



CORDEX.be stakeholders meeting – Session Urban – September 25th, 2017

Heat stress increase under climate change twice as large in cities as in rural areas

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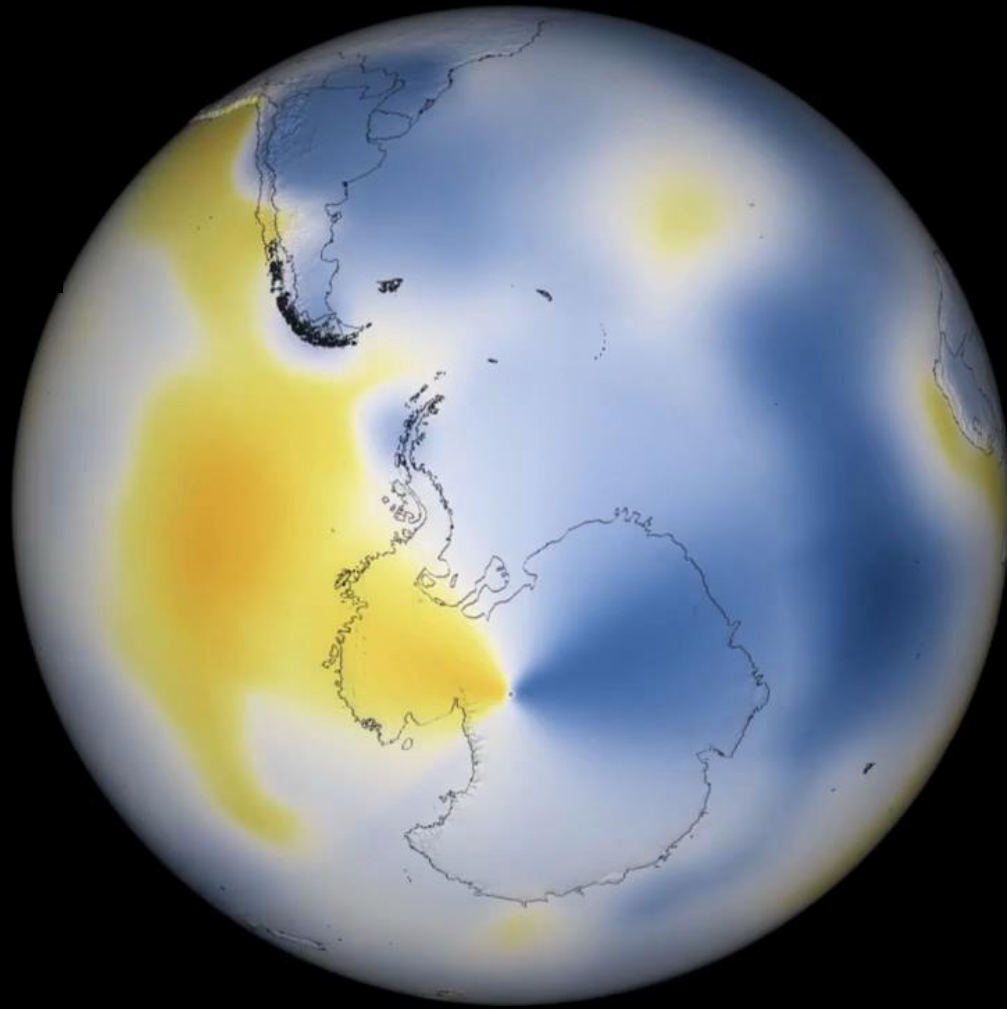
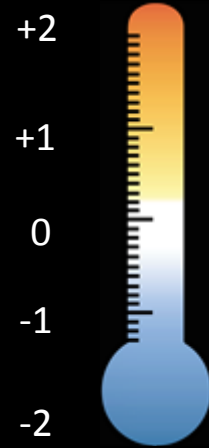




