**WHAT CAN LICHENS TELL US ABOUT CITIES?**

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With the current increase of the urban population and the societal self-awareness of global change drivers, such as air pollution, climate change and others, researchers are aiming at developing tools to quantify its effects and to guide management actions. Lichens were used before to identify the main threats for ecosystems. This has been done mainly in natural and semi-natural ecosystems, while work in cities is still scarce. It’s increasingly important to push forward studies in urban areas, where data with high spatial resolution is needed to understand how cities are changing and where and which environmental problems are more pressing.

The aim of this work is to support the use of lichen diversity as ecological indicators of global change drivers in urban environments, more specifically on how different metrics can be used to identify the effects of different drivers of change in these environments. Both taxonomic (species richness, abundance) and functional metrics can play a very important role when using lichens in an urban context. We found that taxonomic metrics are useful to quantify the effects of strong disturbances such as air pollution. On the other hand, functional traits (e.g. poleotolerance, eutrophication and others) and community shifts were more suited to identify intermediate disturbances.

To fulfill the 2030 Agenda for Sustainable Development, specially the 11th SGD, more data needs to be gathered and shared with stakeholders and politicians in order to plan and build more efficient, resilient and adaptative cities. Lichens ability to identify problems, evaluate its intensity and map them, makes them excellent tools to be used for this purpose. Overall, our results show the importance of considering different metrics and how they can act as a powerful tool to identify the potential drivers of change playing in urban environments.