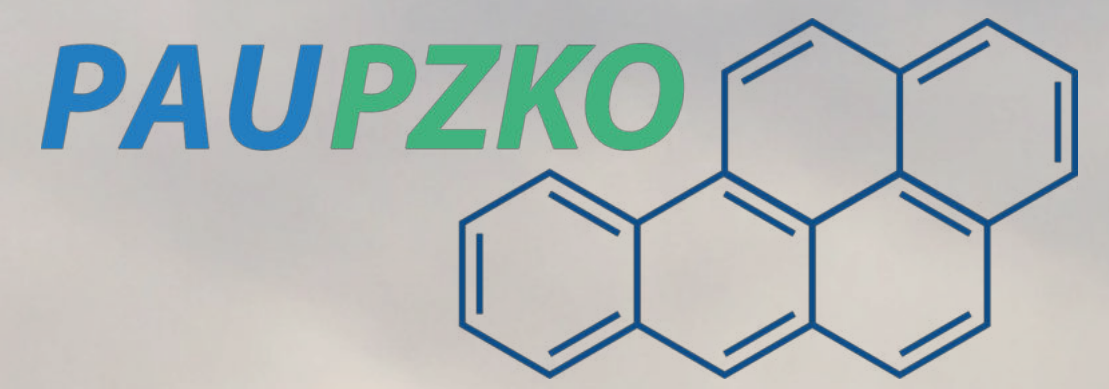


# Detailed monitoring of polycyclic aromatic hydrocarbons in connection with the of Air Quality Improvement Program in the Southeast Zone CZ06Z 2020+



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## INTRODUCTION

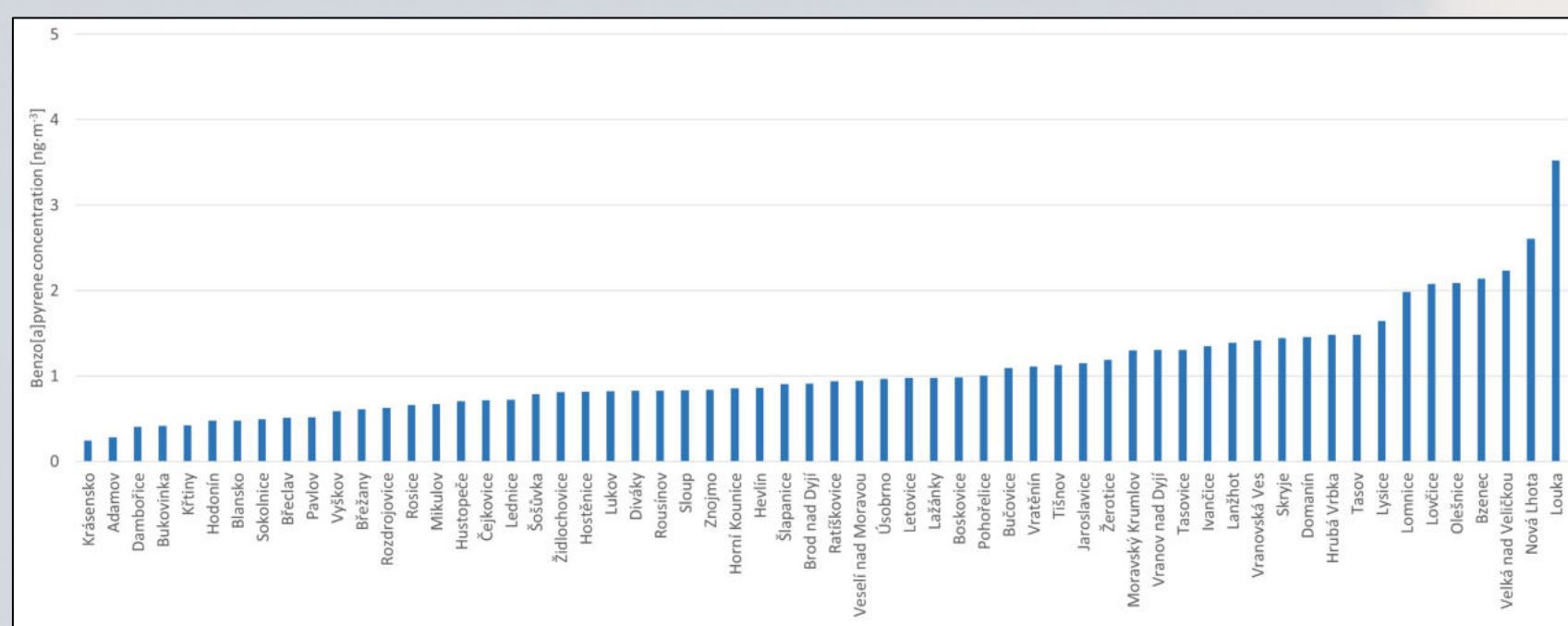
The project goal is to develop action plans for both the Vysočina Region and the South Moravia Region, where appropriate measures will be proposed to reduce Benzo[a]pyrene concentrations. This was specified as the most problematic pollutant for the Vysočina and South Moravia Regions by the Program for the Improvement of Air Quality in the Southeast Zone CZ06Z 2020+, which was prepared by the Ministry of the Environment of the Czech Republic. The target municipalities were selected by this Programme mainly on the basis of data obtained from model calculations because of a lack of data from real measurements of polycyclic aromatic hydrocarbons. Therefore, the project is designed so that the data obtained from real measurements will cover not only in the mentioned problematic locations but the largest possible area of the southeastern zone. Detailed measurements and evaluations of the concentrations of polycyclic aromatic hydrocarbons, including the mentioned carcinogenic substance, at selected 60 locations in the South Moravia Region and 60 in the Vysočina Region are and will be performed during two heating seasons (winter) and one non heating season (summer). In addition to measurements of polycyclic aromatic hydrocarbons concentrations, other pollutants concentrations including SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, CO, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and PM<sub>1</sub> will be measured in the municipalities specified in the Air Quality Improvement Programme. Poster presents first results obtained in monitoring campaigns performed in 2022.

