

# Novi Sad Urban Network (NSUNET) system – Monitoring urban climate on local and micro scales

**Stevan Savić**

University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia

WG1 – Networking and Communication

**CA20108 - FAIRNESS**



Funded by  
the European Union

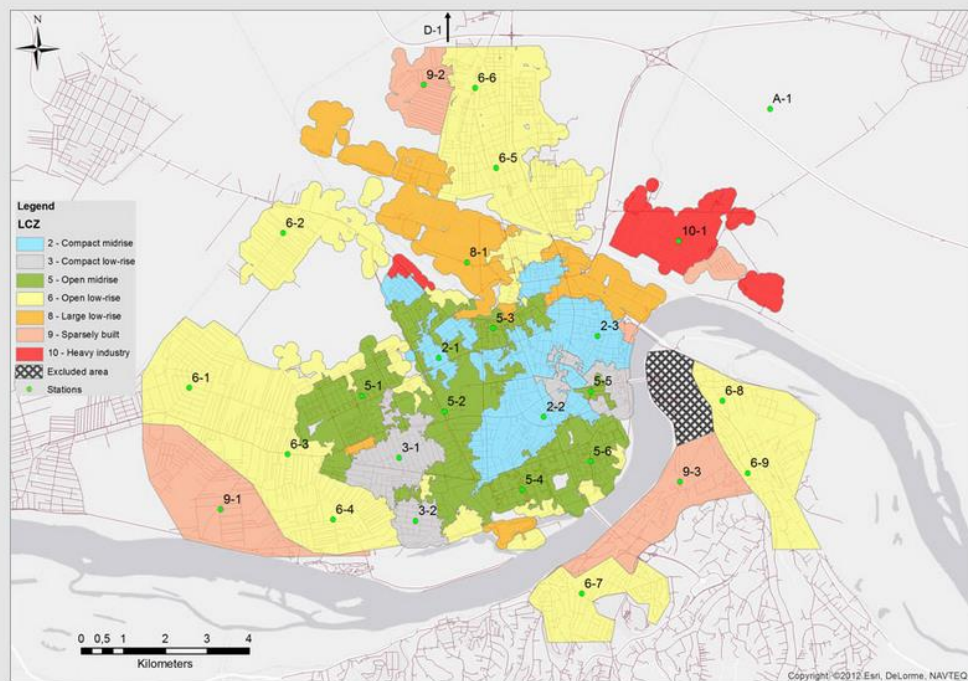


[www.cost.eu](http://www.cost.eu)

# NSUNET: URBAN-PATH project – Evaluations and public display of urban patterns of human thermal conditions (2013-2014)

NSUNET Portal

Help  
SV monitor



Stations monitor:		Missing measurements monitor:	
LATEST DATA:	ID / days ago	MISSING DATA:	ID
02-08-2016 / 19:40:00	2-1 / 0	367	2-1
02-08-2016 / 20:10:00	2-2 / 0	3730	2-2
02-08-2016 / 20:10:00	2-3 / 0	1671	2-3
02-08-2016 / 19:20:00	3-1 / 0	12298	3-1
02-08-2016 / 20:10:00	3-2 / 0	7751	3-2
02-08-2016 / 19:40:00	5-1 / 0	8621	5-1
01-01-2016 / 06:00:00	5-2 / ERROR IN DATABASE DATA	4250	5-2
02-08-2016 / 19:50:00	5-3 / 0	8236	5-3
02-08-2016 / 20:10:00	5-4 / 0	3758	5-4
02-08-2016 / 19:20:00	5-5 / 0	1733	5-5
02-08-2016 / 20:10:00	5-6 / 0	4975	5-6
02-08-2016 / 20:10:00	6-1 / 0	9256	6-1
10-03-2016 / 11:40:00	6-2 / 145.4	22758	6-2
02-08-2016 / 19:20:00	6-3 / 0	3936	6-3
02-08-2016 / 19:10:00	6-4 / 0.1	5553	6-4
02-08-2016 / 19:50:00	6-5 / 0	2883	6-5
02-08-2016 / 19:20:00	6-6 / 0	1353	6-6
02-08-2016 / 19:30:00	6-7 / 0	2107	6-7
02-08-2016 / 19:50:00	6-8 / 0	4494	6-8
02-08-2016 / 19:20:00	6-9 / 0	1904	6-9
02-08-2016 / 20:10:00	8-1 / 0	6837	8-1
02-08-2016 / 20:10:00	9-1 / 0	3449	9-1
02-08-2016 / 19:00:00	9-2 / 0.1	7290	9-2
02-08-2016 / 19:20:00	9-3 / 0	1822	9-3
02-08-2016 / 19:40:00	10-1 / 0	299	10-1
02-08-2016 / 19:50:00	A-1 / 0	2818	A-1
02-08-2016 / 20:00:00	D-1 / 0	11584	D-1
02-08-2016 / 17:30:00	PMF-1 / 0.1	1194	PMF-1

