



Prague Postcard

Impetus4Change (I4C): Improving near-term climate predictions for societal transformation

Adaptalab #1, Paris, France

29 Nov. – 1 Dec., 2023

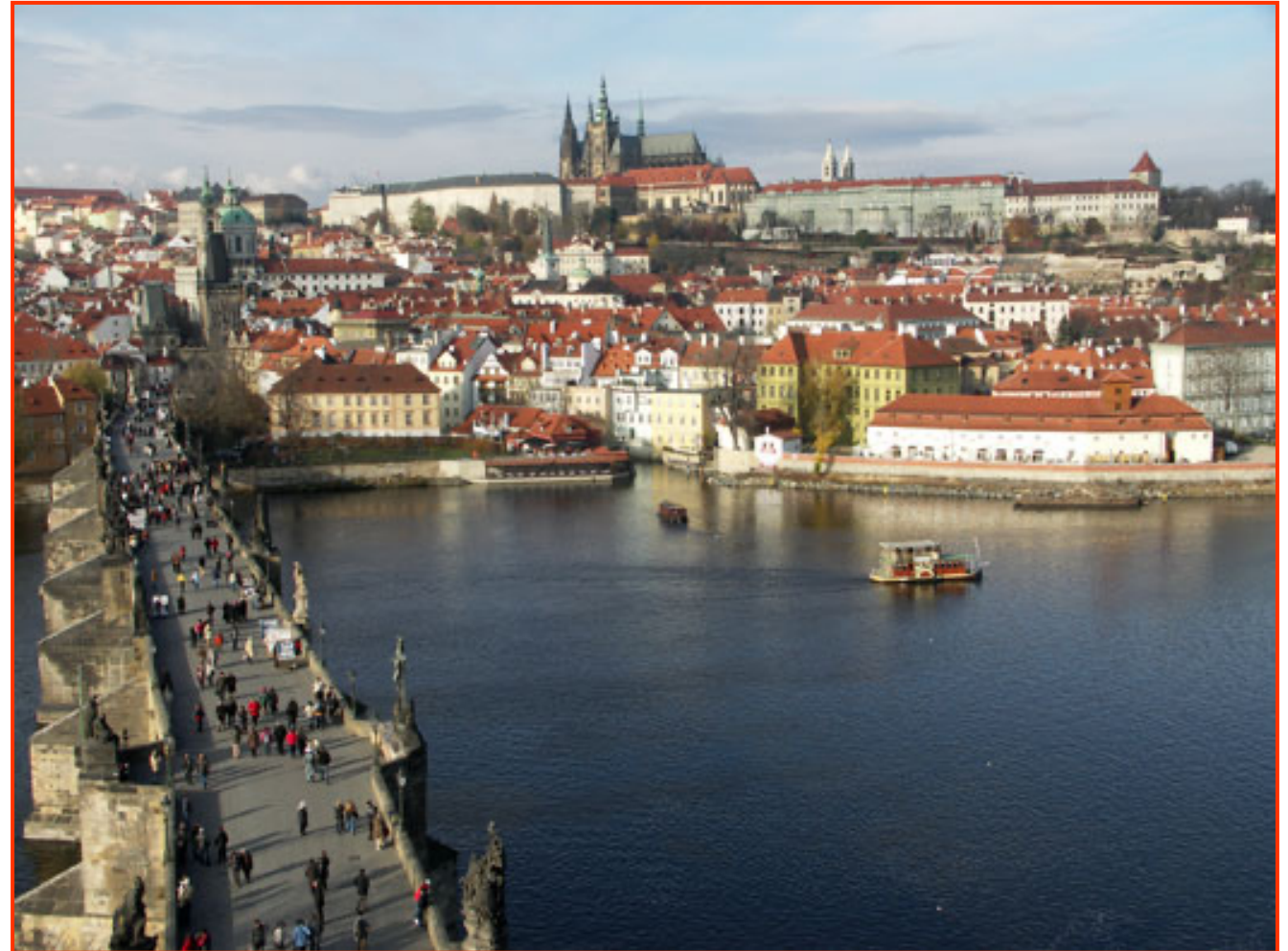
Prague climate

Population: 1.3 M

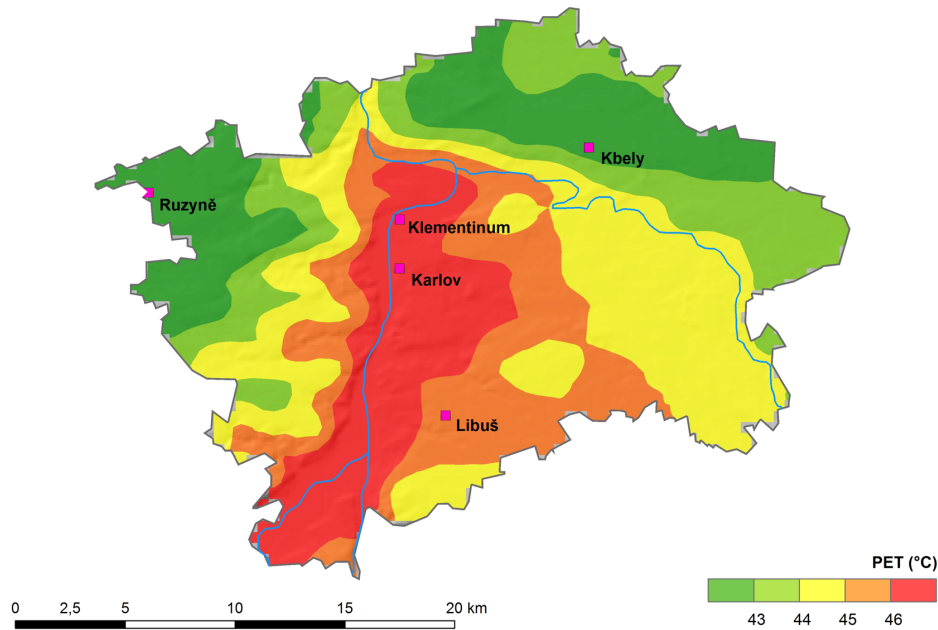
Metropolitan area: 2.7 M

In the middle of Bohemian massif with part of the city in the Vltava river valley and slopes up to the plateaus

