Otváracia konferencia projektu DELIVER: Sídliská ako živé miesta odolné voči zmene klímy
12.9. 2018 Univerzitná knižnica Bratislava

Dôsledky zmeny klímy vo vzťahu k sídelnému prostrediu

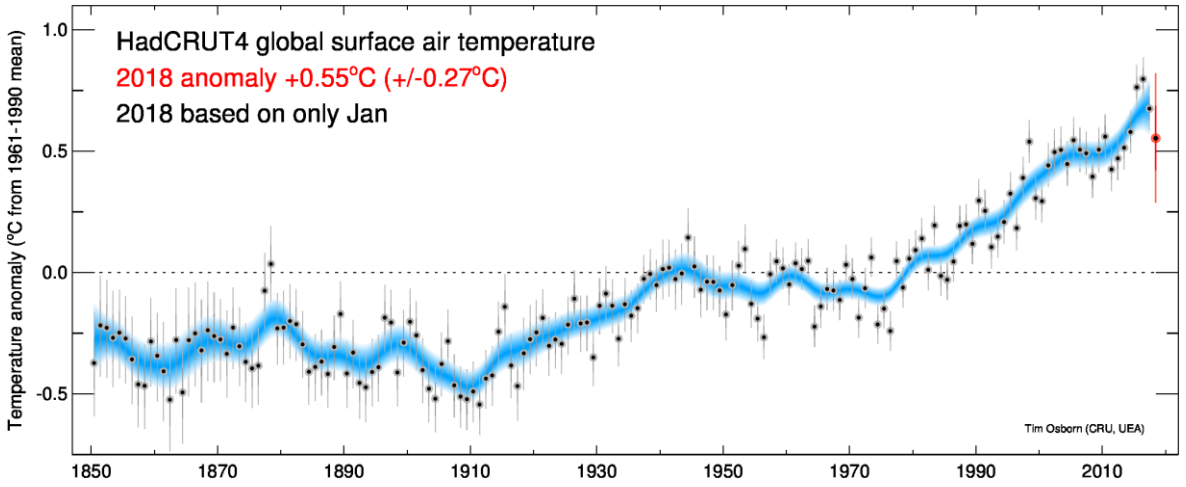
Jozef Pecho

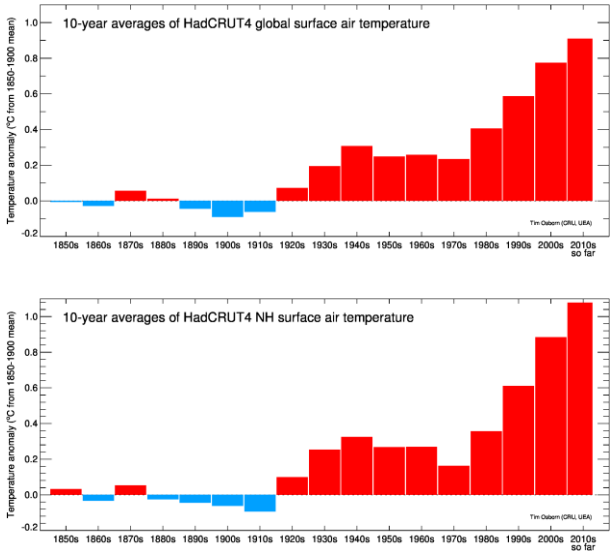
Slovenský hydrometeorologický ústav, Bratislava

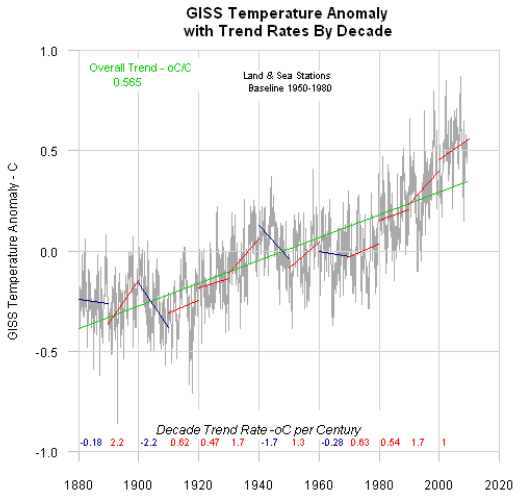
Projekt DELIVER - DEveloping resilient, low-carbon and more LIVablE urban Residential area, DELIVER:Sídliská ako živé miesta odolné voči zmene klímy, kód LIFE17 CCA/SK/000126 - LIFE DELIVER.

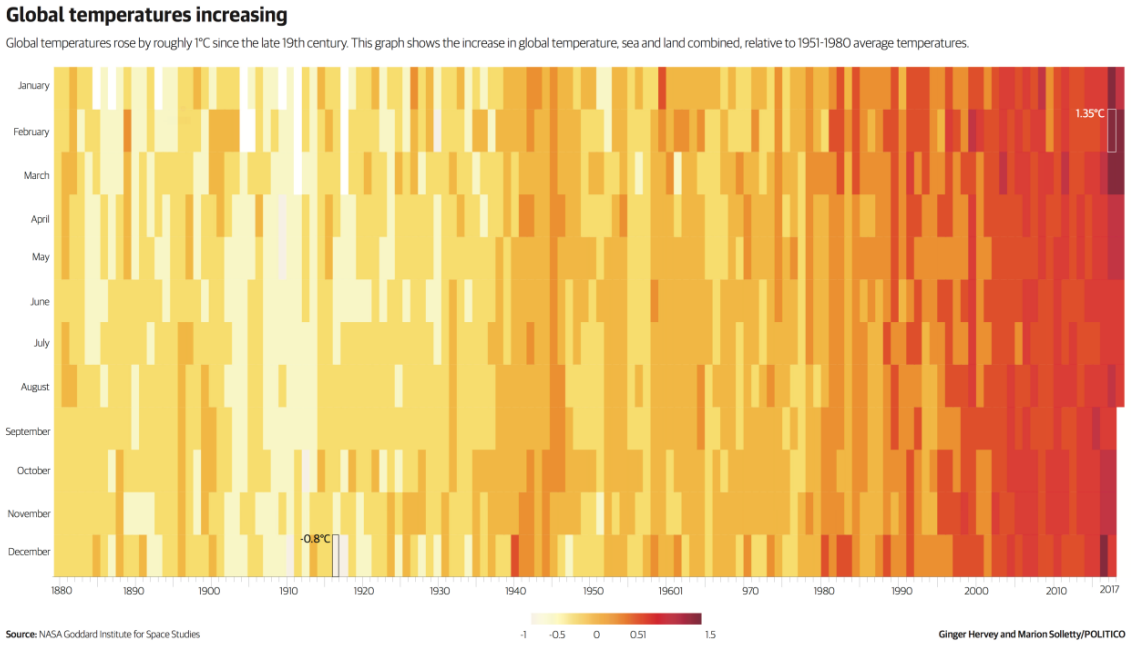
Projekt je financovaný zo zdrojov Európskej komisie, z finančného nástroja pre životné prostredie: program LIFE, z podprogramu „Ochrana klímy“.

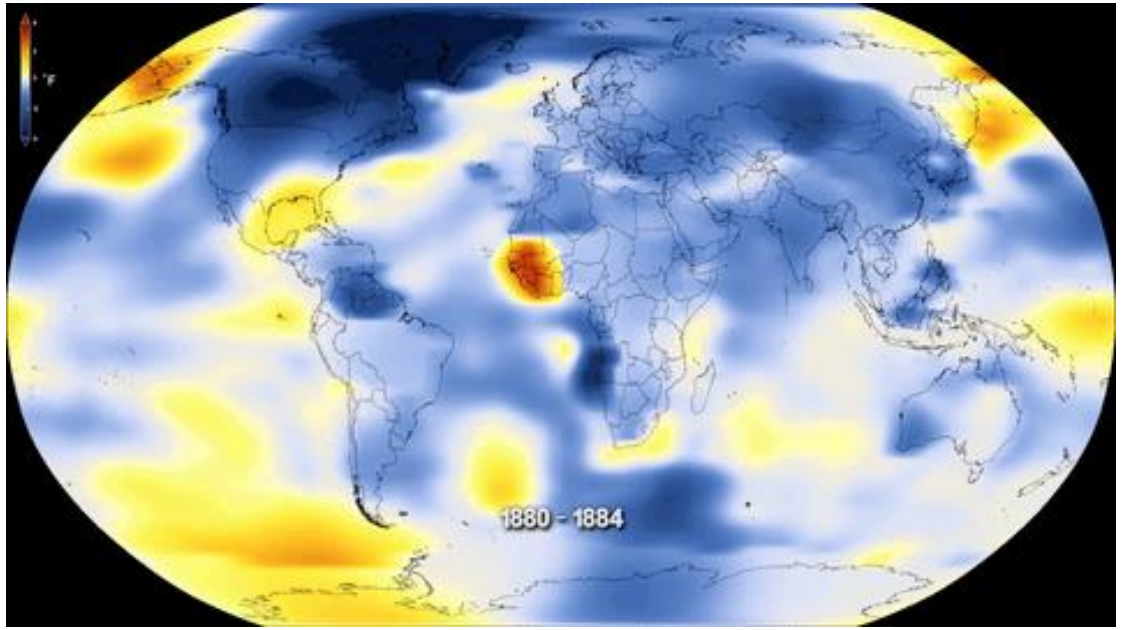
ZEM AKUMULUJE ČORAZ VIAC TEPLA











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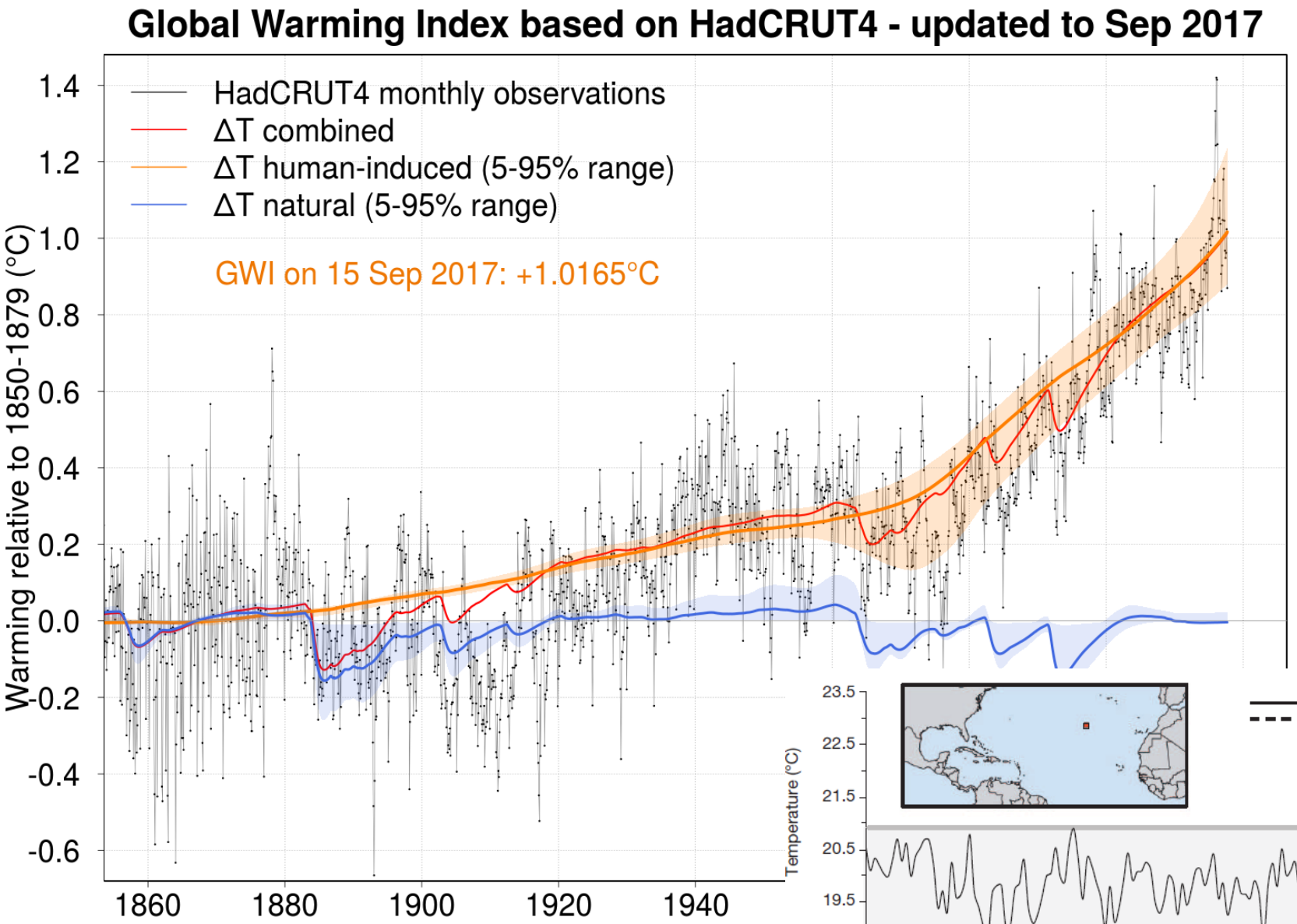