## METHODS

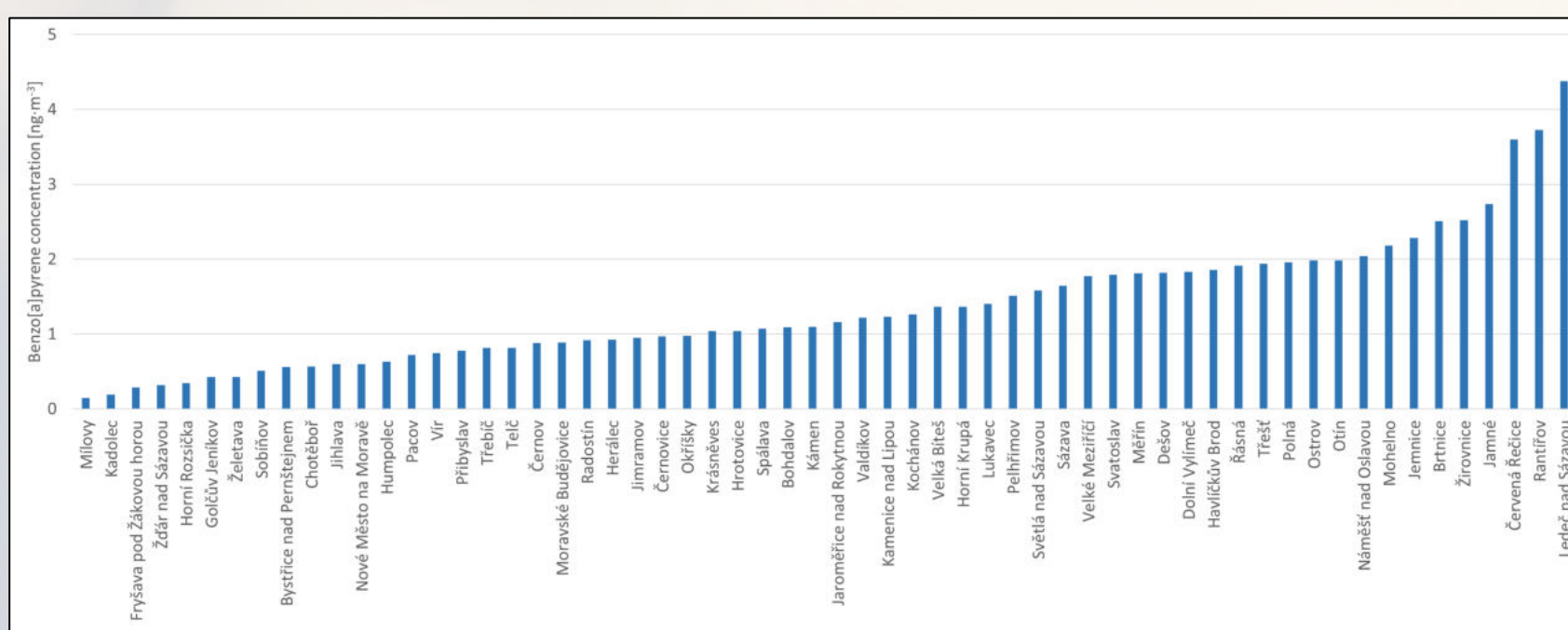


## RESULTS

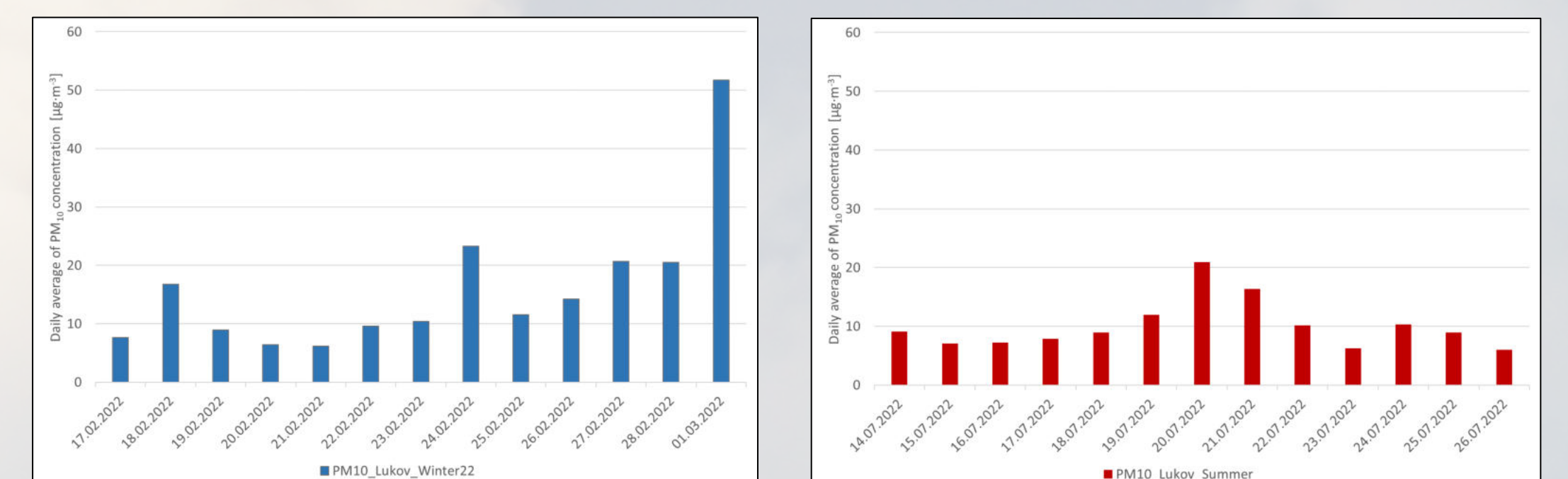
Benzo[a]pyrene concentrations South Moravia