Temperate oceanic climate with humid continental influences (cold winters often below freezing temperatures and mild or warm summers)



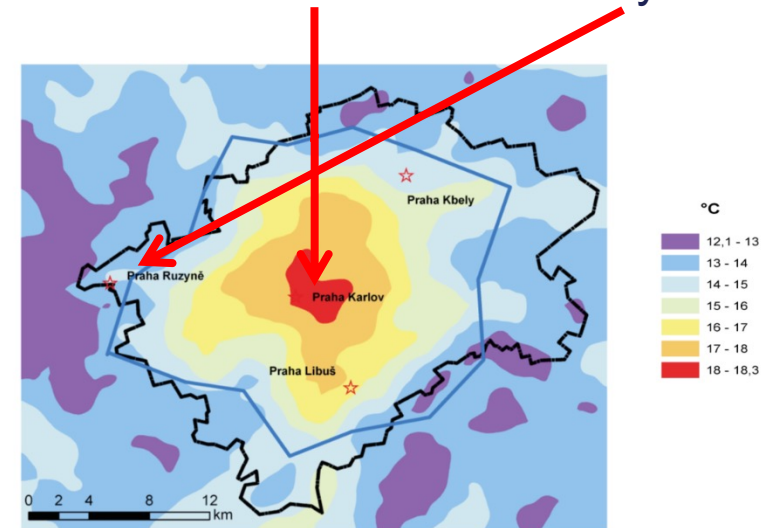
Prague climate



	J	F	M	A	M	J	J	A	S	O	N	D	annual
Tmax [°C]	1,4	3,1	7,7	13,4	18,7	21,2	23,6	23,5	18,6	12,8	5,5	2,1	12,6
Tmin [°C]	-3,6	-3,3	-0,1	3,5	8,4	11,3	13,4	13,0	9,1	4,9	0,3	-2,2	4,6
Precip [mm]	23,6	23,1	28,1	38,2	77,2	72,7	66,2	69,6	40,4	30,5	31,9	25,3	526,8

