



Ministero della Salute



CLIMACTIONS

Progetto CCM Interventi urbani per la promozione della salute

Popolazione e caratteristiche ambientali del territorio nelle città del progetto

Chiara Badaloni

Da una recente revisione dell'OMS (WHO 2016) emerge che gli spazi verdi urbani hanno il potenziale di prevenire malattie croniche come diabete, malattie cardiovascolari e disturbi psichici.

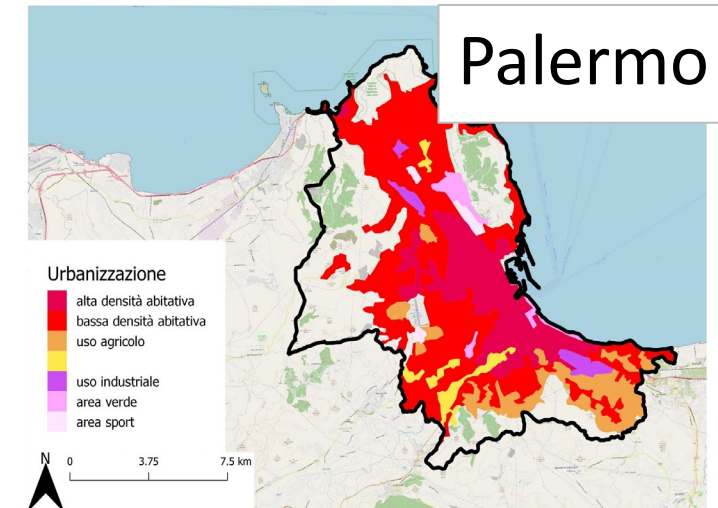
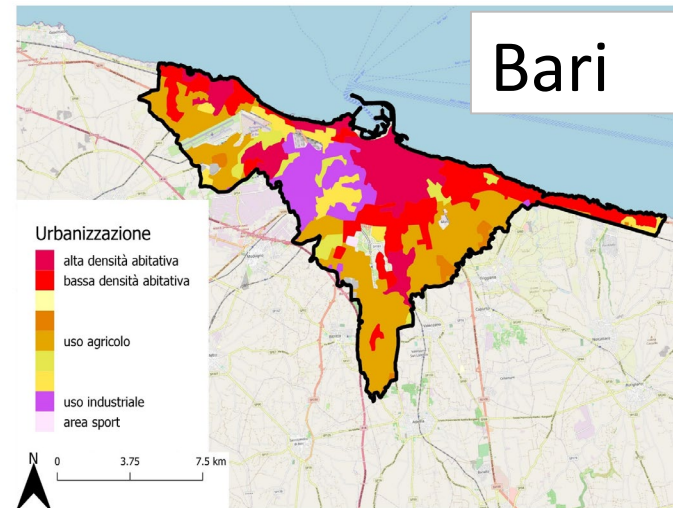
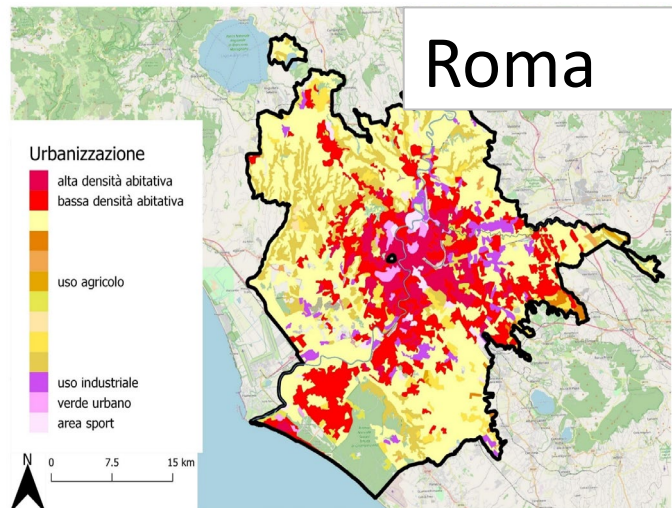
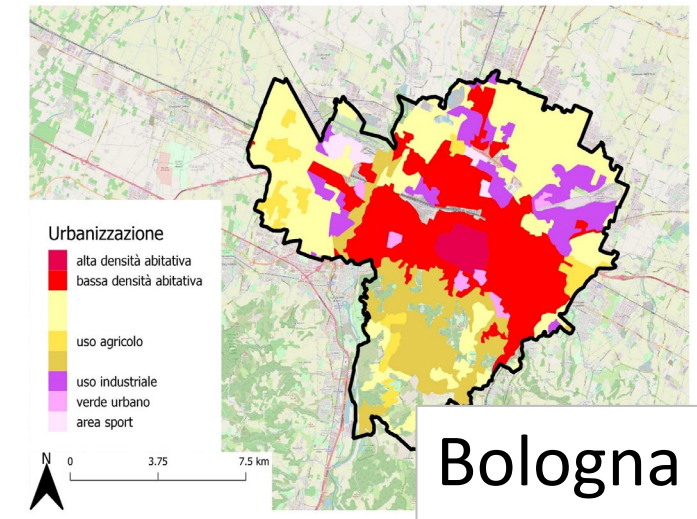
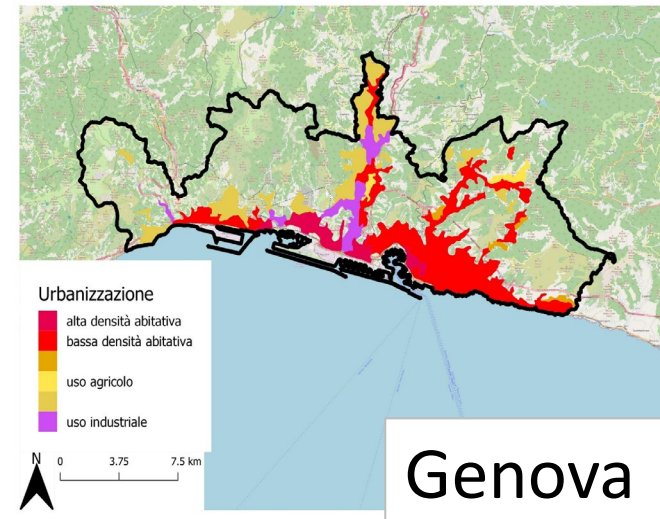
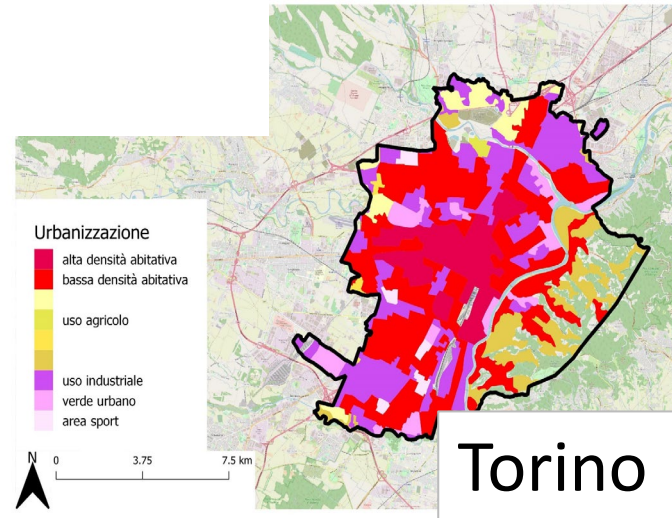
Pertanto disporre di indicatori di verde urbano integrati a dati di popolazione e di uso del suolo rappresenta uno strumento indispensabile per favorire un cambiamento e contrastare in modo più efficace i rischi ambientali

