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Assessing the Scope and Scale of Illegal Killing and Taking of Birds in the Mediterranean and establishing a basis for systematic monitoring

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Assessing the scope and scale of illegal killing and taking of birds in the Mediterranean, and establishing a basis for systematic monitoring



Blackcap trapped on lime-stick © BirdLife Cyprus



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Executive Summary

Overexploitation, in particular illegal killing and taking, is one of the main threats driving birds towards extinction globally and is known to be a particular and growing issue of concern, especially across the Mediterranean. The first report to review the killing of migratory birds in the Mediterranean as a whole was published in 1979 by ICBP (now BirdLife International). It estimated that hundreds of millions of migratory birds were killed annually in the Mediterranean region. Illegal killing of birds in the Mediterranean is known to remain an issue, but there is little quantitative information available. As this threat may be having a negative impact on the populations of some bird species, a quantitative assessment is needed to estimate how many individuals may be killed illegally each year, which species may be the most impacted and where the worst locations may be.

In 2014/15 BirdLife International led a 1.5-year project aiming to review all aspects of illegal killing and taking of birds in the Mediterranean. National legislation of the 27 assessed Mediterranean and peri-Mediterranean countries/territories was reviewed to define what was illegal at national level. Information on the species affected and the number of individuals illegally killed/taken each year, the worst locations and the illegal practices used in these countries/territories were then compiled using a diverse range of data sources and incorporating expert knowledge. These data were analysed to quantitatively assess the approximate scale and scope of illegal killing and taking of birds in the region and identify some of the species of greatest concern, and the highest priority locations at which urgent remedial action is required to tackle this threat. We estimated that 11-36 million individual birds per year may be killed/taken illegally in the region, many of them on migration. At the 20 worst locations with the highest reported numbers, 7.9 million individuals may be illegally killed/taken per year, representing 34% of the mean estimated annual regional total number of birds illegally killed/taken for all species combined. For species such as Blackcap, Common Quail, Eurasian Chaffinch, House Sparrow and Song Thrush, more than one million individuals of each species are estimated to be killed/taken illegally on average in the region every year. This assessment also highlighted the paucity of data on illegal killing and taking of birds in the region and the need to establish standardised monitoring. Best-practice guidelines for systematic monitoring of illegal killing of birds were developed to generate more reliable quantitative national-scale estimates of the number of birds illegally killed/taken per year. A road-map was developed to guide subsequent efforts by the BirdLife partnership, engaging with other stakeholders, to tackle the illegal killing and taking of birds in the Mediterranean region and beyond. Future steps will include (a) a programme of investment in and support to relevant stakeholders to strengthen and expand actions on the ground to reduce the illegal killing and taking of birds, targeting the worst locations, and involving enforcement of legislation, awareness-raising, education, advocacy, communications and publicity activities and (b) establishing,

expanding or strengthening coordinated and systematic monitoring of illegal killing and taking of birds in the worst affected countries and locations where such monitoring is currently lacking, or incomplete. Results of this project would help relevant stakeholders, including government departments and agencies, hunting groups, international policy instruments and NGOs to strengthen efforts and coordination to tackle this pressing issue for bird conservation.

Citation of the report

BirdLife International (2015) Assessing the scope and scale of illegal killing and taking of birds in the Mediterranean, and establishing a basis for systematic monitoring. Cambridge, UK: BirdLife International.

Overview of main outputs of the project

The information collated and analysed during this project has been summarised in a variety of outputs:

1. This full report

Presenting all the aspects of the project at regional (Mediterranean) and national levels

<http://www.birdlife.org/illegal-killing>



2. Scientific paper

Presenting results of the regional assessment of scope and scale of illegal killing and taking of birds in the Mediterranean

<http://journals.cambridge.org/action/displayFulltext?type=1&fid=10215519&jid=BCI&volumeId=26&issueId=01&aid=10215514&bodyId=&membershipNumber=&societyETOCSession=>



www.birdlife.org/datazone/sowb/casestudy/513

3. Legislation country factsheets

Presenting a review of national legislation on hunting, trapping and trading of birds in each assessed country/territory

<http://www.birdlife.org/datazone/country> (under 'resources' tab)

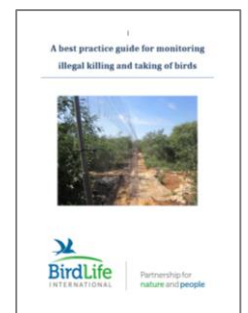


4. Best practice guide for monitoring illegal killing of birds

Providing a guide to improving or embarking on monitoring illegal killing and taking, including methodological principles, suggested steps and practical considerations, illustrated by a series of case studies describing different approaches applied in selected countries

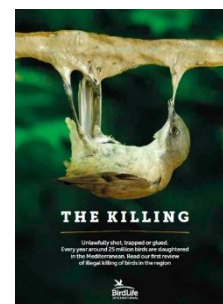
<http://www.birdlife.org/illegal-killing>

www.birdlife.org/datazone/sowb/casestudy/708



5. 'The Killing' report

Short communications publication for publicity purposes with some key headlines of the results of the project, focusing on the 10 countries most affected in terms of absolute numbers of birds illegally killed/taken.



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Abbreviations

AEWA: African-Eurasian Migratory Waterbird Agreement

CMS: Convention on the Conservation of Migratory Species of Wild Animals

EC: European Commission

EU: European Union

IBA: Important Bird and Biodiversity Area

NGO: Non-Governmental Organisation

Raptors MoU: Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia

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1. Context of the illegal killing and taking of birds in the Mediterranean

1.1. Background information

The illegal killing and taking of birds is known to be a particular and growing issue of concern across the Mediterranean region (e.g. Franzen 2010, Schneider-Jacoby & Spangenberg 2010, BirdLife International 2011, CABS 2014, Emile *et al.* 2014). The first region-wide review of killing of migratory birds was published in 1979 by ICBP (now BirdLife International). It estimated that hundreds of millions of migratory birds were killed each year in the Mediterranean (Woldhek 1979), mainly based on the numbers of hunters per country, but made no distinction between legal hunting and illegal killing. Subsequently, Magnin (1991) estimated that 1,000 million migratory birds are illegally shot and trapped every year in Mediterranean countries, including some 100,000 raptors and “probably many millions” of individuals of protected species or of huntable species killed illegally. Again these were mainly extrapolated from estimates of the numbers of people shooting birds (9-10 million) or trapping them (1 million) and anecdotal numbers of traps and shots fired in areas known to have a high level of illegal killing and trapping (e.g. Malta, Cyprus and Turkey). Schneider-Jacoby & Spangenberg (2010) and CABS (2014) also reported that “millions” of birds are illegally killed in Mediterranean countries. Illegal killing and taking of birds occurs not only in North Africa and the Middle East (BirdLife International 2007), but it is also known to be widespread in Europe, including EU countries despite national and EU legislation (BirdLife International 2011).

These studies have increased our understanding of the breadth and potential scale of illegal activities taking place across the Mediterranean region and provide useful qualitative information, but there is **little robust quantitative information on which species are involved, the total numbers of individual birds affected, the impacts on bird populations, trends over time, the most significant illegal activities, the most significant motivations for illegal killing and taking, or the geographical variation in all of these**. While some quantitative data are available for some Mediterranean countries (e.g. Raine 2007 for Malta, BirdLife Cyprus 2015 for Cyprus, Mikuška 2014 for parts of Croatia, Murgui 2014 for parts of Spain), such data are lacking from others, and so the region-wide picture is still obscure.

Recognising that illegal killing and taking of birds represents a significant conservation issue, international activity to address the issue has accelerated in recent years, with the EC publishing a “Roadmap towards eliminating illegal killing, trapping and trade of birds” (European Commission 2012), the Bern Convention developing the “Tunis Action Plan for the eradication of illegal killing, trapping and trade of wild birds” (Council of Europe 2013), and the CMS establishing an Intergovernmental Task Force to address illegal killing, taking and trade of migratory birds in the

Mediterranean (UNEP/CMS 2014). However, the current lack of data hampers the ability of governments, policy instruments, organisations and initiatives to set appropriate priorities and address the issue. Robustly quantifying the scale and scope of the illegal killing and taking of birds and its possible impact on individual species is therefore an urgent priority (Vickery *et al.* 2014).

1.2. Project description

1.2.1. Objectives

To address this need and provide information of utility for priority-setting both across the geographic region and within single species conservation efforts, **BirdLife International coordinated between March 2014 and September 2015 a project assessing the scope and scale of illegal killing and taking of birds in the Mediterranean, and establishing a basis for systematic monitoring.** This project was coordinated by BirdLife International's Global and Regional secretariats (in Africa, Europe and Middle East) and aimed to review all the aspects of illegal killing and taking of birds in 27 countries/territories. The project objectives were:

1. **To undertake high-level review of national legislation on hunting, trapping and trading of birds**, thus defining what is illegal at the national level.
2. **To assess the scale, scope and impact of illegal killing and taking of birds** by compiling information on the species, numbers of individuals, worst locations and illegal practices, using a diverse range of data sources and incorporating expert knowledge.
3. **To develop best-practice techniques and protocols for systematic monitoring of the different type of illegal activities**, to determine robust trends over time and compare scale of illegal activities between geographical areas.
4. **To promote results through communications and advocacy**, to increase awareness about the illegal killing of birds among various audiences.
5. **To develop a road-map and portfolio of responses** for subsequent efforts by BirdLife in collaboration with others to tackle the illegal killing and taking of birds.

Results are presented in this report at the regional (Mediterranean) level. Results at the national level are presented in [Annexes](#).

1.2.2. General principles

For this assessment, we defined **illegal killing and taking of birds (hereafter 'illegal killing')** as **any form of deliberate action that results in the death or removal from the wild of an individual bird (regardless of whether it was the target of this action or not) that is prohibited under national or regional legislation.** Examples of illegal killing include hunting of 'game' species during the closed

1. Context

season, use of prohibited methods (e.g. mist-nets, lime-sticks, poisons) or activities (e.g. egg-collecting), killing protected species, and/or inside protected areas in which such activities are forbidden. Species can be killed/taken for different reasons, such as for food, trade or to be used as caged pets.

Illegal killing of birds was reviewed in 26 Mediterranean and peri-Mediterranean (hereafter Mediterranean) countries/territories and Georgia (Map 1.1). Owing to the wide distribution of most wild bird species occurring in the region, we carried out assessments at the national level even if only part of the country/territory assessed is in the Mediterranean area. All native species regularly present in any season in at least one of the assessed countries (i.e. excluding vagrants) were assessed. Between July 2014 and June 2015, we asked Birdlife partners and other national experts/organisations from 27 targeted countries/territories to provide information about the hunting and taking legislation, the scope and scale of illegal killing and the protocols currently implemented in their respective countries, through templates and many one-to-one discussion. National contributors (see list of contributors in [Annexes](#)) were consulted at all stages and provided input to all products of this project.



Map 1.1 Map of the Mediterranean region with the 27 assessed countries/territories (in white). ISO code used for names of Balkan countries (Albania = AL, Bosnia and Herzegovina = BA, Croatia = HR, Macedonia = MK, Montenegro = ME, Serbia = RS, Slovenia =SI) and Palestinian Authority Territories (PS).

2. Review of the illegal killing and taking of birds in the Mediterranean

2.1. Review of the national hunting, trapping and trading legislation

The aim was to define what is illegal at the national level and to identify major areas of concern in the national legislation. A high-level review of national legislation on hunting, trapping and trading of birds of all assessed countries was therefore undertaken using a specific template to compile information (available upon request). National legislation can be very complex, e.g. with specific bag limits and permitted times and dates for taking particular species changing annually. The aim of this review was not to collect highly detailed information, but to focus at high level and identify any clear legislative gaps.

All 27 assessed countries/territories, except Libya, have hunting/taking regulations in their national legislation. This varies from lists of legally huntable/takable species with open and closed seasons (e.g. in EU countries) to complete (permanent or temporary) hunting bans on all species (in six countries: Albania, Algeria, Gibraltar, Lebanon, Palestinian Authority Territories and Syria). In the case of complete national hunting bans, we considered all killing in the country as illegal. In the case of Libya, prior to the recent political upheaval, all hunting of birds was illegal. Currently there is a legislative hiatus, and given this political uncertainty we assumed that all current killing of birds is illegal. All granted derogations from the EU Birds Directive were considered as legal, even if some of these derogations are currently contested by conservationists on the basis of their sustainability. **The information collected was summarised in country factsheets¹ available on the BirdLife Data Zone** (in country profiles under 'resources' tab: <http://www.birdlife.org/datazone/country>).

Hunting legislation seems not sufficiently detailed in some non-EU Mediterranean countries (e.g. permitting hunting of 'larks', 'plovers' or 'falcons', rather than individual species), hence a maximum of 152 native species may be legally huntable around the Mediterranean, of which 14 are listed as globally threatened (VU, EN, CR) or Near Threatened (NT) by BirdLife International on the IUCN Red List. The mean number of huntable bird species reported per country was 25 species (range: 0 in countries where hunting is banned to 73 in Morocco, mainly owing to insufficiently detailed legislation mentioning groups rather than individual species); the mean per country is 33 huntable

¹ *The information found in these factsheets prepared was updated in November 2014. Every reasonable effort has been made to ensure that the information presented is current and accurate at this time, but recent legislative changes may not be reflected. The content of these factsheets is for information only and is not intended as legal advice. If official legal documentation of national legislation is required it should be sought from the relevant national government authority.*

species if countries with total hunting ban are excluded, representing on average 11% of the number of bird species regularly present in the country (range: 6 (2%) in Slovenia to 73 (22%) in Morocco).

Shooting is the most widespread practice for hunting in the Mediterranean region, allowed by law in all countries, except the ones with a complete hunting ban in place. Trapping is legally only allowed in four countries (Egypt, France, Malta and Spain; under EU Birds Directive derogations for the latter three countries) and falconry is also legally allowed in only five countries (Croatia, Georgia, Slovenia, Tunisia and Turkey). Taking of eggs and/or chicks is prohibited in all assessed countries, except in Tunisia where yearly four young Peregrine falcons can be taken by members of the Falconers Association in El Haouaria from the nest after a specific administrative authorisation.

Hunting seasons are well defined in most cases, with open season during the wintering period for migratory birds (ranging from August to March considering all the countries). In some countries, however, hunting of migratory birds coincides with spring migration and the breeding season and the length of some hunting seasons may result in impacts on the breeding bird populations. Spring hunting is allowed by law in Malta for Common Quail *Coturnix coturnix* and European Turtle-Dove *Streptopelia turtur* under EU Birds Directive derogation and in Tunisia for Common Quail using Sparrowhawks. Many other species may be affected by this activity including breeding birds. In Bosnia-Herzegovina, Macedonia and Serbia, hunting seasons are not always well defined in the legislation and some species are potentially huntable all-year round, even if it is stated in the legislation that hunting during breeding period is prohibited.

Legislation on bird trade appears to be less accessible; as trade legislation was unknown in six assessed countries (Egypt, Georgia, Montenegro, Serbia, Slovenia, and Turkey) and not defined in four countries (Bosnia and Herzegovina, Jordan, Lebanon and Syria). Trade of protected species is prohibited in all other countries with national legislation on this issue, or authorised with specific permit only. Trade of hunted species is allowed by law (with or without a specific permit requested according to the country) in nine countries (Albania, Algeria, Croatia, Cyprus, France (concerns only 5 species) Macedonia, Portugal, Morocco and Spain). In Greece and Italy, only individuals raised in captivity can be traded and in Gibraltar, Israel, Palestinian Authority Territories and Tunisia, trade of all species is prohibited.

2.2. Scale, scope and impact of illegal killing and taking of birds

Note: More details on this analysis can be obtained in the scientific paper Brochet et al. (2016) published in the peer-reviewed journal Bird Conservation International, accessible online at <http://journals.cambridge.org/action/displayFulltext?type=1&fid=10215519&jid=BCI&volumeld=26&issuelid=01&aid=10215514&bodyId=&membershipNumber=&societyETOCSession=>

Data from Georgia are not presented in this paper and so not summarised in this section, but results for this country is presented in the Annex, as for the other assessed countries.

The aim was to better understand which species might be most affected, why and how, which countries are the most seriously affected by the issue of illegal killing and where are the worst locations for the illegal killing of birds. We asked national experts to provide quantitative information compiled in a specific template, based on their own data, experience and/or knowledge, as well as any available, relevant information (data from publications, grey literature, police reports, consultation of individuals and organisations who may have relevant information, such as government departments, hunting associations, animal recovery centres, etc.) for each of species regularly present in their country.

The datasets for each country were then made available online for review by external experts from conservation and ornithological organisations, hunting associations, and the scientific/technical bodies and/or national focal points of relevant international conventions (e.g. CMS, AEWA, Raptor MoU and the Bern Convention) with feedback, corrections, additional information or comments requested. Our aim was to ensure that the data were as accurate as possible and integrated all relevant information. Any feedback was then used by the national experts to revise the data, and these revised datasets were used in our analysis.

2.2.1. Number of birds estimated to be illegally killed in the Mediterranean

In total, 11-36 million individual birds were estimated to be illegally killed in the Mediterranean region each year (Table 2.1). Non-trivial numbers of birds were reported to be killed illegally in all Mediterranean countries, except in Gibraltar and Israel (Table 2.1). The potential highest total number of individuals estimated to be known or likely to be illegally killed per year were reported in Italy (3.4-7.8 million), followed by Egypt (0.3-10.6 million) and Syria (2.9-4.9 million; Table 2.1, Map 2.1).

We assessed in which countries illegal killing may have the greatest impact on bird populations by calculating an “impact index”. For all species likely to be significantly impacted by illegal killing in each country, we used the ratio between the mean estimated number of individual birds illegally killed in the country and the mean estimated global population, and defined the mean of these values for all species as the “impact index” for the country. Our estimated “impact index” was highest in Libya followed by Turkey (Map 2.2).

Trends in the scale of illegal killing, averaged across all species, varied across countries, with overall reported trends increasing in four countries, stable in nine, declining in four and unknown in seven (Map 2.1).

2.2.2. Species reported to be impacted

Among the 561 species assessed, 375 species (67%) were reported to be known, or likely to be killed illegally in substantial numbers each year (73% of waterbird species, 73% of raptor species and 67% of passerine species). An additional 81 species (14%) were reported to be known, or likely to be killed illegally in insignificant numbers.