Select database: range:

Climate Data: LAST\_DAY

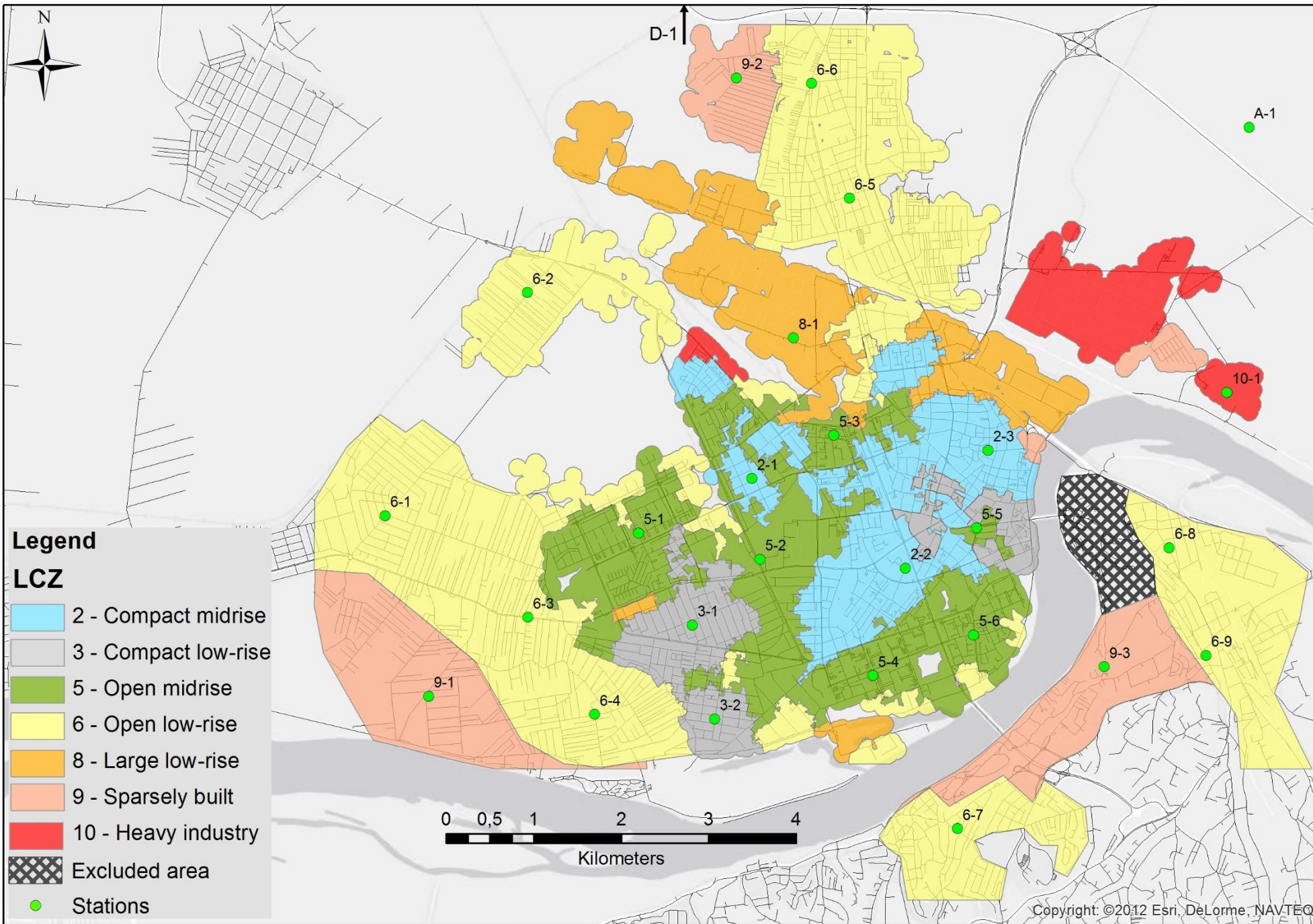
Debug Data: LAST\_DAY

