679	0.009605509	0.01354161	0.01701864	0.02018221	0.02316346	0.02607027	0.02891117
484010010113	-102.29	21.758	156	225	1	1	113	1	1	Aguascalientes	Aguascalientes	Bajo de Montoro	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010120	-102.293	21.719	156	224	1	1	120	1	1	Aguascalientes	Aguascalientes	Buenavista de Peñuelas	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
484010010121	-102.413	21.775	156	225	1	1	121	1	1	Aguascalientes	Aguascalientes	Cabeçita 3 Marías (Rancho Nuevo)	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010125	-102.236	21.784	157	225	1	1	125	1	1	Aguascalientes	Aguascalientes	Cañada Grande de Cotorina	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010126	-102.197	22.008	157	225	1	1	126	1	1	Aguascalientes	Aguascalientes	Cañada Honda [Estación]	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010127	-102.467	21.783	156	225	1	1	127	1	1	Aguascalientes	Aguascalientes	Los Caños	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010128	-102.371	21.894	156	225	1	1	128	1	1	Aguascalientes	Aguascalientes	El Carrón	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010135	-102.311	21.699	156	224	1	1	135	1	1	Aguascalientes	Aguascalientes	El Cedazo (Cedazo de San Antonio)	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
484010010138	-102.499	21.731	156	224	1	1	138	1	1	Aguascalientes	Aguascalientes	Centro de Arriba (El Taray)	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
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484010010144	-102.168	21.904	157	225	1	1	144	1	1	Aguascalientes	Aguascalientes	El Colorado (El Soyatal)	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010146	-102.208	21.917	157	225	1	1	146	1	1	Aguascalientes	Aguascalientes	El Conejal	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010157	-102.267	21.757	156	225	1	1	157	1	1	Aguascalientes	Aguascalientes	Cotorina de Abajo	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
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484010010166	-102.448	21.688	156	224	1	1	166	1	1	Aguascalientes	Aguascalientes	La Huerta (La Cruz)	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
484010010170	-102.351	21.756	156	225	1	1	170	1	1	Aguascalientes	Aguascalientes	Cuautémoc (Las Palomas)	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010171	-102.161	21.731	157	224	1	1	171	1	1	Aguascalientes	Aguascalientes	Los Cuervos (Los Ojos de Agua)	0.00508679	0.009605509	0.01354161	0.01701864	0.02018221	0.02316346	0.02607027	0.02891117
484010010172	-102.383	21.865	156	225	1	1	172	1	1	Aguascalientes	Aguascalientes	San José [Granja]	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010176	-102.167	21.766	157	225	1	1	176	1	1	Aguascalientes	Aguascalientes	La Chiripa	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010182	-102.372	21.665	156	224	1	1	182	1	1	Aguascalientes	Aguascalientes	Dolores	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
484010010183	-102.245	21.84	157	225	1	1	183	1	1	Aguascalientes	Aguascalientes	Los Dolores	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010190	-102.166	21.782	157	225	1	1	190	1	1	Aguascalientes	Aguascalientes	El Duraznillo	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010191	-102.137	21.766	157	225	1	1	191	1	1	Aguascalientes	Aguascalientes	Los Durón	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010197	-102.355	21.888	156	225	1	1	197	1	1	Aguascalientes	Aguascalientes	Paraiso [Rancho]	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010201	-102.346	21.9	156	225	1	1	201	1	1	Aguascalientes	Aguascalientes	Desde el Corazón del Fruto	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010207	-102.353	21.878	156	225	1	1	207	1	1	Aguascalientes	Aguascalientes	Valle Redondo	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010209	-102.329	21.833	156	225	1	1	209	1	1	Aguascalientes	Aguascalientes	La Fortuna	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010212	-102.242	21.857	157	225	1	1	212	1	1	Aguascalientes	Aguascalientes	Lomas del Gachupín	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010213	-102.106	21.77	157	225	1	1	213	1	1	Aguascalientes	Aguascalientes	El Carmen (Gallinas Sueras) [Rancho]	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010216	-102.375	21.822	156	225	1	1	216	1	1	Aguascalientes	Aguascalientes	La Gloria	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010226	-102.359	21.907	156	225	1	1	226	1	1	Aguascalientes	Aguascalientes	Hacienda Nueva	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010227	-102.451	21.686	156	224	1	1	227	1	1	Aguascalientes	Aguascalientes	La Hacienda (La Esperanza)	0.02743369	0.04786261	0.0636996	0.07662067	0.08777876	0.09797107	0.1077533	0.1172077
484010010228	-102.213	21.908	157	225	1	1	228	1	1	Aguascalientes	Aguascalientes	La Herrada	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010230	-102.347	21.892	156	225	1	1	230	1	1	Aguascalientes	Aguascalientes	Don Abraham [Rancho]	0.006418253	0.01147077	0.01554942	0.01897636	0.02199584	0.02478816	0.0274851	0.03010355
484010010231	-102.2	21.755	157	225	1	1	231	1	1	Aguascalientes	Aguascalientes	Puerta de los Hoyos	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010236	-102.117	21.746	157	224	1	1	236	1	1	Aguascalientes	Aguascalientes	Las Jabonerías	0.00508679	0.009605509	0.01354161	0.01701864	0.02018221	0.02316346	0.02607027	0.02891117
484010010237	-102.145	22.016	157	225	1	1	237	1	1	Aguascalientes	Aguascalientes	Jaltomate	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035
484010010239	-102.201	22.001	157	225	1	1	239	1	1	Aguascalientes	Aguascalientes	General José María Morelos y Pavón (C)	0.003424276	0.006431424	0.009033555	0.01132273	0.01340019	0.01535503	0.01725964	0.01912035



Gracias

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