Zdroj: [Ročenka Praha - životní prostředí 2005](#) Statistické údaje za roky 1961–1990 ze stanice Praha-Ruzyně

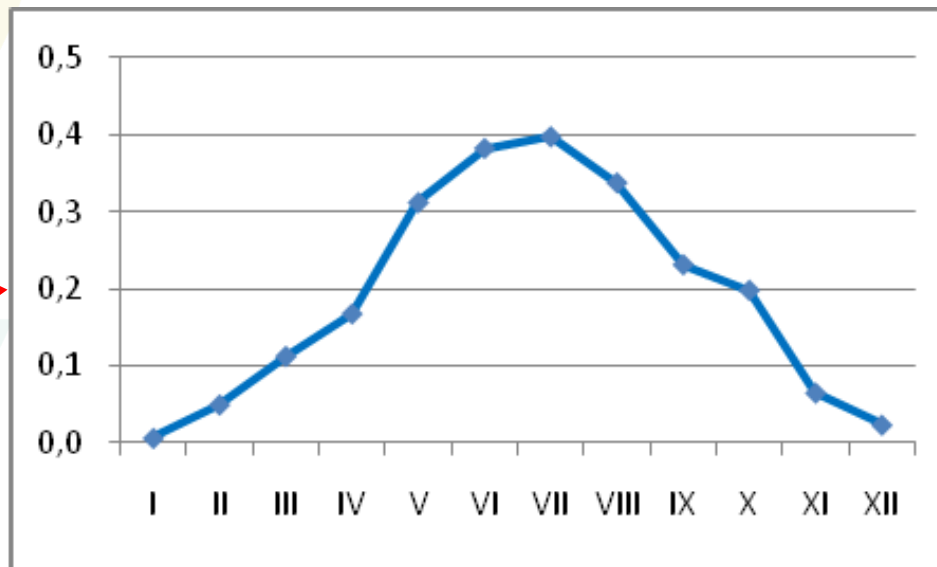
Klementinum vs. Ruzyně



Maximum PET in Prague on 28th July 2013

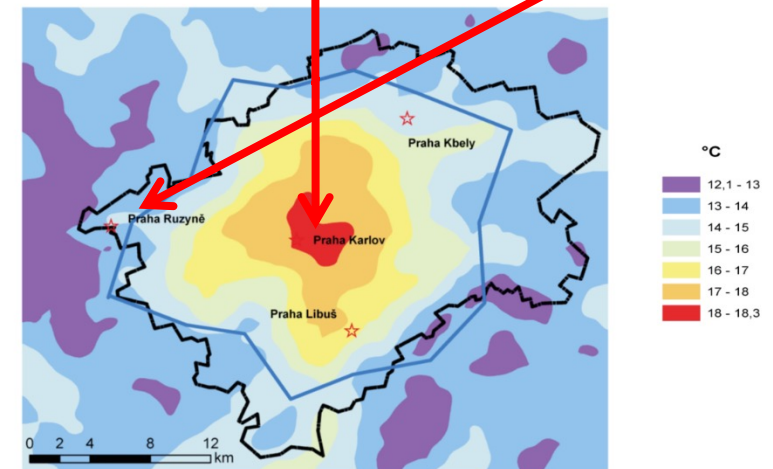
UHI development

<i>period</i>	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	YEAR
1961-2009	2,2	2,3	2,2	2,2	2,2	2,4	2,3	2,2	2,0	2,0	2,2	2,2	2,2
1961-1990	2,2	2,3	2,2	2,1	2,1	2,2	2,2	2,0	1,9	2,0	2,2	2,2	2,1
1991-2009	2,2	2,3	2,3	2,3	2,4	2,6	2,6	2,4	2,1	2,2	2,2	2,2	2,3
Difference new - standard	0,01	0,05	0,11	0,17	0,31	0,38	0,40	0,34	0,23	0,20	0,07	0,02	0,19



