



Air quality issues in therapeutically exposed locations

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Therapeutic spa landscape

- Therapeutic landscape - place that has healing or health-promoting qualities



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- Spa places
 - **Physical environment**
 - Social environment
 - Symbolic/cultural meaning

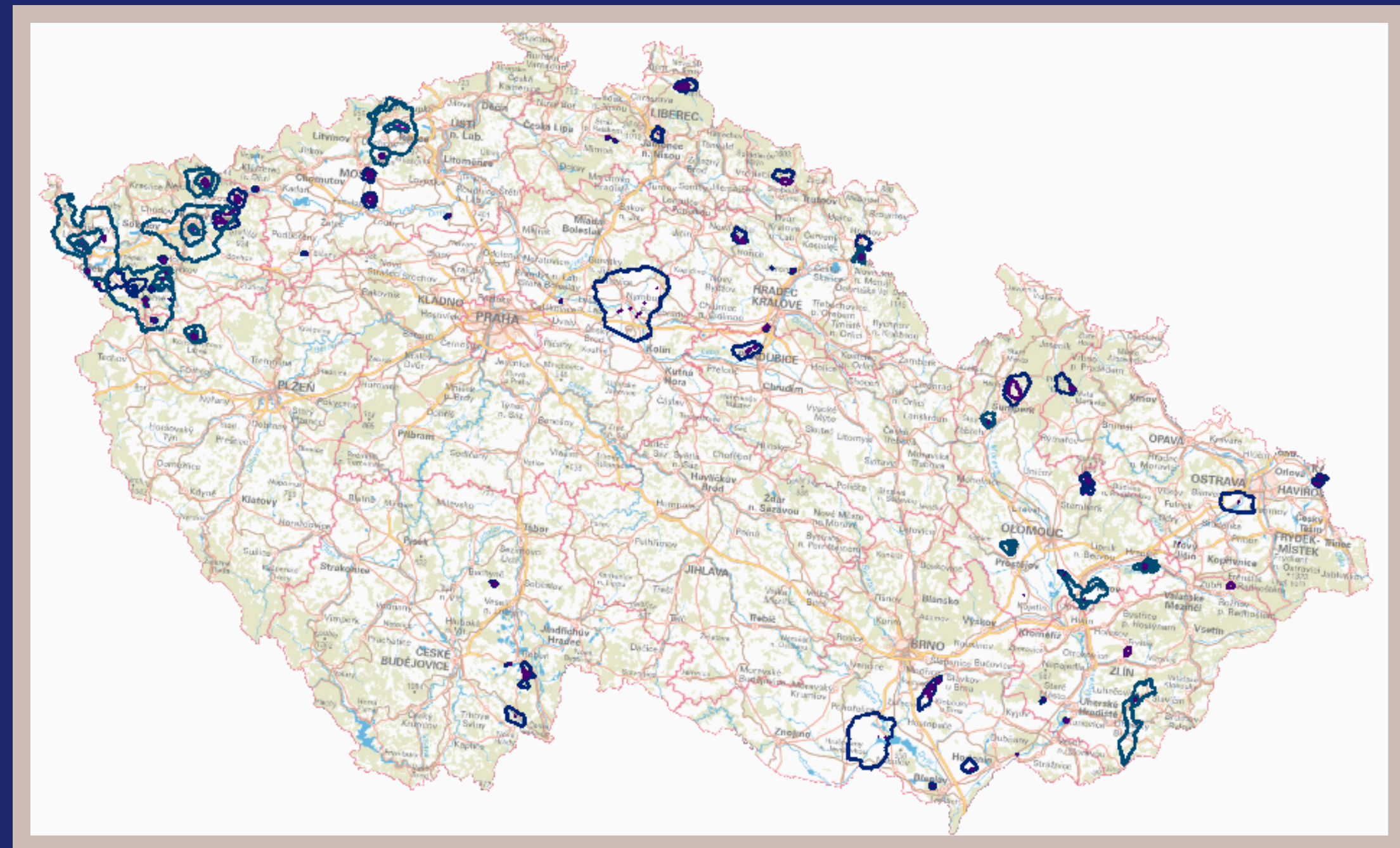
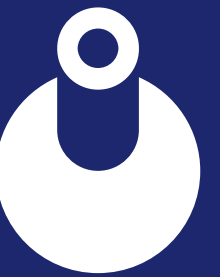


