

WEST BEKAA & MOUNT LEBANON (LEBANON)

Hima Ras El Matn,
La Martine Valley,
Mount Lebanon
©Asaad Saleh

WEST BEKAA SPANS ACROSS 470 KM², STRETCHING FROM THE HIGHLANDS OF THE SHOUF MOUNTAIN

in the west all the way down to the Bekaa plain, and then up again to the Anti-Lebanon mountain range. The landscape is characterised by 3 bio-climate zones: Mountain-Mediterranean (1500 - 1900 m), Supra-Mediterranean (1000 - 1500 m) and Meso-Mediterranean (500 - 1000 m).

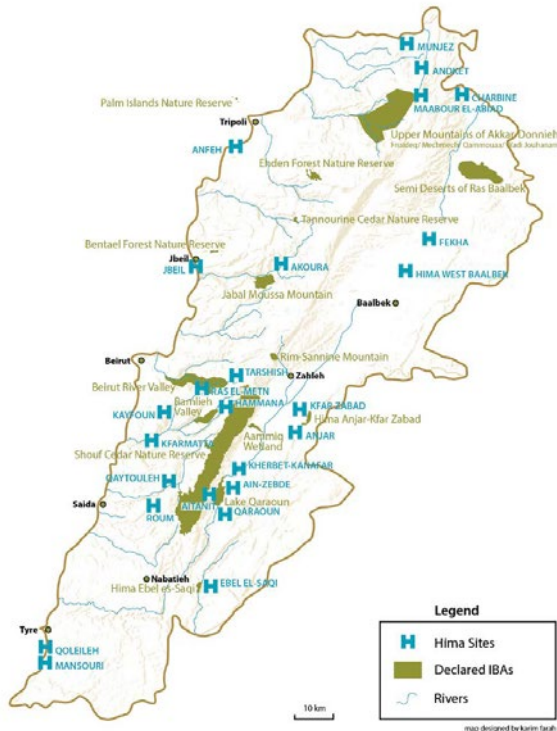
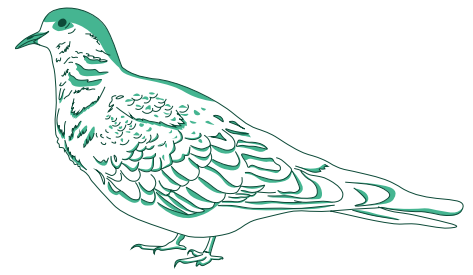
The West Bekaa is characterised by the occurrence of a traditional communal governance system, called *himas*. The *himas* of West Bekaa, namely Kherbet Kanafar, Ain Zebdeh and Aitanit, are located on the eastern slopes of the Shouf Mountain, and are used to sustainably manage natural resources in a way that performs common benefits for people and nature.

Building on earlier work with the *himas* of West Bekaa, the Society for the Protection of Nature in Lebanon (SPNL) is now expanding its work to 4 additional Hima sites in Mount Lebanon, specifically Kayfoun, Kfarmatta, Hammana, and Ras El Matn. The two latter are situated in the upper reaches of Beirut River Valley, which was declared as an Important Bird Area (IBA) and Key Biodiversity Area (KBA) in 2009. It is a deep river valley carved by the Beirut river, extending 20 kilometres eastwards from the outskirts of Beirut on the western slopes of the Mount Lebanon range.

Besides being a region that is an important bottleneck for migratory soaring birds, agriculture is still a main activity in West Bekaa and has an important socio-economic impact on the mostly rural population of the district. The lands of the West Bekaa are well known for producing top quality wines and wine-making is as ancient as history in Lebanon. SPNL adopted the Hima Revival approach, where a total of 25 *himas* have been established in collaboration with local authorities. The focus is on sustainable management of cultural practices to ensure direct benefits to significant species and associated habitats, and help maintain healthy and biologically-diverse agro-silvo-pastoral systems.