Pretel (2010)

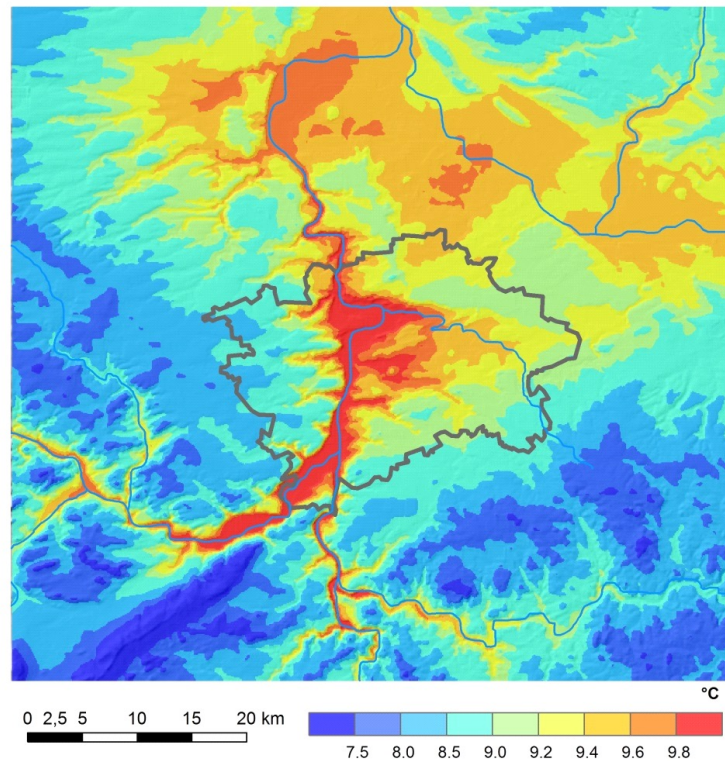
Klementinum vs. Ruzyne



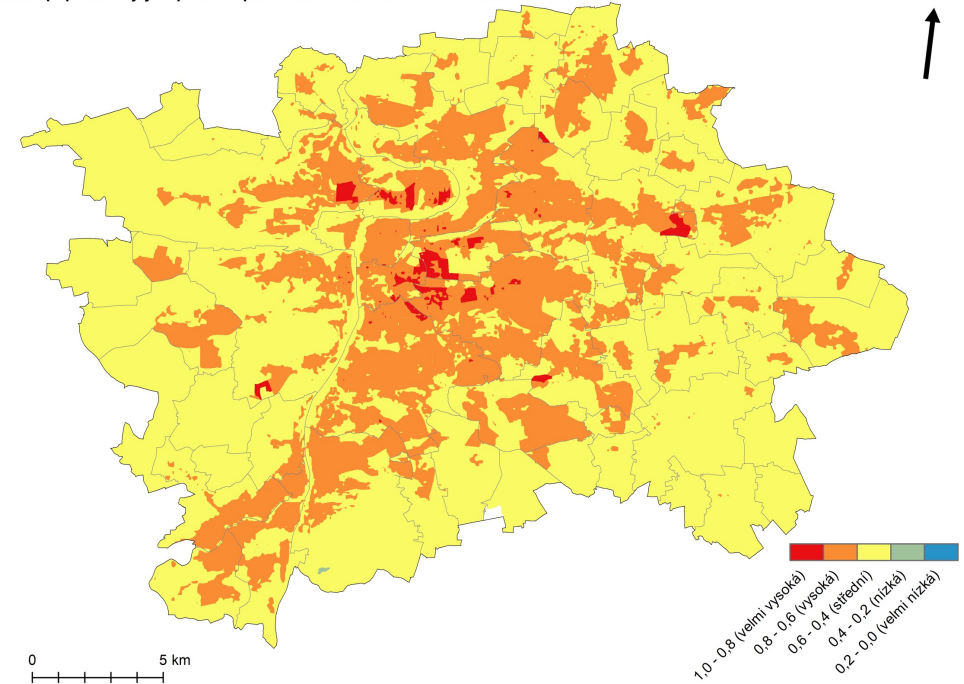