Therapeutic spa landscape

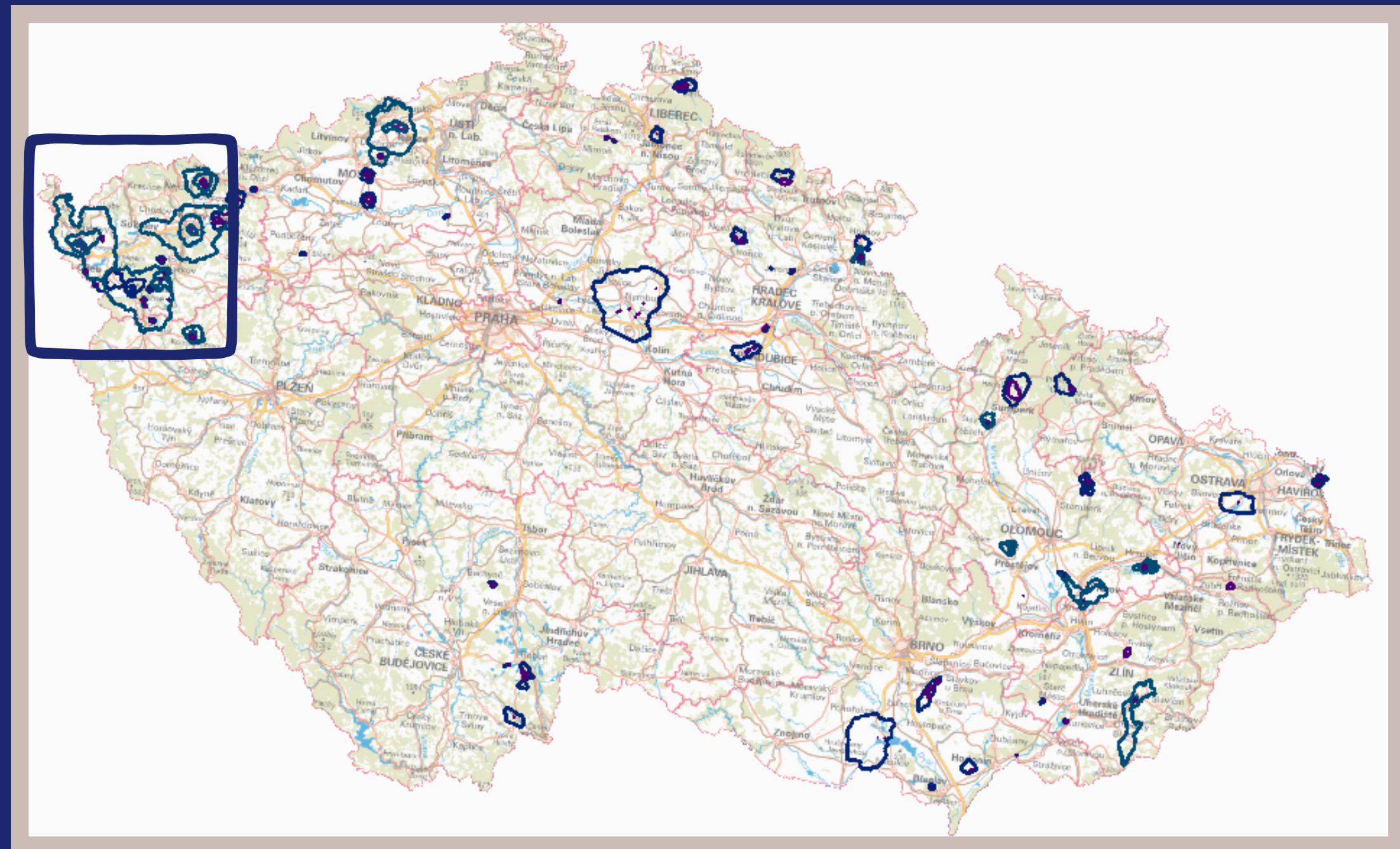
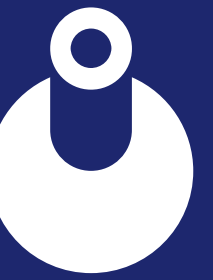
- Therapeutic landscape - place that has healing or health-promoting qualities
- Spa places
 - **Physical environment**
 - Social environment
 - Symbolic/cultural meaning
- Obtaining data to support theory