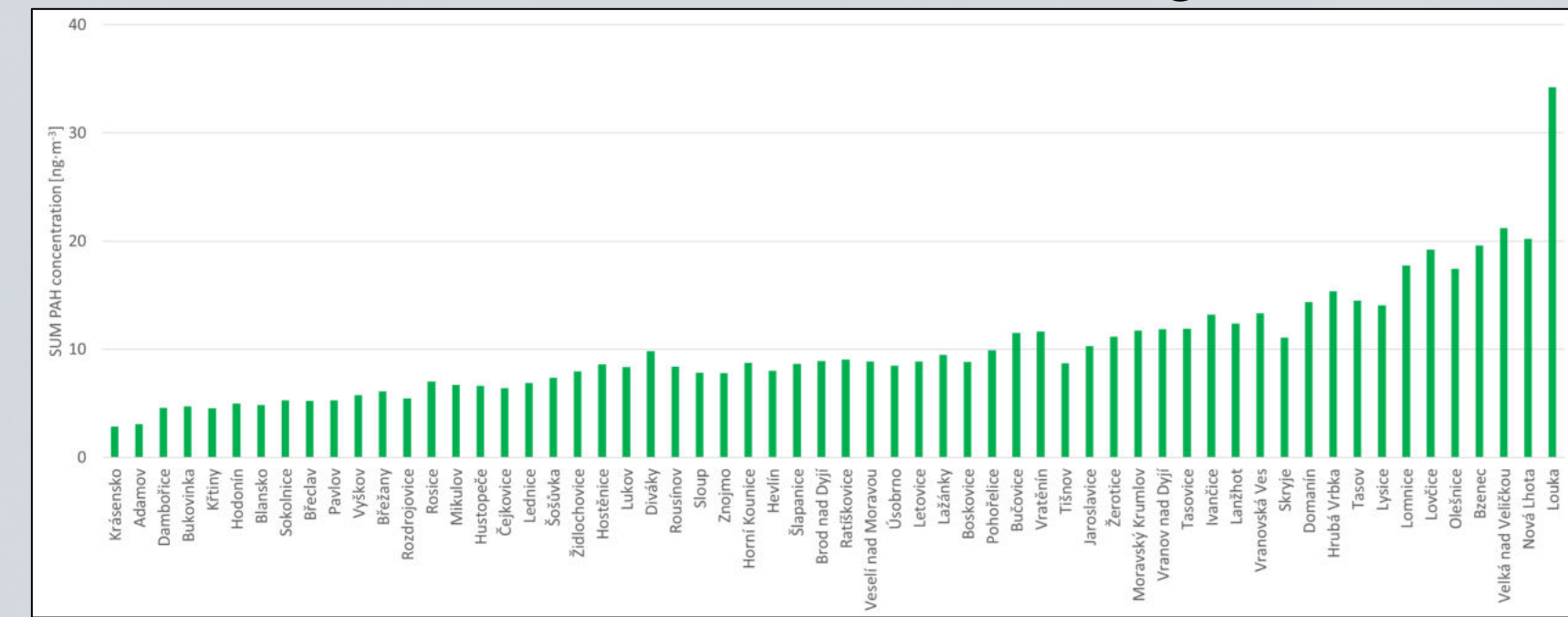
Benzo[a]pyrene concentrations Vysočina region