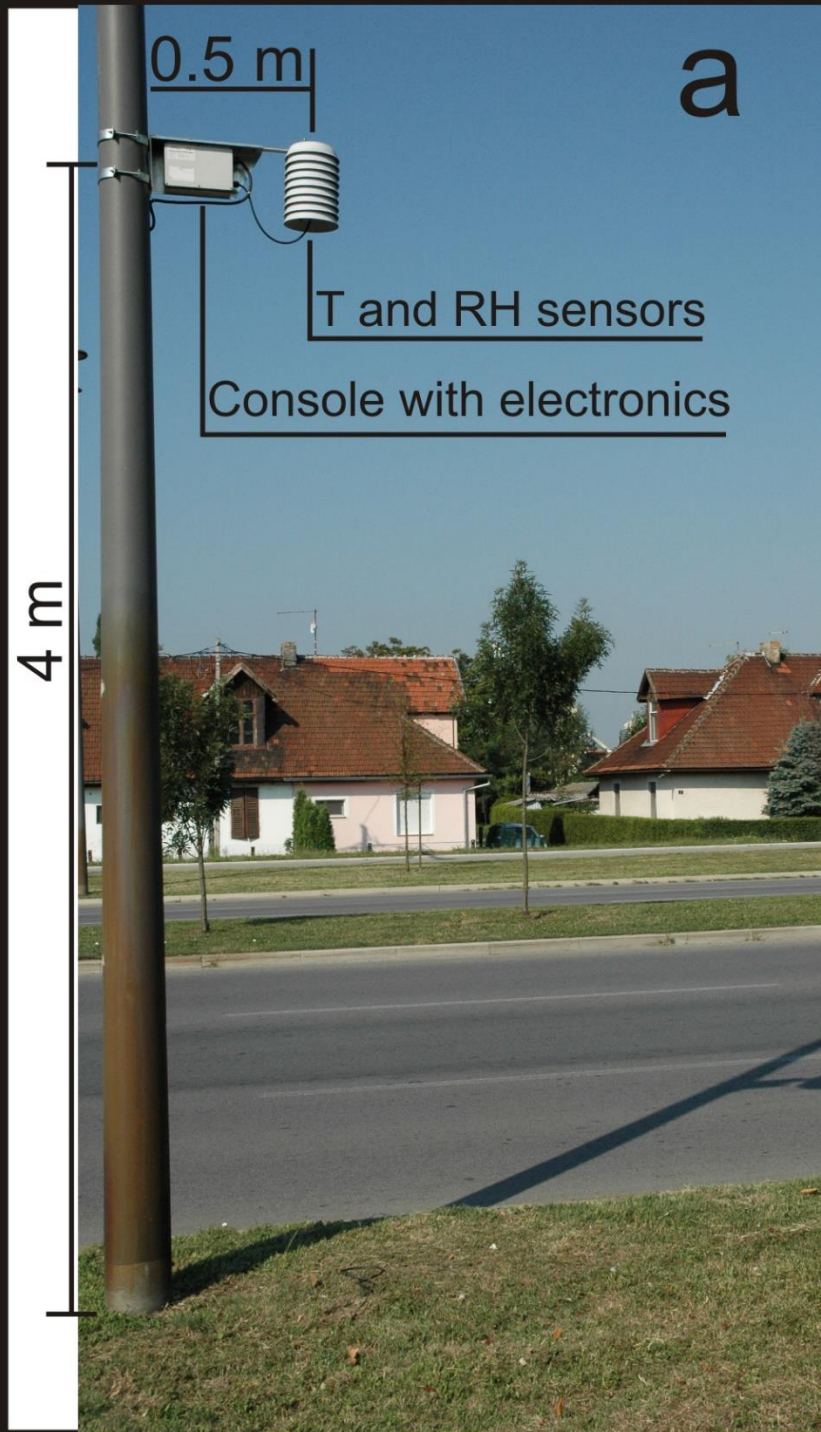
Average Data: LAST\_DAY

LOCATION Data: LAST\_DAY

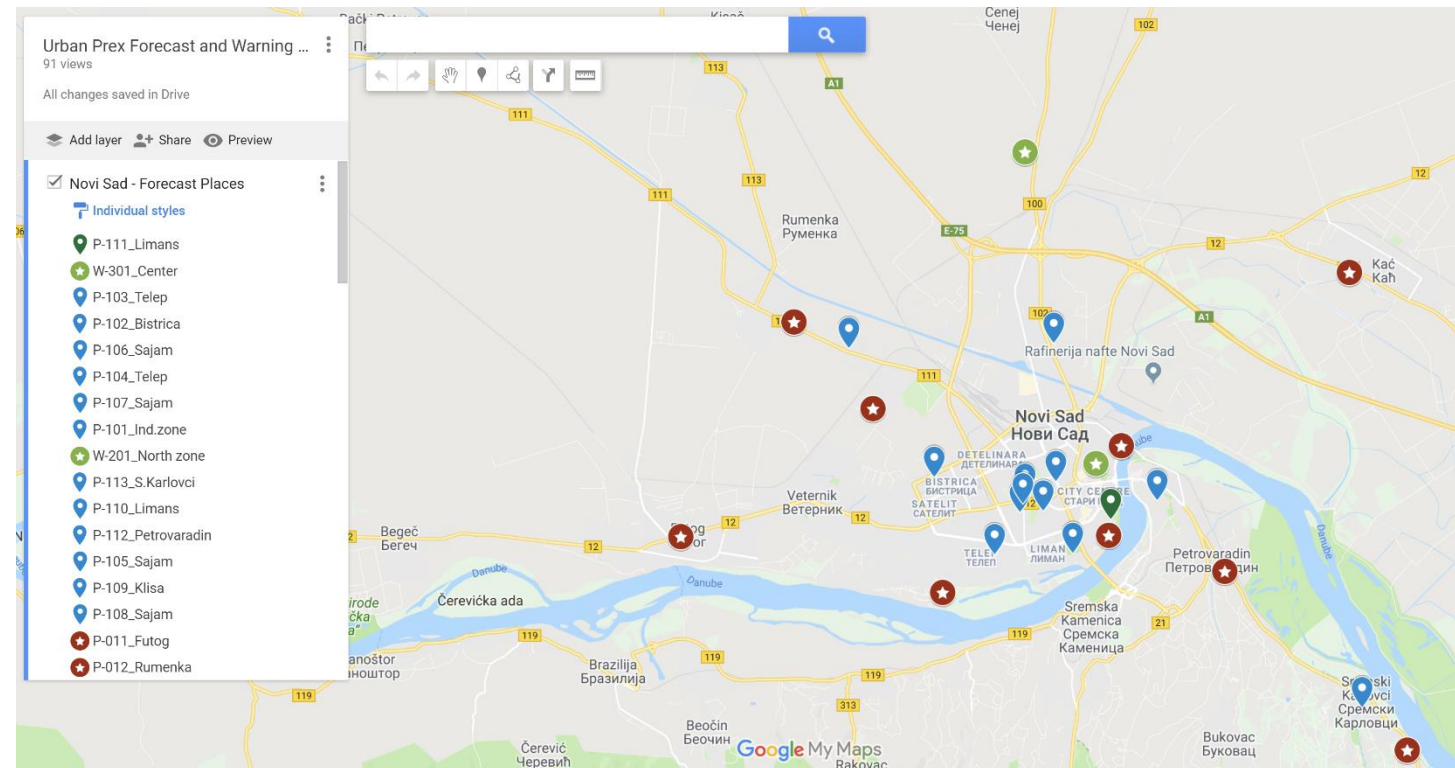
