

Development of a Regional Ecological Master Plan for the Northern Arad Valley in the Negev Desert of Southern Israel

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The Northern Arad Valley of the Negev Desert is developing quickly, requiring documentation and analysis of the existing areas to inform proper development of the area. To preserve zones of high ecological value while planning for new neighborhoods in the Bedouin-inhabited Marit area, Geo Teva’s environmental consultants developed a strategic Master Plan for upcoming development of the regulated settlements. The Marit area is located along Road 31, between Be’er Sheva and Arad. Nearby are two quarries, (to the north and west), posing environmental challenges to development.

To create the Master Plan, multilayer datasets were used to conduct a statutory and ecological analysis of the area. In this, the ecological importance and watersheds of each plot were analyzed along with planned neighborhoods (with respect to land significance to the numerous local Bedouin family clans). Through this, levels of ecological importance were designated from High (red on the map to the right) to Low (green) significance.

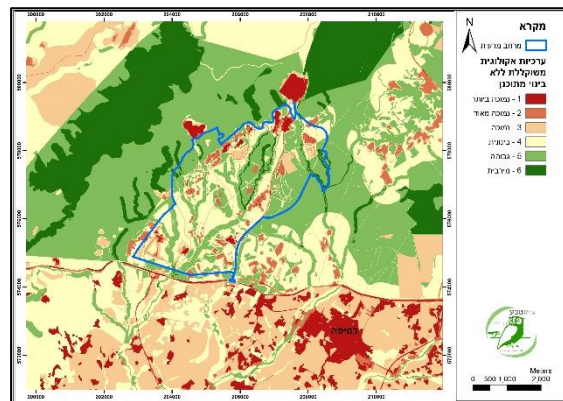


Figure 1: Map of ecological valuation of land areas, to inform land designation for future neighborhoods.

In accordance with the findings, the Master Plan proposes future land-uses including housing, infrastructure, public buildings, tourism, trails, and open spaces.

The Master Plan includes:

1. Preservation ecological corridors within the area to preserve ecological integrity and connectivity, for extensive development only.
2. Designation of open spaces of moderate value for herding and agriculture, in accordance with the needs and culture of the local Bedouin community.
3. Designation of a key preservation areas in the western and eastern portions of the site which will comprise the heart of the ecological spaces, supporting biodiversity in the open spaces of Marit.
4. Restoration of areas that are currently inundated with waste material and will require rehabilitation.
5. Restoration of areas to be vacated by the current population which will move to the newly established neighborhoods.



Figure 2: Gilead Iris, *Iris atrofusca*, from the Northern Negev.