



Great white pelicans at a water reservoir in the Hefer valley, in central Israel. Pelicans stop off in Israel during their annual migration from the Balkans to Africa, where they enjoy a mild winter before returning to Europe. (Moshe Shai/Flash90)

Concern for all living things coupled with prohibitions against environmental degradation is not new to our generation, in fact, nature protection can be traced back to biblical sources. Indeed, the first chapters of the Book of Genesis emphasize the vital link between humanity (adam) and the earth (adamah) and introduce the concept of stewardship by enjoining man to work the earth and to watch over it. Israel's rebirth in modern times was sparked by this age-old commitment of the people to their land. Despite that, the Annual State of Nature report highlights the negative consequences of galloping urbanization amid population growth, but notes an increase in protected open space

## By SUE SURKES

Israel is losing open space every year equivalent in area to a medium-sized Israeli city, wildfires are increasing in frequency, intensity and size, and two-thirds of the country are exposed to light pollution to an extent that is harming ecosystems and biodiversity. On the other hand, nature reserves are expanding on land and at sea, and there is more vegetation cover in the rainier, northern half of the country, thanks to conservation efforts. These and many other findings appear in the annual report, published on Thursday, of HaMaarag ("The Web" in Hebrew), the national program for assessing the state of nature. HaMaarag is a collaboration of Tel Aviv Museum's Steinhardt Museum of Nature, the Ministry of Environmental Protection, the KKL-JNF Jewish National Fund, and the Israel Nature and Parks Authority.

Between 2017 and 2020, an average of 30 square kilometers (11.5 square miles) of natural, wooded and agricultural land was lost each year to development, according to the report. This is roughly equivalent in size to Zichron Yaakov or Caesarea.



A mountain gazelle runs in front of a barbed-wire fence near a populated area on a hill next to a forest in the suburb of Jerusalem on January 12, 2021. (Menahem Kahana/AFP)

Creeping urbanization has led to increasing fragmentation of natural space, which makes it harder for wild animals to move around populated areas.

It also means that 83% of the country north of Beersheba is now located less than one kilometer (0.6 of a mile) from the nearest road. (The desert to the south of Beersheba, along

with the Golan Heights in the country's far north, are relatively sparsely populated). In the upper half of Israel, where the climate is Mediterranean, around 500 square kilometers (193 square miles) — or 15% of the natural and planted forest — were set alight at least once between the years 2015 to 2021, and around a quarter of the open herbaceous shrublands. Most of the areas where the frequency of fires was high were in or near army training areas, particularly in the Golan Heights, Lachish to the southwest of Jerusalem, and a series of hills in Samaria in the West Bank.

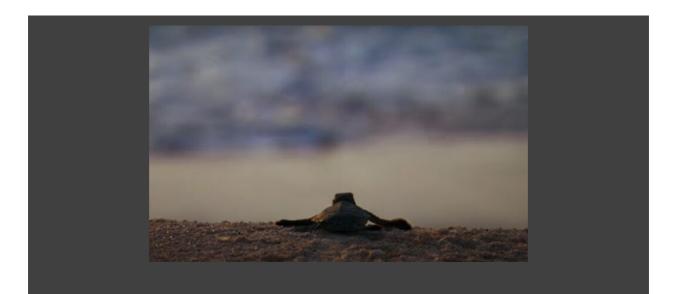
As there are no lightning storms during the Israeli summer, wildfires are always caused by humans, either through negligence or by design.

The report attributes increasing fires to rising population density, which multiplies the risk of negligence, climate change, and thicker plant cover resulting from better conservation.



Last summer, it was the turn of the Jerusalem hills to suffer widespread blazes. Expanded urban areas reflect the rising population, and with that has come an increase in artificial light, the report says.

Artificial light during the dark hours not only prevents us from seeing the stars. It can affect everything from insect movement, foraging, reproduction and hunting, to the orientation of turtles heading out to sea, and the ability of birds to avoid flying into buildings.



The report, which for the first time sets a threshold for light pollution that is harmful to nature, says that the amount of artificial light has increased by 30% over the past decade.
North of Beersheba, a whopping 67% of the land is now exposed to light pollution to the extent, says the Maarag, that nature — ecosystems and biodiversity — are being harmed.

In Eilat, a tourist city on the southern tip of the country, coastal light pollution is threatening the future of the world-renowned coral reef, the report goes on.

The glare even penetrates 30% of the planted forests created by KKL-JNF and 16% of the nature reserves north of Beersheba.

Along the densely-populated Mediterranean coastal strip, some 78% of the land is exposed to high light pollution — a situation, says the report, that has been exacerbated by the creation of two offshore gas platforms in recent years.

The report examines the expected effects of climate change on biodiversity for the first time, saying that it is felt particularly in the sea, where dozens of species of mollusks have become extinct over several decades, probably due to warming seawater.

Israel is warming faster than the global average and is expected to become drier.

Due to the warming, migratory birds are migrating earlier and are stopping for shorter periods along the way to rest and feed, the report notes.

However, it cautions that human actions can also conceal the effects of climate change. One example of this is the increase in plant cover in the Mediterranean area of Israel, despite gradual warming, because grazing and tree felling have been reduced as part of conservation measures.

Thanks to our efforts and your contribution, there is good news: open spaces protected by nature reserves grew by 9.6% between the years 2017-2021, taking the total area of terrestrial nature reserves and national parks to 26%. Around 4% of Israel's sovereign maritime area is now protected too.

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Giora Shavit, Director of Fundraising Nature Israel, CSPNI Please help us spread the word and forward this newsletter to your contacts.

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