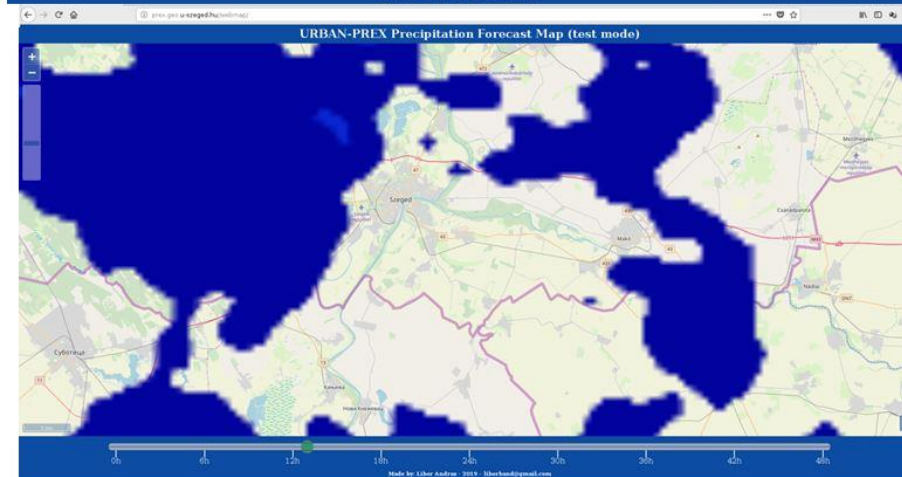
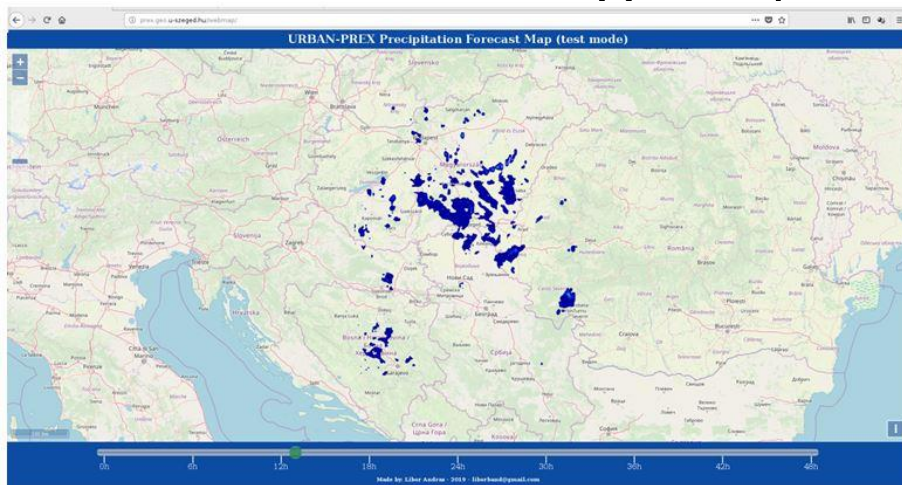
STATISTICS Data: LAST\_DAY

