

Particulate Matter

▶ Levels in Molise

Science for The Planet

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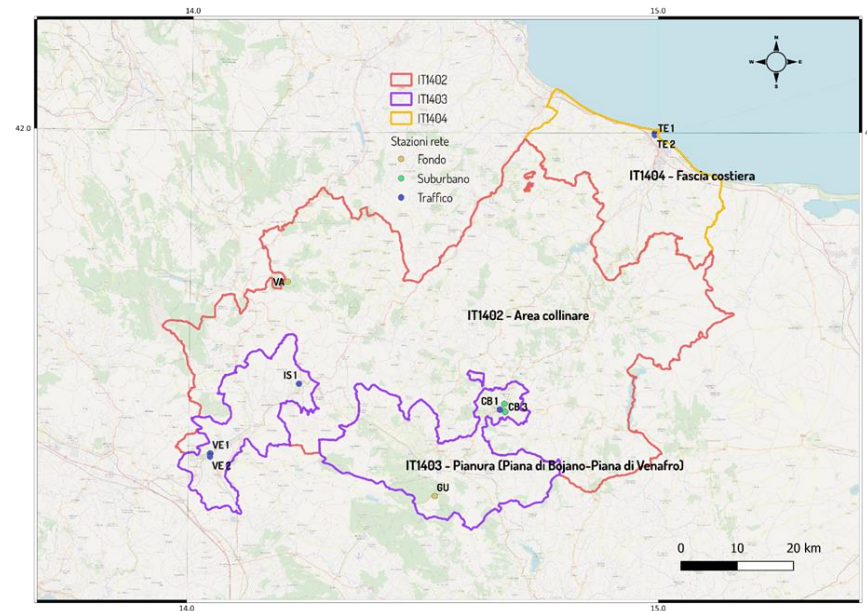
Regional Agency for Environmental Protection of Molise



- ▶ Referendum of April 18, 1993.
- ▶ Law 61/1994
- ▶ Regional law 38/1999
- ▶ Law 132/2016

The regional monitoring network

- ▶ Air quality has been monitored with the regional network since 2006.
 - ▶ There are on the territory:
 - ▶ 8 monitoring stations located in the main urban centers of the region:
 - ▶ Campobasso
 - ▶ Isernia
 - ▶ Termoli
 - ▶ Venafro
 - ▶ 2 rural cross-country skiing stations
 - ▶ Guardiaregia
 - ▶ Vastogirardi



The regional monitoring network

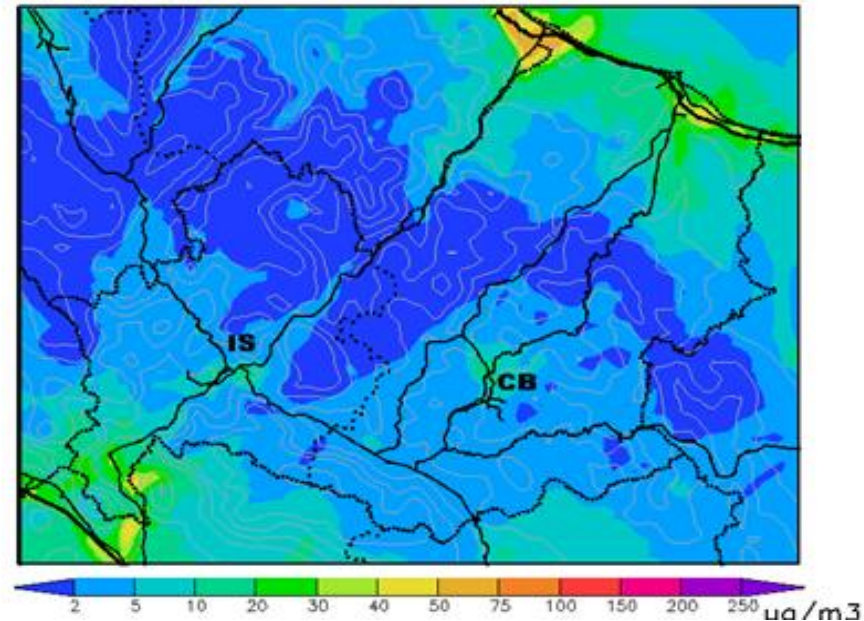
Station name	Localization	Type	Pollutants monitored
Campobasso1 - CB1	Piazza Cuoco (CB)	Traffic	NO _x , SO ₂ .
Campobasso3 - CB3	Via Lombardia	Background	NO _x , PM ₁₀ , PM _{2.5} , O ₃ , BTX, As, Cd, Ni, Pb, B(a)P
Campobasso4 - CB4	Via XXIV Maggio	Background	NO _x , CO, O ₃ .
Termoli1 - TE1	Piazza Garibaldi	Traffic	NO _x , SO ₂ , CO
Termoli2 - TE2	Via Martiri della Resistenza	Traffic	NO _x , PM ₁₀ , PM _{2.5} , O ₃ , As, Cd, Ni, Pb, B(a)P
Isernia1 - IS1	Piazza Puccini	Traffic	NO _x , SO ₂ , CO.
Venafro1 - VE1	Via Colonia Giulia	Traffic	NO _x , SO ₂ , CO, PM ₁₀ .
Venafro2 - VE2	Via Campania	Background	NO _x , PM ₁₀ , PM _{2.5} , O ₃ , BTX, As, Cd, Ni, Pb, B(a)P.
Guardiaregia - GU	Arcichiaro	Rural	NO _x , SO ₂ , O ₃ .
Vastogirardi - VA	Monte di Mezzo	Rural	NO _x , PM ₁₀ , PM _{2.5} , O ₃ , As, Cd, Ni, Pb, B(a)P

