

# The urban matrix matters: Quantifying the effects of surrounding urban vegetation on natural habitat remnants in Santiago de Chile

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© 2018 Elsevier B.V. Urbanization destroys and fragments natural habitats, resulting in a system of natural remnants embedded in an urban matrix. Urban natural remnants (UNRs) can provide multiple ecosystem services for urban areas. Nevertheless, the long-term provision of ecosystem services by UNRs depends on their capacity to retain the ecosystem processes supporting the services. As vegetation from the urban matrix could play a key role in remnants ecological dynamics, understanding the effect of surrounding urban vegetation on UNRs ecosystem processes is fundamental for sustainable urban planning. In this work, we used a multi-temporal and -spatial scale approach to evaluate the role that vegetation patterns (i.e. composition and configuration) of the urban matrix have played on ecosystem processes (i.e. primary productivity) of 10 UNRs located in the city of Santiago (Chile). Using a set of six remote sensing-derived vegetation indices (years 1985-2010), we analyzed how temporal c