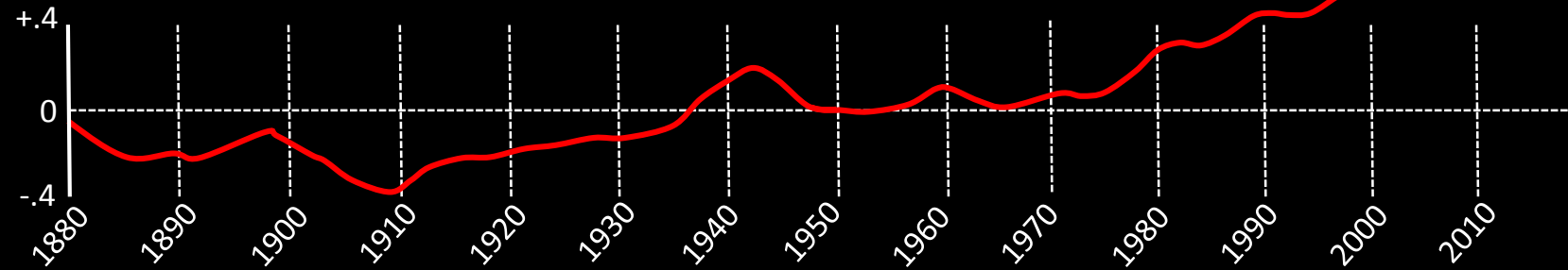


1883 - 1887

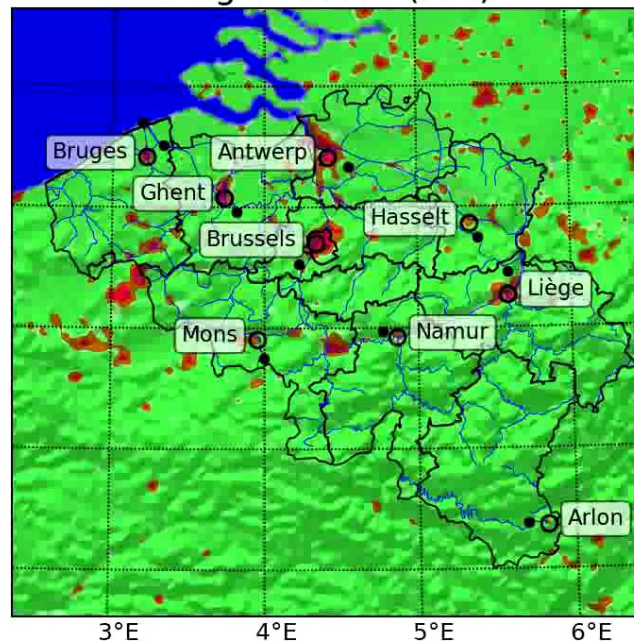
T anomaly ($^{\circ}\text{C}$)



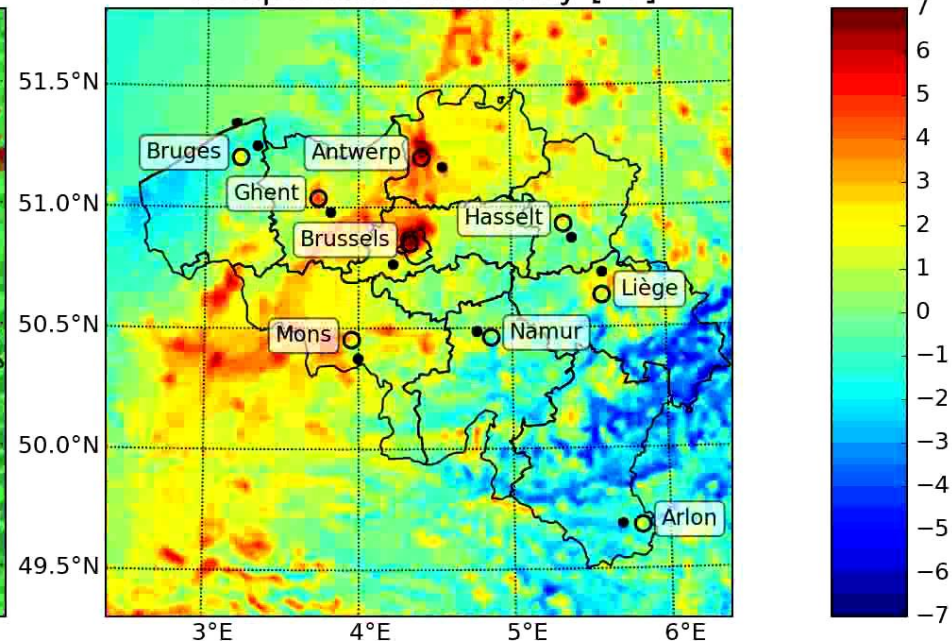
T anomaly ($^{\circ}\text{C}$)



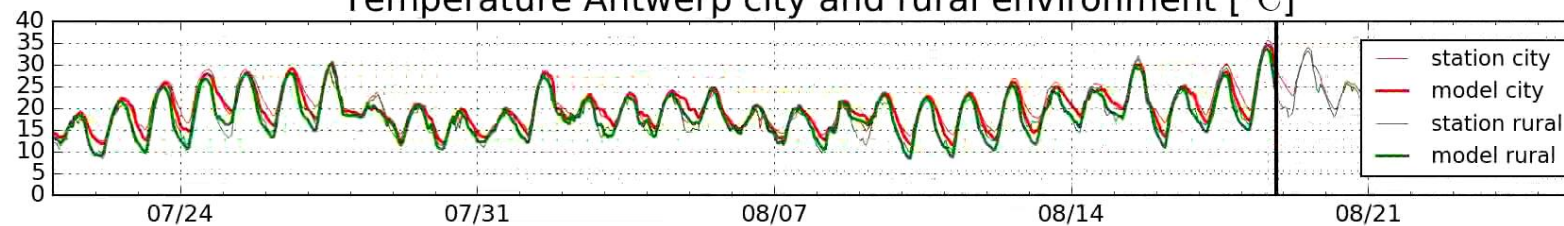
Belgian cities (red)



