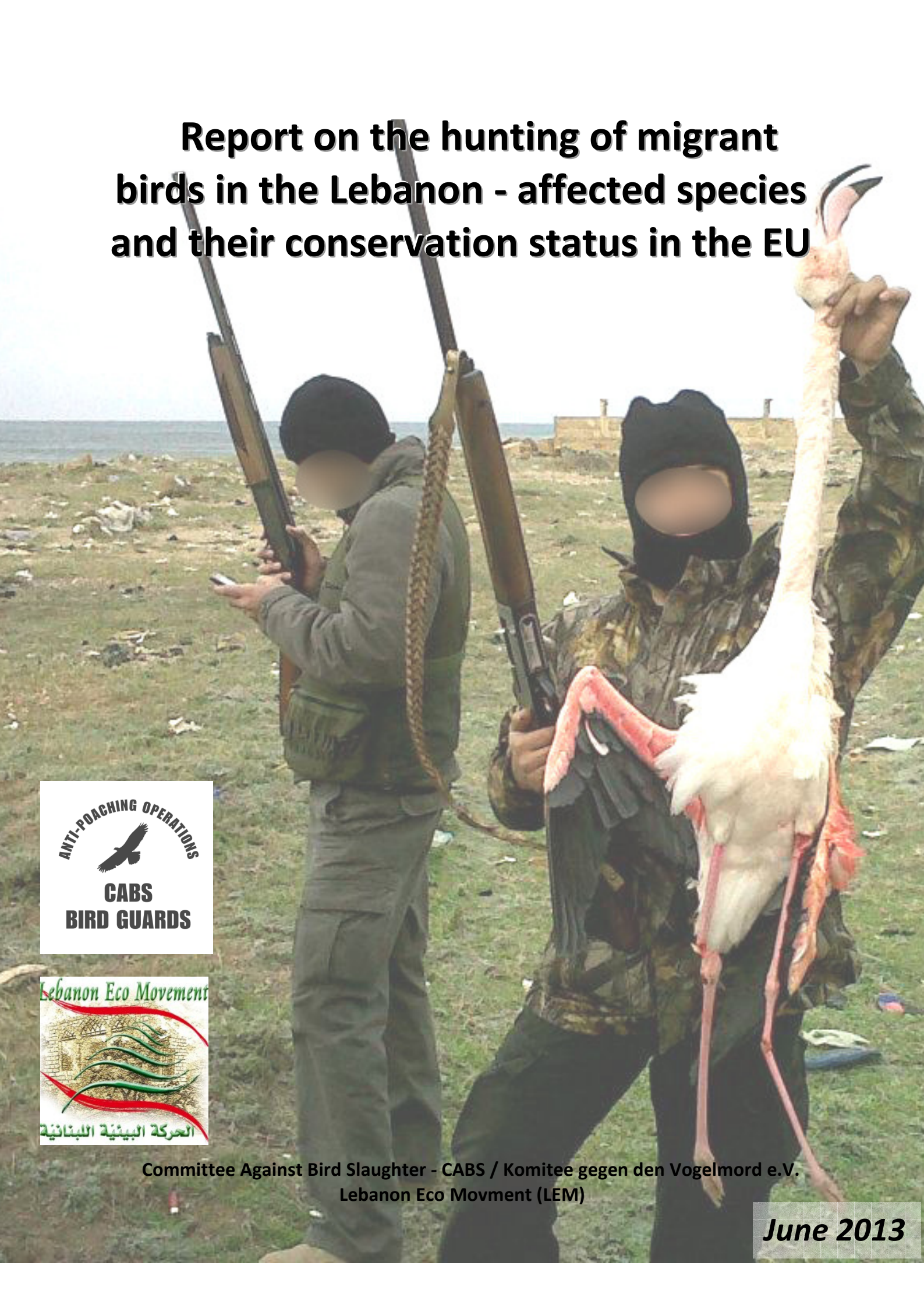


Report on the hunting of migrant birds in the Lebanon - affected species and their conservation status in the EU



Committee Against Bird Slaughter - CABS / Komitee gegen den Vogelmord e.V.
Lebanon Eco Movement (LEM)

June 2013

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1. Background

The Lebanon is situated centrally on the Eastern Eurasian-African migratory bird flyway, which is used every year by several million European migratory birds en route to their winter quarters in Africa and on pre-nuptial flight to their European breeding grounds (NADER 2013, SOCIETY FOR THE PROTECTION OF NATURE IN LEBANON 2005, BENSON 1970).

The most important flight path is the coastal region, where above all water birds, and in autumn large numbers of birds of prey, pass through. The Bekaa Rift Valley in the east of the country is also very important for bird migration. The Bekaa Valley is the continuation of the Jordan Rift Valley, and its fertile fields and extensive wetlands are also used by numerous bird species as a staging area. Embedded between the Lebanon and Anti-Lebanon Mountains, the plateau is in places only a few kilometres wide. And precisely at this bottleneck, where the migration flocks are funnelled into a narrow corridor, bird hunting has a long tradition. The main motivation behind hunting today is still sustenance. The shot birds are either consumed by the hunters themselves and their families, or they are offered for sale at local markets (RAMADAN-JARADI & RAMADAN-JARADI 2012).

As neither a valid hunting law nor a state hunting control system exist or have been in force since 1995, uncontrolled and unrestricted hunting takes place in most areas of the country (NADER 2013). A law was drafted in 2004 that would permit the hunting of some common species, but at the same time proscribing penalties for the hunting of numerous migrant species (including all birds of prey, storks and pelicans), provision of a form of 'basic training' for hunters, and bird counts in important stopover areas. The draft was however not pursued further after the assassination of the then Prime Minister Hariri and the subsequent political changes (NADER 2013). The consequences are a complete lack of a sense of wrongdoing - as the published photographs demonstrate - on the part of the hunters and an increase in poaching over the years.