Identificare/mappare le zone a maggior rischio all'interno delle aree urbane in termini di esposizioni ambientali, urbanistica, fattori demografici e socio-sanitari per le città incluse nel progetto
(Torino, Genova, Bologna, Roma, Bari e Palermo)

Caratteristiche territoriali: uso del suolo

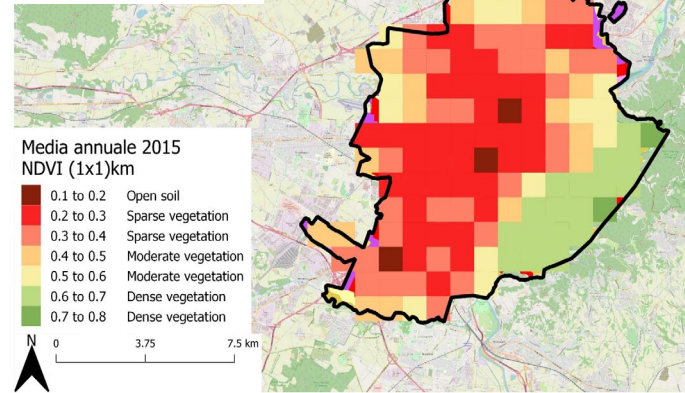
	Torino	Genova	Bologna	Roma	Bari	Palermo
Caratteristiche Territoriali						
Superficie (km ²)	130.1	240.5	140.8	1,285.8	116.3	160.1
Altitudine centro abitato (m) (fonte: ISTAT)	239	19	54	20	5	14
% superficie ad uso alta densità abitativa	10.8%	2.8%	2.3%	6.5%	16.8%	14.2%
% superficie ad uso bassa densità abitativa	34.7%	15.2%	25.2%	18.1%	20.2%	35.7%
% superficie ad uso industriale	20.7%	2.8%	8.8%	3.4%	10.4%	1.7%
% superficie ad uso agricolo	13.3%	8.9%	47.4%	59.5%	44.6%	10.6%
% superficie con verde urbano (fonte: ISTAT 2016)	15.1%	1.5%	8.0%	3.3%	2.4%	4.6%
Verde pubblico pro capite (m ²) (fonte: ISTAT 2016)	22.04	6.33	28.95	14.83	8.48	10.83
% superficie con una densa vegetazione (NDVI 2015)	14.6%	73.6%	14.2%	24.0%	0.0%	10.6%
Densità abitativa per km ²	6,706.47	2,435.59	2,636.40	2,035.44	2,717.57	4,105.99