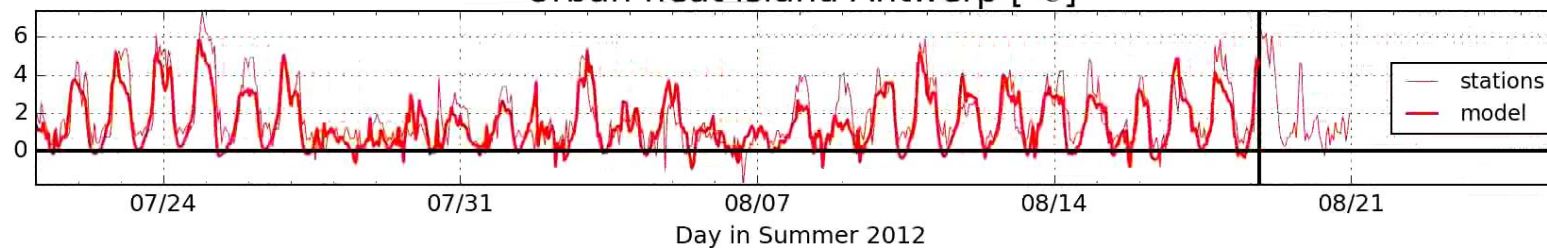
Temperature anomaly [°C]



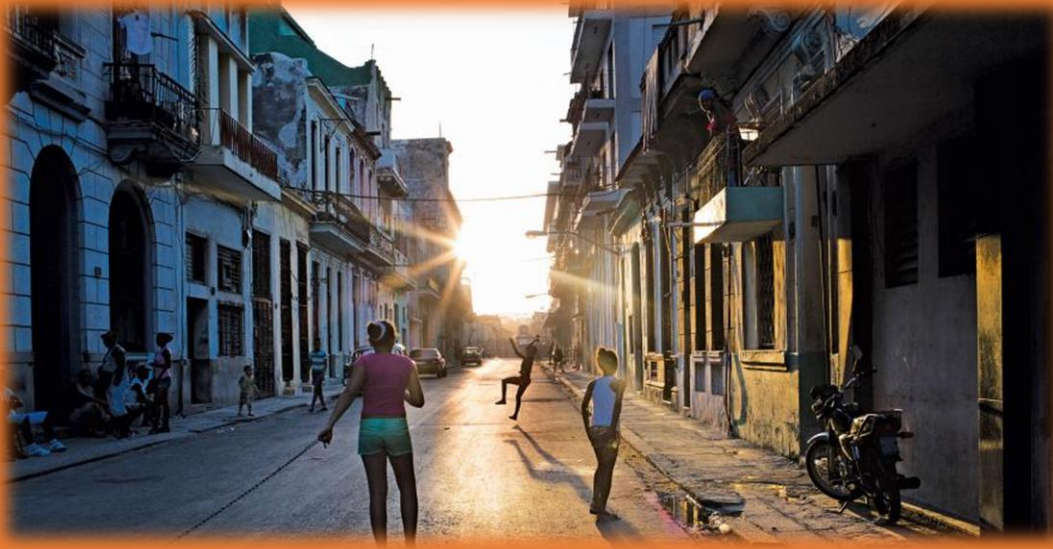
Temperature Antwerp city and rural environment [°C]

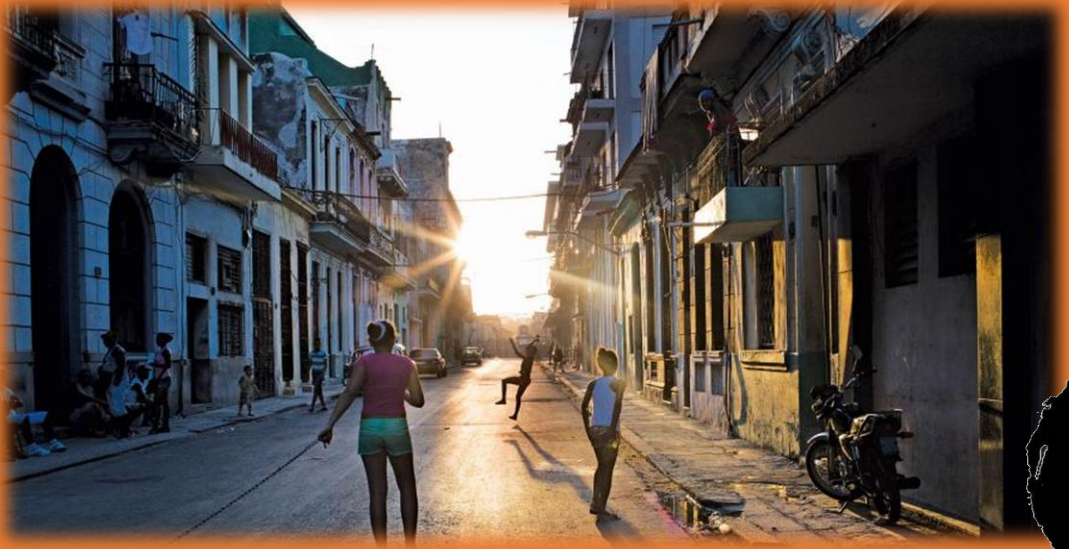


Urban heat island Antwerp [°C]