A new and widespread phenomenon, especially among young hunters, is photographing their bag immediately after the shoot using a mobile phone or compact digital camera and later uploading the pictures to social networks or photo-share sites on the internet. Many do not bother to mark such photographs private, so that they can be seen or downloaded by anyone. A particularly shocking picture from the hunting season 2012 shows a dozen of White Storks *Ciconia ciconia* neatly hung out on a washing line - the shooter obviously found this funny - and the first bird has had a smoking cigarette placed in its beak. On other photographs young men in muscle shirts, and draped with cartridge belts, pose with freshly-killed Common Cranes *Grus grus*, Short-toed Eagles *Circaetus gallicus* and pelicans. Another grins and holds a dead Lesser Spotted Eagle *Aquila pomarina* towards the camera. His hunting friend has decorated a silver salver with his bag of the day - some 30 Golden Orioles

Oriolus oriolus. A photograph of more than 20 shot Honey Buzzards *Pernis apivorus* spread out on the bonnet of a hunter's 4 x 4 is equally bizarre.

Such photographs give an idea of the unbelievable carnage uncontrolled hunting inflicts on nature in the Lebanon. The aim of this article is, by analysing and evaluating the collection of trophy photographs published on Facebook, to provide an overview of the dimension of the slaughter as well as the species affected by hunting in the country.

2. Material and Methods

In the time frame January 2011 to March 2013, members of the Lebanon Eco Movement (LEM) regularly searched the publicly accessible Facebook (www.facebook.com) pages of Lebanese hunters for uploaded photographs of shot birds. More than 700 such pictures were found and saved on a hard disc. The photographs were taken from some 400 Facebook profiles; this figure represents only a miniscule fraction of all active hunters in the Lebanon. After the sorting out of obvious duplicate photographs, or those clearly not taken in the Lebanon, a total of 589 pictures remained that were then checked and the birds portrayed were identified as far as this was possible.

3. Results

The majority of the photographs show the birds together with one or more hunters, or with hunting equipment such as weapons or ammunition. Some of the pictures could be precisely dated as, in a number of cases, the participants had either integrated the date and place of the hunting trip in the photograph, or had written these on handmade placards. This enabled us to place the 598 pictures analysed by us in the time frame September 2008 to March 2013.

At least 13,164 shot birds are shown on these photographs, on average 22 birds for each photograph analysed. An exact total number cannot be determined as some pictures show literally heaps of birds consisting of hundreds of corpses. Altogether the species of 11,213 birds could be reliably identified. The birds that could not be identified were either only partly visible, or the quality of the photograph made a definite identification of the individual bird impossible.

The 11,213 identified individuals comprised a total of 143 species, including numerous endangered European species for which considerable conservation efforts are undertaken, such as Egyptian Vulture *Neophron percnopterus*, Lesser Spotted Eagle *Aquila pomarina*, Red-footed Falcon *Falco vespertinus*, Night Heron *Nycticorax nycticorax*, Bittern *Botaurus stellaris*, Corncrake *Crex crex*, Ortolan Bunting *Emberiza hortulana*, Golden Oriole *Oriolus oriolus*, Roller *Coracias garrulus*, Common Crane *Grus grus*, White Stork *Ciconia ciconia*, Black Stork *Ciconia nigra* and White Pelican *Pelecanus onocrotalus* (see Tab. 1). The three most frequent species depicted on the photographs analyses are Song Thrush *Turdus philomelos*, Chaffinch *Fringilla coelebs* and Skylark *Alauda arvensis* which, with a total of 6,653 individuals, make up some 59 % of the shot bird victims shown on the photographs.

Tab.1: List of birds visible on trophy-photos from lebanese hunters, published on Favebook between 2008 and 2013

English bird name	Latin bird name	birds counted on pictures
Phasianidae		
Chukar Partridge	<i>Alectoris chukar</i>	38
Common Quail	<i>Coturnix coturnix</i>	203
Anatidae		
Common Shelduck	<i>Tadorna tadorna</i>	9
Gadwall	<i>Anas strepera</i>	13
Eurasian Wigeon	<i>Anas penelope</i>	3
Mallard	<i>Anas platyrhynchos</i>	7
Northern Shoveler	<i>Anas clypeata</i>	1
Common Teal	<i>Anas crecca</i>	4
Podicipedidae		
Unidentified Grebe		1
Phoenicopteridae		
Greater Flamingo	<i>Phoenicopterus ruber</i>	1
Ciconiidae		
Black Stork	<i>Ciconia nigra</i>	13
European White Stork	<i>Ciconia ciconia</i>	83
Threskiornithidae		
Eurasian Spoonbill	<i>Platalea leucorodia</i>	1
Ardeidae		
Eurasian Bittern	<i>Botaurus stellaris</i>	3
Little Bittern	<i>Ixobrychus minutus</i>	2
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	15
Squacco Heron	<i>Ardeola ralloides</i>	4
Cattle Egret	<i>Bubulcus ibis</i>	2
Grey Heron	<i>Ardea cinerea</i>	8
Purple Heron	<i>Ardea purpurea</i>	7
Great Egret	<i>Ardea alba</i>	4
Little Egret	<i>Egretta garzetta</i>	4