- 27 Ta/RH sensors
- 10-min resolution
- 2014-2017 period of work





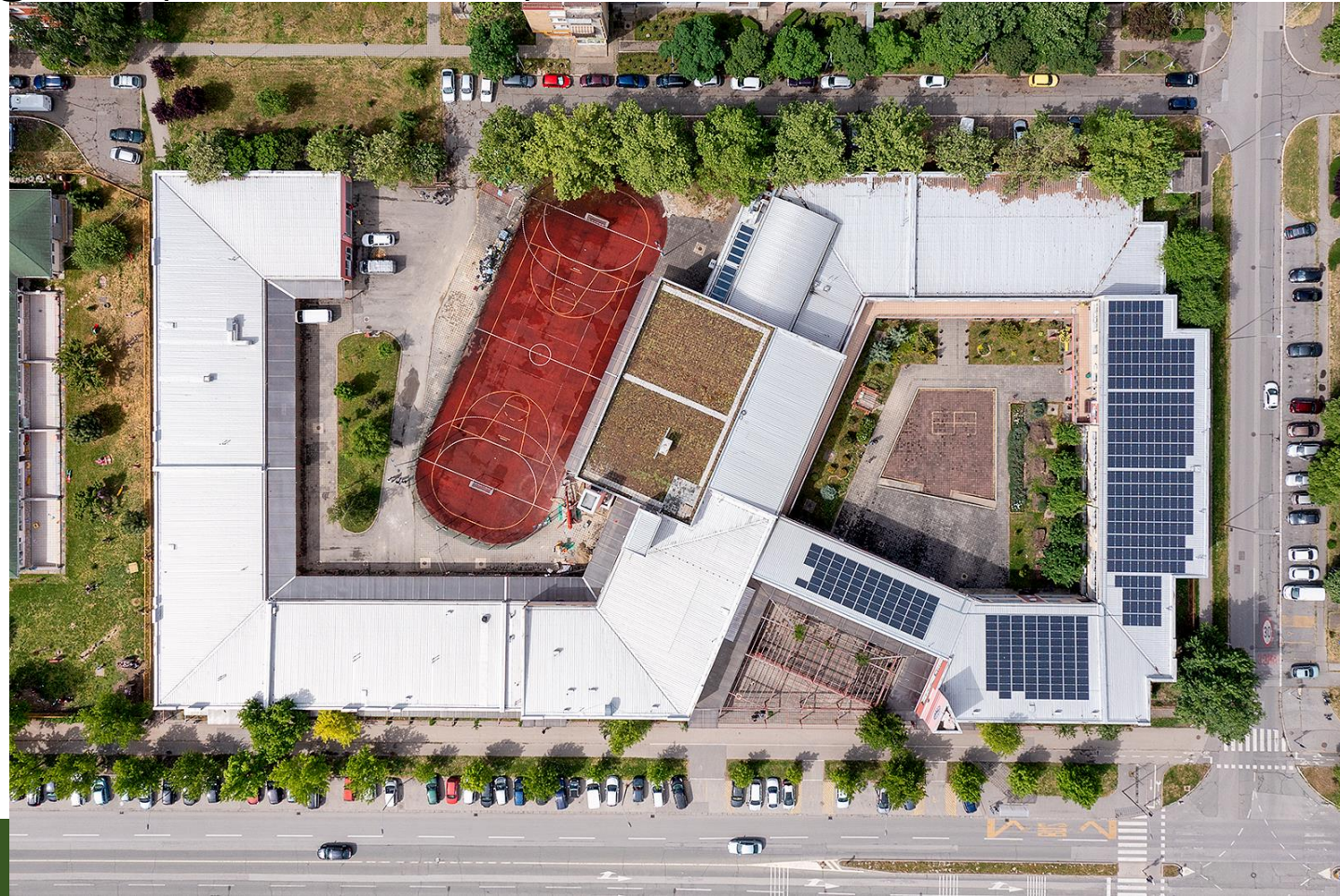
# NSUNET: URBAN-PREX project – Monitoring, forecasting and development of online public early warning system for extreme precipitations and pluvial floods in urban areas of the HU-RS cross-border region (2017-2019)