European turtle dove
(*Streptopelia turtur*)



Source: SPNL Annual Report 2022 © SPNL

CURRENT CHALLENGES

The part of the landscape most modified by the human being is in the Supra and Meso-Mediterranean levels, due to the milder climate conditions and the complex geological features favouring the presence of deeper soils and higher soil water content and freshwater availability. The landscape is characterised by a mosaic of agricultural land, semi-natural woodlands and pastures. The Mountain-Mediterranean level keeps more natural conditions being characterised by different successional stages of forests and pastures. Traditional farming systems, such as the *hima* governance system for transhumant livestock management, have historically contributed to high landscape and biological diversity. Nowadays, the landscape and its associated traditional farming systems are under threat by various factors: (i) Forest loss, degradation and fragmentation due to intense logging, wood and fodder collection, (ii) Overgrazing; (iii) Uncontrolled harvesting of non-wood forest and pasture products; (iv) Agricultural intensification; (v) Environmental threats, which are exacerbated by climate change: land degradation caused by rural abandonment, forest fires caused by the burning of agriculture waste and the accumulation of dry biomass on abandoned land; (vi) Lack of economic incentives to reverse rural abandonment and unemployment, which mostly impact women and youth.

NEGATIVE IMPACTS ON BIODIVERSITY

The *himas* of West Bekaa are located under the main migration flyway for soaring & water birds, a bottleneck area situated in the middle of the Shouf Biosphere Cedar Reserve, Ammiq wetlands, and Qaraoun Lake. It is a top conservation site since it is a resting and breeding zone for a large number of endangered birds, such as the Imperial eagle (*Aquila adalberti*), spotted eagle (*Clanga pomarina*) and Syrian woodpecker (*Dendrocopos syriacus*). It is also a hotspot for mammals (wolves, hyenas, porcupines, lynx), reptiles and plants.

The *himas* of Hammana and Ras El Matn are situated in the upper reaches of Beirut River Valley, designated as an Important Bird Area (IBA) and Key Biodiversity Area (KBA). The area consists of valleys and large watersheds with forests of evergreen oak, mixed pine-oak and conifers, seasonal streams and perennial rivers, stony cliffs and small caves. This area is also designated as an Important Plant Area (IPA), supporting around 550 wild plant species, including nearly 100 endemic species to the region. In addition to this plant richness, *himas* Ras El Maten and Hammana possess significant importance for the reptilian and avian diversity in Lebanon.

A special focus for bird conservation in these *himas* is on the Syrian serin (*Serinus syriacus*) and the European turtle dove (*Streptopelia turtur*). The Turtle Dove is a summer breeder mainly in the woods and open woods of the eastern and southern slopes of Mount Lebanon. Besides illegal hunting, the destruction of the habitat of this species through agricultural intensification, pesticides, insecticides, fire, deforestation, polluted water do widely contribute to its decline. The Syrian serin is a common migrant breeder



Syrian serin (*Serinus syriacus*) © SPNL



© SPNL

in rocky mountain areas. It is declining due to the sudden waves of drought and the unregulated grazing, beside the illegal hunting and trapping. The Syrian serin is a summer breeder in the Higher Metn region, at the upper boundary of the Beirut River Valley. Although the region an important bottleneck for migratory soaring birds during migration is, it has still not received any fully-covered formal protection. Recent threat assessment of the region showed that agricultural expansion and intensification is the single most severe threat. In fact, minimal conservation has been done in the protected areas of the Beirut River Valley, while it is important to conserve its habitat and species. Along with parallel efforts to address other major threats, restoring traditional cultural land-use practices would ensure direct benefit to these species and associated habitats at the area.

CULTURAL SUSTAINABLE LAND-USE PRACTICES

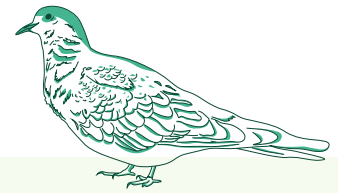
Hima is a traditional communal governance system used to sustainably manage natural resources in a way that provides benefits for people and nature. The word *hima* is an Arabic word meaning “a protected area”. It was established over 1,500 years ago within the Arabian Peninsula and later evolved by integrating new social norms and values, mainly or especially those of the Islamic culture. The traditional *hima* concept has been deployed to facilitate the sustainable use of natural resources, based on empowering local, traditional knowledge, culture and livelihood in West Bekaa and Mount Lebanon.

