Highlights of Palestinian Habitats

Photo by Moutaz Ala'raj.

Palestine is home to a stunning variety of ecosystems. As part of the Mediterranean basin to the west and the vast desert to the east, this country is a world centre of wild plant and animal biodiversity. It is known for its variety of habitat formations that support Palestinian livelihood.

By Roubina Bassous/Ghattas

A habitat, or biome, is the type of environment in which plants and animals live. Habitat is dictated by climate, geography, and the kinds of plants that grow in that particular environment. Palestinian territory is a unique element of the Mediterranean eco-region. It displays a wide variation in elevation, geology, and climate, which leads to a broad range of habitats. This variation is reflected in its high biodiversity value as well as in its crop diversity. Palestine is considered an historic centre of crop diversity, cultivation, and agro-biodiversity. The main habitats in Palestine and human well-being are interrelated. The habitats include the forested areas, shrub-lands, grasslands, water bodies, and the sea. These habitats provide a full array of goods and services upon which people depend for their livelihood and well-being. Main services include food, medicine, fuel, water purification, pest control, and climate regulation, in addition to intangible services such as aesthetics, cultural heritage, recreation, and, most importantly, the Palestinian identity.

Photo courtesy of ARIJ, 2013.

Palestinian life has developed in close relationship with natural habitats such as forests, shrub-lands, and grasslands. Forested spaces cover an area of 78km2 of the West Bank and 1.76 km2 in the Gaza Strip.[i] The natural forests are mainly evergreen oak maquis: oak, carob, pistachio, Christ thorn, strawberry tree, tree heath, and azarole, among others. Other dominant plant species that grow in the Palestinian forests are mastic tree, or lentisc, storax, Mediterranean medlar, and bear plum. Almost all are highly nutritious and valuable for Palestinian cuisine. Large plane trees such as tamarisks and willows provide shade along the streams of the Jordan Valley. Fruit trees such as wild plums, peaches, pears, figs, medlars, mulberries, dates, and almonds bloom in spring. Blackberries, loquats, and pomegranates flourish during the summer months. In the southern region of the West Bank, acacia trees and the prickly cactus suck moisture from the desert. Atlantic pistachios strike a dramatic note among the dry riverbeds, and date palms grow wherever there is sufficient underground water.

However, mainly due to the Israeli occupation strategy and practices that include the confiscation of Palestinian hilltops in the West Bank for settlement building, the remaining Palestinian forest environment is less than half of what existed 30 years ago.[ii] Furthermore, almost 31 percent of the total forested area will be annexed behind the West Bank Segregation Wall upon its completion.[iii]

The shrub-lands, which cover an area of 280 km^2, are very dynamic and host a distinctive wildlife.[iv] They allow a great variety of small herbs to associate with the shrubs, and are rich in annuals, orchids, and bulbs, including wildflowers and medicinal and aromatic plants – mainly thorny broom, salvia, thymus, tulips, narcissus, cistus, cyclamen, crocus, iris, daisies, and others – that grow in a remarkable profusion. The shrub-lands are one of the most sensitive habitats and are composed of a wide range of plant species that have high economic value. However, 13.1 percent of this habitat will be annexed behind the West Bank