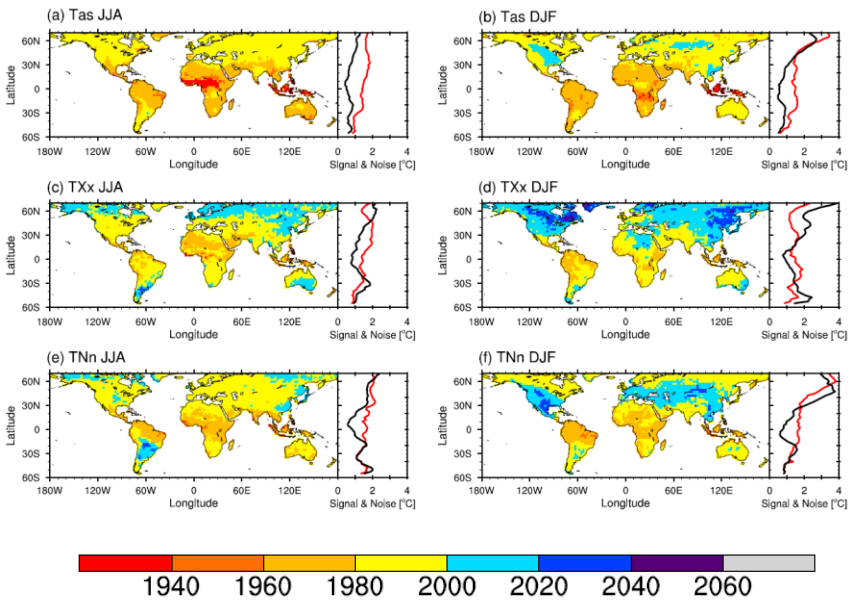

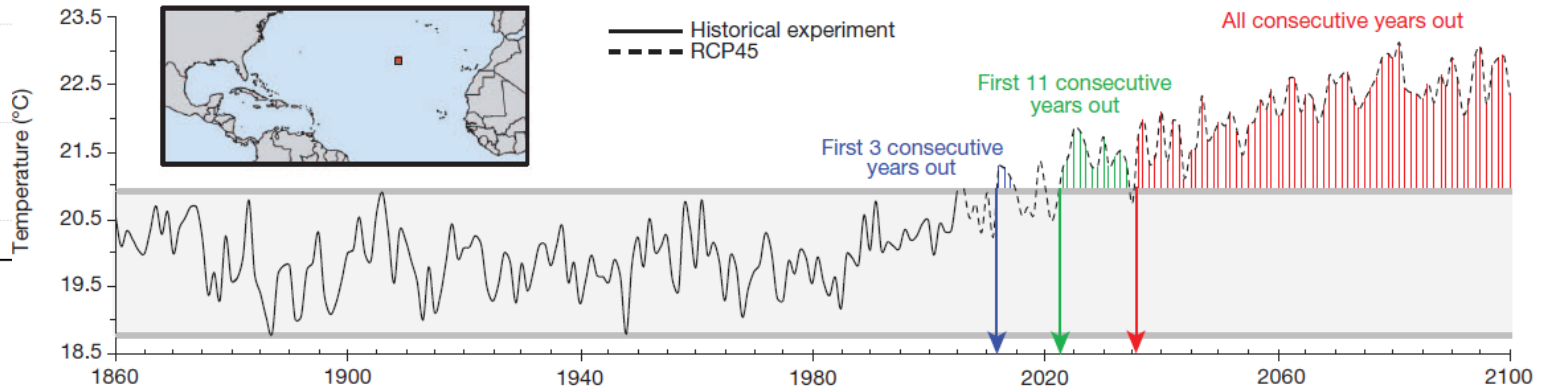

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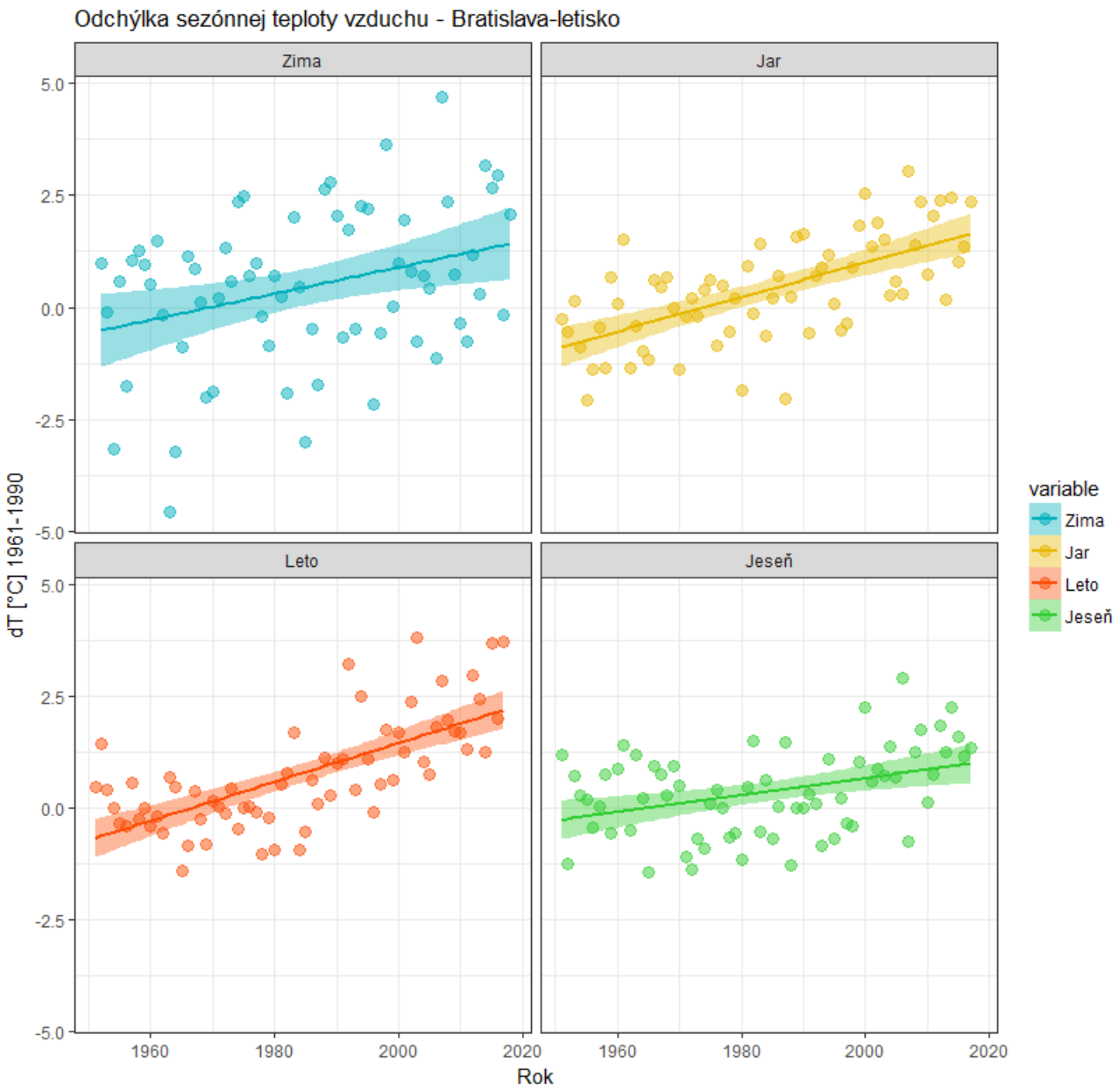

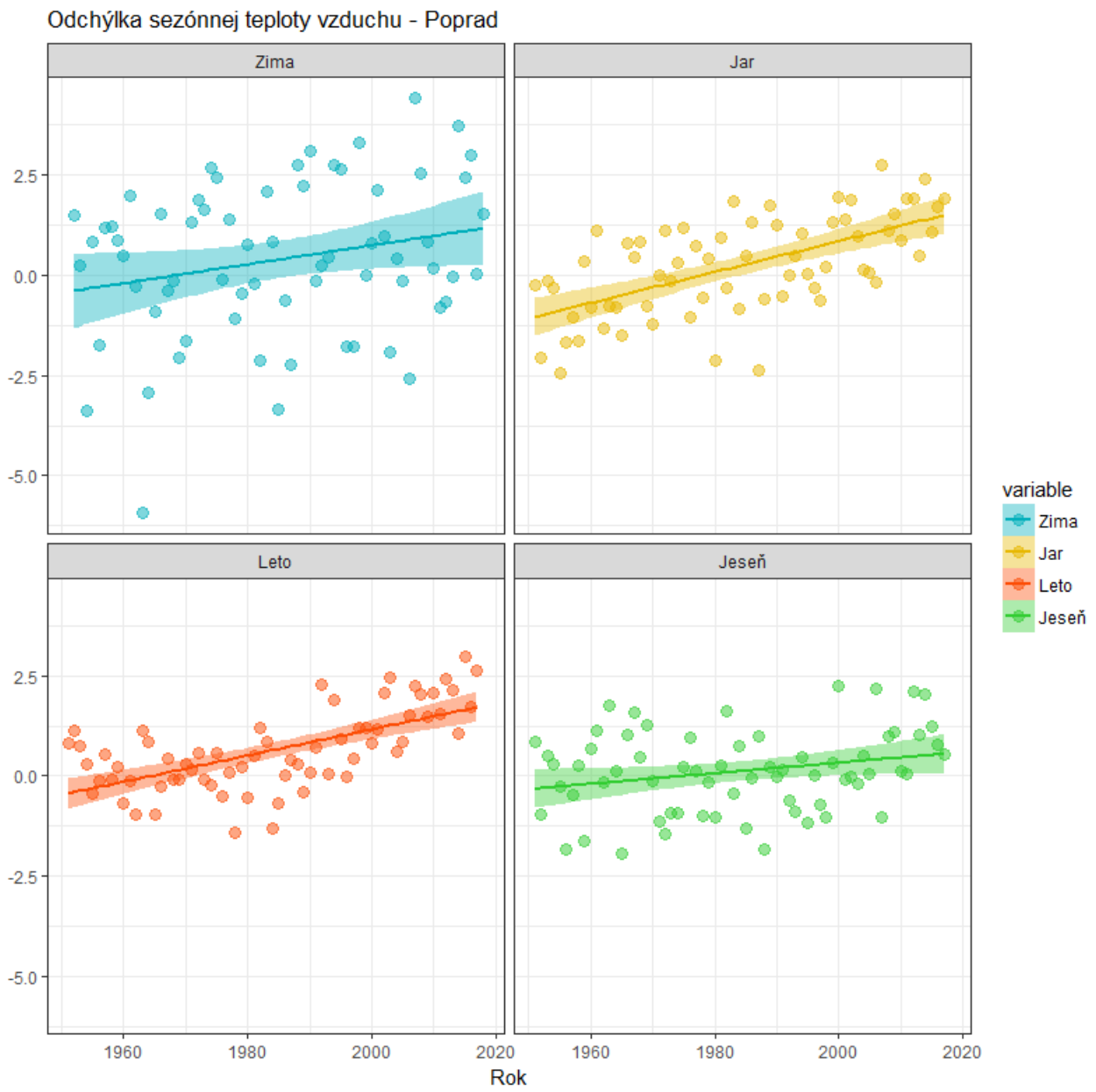

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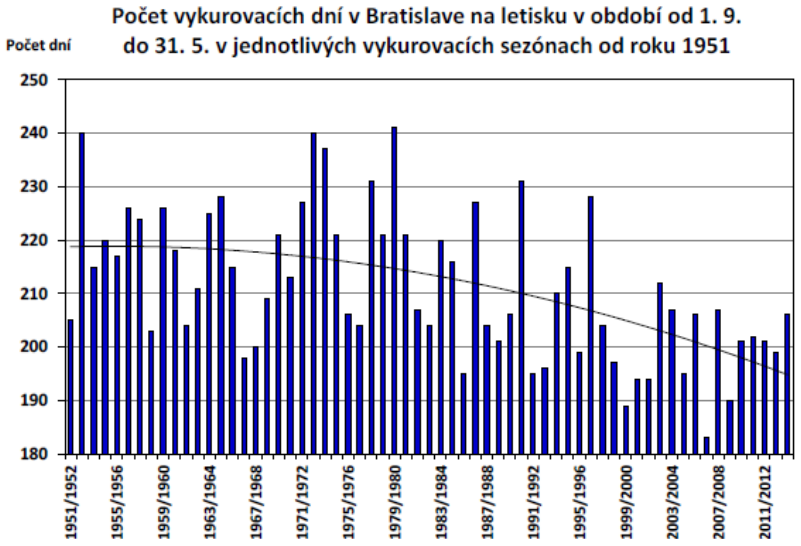

