English Abstracts

Eco-hydrology of a hyper-arid desert at the Ramon LTER site

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The Ramon Long Term Ecological Research (LTER) site studies a hyper-arid ecosystem at the border of an arid and an extreme arid area. At the LTER site we study eco-hydrology, focusing specifically the interactions between water availability and biodiversity of plants and animals. Topography and rain pulses determine runoff pulses and floods that create soil moisture pulses. These pulses feed the water reserves found under the main dry stream channel. The slopes act as a "source" that creates runoff that flows to the "sink" in a source-sink dynamics system. The source-sink and pulse-reserve dynamics provide a mosaic of hydrological niches that increase the biodiversity of the hyper-arid ecosystem.

Analysis of the rain regime in the northern Negev

Shmuel Arbel [1*], Moshe Getker [1], Itshack Moshe [2], Moti Shriki [3]

Understanding the rain regime is an important element in determining land management to ensure the survival of forests and the successful rehabilitation of degraded areas in the northern Negev. The analysis of the rain regime we conducted was based on rain data from long-term monitoring stations in the northern Negev, from Ruhama in the north to Sede Boker in the south. The findings demonstrate the variability of annual rain amounts. During the measurement period, there were rainy years, in which the amounts of rain measured were extremely high compared to the multi-annual average. The number of consecutive years with low rainfall and their extent are greater than those of the rainy periods. The phenomenon of rainy or dry years, apparently has a broad spatial distribution, which is characteristic of all the stations studied in the northern Negev. The analysis of rain data up to 2021 showed no change trend in the various rain regime variables examined in the northern Negev: the annual, storm and daily amounts of

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rain, the start and end dates of the rainy season, as well as the probability of the occurrence of rain events greater than 10 mm and 30 mm. The results of data analysis can contribute to planning soil conservation and runoff harvesting measures, and to the understanding the development and survival of processes of the forest vegetation. The trees in the forest areas were found to have suffered damage from the drought years. Therefore, in view of the climate change scenarios, even though no change trends have been found in the rain regime, we recommend preparing for and adapting forestry activity to rain events whose probability of occurrence is low.

The needs and requirements of Israeli Arab visitors to the Agamon Hula

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This study examines aspects of supply and demand for Israeli Arab visitors in the Agamon Hula Nature Park, including the characteristics, preferences, and expectations of these visitors. In recent years, there has been a shift from product to experience (exponomy), and from passive to active tourism. There has also been a notable increase in the demand for leisure spaces and outdoor recreation.

The study points to significant changes in Arab society in Israel, which constitutes over 20% of the population and is a significant component of domestic tourism in general, and tourism in nature sites and KKL-JNF forests in particular. Nevertheless, no research has been conducted on the tourism trends and the visitation patterns in natural sites in Arab society.

The study was carried out for the KKL-JNF northern region. Its aim was to analyze the behavior of Arab-Israeli visitors to the Agamon Hula Nature Park and, on this basis, to generate practical recommendations for the management and development of the Agamon Hula. This qualitative study was conducted through interviews and observations between April and July 2022.

The study found that Arab society is not a focal target audience at present. This means that, in many ways, the visit to the site is not geared toward this target audience, which impacts their behavior when visiting the site. In addition, the study raises various issues regarding visitor management at the Agamon Hula Park that are not related to one target audience or another but rather to the manner in which the site, the visitors, and the visit experience are managed.

The study reaches several conclusions regarding the management of the site and its relationship with Arab society in Israel, as well as suggesting practical recommendations. The study also sheds light on an important facet of Israel's tourism agenda in general: the fact that the needs, the preferences, and the desires of a group that constitutes over 20% of the Israeli population have not been studied and remain unknown. This is a problematic situation, whose negative impact is evident in the environmental field, in economic potential, and in the effect of this lack of information on social and cultural outcomes.

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