Sorgenia Network

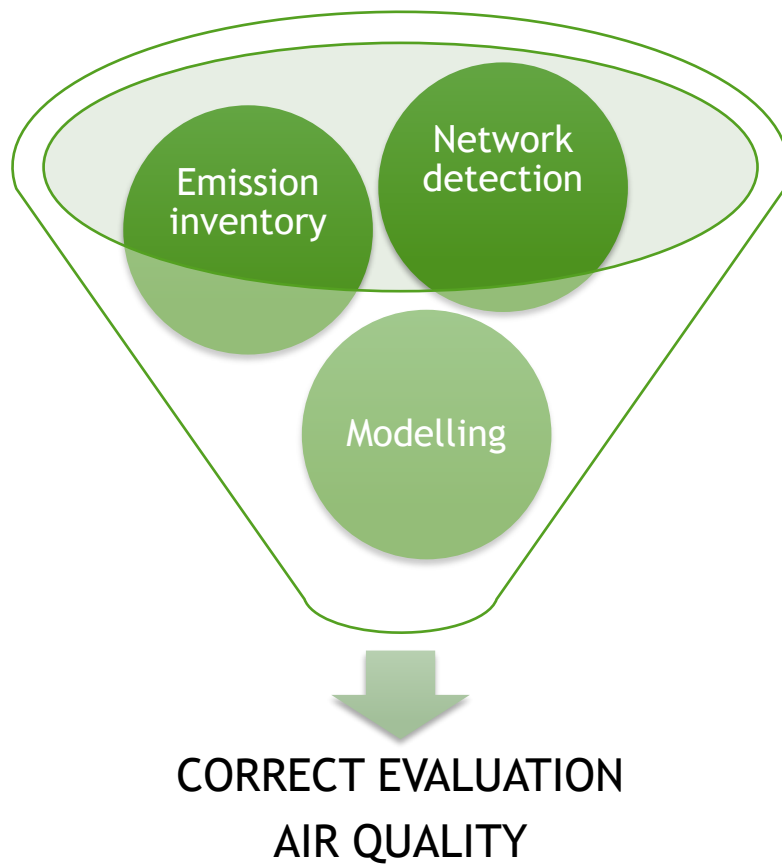
Station name	Localization	Type	Pollutants monitored
Termoli3 - TE3	Portocannone	Industrial	NO _x , CO, PM ₁₀
Termoli4 - TE4	Campomarino	Industrial	NO _x , CO, PM ₁₀
Termoli5 - TE5	San Giacomo degli Schiavoni	Industrial	NO _x , CO, PM ₁₀ , O ₃

Modelling system

- ▶ Another tool used for air quality assessment is modelling.
 - ▶ Three-day forecast
 - ▶ Annual evaluation