Climate hazards

UHI

Heat waves

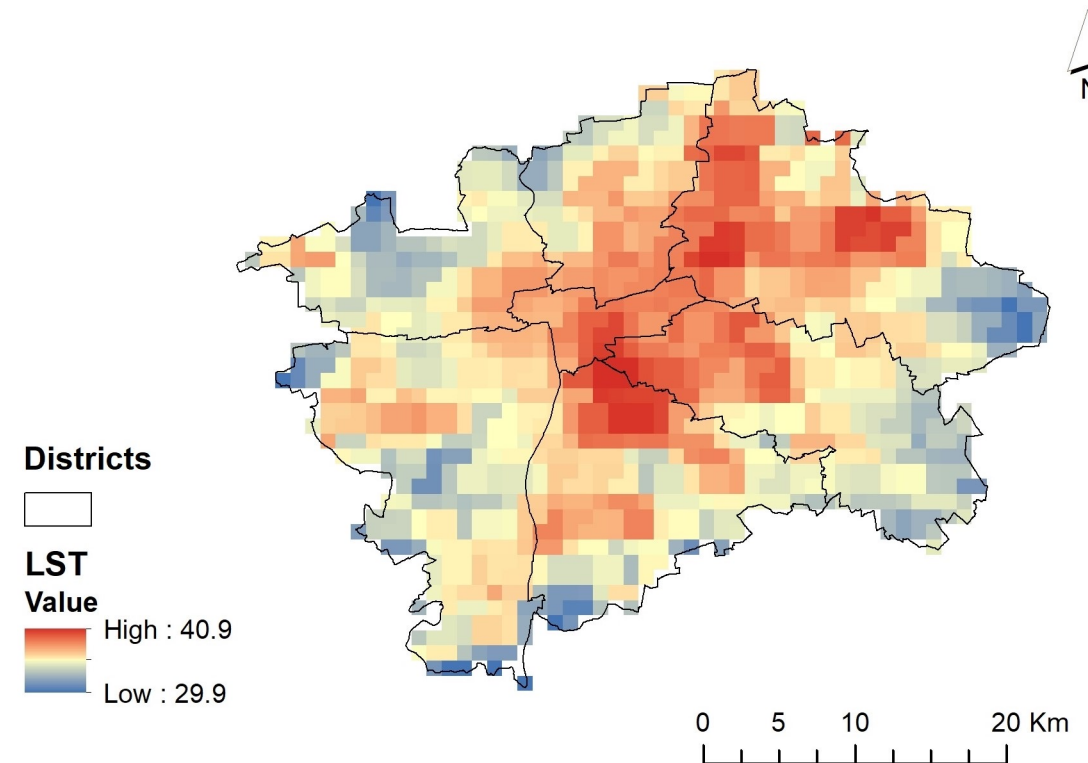
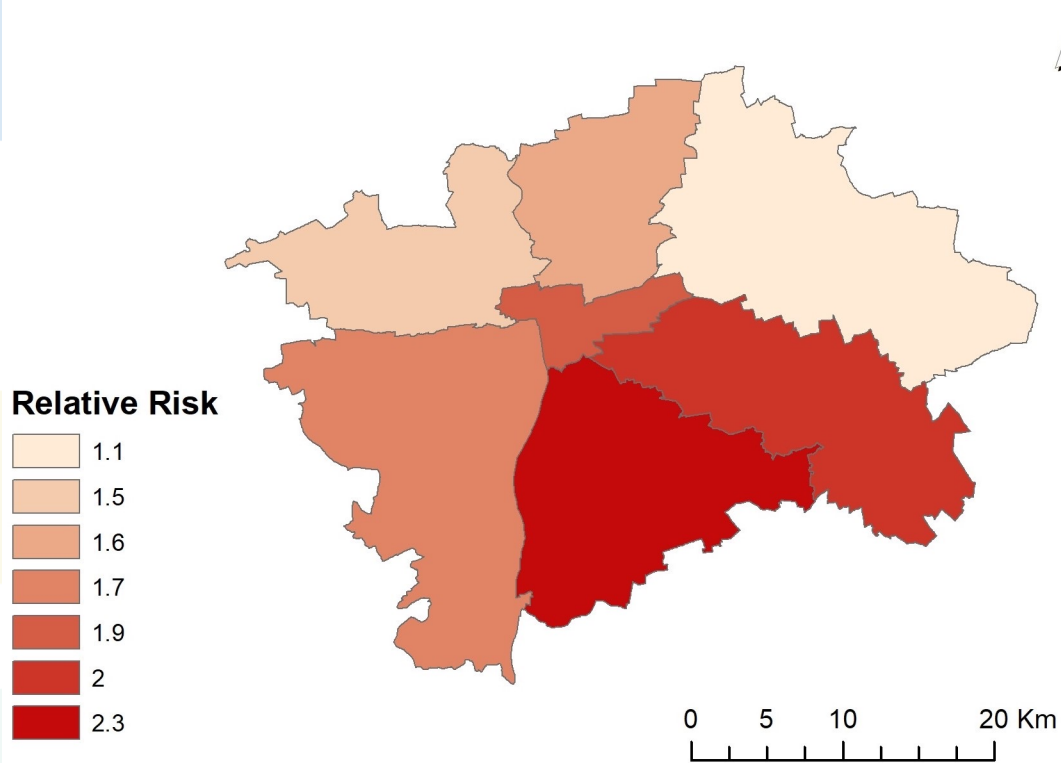