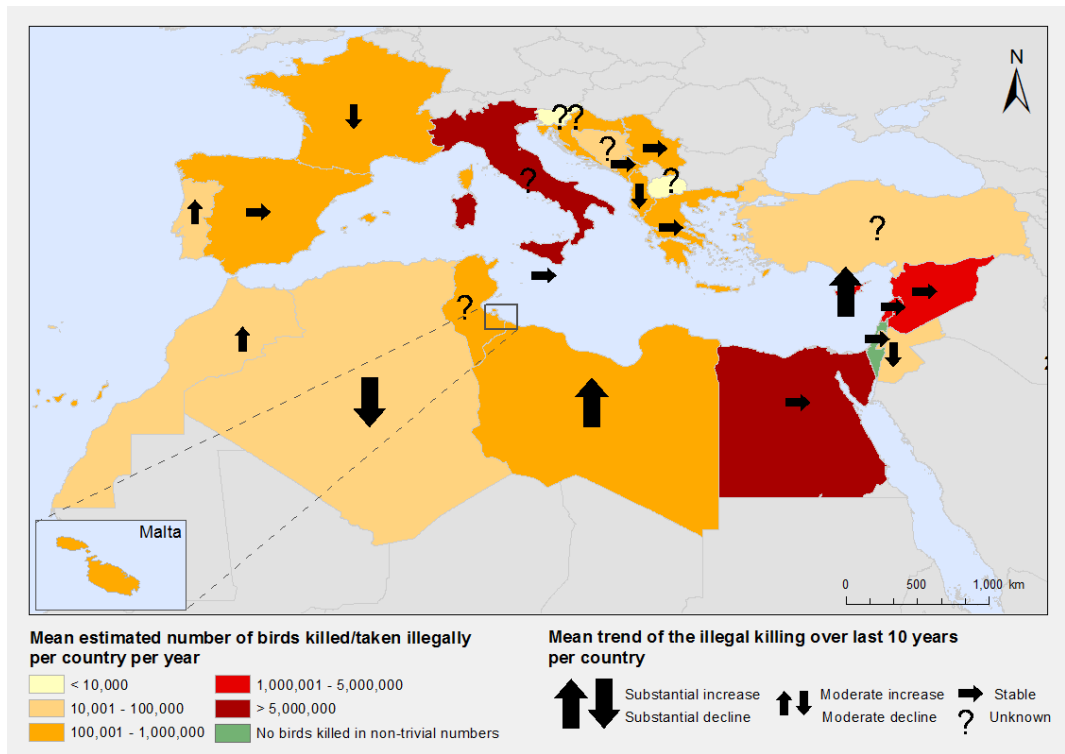
In terms of absolute numbers, passerines may be more impacted by illegal killing than waterbirds and raptors (Table 2.2). At the species level Blackcap, Common Quail, Eurasian Chaffinch, House Sparrow and Song Thrush each have a mean estimate of >1 million individuals illegally killed per year (Table 2.3).

2. Review of the illegal killing and taking of birds in the Mediterranean

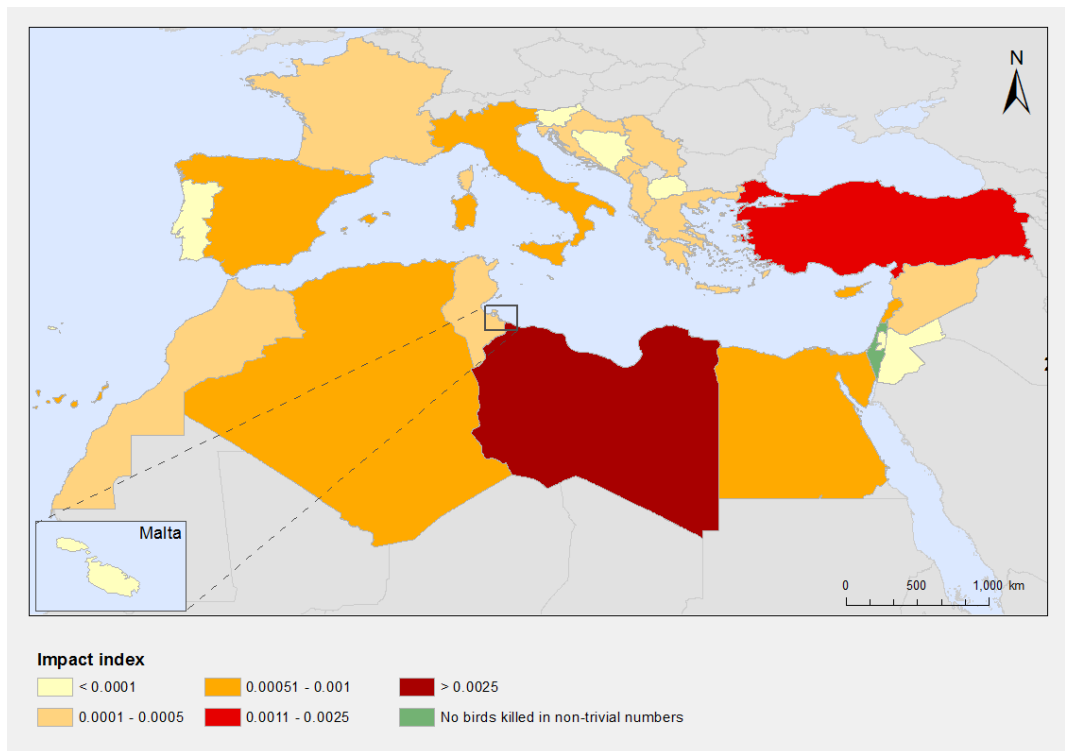
Table 2.1. Estimated numbers of individual birds illegally killed/taken per year in each assessed country/territory in the Mediterranean.

Country	No. species assessed	% of species known or likely to be illegally killed/taken (values in parentheses include species killed/taken in insignificant numbers)	Mean estimated no. individual birds illegally killed/taken per year (min – max)
Albania	296	32 (62)	265,000 (206,000 – 325,000)
Algeria	310	6 (13)	28,900 (17,500 – 40,300)
Bosnia and Herzegovina	274	16 (40)	34,700 (22,400 – 46,900)
Croatia	306	32 (45)	510,000 (166,000 – 855,000)
Cyprus	278	27 (51)	2,300,000 (1,300,000 – 3,200,000)
Egypt	372	27 (35)	5,400,000 (302,000 – 10,600,000)
France	349	32 (59)	522,000 (149,000 – 895,000)
Gibraltar	161	0 (0)	No birds killed in non-trivial numbers
Greece	345	32 (50)	704,000 (485,000 – 922,000)
Israel	379	0 (0)	No birds killed in non-trivial numbers
Italy	348	43 (66)	5,600,000 (3,400,000 – 7,800,000)
Jordan	323	8 (24)	17,300 (13,000 – 21,600)
Lebanon	291	59 (91)	2,600,000 (1,700,000 – 3,500,000)
Libya	265	23 (25)	503,000 (325,000 – 680,000)
Macedonia FYR	321	3 (10)	2,100 (600 – 3,700)
Malta	212	26 (64)	108,000 (5,800 – 211,000)
Montenegro	306	21 (36)	130,000 (64,000 – 197,000)
Morocco	331	19 (29)	74,400 (23,400 – 125,000)
Palestinian Authority Territories	263	19 (38)	89,700 (70,000 – 109,000)
Portugal	291	20 (90)	82,400 (32,400 – 132,000)
Serbia	302	20 (74)	133,000 (104,000 – 163,000)
Slovenia	283	9 (27)	8,000 (200 – 15,700)
Spain	376	16 (45)	254,000 (103,000 – 405,000)
Syria	333	43 (90)	3,900,000 (2,900,000 – 4,900,000)
Tunisia	303	33 (62)	139,000 (50,500 – 227,000)
Turkey	387	21 (33)	71,200 (25,000 – 117,300)
Mediterranean region	561	67 (81)	23,500,000 (11,500,000 – 35,500,000)

2. Review of the illegal killing and taking of birds in the Mediterranean



Map 2.1. Spatial pattern of illegal killing/taking of birds in the Mediterranean in terms of the mean estimated number of individual birds illegally killed/taken per year per country and the mean estimated trend in illegal killing/taking over the last 10 years.



Map 2.2. Spatial pattern of potential impact of illegal killing in assessed countries/territories on global populations of bird species.

2. Review of the illegal killing and taking of birds in the Mediterranean

In terms of the impact on global populations, we calculated the ratio between the mean estimated number of individual birds illegally killed in the region and the mean estimated global population. Illegal killing may be more significant for waterbirds and raptors, compared with passerines (Table 2.2).

At the species level, for species of conservation concern, with Rock Partridge (Near Threatened), African Houbara (Vulnerable) and White-headed Duck among those potentially the most impacted (Table 2.4).

Table 2.2. *Estimated numbers of individual birds illegally killed/taken per year in the Mediterranean for pigeons/doves, passerines, raptors and waterbirds, and the most impacted families within these.*

Group/family of species	No. species in each group/family	Mean estimated no. individual birds illegally killed/taken per yr (min – max) (millions)
Waterbirds	165	1.02 (0.50 – 1.55)
- Duck, geese, swans	34	0.33 (0.14 – 0.52)
- Rails, gallinules, coots	9	0.36 (0.17 – 0.54)
- Sandpipers, snipes, phalaropes	30	0.18 (0.10 – 0.26)
Raptors	59	0.08 (0.04 – 0.12)
- Hawks, eagles	33	0.06 (0.03 – 0.09)
Pigeons, Doves	11	0.71 (0.37 – 1.04)
Passerines	237	19.86 (9.43 – 30.29)
- Buntings	13	0.30 (0.17 – 0.43)
- Chats and old world flycatchers	34	1.08 (0.54 – 1.61)
- Crows and jays	12	0.11 (0.04 – 0.18)
- Finches	25	4.37 (2.91 – 5.82)
- Larks	19	2.35 (1.72 – 2.99)
- Old world warblers	43	3.34 (2.05 – 4.63)
- Sparrows, snowfinches and allies	9	4.83 (0.20 – 9.46)
- Starlings	4	0.45 (0.17 – 0.73)
- Thrushes	6	1.76 (0.92 – 2.60)
- Wagtails and pipits	14	0.91 (0.58 – 1.24)
Others	89	1.81 (1.14 – 2.50)

2. Review of the illegal killing and taking of birds in the Mediterranean

Table 2.3. The 10 bird species with the largest estimated number of individual birds illegally killed/taken per year in the Mediterranean.

Species	Mean estimated no. individual birds illegally killed/year (min – max) (millions)	Migratory status	Countries with the largest estimated no. individual birds illegally killed/year
House Sparrow	4.72 (0.15 – 9.28) ¹	Non-migrant	Egypt, Lebanon, Italy
Eurasian Chaffinch	2.88 (2.15- 3.62) ²	Migrant	Italy, France, Lebanon
Blackcap	1.79 (1.15 – 2.44)	Migrant	Syria, Lebanon, Cyprus
Common Quail	1.65 (1.08– 2.23)	Migrant	Lebanon, Syria, Egypt
Song Thrush	1.25 (0.74 – 1.75)	Migrant	Cyprus, Italy, Spain
Calandra Lark	0.95 (0.70 – 1.20) ³	Migrant	Lebanon, Syria, Montenegro
Eurasian Skylark	0.75 (0.51- 0.98)	Migrant	Syria, Albania, Italy
Meadow Pipit	0.72 (0.51 – 0.93) ⁴	Migrant	Italy, Lebanon, Syria
European Robin	0.63 (0.39 – 0.88)	Migrant	Italy, France, Syria
European Turtle-dove	0.60 (0.34 – 0.87)	Migrant	Libya, Syria, Greece

¹ This result is largely driven by an estimate of 50,000-9,000,000 individuals illegally killed per year in Egypt (96% of the total mean estimate)

² This result is largely driven by an estimate of 2,000,000-3,000,000 individuals illegally killed per year in Italy (87% of the total mean estimate)

³ This result is largely driven by an estimate of 528,000-924,000 individuals illegally killed per year in Lebanon (76% of the total mean estimate)

⁴ This result is largely driven by an estimate of 500,000-900,000 individuals illegally killed per year in Italy (97% of the total mean estimate)

Table 2.4. The 10 threatened and Near Threatened bird species with potentially the highest ratio between the estimated number of individuals killed/taken illegally per year in the Mediterranean and the global population size. 2014 IUCN Red List category: NT = Near Threatened, VU = Vulnerable, EN = Endangered, CR = Critically Endangered.

Species (IUCN Red List category)	Ratio of estimated no. individual birds illegally killed/taken to the global population (min – max)	Migratory status	Countries with the largest estimated no. individual birds illegally killed/year
Rock Partridge (NT)	0.045 (0.014 – 0.101)	Altitudinal Migrant	Croatia/Italy, Albania
African Houbara (VU)	0.041 (0.017 – 0.103)	Unknown	Libya, Algeria, Tunisia
White-headed Duck (EN)	0.035 (0.003 – 0.089) ¹	Migrant	Turkey, Syria, Algeria
Spanish Imperial Eagle (VU)	0.035 (0.008 – 0.061) ²	Non-migrant	Spain
Ferruginous Duck (NT)	0.029 (0.014 – 0.053)	Migrant	Serbia, Libya, Croatia
Syrian Serin (VU)	0.026 (0.007 – 0.106) ³	Migrant	Lebanon, Syria
Eurasian Curlew (NT)	0.019 (0.012 – 0.030) ⁴	Migrant	Libya, Italy, Albania
Red Kite (NT)	0.016 (0.005 – 0.030) ⁵	Migrant	Spain, Italy Portugal
Sociable Lapwing (CR)	0.011 (0.004 – 0.019)	Migrant	Syria, Turkey
Marbled Teal (VU)	0.010 (0.003 – 0.019)	Migrant	Turkey, Syria, Tunisia

¹ This result is largely driven by an estimate of 10-610 individuals illegally killed per year in Turkey (84% of the total mean estimate)

² This result is largely driven by an estimate of 20-150 individuals illegally killed per year in Spain (98% of the total mean estimate)

³ This result is largely driven by an estimate of 80-320 individuals illegally killed per year in Lebanon (84% of the total mean estimate)

⁴ This result is largely driven by an estimate of 15,000-20,000 individuals illegally killed per year in Libya (85% of the total mean estimate)

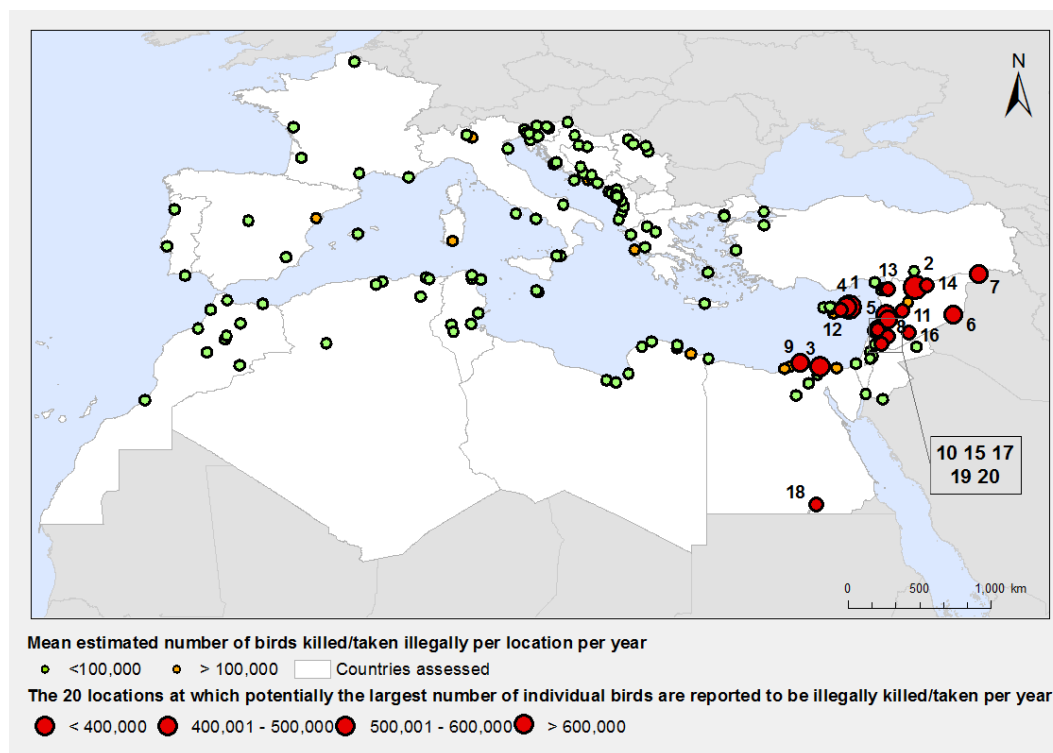
⁵ This result is largely driven by an estimate of 430-1,800 individuals illegally killed per year in Spain (81% of the total mean estimate)

2.2.3. Worst locations reported for illegal killing of birds

Among the 159 potential worst locations for illegal killing identified across the region by national experts (Map 2.3), **>100,000 individual birds were estimated to be illegally killed each year at 32 of these sites (5.3-13.7 million in total)**, representing 40% of the mean estimated annual regional total number of birds illegally killed/taken for all species combined. The 20 worst locations with the highest number of birds likely to be illegally killed spanned four countries: Cyprus, Egypt, Lebanon and Syria. In these 20 locations, 4.6-11.3 million individual birds were estimated to be illegally killed per year, representing 34% of the mean estimated annual regional total number of birds illegally killed/taken for all species combined (Table 2.5, Map 2.3).

Table 2.5. The 20 locations at which the largest estimated numbers of individual birds are killed/taken illegally each year in the Mediterranean. Location numbers correspond to those in Map 3.4.

Location [country]	Mean estimated no. individual birds illegally killed/year (min – max)
1. Famagusta area [Cyprus]	689,000 (405,000 – 973,000)
2. Menbej-Tishreen Dam [Syria]	679,000 (504,000 – 853,000)
3. Manzala [Egypt]	593,000 (33,000 – 1,200,000)
4. Dhekelia Eastern Sovereign Base Area [Cyprus]	574,000 (337,000 – 811,000)
5. Akkar (Andkit-Mounjez) [Lebanon]	503,000 (327,000 – 679,000)
6. Abo Hardoub [Syria]	465,000 (346,000 – 585,000)
7. Malkeieh [Syria]	465,000 (346,000 – 585,000)
8. Fakiha [Lebanon]	438,000 (285,000 – 592,000)
9. Burullus [Egypt]	428,000 (24,000 – 832,000)
10. Roum-Aytouli [Lebanon]	361,000 (235,000 – 487,000)
11. Jeb Al-Jarrah [Syria]	349,000 (259,000 – 439,000)
12. Ayios Theodoros/Maroni areas [Cyprus]	345,000 (202,000 – 487,000)
13. Salqeen [Syria]	310,000 (231,000 – 390,000)
14. Ain Eissa [Syria]	310,000 (231,000 – 390,000)
15. Dalboun [Lebanon]	297,000 (193,000 – 400,000)
16. Saikal Lake [Syria]	252,000 (187,000 – 317,000)
17. Qaraoun area [Lebanon]	245,000 (159,000 – 331,000)
18. Lake Nasser [Egypt]	225,000 (12,000 – 437,000)
19. Heijaneh Lake [Syria]	213,000 (158,000 – 268,000)
20. Tel Shehab [Syria]	194,000 (144,000 – 244,000)



Map 2.3. The potential worst locations where large number of individual birds are reported to be illegally killed/taken per year. Numbers match those in Table 2.5.