Pelecanidae		
Great White Pelican	<i>Pelecanus onocrotalus</i>	30
Phalacrocoracidae		
Great Cormorant	<i>Phalacrocorax carbo</i>	2
Falconidae		
Lesser Kestrel	<i>Falco naumanni</i>	1
Common Kestrel	<i>Falco tinnunculus</i>	21
Red-footed Falcon	<i>Falco vespertinus</i>	1
Eurasian Hobby	<i>Falco subbuteo</i>	16
Accipitridae		
Osprey	<i>Pandion haliaetus</i>	1
European Honey Buzzard	<i>Pernis apivorus</i>	186
Egyptian Vulture	<i>Neophron percnopterus</i>	1
Eurasian Griffon	<i>Gyps fulvus</i>	3
Short-toed Eagle	<i>Circaetus gallicus</i>	11
Western Marsh Harrier	<i>Circus aeruginosus</i>	8
Pallid Harrier	<i>Circus macrourus</i>	1
Montagu's Harrier	<i>Circus pygargus</i>	2
Harrier spec.	<i>Circus spec.</i>	2
Levant Sparrowhawk	<i>Accipiter brevipes</i>	13
Eurasian Sparrowhawk	<i>Accipiter nisus</i>	61
Eurasian Buzzard	<i>Buteo buteo</i>	13
	<i>Bbvulpinus</i>	4
Long-legged Buzzard	<i>Buteo rufinus</i>	2
Lesser Spotted Eagle	<i>Aquila pomarina</i>	7
Booted Eagle	<i>Hieraaetus pennatus</i>	3
Rallidae		
Water Rail	<i>Rallus aquaticus</i>	1
Corncrake	<i>Crex crex</i>	4
Common Moorhen	<i>Gallinula chloropus</i>	4
Gruidae		
Common Crane	<i>Grus grus</i>	16
Burhinidae		
Eurasian Stone Curlew	<i>Burhinus oedicnemus</i>	6
Charadriidae		
Northern Lapwing	<i>Vanellus vanellus</i>	85

Spur-winged Plover	<i>Vanellus spinosus</i>	4
Eurasian Golden Plover	<i>Pluvialis apricaria</i>	7
Scolopacidae		
Eurasian Woodcock	<i>Scolopax rusticola</i>	3
Common Snipe	<i>Gallinago gallinago</i>	2
Marsh Sandpiper	<i>Tringa stagnatilis</i>	3
Green Sandpiper	<i>Tringa ochropus</i>	1
Wood Sandpiper	<i>Tringa glareola</i>	1
Ruff	<i>Philomachus pugnax</i>	1
Glareolidae		
Cream-coloured Courser	<i>Cursorius cursor</i>	2
Collared Pratincole	<i>Glareola pratincola</i>	1
Columbidae		
Stock Dove	<i>Columba oenas</i>	2
Woodpigeon	<i>Columba palumbus</i>	15
European Turtle Dove	<i>Streptopelia turtur</i>	11
Laughing Dove	<i>Streptopelia senegalensis</i>	13
Cuculidae		
Great Spotted Cuckoo	<i>Clamator glandarius</i>	2
Common Cuckoo	<i>Cuculus canorus</i>	4
Strigidae		
Long-eared Owl	<i>Asio otus</i>	1
Caprimulgidae		
European Nightjar	<i>Caprimulgus europaeus</i>	4
Apodidae		
Alpine Swift	<i>Tachymarptis melba</i>	9
Common Swift	<i>Apus apus</i>	3
Pallid Swift	<i>Apus pallidus</i>	1
Coraciidae		
European Roller	<i>Coracias garrulus</i>	4
Alcedinidae		
Common Kingfisher	<i>Alcedo atthis</i>	4

Meropidae		
Blue-cheeked Bee-eater	<i>Merops persicus</i>	1
European Bee-eater	<i>Merops apiaster</i>	126
Upupidae		
Common Hoopoe	<i>Upupa epops</i>	25
Picidae		
Northern Wryneck	<i>Jynx torquilla</i>	4
Syrian Woodpecker	<i>Dendrocopos syriacus</i>	2
Laniidae		
Red-backed Shrike	<i>Lanius collurio</i>	35
Lesser Grey Shrike	<i>Lanius minor</i>	4
Woodchat Shrike	<i>Lanius senator</i>	1
Masked Shrike	<i>Lanius nubicus</i>	7
Oriolidae		
Eurasian Golden Oriole	<i>Oriolus oriolus</i>	247
Corvidae		
Eurasian Jay	<i>Garrulus glandarius</i>	9
Eurasian Jackdaw	<i>Corvus monedula</i>	2
Carrion Crow	<i>Corvus corone</i>	3
Paridae		
Great Tit	<i>Parus major</i>	4
Blue Tit	<i>Parus caeruleus</i>	1
Hirundinidae		
Collared Sand Martin	<i>Riparia riparia</i>	10
Barn Swallow	<i>Hirundo rustica</i>	765
Northern House Martin	<i>Delichon urbicum</i>	1
Red-rumped Swallow	<i>Cecropis daurica</i>	1
Alaudidae		
Calandra Lark	<i>Melanocorypha calandra</i>	5
Crested Lark	<i>Galerida cristata</i>	4
Woodlark	<i>Lullula arborea</i>	24
Eurasian Skylark	<i>Alauda arvensis</i>	1278
Cisticolidae		
Graceful Warbler	<i>Prinia gracilis</i>	1

Pycnonotidae		
White-spectacled Bulbul	<i>Pycnonotus xanthopygos</i>	7
Sylviidae		
Willow Warbler	<i>Phylloscopus trochilus</i>	6
Common Chiffchaff	<i>Phylloscopus collybita</i>	2
Blackcap	<i>Sylvia atricapilla</i>	197
Garden Warbler	<i>Sylvia borin</i>	1
Lesser Whitethroat	<i>Sylvia curruca</i>	62
Orphean Warbler	<i>Sylvia hortensis</i>	15
Greater Whitethroat	<i>Sylvia communis</i>	1
Troglodytidae		
Winter Wren	<i>Troglodytes troglodytes</i>	1
Sittidae		
Eurasian Nuthatch	<i>Sitta europaea</i>	2
		0
Sturnidae		0
Rosy Starling	<i>Sturnus roseus</i>	2
European Starling	<i>Sturnus vulgaris</i>	15
Turdidae		
Eurasian Blackbird	<i>Turdus merula</i>	221
Redwing	<i>Turdus iliacus</i>	1
Song Thrush	<i>Turdus philomelos</i>	1362
Muscicapidae		
European Robin	<i>Erithacus rubecula</i>	11
Black Redstart	<i>Phoenicurus ochruros</i>	3
Common Redstart	<i>Phoenicurus phoenicurus</i>	62
Whinchat	<i>Saxicola rubetra</i>	33
Common Stonechat	<i>Saxicola torquatus</i>	5
Northern Wheatear	<i>Oenanthe oenanthe</i>	294
Black-eared Wheatear	<i>Oenanthe hispanica</i>	3
Common Rock Thrush	<i>Monticola saxatilis</i>	6
Blue Rock Thrush	<i>Monticola solitarius</i>	2
Spotted Flycatcher	<i>Muscicapa striata</i>	2
Collared Flycatcher	<i>Ficedula albicollis</i>	1
Palestine Sunbird	<i>Cinnyris osea</i>	1