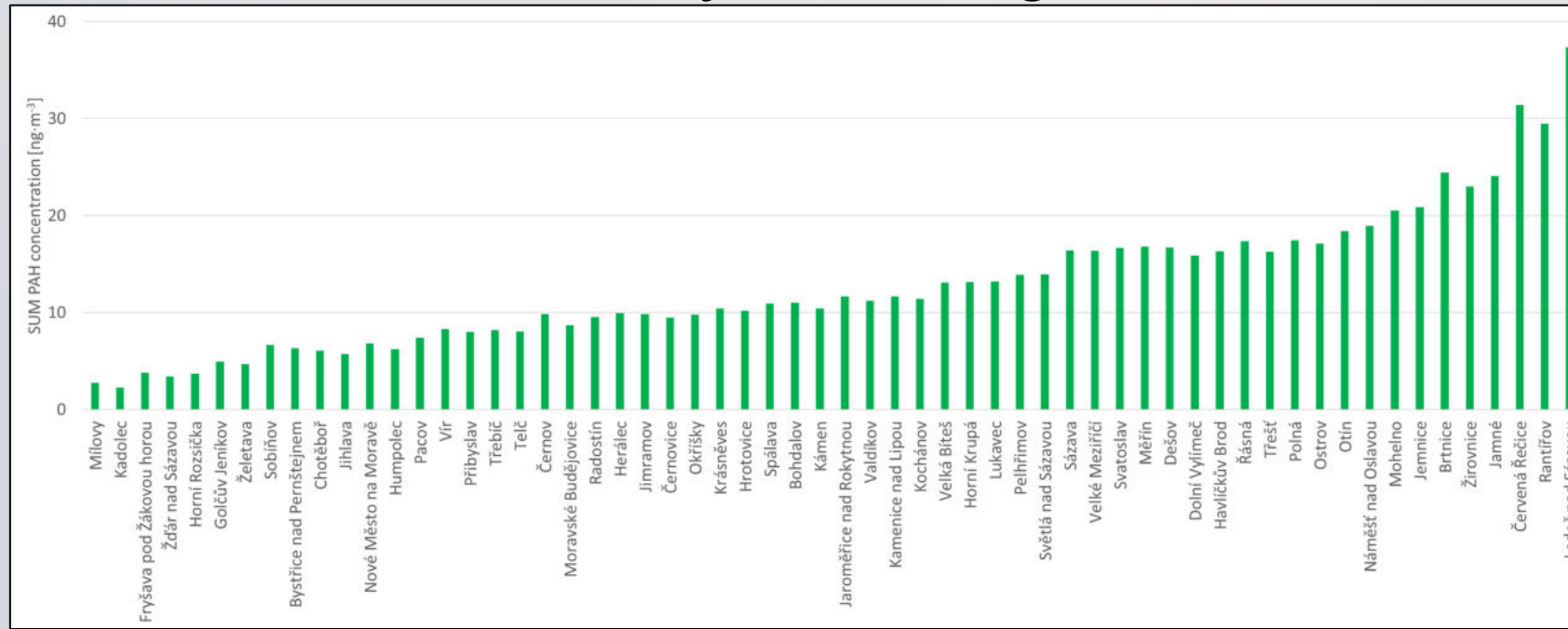
PM<sub>10</sub> concentrations in winter and summer in Lukov, South Moravia region



