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Editorial

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Editorial

Half the planet's population lives in cities and this number is rapidly increasing. This fact forces a discussion among scientists, politicians, decision makers and experts about the relationships between urban and non-urban environment.

Urban forests and green spaces cannot be excluded from these discussions for two main reasons. Firstly, the urban environment affects the behavior of non-urban surrounding spaces. For example, soil organic carbon and nutrient pools as well as energy and water fluxes are directly and indirectly affected by urban land-use conversions and these changes can be observed and evaluated in adjacent disturbed and undisturbed forests [1]. Secondly, in a world that is becoming overcrowded, polluted and with an expansion of land covered by impervious surfaces the alterations given by climate change lead to new challenges for the relationship between people and urban ecosystems [2,3].

Urban forests and, in general, urban green spaces are an important component of the urban ecotone and they provide several and different environmental, economic and social benefits in term of ecosystem services [4-7]. They help cities not only to adapt to climate changes but also to attenuate storm water runoff, improve air quality, reduce sound emissions from traffic, neutralize urban heat island effects, regulate ambient temperature, offset greenhouse gas emission, reduce nutrient leaching to groundwater, provide food, ecological corridors, habitat and landscape connectivity, increment biodiversity, improve the carbon sequestration, enhance recreational opportunities, and to reduce stress and crime activity [8-24].

Urban forests also represent complex socio-ecological systems and their robust and successful governance derives from a resilient interaction between environmental, economic and social factors. They are part of the "environmental infrastructures" that play a central role in maximizing the human and society wellbeing; for this reason, a political and economical equilibrium needs to be found to assure a more livable future for the next generations.

In particular, human and engineering actions and decisions on water, energy, nutrient and carbon cycles and fluxes that characterize the urban context can be of very high impact and can play a crucial role in the definition and quantification of ecosystem services provided by urban forests [25-29]. Cost and benefits of governance strategies have to be carefully addressed in order to find optimal exploitation strategies that assure urban forest conservation, an optimal quality of the provided ecosystem services, their sustainable use and the minimization of resource over-exploitation.

In this context, a multidisciplinary approach is required in order to solve the problem of making modern cities more resilient and livable. Urban forests (and in general urban green spaces) can be important actors provided that some gaps are overcome: the cultural gap between undisturbed and disturbed forests, the scientific gap between data collection and modeling, the academic gap between disciplines and the practical gap between ecosystem services definition and their quantification.

In a recent review [29] authors claim that "Each of the 21 ecosystem services analyzed had on average 24 different measures, which may indicate the complex reality of ecosystem services and/or suggest a potential lack of consensus on what constitutes an ecosystem service". Now it is time to face with this "complexity" and/or increase the "consensus" in the best possible way.

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Conflict of Interest

Author Declare there is no conflict of interest.

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