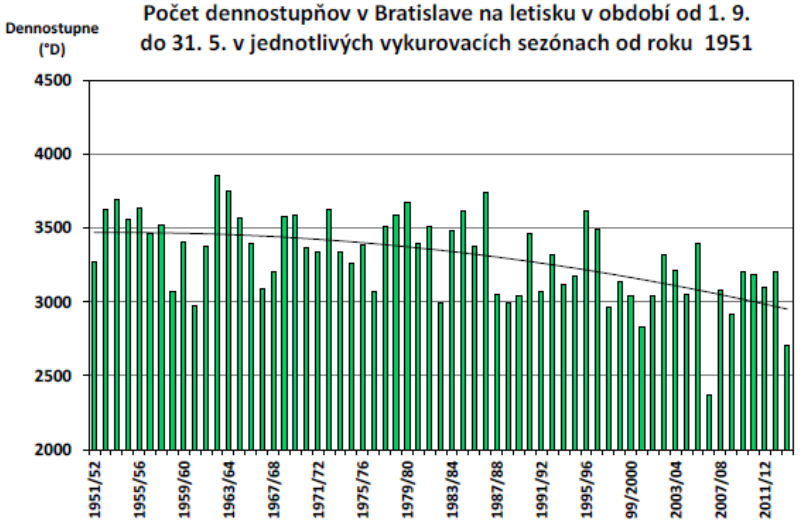

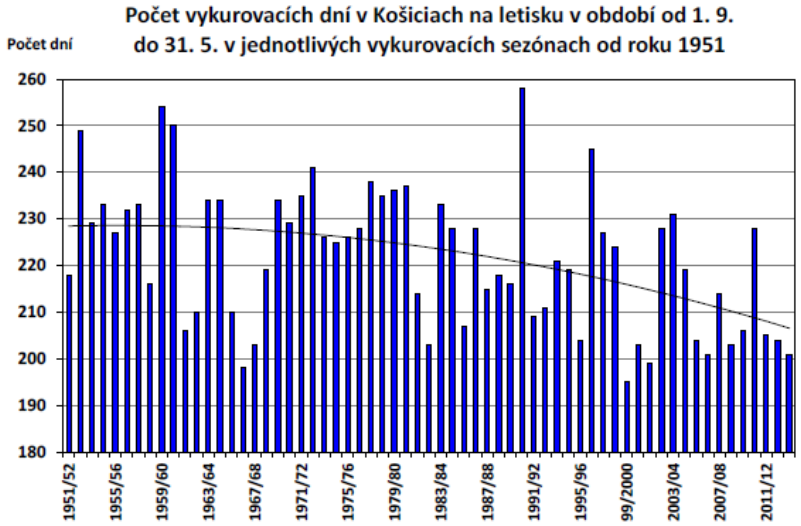

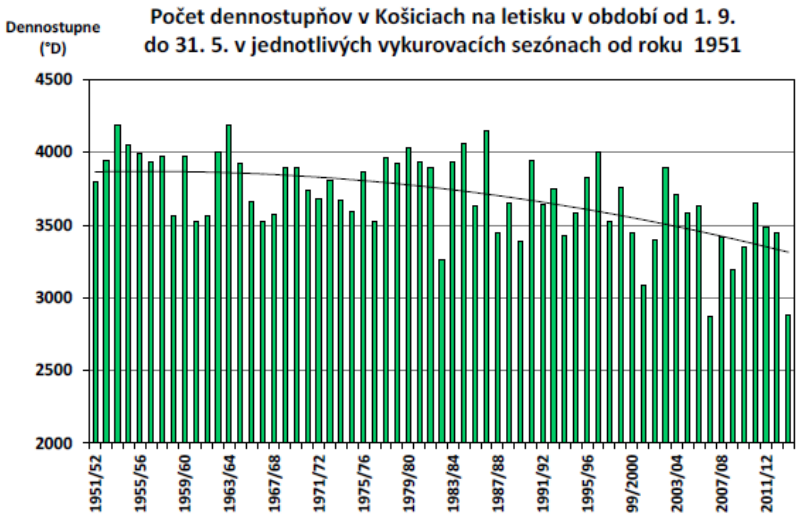

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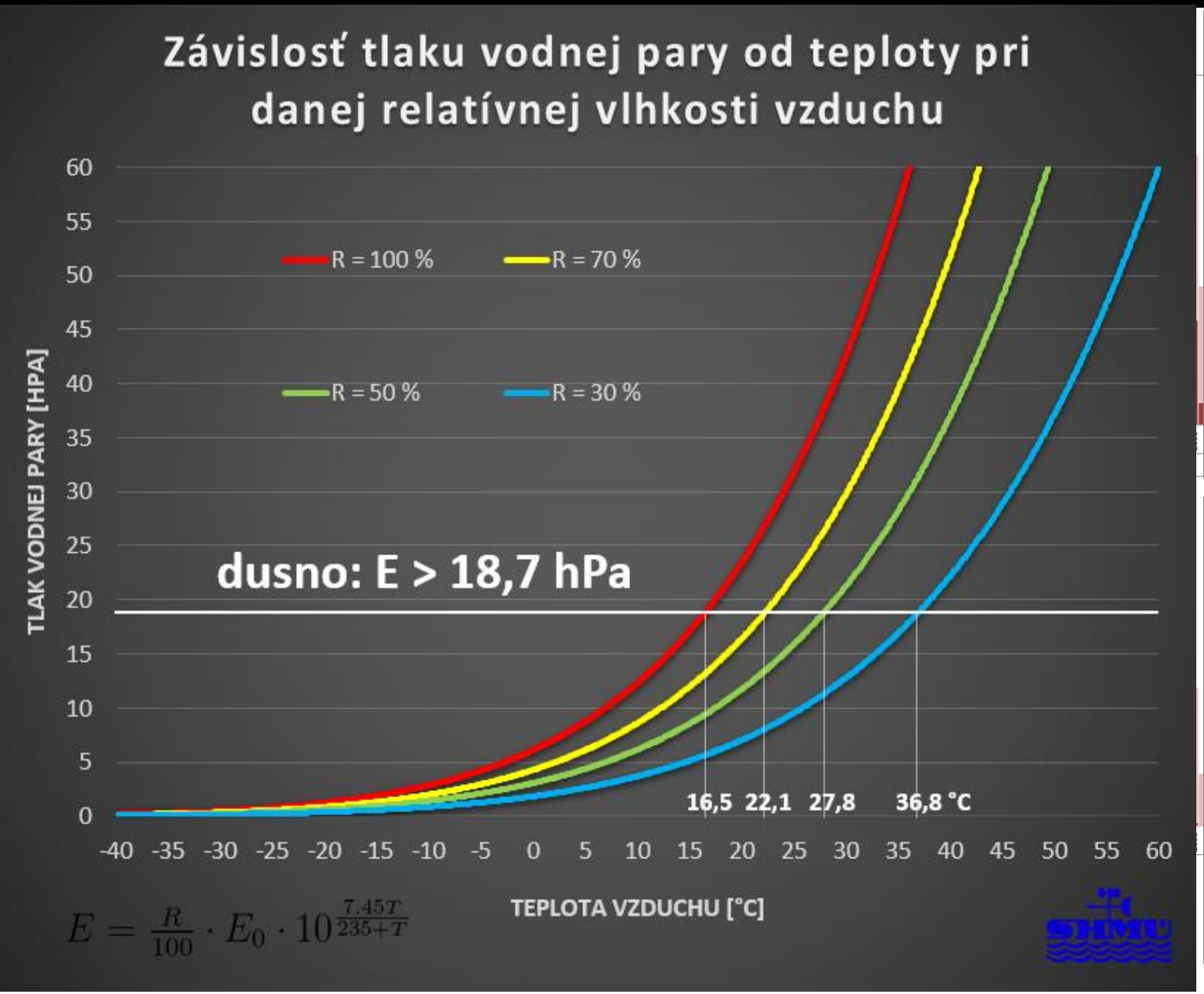

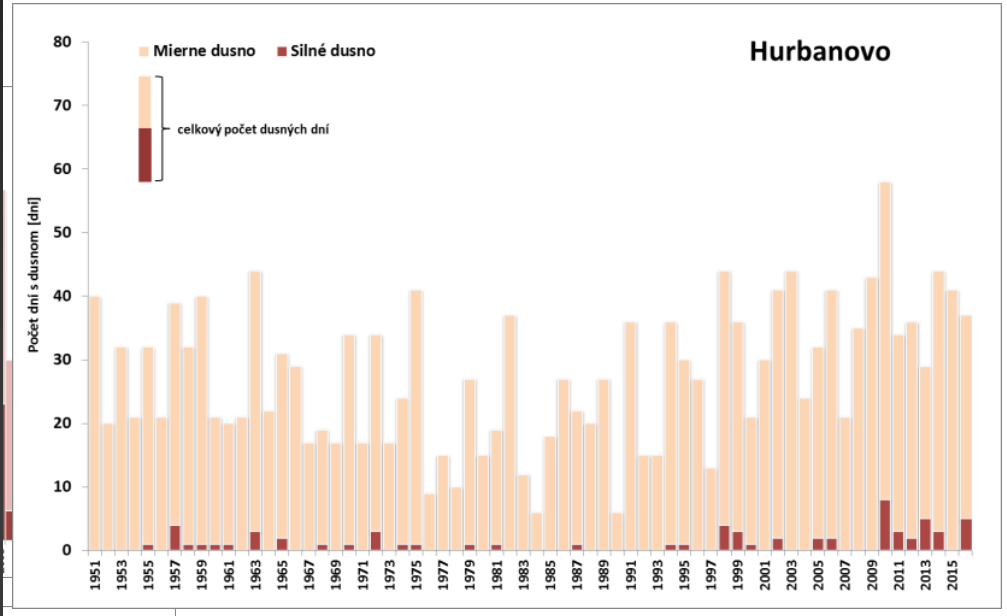

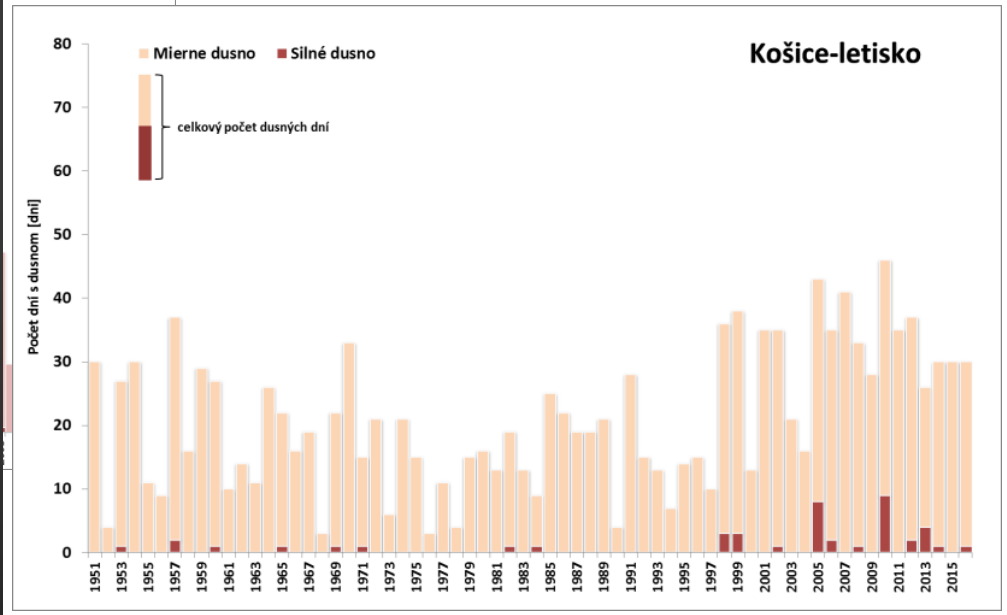

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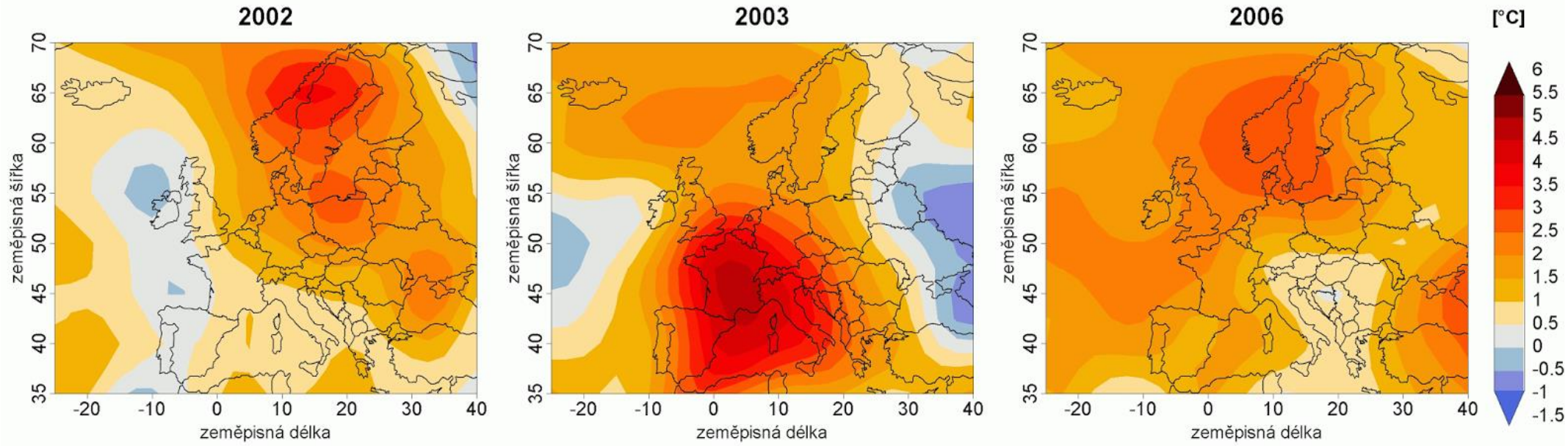

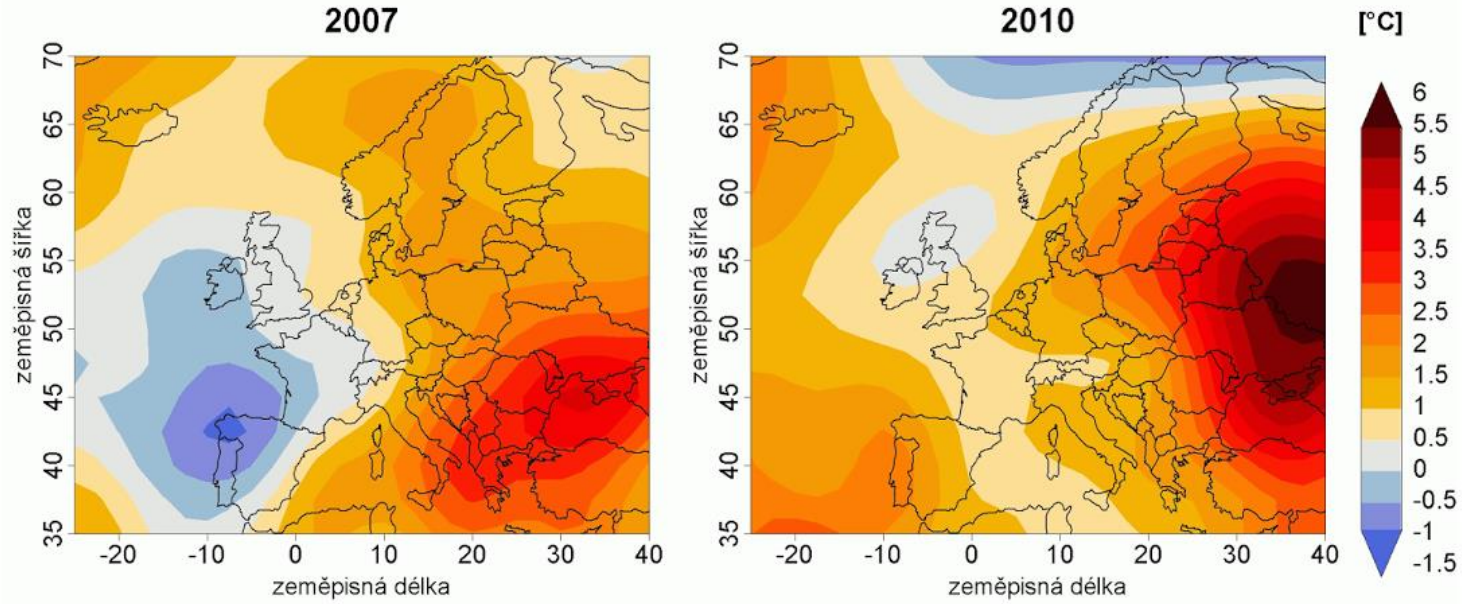

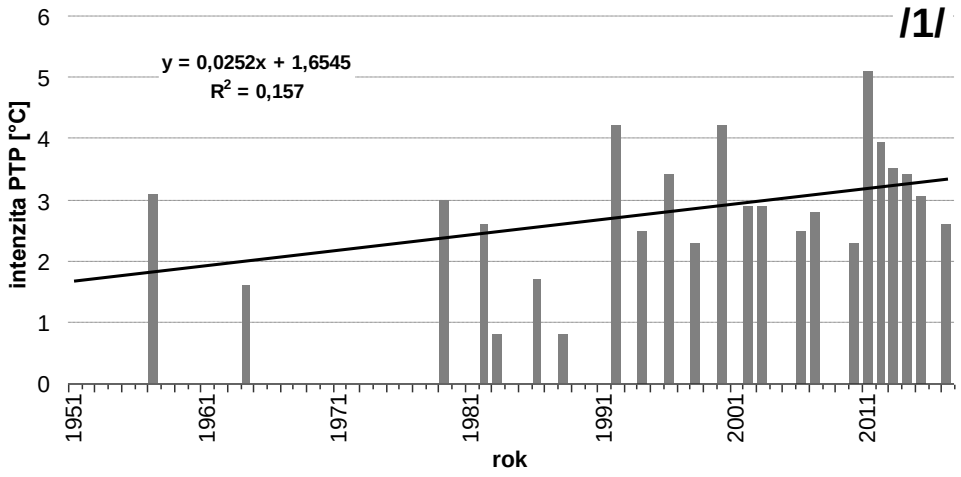

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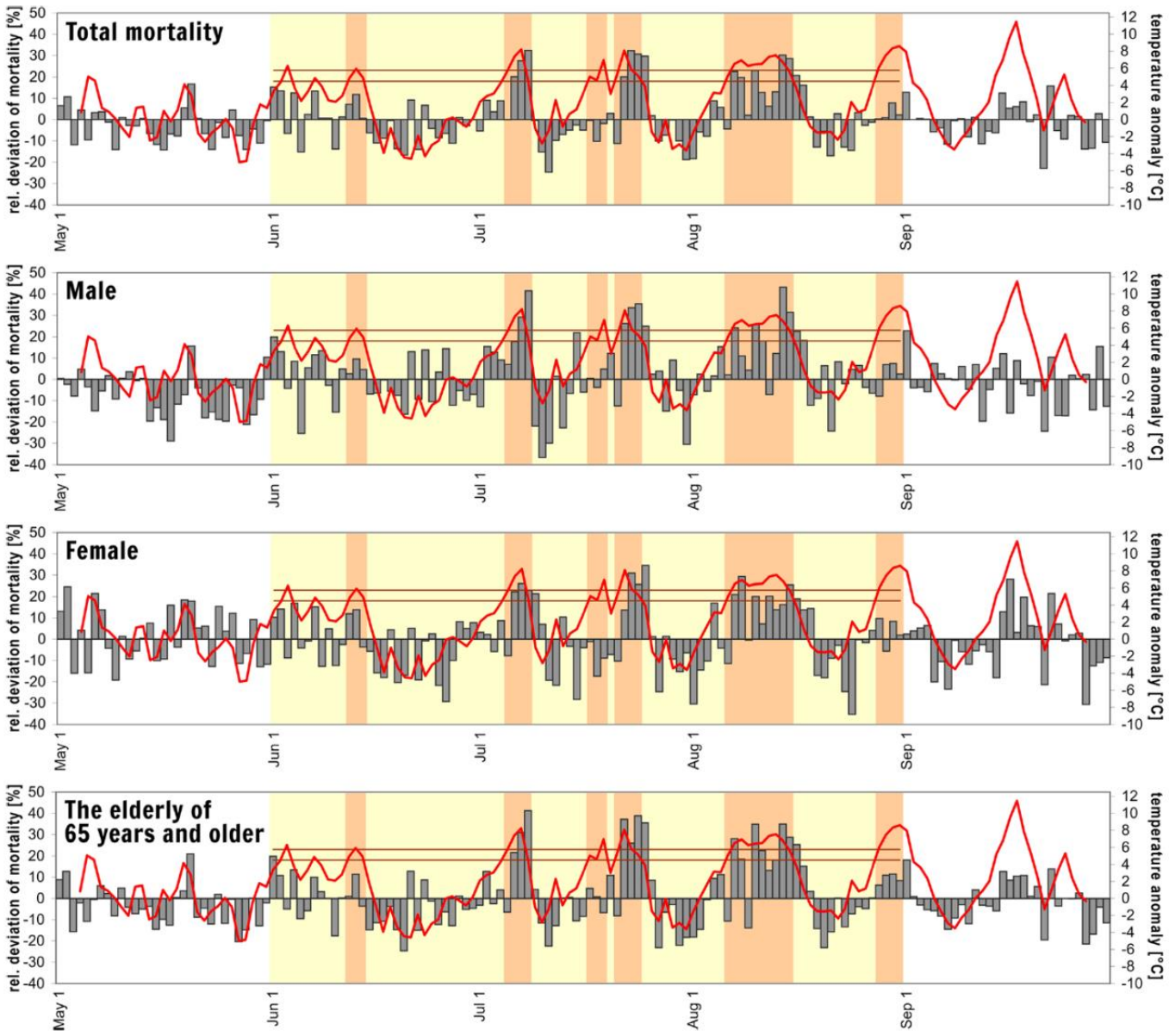