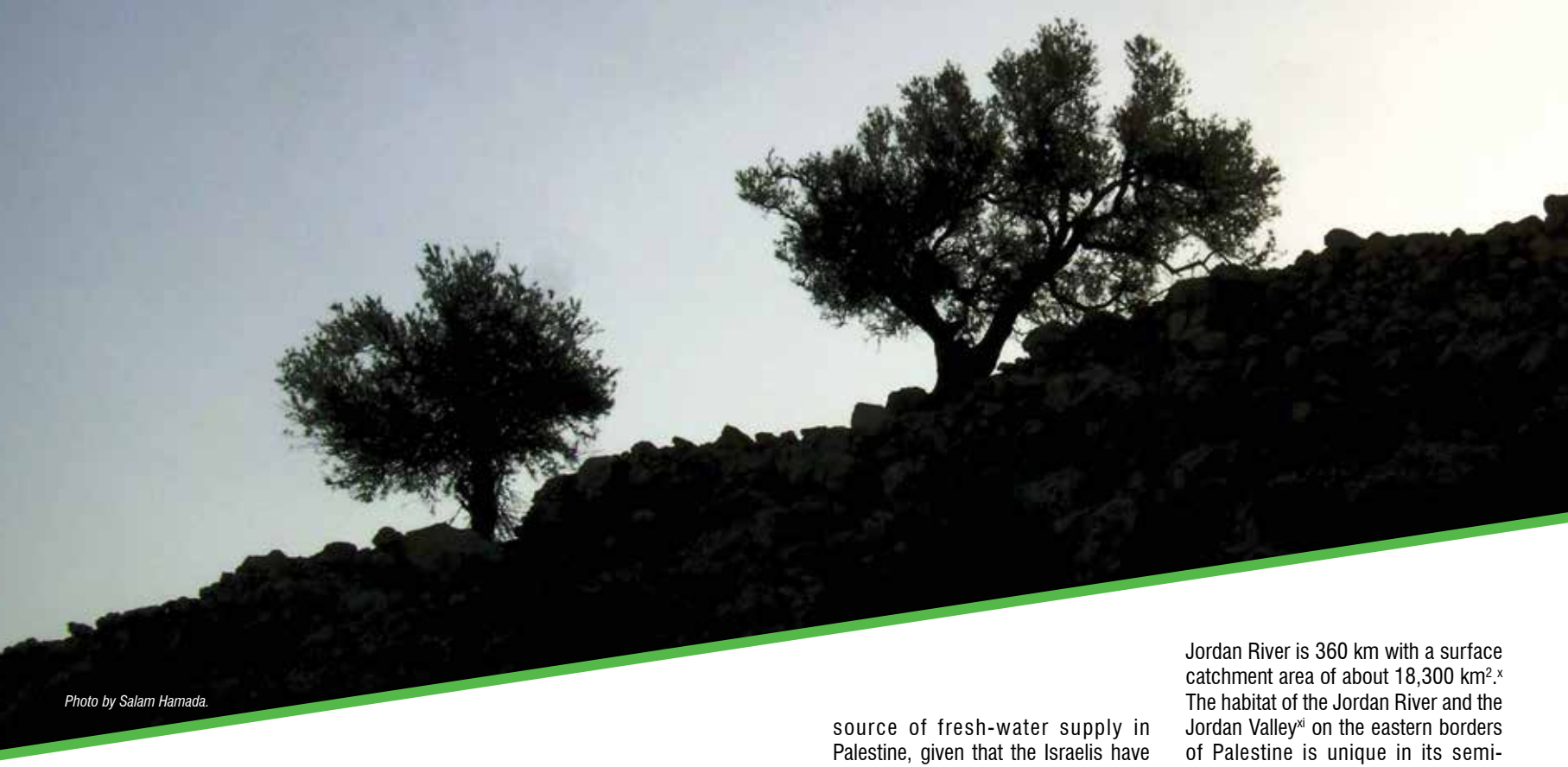

Photo by Salam Hamada.

Segregation Wall upon its completion.[v]

As for the grasslands, the most familiar in the West Bank are the rangelands, with an area of 749 km^2.[vi] The natural grazing lands have a large number of range-plant species, where there are about 268 legume species and 198 grass species,[vii] including barley, medicks, melilot, trigonel, wormwood, Palestine buckthorn, and goat grass. The integrated rangeland-livestock production systems have a high socio-economic as well as cultural value in Palestine, since they are a source of subsistence and food security, income, and social status. The farming systems in this habitat can be identified based on the lifestyle of the herders and the methods of flock-feed management.