Passeridae		
House Sparrow	<i>Passer domesticus</i>	6
Prunellidae		
Dunnock	<i>Prunella modularis</i>	10
Motacillidae		
Yellow Wagtail	<i>Motacilla flava</i>	367
White Wagtail	<i>Motacilla alba</i>	83
Tawny Pipit	<i>Anthus campestris</i>	202
Tree Pipit	<i>Anthus trivialis</i>	52
Red-throated Pipit	<i>Anthus cervinus</i>	1
Fringillidae		
Chaffinch	<i>Fringilla coelebs</i>	4013
Brambling	<i>Fringilla montifringilla</i>	9
European Serin	<i>Serinus serinus</i>	111
European Greenfinch	<i>Carduelis chloris</i>	152
Eurasian Siskin	<i>Carduelis spinus</i>	3
Common Linnet	<i>Carduelis cannabina</i>	58
Hawfinch	<i>Coccothraustes coccothraustes</i>	6
Emberizidae		
Corn Bunting	<i>Emberiza calandra</i>	5
Yellowhammer	<i>Emberiza citrinella</i>	7
Western Rock Bunting	<i>Emberiza cia</i>	3
Ortolan Bunting	<i>Emberiza hortulana</i>	215
Cretzschmar's Bunting	<i>Emberiza caesia</i>	1
Reed Bunting	<i>Emberiza schoeniclus</i>	1
Budgerigar (escaped bird)	<i>Melopsittacus undulatus</i>	1
Total number of species		143
Total number of birds	all species	11.213

4. Discussion and conclusions

The analysis of the collected trophy photographs has shown that a very broad species spectrum of 143 species is affected by hunting in the Lebanon.

The some 400 Facebook profiles studied are only a very small proportion of the estimated 600,000 (including 20,000 officially registered) active hunters (NADER 2013). It can therefore be assumed that the figures presented in Tab. 1 represent only the tip of the iceberg. According to estimates by local conservationists, between 10 and 20 million migrant birds are shot annually in the Lebanon (NADER 2013). As there is no close season in spring, a not insignificant number of these are mature adult birds that, in contrast to the juvenile birds shot in autumn, are especially important for reproduction and the preservation of their respective populations.

The mass shooting of large soaring bird species such as birds of prey, herons and storks is regarded as critical, as their mostly low population density, late sexual maturity and low annual reproduction rates are not adapted to short term compensation of losses caused by intensive poaching. A prime example of this is the Lesser Spotted Eagle, which is endangered throughout its European range and of which eight individuals were identified on the trophy photographs. It has been known for some years that this endangered species suffers particularly from hunting on its migration route. In the Species Action Plan agreed by the European Union in 1997 (EUROPEAN COMMISSION 1997) loss of habitat and killing on migration routes were identified as the primary threats to its population. The same report also mentions the Lebanon explicitly: *"it is apparently the favourite raptor hunted in Lebanon, where local information suggests killing of 100s and even 1,000s every autumn"*. In view of the fact that up to the present there are no controls of or restrictions on hunting in the country, such figures are most probably still valid today.

White Storks and Honey Buzzards are also greatly affected by hunting in the Lebanon and of these species alone 83 and 186 dead individuals respectively were counted on the photographs. If one compares the proportion of Facebook profiles checked by us to the total numbers of active hunters in the Lebanon, the numbers of birds shot every year must amount to several thousand individuals of each species. For the Golden Oriole and Ortolan Bunting, both endangered species in almost all EU states, and of which 247 and 215 shot individuals were counted in the photographs, the annual numbers of birds killed annually probably runs into five figures.

In 2012, in order to take action against poaching where it actually occurs, the LEM started a campaign to bring home to indigenous hunters and bird lovers the consequences of this massive scale of hunting. The most important elements of this awareness-campaign are environmental education events and the posting and distribution of placards and brochures to improve the species identification skills of hunters and to provide information on the threat to birds migrating to and from their European breeding areas.

CABS and the LEM believe that it is also vitally important that the Lebanese Government finally introduce national legislation on hunting and wildlife conservation and establish effective control system. The European Union, in their dual function as the Lebanon's most

important financial donor, and as 'fatherland' of the birds shot in the Lebanon, can play a significant role in this matter. In May 2013 CABS therefore wrote to the EU Commissioner for the Environment, Janez Potočnik, and requested that he, in the name of the European Commission, urge the Government in Beirut to introduce comprehensive legislation for protection of birds in the Lebanon as rapidly as possible. We added that we also considered it sensible and desirable for the European Union, or individual member states, in the framework and spirit of the European Neighbourhood and Partnership Instrument (ENPI), to actively support the Lebanese Government in the reform or creation of Lebanese nature protection legislation as well as the adaptation of the corresponding administrative authorities.