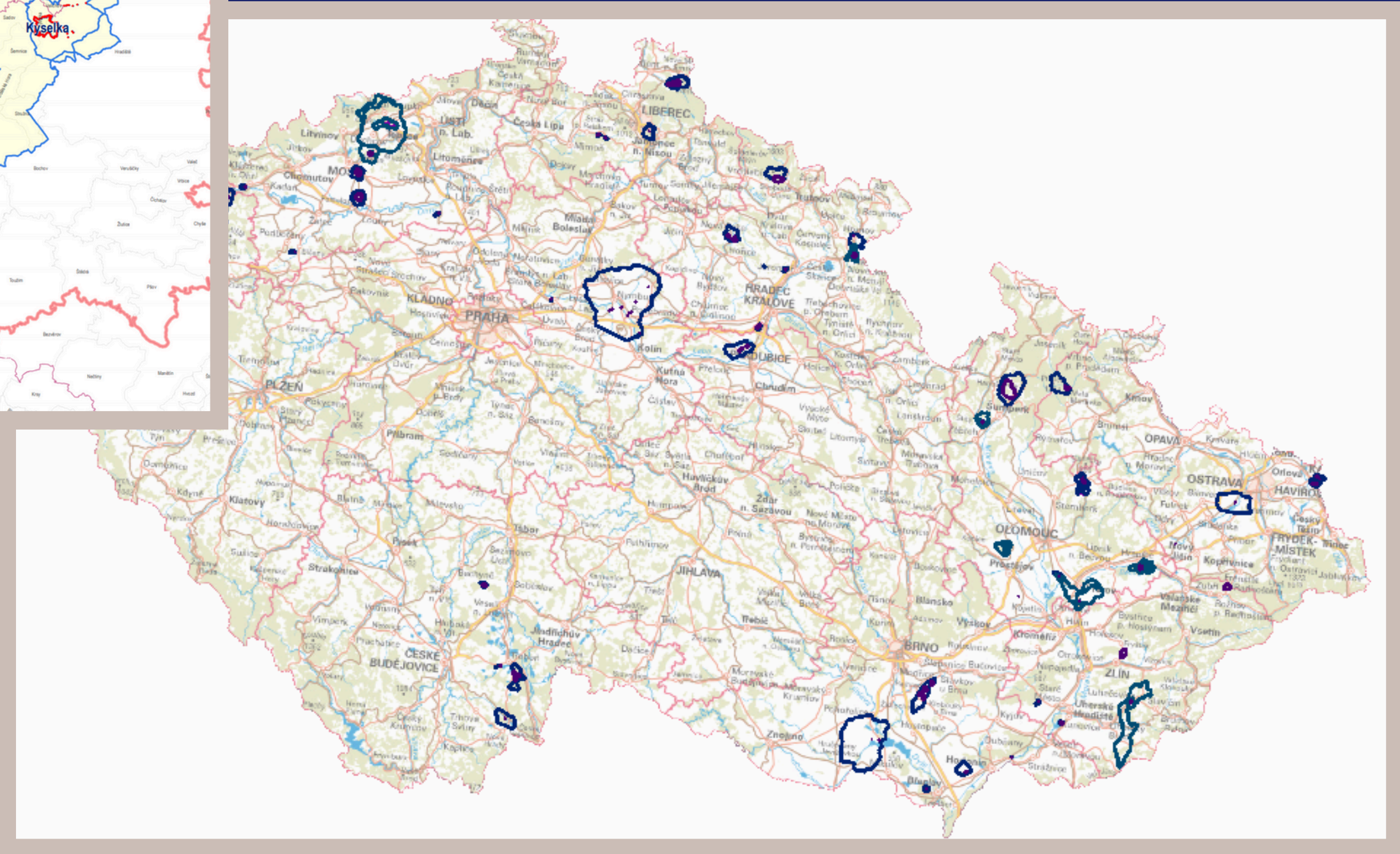


Spa locations in Czech republic

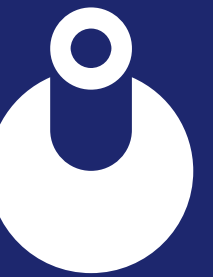


Spa locations in Czech republic





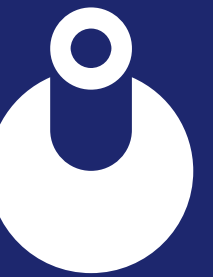
Exterior measurements



- air quality
- climatic parameters
- negative air ions
- volatile organic compounds
- biogenic elements in air
- radioactivity
- noise
- light conditions