Uso del Suolo

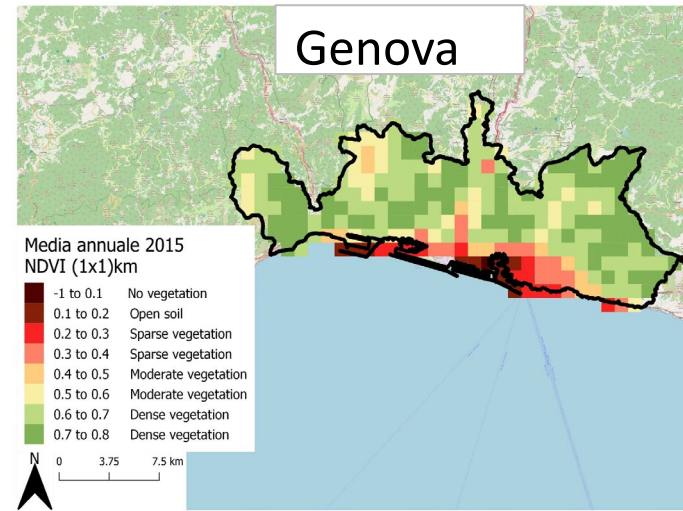


Vegetazione

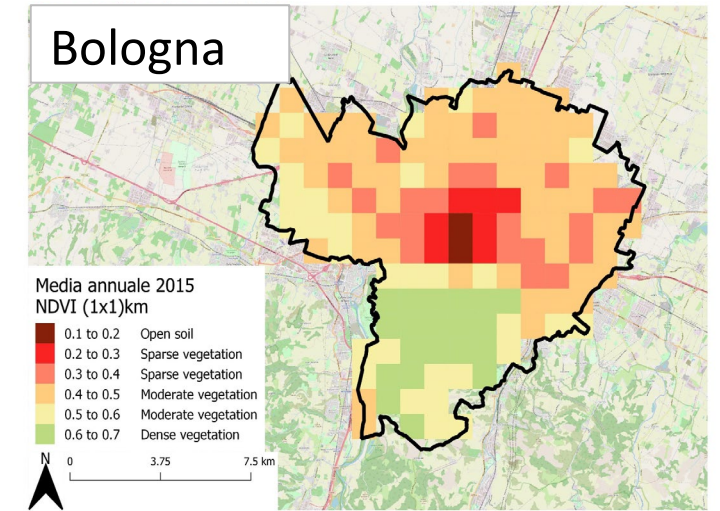
Torino



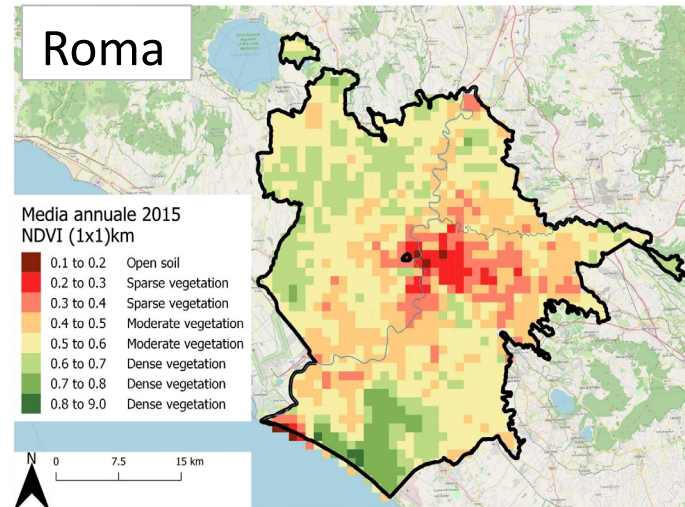
Genova



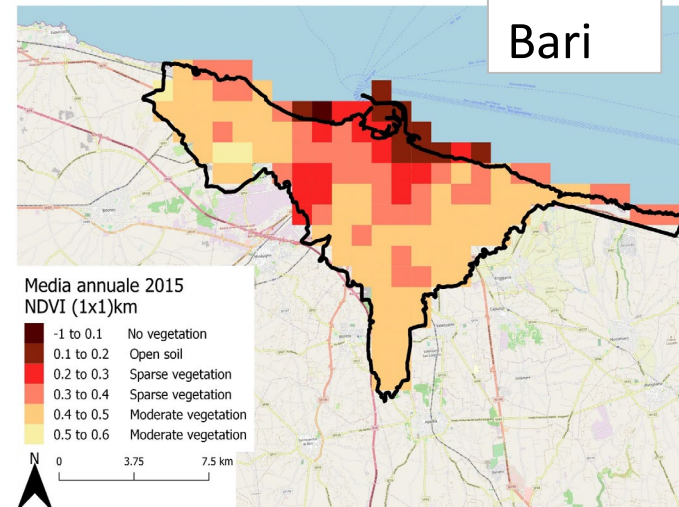
Bologna



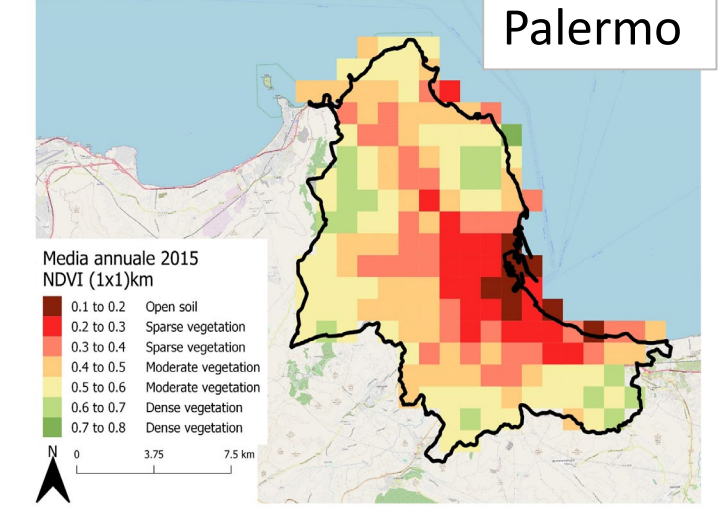
Roma



Bari



Palermo



Distribuzione popolazione per livello vegetazione

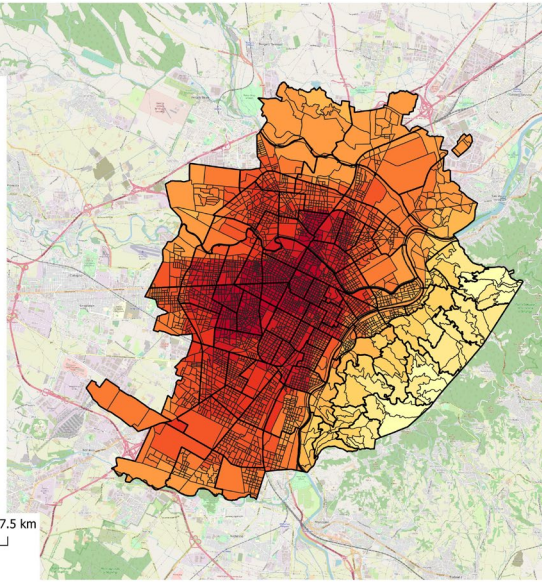
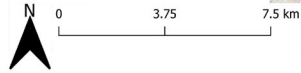
	Torino	Genova	Bologna	Roma	Bari	Palermo
NDVI : media(sd)	0.24 (0.1)	0.38 (0.18)	0.29 (0.13)	0.31 (0.14)	0.23 (0.11)	0.22 (0.09)
Popolazione (%)	872,367	585,710	371,337	2,617,175	315,933	657,561
1: Open soil (0.1-0.2)	251,703 (28.9%)	99,553 (17%)	105,412 (28.4%)	717,828 (27.4%)	132,936 (42.1%)	1242 (0.2%)
2: Sparse vegetation (0.2-0.4)	507,365 (58.2%)	248,807 (42.5%)	184,399 (49.7%)	1,283,259 (49.0%)	149,457 (47.3%)	285552 (43.4%)
3: Moderate vegetation (0.4-0.6)	40,741 (4.7%)	107,752 (18.4%)	79.190 (21.3%)	12,303 (23%)	33,520 (10.6%)	335049 (51.0%)
4: Dense vegetation (0.6-0.8)	435 (0.05%)	80,726 (13.8%)	2.336 (0.6%)	12,303 (0.5%)	-	35360 (5.4%)
missing	72,123 (8.3%)	48.872 (8.3%)	-	798 (0.03%)	20 (0.01%)	358 (0.1%)