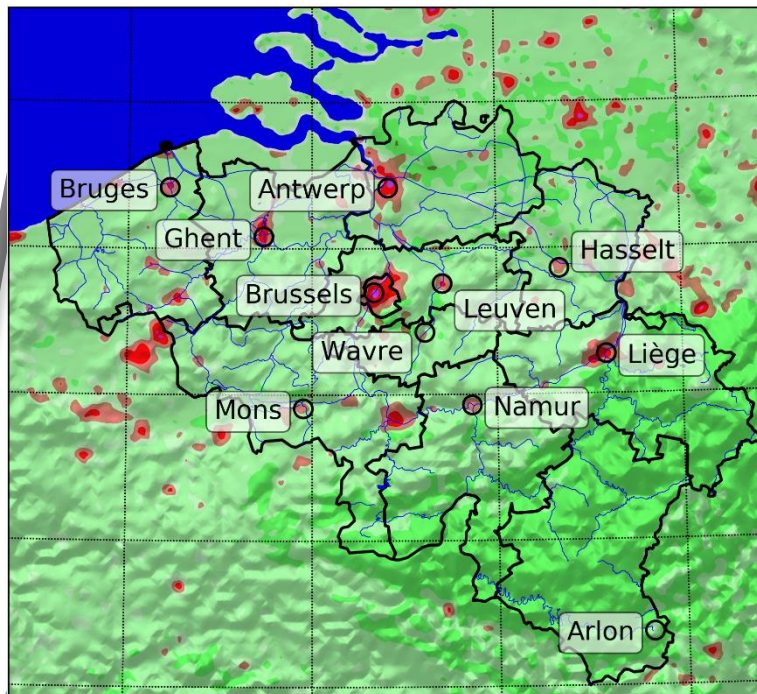








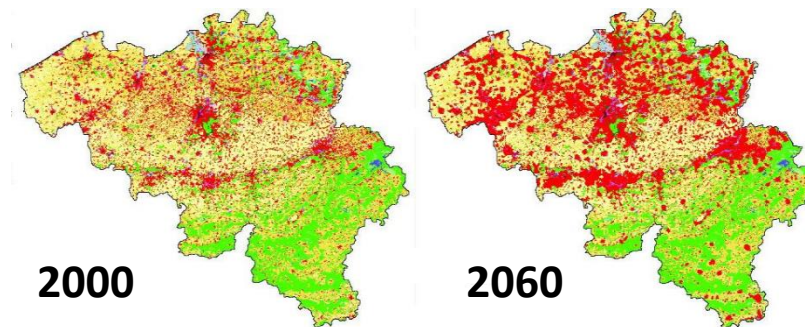
1. Urban climate simulations



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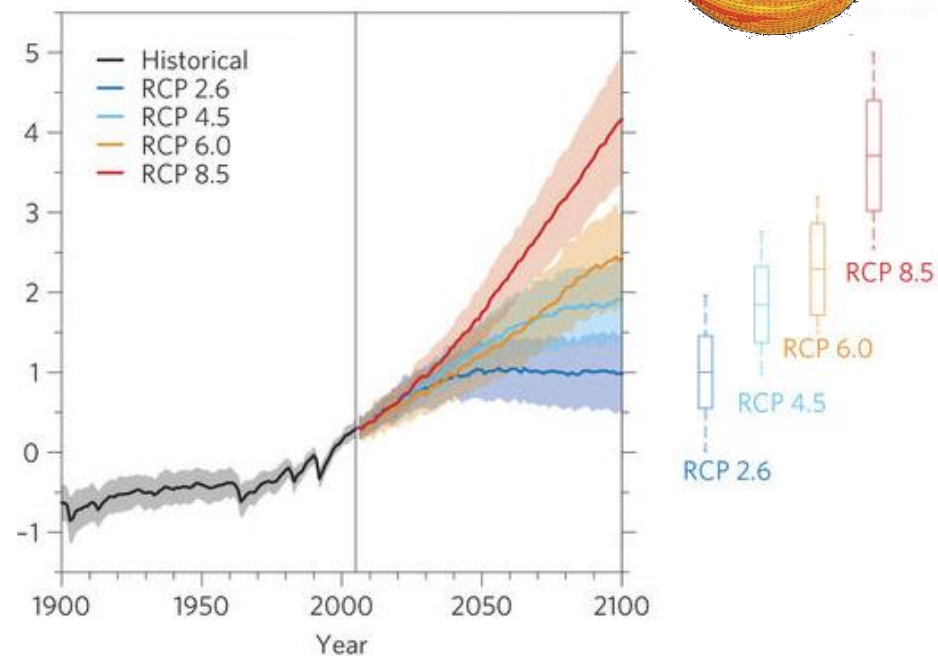
*Coherent climate information
for Belgium*