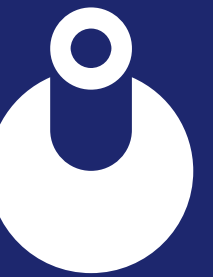
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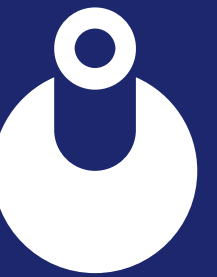
Reference air pollution measurements (immissions)



- **Kynžvart** - climatic spa
- **Karlovy Vary** - spa city surrounded by forests



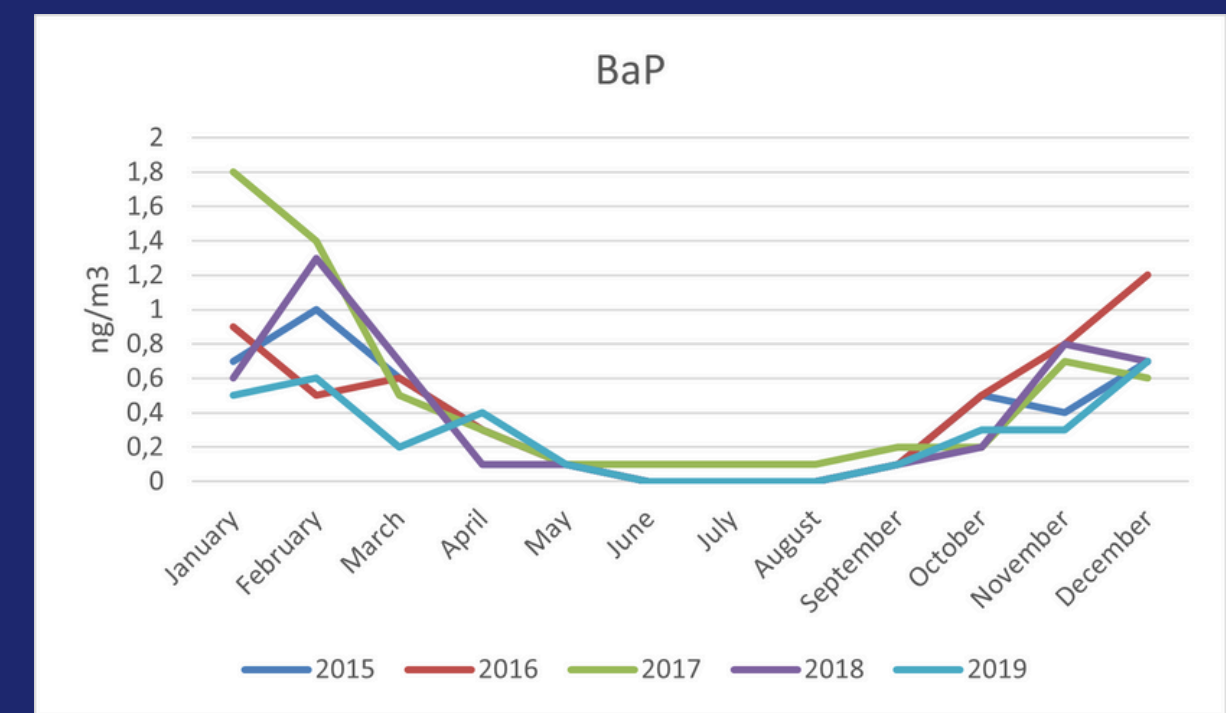
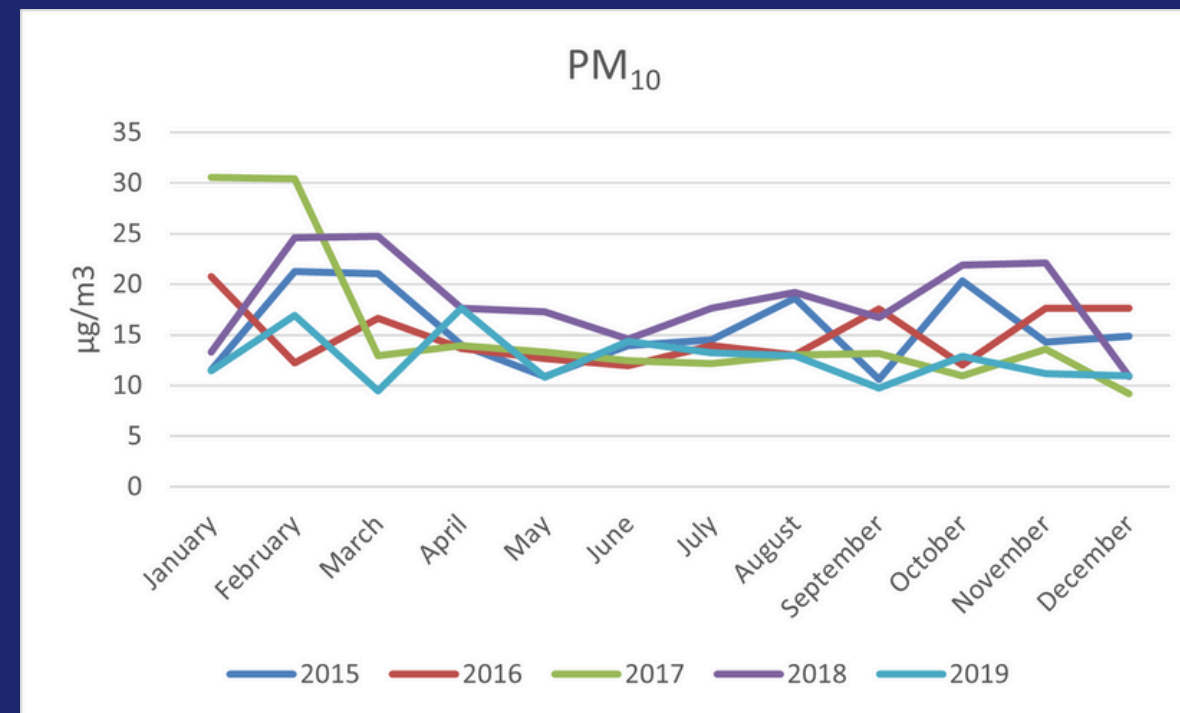
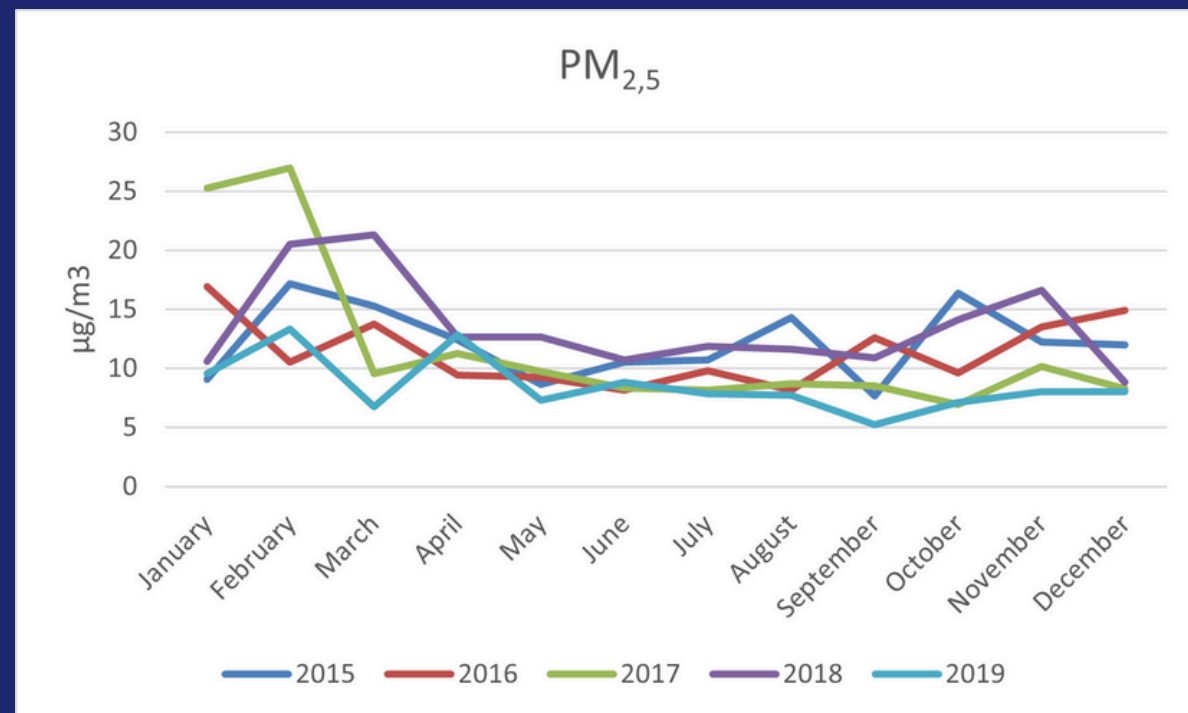
