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# Urban Sprawl pressure on the wildlife in Greater Beirut Area

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## Résumé

Lebanon, a country in the Middle East Region, which occupies only 0.007% of the world's surface area, constitutes a part of the Mediterranean Biodiversity hotspot. This country is well known for its huge number of fauna (4486 species) and flora (4630 species). But, many species are facing a huge decline due to human settlements, some of them have been extinct, and others have become very rare. Uncontrolled urbanization is the main cause of the fragmentation and destruction of terrestrial habitats. This phenomenon ranks as one of the main forms of wildlife habitat loss, making some forest fragments too small to maintain viable breeding populations of some wildlife areas. To better understand the impact of the urbanization on forests and wildlife, we studied, at the level of the Greater Beirut Area (GBA), the diachronic evolution of the buildings expansion into green spaces. Thus, we processed, on GIS (Geographical information System), several images by calculating the Normalized Difference Vegetation Index (NDVI) and representing it on different maps dating from 1985, 2000, 2008, 2011 and 2016. As results, we found that 28.5% is the average value of loss of Green spaces in the GBA, but this loss did not maintain the same pace between the different municipalities of the GBA. In order to study the causes behind this huge expansion, a survey was conducted in which 353 inhabitants of a municipality located in the GBA and experiencing an average sprawl. As results, the surveyed people are not interested in the forests. Only 0.3% of the respondents are willing to preserve their lands and therefore to preserve green spaces and wildlife habitats. Thus, the will of the citizens to urbanize is a major problem inducing the fragmentation of the green spaces and the deterioration of the wildlife habitats. Therefore, in a country cited as a Hotspot for biodiversity; with a rich fauna and flora; the green spaces of her Metropolitan Area, lungs of the coastline and home of a huge wildlife, do not seem to be of great importance when urbanizing. Thus, the loss and fragmentation of wildlife habitats area unfortunately depreciated.

**Mots-Clés:** Greater Beirut Area, Sprawl, Green Spaces, Wildlife

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