2.2.4. Reasons for killing and types of illegality

Results about the importance of each potential reason for illegal killing are presented as an “index of importance”. **Food², Sport and Capture as cagebirds/decoys/etc. had the highest indices of importance (Figure 2.1).** Most species (62%) were reported to be killed for multiple reasons, e.g. food and sport together, e.g. when birds killed for sport are then taken home and eaten. Taxidermy and predator control were of relatively minor importance, although taxidermy may affect rare species (highly targeted for collection; e.g. in Albania, Malta and Lebanon) and predator control was listed in some European countries (e.g. France, Portugal and Spain) as the primary reason for targeting raptor species. Reasons mentioned under the “other” category included: accidental bycatch/accidental poisoning/wrong identification (64% of the other reasons), species persecuted as a result of ‘cultural beliefs/ superstitions’ (22%), species taken to be used as food for other trapped birds (10%) and species or species product (e.g. eggs, feathers) taken for sale (4%).

We used a similar approach to calculate an analogous “index of importance” for each potential type of illegality in each country. **Illegal shooting and illegal trapping had the highest indices of**

² The category ‘food’ covers a wide range of activities including commercial sale for food/ culinary delicacy, personal consumption as a culinary delicacy, eating of a kill made primarily for sport and subsistence.

importance (Figure 2.2). Other types mentioned under the “other” category included: use of illegal methods (decoy, tape-lure, etc.; 40% of other types), egg and/or chick collection (23%), nest destruction (20%), killing/taking by people without licence/authorisation (10%) and killing/taking beyond legal hunting quotas (7%).

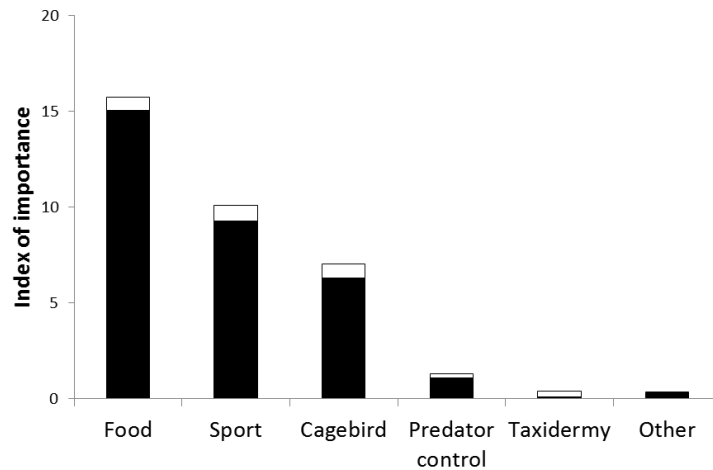


Figure 2.1. Index of importance of the potential reasons for illegally killing/taking birds in the Mediterranean region. Solid bars indicate the primary reasons, open bars indicate secondary reasons.

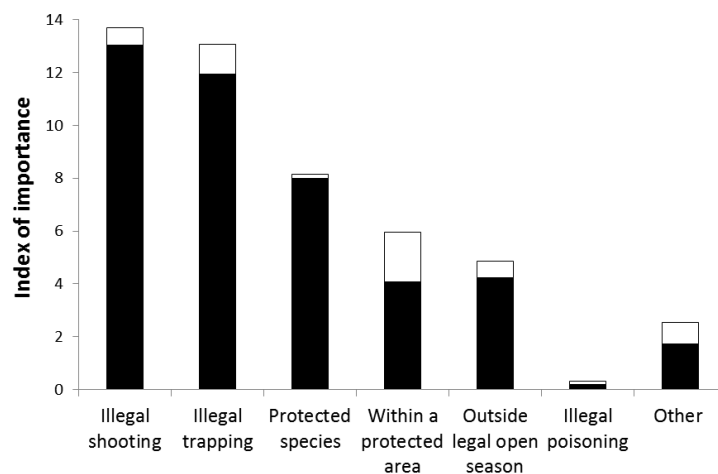


Figure 2.2. Index of importance of the potential types of illegality for killing/taking birds in the Mediterranean region. Solid bars indicate the primary types, open bars indicate secondary types.

2.3. Standard methodology for monitoring illegal killing of birds

Information on activities to monitor illegal killing of birds being implemented by BirdLife Partners and other organisations within their countries has been collected using a specific template for different types of illegal activities (mist-netting, liming, poisoned baits, shooting, etc.). The

information obtained was synthesised to produce draft a **best practice guide for monitoring illegal killing and taking of birds**, in order to determine robust trends over time and compare scale of illegal killing between geographical areas. A workshop was organised in Madrid (Spain) in February 2015 to discuss these, involving BirdLife Partners and external experts (enforcement agencies, experts in monitoring, and representatives of international conventions).

Our review of protocols currently implemented in the region, highlighted **the lack of systematic monitoring schemes which aim to generate reliable quantitative national-scale estimates of the number of birds illegally killed per year**. Some countries show a strong commitment to tackle this issue and are currently collecting relevant data on illegal killing, but without any systematic monitoring protocols. Among the Mediterranean countries, only Cyprus is known to have an ongoing systematic illegal bird trapping monitoring programme (BirdLife Cyprus 2015a), while Egypt is in the process of developing one (Emile *et al.* 2014).

Useful applicable information is available in the general literature on monitoring methods, sampling design etc., but setting up and running monitoring schemes on illegal activities presents particular challenges. Some of these challenges are country-specific, but within the BirdLife Partnership and other collaborating organisations there exists a body of knowledge and experience that could usefully be shared. Running a scheme to monitor illegal killing of birds requires use of appropriate methodology, but also data management and analysis, data presentation and communication, recruitment and maintenance of a network of people, appropriate consideration of security issues, involvement of the local community and many other elements. BirdLife International has developed a **Best Practice Guide for monitoring illegal killing and taking of birds to provide BirdLife Partners and other stakeholders with a toolkit of best practices covering all the aspects of monitoring the different activities of illegal killing of birds in order to improve the standard and quality and support the geographic expansion of monitoring schemes**. The Best Practice Guide aims to be a source of information for immediate use, as well as a source of inspiration for further development.

Implementing standardised, replicable methods as proposed in the Best Practice Guide would generate more robust information about the illegal killing of birds and would help to underpin efforts to tackle this issue on the ground.

3. Road map for addressing the illegal killing and taking of birds in the Mediterranean

Illegal killing is a complex conservation problem, with key methods of killing, targeted species and motivations varying between countries. There are different and often complex reasons for illegal killing of birds in different countries which means that the most effective means of addressing illegal killing is also likely to differ between countries. Addressing illegal killing requires also action at local, national and international scales involving a variety of stakeholders, from local and national law enforcement agencies, to the judiciary, hunting groups to national government authorities, NGOs to international policy instruments. In each case it may be beneficial to develop a national plan of action to agree and guide multi-stakeholder action on illegal killing, such as the ones recently developed in Egypt/Libya and Cyprus to address the illegal trapping (Emile *et al.* 2014, BirdLife Cyprus 2015b). Overall, some key general areas for action would be:

- i) Improvements to the legislation itself.
- ii) Improving compliance with existing legislation.
- iii) Improving and scaling-up enforcement of existing legislation.
- iv) Applying consistently more effective penalties that act as a deterrent to illegal killing.
- v) Implementing systematic monitoring of illegal killing at national scale and making results available internationally
- vi) Collating and analysing illegal killing monitoring data at international level and feeding it into species action planning and population modelling approaches.

International policy instruments (nine assessed countries are members of the EU, 22 are CMS signatory parties of the CMS, 21 of the AEWA, 14 of the Raptors MoU and 17 of the Bern Convention) may be able to encourage and support development of national plans of action and contribute to many of the key areas mentioned previously. In addition, they may be able to support national stakeholders in tackling illegal killing and taking of birds, by promoting experience-sharing between countries facing similar issues.

BirdLife International is also strongly committed to helping both BirdLife Partners and other stakeholders to tackle this issue. Future steps (some of them funding dependent) would include:

- Identifying gaps where national legislation fails to comply with international conventions and promoting action to strengthen legislation.
- Investing in and supporting BirdLife Partners to strengthen and expand actions on the ground to reduce this threat, targeting the worst locations, and involving contributing to improved enforcement of legislation, awareness-raising, education, advocacy, communications and publicity activities.

3. Roadmap for addressing the illegal killing and taking of birds in the Mediterranean

- Establishing, expanding or strengthening coordinated and systematic monitoring of illegal killing and taking of birds in the worst affected countries and locations where such monitoring is currently lacking, or incomplete.
- Promoting results of this project to and increasing collaboration with international initiatives on the same topic (CMS Task Force on illegal killing, taking and trade of birds in the Mediterranean, Tunis Action Plan for the eradication of illegal killing, trapping and trade of wild birds of the Bern Convention, EC Roadmap, etc.).
- Extending the review of illegal killing and taking of birds to other regions within the African-Eurasian flyway (rest of Europe, Arabian Peninsula, sub-Saharan Africa and Central Asia) and other flyways. The methodology used here could indeed be applied in other regions (Asia, Americas).

4. Conclusion

This review is the first pan-Mediterranean analysis providing detailed quantitative estimates of the scope and scale of illegal killing of birds. However, illegal activities are typically difficult to detect, and systematic monitoring systems are far from to be comprehensive across the region. The quality of the data gathered varies, with considerable uncertainty over some estimates, and many being based on expert opinion and few scored as high confidence. Consequently, the figures presented in this paper should be considered as current best estimates, which can be further refined through future work. Improved availability of systematic monitoring data on illegal killing should allow repeat assessments to improve in accuracy over time.

Illegal killing was reported to be widespread among Mediterranean species: 67% of bird species regularly present in at least one Mediterranean country were reported to be impacted in significant numbers and in total 11-36 million individuals per year may be killed/taken illegally across the region. Earlier studies (e.g. Woldhek 1979, Magnin 1991) estimated that hundreds to thousands of millions of individual birds were killed per year. It is possible that better law enforcement and implementation of strong legal protection, such as that provided under the EU Birds Directive, may have reduced the total numbers of birds illegally killed each year. However, numbers of migratory birds in the region have also declined substantially, with one study estimating that there are 300 million fewer farmland birds in Europe today than in 1980, primarily as a result of agricultural intensification (BirdLife International 2013). It is also plausible that earlier estimates were inaccurate by up to one or two orders of magnitude.

As a preliminary assessment setting a baseline for future more detailed studies, this work provides useful indications about the overall magnitude of the issue, which species may be most heavily affected, which countries may have the most significant problems with illegal killing, and which may be the worst locations. This assessment also highlights the need to establish systematic monitoring schemes which use standardised, replicable methods to generate more robust data to inform priority-setting for national and international action to tackle this issue effectively.

Conservation and sustainable use of bird populations in the Mediterranean require better knowledge, more effective legislation and more robust enforcement. Relevant stakeholders including governmental departments and agencies, hunting groups, NGOs and international policy instruments should strengthen efforts and coordination to tackle this pressing issue for bird conservation.

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Annex. National reviews of the illegal killing and taking of birds in Mediterranean countries

Note: Results of the review of illegal killing and taking of birds in the Mediterranean are presented in the main text with some information at the country level (e.g. [Table 2.1](#)). Please consult the report for more detailed information about data collection and analysis. For more information about the review at national level, please contact the BirdLife Partner of the country (see <http://www.birdlife.org/worldwide/partnership>).

All the following national results are presented on the same template:

- **Contributors to the review:** Name and organisation of the main national contact point and names and organisations of other contributors.
- **Hunting and trapping legislation:** Summary of the review of the national legislation, highlighting more particularly the number of legally huntable species, restrictions, illegal practices and any identified gap in the legislation. More information is available in country factsheets on the BirdLife Data Zone (under country profiles 'resources' tab): <http://www.birdlife.org/datazone/country>.
- **Scale and scope of illegal killing and taking of birds:** Summary of the national assessment of the illegal killing and taking of birds, highlighting more particularly the reported trend in the scale of the illegal activity over at least the last 10 years, the total estimated numbers of birds illegally killed (for all the species and the five species the most affected in terms of absolute numbers), the type of information/data used for the assessment, the main reason and the main type of illegality reported. Detailed national data are available upon request at science@birdlife.org.
- **Worst areas for illegal killing and taking of birds:** Information of worst areas identified within the country and their location on a map. Main cities and protected areas are also presented on each map for information (IUCN and UNEP-WCMC 2015). Detailed data on worst locations are available in the supplementary information of Brochet *et al.* (2016).
- **Recommendation to tackle the illegal killing and taking of birds:** background information on this issue in the country and recommendations suggested by BirdLife Partners to address it at national level.

A.1. Albania

Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Albania, with many laws on hunting, season, huntable species, hunting areas, weapons tariffs, etc. However hunting is completely banned from March 2014 until March 2016 and trapping is forbidden when it is unselective and causes mass eradication.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in moderate decline**, mainly owing to a complete hunting ban instated since autumn 2014. **206,000-325,000 individual birds may be illegally killed/taken each year in Albania** (Table A.1). Estimates are based on expert opinion and information from few sites extrapolated at the country level. The five bird species reported to be the most affected represented 75% of the total estimated number (Table A.1). 'Sport' was the main reason for killing/taking birds and 'illegal shooting' the main type of illegality (Figure A.1).

Worst areas for illegal killing and taking of birds

Five worst locations were identified in Albania (Map A.1), accounting for 32-67% of the total estimated number of individual birds illegally killed each year in the country. They are all located on the Adriatic coast where illegal trapping and shooting of passerines and waterbirds is reported to be widespread.

Recommendation to tackle the illegal killing and taking of birds

Since the implementation of the hunting ban, monitoring is being carried out at a number of sites, e.g. in Karavasta National Park and Patoku-FusheKuqe-Ishem Nature Managed Reserve. No results are available for the moment but the current situation seems rather good, with very few illegal killing activities recorded. The hunting ban seems to have put under control illegal killing in lowland areas, but control still seems difficult to achieve for the rest of the country.



Illegal killing in Drin Delta (Albania) in spring 2005 © AOS

Table A.1. Review of the illegal killing/taking of birds in Albania for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed/taken	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (296)	206,000 – 325,000	Moderate decline	100% / 1%
Eurasian Skylark	113,000 – 161,000	Moderate decline	52% / 18%
European Goldfinch	29,000 – 31,000	Moderate decline	11% / 6%
Eurasian Blackbird	9,400 – 23,900	Moderate decline	6% / 9%
Common Teal	5,000 – 11,400	Moderate decline	3% / 17%
Common Coot	4,500 – 10,700	Moderate decline	3% / 3%

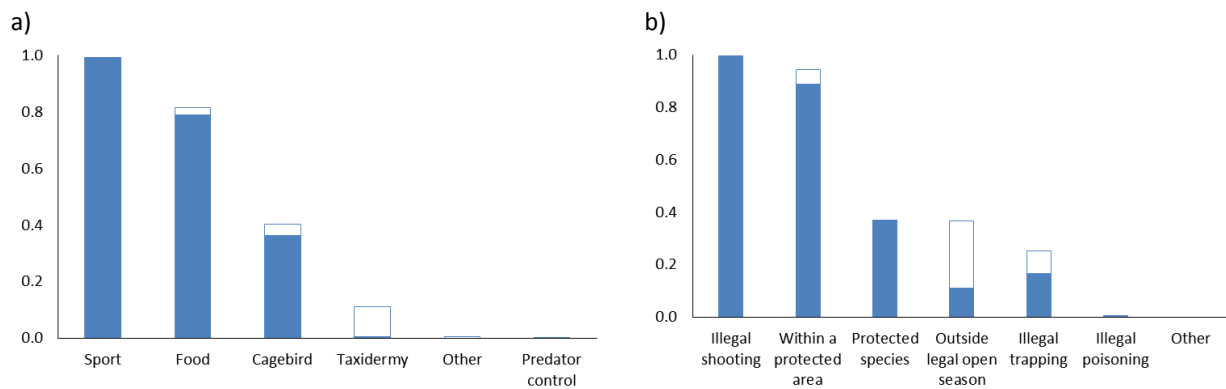
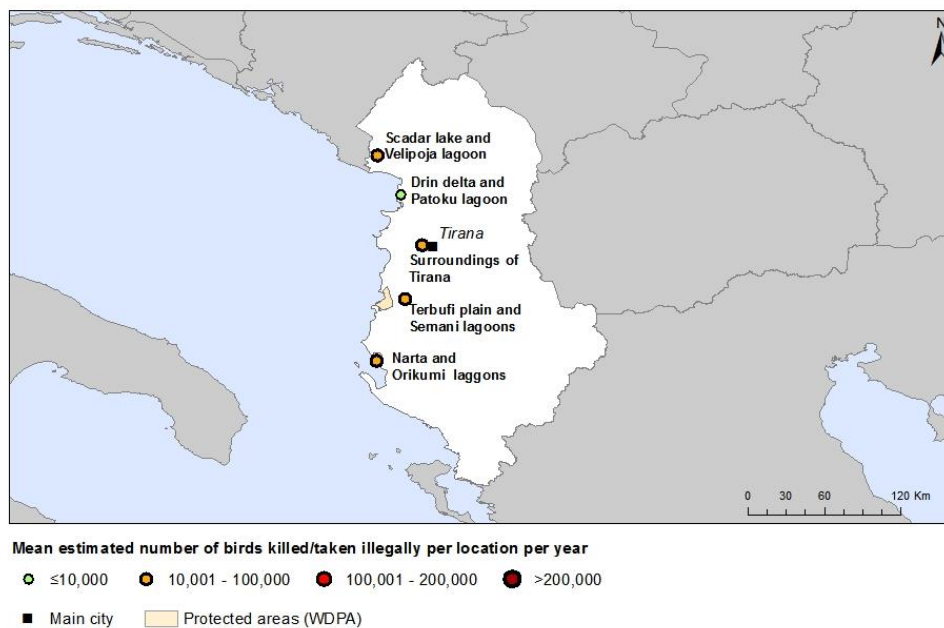


Figure A.1. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Albania. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.1. Potential worst locations for illegal killing/taking of birds in Albania.

A.2. Algeria



Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Algeria. Hunting was banned in the 1994 but it is currently “tolerated” in some regions (where guns were reinstated by the administration). A new hunting law was prepared in 2004 but still not implemented, so hunting is still officially banned. Trapping is prohibited in Algeria.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in substantial decline**, mainly owing to the implementation of a complete hunting ban since 1994 and effective law enforcement by authorities. **17,500-40,300 individual birds may be illegally killed/taken each year in Algeria** (Table A.2). Owing to the lack of data/information on this issue, estimates are only based on expert opinion. The five bird species reported to be the most affected represent 90% of the total estimated number (Table A.2). ‘Food’ was the main reason reported for killing birds and ‘illegal trapping’ the main type of illegality (Figure A.2).

Worst areas for illegal killing and taking of birds

Nine worst locations were identified in Algeria (Map A.2), accounting for 39-96% of the total estimated number of individual birds illegally killed each year in the country. They are mainly located in the northern part of the country.

Recommendation to tackle the illegal killing and taking of birds

If poaching was a significant problem in the 1980s, this hasn’t been the case for the last 10-15 years, especially since the implementation of the hunting ban in 1994 and the ban on sale of ammunition, as well as monitoring campaigns conducted by the authorities in charge (rangers of national parks and regional administration for forestry conservation, and police force).