However, the Palestinian rangeland resources have been greatly affected by the closure of extensive range areas for the expansion of Israeli settlements and for Israeli military practices. Of the total grazing area in the eastern slopes and Jordan Valley, only 20 percent is accessible to Palestinian livestock owners.[viii] Such conditions expose the accessible rangeland to overgrazing phenomena, reducing the green cover biomass and grazing capacity and enhancing the desertification of that area. Furthermore almost 21 percent of the grassland habitat will be annexed behind the West Bank Segregation Wall upon its completion.[ix]

Water bodies are another vital element of the Palestinian habitats and consist mainly of the Jordan River, the Dead Sea, the Mediterranean Sea (accessible through the Gaza Strip), and scattered limited inland water bodies. The most stable surface-water resource is the Jordan River; nevertheless, since the beginning of the Israeli occupation of Palestinian territory, groundwater resources have become the major source of fresh-water supply in Palestine, given that the Israelis have deprived the Palestinians of their rightful share of Jordan River water. The Jordan River flows southward through Lake Tiberias until it spills into the Dead Sea at approximately 400 metres below sea level. The entire length of the Jordan River is 360 km with a surface catchment area of about 18,300 km^2.[x] The habitat of the Jordan River and the Jordan Valley[xi] on the eastern borders of Palestine is unique in its semi-tropical environment, which supports the existence of confined plant and animal species, including Jordanian tamarisk, shrubby saltbush, and lotus tree, among others, which all tolerate high temperatures and salinity.

Jordan River.

Palestine also has access to another habitat along the 42-kilometre-long Mediterranean coastline of the Gaza Strip. The shoreline of the Gaza Strip consists of beaches, sand dunes, coastal cliffs, and built-up areas, particularly in the Gaza City region. Of particular ecological importance is the presence of the near-shore waters of the Gaza Strip, to a depth of 35 to 40 metres.[xii] This habitat is perhaps the most productive marine ecosystem in the Mediterranean, supporting very high population densities of epiphytic flora and fauna, and providing shelter and foraging areas for many com-mercially important fish species.[xiii] There are numerous common plants that grow on the coastland in this region, such as opposite-leaved saltwort, sea spurge, and tamarisk, among others.

Habitats, however, change naturally with time, but in Palestine, changes have been a result of abrupt continuous pressures that break their structure and consequently the related physical, chemical, and biological functions. Thus the preservation of biological diversity, habitats, and natural places is critically important to the survival of all – people, plants, and animals alike. It is equally important to reach a state where the utilisation and conservation of Palestinian biological resources are justly shared and protected within Palestinian society.


Photo courtesy of ARIJ, 2013.

Roubina Bassous/Ghattas is head of the Biodiversity and Food Security Department at the Applied Research Institute - Jerusalem (ARIJ). She graduated from Birmingham University, United Kingdom, with an MSc degree in the "Utilization and Conservation of Plant Genetic Resources." She has extensive experience in research, project leadership, and fund-raising.

---

[i] This habitat covers almost 1.38 percent of the total area of the West Bank and 0.48 percent of the Gaza Strip.

[ii] *The Status of Environment in the oPt: a human rights based approach*, The Applied Research Institute-Jerusalem (ARIJ), 2011, Bethlehem, Palestine.

[iii] "Land Use/Land Cover analysis for West Bank 2010 and GIS Land Use/Land Cover analysis for Gaza 2005," The Applied Research Institute-Jerusalem (ARIJ), GIS (Geographic Information System) Department.

[iv] Ibid. This habitat covers 4.9 percent of the total West Bank area.

[v] Ibid.

[vi] Ibid. This habitat covers 13.2 percent of the total West Bank area.

[vii] "The Development of a National Policy and Legislation for Promoting the Conservation of Agro-biodiversity in Palestine," MoA/ EQA, 2003, Palestine.

[viii] Geo-informatics and Urbanization Monitoring Departments - databases, The Applied Research Institute -Jerusalem (ARIJ), 2008.

[ix] "Land Use/Land Cover analysis for West Bank 2010," The Applied Research Institute-Jerusalem (ARIJ), GIS (Geographic Information System) Department.

[x] Ibid.

[xi] This habitat covers 7.1 percent of the total West Bank area.

[xii] *The Status of Environment in the oPt: a human rights based approach*, The Applied Research Institute-Jerusalem (ARIJ), 2011, Bethlehem, Palestine.

[xiii] Ibid.