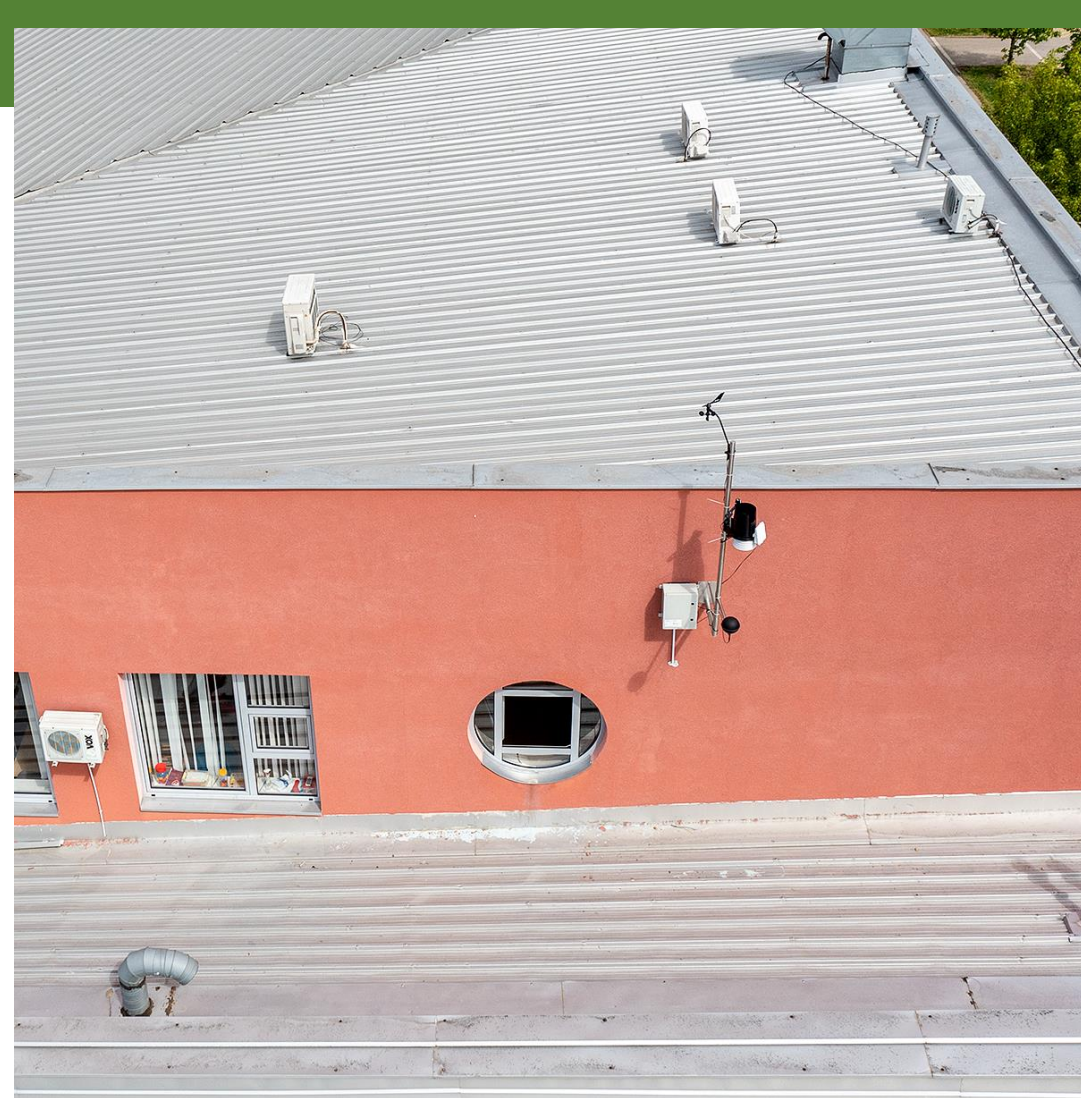


- 15 precipitation sensors
- 2019- period of work

NSUNET: GReENERGY project – Greening the cities –  
Development and promotion of energy efficiency and  
sustainable urban environment in the cities of Croatia-Serbia  
cross-border region (2019-2022)



- 6 AWS in different micro-locations
- 10 minutes of measurements
- 2021- period of work