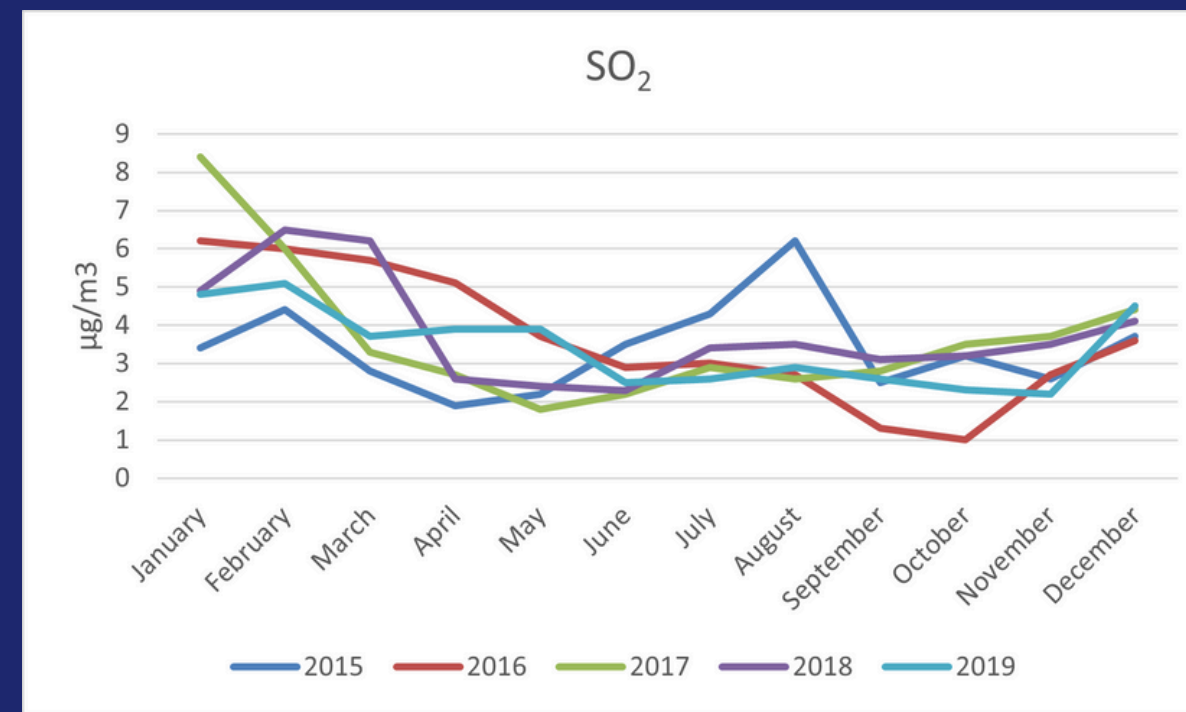
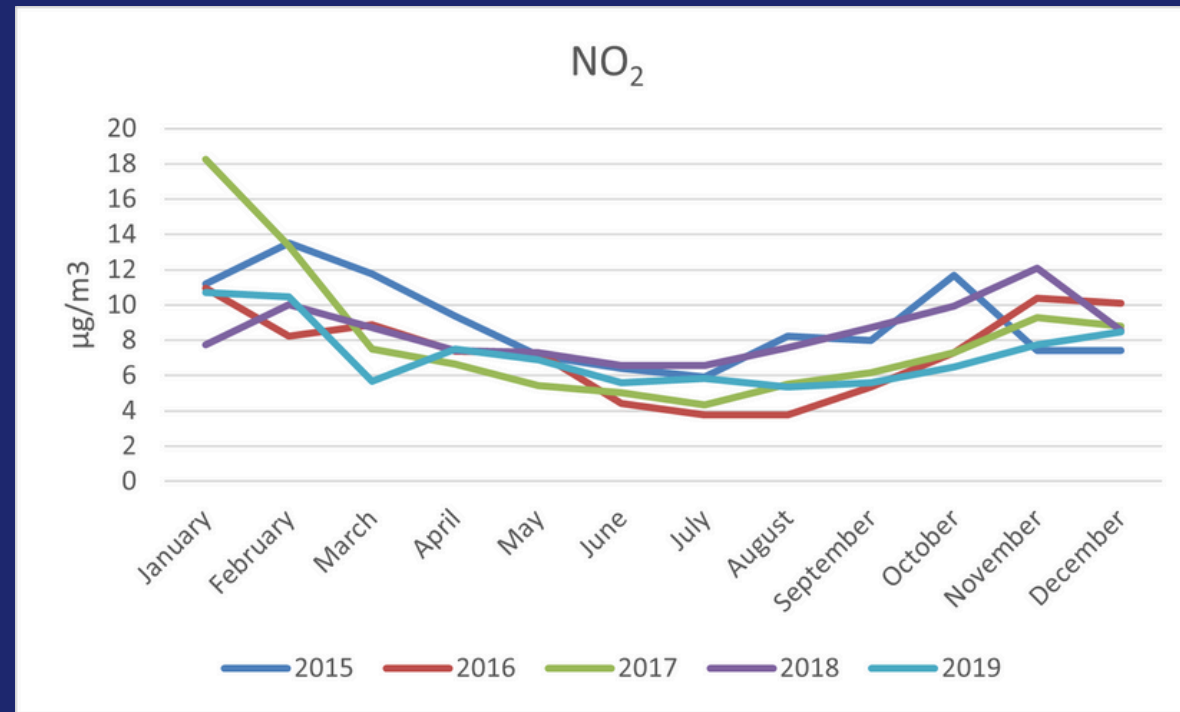
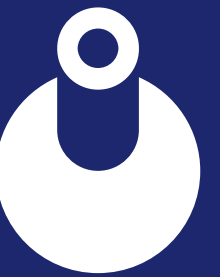
Reference air pollution measurements (immissions)