Zranitelná populace a její expozice v průběhu horkého dne v 16:00 hod.



Annual average air temperature for Prague and surrounding, period 1961–2010.

Relative risk of mortality vs. LST (MODIS)



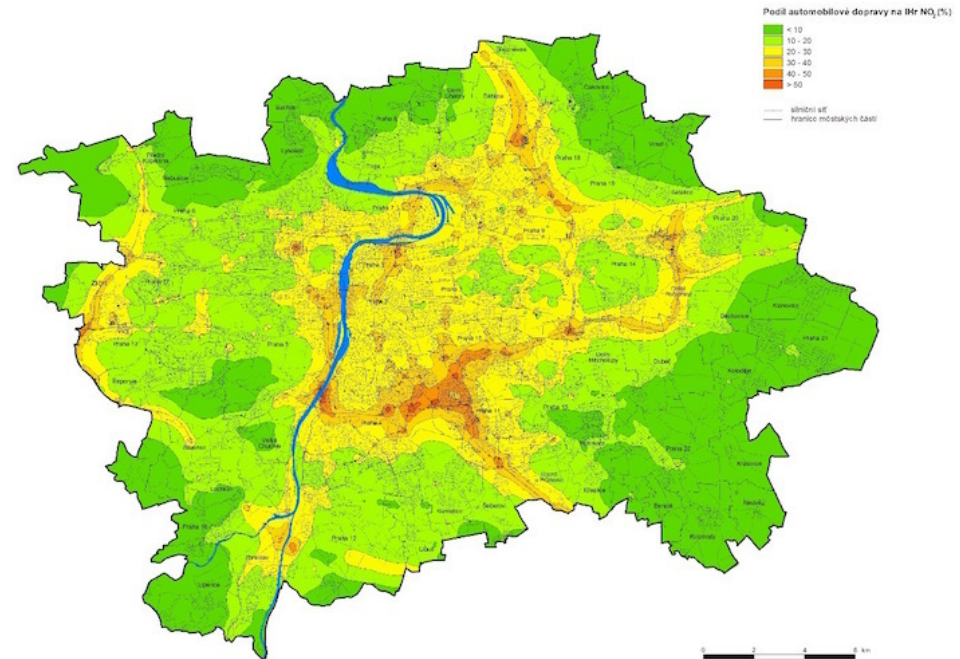
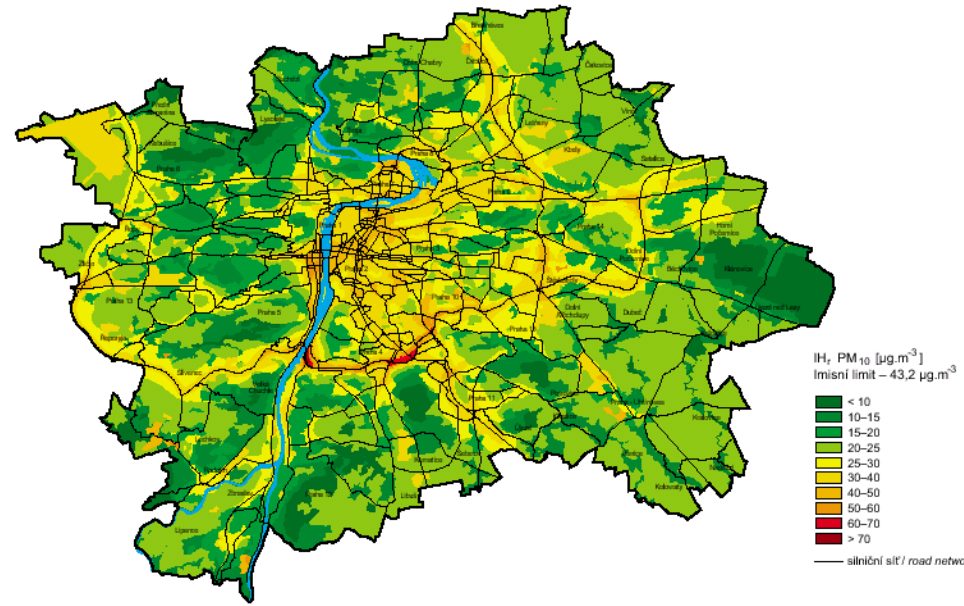
Air quality