Temperatura Estiva (mag- sett). Media periodo 2006-2015

Torino

°C media 2006-2015
mag-sett

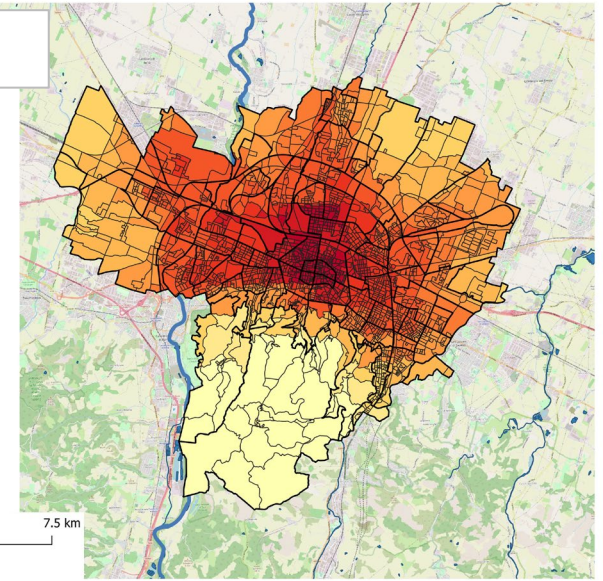
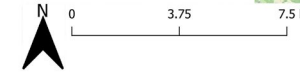
- 19.12 - 19.58
- 19.58 - 20.22
- 20.22 - 20.79
- 20.79 - 21.2
- 21.2 - 21.42
- 21.42 - 21.56
- 21.56 - 21.71
- 21.71 - 21.84
- 21.84 - 21.95
- 21.95 - 22.07



Bologna

°C media 2006-2015
mag-sett

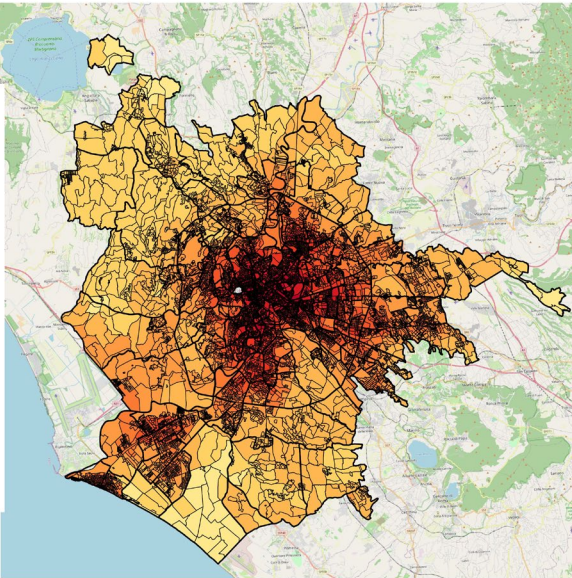
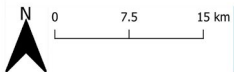
- 20.99 - 21.41
- 21.41 - 21.668
- 21.668 - 21.946
- 21.946 - 22.133
- 22.133 - 22.287
- 22.287 - 22.439
- 22.439 - 22.581
- 22.581 - 22.697
- 22.697 - 22.797
- 22.797 - 22.878



Roma

°C media 2006-2015
mag-sett

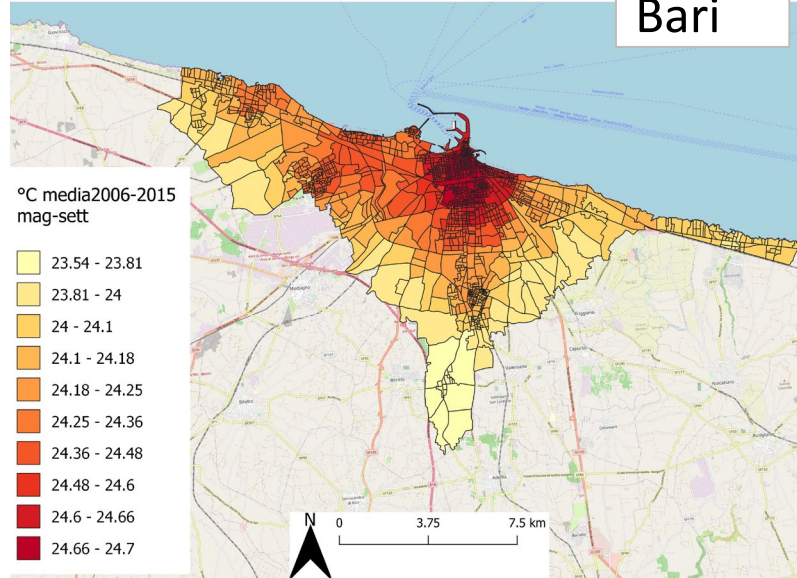
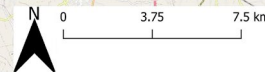
- 0 - 0
- 0 - 21.44
- 21.44 - 22.02
- 22.02 - 22.36
- 22.36 - 22.64
- 22.64 - 22.88
- 22.88 - 23.1
- 23.1 - 23.3
- 23.3 - 23.52
- 23.52 - 23.72