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CABS & LEM Report on the hunting of migrant birds in the Lebanon

ANNEX: Photo-documentation, all pictures were published on Facebook

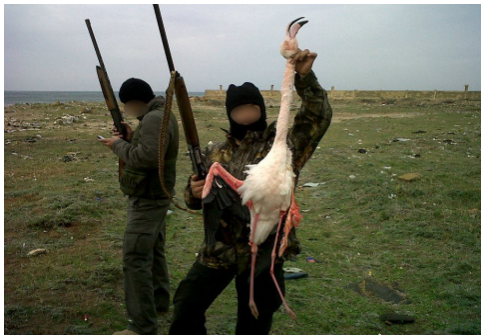


Fig.1 - Greater Flamingo



Fig.2 - European White Stork



Fig.3 - Black Stork



Fig.4 - Eurasian Spoonbill



Fig.5 - Eurasian Bittern



Fig.6 - Night Heron



Fig.7 - Great White Pelican

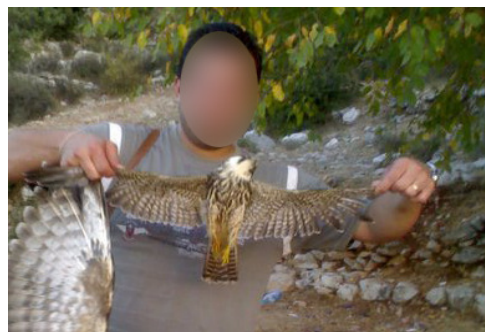


Fig.8 - Eurasian Hobby



Fig.9 - European Honey Buzzard



Fig.10 - Egyptian Vulture



Fig.11 - Lesser Spotted Eagle



Fig.12 - Booted Eagle



Fig.13 - Common Crane



Fig.14 - Lapwing

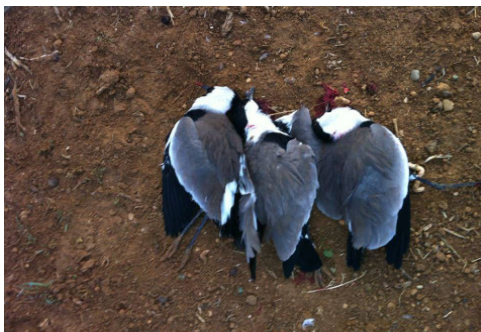


Fig.15 - Spur-winged Plover



Fig.16 - Wood Sandpiper



Fig.17 - Great Spotted Cuckoo



Fig.18 - Common Cuckoo



Fig.19 - European Roller



Fig.20 - Common Kingfisher



Fig.21 - European Bee-eater



Fig.22 - Common Hoopoe



Fig.23 - Red-backed Shrike



Fig.24 - Masked Shrike



Fig.25 - Eurasian Golden Oriole



Fig.26 - Barn Swallow



Fig.27 - Eurasian Skylark



Fig.28 - White-spectacled Bunting



Fig.29 - Blackcap



Fig.30 - Common Stonechat



Fig.31 - Song Thrush & Blackbird



Fig.32 - Common Redstart



Fig.33 - Northern Wheatear



Fig.34 - Common Rock Thrush



Fig.35 - Yellow Wagtail



Fig.36 - Chaffinches & other birds



Fig.37 - Siskins & other birds



Fig.38 - Greenfinches & other birds



Fig.39 - Ortolan Bunting



Fig.40 - Western Rock Bunting



Lebanon Eco Movement

الحركة البيئية اللبنانية- علم و خبر 1236

Report on the situation of migrating birds in Lebanon

**Prepared by
Bernard Abi Nader**

For Committee Against Bird Slaughter (CABS)



March 2013

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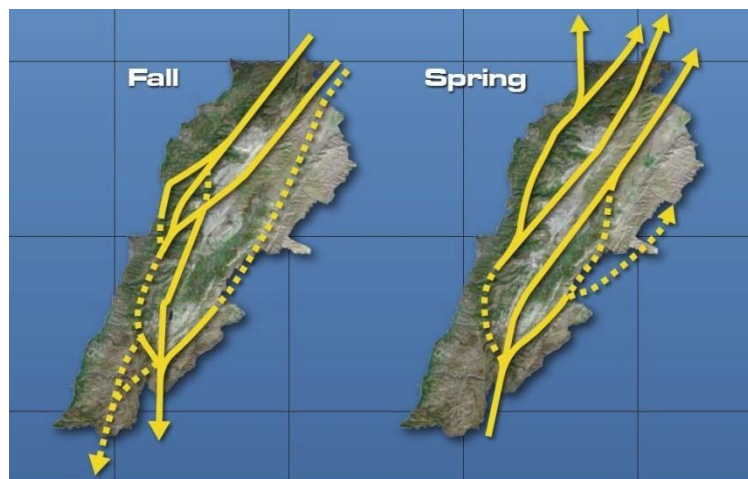
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1. Importance of Lebanon as migration pathway for birds

Lebanon is a small country with an area of 10 452 km² located in the Middle East, bordered by the Mediterranean Sea to the west, Syria to the north and east, and the Palestinian territory to the south. One characteristic of the Lebanese topography is the alternation of highlands and lowlands, forming 4 parallel longitudinal strips: the coastal strip, western Lebanon, central plateau, and eastern Lebanon.

The coastal strip stretches along the shore of the eastern Mediterranean along 225 km. The western range forms the Lebanon Mountains or Mount Lebanon which extends along 170 km. The eastern range forms the Anti-Lebanon Mountains extending along 150 km. The Bekaa valley extends at 150 km between Mount Lebanon and Anti-Lebanon Mountains, forming an extension of the Jordan Rift Valley.

Due to its particular narrow position, Lebanon is one of the most concentrated countries on the Rift Valley/ Red Sea flyway. Three flyways exist in Lebanon, all parallel to the Mediterranean Sea. The first flyway extends along the shoreline, and is mainly used by shorebirds, sea birds, and waders. Raptors also use it during fall migration. The second flyway stretches along the Bekaa valley, and is the main migration route part of the Red Valley/ Red Sea flyway. A large variety of birds use this flyway, including soaring birds, waterbirds, and songbirds. The third flyway extends along the Anti-Lebanon mountain range mainly used by soaring birds during spring migration.



Fall and spring migration pathways in Lebanon (credits to A Rocha)

The Rift Valley/ Red Sea flyway is the second most important flyway for migrating soaring birds. This route is used by an estimated 2 billion passerines and near-passerines, 2.5million ducks and over 1.5 million soaring birds migrating from their breeding grounds in Europe and central and western Asia to winter in tropical Africa. Latest studies estimate that 400 species migrate over Lebanon, including 37 species of soaring birds, all having unfavorable conservation status. Among these birds and according to the IUCN, 2 species are listed as endangered: saker falcon and Egyptian vulture, 3 are listed as vulnerable: greater spotted eagle, eastern imperial eagle and Dalmatian pelican, and 3 are listed as near threatened: red-footed falcon, red kite, and black vulture, in addition to the critically endangered Slender-billed Curlew.