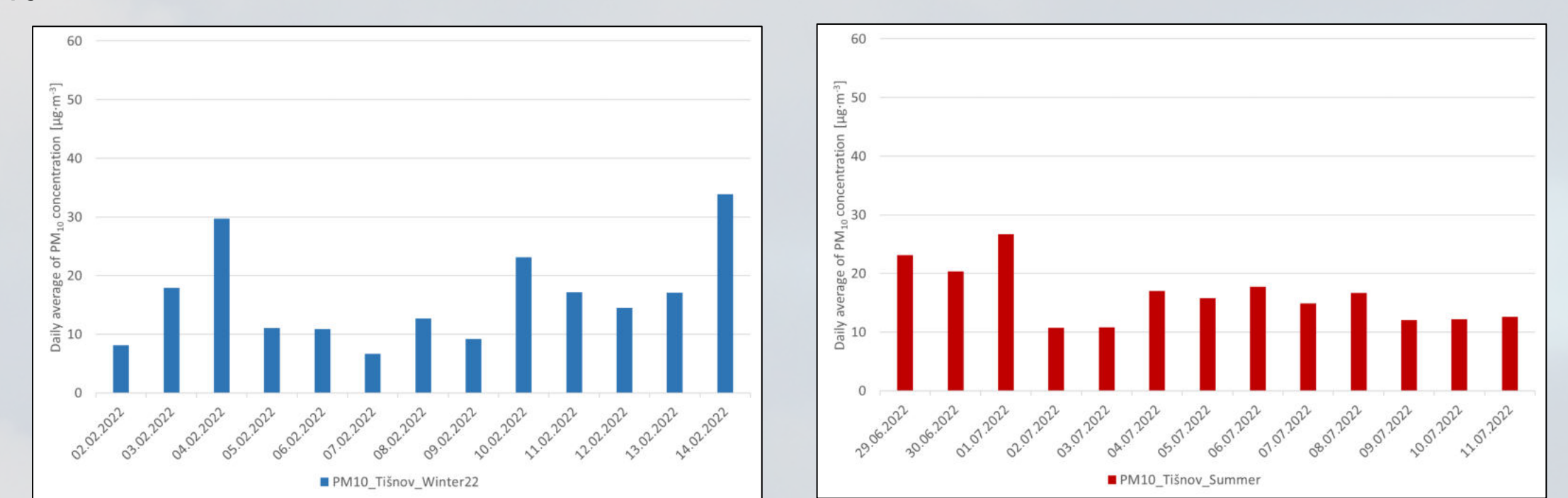
PAH concentrations South Moravia region



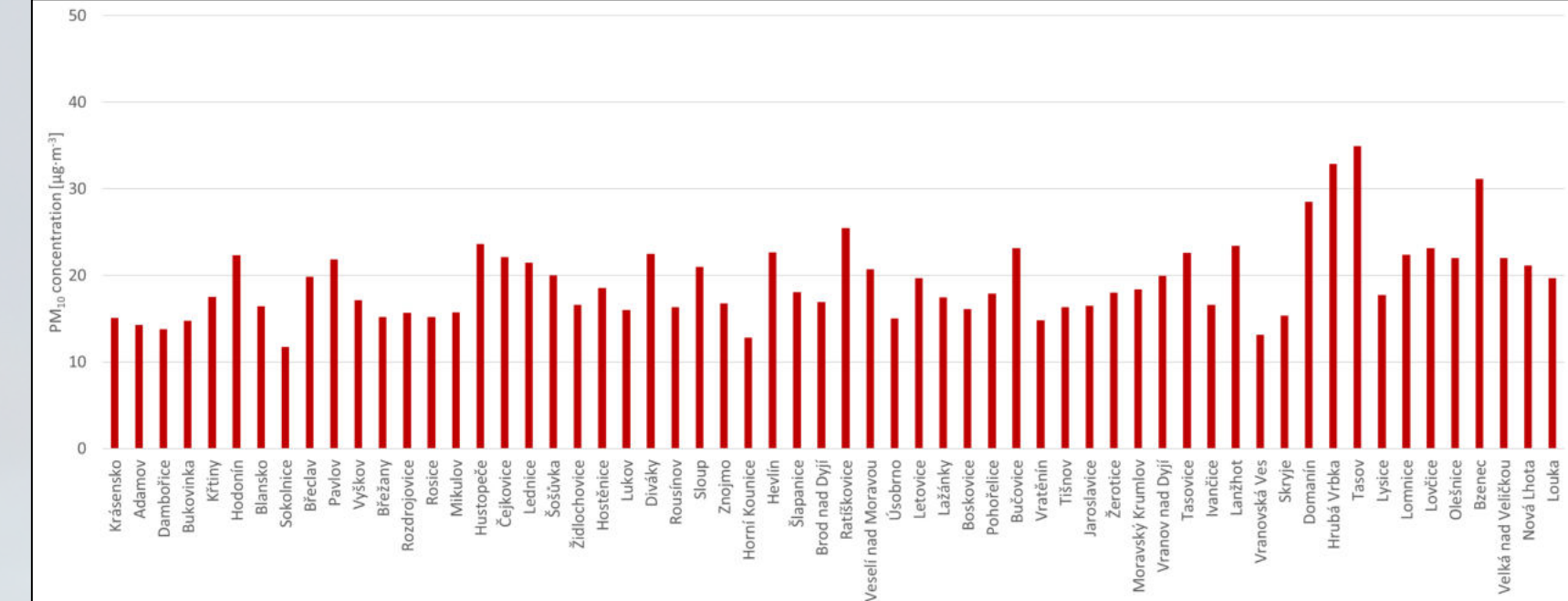