Bari

°C media 2006-2015
mag-sett

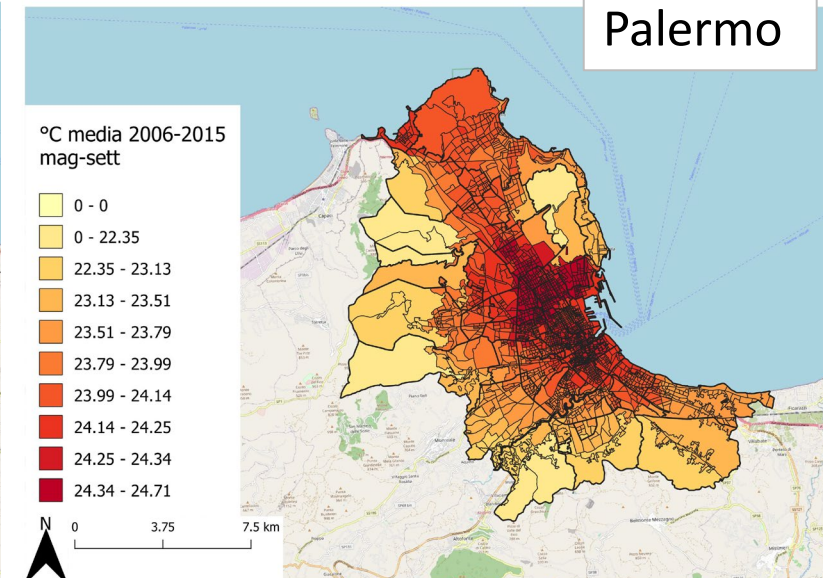
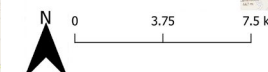
- 23.54 - 23.81
- 23.81 - 24
- 24 - 24.1
- 24.1 - 24.18
- 24.18 - 24.25
- 24.25 - 24.36
- 24.36 - 24.48
- 24.48 - 24.6
- 24.6 - 24.66
- 24.66 - 24.7



Palermo

°C media 2006-2015
mag-sett

- 0 - 0
- 0 - 22.35
- 22.35 - 23.13
- 23.13 - 23.51
- 23.51 - 23.79
- 23.79 - 23.99
- 23.99 - 24.14
- 24.14 - 24.25
- 24.25 - 24.34
- 24.34 - 24.71



Distribuzione popolazione per Temperatura estiva 2006-2015 estiva (maggio settembre) delle temperature medie giornaliere

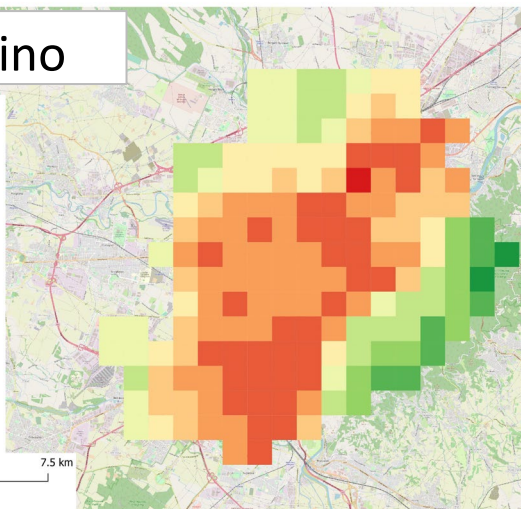
°C	Torino	Bologna	Roma	Bari	Palermo
Min	19.1	21.0	20.5	23.5	21.2
1 st	21.6	22.3	22.6	24.2	24.1
media	21.8	22.5	23.0	24.4	24.2
3°	21.9	22.7	23.3	24.7	24.3
Max	22.1	22.9	23.7	24.7	24.7
Popolazione (%)	872,367	371,337	2,617,175	315,933	657,561
Basso (1 st qnt)	193,376 (22.2%)	65,459 (17.6%)	449,019 (17.2%)	64,285 (20.3%)	264,428 (40.2%)
Medio Basso	275,352 (31.6%)	102,193 (27.5%)	682,608 (26.1%)	80,711 (25.5%)	188.650 (28.7%)
Medio Alto	222,756 (25.5%)	113,149 (30.5%)	910,454 (34.8%)	104,385 (33.0%)	65,275 (9.9%)
Alto (3 st qnt)	180,883 (20.7%)	90,536 (24.4%)	575,094 (22.0%)	78,800 (21.1%)	139,208 (21.2%)

PM₁₀

Torino

PM₁₀(µg/m³)