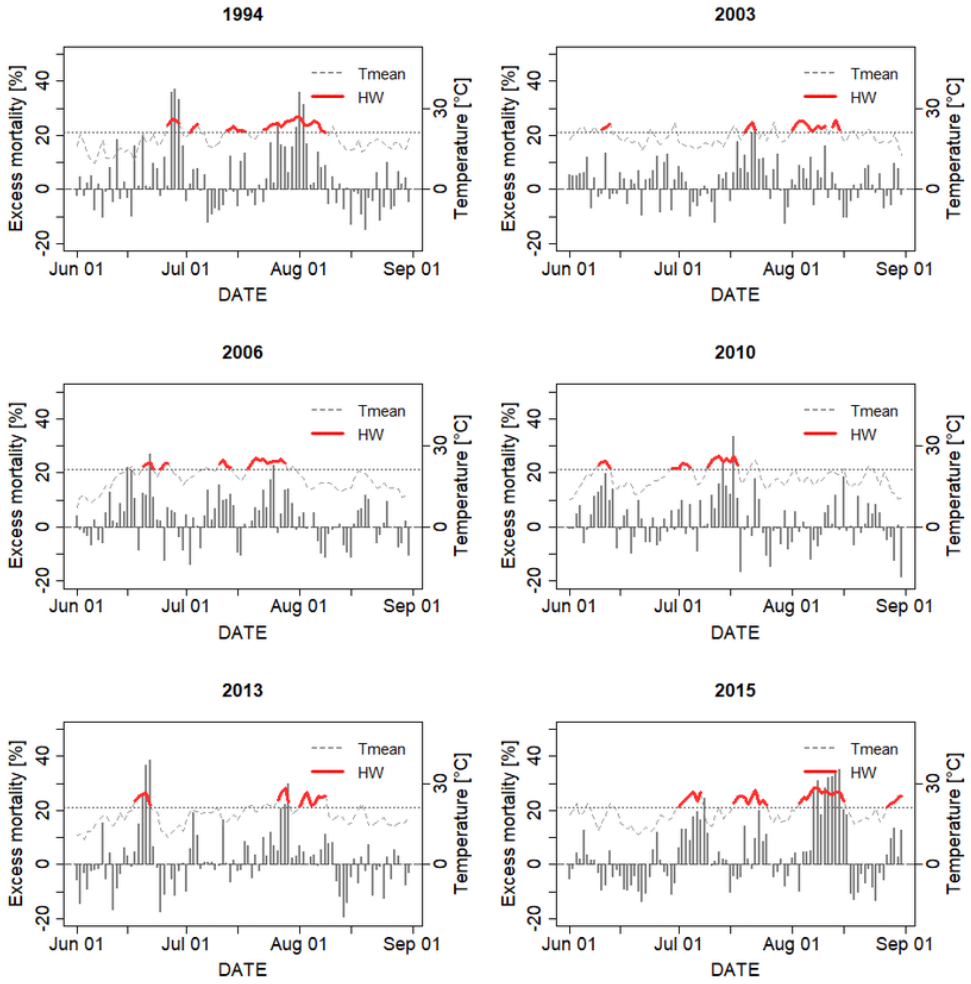

Zdroj: Výberči et al. 2017 (SR)

Zdroj: Urban et al. 2017 (ČR)

RASTIE EXTRÉMNOSŤ ATM. ZRÁŽOK

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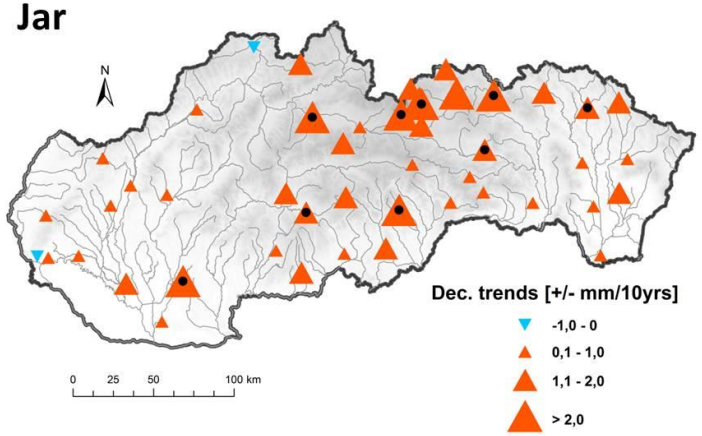

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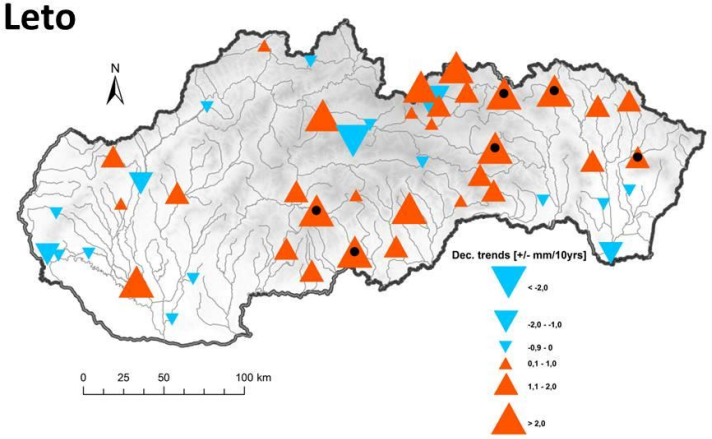

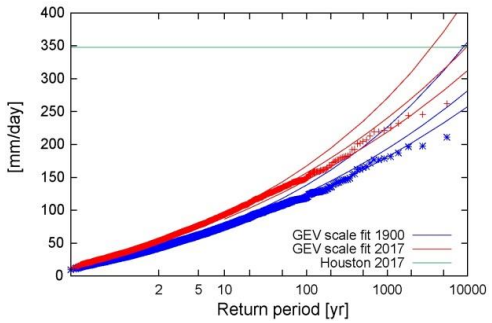

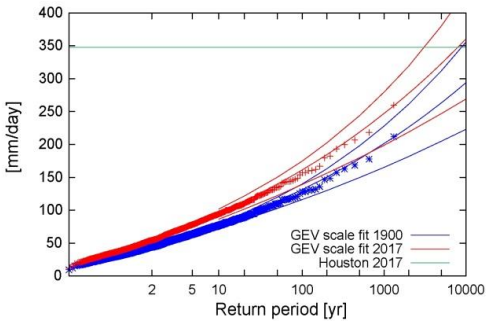

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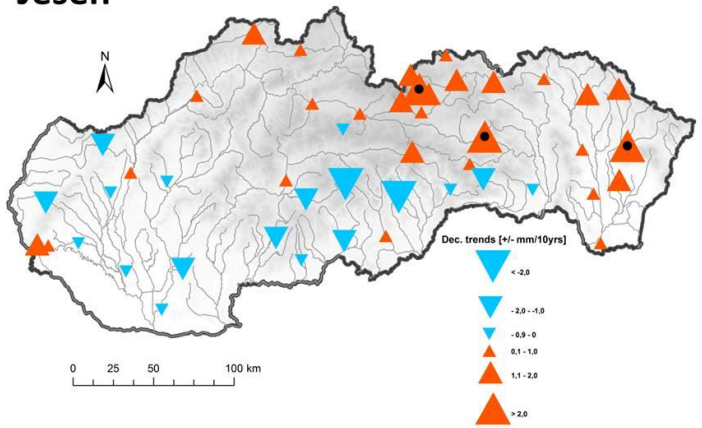

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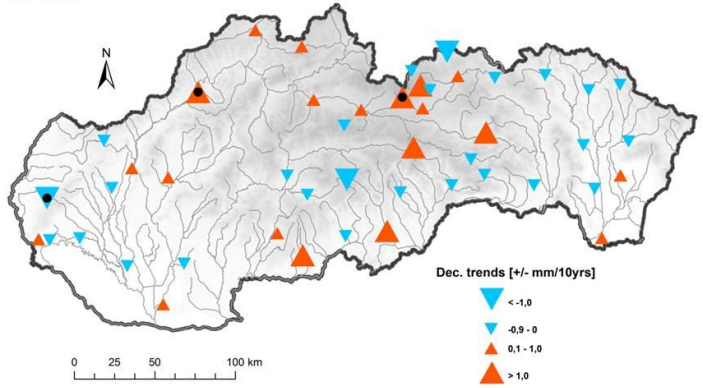