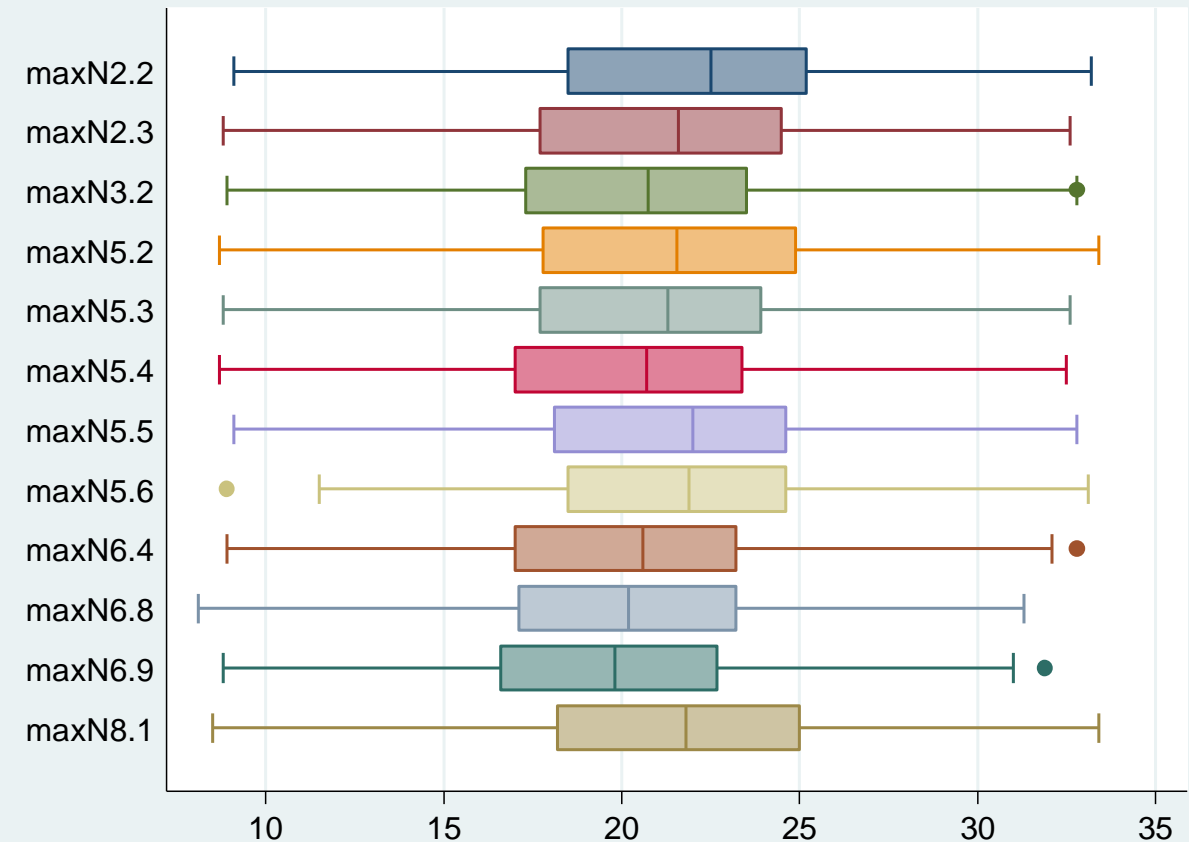
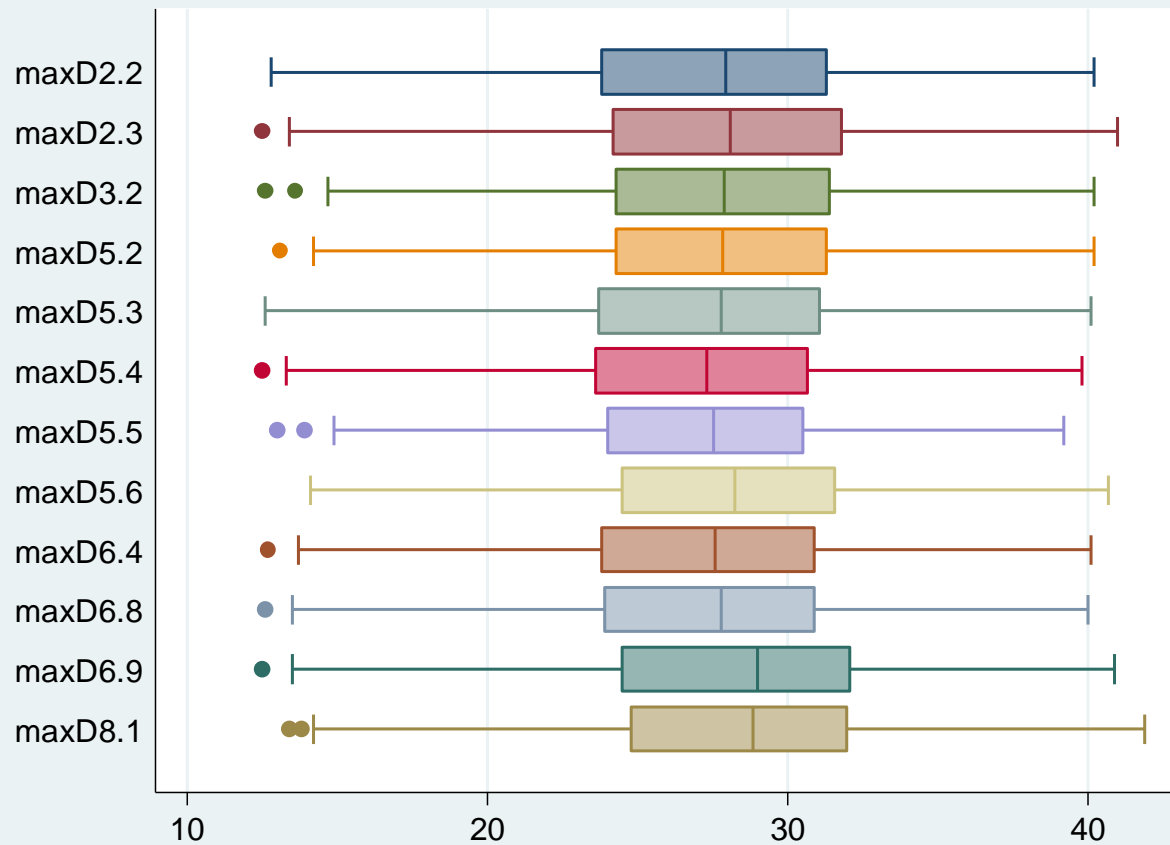