Table A.2. Review of the illegal killing/taking of birds in Algeria for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (272)	17,500 – 40,300	Substantial decline	100 / <1%
Common Starling	5,000 – 10,000	Substantial decline	26% / 2%
Song Thrush	5,000 – 10,000	Stable	26% / 1%
European Goldfinch	5,000 – 10,000	Moderate increase	26% / 2%
Red-billed Firefinch	1,000 – 5,000	Moderate decline	10% /100%
Houbara Bustard	250 – 1,000	Substantial decline	2% /43%

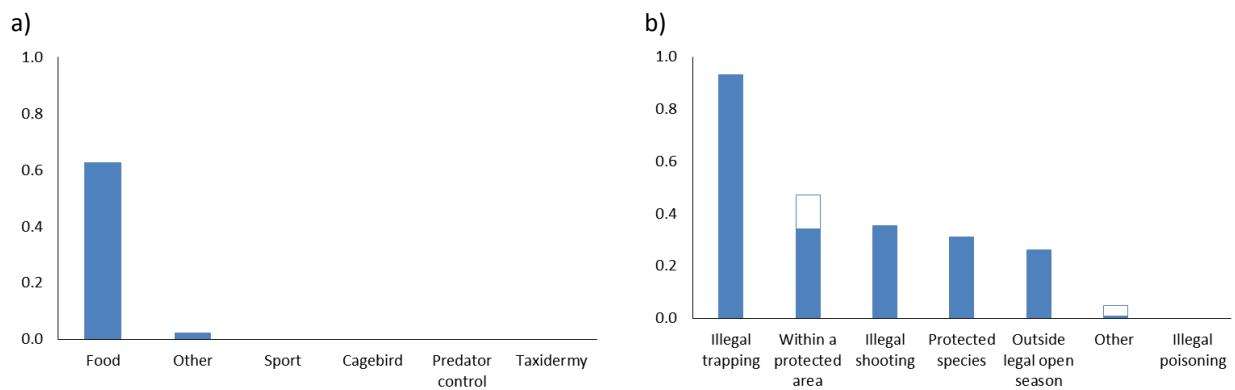
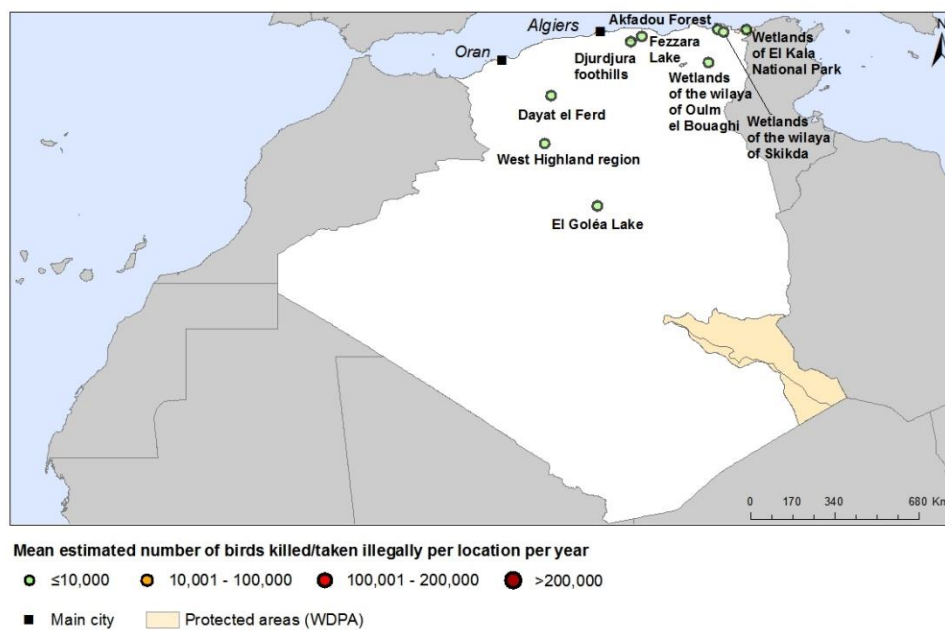


Figure A.2. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Algeria. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.2. Potential worst locations for illegal killing/taking of birds in Algeria.

A.3. Bosnia and Herzegovina



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Hunting and trapping legislation

There are two valid hunting laws in Bosnia and Herzegovina, for the Federation of Bosnia and Herzegovina and for the Republika Srpska. Both hunting laws are complicated and not understood/respected by the hunters themselves. For several species listed as game (12 in Federation of Bosnia and Herzegovina and 33 in Republika Srpska), no hunting season is defined, so technically they can be hunted throughout the year. Trapping is prohibited by both laws.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, owing to the absence of reliable information on the issue. **22,400-46,900 individual birds may be illegally killed/taken each year in Bosnia and Herzegovina** (Table A.3). Estimates are expert opinion based on various local information sources. The five bird species reported to be the most affected by illegal killing represent 40% of the total estimated number (Table A.3). 'Food' was the main reason reported for killing birds and 'within a protected areas' the main type of illegality (Figure A.3).

Worst areas for illegal killing and taking of birds

Six worst locations were identified in Bosnia and Herzegovina (Map A.3), accounting for 40-85% of the total estimated number of individual birds illegally killed each year in the country.

Recommendation to tackle the illegal killing of birds

Detailed research on illegal killing of birds has never been performed in Bosnia and Herzegovina. There is very poor local awareness about the importance of this issue, so in most cases it goes unreported/unpunished. Raising awareness about this issue would be a first step to tackle this issue in the country.



*Illegal trapping in Bosnia and Herzegovina
© Naše ptice*

Table A.3. Review of the illegal killing/taking of birds in Bosnia and Herzegovina for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (274)	22,400 – 46,900	Unknown	100% / <1%
European Goldfinch	3,000 – 5,000	Unknown	12% / 1%
Common Coot	1,000 – 5,000	Unknown	9% / 1%
Eurasian Siskin	2,000 – 3,000	Unknown	7% / 2%
Eurasian Linnet	2,000 – 3,000	Unknown	7% / 2%
Grey Partridge	1,000 – 2,500	Unknown	5% / 18%

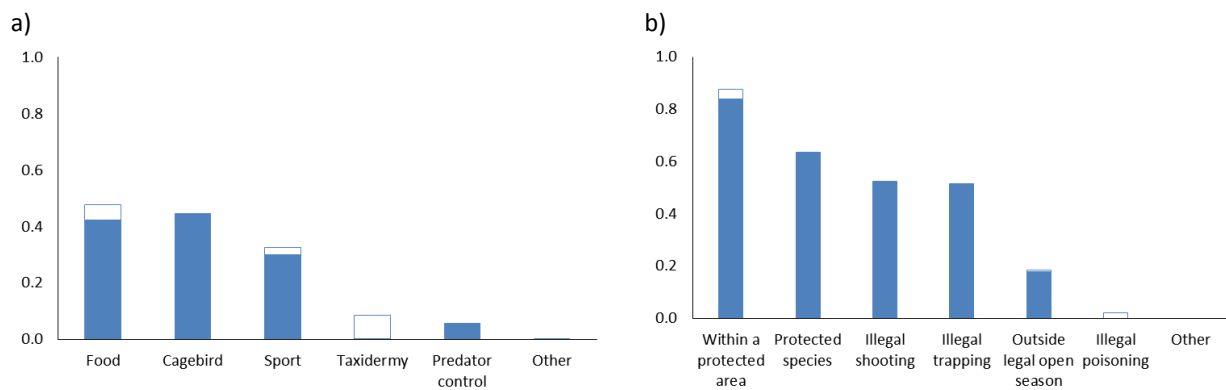
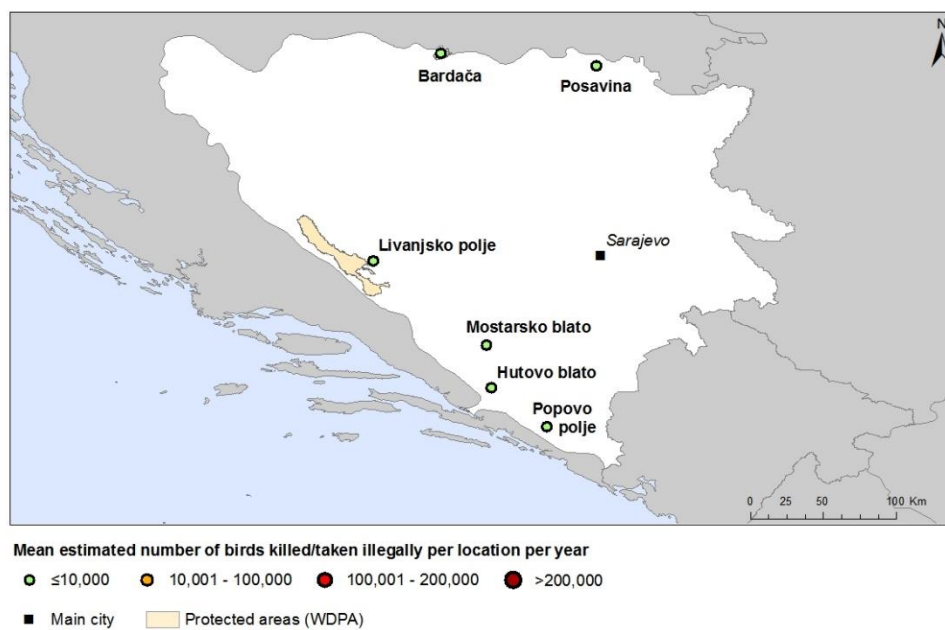


Figure A.3. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Bosnia and Herzegovina. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map 4.3. Potential worst locations for illegal killing/taking of birds in Bosnia and Herzegovina.

A.4. Croatia



Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Croatia. Hunting is permitted in certain seasons and for 21 bird species. Only falconry and rifles are permitted and all other hunting methods are forbidden including use of calling devices or live decoys, shooting from a moving vehicle of any sort. Bird trapping is prohibited.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, owing to the lack of data on the issue. **166,000-855,000 individual birds may be illegally killed/taken each year in Croatia** (Table A.4). Estimates are informed expert opinion based on different sources of information, such as field experience and direct observations, official and unofficial reports, news reports, hunter forums, etc. and data from few sites extrapolated at the country level. The five bird species reported to be the most affected by illegal killing represent 44% of the total estimated number (Table A.4). 'Food' was the main reason reported for killing birds and illegal 'shooting' the main type of illegality (Figure A.4).

Worst areas for illegal killing of birds

Six worst locations were identified in Croatia (Map 4.4), accounting for 45-100% of the total estimated number of individual birds illegally killed each year in the country. The main ones are located along the Adriatic coast.

Recommendation to tackle the illegal killing of birds

Some research on illegal killing of birds has been undertaken in Croatia, but no systematic monitoring has been employed, using standardised, replicable methods. More robust data would help to underpin efforts to tackle this issue on the ground.



Illegal use of Stone crush trap in Dalmatia © BIOM

Table A.4. Results of the review of the illegal killing/taking of birds in Croatia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (306)	166,000 – 855,000	Unknown	100% / 2%
Common Quail	10,000-100,000	Stable	11% / 3%
Common Starling	10,000-100,000	Unknown	11% / 12%
Common Coot	30,000-70,000	Moderate decline	10% / 18%
Eurasian Woodcock	15,000-50,000	Unknown	6% / 70%
Blackcap	10,000-50,000	Unknown	6% / 2%

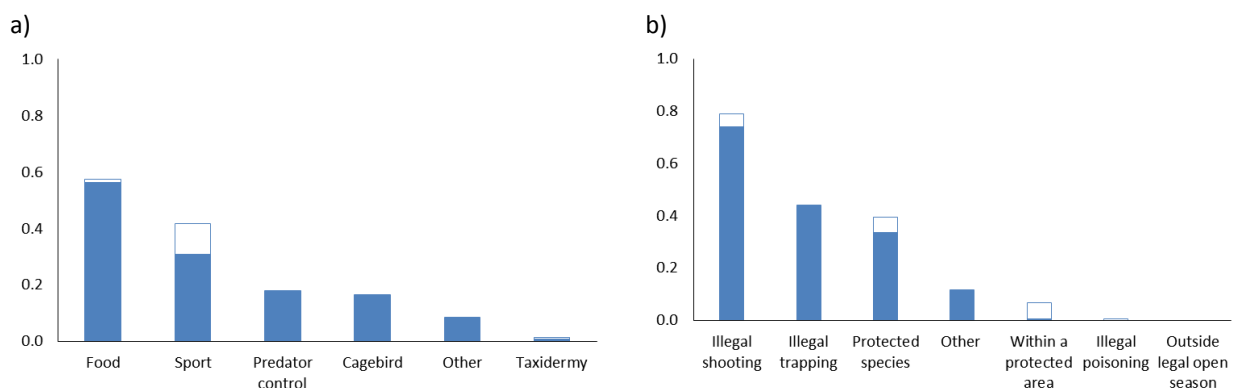
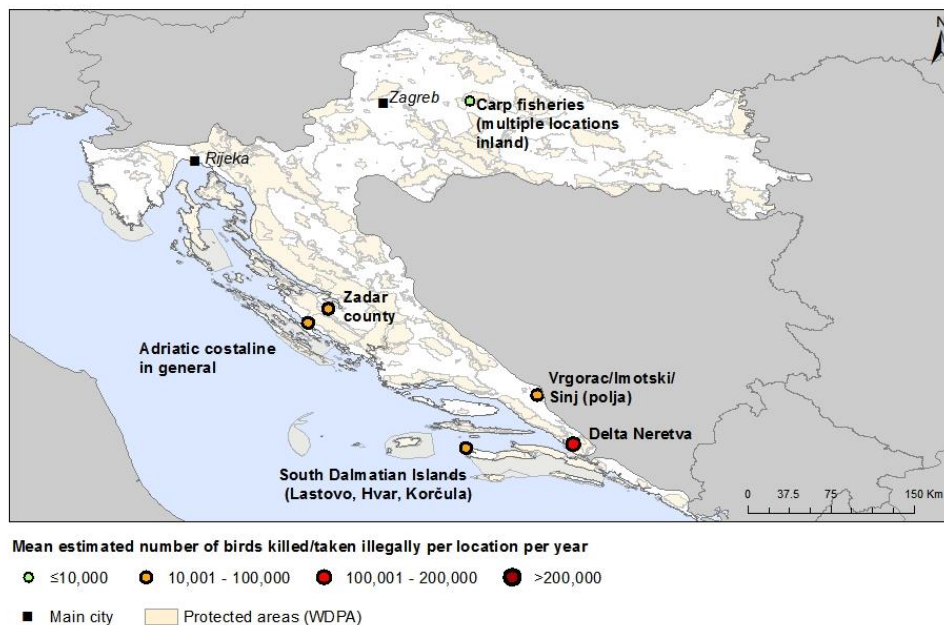


Figure A.4. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Croatia. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.4. Potential worst locations for illegal killing/taking of birds in Croatia.

A.5. Cyprus



Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Cyprus. Licensed hunting is permitted in certain seasons (on Wednesday and Sunday in the majority of permitted hunting areas) for 34 bird species. Only rifles are permitted and all other hunting methods are forbidden including use of calling devices or live decoys, shooting from a moving vehicle of any sort, falconry. Trapping is also completely illegal in Cyprus, including the use of mist nets and limesticks. It is illegal to possess, sell or eat trapped birds.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in substantial increase**, based on the results of the surveillance programme. **1.3-3.2 million individual birds may be illegally killed each year in Cyprus** (Table A.5). Estimates are based on results of different illegal trapping monitoring schemes, data from rehabilitation centre and expert opinion. The five bird species reported to be the most affected represent 76% of the total estimated number. 'Food' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality reported (Figure A.5).

Worst areas for illegal killing and taking of birds

Ten worst locations were identified in Cyprus (Map A.5), accounting for 75-100% of the total estimated number of individual birds illegally killed each year in the country. The three first worst locations are also among the 20 worst locations at the Mediterranean level.

Recommendation to tackle the illegal killing of birds

The surveillance programme on illegal bird trapping carried out by BirdLife Cyprus since 2002³ confirm the industrial scale of this activity. BirdLife Cyprus have developed a strategic action plan against illegal bird trapping⁴ that, for the first time, brings together all



*Illegal mist-netting of birds in Cyprus©
BirdLife Cyprus*

³ Reports available at: http://www.birdlifecyprus.org/en/html-36-Trapping_Reports.html

⁴ Strategic Action Plan available at:

http://birdlifecyprus.org/upload/StrategicActionPlan_IllegalBirdTrapping_BirdLifeCyprus_EN.pdf

relevant stakeholders to agree a common framework to tackle this issue. The implementation of this plan would be an important first step to address this issue.

Table A.5. Results of the review of the illegal killing/taking of birds in Cyprus for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (272)	1,300,000 – 3,200,000	Substantial increase	100% / 10%
Song Thrush	561,000 – 918,000	Substantial increase	32% / 59%
Lesser Whitethroat	179,000 – 537,000	Substantial increase	16% / 85%
Common Chiffchaff	155,000 – 465,000	Substantial increase	13% / 86%
Blackcap	130,000 – 390,000	Substantial increase	11% / 15%
Common Redstart	37,600 – 113,000	Substantial increase	3% / 71%

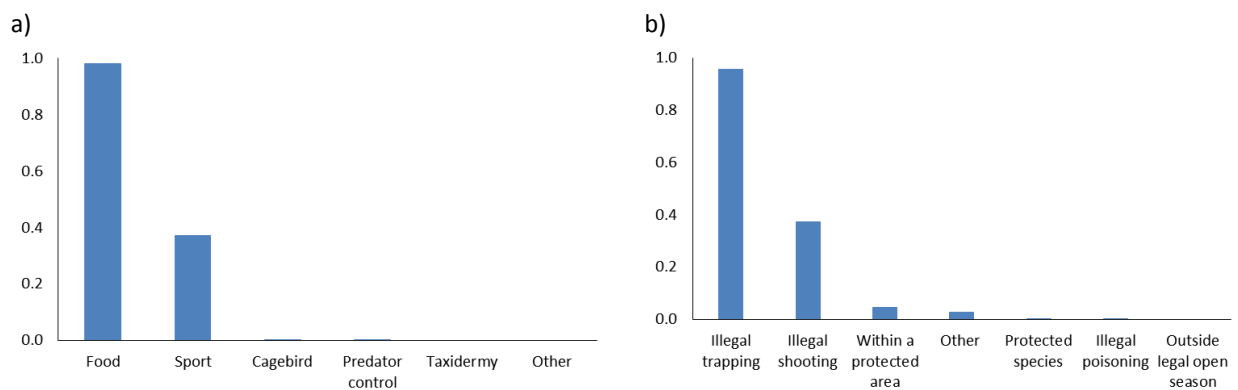
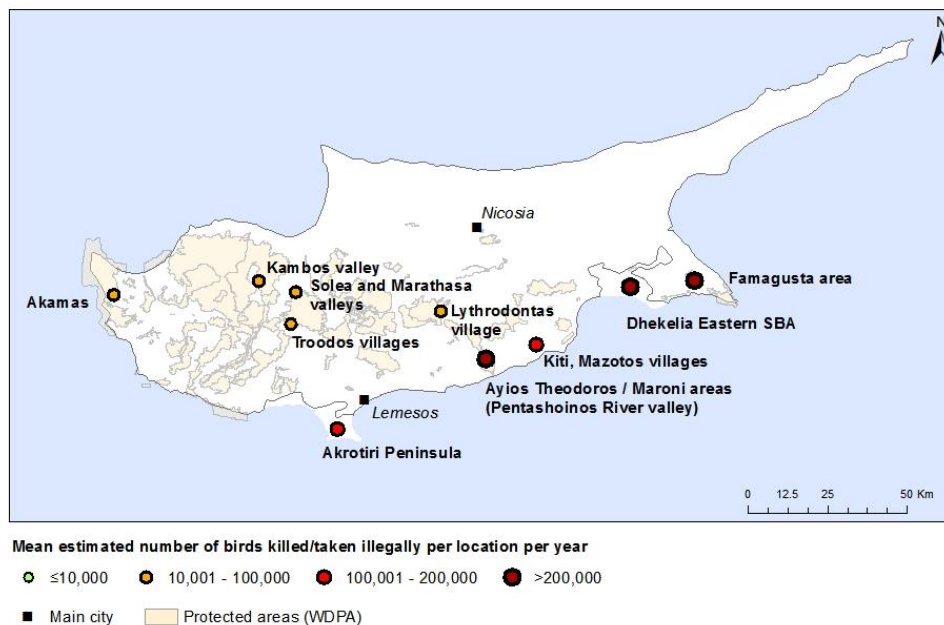


Figure A.5. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Cyprus. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map 4.5. Potential worst locations for illegal killing/taking of birds in Cyprus.