Zdroj: SHMÚ

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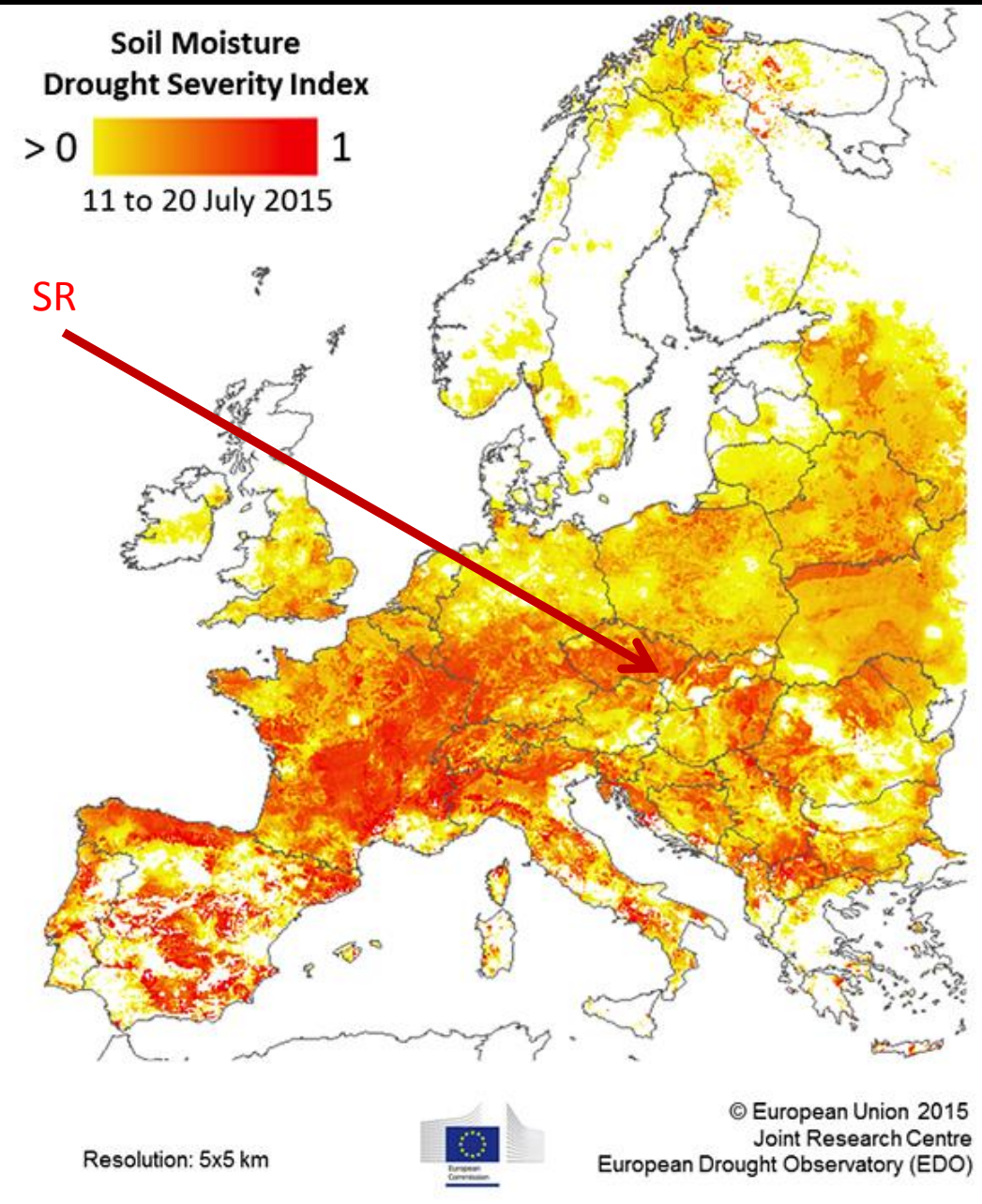
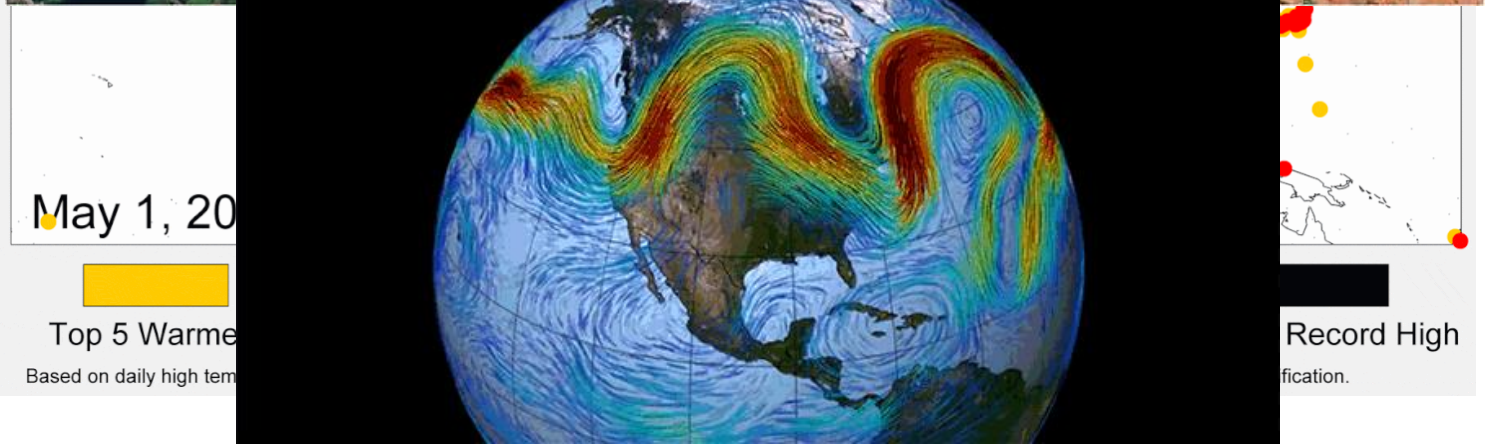
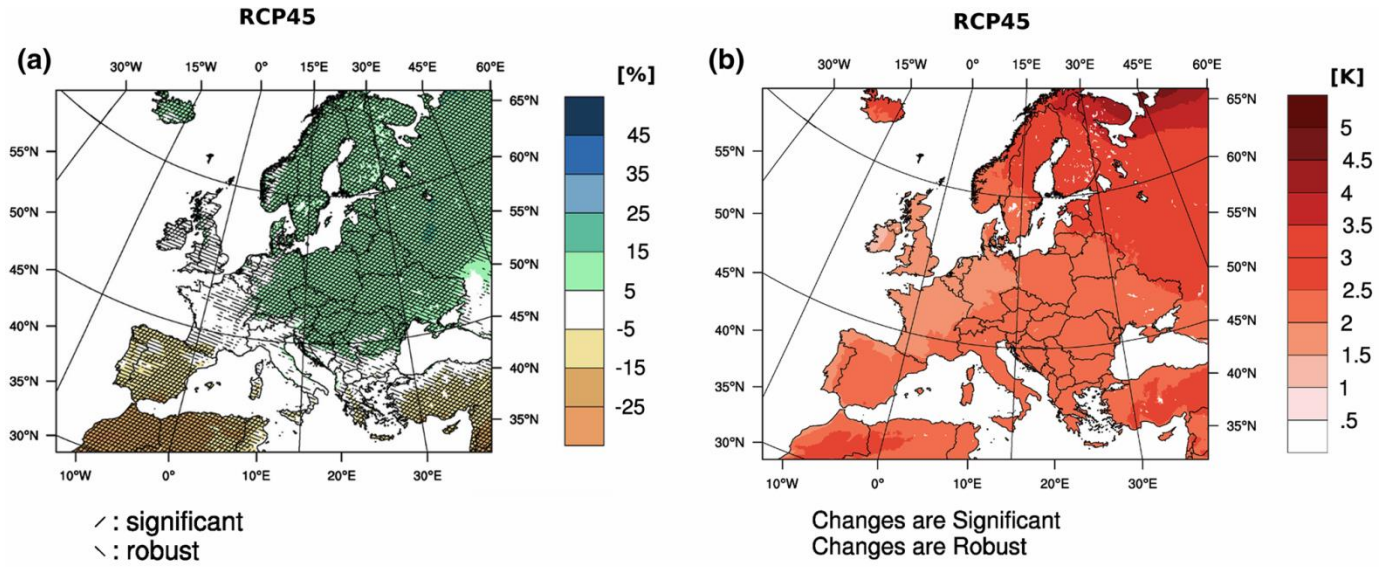
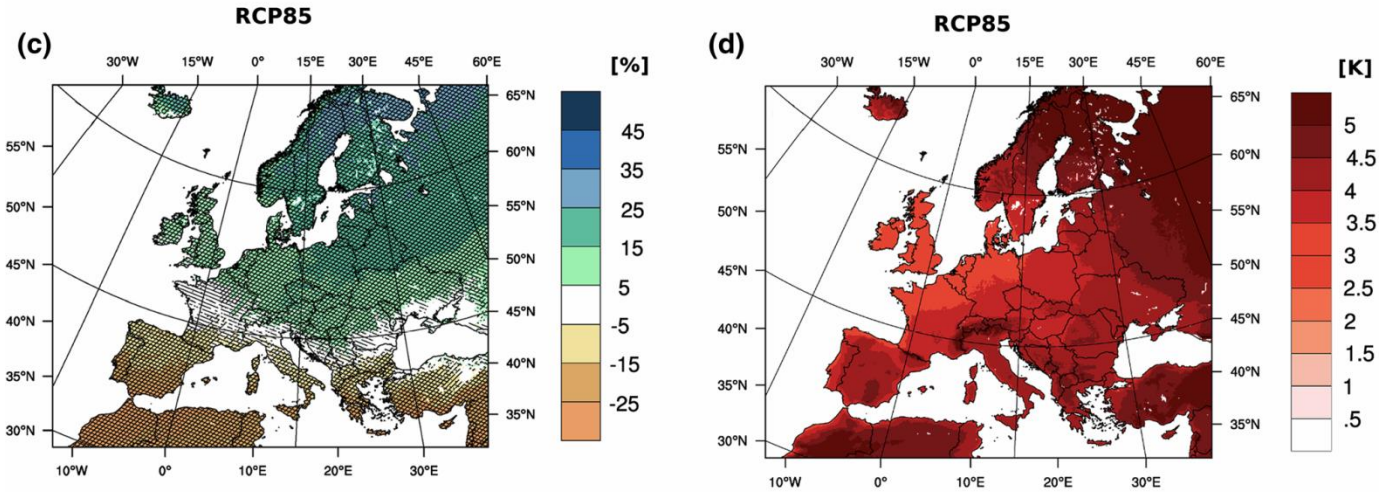
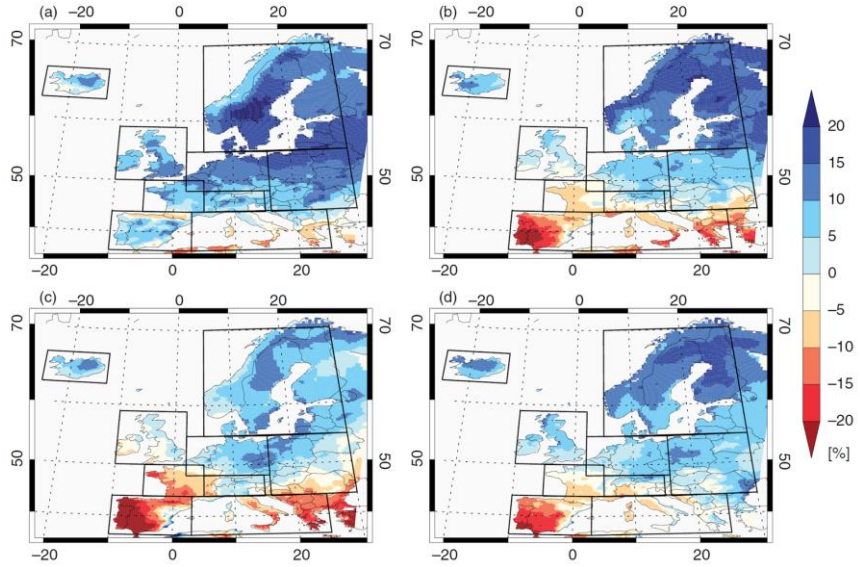


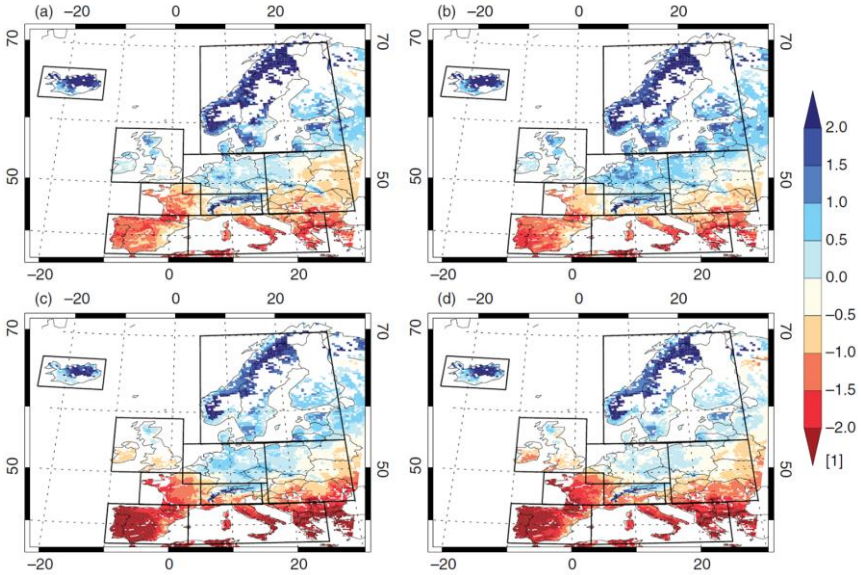


SCENÁRE BUDÚCEJ KLÍMY NA SLOVENSKU









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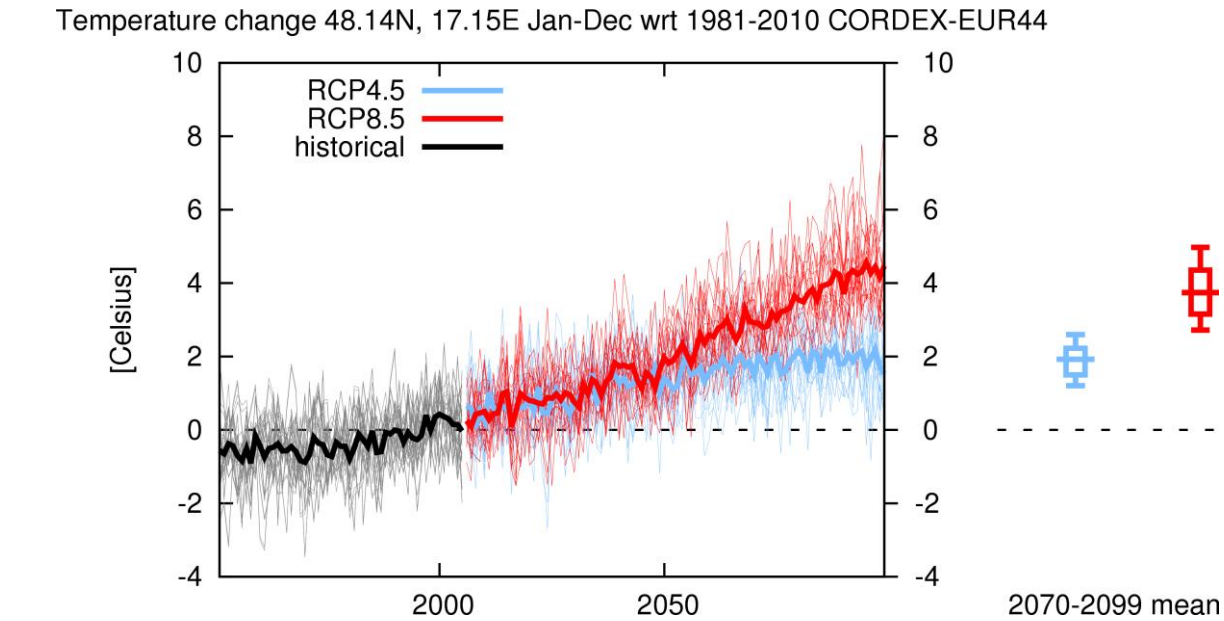
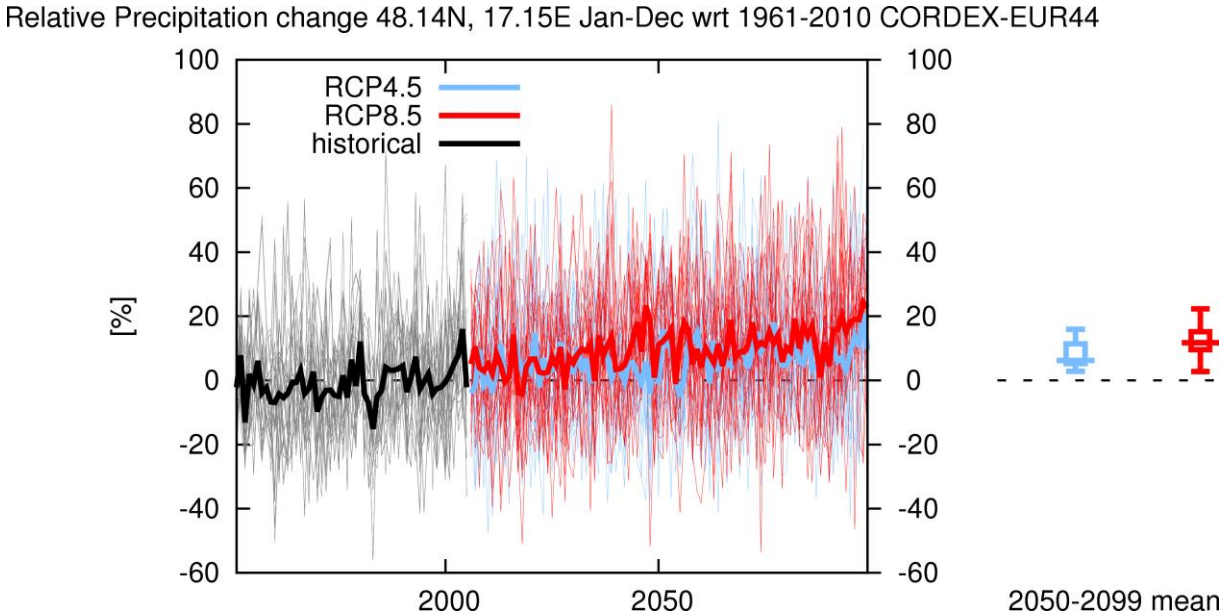
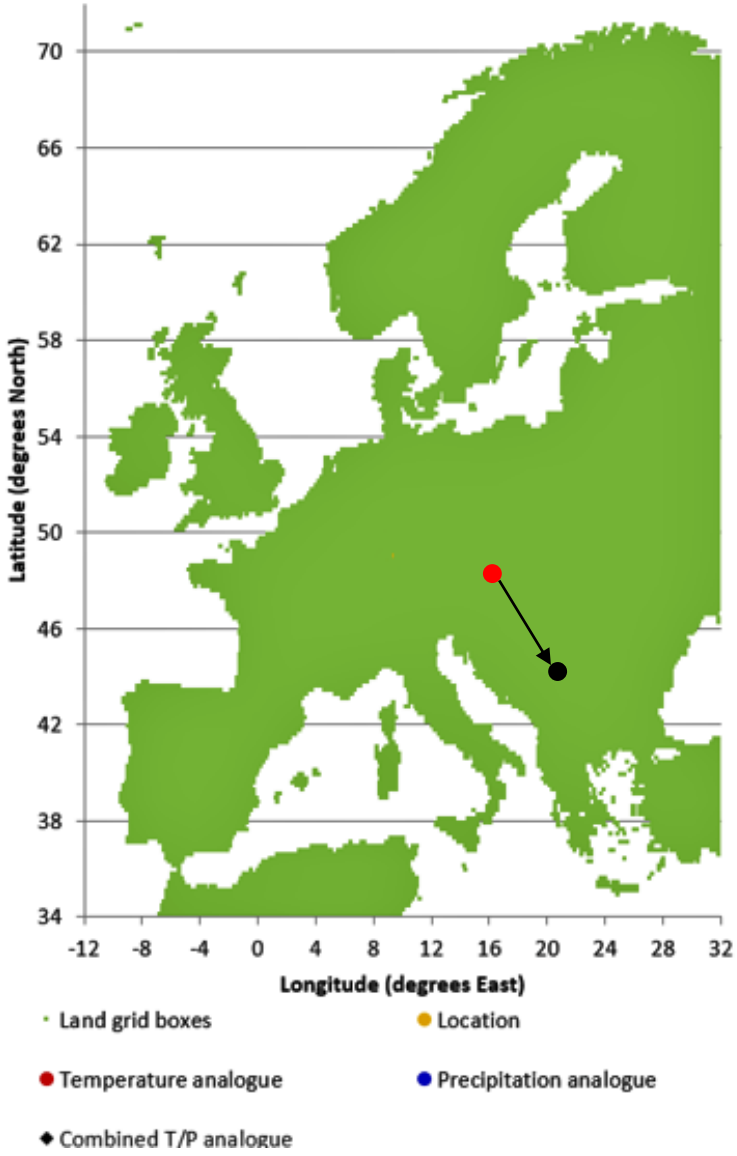
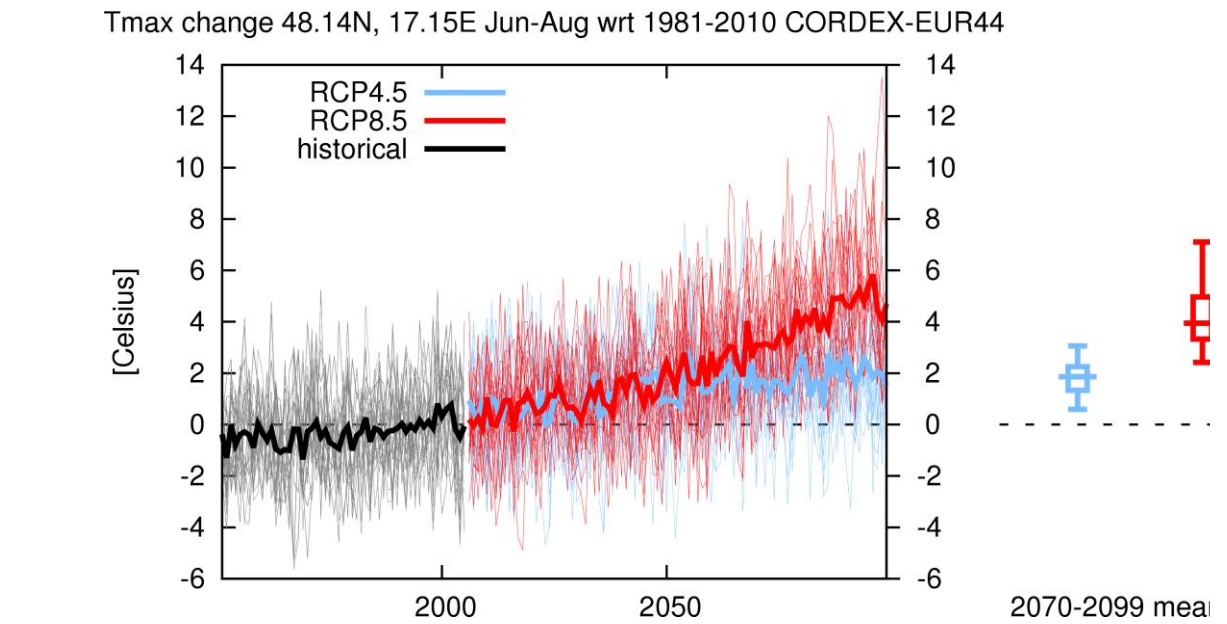