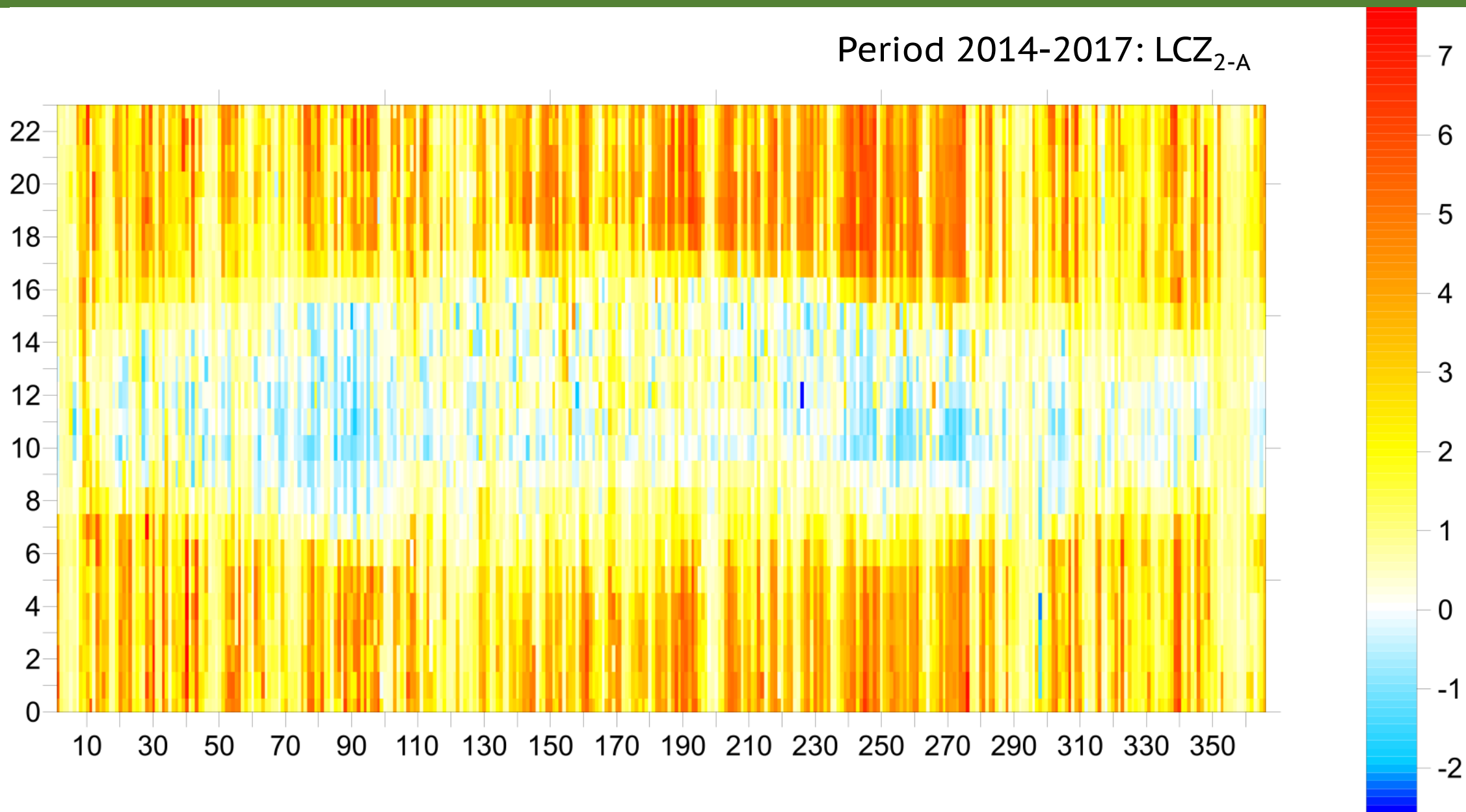


# Mobile sensors: Mobile Micrometeorological Cart - MMC



## Distribution of Tmax daytime and nighttime in NSUNET stations





Period 2014-2017

LCZs	Frosty days ( $T_{мин} < 0 \text{ } ^\circ\text{C}$ )	Ice days ( $T_{макс} < 0 \text{ } ^\circ\text{C}$ )	Summer days ( $T_{макс} > 25 \text{ } ^\circ\text{C}$ )	Tropical days ( $T_{макс} > 30 \text{ } ^\circ\text{C}$ )	Tropical nights ( $T_{мин} > 20 \text{ } ^\circ\text{C}$ )
2	35	11	118	56	35
3	43	11	121	56	20
5	39	12	116	51	27
6	44	11	118	56	19
8	43	10	109	51	39
9	45	12	117	50	19
A	64	14	116	55	4