A.6. Egypt

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Hunting and trapping legislation

The legislation is comprehensive in Egypt. Hunting is permitted in certain seasons for 24 bird species, with annual Ministerial Decree determining which species can be hunted and trapped, and when (i.e. hunting season).

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to interviews with poachers and experts' opinion. **302,000-10,600,000 individual birds may be illegally killed each year in Egypt** (Table A.6). Estimates are based on literature review, hunter's knowledge and expert opinion. According to the lack of reliable information, estimates were provided with wide range limits to take into account the level of uncertainty. Passerines/Near passerines were estimated as group (540,000-10,000,000 estimated number of individual birds illegally killed) and divided per species according to their relative abundance in the country. The five bird species reported to be the most affected represent 91% of the total estimated number (Table A.6). 'Food' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality (Figure A.6).

Worst areas for illegal killing and taking of birds

Nine worst locations were identified in Egypt (Map A.6), accounting for 6-62% of the total estimated number of individual birds illegally killed each year in the country. The two main worst locations (Manzala and Burullus) are also among the 20 worst locations at the Mediterranean scale.

Recommendation to tackle the illegal killing and taking of birds

A multi-stakeholder action plan to address the illegal trapping of birds on the Mediterranean coast⁵ is currently under implementation in Egypt. The results of this action plan and the illegal killing monitoring programme Egypt is currently embarking upon will provide more robust data for the next assessment of illegal killing and taking of birds on the Mediterranean coast of



Illegal use of Munsaab net to trap bird in Egypt © NCE

⁵ <http://www.unep-aewa.org/en/news/bird-trapping-egypt-and-libya-%E2%80%93-plan-action-put-place>

Egypt. This data could be a useful tool for guiding future conservation intervention to address this issue in Egypt and in the project scope in particular.

Table A.6. Results of the review of the illegal killing/taking of birds in Egypt for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (372)	741,000 – 10,600,000	Stable	100% / 23%
House Sparrow	50,000-9,000,000	Stable	83% / 96%
Common Coot	83,200 – 239,600	Stable	3% / 58%
Common Quail	37,000 – 250,000	Stable	3% / 9%
Eurasian Golden Oriole	6,500 – 120,000	Moderate decline	1% / 79%
White Wagtail	4,900 – 90,000	Moderate decline	1% / 49%

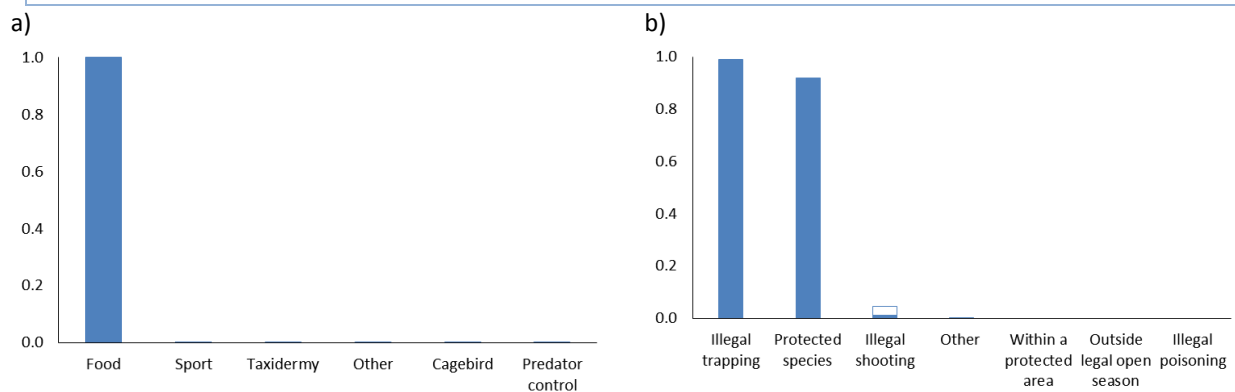
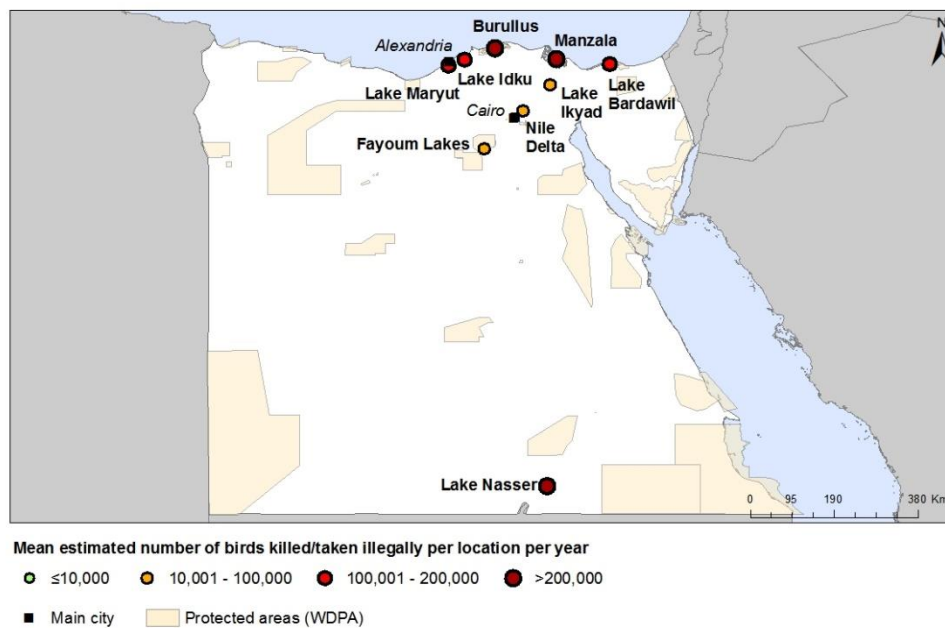


Figure A.6. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Egypt. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.6. Potential worst locations for illegal killing/taking of birds in Egypt.

A.7. France



AGIR pour la
BIODIVERSITÉ

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Hunting and trapping legislation

The legislation is comprehensive in France. Licensed hunting is permitted in certain seasons for 64 bird species with hunting seasons based on permanent decree for waterbirds and migratory birds and annual Decree for resident birds. Most hunting methods are permitted except some specific methods such as use of poison, shooting from a moving vehicle, some firearms, use of light... Hunting with traps, nets, lime and snares is allowed for lapwings, blackbirds, thrushes, and skylarks under derogations of the EU Birds Directives for 'traditional practices'.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in moderate decline**, reflecting the decline in traditional practices. **149,000-895,000 individual birds may be illegally killed each year** (Table A.7). Estimates are based on wildlife police records, data from recovery centres, data from refused applications for derogations under the EU Birds Directive and expert opinion. The five bird species reported to be the most affected by illegal killing represent 65% of the total estimated number (Table A.7). 'Food' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality (Figure A.7).

Worst areas for illegal killing and taking of birds

Five worst locations were identified in France (Map A.7), accounting for 59-84% of the total estimated number of individual birds illegally killed each year in the country. They are large administrative regions as illegal activities were reported to be widespread in France.

Recommendation to tackle the illegal killing and taking of birds

Different illegal practices are carried out in France, evolving in different manners: increase in cagebird trade, stability of raptor persecution, decline in passerine-catching for culinary traditions, increase/stability of illegal killing of species suspected to cause damage to human activities, decline in illegal hunting. Data on illegal killing exist in France but are held at province level and should be better centralised to



Eurasian Buzzards illegally shot in France © LPO

increase robustness of estimates and measure trends in illegal activities. The policing capacity of The National Hunting and Wildlife Agency (ONCFS) needs reinforcing (financial and staff), in this currently difficult context of shrinking budgets.

Table A.7. Results of the review of the illegal killing/taking of birds in France for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (349)	149,000 – 895,000	Moderate decline	100% / 2%
Eurasian Chaffinch	30,000 – 300,000	Substantial decline	32% / 6%
Song Thrush	50,000 – 79,000	Moderate decline	12% / 5%
European Robin	30,000 – 90,000	Moderate decline	11% / 9%
Brambling	5,000 – 50,000	Substantial decline	5% / 21%
Blackcap	12,500 – 37,500	Moderate decline	5% / 1%

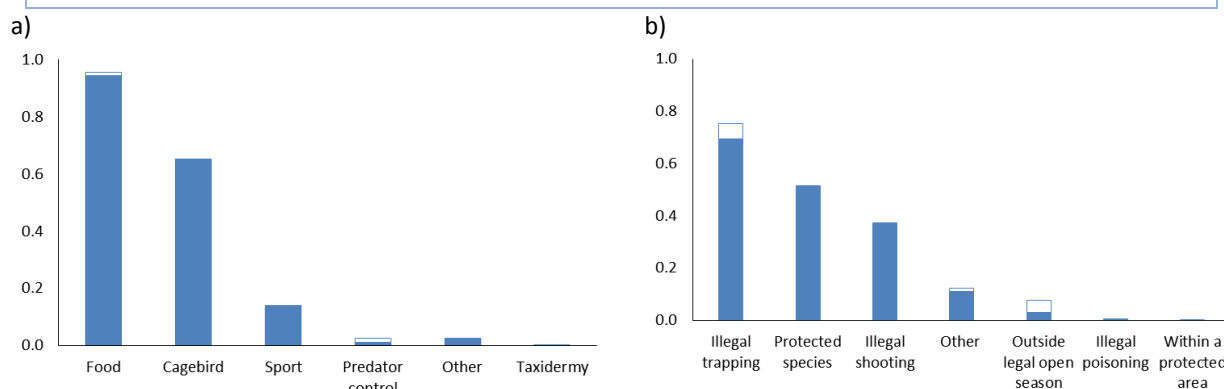
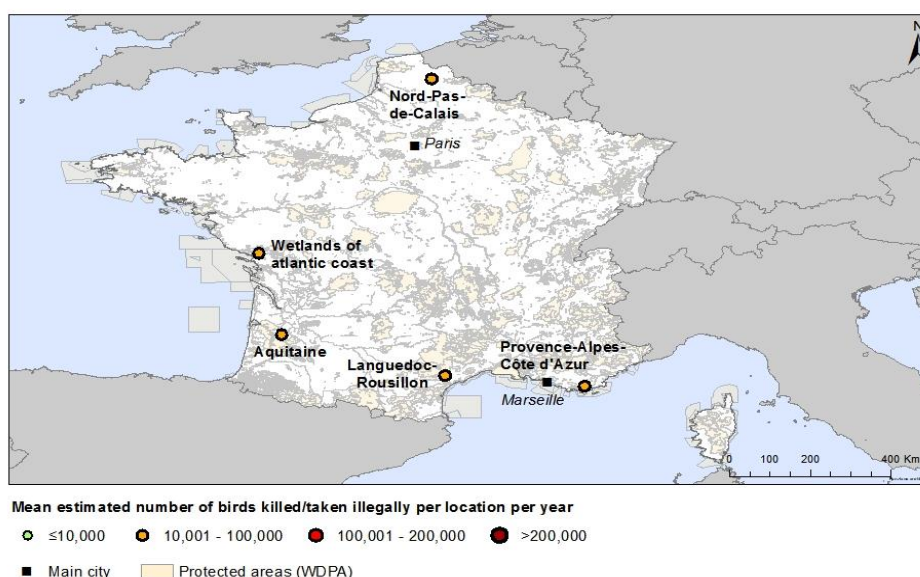


Figure A.7. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in France. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.7. Potential worst locations for illegal killing/taking of birds in France.

A.8. Georgia



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Hunting and trapping legislation

The legislation is comprehensive in Georgia. Hunting is permitted in certain seasons for 19 bird species. Each huntable species is labelled with a price tag, allowing any individual who has paid a fixed price, to hunt for them anywhere, excluding protected areas and national reserves. Falconry is permitted by law but any aspect of the activity is regulated. Trapping is forbidden by law.

Scale and scope of illegal killing and taking of birds

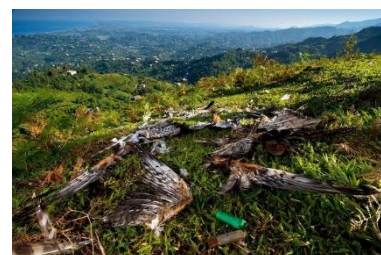
The **trend in the scale of illegal killing was reported as unknown**, owing to the lack of data. **7,600-32,300 individual birds may be illegally killed each year in Georgia** (Table A.8). Estimates are based on regular surveys carried out (migration count, shoot count, interviews), field observations, literature and expert opinion. The five bird species reported to be the most affected represent 57% of the total estimated number (Table A.8). ‘Sport’ was the main reason reported for killing birds and ‘illegal shooting’ the main type of illegality reported (Figure A.8).

Worst areas for illegal killing and taking of birds

Two worst locations were identified in Georgia (Map A.8), accounting for 50-90% of the total estimated number of individual birds illegally killed each year in the country. They are both located in the south western part of Georgia (Autonomous Republic of Adjara) where surveys of illegal killing take place. Outside of this region, only patchy information is available on illegal killing.

Recommendation to tackle the illegal killing and taking of birds

Research studies on quantifying illegal shooting and understanding its drivers are carried out in the Batumi bottleneck, in parallel with migration count⁶. Education of local people and regional students is also carried out in the region, as well as working in close cooperation with competent authorities to establish effective information



*Illegally shot raptor wings
discarded © SABUKO*

⁶ Batumi Raptor Count project: <http://www.batumiraptorcount.org/>

campaigns, feasible law enforcement strategies, realistic quotas and best practices for hunters.

Table A.8. Results of the review of the illegal killing/taking of birds in Georgia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country
All species (349)	7,600 – 32,300	Unknown	100%
European Honey-buzzard	3,000 – 7,000	Unknown	25%
Common Buzzard	1,000 – 4,000	Unknown	13%
Common Quail	300 – 3,000	Unknown	8%
Montagu's Harrier	500 – 2,000	Unknown	6%
Common Snipe	100 – 2,000	Unknown	5%

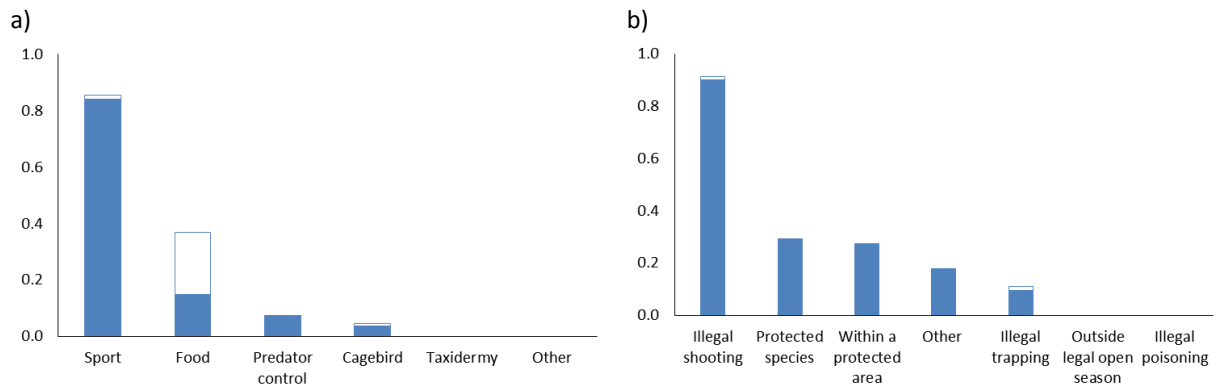
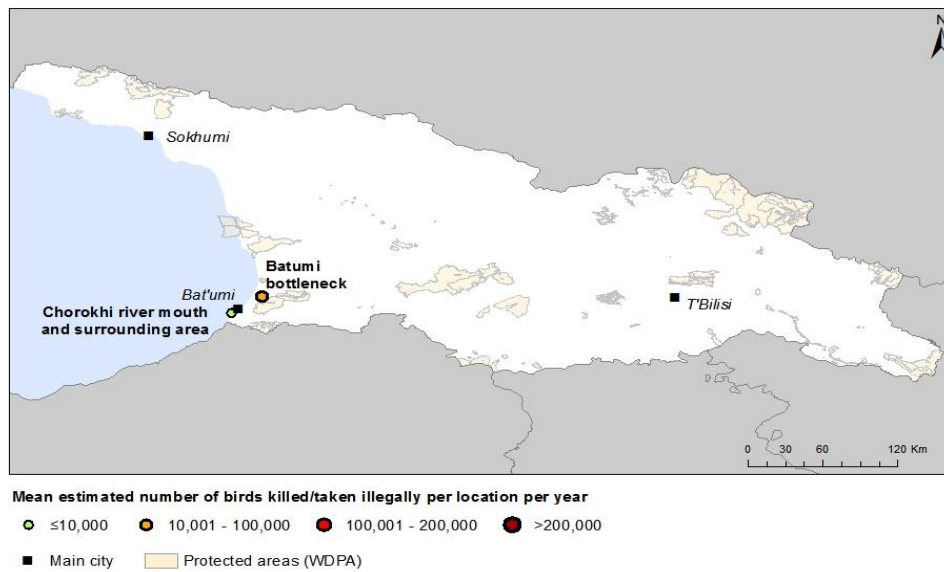


Figure A.8. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Georgia. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.8. Potential worst locations for illegal killing/taking of birds in Georgia.

A.9. Greece



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Hunting and trapping legislation

The legislation is comprehensive in Greece. Licenced hunting is permitted for people with a rifle permit, in certain seasons for 32 bird species. The following hunting methods are illegal: nets, traps, lures, hooks, via engine boats and cars. Trapping is forbidden by law.