Emission from transportation

Photochemical smog

PMs

exceedances



Actions – documents - decisions



Measures

Investment into green infrastructure,
following adaptation plans,

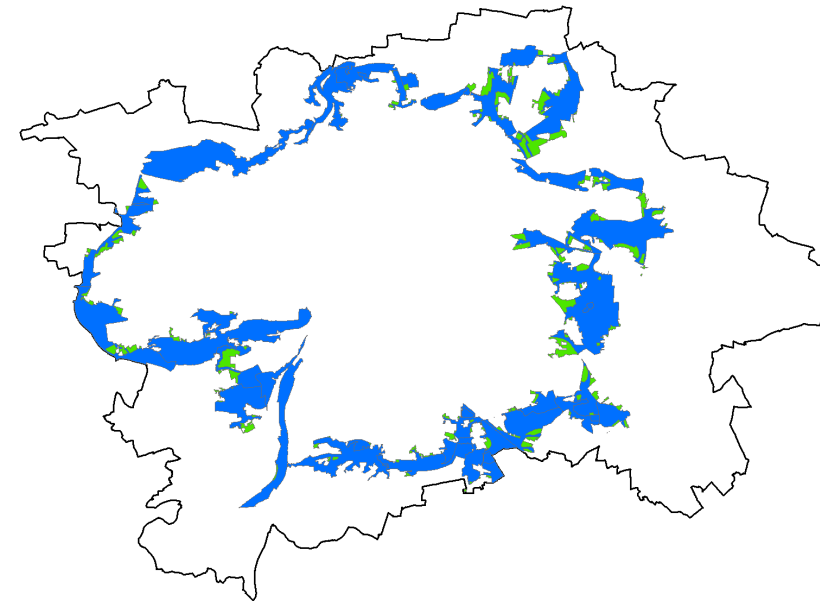
Greenery

Blue infrastructure

Water cart, mist showers, sprinklers

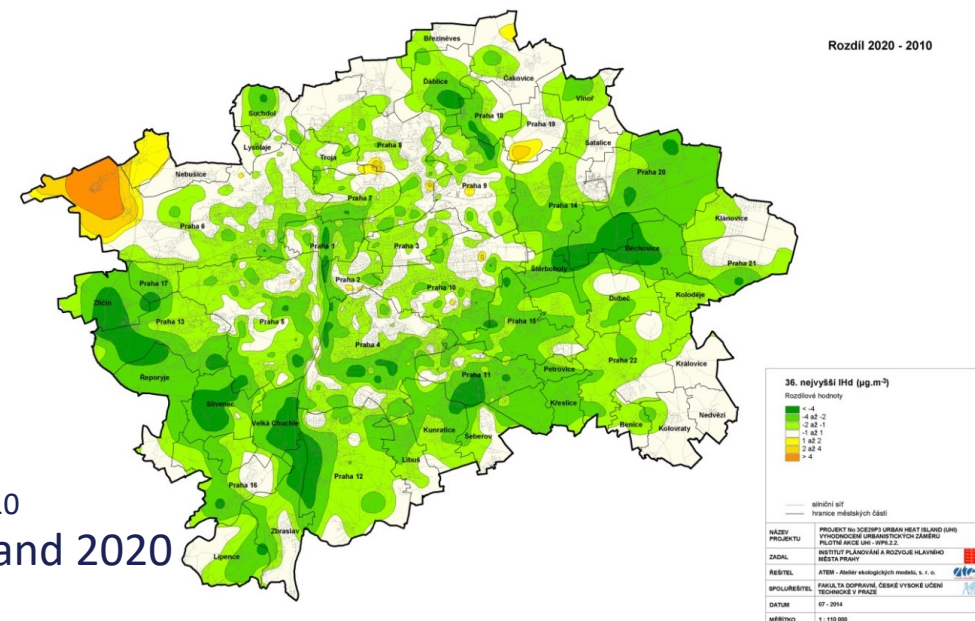
ČHMÚ warnings (biometeorology)

Media, recommendations



ČÁSTICE PM₁₀
36. nejvyšší průměrná 24hodinová koncentrace

Výřez 5-9



Rozdíl 2020 - 2010

Differences in 24-hour-averaged PM₁₀
concentrations between years 2010 and 2020