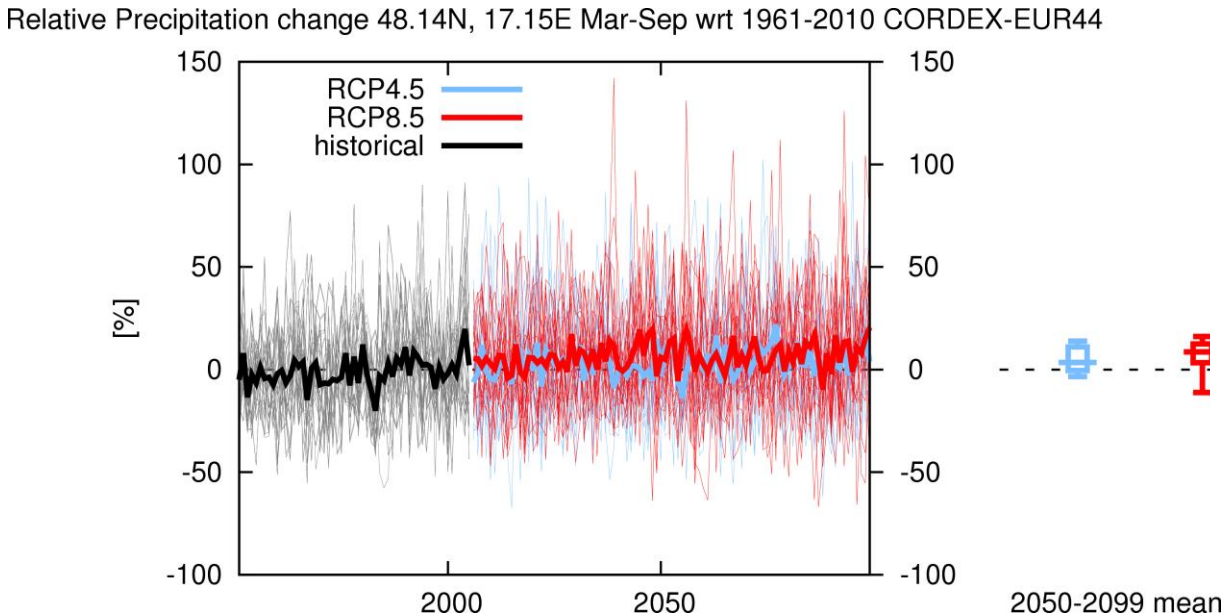


RCP4.5/8.5 - 2050
(ΔT +2°C, Δ P +10%)

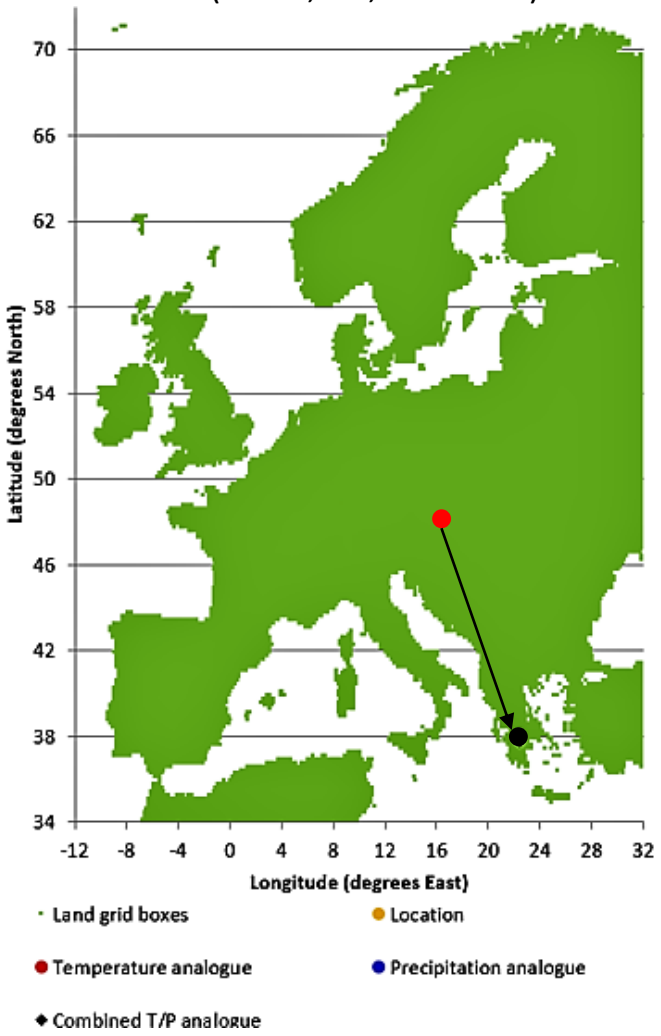


PRIESTOROVÉ ANALÓGY PRE SLOVENSKO

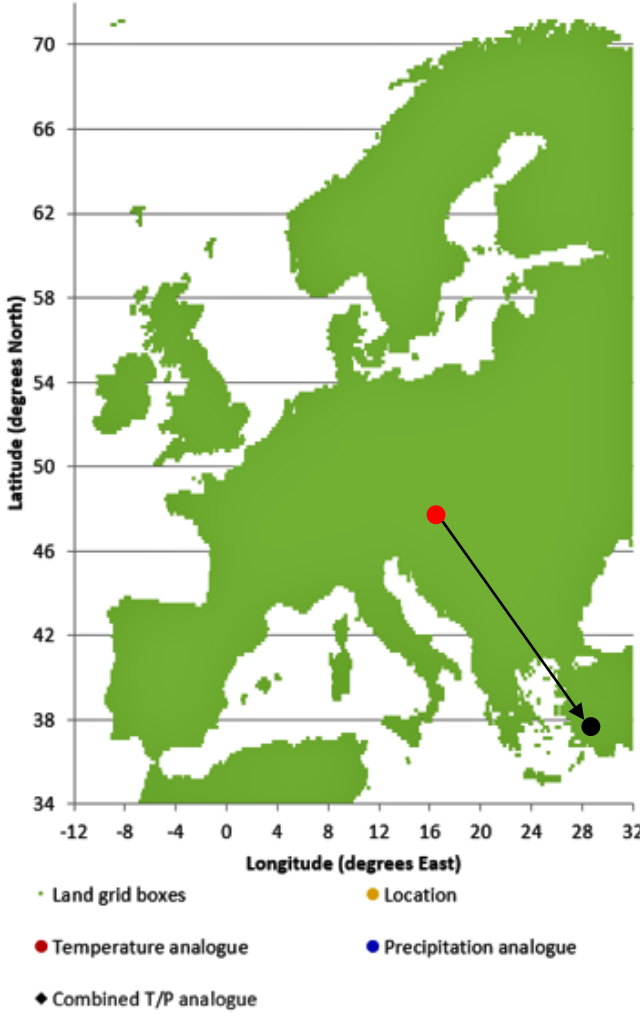




RCP4.5 - 2080
(ΔT +2,5°C, Δ P +15%)



RCP8.5 - 2080
(ΔT +4,5°C, Δ P +25%)



KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

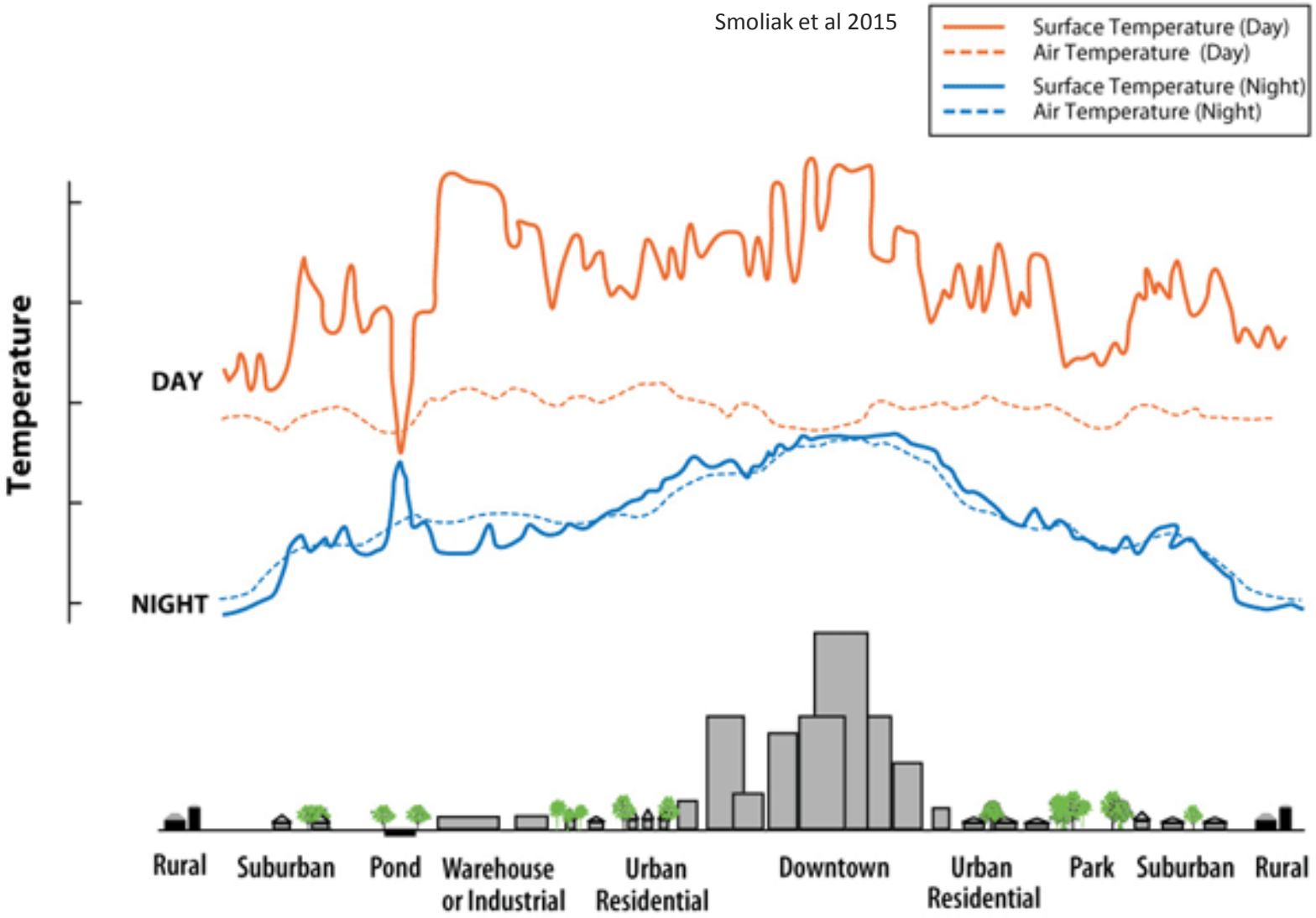
KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