- **Kynžvart** - climatic spa
 - obligation to monitor troposphere quality
 - stable station - monthly results
 - mobile station - control
- **Karlovy Vary** - spa city surrounded by forests
 - 3 stable stations within spa center

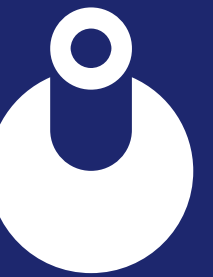


Immisions in climatic spa

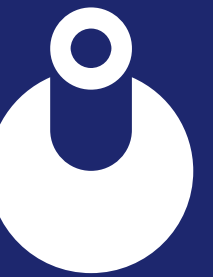


Conclusions

- Annual balneotechnical reports
- Climatic report every 5 years



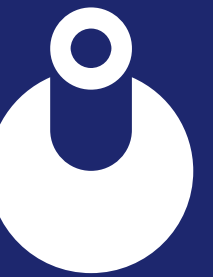
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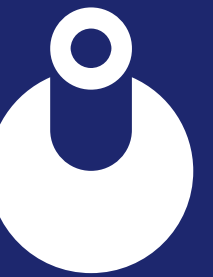


- Annual balneotechnical reports
- Climatic report every 5 years
- **Present** - stable stations
 - stable stations for air quality monitoring not in all places
- **Future** - mobile station
 - fill in missing data



Summary

- Spas are not only natural healing resources



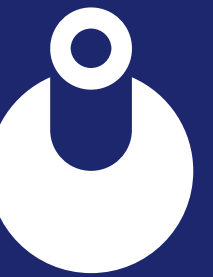
Summary

- Spas are not only natural healing resources
- All elements in nearby area affects synergistically human health and wellbeing

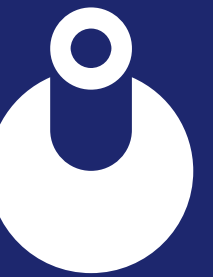


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Summary



- Spas are not only natural healing resources
- All elements in nearby area affects synergistically human health and wellbeing
- Monitoring tropospheric composition enhance evidence base
- Air quality is crucial



Thank you!

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