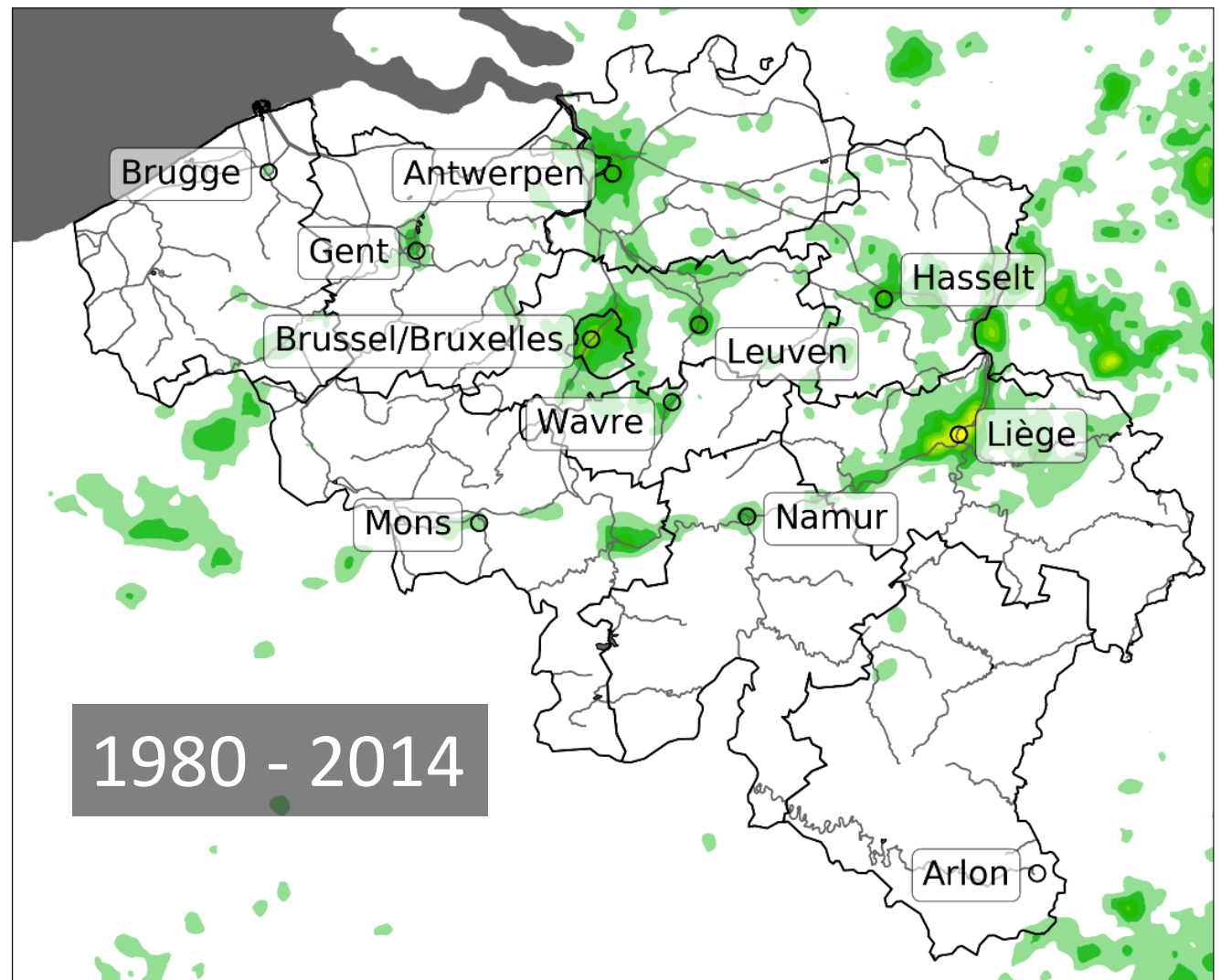
2. Land-cover scenarios



3. Global emission scenarios

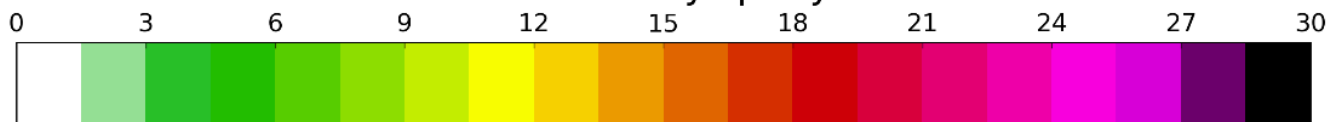
Global surface warming (°C)

