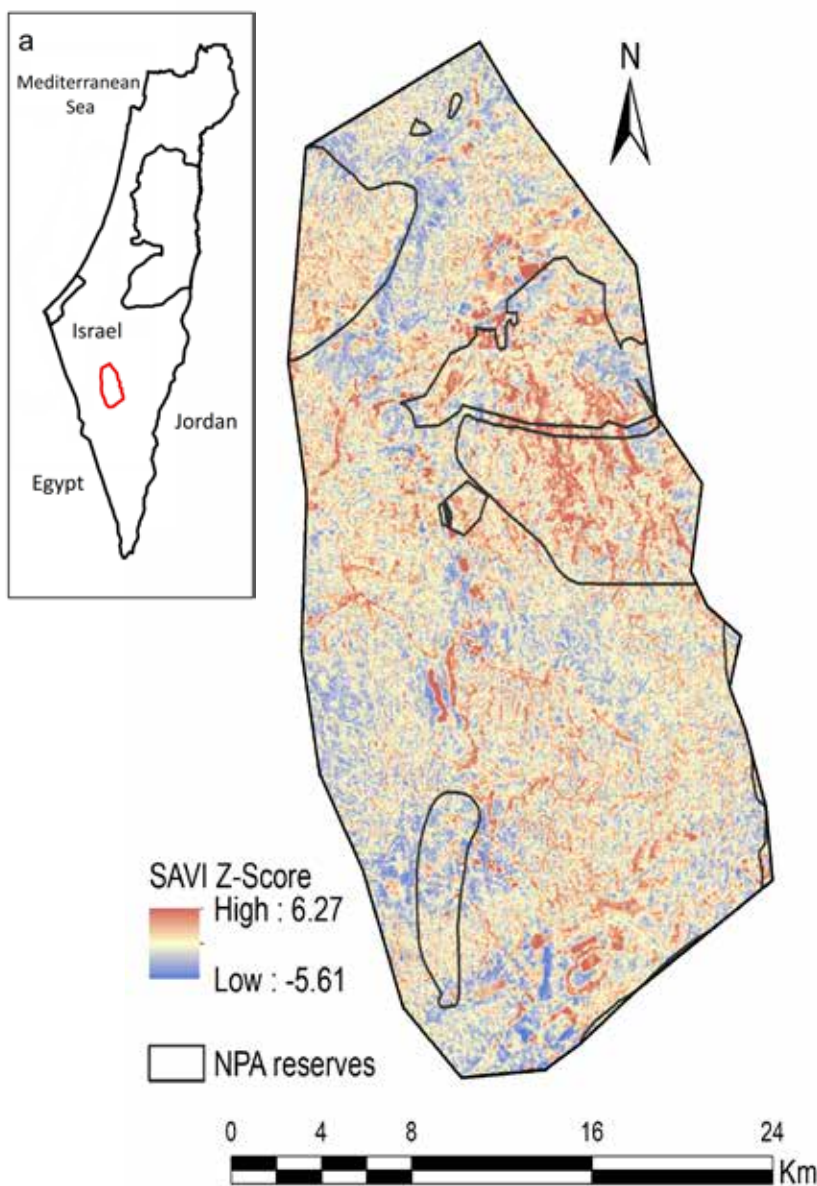


Impact of residential development on the life supporting capacity of the Har HaNegev arid environment - an ECOPOTENTIAL study