Three types of farmland can be distinguished in this cultural landscape:

1. Productive agriculture terraced lands with orchards of apple, vineyard or olive trees, mainly on terraces with traditional stone walls
2. Productive agriculture flat lands with vineyards, vegetables or cereals
3. Traditional pastoral system, involving both low mountain and high mountain pastures under a short-distance transhumance movement

The sustainable management of agricultural practices directly benefits significant species and associated habitats at the area, while also playing an instrumental role in environmental risk reduction. They lead to the conservation of local genetic heritage, with the maintenance of a highly diversified number of local crop varieties and local breeds of goats (*chabli* and *bardie*). Agricultural terraces allow for farming on sloped hills or mountains. Aromatic plants in the agricultural lands are planted within the crops as a natural repellent for pest species. Dry stonewalls play an important role in terms of biodiversity conservation, as micro-habitats for rocky plants, insects, reptiles, amphibians, birds and mammals. Stonewall terrace systems facilitate soil water infiltration and storage, and act as firebreaks reducing the risk of fire spread.

Traditional transhumant livestock management, based on a rotation and resting system, has a strong effect on species and community diversity. It affects vegetation dynamics by creating openings and corridors in forest. Uncontrolled livestock grazing with no management of pasture land, and permanent livestock presence in the same places contribute to pasture degradation, habitat and species loss. Transhumant grazing systems create natural firebreak areas, regulate water runoff, and are home to beneficial insects that increase biological control of crop insect pests, and provide pollination services.



ECONOMIC VALUE OF WEST BEKAA & MOUNT LEBANON

The *hima* approach also engages, empowers and incentivizes the local community, through policy, economic and education interventions. This includes integrating land-use practices into management plans of *hima* declared sites and establishing *hima* committees. The *hima* market (*Souk el Hima* programme) supports the production and sale of nature-friendly microenterprise products, services and practices. Finally, the *hima* education programme provides capacity building for youth of the *hima* (*Homat al Hima*-HH programme) on various aspects of its management in addition to education for the children on ecological, conservation and environmental topics (SNOW- School with No Walls).

The *hima* Hammana is known for its apple, bean, and cherry produce, and its 50-year old cherry festival attracts hundreds of visitors from all over Lebanon and sells tons of cherries. It is an ideal destination for bird watching, cherry-picking, hiking, canyoning, as well as several eco-touristic activities. *Hima* Ras Al Metn is also rich in biodiversity and natural assets, and known for the cultivation of olives, grapes, figs, apricots and other fruits. It is an important source of pine production, accounting for 2/3 of the output in the Higher Metn region and 1/3 of Lebanon's production.



Hima Ras El Matn, Mount Lebanon © Paul Marc Massabni

It is a touristic destination offering activities like hiking along the Grotto of Hiskan and pine forests in addition to engaging with the community's cultural practices and heritage.

According to the Economic Valuation report on Ecosystem Services prepared in 2021, the ecosystem services in Hammana and Ras El Matn with a total area of 2,180.28 ha, deliver a substantial economic value of USD 19,419,563 annually to the local community. The economic value, which assesses the intrinsic values representing peoples' perception on the importance of protecting and conserving cultural heritage and natural landscapes as well as the biodiversity richness in these areas, as non-use benefits, was estimated at USD 494,040 per year.



PROVISIONING SERVICES

Food

- Field & tree crops
- Honey
- Pine nuts
- Animal products from livestock

Raw Materials

- Fuel wood
- Fodder for livestock
- Medicinal & aromatic Plants (MAPs)
- Freshwater



REGULATING SERVICES

- Carbon Sequestration & storage
- Erosion Control
- Stone wall terraces
- Water regulation & filtration
- Grazing & nutrients regulation



CULTURAL SERVICES

Recreation, Eco-tourism & agritourism

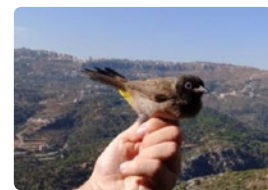
- Nature-based sports activities
- Birdwatching tourism
- Agritourism & eco-lodging

Education & research

Cultural & Historical Heritage

- Cultural heritage
- Historical heritage & religious sites

Landscape & Aesthetics



SUPPORTING SERVICES

- Maintenance of Nuersery Populations and Habitat
- Pollination
- Biodiversity & biological Support