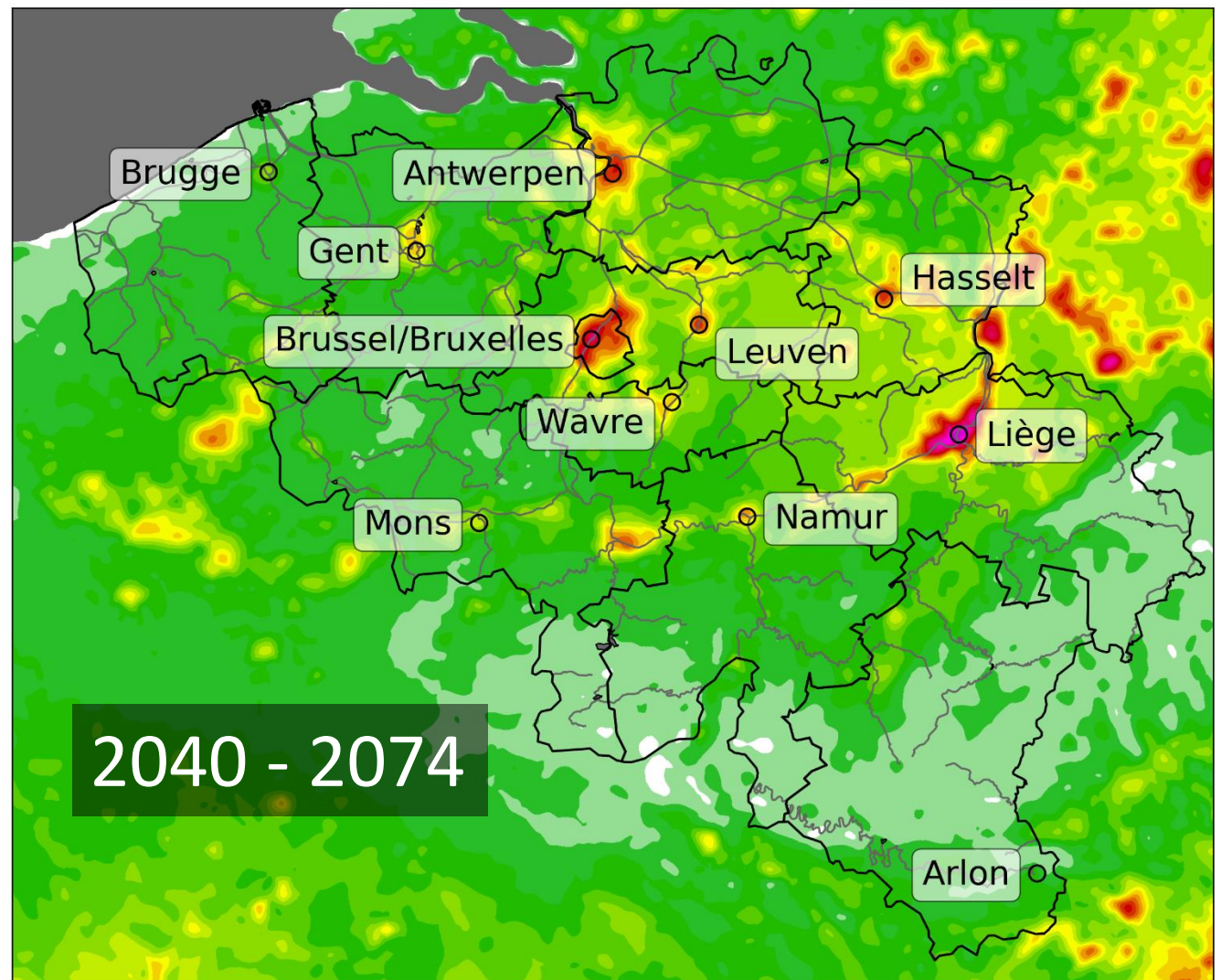




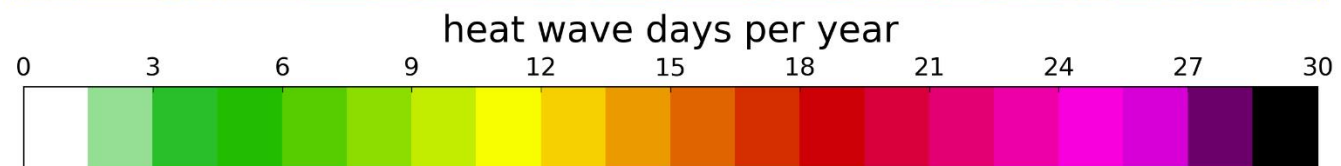
1980 - 2014

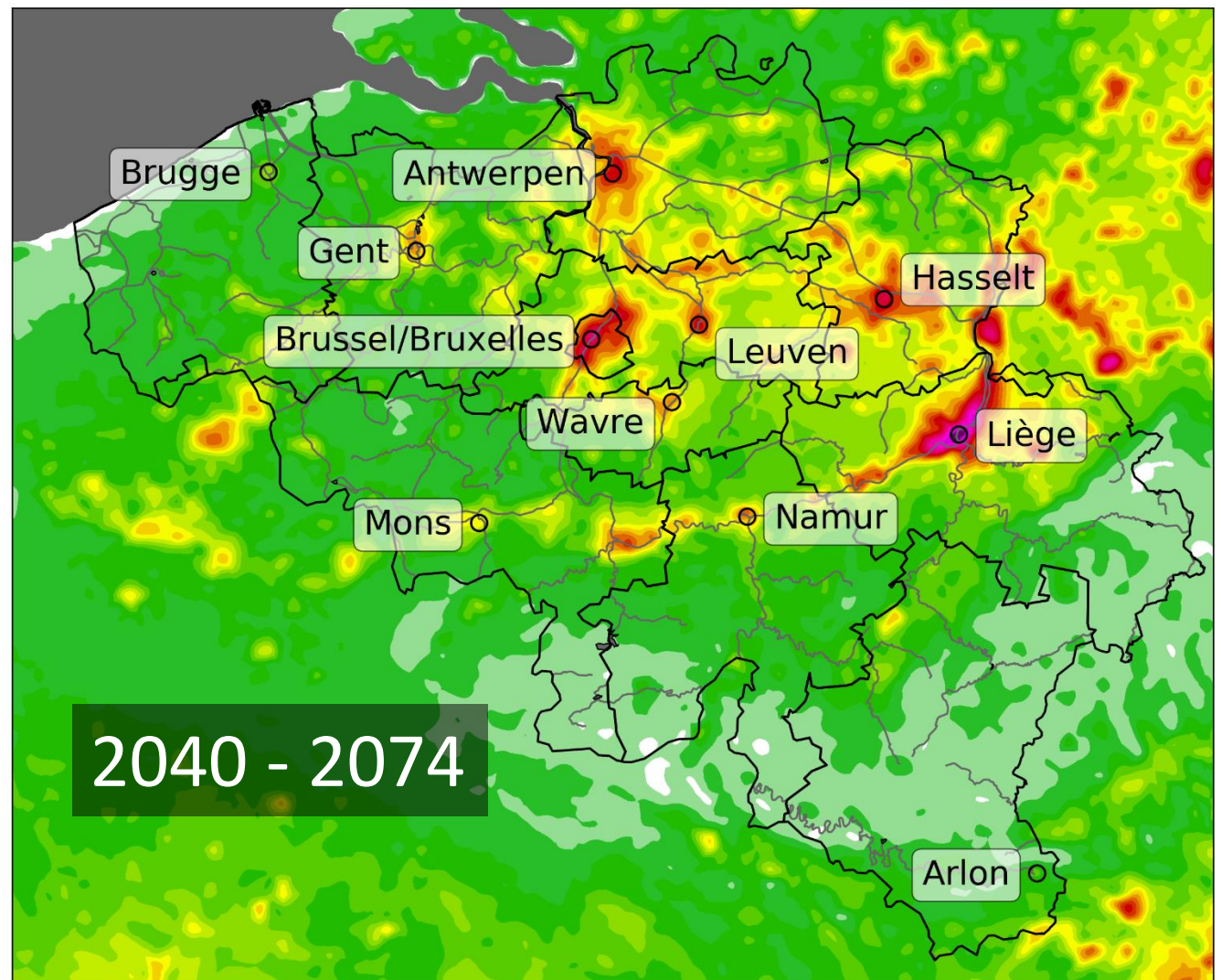
heat wave days per year



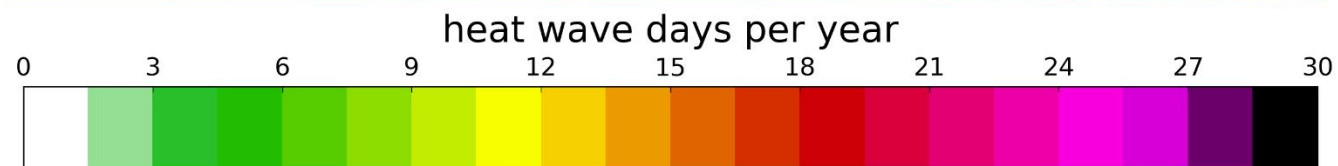


2040 - 2074





2040 - 2074



	countryside		cities	
	Heat wave days		Heat wave days	
Present-day	0.9		5.1	
Mid-21 st century (middle)	7.1		16.8	

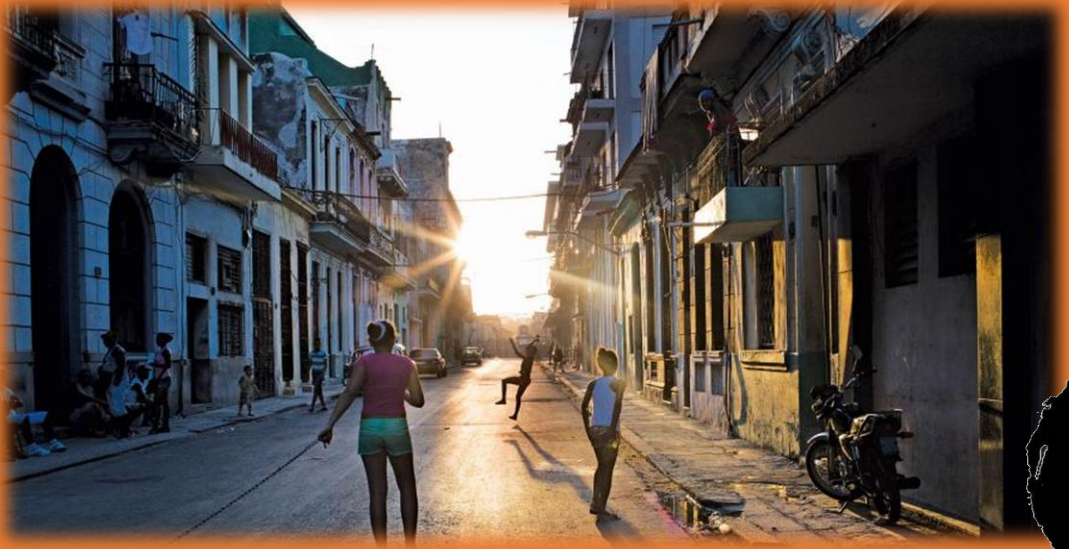
	countryside		cities	
	Heat wave days	Mean intensity [°C]	Heat wave days	Mean intensity [°C]
Present-day	0.9	2.7	5.1	3.3
Mid-21 st century (middle)	7.1	3.5	16.8	5.0

	countryside		cities	
	Heat wave days	Mean intensity [°C]	Heat wave days	Mean intensity [°C]
Present-day	0.9	2.7	5.1	3.3
Mid-21st century (best case)	1.6	2.9	6.4	3.5
Mid-21 st century (middle)	7.1	3.5	16.8	5.0

	countryside		cities	
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Present-day	0.9	2.7	5.1	3.3
Mid-21 st century (best case)	1.6	2.9	6.4	3.5
Mid-21 st century (middle)	7.1	3.5	16.8	5.0
Mid-21st century (worst case)	26.9	5.4	41.2	6.2