Scale and scope of illegal killing and taking of birds

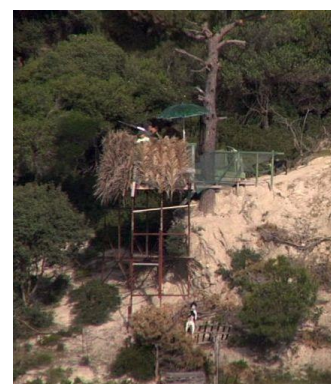
The **trend in the scale of illegal killing was reported as stable**, according to information available. **485,000-922,000 individual birds may be illegally killed each year in Greece** (Table A.9). Estimates are based on report from citizens, “HOS advocacy database”, IBA caretaker annual reports, hunter association reports, forestry authority report, national park management authority report, police and rehabilitation centre data and expert opinion. The five bird species reported to be the most affected represent 69% of the total estimated number (Table A.9). ‘Cagebird’ was the main reason reported for killing birds and ‘illegal trapping’ the main type of illegality reported is (Figure A.9).

Worst areas for illegal killing and taking of birds

Eight worst locations were identified in Greece (Map A.9), accounting for 39-80% of the total estimated number of individual birds illegally killed each year in the country. They are located in different part of the country (islands, mountains and wetlands), illegal practices being widespread.

Recommendation to tackle the illegal killing and taking of birds

Surveys on monitoring illegal shooting are carried out in Greece, and many types of data are centralised to study the issue. An awareness raising campaign has been carried out in the Ionian Islands regarding the EU’s spring hunting ban, which was imposed in the 1980’s. Even though three decades have passed, Greece is not implementing the ban properly and more awareness among the general public, the authorities and the younger generation is therefore needed.



*Illegal spring shooting
hide in Ionian islands
(Greece) © HOS*

Table A.9. Results of the review of the illegal killing/taking of birds in Greece for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species (345)	485,000 - 922,000	Stable	100% / 3%
European Goldfinch	150,000 – 250,000	Stable	28% / 41%
European Serin	80,000 – 110,000	Stable	14% / 61%
European Greenfinch	50,000 – 100,000	Stable	11% / 42%
European Turtle-dove	12,000 – 126,000	Moderate decline	10% / 11%
Eurasian Blackbird	42,000 – 54,000	Stable	7% / 27%

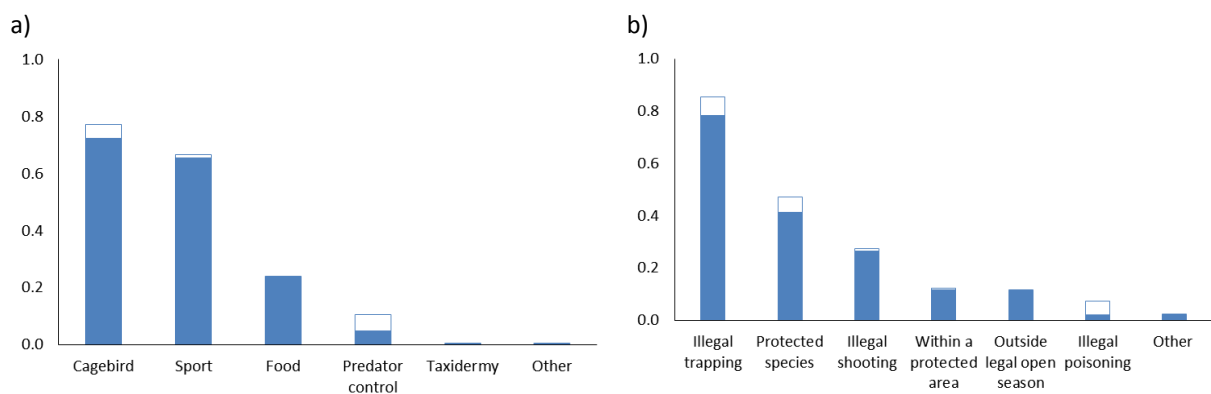
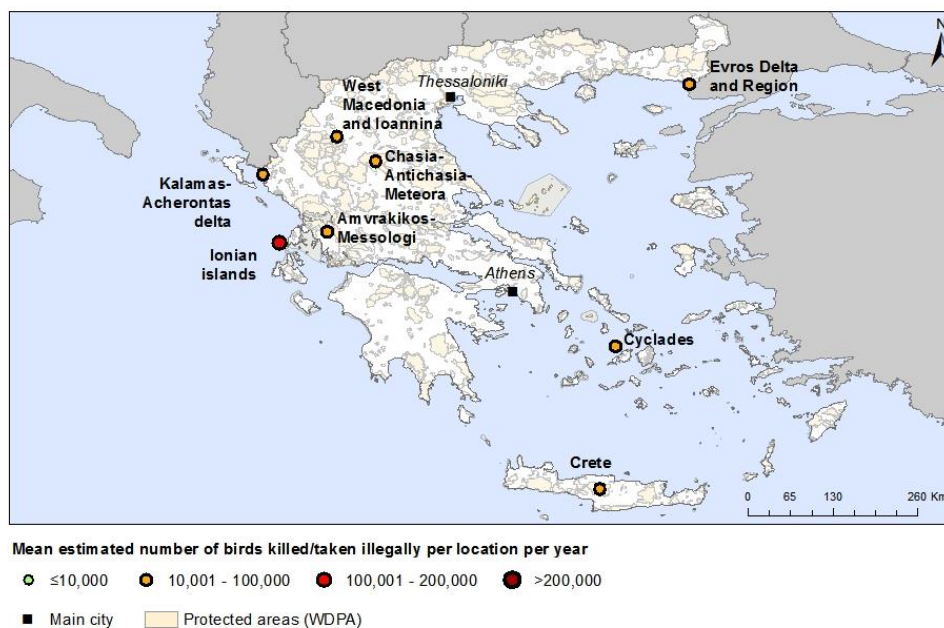


Figure A.9. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Greece. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.9. Potential worst locations for illegal killing/taking of birds in Greece.

A.10. Italy

Contributors to the review

Main contributor:

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Co-contributors:

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Hunting and trapping legislation

The legislation is comprehensive in Italy. Licenced hunting is permitted during certain seasons for 36 bird species. The following hunting methods are illegal: shooting from a moving vehicle, some firearms (e.g. with silencers, night vision scopes, etc.), use of electronic birds call. Trapping is not allowed by law.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, illegal practices are widespread throughout the country, among hunters and non-hunters, and illegal killing was therefore difficult to quantify. **3.4-7.8 million individual birds may be illegally killed each year in Italy** (Table A.10). Estimates are based on species population size and relative abundance, monitoring at Messina Strait and expert opinion. The five bird species reported to be the most affected represent 75% of the total estimated number. 'Sport' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.10).

Worst areas for illegal killing and taking of birds

Ten worst locations were identified in Italy (Map A.10), accounting for 4-10% of the total estimated number of individual birds illegally killed each year in the country. They are located in the different part of the country, illegal practices for killing birds being widespread in the whole country.

Recommendation to tackle the illegal killing and taking of birds

Considering the last 25 years, the situation has improved locally (Messina Strait bottleneck and parts of northern Italy), but illegal killing remain a very important conservation issue. An awareness raising campaign has been carried out by LIPU regarding the hunting ban on migrating birds. Even though three decades have passed, many continued to trap the wild birds to supply illegally the local restaurants. Because of the socio-economic situation, many consider poaching as a minor issue or as a legitimate source of alternative income, whatever



*Illegal trapping in Brescia region
(Italy) © LIPU*

the law says. More awareness among the general public, the authorities and the younger generation is therefore needed.

Table A.10. Results of the review of the illegal killing/taking of birds in Italy for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (348)	3,400,000 - 7,800,000	Unknown	100% / 24%
Eurasian Chaffinch	2,000,000 - 3,000,000	Unknown	45% / 87%
Meadow Pipit	500,000 - 900,000	Unknown	12% / 97%
European Robin	300,000 - 600,000	Unknown	8% / 71%
Common Starling	100,000 - 500,000	Moderate increase	5% / 67%
Song Thrush	50,000 - 500,000	Stable	5% / 22%

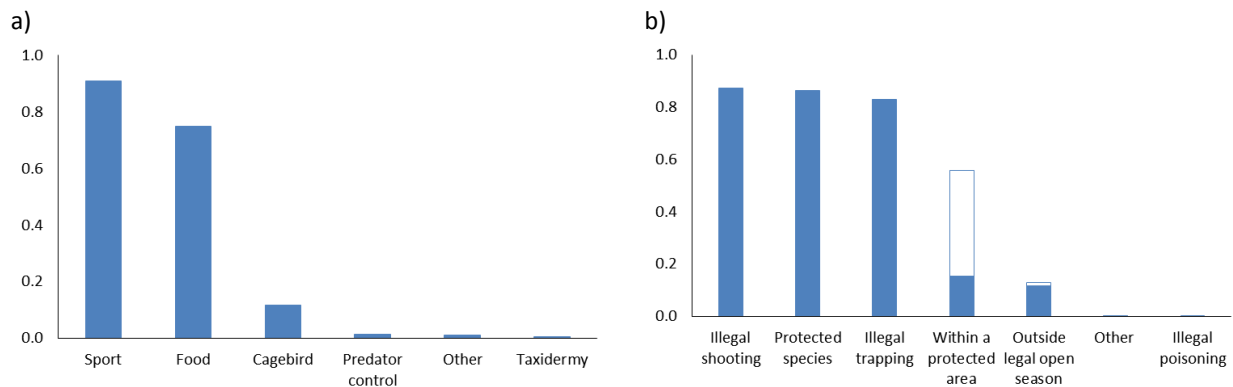
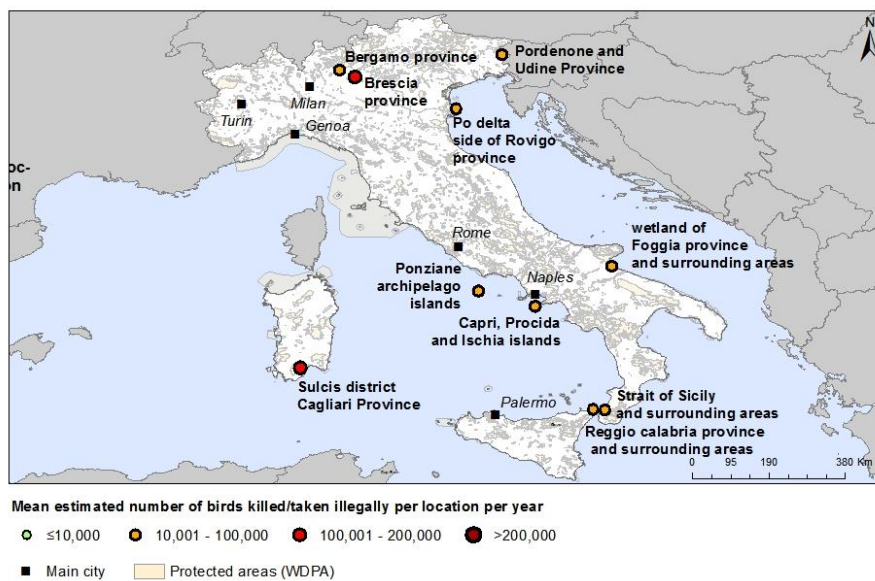


Figure A.10. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Italy. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.10. Potential worst locations for illegal killing/taking of birds in Italy

A.11. Jordan

Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Jordan. Licenced hunting is permitted during certain seasons for 26 bird species, but no hunting season is cleared stated in the law. The duration can be changed upon a decision from the Minister and quota will be provided annually. The following hunting methods are illegal: shooting with unlicensed hunting gun, from a moving vehicle and use of electronic birds call and decoys. Trapping and falconry are not allowed by law.

Scale, impact and geography of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in moderate decline**, according to the numbers of recorded violation tickets, ranger patrolling and monitoring studies. **13,000-21,600 individual birds may be illegally killed each year in Jordan** (Table A.11). Estimates for worst locations and species are based on information from recorded violation tickets from 2011 to 2014 adjusted according to expert opinion. The five bird species reported to be the most affected represent 69% of the total estimated number (Table A.11). 'Food' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.11).

Worst areas for illegal killing and taking of birds

Four worst locations were identified in Jordan (Map A.11), accounting for 70-90% of the total estimated number of individual birds illegally killed each year in the country.

Recommendation to tackle the illegal killing and taking of birds

Illegal killing of birds is not a major conservation issue in Jordan. RSCN is very active in terms of law enforcement (joint patrol with environmental police) and capacity building of all the partners (judges, police, etc.) to increase their awareness level about wildlife and bird protection. However, illegal killing of birds may have an impact locally on some species, especially raptors for which national population sizes are very small.



*Raptor illegally shot in
Jordan © RSCN*

Table A.11. Results of the review of the illegal killing/taking of birds in Jordan for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (323)	13,000 - 21,600	Moderate decline	100% / <1%
Common Quail	3,000 - 5,000	Moderate decline	23% / <1%
Rock Dove	1,500 - 2,500	Moderate decline	12% / 10%
Stock Dove	1,500 - 2,500	Moderate decline	12% / 30%
European Turtle-dove	1,500 - 2,500	Moderate decline	12% / <1%
Eurasian Collared-dove	1,500 - 2,500	Moderate decline	12% / 4%

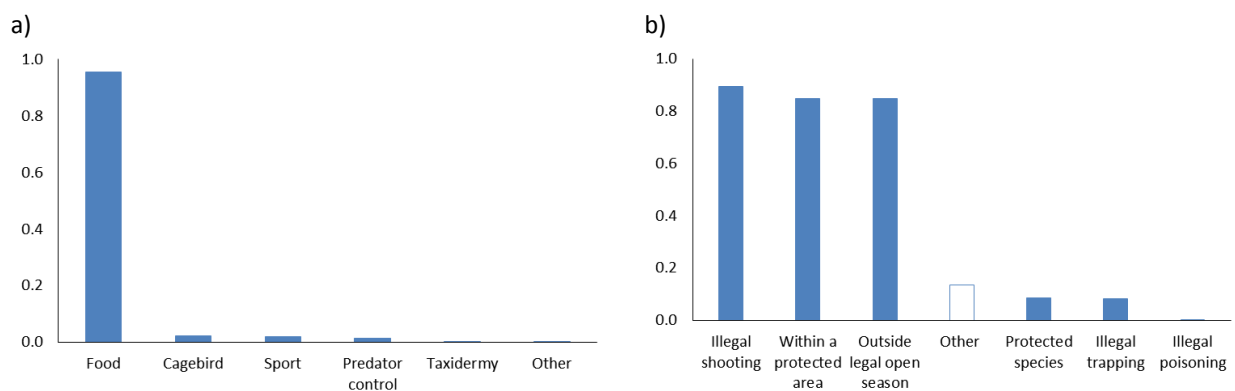
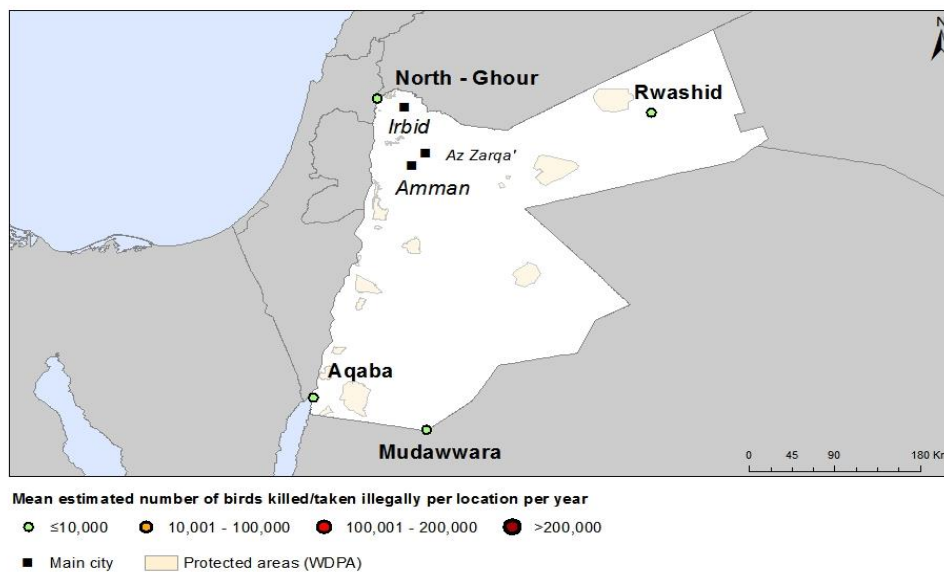


Figure A.11. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Jordan. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.11. Potential worst locations for illegal killing/taking of birds in Jordan.

A.12. Lebanon

Contributors to the review

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Hunting and trapping legislation

A complete hunting ban has been implemented since 1995. A new law was issued in 2004 and application decrees are finished, but the Minister of Environment did not announce the opening of hunting season yet, so the hunting ban is still legally in place. However laws allow import of guns and ammunitions. Trapping is not allowed by law, except for pest species announced by the Ministry.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to information in published and grey literature/reports, data collected from poachers, ammunition store statistics and social media. **1.7-3.5 million individual birds may be illegally killed each year in Lebanon** (Table A.12). Estimates are based on calculation from patchy information and expert opinion of number of birds illegally killed at one site, extrapolated to the national level according to the duration of passage of different species and the potential number of equivalent sites in the country. The five bird species reported to be the most affected represent 85% of the total estimated number (Table A.12). 'Sport' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.12).

Worst areas for illegal killing and taking of birds

Five worst locations were identified in Lebanon (Map A.12), accounting for 59-84% of the total estimated number of individual birds illegally killed each year in the country. They are all among the 20 worst locations at the Mediterranean level. Each of these five sites is a group of 2-3 sites in one administrative district, grouped as Lebanon is a small country.



*Illegal shooting in
Lebanon © SPNL*

Recommendation to tackle the illegal killing and taking of birds

Till today the hunting ban is minimally enforced; there is no willingness to regulate hunting owing to lack of logistical support and political tension. This long term ban has encouraged poaching. Irresponsible illegal killing and trapping is thought to be one of the main factors behind the decline of many migratory bird species in Lebanon. SPNL and its partners have been tasked by the government

with the responsibility of setting the scene for the implementation of the new hunting law. Clarifying the legislation and better law enforcement should help to tackle this issue in Lebanon.