PAH concentrations Vysočina region



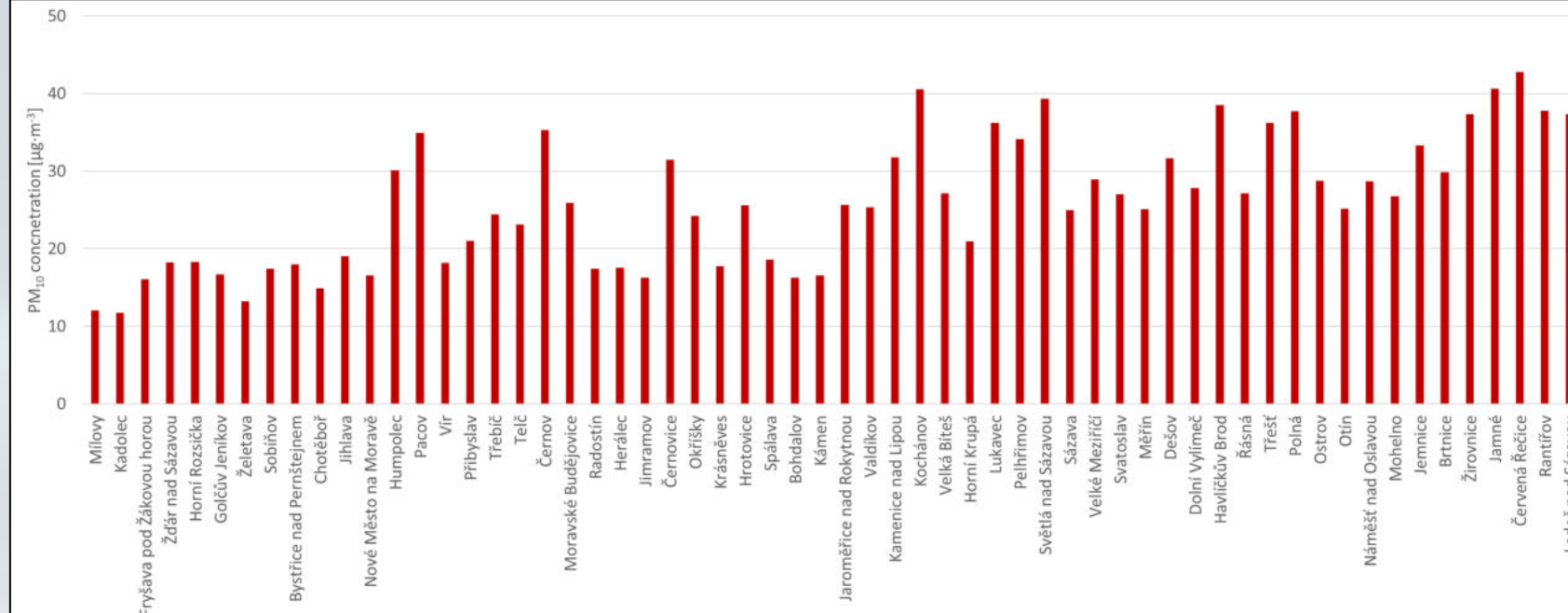
PM<sub>10</sub> concentrations in winter and summer in Třešť, Vysočina region