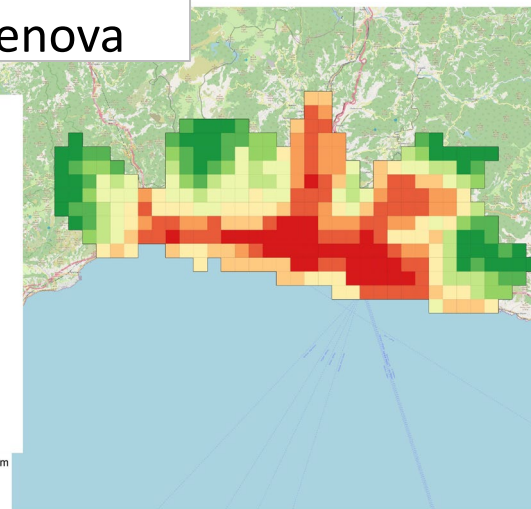
- 22.12 - 22.52
- 22.52 - 24.54
- 24.54 - 25.91
- 25.91 - 26.95
- 26.95 - 27.87
- 27.87 - 28.83
- 28.83 - 29.65
- 29.65 - 30.47
- 30.47 - 31.32
- 31.32 - 33.25



Genova

PM₁₀(µg/m³)

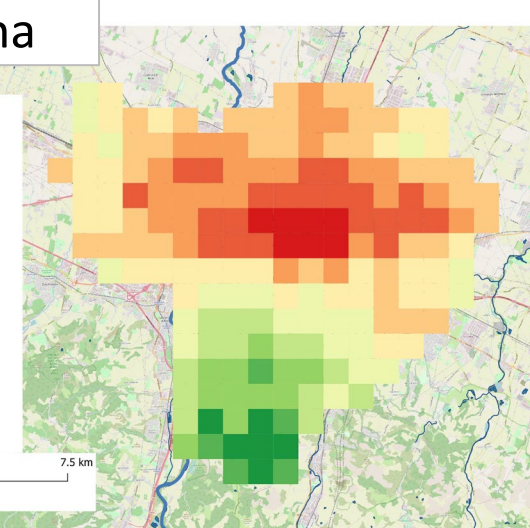
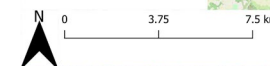
- 11.04 - 12.49
- 12.49 - 13.71
- 13.71 - 14.78
- 14.78 - 15.92
- 15.92 - 17.03
- 17.03 - 18
- 18 - 18.94
- 18.94 - 19.88
- 19.88 - 20.81
- 20.81 - 22.2



Bologna

PM₁₀(µg/m³)

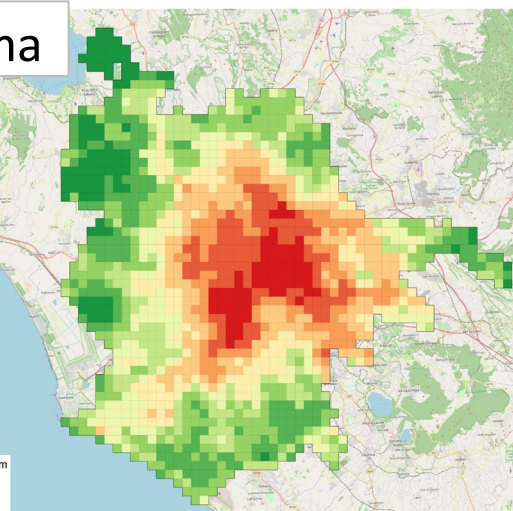
- 20.69 - 21.15
- 21.15 - 21.75
- 21.75 - 22.83
- 22.83 - 23.96
- 23.96 - 24.63
- 24.63 - 25.13
- 25.13 - 25.54
- 25.54 - 25.96
- 25.96 - 26.58
- 26.58 - 27.11



Roma

PM₁₀(µg/m³)

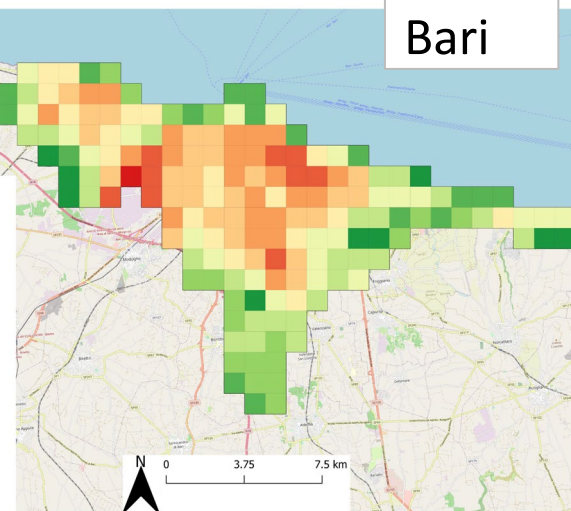
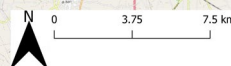
- 16.3 - 17.89
- 17.89 - 18.93
- 18.93 - 19.85
- 19.85 - 20.92
- 20.92 - 22.05
- 22.05 - 23.08
- 23.08 - 24.04
- 24.04 - 25.19
- 25.19 - 26.55
- 26.55 - 29.21