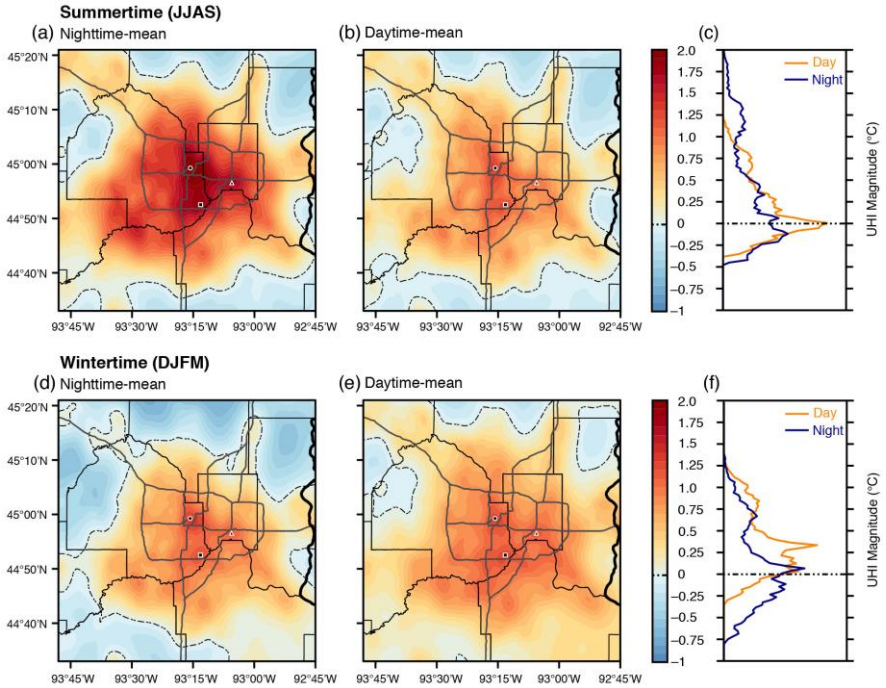
Problém existencie UHI:

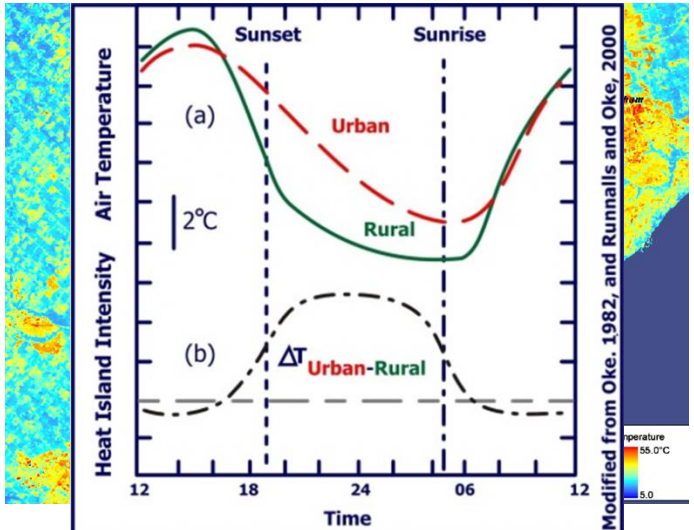
prevaha vertikálnych plôch
vysoká hustota zástavby
absencia vodnej a zelenej infraštruktúry
výber nevhodných stavebných materiálov a úniky tepla

KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

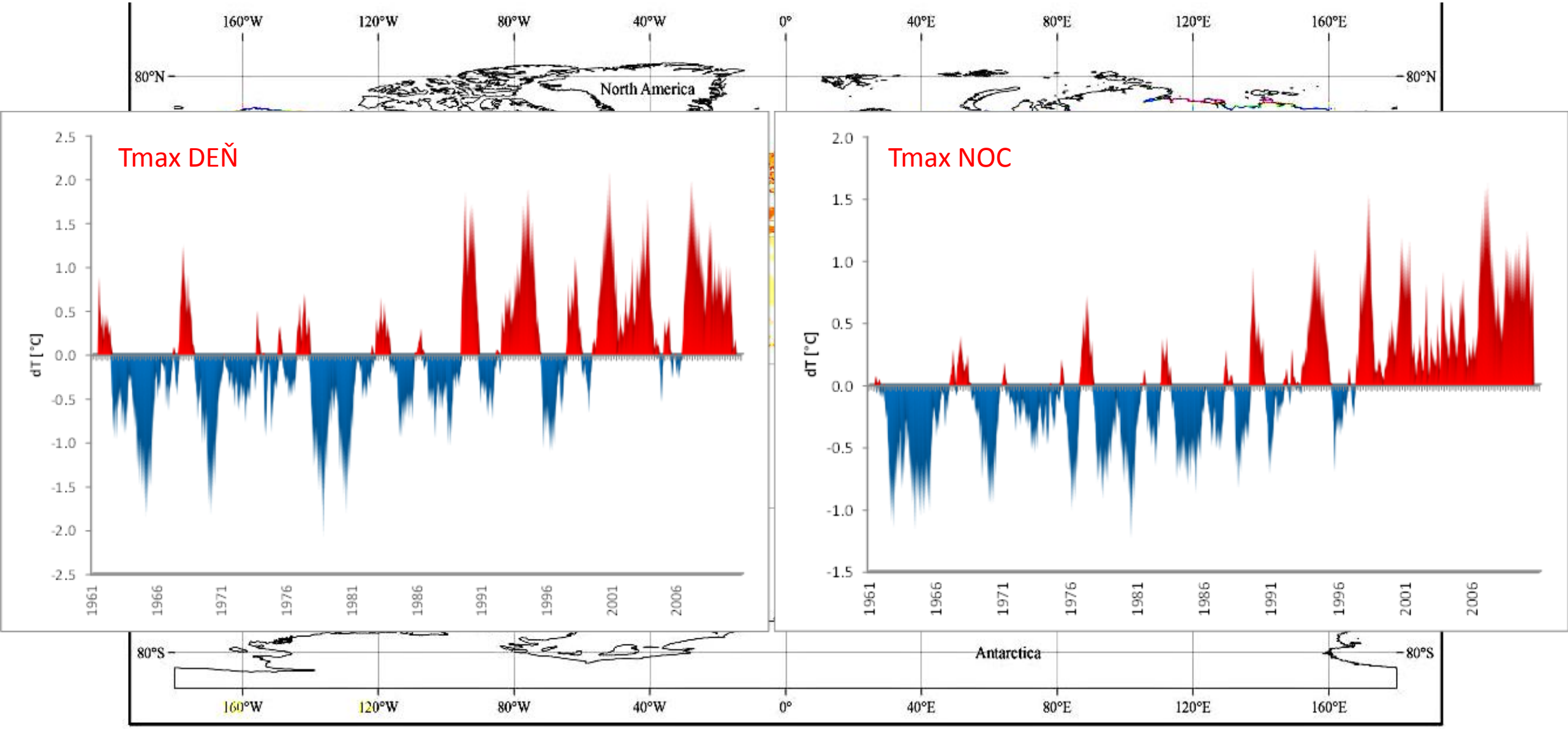
Smoliak et al 2015





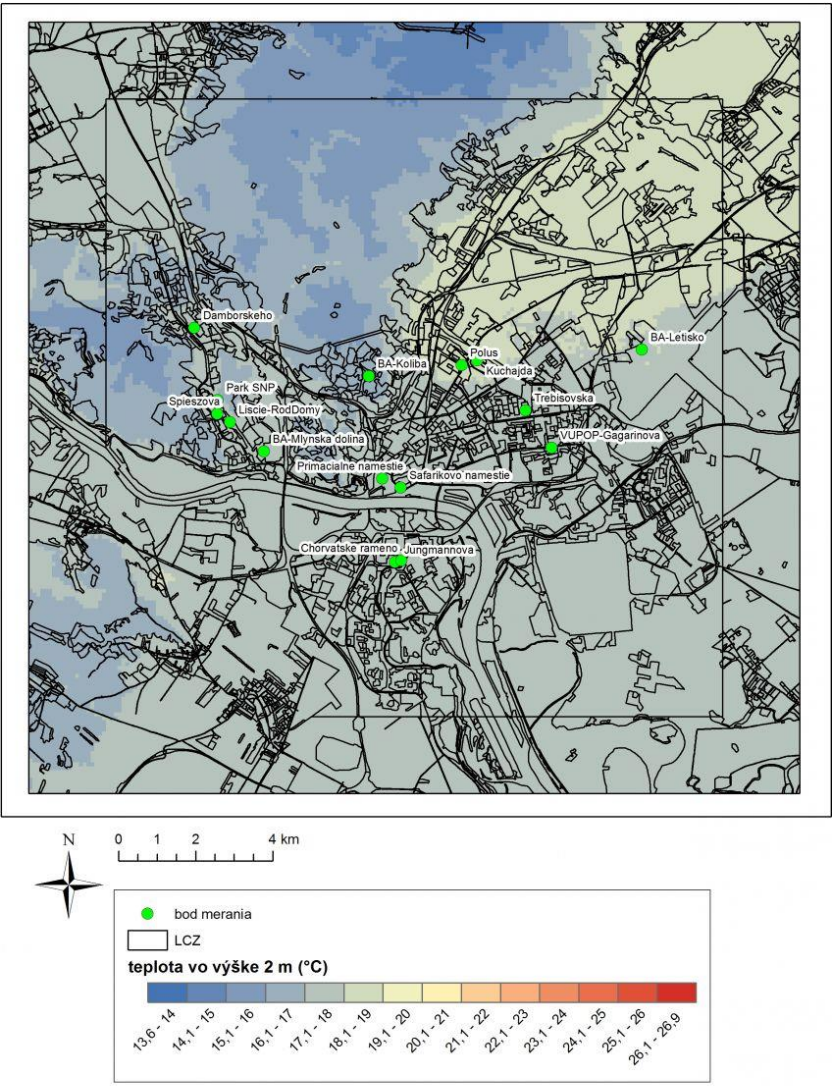


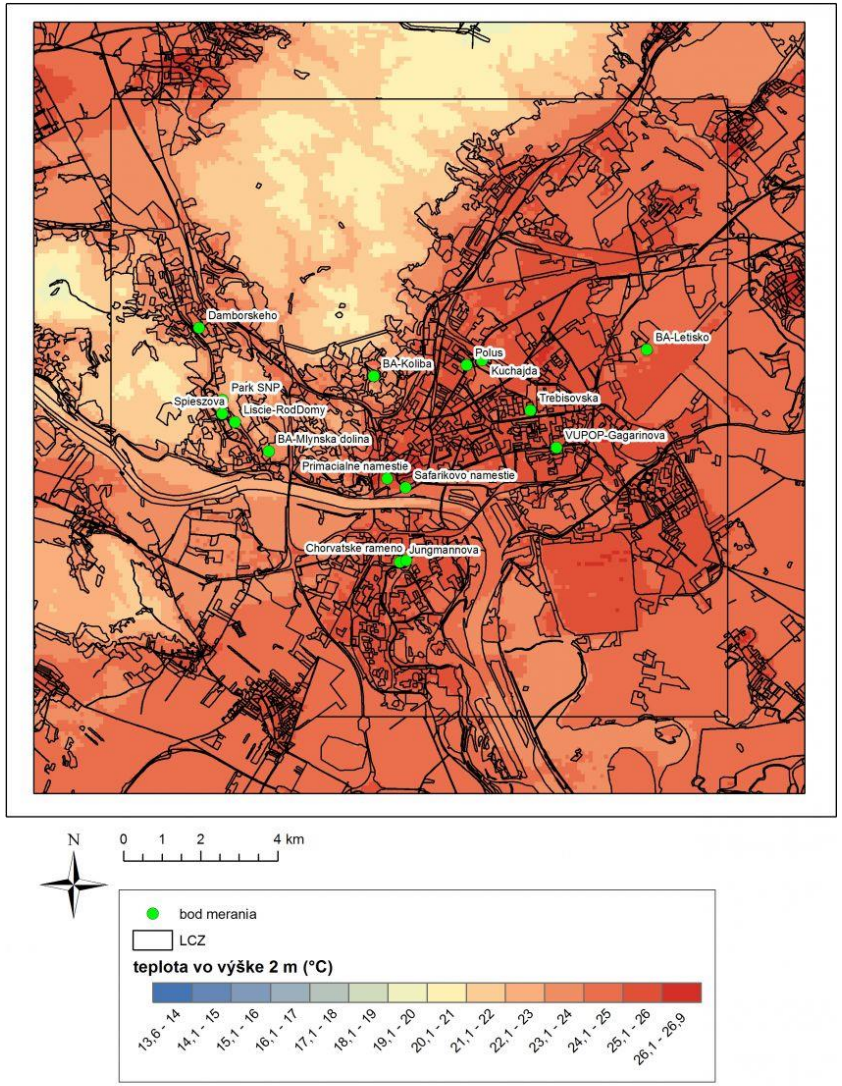
KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

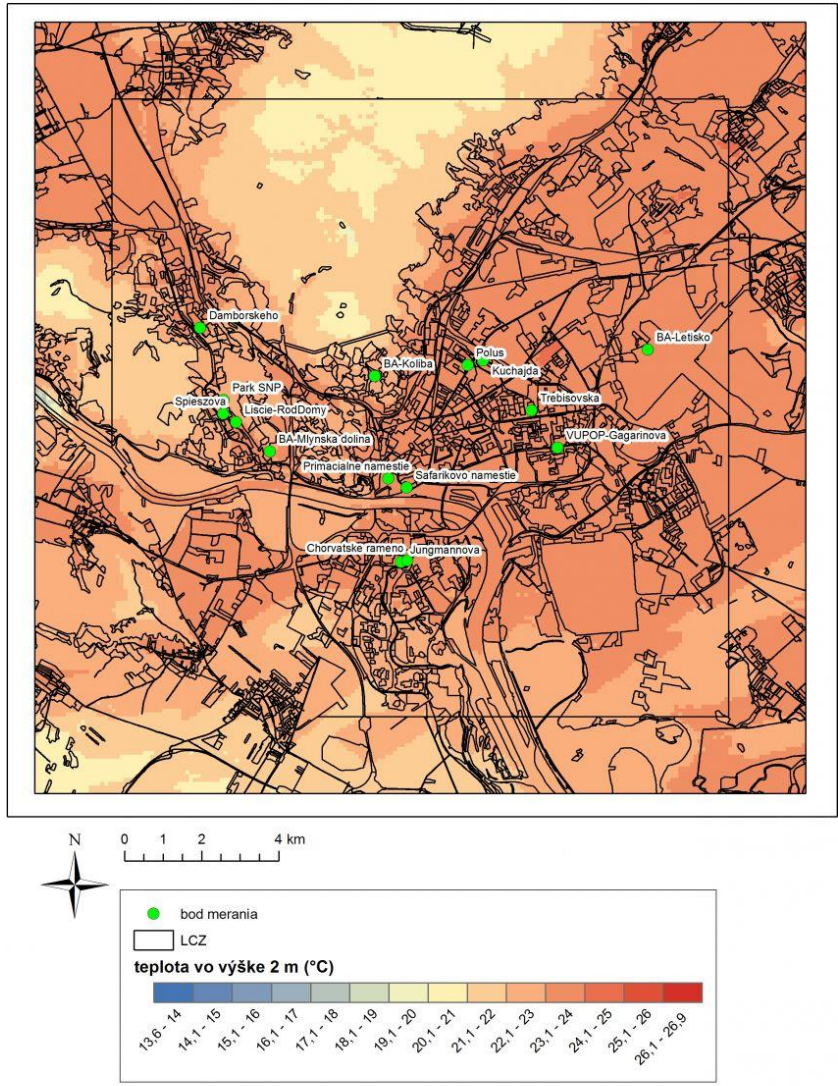


Zdroj: Cui et al 2016

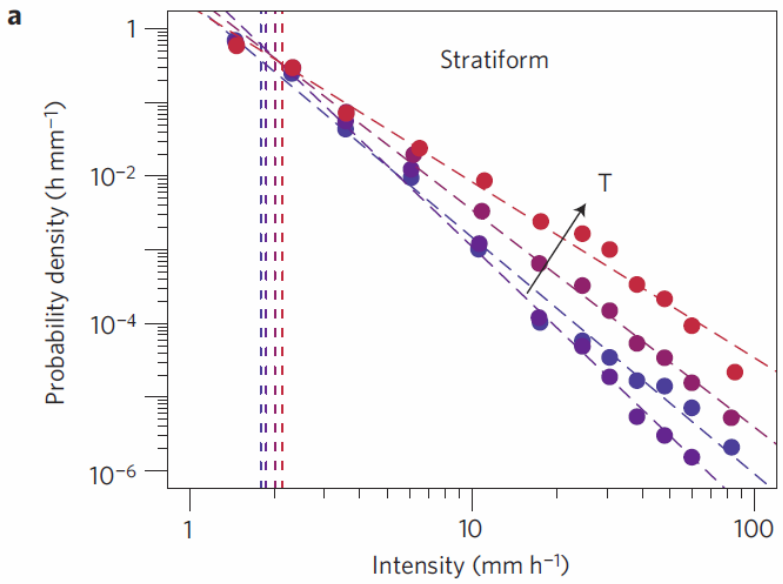
KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