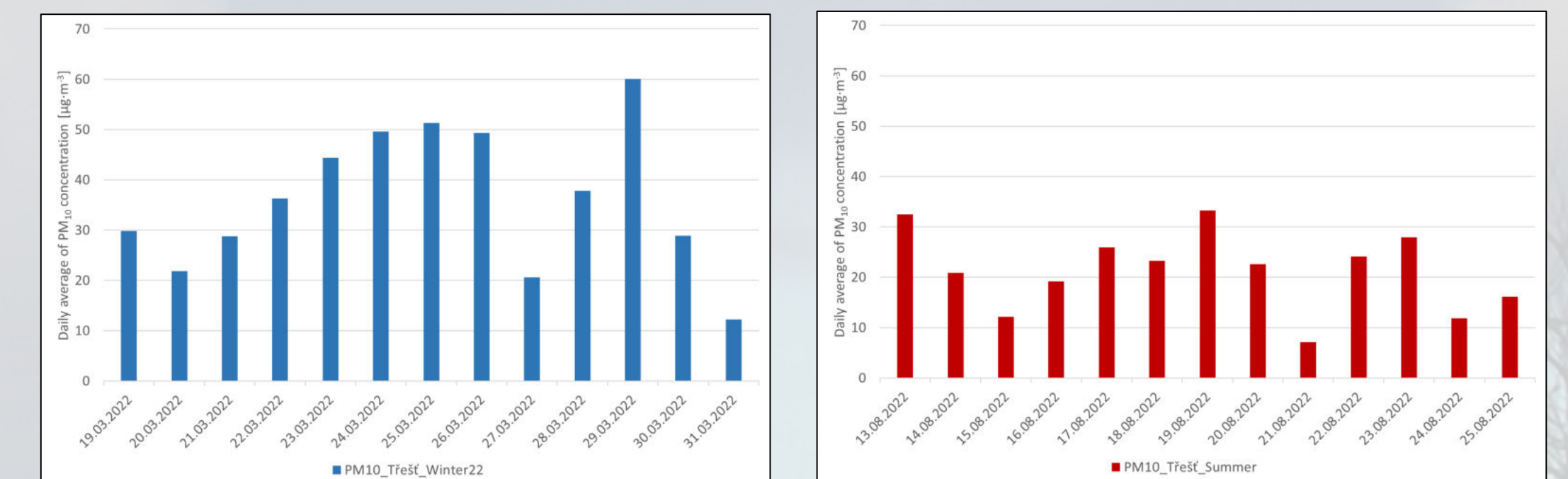
PM<sub>10</sub> concentrations South Moravia region



PM<sub>10</sub> concentrations Vysočina region



PM<sub>10</sub> concentrations in winter and summer in Tišnov, South Moravia region



## CONCLUSIONS

The benzo[a]pyrene concentrations varies significantly in individual cities and municipalities. Elevated benzo[a]pyrene concentrations were measured in nearly the half of cities and towns (59 out of 120). The concentration of aerosol particles of the PM<sub>10</sub> fraction varies significantly in individual cities and municipalities. Higher concentrations of aerosol particles of the PM<sub>10</sub> fraction do not mean higher concentrations of benzo[a]pyrene.

You can find more information on the project website <https://monitoringpau.cz/>

## ACKNOWLEDGEMENT

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