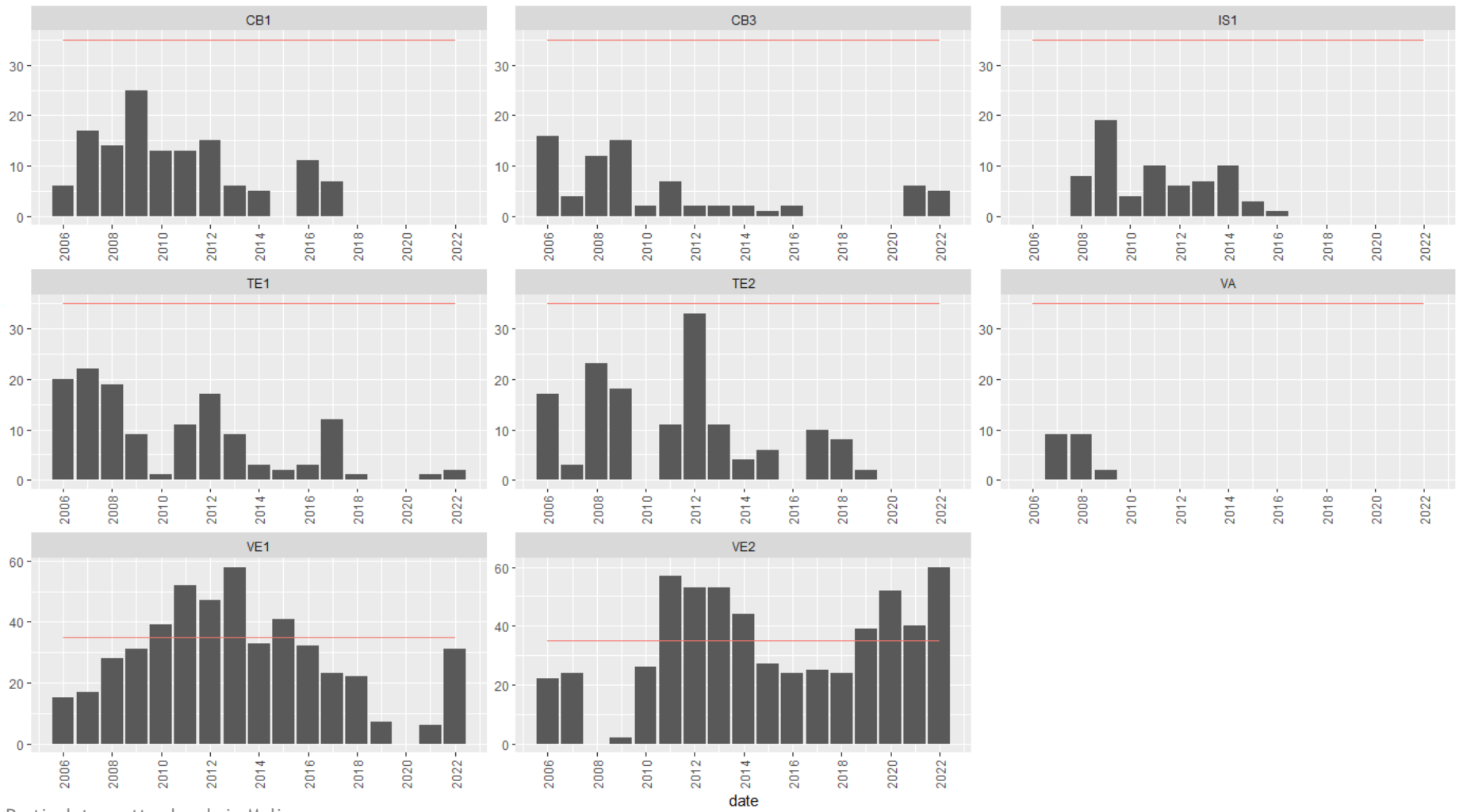
Air quality



Particulate matter levels in Molise

- ▶ The air quality in Molise over the years has not shown particular criticality, resulting satisfactory in most of the regional territory, as shown by the results of monitoring activities and modeling.
- ▶ The exception is the city of Venafro where, with the exception of the three-year period 2016-2018, since 2010 the threshold of 35 days allowed for exceeding the daily average of PM_{10} has been exceeded.
- ▶ $PM_{2.5}$ also recorded critical concentration values, reaching close to the limit threshold provided for by current legislation.