It estimated that almost 100% of the world population of Levant Sparrowhawk passes along this flyway twice yearly, in addition to more than 90% of the world population of Lesser Spotted Eagle, 60% of Eurasian Honey Buzzard and 50% of each of Short-toed Eagle, Booted Eagle, Egyptian Vulture, and White Stork.

2. Hunting ban and current situation

Hunting was banned in Lebanon by Ministerial Decision 8/B issued in 1994, initially for a period of 3 years (from 1-1-1995 till 31-12-1997), mainly after ratification of the “Convention on Biodiversity” in 1994 and following a period of destruction caused by the Lebanese war and chaotic hunting. Lebanon was supposed to work during this time period on releasing a new hunting law that was ultimately agreed on in 2004, known as Law 580, but not finalized due to missing decrees. The banning Decision was thereafter renewed several times until adoption of the Law 580 in 2004, when hunting became subject of a continuous ban and the Minister of Environment given the authority to open the hunting season when he finds it appropriate. To the present day, hunting is still banned, and Law 580 not yet enforced.

During the first years of the banning Decision, the situation was seriously taken into account, with an almost total absence of hunting practices, in addition to the monitoring and enforcement of the law. Soon after, interest in this Decision started gradually dropping until it was almost ignored, and the situation returned to its previous situation, even worse.

This break up followed by a return to practice led to appearance of a new generation of hunters mostly young without “hunting education” (previously, the knowledge and ethics of hunting

were passed on from father to child). It became not unusual to see a 10 or 12 year-old child holding a weapon and shooting at large. This new generation had no concept of birds' identification or proper training for using hunting weapons. In addition, the hunting trip that was considered a return to nature, and part of a daylong trip with other related activities (hiking, picnic...) turned into a "birds killing" trip in which the main objective was to gather the largest numbers and varieties of birds.

On a different level, this whole issue led to a clash between ecologists and hunters, to the point that each considered the other as enemy, with the total absence of any discussion or dialogue between the two sides with a rise in extremism that extended the gravity of poaching (in some cases, a hunter may kill a particular important bird just to "tease" ecologists). This conflict lasted several years until lately, when some environmental NGOs took the initiative of joining forces with hunters to reach an agreement and develop the concept of sustainable hunting that would please and loose the tension between both sides.

3. Number of hunters and hunting hotspot areas

The number of hunters officially registered in 1980 was approximately 14 000. Today, although hunting was banned since 1995, the number of officially registered hunters is estimated at 20 000, while the overall number of hunters, both registered and unregistered, is estimated to be 600 000. Compared to the overall population of Lebanon of approximately 4 200 000, hunters count more than 14% of the total population, one of the highest numbers worldwide. Official sources suspect that once the new law is applied and hunting clubs are opened for examination, the number of officially registered hunters won't exceed 100 000.

Because of Lebanon's small size and particular geography, no single location can be considered as a hotspot-area for hunting. The total of Lebanon forms a bottleneck for migrating birds due to the narrow migration pathway bordered by mountain ranges.

Lebanon counts 15 important bird areas (IBAs) extending from north to south. Beirut River Valley, being the closest to the capital, remains a popular hunting area mainly for inhabitants of surrounding cities. However, some regions offer more attraction for hunters; these areas might have easier access or largest concentration of birds mainly as resting places during migration,

especially areas rich in water reservoirs. Two main regions are popular among hunters: the North region and the Bekaa.

To the North, Akkar district is among the most popular regions, as having a large coastal plain in addition to elevated mountains offering a large variety of birds. Koura district is also popular for hunting, having large fields of cultivated olive trees. To the Bekaa, Baalbek and Hermel districts are among the most popular regions, being located along the major migration flyway. West Bekaa district is also popular, mainly for being rich in water reservoirs attracting mostly waterbirds.

The South region also contains famous hunting spots, but some areas are more controlled due to the presence of the Lebanese Army and the United Nations Interim Force in Lebanon (UNIFIL) in response to the continuous Lebanon-Israel conflict, and the United Nations Security Council decisions for unarming the South region.

In the Mount Lebanon Governorate, Jbeil district is considered as a hunting hotspot mainly for people coming from the capital Beirut, and suffers a big poaching issue.

Nevertheless, hunting is practiced all over Lebanon, from urban highly populated areas to rural undeveloped regions. Inside cities, the widest spread activity is hunting at night by elevating barren trees on rooftops. It is not unusual to see hunters shooting birds during the day from balconies and rooftops, causing a potential danger to others.



Hunting from rooftops

4. Targeted bird species

There is no accurate or official data on numbers or species of birds hunted every year. According to officials, such data shouldn't exist because hunting is not allowed in the first place. Thus, no species can be considered as a "legal hunt" since hunting of all species is banned. The number of migrating birds shot within Lebanese borders is estimated between 10 and 20 million birds per year.

Lately, social media and particularly Facebook, made a breakthrough as informative source to the crimes that were conducted throughout the years against birds. Hunters started posting photos (both old and new) to their profiles and on hunting pages, showing when and what they hunted, offering the environmental community a shocking sample on the atrocities that were taking place, but were occurring unnoticed.

Information about species of birds hunted in Lebanon are mainly given by hunters themselves and photos posted online.

Species mostly targeted are quails, larks (e.g. calandra lark, skylark...) and thrushes (e.g. song thrush, mistle thrush, fieldfare...), usually hunted in large numbers, the latter being subject of massacres at night. Songbirds are indiscriminately shot, and most of the times the species are not well identified by hunters. It is not unusual to see a dead bird's photo posted by the hunter asking what species it was. In other cases, hundreds of birds are piled, to the extent that makes it impossible for an observer to identify or differentiate the many species present.



