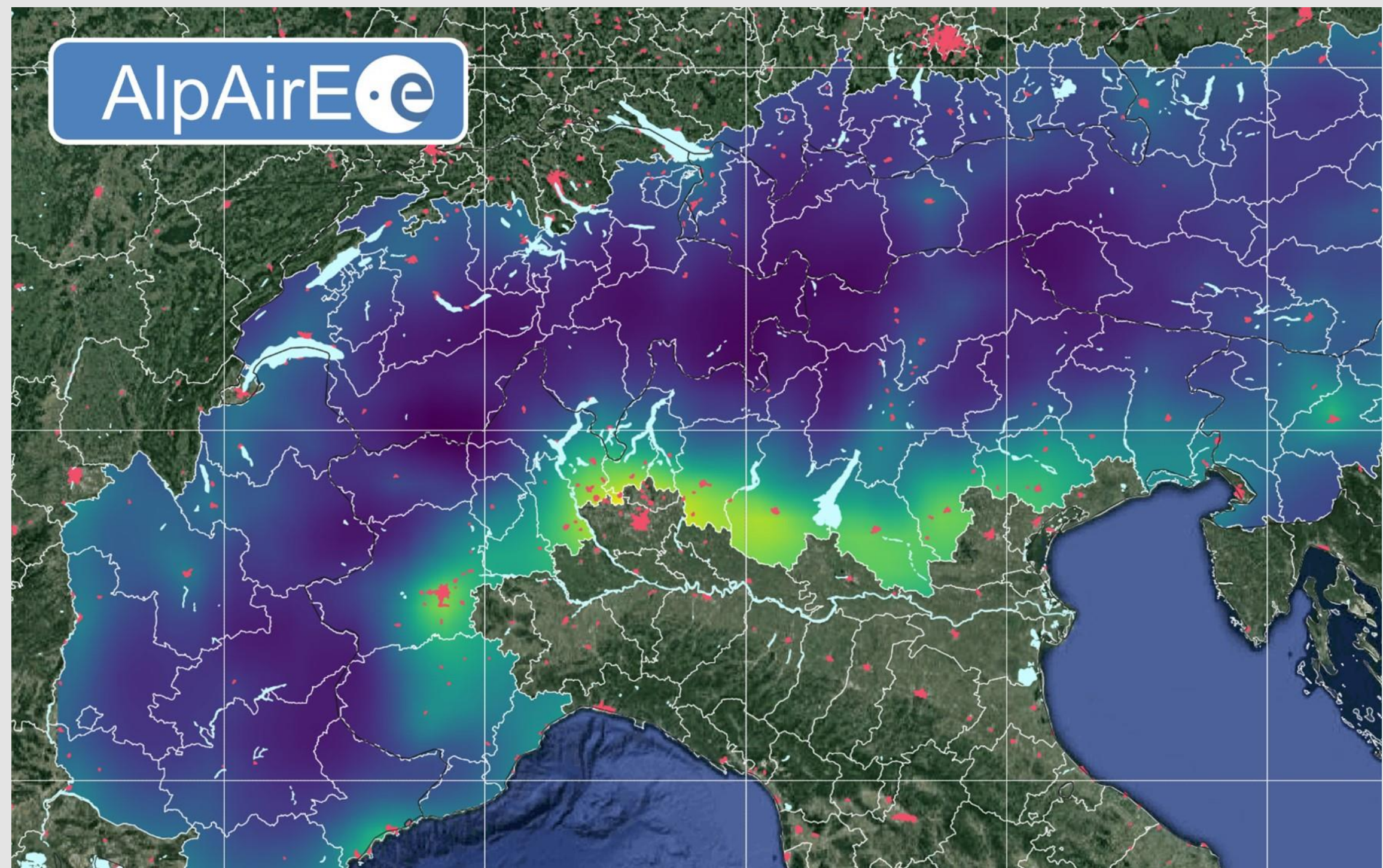


Project AlpAirEO: Health Risks by Air Pollution – a Service for the Alpine Region



Number of days with an increased health risk of mortality of 16% due to all causes in the time span between 2014-2016 due to the exposure to air pollution

- Project objectives
1. Assess the needs of health communities in the alpine and neighboring regions;

2. Assess the state-of-the art on data already provided;

3. Exploit remote sensing (CAMS and Sentinel data) and in-situ instruments (EEA monitoring stations) data in combination with other environmental and health data to support the impact assessment of environmental stressors on human health;