Table A.12. Results of the review of the illegal killing/taking of birds in Lebanon for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (291)	1,700,000 - 3,500,000	Stable	100% / 11%
Calandra Lark	528,000 - 924,000	Stable	28% / 76%
Common Quail	410,000 - 962,000	Moderate increase	27% / 41%
Blackcap	380,000 - 810,000	Substantial increase	23 % / 33%
House Sparrow	58,500 - 135,000	Moderate increase	4% / 2%
Eurasian Chaffinch	58,500 - 135,000	Substantial increase	4% / 3%

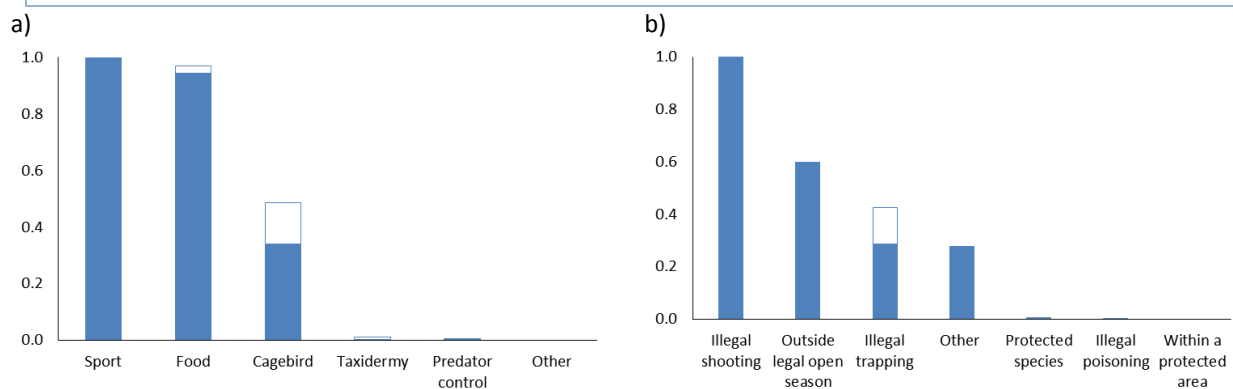
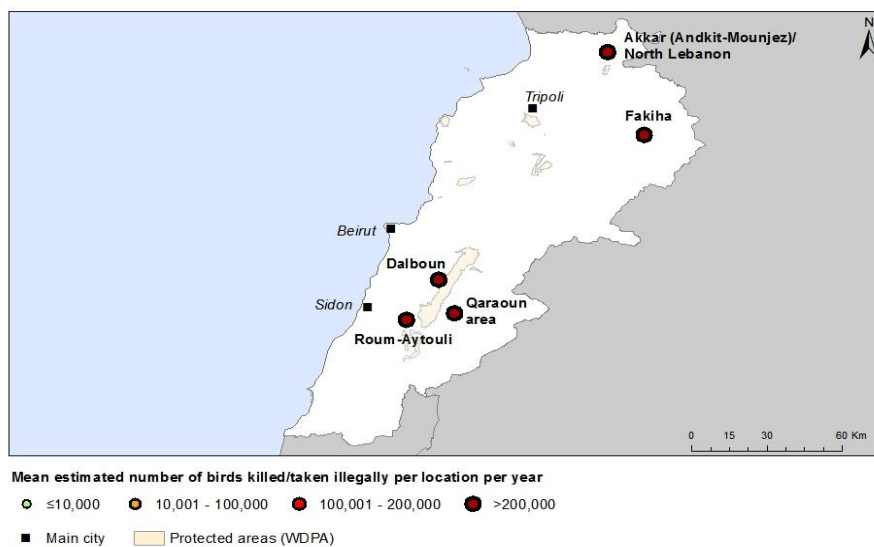


Figure A.12. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Lebanon. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.12. Potential worst locations for illegal killing/taking of birds in Lebanon.

A.13. Libya

Contributors to the review

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Hunting and trapping legislation

There is currently a legislative hiatus in Libya, with no hunting regulation in the legislation. As prior to the recent revolution all hunting of birds was illegal and given this political uncertainty, we assumed that all current killing of birds in Libya is illegal.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in substantial increase**, according to direct interviews and questionnaires with c.50 hunters and falconers from the eastern part of Libya (where the most hunting activity occurs). **325,000-680,000 individual birds may be illegally killed each year in Libya** (Table A.13). Estimates are based on information from hunters and falconers themselves, extrapolated to the national level. The five bird species reported to be the most affected represent 86% of the total estimated number (Table A.13). 'Food' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.13).

Worst areas for illegal killing and taking of birds

Nine worst locations were identified in Libya (Map A.12), accounting for 65-100% of the total estimated number of individual birds illegally killed each year in the country; all of these are on the Mediterranean coast. Tubrok area is the worst location reported; illegal killing of waterbirds was reported to occur in the coastal area and inland for doves and Common Quails. It is estimated that there are about 500 falconers in the city of Tubrok.

Recommendation to tackle the illegal killing and taking of birds

LSB together with the Egyptian and Libyan governments, are working on a joint conservation strategy for the North Africa Mediterranean region. LSB was founded in 2011 and carries out awareness campaigns and field visits to the areas where illegal killing takes place,



*Illegal shooting in Libya ©
<https://www.facebook.com/groups/syadytobruk/?fref=nf>*

coordinating their efforts with local councils. However, the absence of any legal framework to regulate hunting and trapping remains an obstacle to stopping the illegal killing and taking of birds.

Table A.13. Results of the review of the illegal killing/taking of birds in Libya for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (265)	325,000 - 680,000	Substantial increase	100% / 2%
European Turtle-dove	200,000 - 450,000	Substantial increase	65% / 54%
Common Shelduck	30,000 - 75,000	Substantial increase	10% / 86%
Grey Heron <i>Ardea</i>	20,000 - 30,000	Substantial increase	5% / 88%
Eurasian Curlew	15,000 - 20,000	Substantial increase	3% / 85%
Mallard	8,000 - 20,000	Substantial increase	3% / 19%

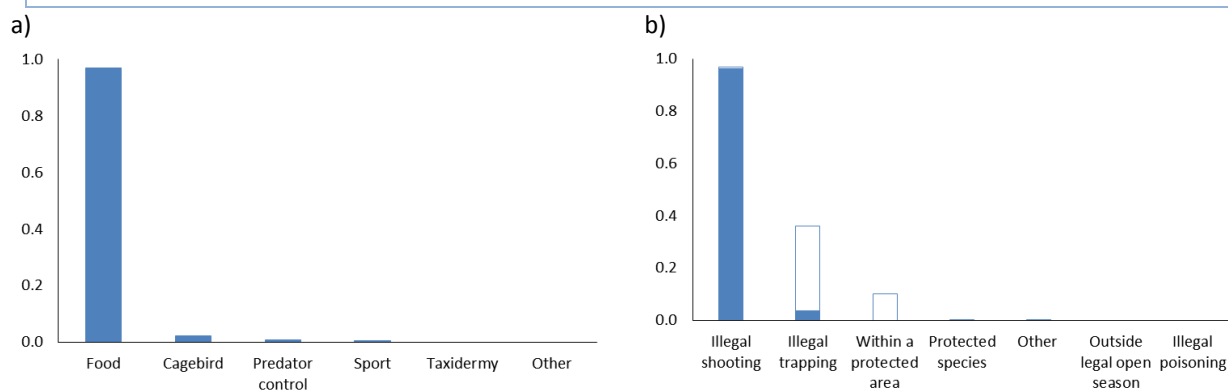
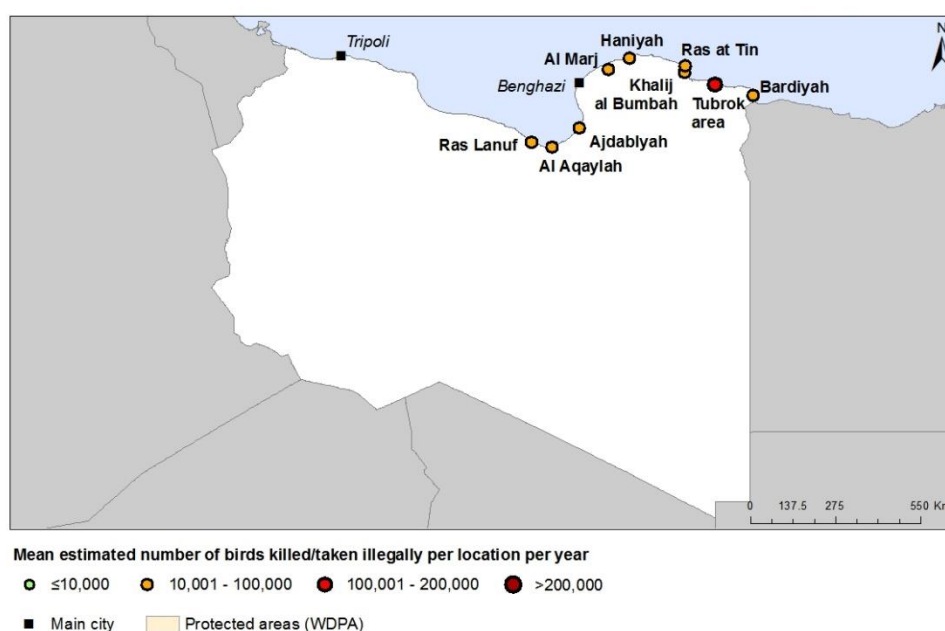
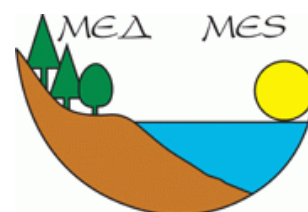


Figure A.13. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Libya. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types



Map A.13. Potential worst locations for illegal killing/taking of birds in Libya (No worst locations in the south part of the country).

A.14. Macedonia FYR



Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Macedonia. Licenced hunting is permitted during certain seasons for 33 bird species, but hunting season are very long (August to March), for most of huntable species. Trapping is not allowed by law in Macedonia.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, because of the lack of data on this issue. **600-3,700 individual birds may be illegally killed each year in Macedonia** (Table A.14). Estimates are based on monitoring of some species (Vultures, Owls and songbirds), published reports and expert opinion. The five bird species reported to be the most affected represent 66% of the total estimated number (Table A.14). 'Sport' was the main reason reported for killing birds and 'outside legal open season' the main type of illegality (Figure A.14).

Worst areas for illegal killing and taking of birds

No locations have been identified in Macedonia because of the lack of information on the issue.

Recommendation to tackle the illegal killing and taking of birds

Illegal killing of birds may not be a major conservation issue in Macedonia, but data are currently deficient and individual assumptions from national experts that illegal killing is increasing are most likely owing to increased knowledge. Long-term and more focused research is required to come to any reliable conclusions regarding this question.

Table A.14. Results of the review of the illegal killing/taking of birds in Macedonia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (321)	600 – 3,700	Unknown	100% / <1%
European Goldfinch	300 – 500	Unknown	19% / <1%
Great Cormorant	10 – 500	Unknown	12% / 3%
Common Coot	10 – 500	Unknown	12% / <1%
Common Woodpigeon	10 – 500	Unknown	12% / 1%
European Turtle-dove	10 – 500	Unknown	12% / < 1%

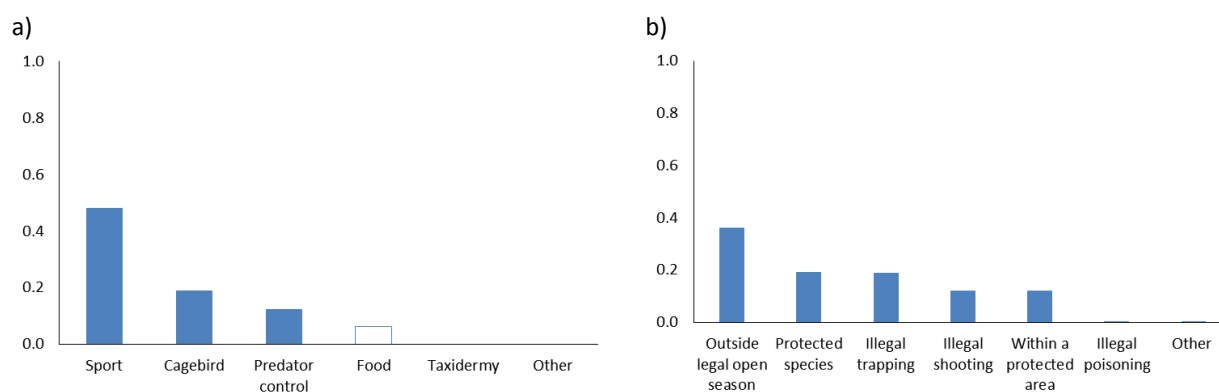


Figure A.14. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Macedonia FYR. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.

A.15. Malta

Contributors to the review

Main contributors:

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BirdLife Malta



Hunting and trapping legislation

The legislation is comprehensive in Malta. Hunting is permitted during certain seasons for 40 bird species. Spring hunting of Common Quail and European Turtle-dove is allowed under derogation of the EU Birds Directive. Trapping of songbirds (Hawfinch, Eurasian Linnet, European Greenfinch, European Goldfinch, Eurasian Siskin, Eurasian Chaffinch and European Serin), Golden Plover and Song Thrush is also allowed under derogations of the EU Birds Directive.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to monitoring and expert opinion. **5,800-211,000 individual birds may be illegally killed each year** (Table A.15). Estimates are based on calculations from the ratio of birds found dead in the field to the number of bird observed in Malta for each species (BirdLife Malta database), published reports, records of illegalities observed and expert opinion. The five bird species reported to be the most affected represent 75% of the total estimated number of individual birds illegally killed in the country (Table A.15). 'Cagebird' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality (Figure A.15).

Worst areas for illegal killing and taking of birds

Malta being a small country and illegal killing of birds being reported as a widespread activity, the entire two main islands (Malta and Gozo) were each reported as worst location, accounting for 80-100% of the total estimated number of individual birds illegally killed each year in the country (Map A.15).

Recommendation to tackle the illegal killing and taking of birds

BirdLife Malta reported that in general illegal killing and trapping appears to be on the decrease, with fewer incidents reported. Over recent years however, Malta has experienced the presence of rarer species which are still highly sought after, so their arrival is usually marked by illegal killing events. Overall illegal killing events appear to be more frequent during open seasons or during applied EU



*Marsh Harrier illegally shot in
Malta © David Tipling*

derogation periods. Improvements to the monitoring protocol used during BirdLife Malta migration camps would produce more robust data quantifying illegal killing of birds; BirdLife Malta’s objective to directly protect bird is however a challenge to the implementation of this.

Table A.15. Results of the review of the illegal killing/taking of birds in Malta for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (212)	5,800 - 211,000	Stable	100% / <1%
Eurasian Linnet	0 - 58,000	Moderate decline	27% / 20%
European Turtle-dove	0 - 29,000	Stable	13% / 2%
European Serin	0 - 27,700	Moderate decline	13% / 9%
European Greenfinch	0 - 25,500	Moderate decline	12% / 7%
Eurasian Chaffinch	0 - 21,400	Moderate decline	10% / <1%

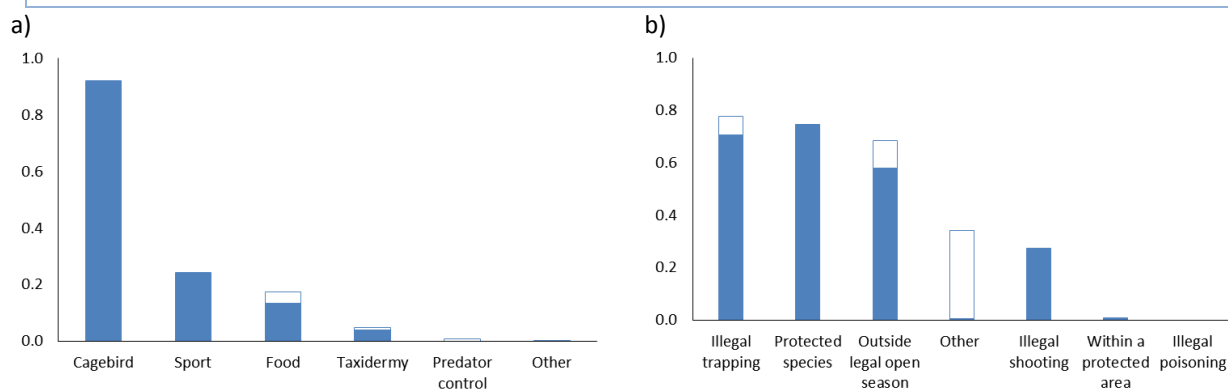
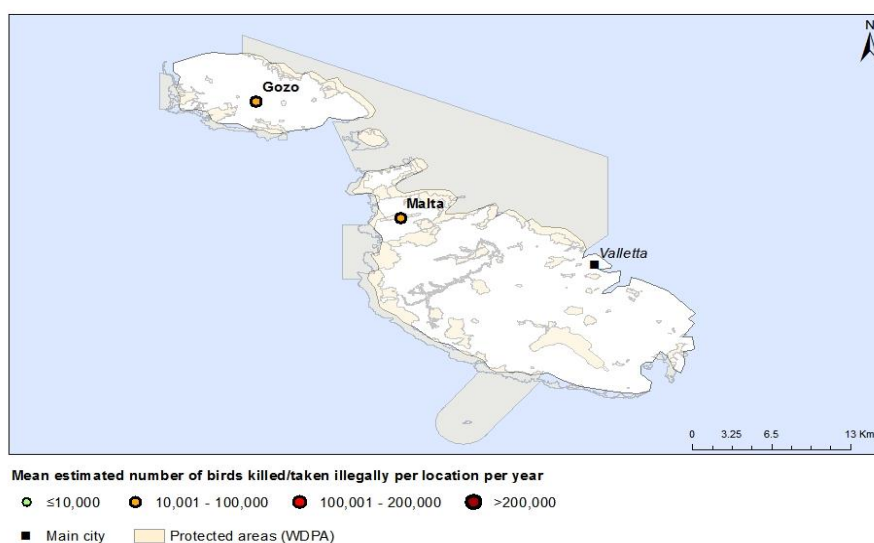


Figure A.15. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Malta. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.15. Potential worst locations for illegal killing of birds/taking in Malta.

A.16. Montenegro

Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Montenegro. Hunting is permitted during certain seasons (only Sundays and Bank holidays) for 19 bird species. Only rifles are permitted, all other hunting methods including use of calling devices or live decoys, shooting from a moving vehicle, falconry are prohibited. However, all species, even protected species, are allowed to be shot outside the hunting ground and hunting season, if they are endangering human lives or possession. Trapping is prohibited in Montenegro.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to monitoring in few sites and expert opinion. **64,000-197,000 individual birds may be illegally killed each year in Montenegro** (Table A.16). Estimates are based on field observation (records of illegal activities on different sites), criminal reports and expert opinion. The five bird species reported to be the most affected represent 71% of the total estimated number (Table A.16). 'Sport' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.16).

Worst areas for illegal killing and taking of birds

Ten worst locations were identified in Montenegro (Map A.16), accounting for 28-66% of the total estimated number of individual birds illegally killed each year in the country, mainly coastal wetlands because these areas attract many birds which stop overs during their migration or winter there.

Recommendation to tackle the illegal killing and taking of birds

During the last four years, CZIP is conducting monitoring of illegal bird shooting on the Adriatic Flyway and reliable indicators show that the pressure of illegal shooting is in slight decline, especially when it comes to poaching by Italian hunters, who until 15 years ago, were the main poachers in Montenegro. Involvement of state authorities and law enforcement is currently missing to tackle the issue in the country.