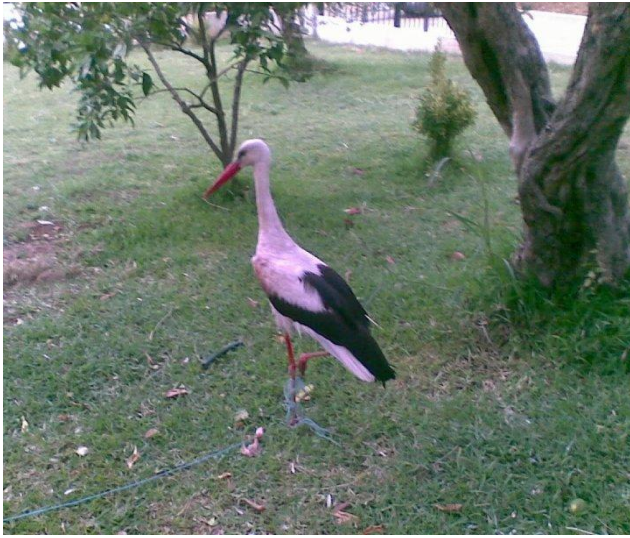
Piles of killed birds

Among songbirds, chaffinches are the mostly hunted, mainly the common chaffinch, in addition to the greenfinch, European serin, starling, robin, great grey shrike, and golden oriole among others. Swallows and bee-eaters are also among favorite targets. Other targeted species include warblers (mainly blackcap), crows, Eurasian woodcock, doves, pigeons, mallard, Eurasian teal, garganey, chukar partridge...

Knowing that Lebanon joined the AEWA (Agreement on the Conservation of African-Eurasian Migratory Waterbirds) in 1-12-2002, protected waterbirds remain one of the largest targets for poachers without any local or international intervention. Storks are the major victims of massacres, killed by dozens with sometimes an elimination of a complete flock. Many Lebanese consider storks as a “tasty” meal, and encourage their hunting. Pelicans are also a large target for poachers. Other targeted waterbirds include cranes, herons (egrets) and northern lapwings. Cases of shot greater flamingos have also been reported.

Raptors, being protected by local and international laws, are also major victims of massacres. Lebanon’s particular topography rich in mountains and valleys serves as a trap for those birds. Raptors usually rest deep inside the valleys, and rise in the early morning using thermals. Being on a low altitude and having a slow motion during this ascension period makes them an easy prey for hunters that are usually lurking on surrounding hills. Species shot are of a large variety including among others: buzzards (e.g. common buzzard, honey buzzard...), eagles (e.g. lesser spotted eagle, steppe eagle...), falcons (e.g. hobby, lesser kestrel...), and harriers... The meat of these species is appreciated in some regions, where it is processed into a traditional meal called “kebbeh”. Several cases of shot griffon vultures have also been reported. One of the most shocking cases was that of a killed Egyptian vulture which is listed as endangered by the IUCN.

Due to their large sizes, soaring birds (mainly raptors, pelicans and storks) are not always fatally wounded. They end up by being captured, and then kept as personal pets, or sold in pet shops or in the Sunday market, usually in bad shape and untreated injuries. Storks and pelicans are sometimes attached to a rope and kept in gardens, or have their wings’ feathers removed in order not to escape, while raptors are kept in home cages and considered as tokens of pride.



Shot white stork kept in a private garden



Shot kestrel kept in a cage



Pelican for sale in the Sunday market

A small number of injured birds (mainly raptors) are presented to veterinary clinics, mostly found injured by people unrelated to the shooting event. These are usually treated and kept in houses or in a shelter. It is important to note that no establishment specialized in birds nor a professional flight aviary exists in Lebanon, in addition to a lack of veterinary and medical knowledge in these avian species.

It is also important to mention that ringed birds are killed with their tags not being reported, due to the absence of any reference in this subject or specialized institutions for the reporting system.



Ringed bird shot

5. Illegal hunting and trapping methods

Many illegal or unethical methods are widely used for trapping or hunting birds. Such methods include:

- **Hunting at night using artificial lights:** a powerful light source is used to project light on a barren tree. This will attract birds migrating at night, mainly thrushes that will be then shot while seeking rest, usually in large numbers. Another issue about this method is that it also takes place on house roofs inside the cities. Special homemade cartridges are used for shooting birds at night, having a much lower cost and a reduced noise. This method is highly condemned by professional hunters that deem it unethical and identify it as a massacre. In addition, this practice highly affects the hunters themselves during the following day, with sometimes the absence of birds' passages.



Barren tree elevated on a rooftop for night hunting

- Capturing birds at night by drawing a tree on a wall: one of the cruelest methods consists of painting a tree shape on a wall, with a light source directed on it during the night. This will also attract birds migrating at night, mainly thrushes that will seek rest on the tree's branches, but end up bumping at the wall and falling dead or severely wounded.
- Trapping using lime sticks and glue: the glue is spread on a tree branch in order to trap the landing bird. This method can be combined with the use of bait that will attract birds to the trap. Captured birds are sold in pet shops or in the Sunday market.



Birds captured using lime sticks

- Trapping birds using mist nets: mist nets similar to the ones used to capture birds for scientific studies and ringing are installed in the fields. Migrating birds will be trapped in the nest and collected alive. Those nests are also placed on the sea level in many areas, in order to capture birds migrating over the sea and seeking rest on the land. Birds captured using such method are usually sold in pet shops or kept for breeding, or even sold to hunters that will then release them in hunting fields and shoot them.



Birds captured using mist nets

- Luring birds using baits: live or artificial baits are used to lure birds to a trap or within shooting range. This method is often used to capture the chukar that will be then domesticated and used for breeding, or sold usually at a high cost. Captured birds can be used in turn as a bait to lure other birds.
- Luring birds using sound machines: the import, selling and use of bird sound recorders was banned by Ministerial Decision 2/B issued in 1993. Still, it remains one of the most used methods in hunting, and machines are still sold on the loose. This technique can be combined with any of the other listed methods to increase its efficiency. This method poses a serious problem since lately, any electronic device able to play sounds (music player, Smartphone...) connected to a speaker, can be used to play bird sounds. Thus, the only way to control this violation is by continuous monitoring and penalizing violators based on witnessed crimes.



