

# The role of plants in improving environmental quality: analysis of their response to different pollution levels

Atmospheric pollution is one of the most important public health problems in cities. Urban areas account for more than 70% of global greenhouse gases due to artificial surfaces, fossil fuel combustion and traffic density. Moreover, particles in the atmosphere are usually associated with metals in airborne dust generated by traffic or industrial activity. In such context, our researches focus on the vegetation capability to remove particulate matter from the air and lower CO<sub>2</sub> concentration. Such researches are carried out by portable instruments for gas exchange, pigment content, leaf area index (LAI) and microclimate measurements, and laboratory instruments for leaf water potential, leaf area, fresh and dry leaf mass measurements. Currently, to assess heavy metal pollution in plants and soil we are experimenting the X-ray Spectrometry, a non-destructive method applicable on different matrices. This research area has important interactions with medicine, engineering and chemistry.

## Ambito

## Settore

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**Session Classification:** Poster session divide per aree tematiche