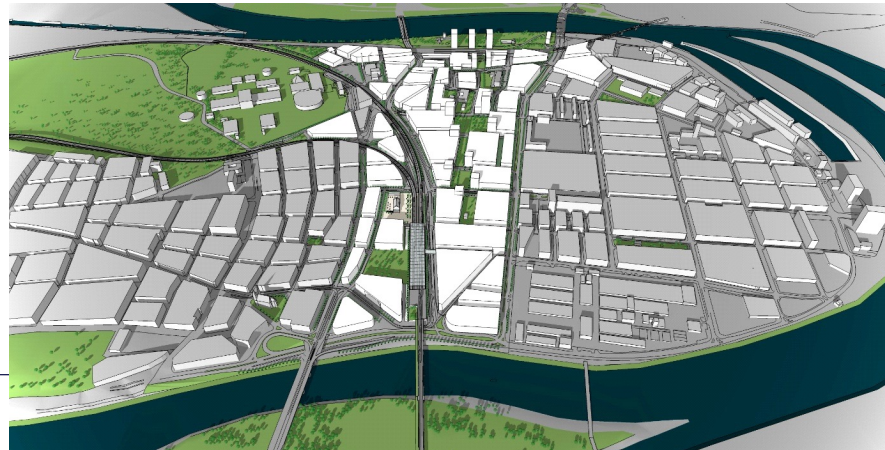
Projections – adaptation - mitigation

What sort of information might be helpful [in general]

Awareness, preparedness

Heat waves intensification, shelters?

Air quality – paid entrance for selected parts of downtown, lower speed limits



Challenges

Behavioral issues

Preservation guidances

Increase awareness

Involvement of stakeholders

Action plan (systematic), implementation into the building rules, fundings possibilities

Health recommendation



Contact

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