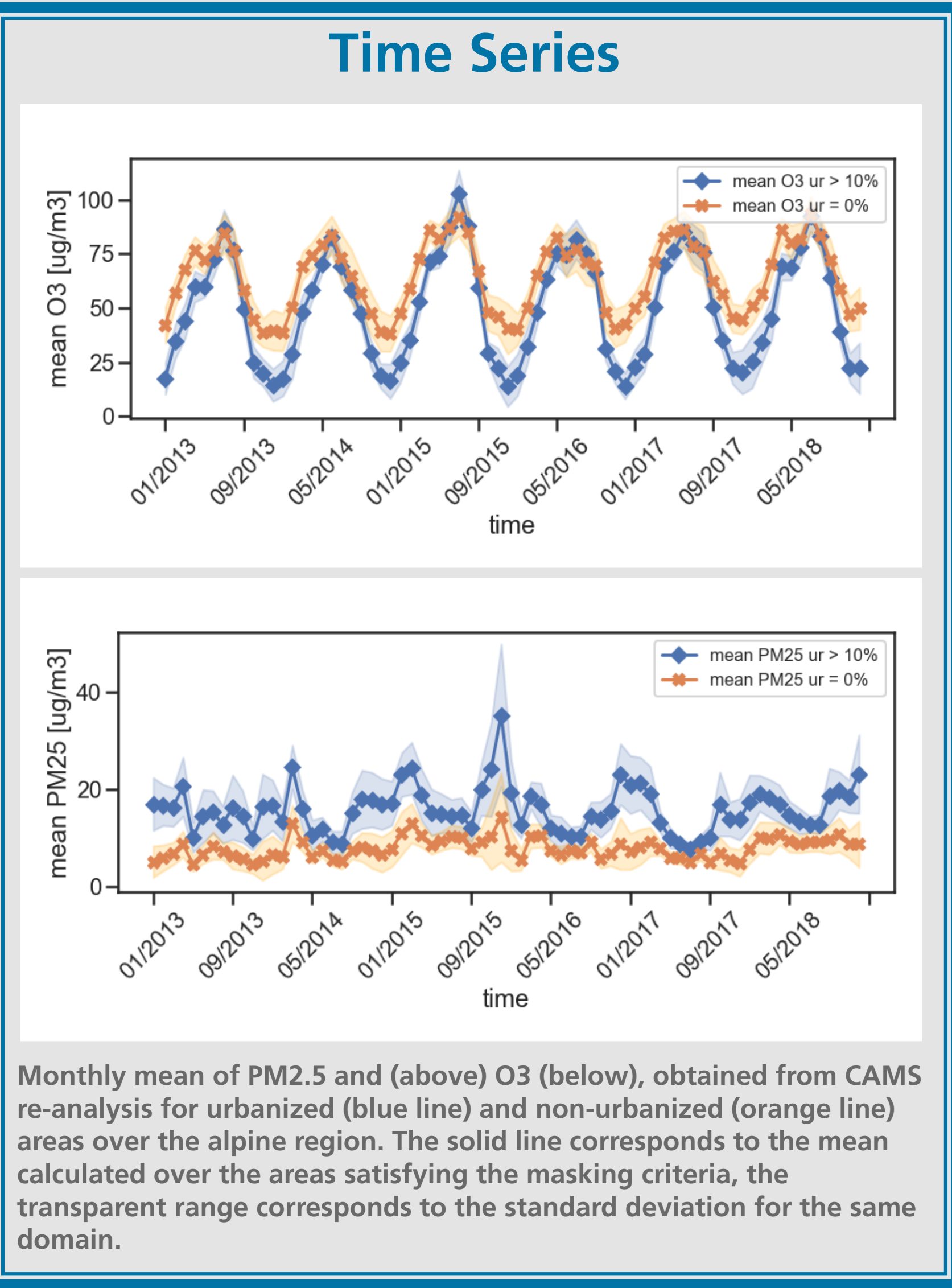
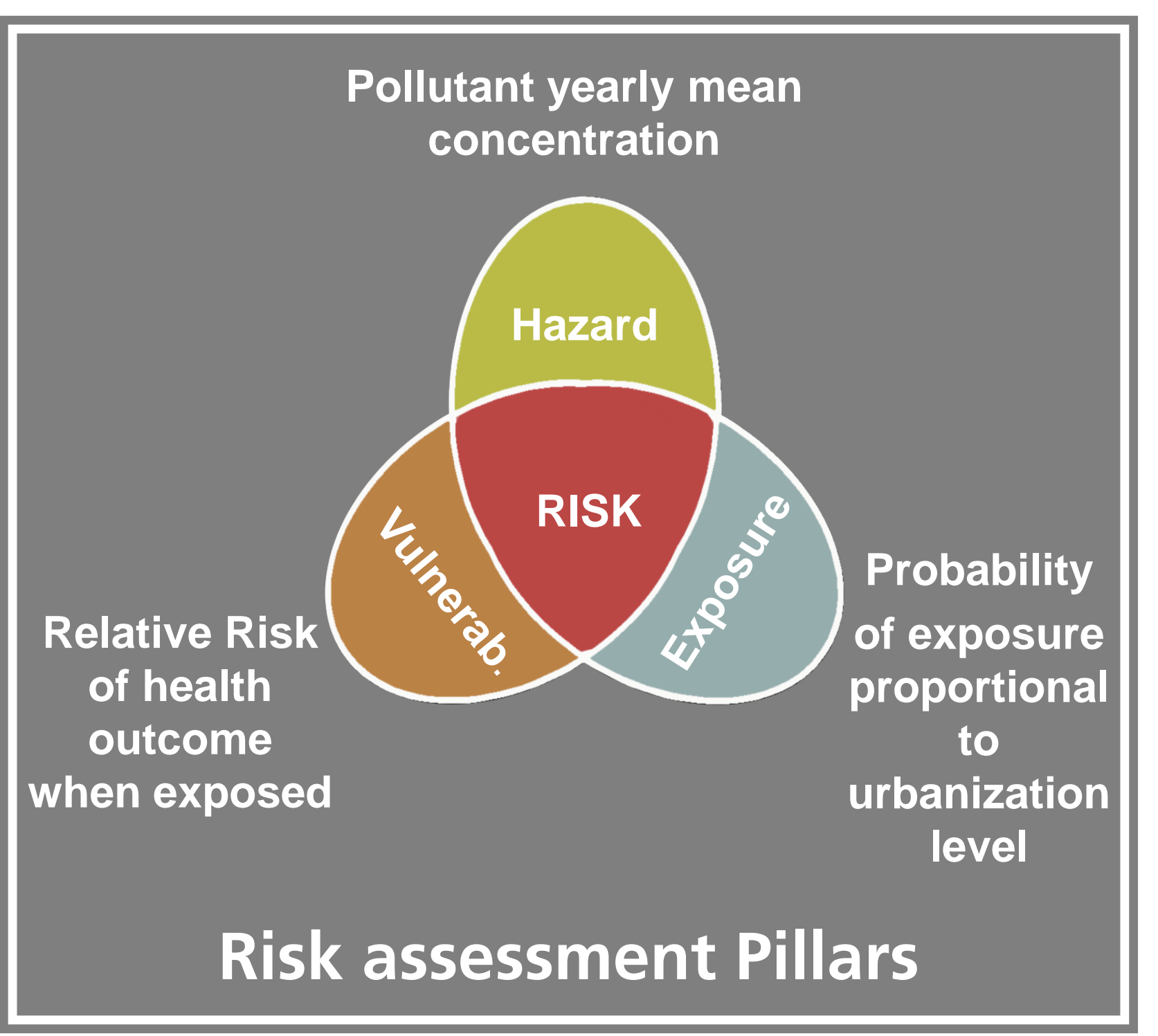
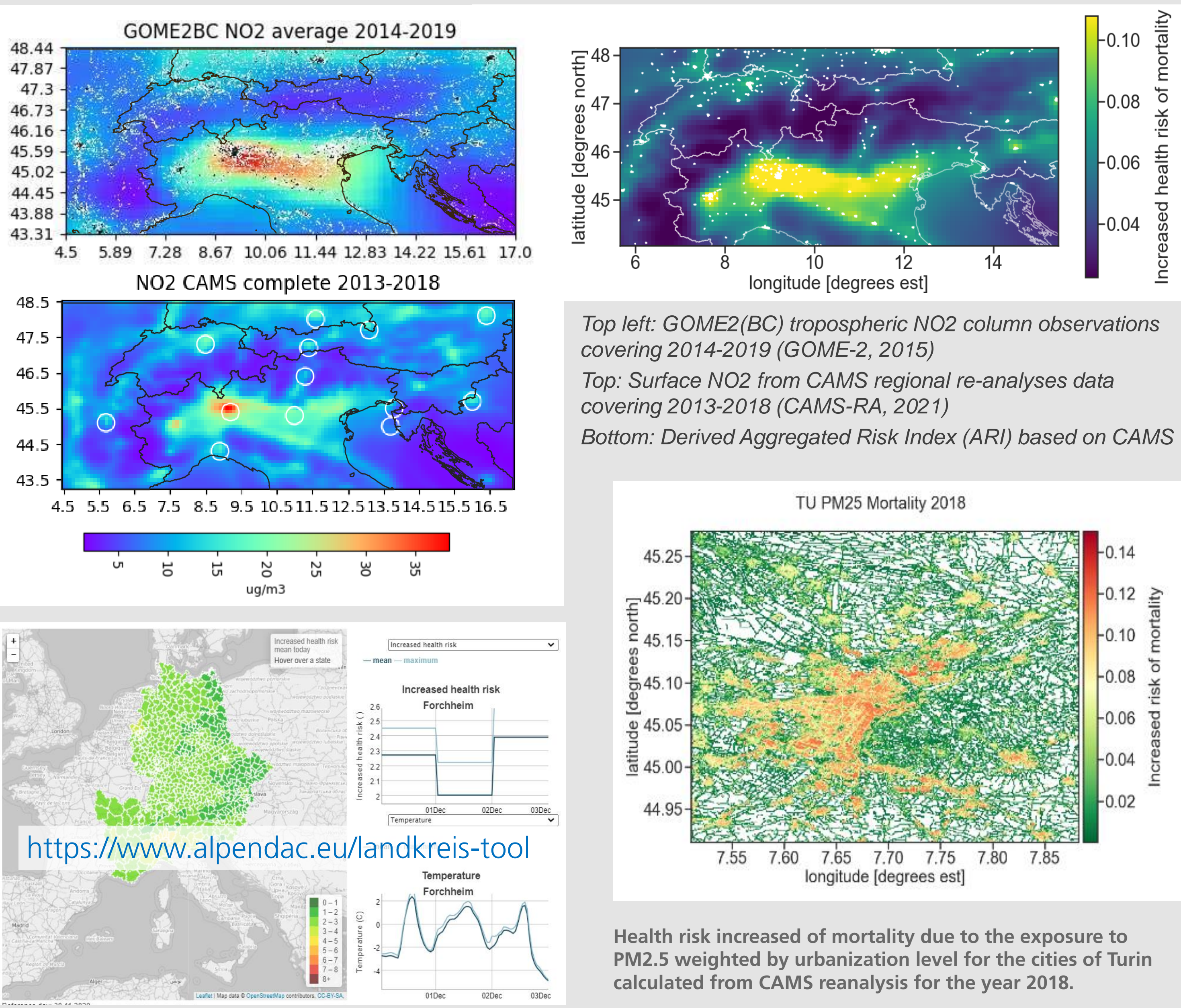
4. Provide a quantification of the exposure to environmental stressors of the Alpine population;