**1. decrease greenhouse
gas emissions**

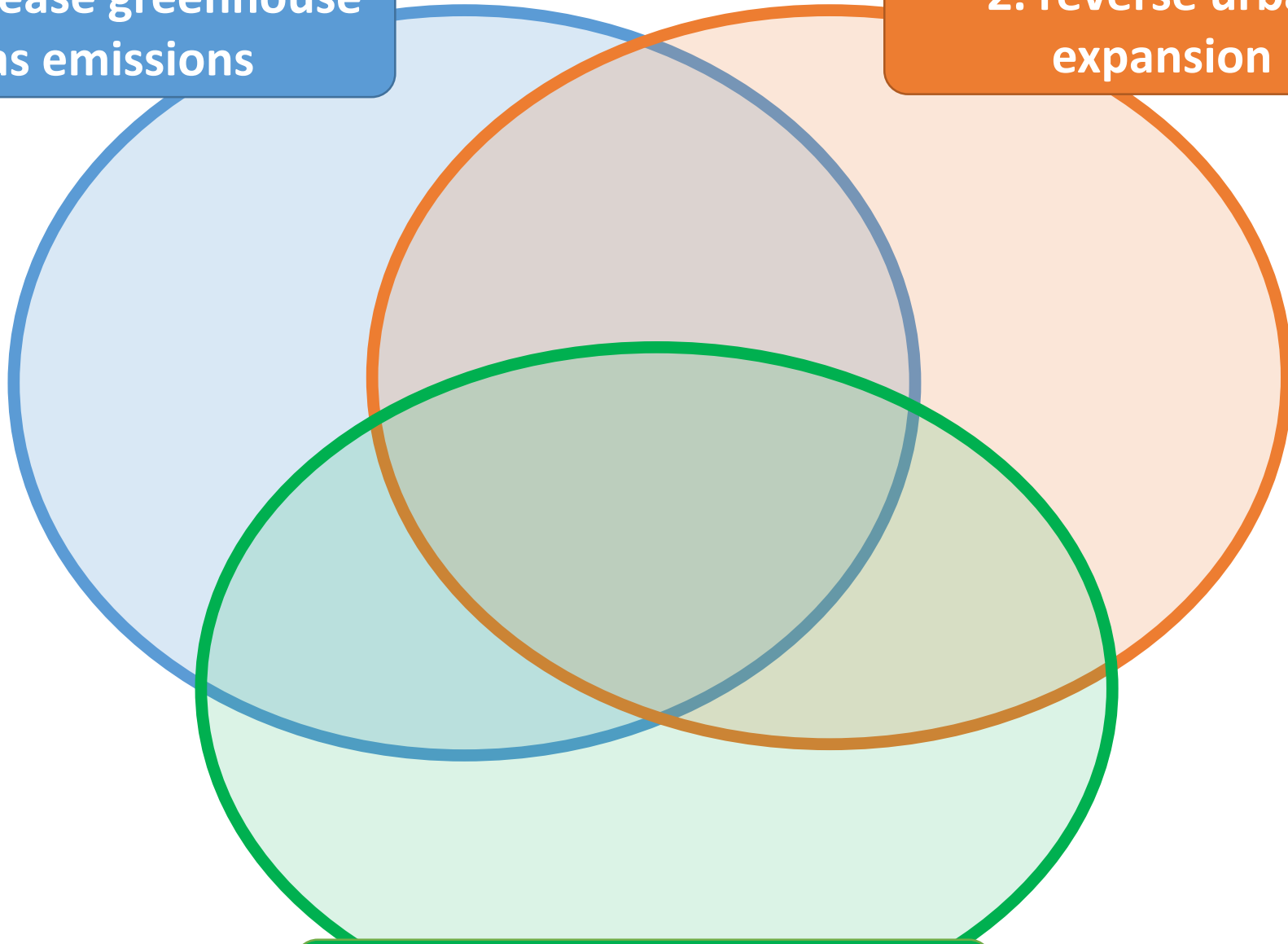
**2. reverse urban
expansion**

**3. decrease urban heat load,
increase cooling capacity**

**1. decrease greenhouse
gas emissions**

**2. reverse urban
expansion**

**3. decrease urban heat load,
increase cooling capacity**



**1. decrease greenhouse
gas emissions**



**2. reverse urban
expansion**



**3. decrease urban heat load,
increase cooling capacity**

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gas emissions**



**2. reverse urban
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**3. decrease urban heat load,
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1. decrease greenhouse gas emissions



2. reverse urban expansion



3. decrease urban heat load, increase cooling capacity











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publication



press



video