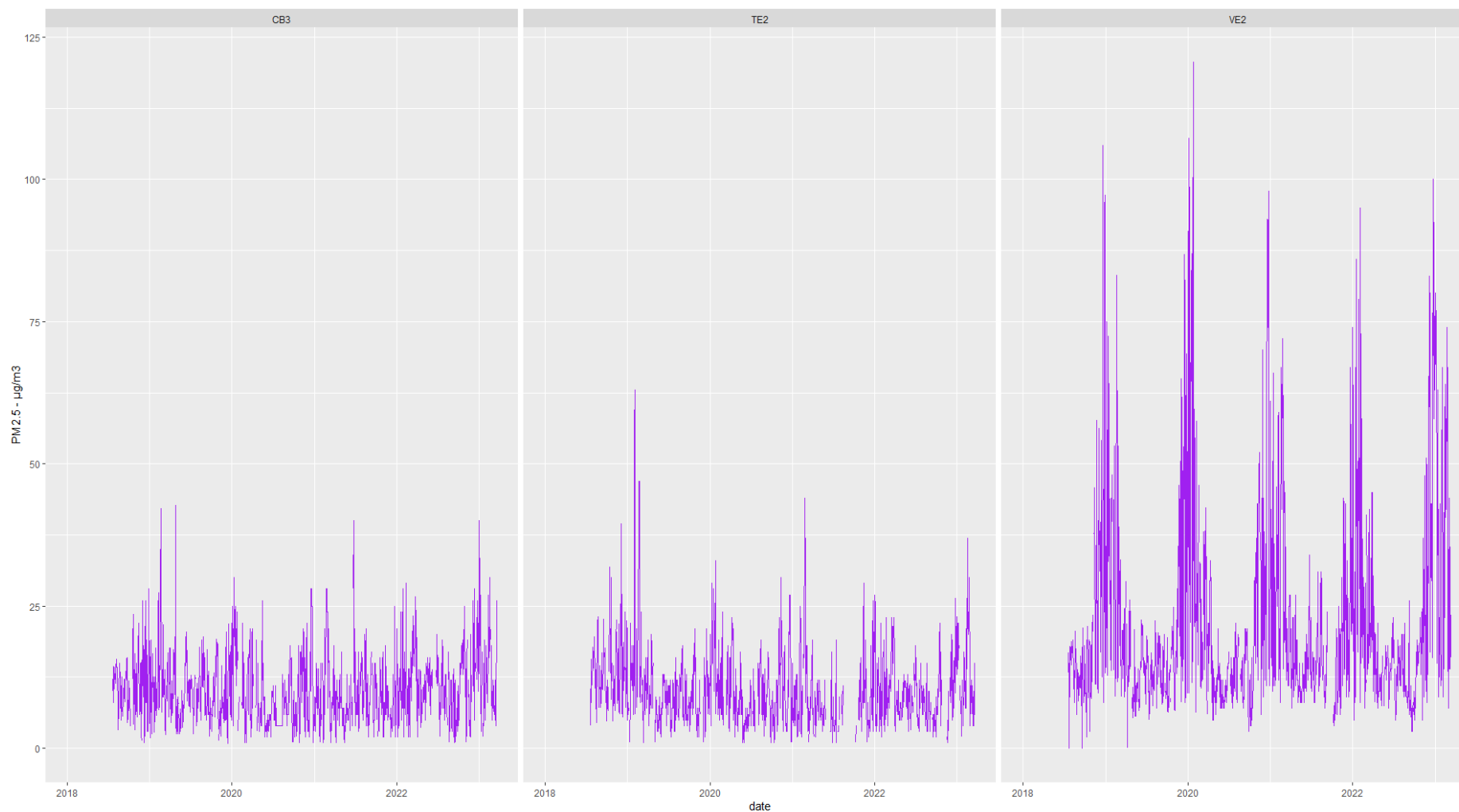
Particulate matter levels in Molise - average daily exceedances PM₁₀



Particulate matter levels in Molise

Particulate matter levels in Molise - average day

PM_{2.5}



Particulate matter levels in Molise

Particulate matter levels in Molise

- ▶ Fine particles therefore represent a critical issue to be addressed with the adoption of measures aimed at containing the impact of air pollution aimed at reducing particulate concentration values.
 - ▶ Preliminary Study of PM₁₀ Characterization in Three Sites (Venafro, Sesto Campano, Pozzilli) in the Venafro Valley
 - ▶ ARPA Molise characterization study

THANK YOU FOR YOUR
ATTENTION