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LIFE URBANGREEN: efficient management tools for adaptation to climate change (3151)

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An increasing number of cities around the world use management tools for green infrastructures. GreenSpaces, a management Platform developed by R3GIS in Italy, builds upon a detailed census of public green areas and helps municipalities to efficiently plan and monitor maintenance activities.

Information given on the platform shows when and how a tree was pruned, when the next tree stability assessment will be performed, when a lawn will be mown etc. The platform allows users to report internal costs for the municipality as well as the costs of external contractors, allowing limited resources to be managed efficiently.

How do we make the ecosystem services of urban green areas and their benefits against climate change visible in real-time and even more effective? R3GIS, in conjunction with their technological and scientific partners, ProGEA 4D (Poland), the University of Milan (Italy) and the University of Florence, addressed these topics in the EU-project LIFE URBANGREEN within the cities of Rimini (Italy) and Kraków (Poland). The project not only enriched the GreenSpaces platform with new innovative modules, but also tested and evaluated their effectiveness on parks and avenues in Rimini and Kraków:

- Optimising water consumption, providing water only when and where needed;
- Reducing the carbon footprint of maintenance activities by organising a more efficient working plan and considering weather forecasts;
- Quantifying ecosystem services provided by green infrastructure;
- Monitoring health parameters in trees by using remote sensing data;
- Increasing citizen participation in urban green management.

R3GIS coordinated the project, developed the new software tools and integrated them into the GreenSpaces platform. The algorithms forming the basis of these new tools were developed by the University of Milan with data recorded in field surveys and three-dimensional inventories provided by the technological partner ProGea 4D. The new tools were tested in Rimini and Krakow.

The knowledge gained and the tools developed through the LIFE URBANGREEN project facilitate the understanding of urban forests and how to maximise their benefit for citizens. The new data provided by the platform supports decisions that help cities better adapt to the effects of climate change.