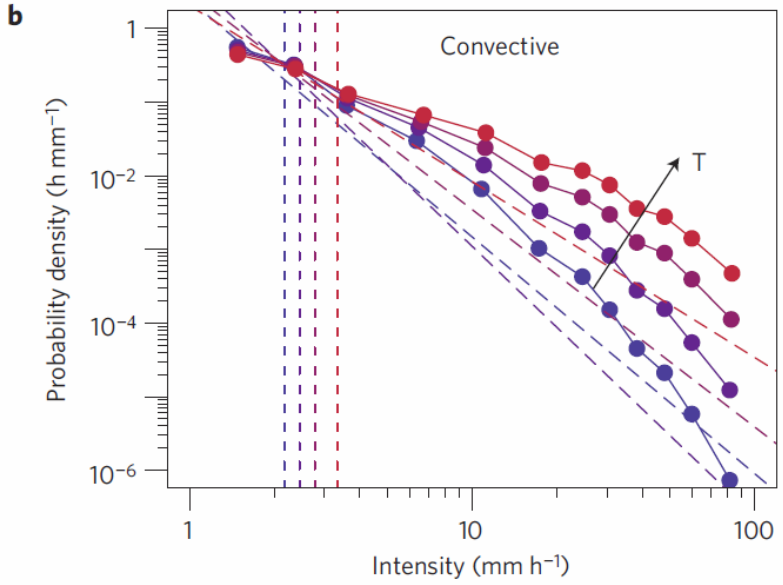


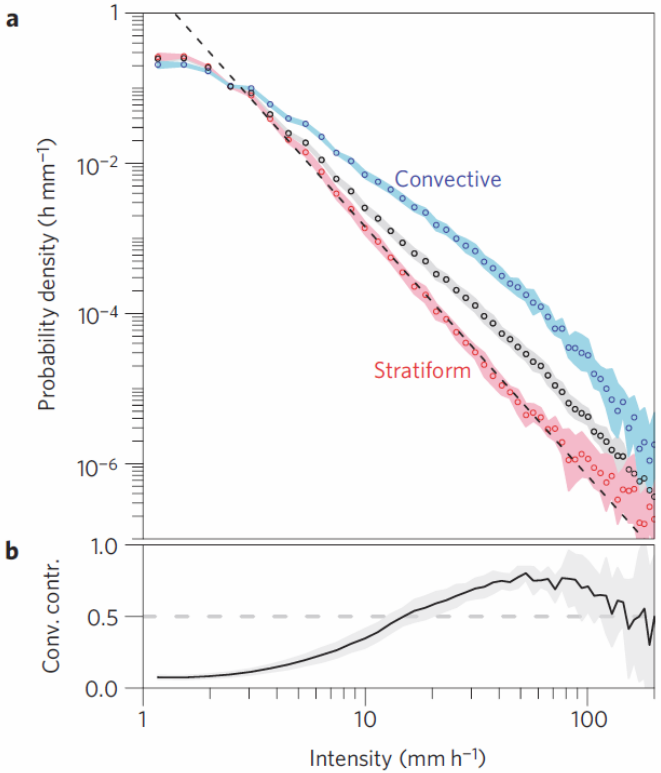


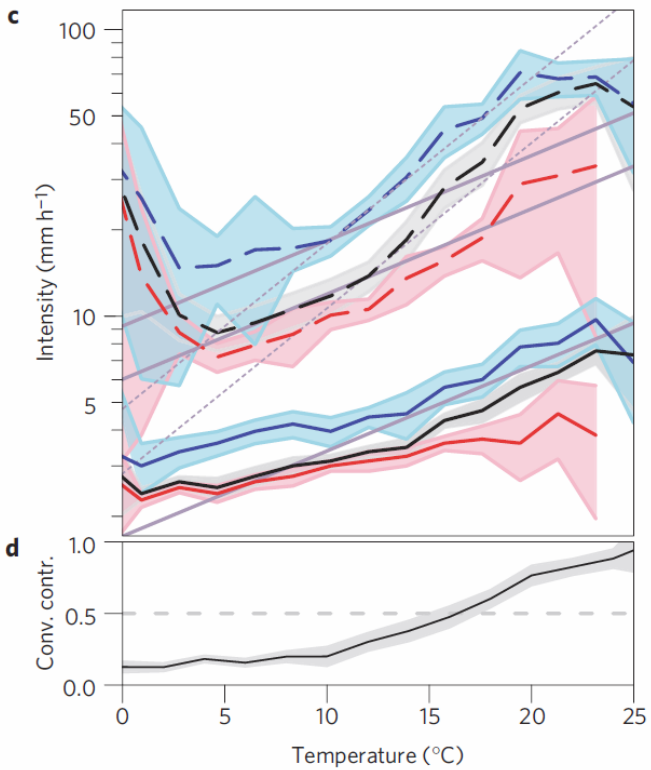


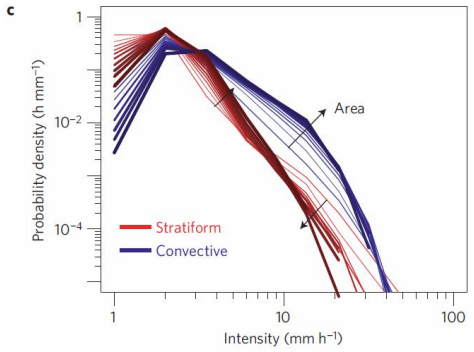
KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE







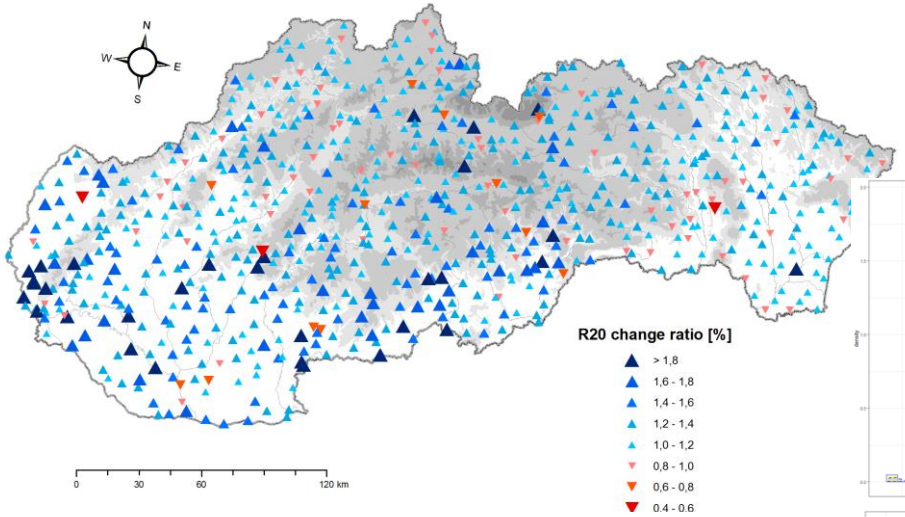


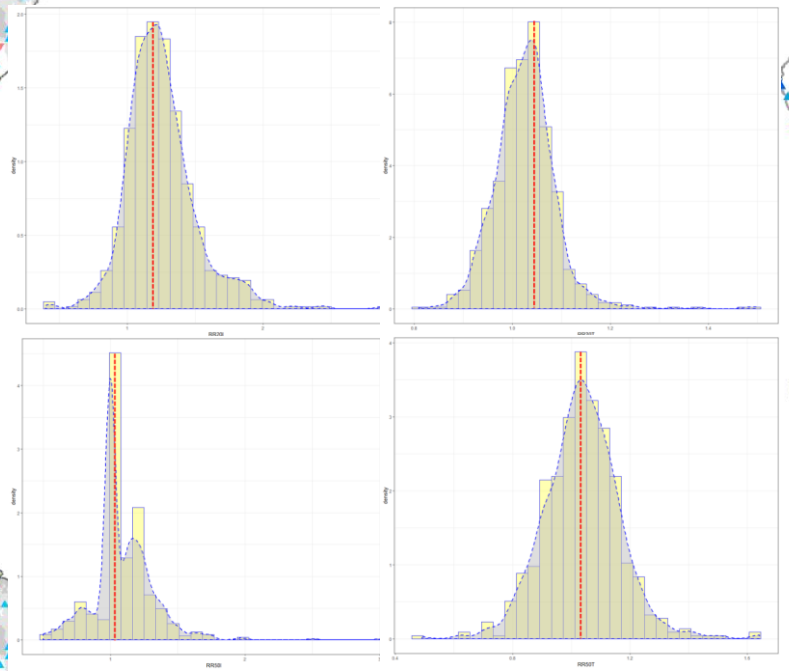


Berg et al 2013

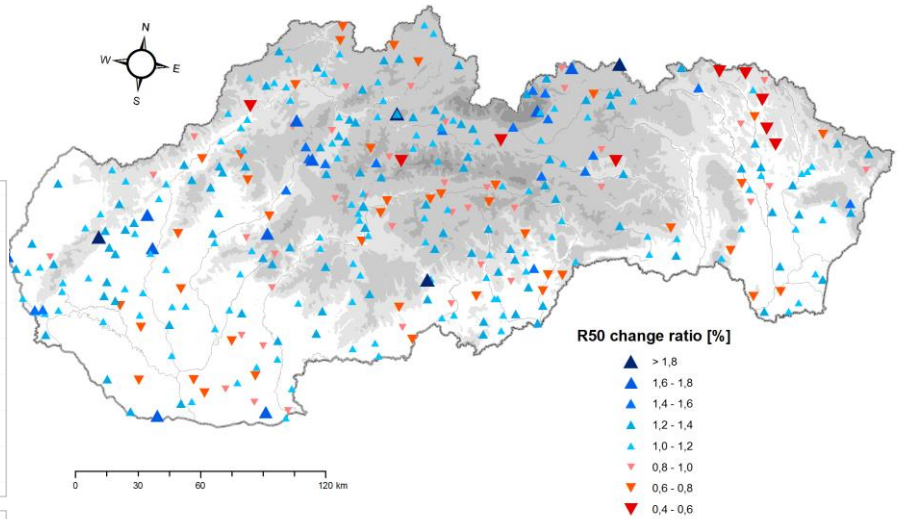
KLIMATICKÁ ZMENA A SÍDELNÉ PROSTREDIE

Changes in R20 frequency (1961-1990 vs. 1988-2017)

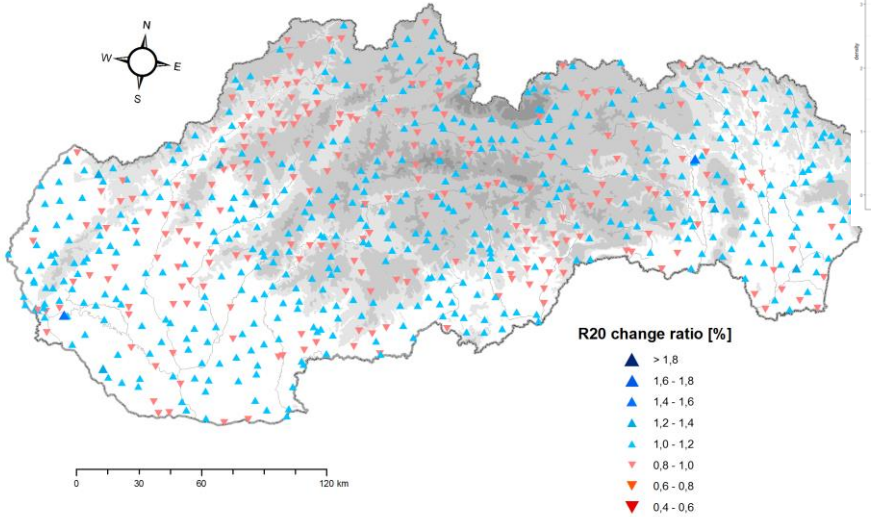




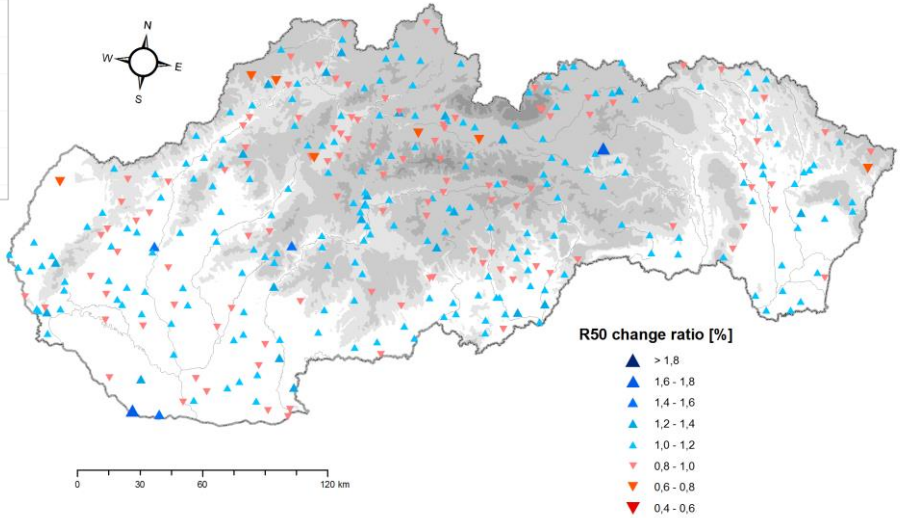
Changes in R50 frequency (1961-1990 vs. 1988-2017)



Changes in R20 intensity (1961-1990 vs. 1988-2017)



Changes in R50 intensity (1961-1990 vs. 1988-2017)



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Eliminácia zvyšujúcich sa rizík (mestský ostrov tepla, extrémnosť počasia, nedostatok vody, atď.) prostredníctvom adaptácie a mitigácie

Adaptačné opatrenia na úrovni mestskej infraštruktúry a budov

Znižovane spotreby energie v budovách a mestách

Dnes žije v mestách
3,5 miliardy ľudí

Do roku 2030 vzrastie plocha miest
na **1,2 mil. km^2**

Ročne sa do miest presťahuje
77 miliónov ľudí

Mestá produkujú asi polovicu
globálnych emisií oxidu uhličitého
20 Gt CO_2

ĎAKUJEM ZA POZORNOSŤ