Bari

PM₁₀(µg/m³)

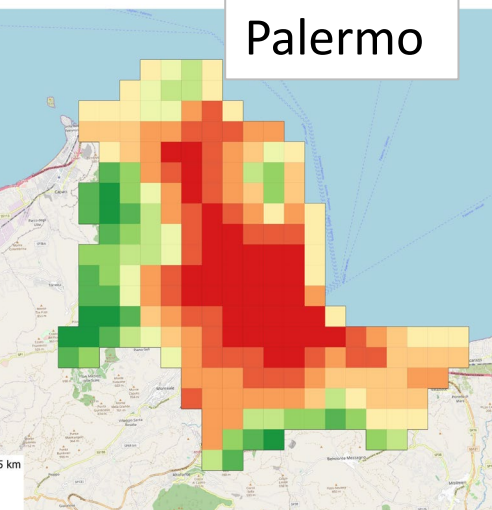
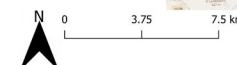
- 17.9 - 18.66
- 18.66 - 19.48
- 19.48 - 20.23
- 20.23 - 21.04
- 21.04 - 21.87
- 21.87 - 22.68
- 22.68 - 23.45
- 23.45 - 24.21
- 24.21 - 25.52
- 25.52 - 28.34



Palermo

PM₁₀(µg/m³)

- 14.33 - 15.11
- 15.11 - 16.07
- 16.07 - 16.86
- 16.86 - 17.96
- 17.96 - 19.04
- 19.04 - 20.29
- 20.29 - 21.32
- 21.32 - 22
- 22 - 22.94
- 22.94 - 23.86



Distribuzione popolazione per PM10

PM ₁₀ (µg/m³)	Torino	Genova	Bologna	Roma	Bari	Palermo
1 st	11.1	10.3	12.8	12.3	11.8	11.7
Media	24.6	20	24.9	22.9	22.8	23.1
3°	50.4	21	25.7	25.9	24.2	23.6
Popolazione (%)	872,367	585,710	371,337	2,617,175	315,933	657,561
Basso (1 st qnt)	292,518 (33.5%)	115,004 (19.6%)	94,078 (25.3%)	621,433 (23,7%)	71,700 (22.7%)	256,049 (38,9%)
Medio Basso	232,178 (26.6%)	142,079 (24.3%)	89,876 (24.2%)	704,218 (26.9%)	84.242 (26.7%)	186,428 (28.4%)
Medio Alto	293,858 (33.7%)	155,777 (26.6%)	88,081 (23.7%)	534,224 (20.4%)	80.162 (25.4&)	100,056 (15.2%)
Alto (3 st qnt)	53,813 (6.2%)	172,850 (29.5%)	99,302 (26.7%)	757,300 (28.9%)	79.829 (25.3%)	115,028 (17.5%)

Distribuzione popolazione per livello socioeconomico

	Torino	Genova	Bologna	Roma	Bari	Palermo
Indice di deprivazione						
Popolazione (%)	872,367	585,710	371,337	2,617,175	315,933	657,561
1: Basso livello	128,674 (14.7%)	160,351 (27.4%)	96,756 (26.1%)	50,9214 (19.5%)	28,361 (9.0%)	29,902 (4.5%)
2	139,931 (16.0%)	154,088 (26.3%)	95,713 (25.8%)	534,396 (20.4%)	43,192 (13.7%)	43,931 (6.7%)
3	171,918 (19.7%)	12,0442 (20.6%)	81,346 (21.9%)	521,617 (19.9%)	41,734 (13.2%)	58,849 (8.9%)
4	235,113 (27.0%)	93,588 (16.0%)	47,988 (12.9%)	521,744 (19.9%)	64,801 (20.5%)	96,415 (14.7%)
5: Alto livello	192,907 (22.1%)	56,435 (9.6%)	48,985 (13.2%)	521,539 (19.9%)	137,748 (43.6%)	428,259 (65.1%)
missing	3,824 (0.4%)	806 (0.1%)	549 (0.1%)	8,665 (0.3%)	97 (0.0%)	205 (0.0%)





Ministero della Salute



CLIMATIONS

Progetto CCM Interventi urbani per la promozione della salute

Grazie dell'attenzione

Chiara.badaloni@deplazio.it

www.deplazio.net