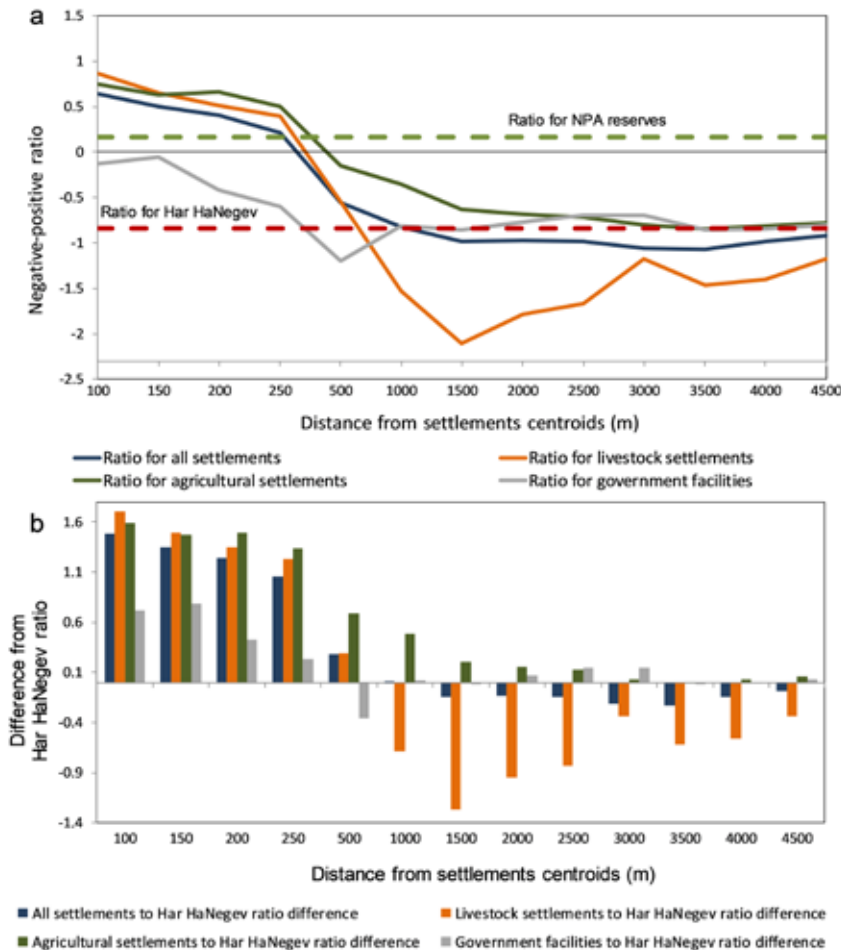
The ECOPOTENTIAL project in the Negev Highland demonstrated the utility of Earth observation data for conducting policy-relevant research on ecosystems at large spatial scales. Residential and associated development in the Negev Highland has had diverse impacts on a variety of ecosystem functions.

Populated areas are a major driver of vegetative cover, which in our research resulted to be the third most important determinant of vegetation productivity patterns after the environmental characteristics of elevation and slope.



The Har Ha Negev study area: (a): Location with the Israeli borders; (b): Temporal Z-score map of vegetation cover trends calculated using the Contextual Mann-Kendall significance test; (c): The Zin Natural Reserve; (d) Agricultural Farm; (e) Jailing facility; (f): livestock settlement.

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Vegetative cover generally increases in close proximity to human communities (partly due to farming near these communities) and then declines rapidly after a threshold difference.

The two charts show the ratio of negative-positive temporal trends of vegetation cover change as a function of distance from the settlements' centroids: (a) ratio anomalies from zero; and (b) differences between the point ratios and the overall Har HaNegev study area ratio.

Link:

This short description of the ECOPOTENTIAL work conducted in the Har HaNegev Protected Area is featured in an interactive on-line story map which can be found at the following link: <https://unep-wcmc.maps.arcgis.com/apps/Cascade/index.html?appid=87e9f69d64e349728041200929281aaa&fbclid=IwARo6mCBUbnlwomo3EBOVerSkbryfT3eoCNFvz2d26ohrrATR>

References:

Ohana-Levi, N., Paz-Kagan, T., Panov, N., Peeters, A., Tsoar, A. & Karnieli, A. (2019) Time series analysis of vegetation-cover response to environmental factors and residential development in a dryland region, *GI-Science & Remote Sensing*, 56:3, 362-387, DOI: 10.1080/15481603.2018.1519093

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