5. Provide an assessment of additive effects of exposure to mixtures of air pollutants;

6. Provide a freely accessible web-based service, capable of providing information of the current status and forecast of air quality and the associated increased health risk at local level.



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Air pollutants concentrations (24h)

Relative risk per 10 µg/m³ (Mortality / Morbidity)

Single risk per each air pollutant

CNO₂

CO₃

CPM_{2.5}

CPM₁₀

CSO₂

RRNO₂

RR_{O₃}

RRPM_{2.5}

RRPM₁₀

RRSO₂

RINO₂

RI_{O₃}

RI_{PM_{2.5}}

RI_{PM₁₀}

RI_{SO₂}

Aggregate d risk per target group

$\sum RI_i = ARI$

BioClis legacy

Derive ARI and Universal Thermal Climate Index (UTCI) for main Alpine administrative regions (Jendritzky et al., 2012; Sicard, 2012)

Mapping on NUTS2 and NUTS3 level

Show three-day forecasts for risk indices and main pollutants

Short time records for pre-selected areas for pollutants and meteorological parameters

Improvements in AlpAirEO

Long-term archive for time records and maps (calendar tool)

Derive surface concentrations for NO2 and PM2.5

Health burden assessments based on population density

Concurrent trend analysis for pollutants, health risk and meteorological parameters