Usage of sound machines



Sound machine and amplifier sold online

6. Other hazards and risks for birds

In addition to uncontrolled hunting, birds migrating through Lebanon face lots of other obstacles and hazards. Some of them might have a direct impact, while others cause a long-term damage.

- Excessive use of pesticides: the main migrating route of birds coincides with Lebanon's most important farming region, the Bekaa Valley. Pesticides are still excessively used in agriculture, despite their known noxious effects on humans and the environment. Control on these products is poor in Lebanon. Their effects can be direct or indirect. Of the most

used pesticides in Lebanon we name organohosphates and pyrethroids. These are known for their high toxicity in birds. They can act by directly poisoning and killing the birds, or indirectly after the bird ingests a poisoned insect or animal. In addition to their health hazards, pesticides (mainly herbicides and insecticides) play a role in altering the natural habitat of birds, thus affecting their reproduction (nesting places) and reducing their food availability (grains and insects). Pesticides also cause a serious hazard for waterbirds, due to their leakage and evaporation into water reservoirs, knowing that the Bekaa region is well known for its large supplies of water (rivers, lakes and swamps).

- Reduction in forest areas: Lebanon is in constant war with deforestation, mainly caused by long years of war, forest fires, and excessive urbanization. Up to 60% of forests were lost between 1972 and 1994. Only about 13.4% of Lebanon's total area remains covered by forests, corresponding to a loss of habitat for birds.
- Electrical shock risk: high voltage power lines are present all along the migration route. A number of birds will rest on these lines putting themselves into potential risk of electrocution.



Birds resting on high voltage lines

- Lead contamination: lead is still the major component of bullets used in hunting. Their usage is preferred by hunters due to a lower cost and higher accuracy compared to other bullets. In addition, Lebanese laws pose no restrictions or control over this matter. It is

estimated that due to hunting, 800 tons of lead are released in the environment every year. Lead poses a high risk for waterbirds due to accumulation inside water reservoirs. Birds of prey are of high risk most commonly due to their ingestion of lead-based ammunition present in dead carcasses left by hunters. Moreover, in many occasions some birds after getting shot are wounded but not killed, thus are poisoned and may slowly suffer and die. This leads to a relay toxicity that may appear on any location of their migration route and causes further damage in the food chain.

- Pollution due to waste dumping: almost 700 dumps exist in Lebanon containing a variety of toxicants. Large dumps are mainly located on the shoreline. This issue causes a serious hazard to birds due to ingestion of poisonous materials, mainly sea birds.



Sidon's trash mountain

7. Measures to control the situation

In order to get the hunting situation under control, a thorough assessment of the situation should be conducted, with the involvement of local and international communities.

Locally, changes should be made on the political, educational, economical, and environmental scales.

One of the missing priorities in Lebanon is a professional “green” force in charge of environmental tasks, under the control of the ministries of interior, agriculture and environment. Currently, internal security forces (ISF) are in charge of all security tasks and law monitoring. This issue makes it unpractical and illogical for the same agent to respond simultaneously to a murder crime or robbery and an illegal hunting practice, thus posing a priority problem with environmental cases being mostly ignored. Furthermore, a large number of ISF agents are known

as taking part in the poaching problem, which reduces the community's trust in their operations. They also lack the educational and scientific background on the environmental level, imposing the need of graduated persons to fill this need.

On the educational level, the implementation of educational programs and courses in schools and universities is crucial to allow the graduation of experts in the ornithology field, serving in the development of scientific researches, and experts in law enforcement, knowing that all Lebanon counts only one professional ornithologist. In addition, an educational program should be integrated in schools and universities to promote bird watching and birds' identification, and ultimately the respect of nature and biodiversity mainly through ecotourism.

On another level, each municipality should be responsible in controlling violations occurring within its grounds, mainly concerning hunting at night, and employing mist nests. Barren trees used for hunting at night are publicly seen on rooftops, and control over this matter is relatively the easiest, requiring a simple patrol during the night.

The local community should also be involved and encouraged in law enforcement for example by taking pictures of violations or reporting known violators, and by being compensated in return. This will put poachers under pressure, by the feeling of being always watched and unsafe.

The ministries involved in the hunting issue should have a more prominent role in raising awareness, and organizing events over all the Lebanese territory, mainly in rural areas. Local NGOs should also be financed and encouraged to raise such events with an ecological and entertaining aspect, involving hunters and their families. In addition, the expertise of some prominent hunters in birds' identification could be used as a material in promoting ecotourism. In example, during spring migration (knowing that no hunting is allowed during this period), hunters can themselves organize bird watching events, benefiting of the revenue and promoting ecotourism at the same time.

Another issue to be controlled is the expansion of illegal pet shops that are selling protected wildlife in general, and particularly injured raptors, waterbirds (pelicans and storks), and illegally trapped songbirds, without any control or monitoring. Once this issue is controlled, poachers won't have any longer the possibility of marketing their illegally captured birds, leading to the decline of this practice to some extent. Imposing penalties on these establishments will serve as a

warning to both buyers and providers. The selling of shot birds to restaurants and markets should also be banned in order not to encourage hunters to overkill for financial purposes.

Finally, it may seem inappropriate to put the hunting issue as priority, while Lebanon and the whole region is facing major political and security problems. But noting the importance of this issue on a worldwide scale, it should not be ignored in the shade of the rest of the problems. International NGOs and countries affected by poaching in Lebanon (mainly European countries) should exercise more pressure and pose restrictions on the Lebanese government, mainly after breach of international agreements and conventions (such as the AEWA). It is important to note that the activity of international birds' protection NGOs in Lebanon is very minimal, and no serious actions from their part are being implemented, despite the importance of Lebanon as a flyway for Eurasian- African migratory birds.