Shooting hides in Ulcinj salinas (protected area where hunting is banned) © CZIP

Table A.16. Results of the review of the illegal killing/taking of birds in Montenegro for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (306)	64,000 - 197,000	Stable	100% / 1%
Common Quail	30,000 - 100,000	Substantial increase	50% / 4%
Common Snipe	4,000 - 15,000	Moderate decline	7% / 72%
Garganey	4,000 - 10,000	Moderate increase	5% / 39%
Common Coot	3,000 - 10,000	Stable	5% / 2%
Common Pochard	2,000 - 6,000	Stable	3% / 10%

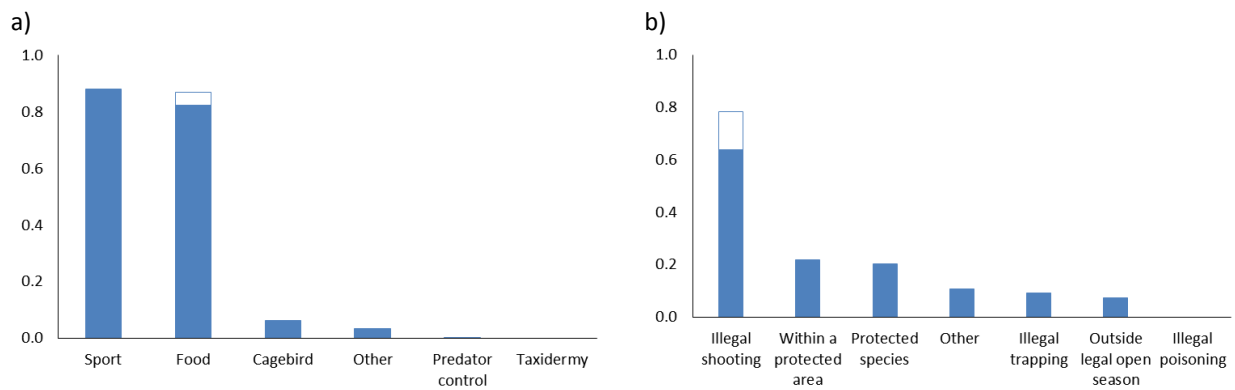
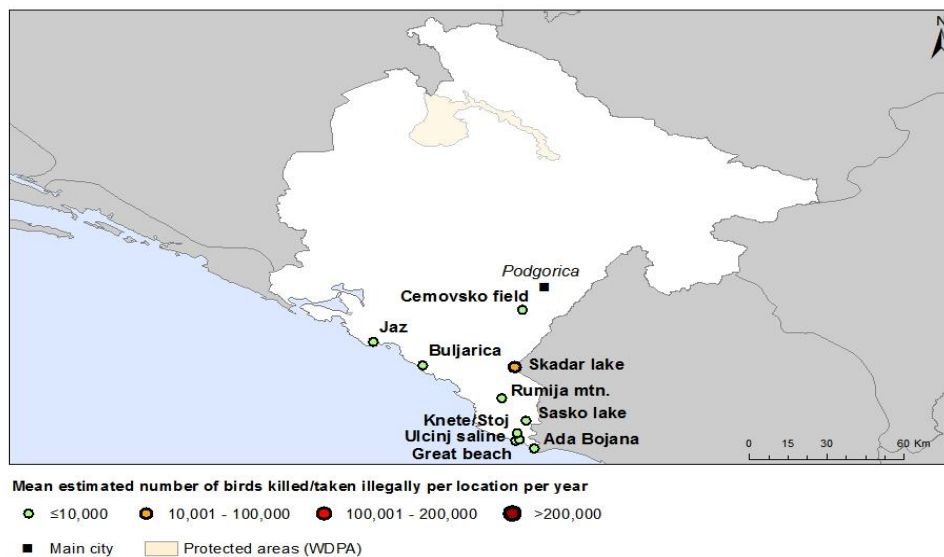


Figure A.16. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Montenegro. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.16. Potential worst locations for illegal killing/taking of birds in Montenegro.

A.17. Morocco



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(GREPOM)

Hunting and trapping legislation

The legislation is comprehensive in Morocco. Hunting is permitted during certain seasons and for certain bird species, but the 'Arrêté de Chasse' does not go into detail of listing species (only groups or genus) hence a high number of potential huntable species (73 species). Trapping is not allowed, except for species considered as pests. All restrictions mentioned in the legislation can be derogated if the species is considered as a pest by the landowner of an affected parcel. All hunting methods are allowed for killing pest species, except fire, deliberate bacterial and viral infections.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported to be in moderate increase**, according to surveys, published report and data collected for this review through questionnaire. **23,400-125,000 individual birds may be illegally killed each year in Morocco** (Table A.17). Estimates are based on questionnaires to GREPOM members and forestry rangers, surveys in market and in the field, reports (e.g. 2013 report on legal hunting), police violation reports, etc. The five bird species reported to be the most affected represent 53% of the total estimated number (Table A.17). 'Sport' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality (Figure A.17).

Worst areas for illegal killing and taking of birds

Ten worst locations were identified in Morocco (Map A.17), accounting for 47-90% of the total estimated number of individual birds illegally killed each year in the country. They are located in different parts of the country, illegal practices for killing birds being widespread in the whole country.

Recommendation to tackle the illegal killing and taking of birds

Civil society is lacking "administrative power" to tackle the issue in Morocco, it can however sometimes influence governmental decisions, e.g. GREPOM has provided significant arguments that European Goldfinch and Common Buttonquail populations have decreased drastically owing to illegal trapping and therefore both



Illegal trade of birds in the street © GREPOM

are listed as protected species in Morocco since 2012. Better involvement of state authorities and better law enforcement should help to tackle the issue in the country.

Table A.17. Results of the review of the illegal killing/taking of birds in Morocco for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (331)	23,400 - 125,000	Moderate increase	100% / <1%
European Goldfinch	5,000 - 25,000	Substantial increase	20% / 3%
European Turtle-dove	2,000 - 12,000	Moderate increase	9% / 1%
Barbary Partridge	2,500 - 10,000	Moderate increase	8% / 30%
Common Quail	1,500 - 10,500	Moderate increase	8% / <1%
European Serin	1,000 -10,000	Moderate increase	7% / 4%

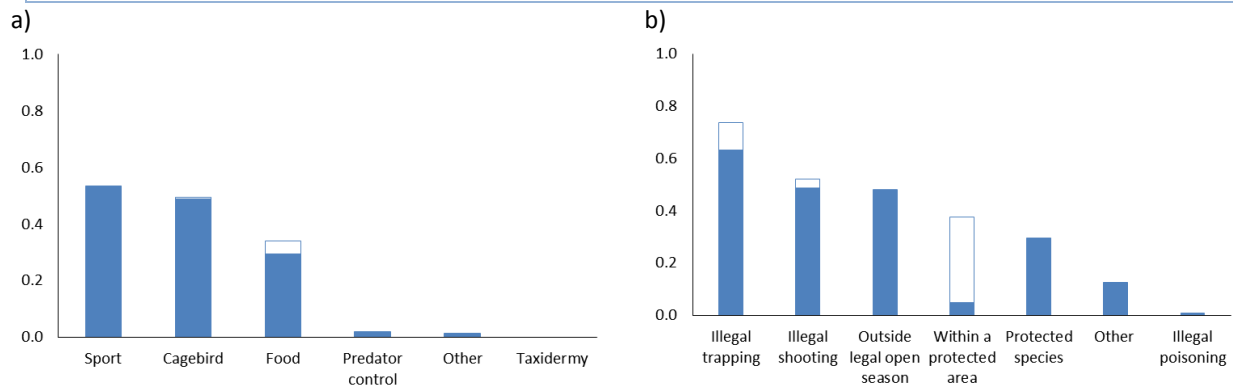
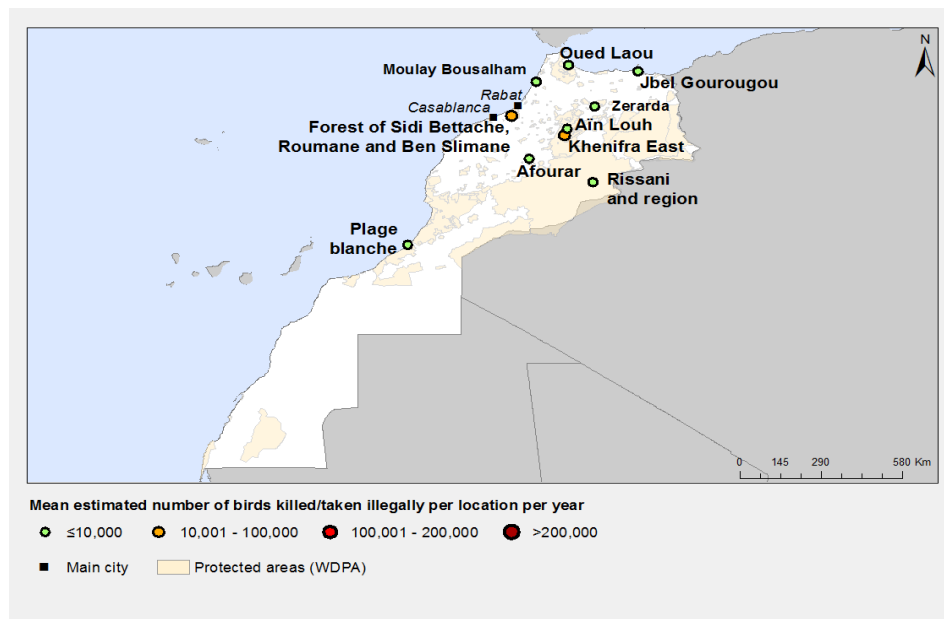


Figure A.17. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Morocco. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.17. Potential worst locations for illegal killing/taking of birds in Morocco.

A.18. Palestinian Authority Territories



Contributors to the review

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Hunting and trapping legislation

The Environmental Law (including hunting regulation) was approved in 2000 but was never implemented. The Jordanian Environmental Law is implemented in Palestinian Authority Territories since 1963, but bird hunting and trapping are currently illegal.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to data collected for this review through questionnaires to hunters and trappers. **70,000-109,000 individual birds may be illegally killed each year in Palestinian Authority Territories** (Table A.18). Estimates are based on information from hunters and trappers adjusted by expert opinion. Grand total estimates for Herons, Waders, Raptors, Shrikes, Larks, Thrushes, Chats, non-aquatic Warblers and Buntings were estimated for the whole group of species, then divided according to species relative abundance in Palestinian Authority Territories. The five bird species reported to be the most affected represent 79% of the total estimated number of individual birds illegally killed in the country (Table A.18). 'Food' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.18).

Worst areas for illegal killing and taking of birds

Five worst locations were identified in Palestinian Authority Territories (Map A.18), accounting for 65-97% of the total estimated number of individual birds illegally killed each year in the country. They are located in the different part of the territories, illegal practices for killing birds being widespread in Palestinian Authority Territories.

Recommendation to tackle the illegal killing and taking of birds

PWLS has started to collect information from the local black market of the birds and from hunters and trappers about this issue of illegal killing, but more reliable information is needed. Implementation of environmental law in Palestine and hunting and trapping regulations should be strengthened and a hunter's community should be established to allow illegal killing to be tackled more efficiently.

Table A.18. Results of the review of the illegal killing/taking of birds in Palestinian Authority Territories for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (263)	70,000 - 109,000	Stable	100% / <1%
Common Quail	40,000 - 60,000	Substantial decline	56% / 3%
Blackcap	8,300 - 13,000	Stable	12% / 1%
Lesser Whitethroat	3,300 - 5,200	Stable	5% / 1%
Common Chiffchaff	2,500 - 3,900	Stable	4% / 1%
Laughing Dove	2,000 - 3,000	Substantial increase	3% / 25%

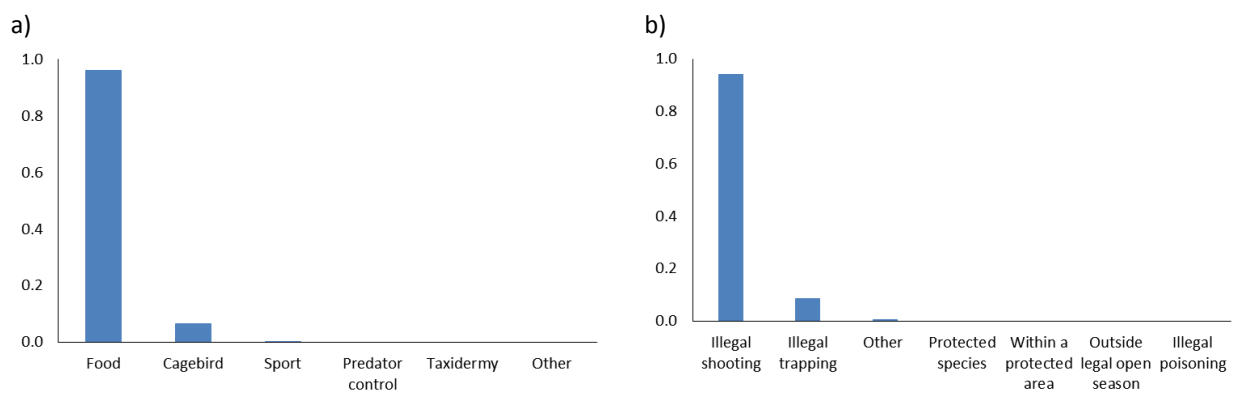
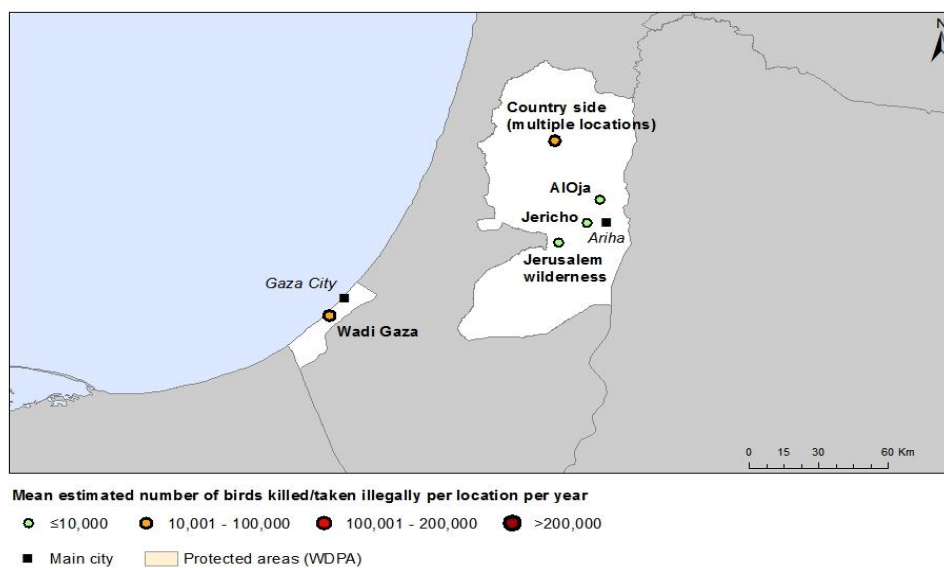


Figure A.18. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Palestinian Authority Territories. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.18. Potential worst locations for illegal killing/taking of birds in Palestinian Authority Territories.

A.19. Portugal

Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Portugal. Licensed hunting is permitted during certain seasons for 28 bird species. Use of bird calls and decoys is forbidden, except in the case of wildfowl and pigeon hunting. Use of poison and other non-selective methods are forbidden, as well as hunting from any kind of motorised vehicle. Trapping is prohibited in Portugal, except for selective methods for predator-control (mammals).

Scale and scope of illegal killing and taking of birds

Note: The information does not concern Portuguese archipelagos, Madeira and Azores, only mainland

The **trend in the scale of illegal killing was reported to be in moderate increase**, according to different sources of information: data from animal recovery centres, data from bird surveys (e.g. anti-poisoning project), public surveys, animal selling sites, seizures of birds in restaurants). **32,400 – 132,000 individual birds may be illegally killed each year in Portugal** (Table A.19). Estimates are based on mainly on data from recovery centres, bird seizing (online or in restaurants) extrapolated to the national level and expert opinion. The five bird species reported to be the most affected represent 67% of the total estimated number (Table A.19). ‘Cagebirds’ was the main reason reported for taking birds and illegal trapping the main type of illegality (Figure A.19).

Worst areas for illegal killing of birds

Three worst locations were identified in Portugal (Map A.19), accounting for 80-95% of the total estimated number of individual birds illegally taken each year in the country. They are all located in coastal areas, where the most-densely populated areas are.

Recommendation to tackle the illegal killing and taking of birds

In Portugal, people do not kill birds for sport. Passerines are trapped for cagebirds and for food (sold in local restaurants or for own consumption)

and birds of prey are trapped or shot because they are perceived as game pests. Actually, even though the law prohibits all bird-trapping, it has a limited scope, because selling traps and nets is not forbidden



Illegal trapping for “predator control” reasons © SPEA

and trappers are rarely caught. Data on illegal killing is collected by different organisations and should to be centralised. Better law enforcement, data monitoring and data management should be priority actions to tackle illegal killing of birds in Portugal.

Table A.19. Results of the review of the illegal killing/taking of birds in Portugal for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (291)	32,400 - 133,000	Moderate increase	100% / <1%
European Goldfinch	7,000 - 35,000	Moderate increase	25% / 4%
Blackcap	8,500 - 21,000	Unknown	18% / 1%
European Robin	7,500 - 19,000	Unknown	16% / 2%
European Pied Flycatcher	1,500 - 5,000	Unknown	4% / 14%
Eurasian Linnet	1,100 - 5,000	Moderate increase	4% / 2%

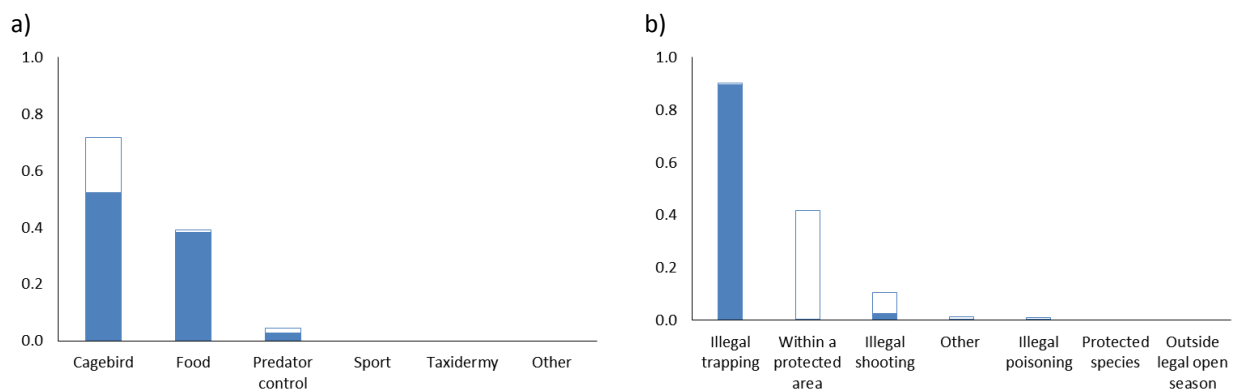
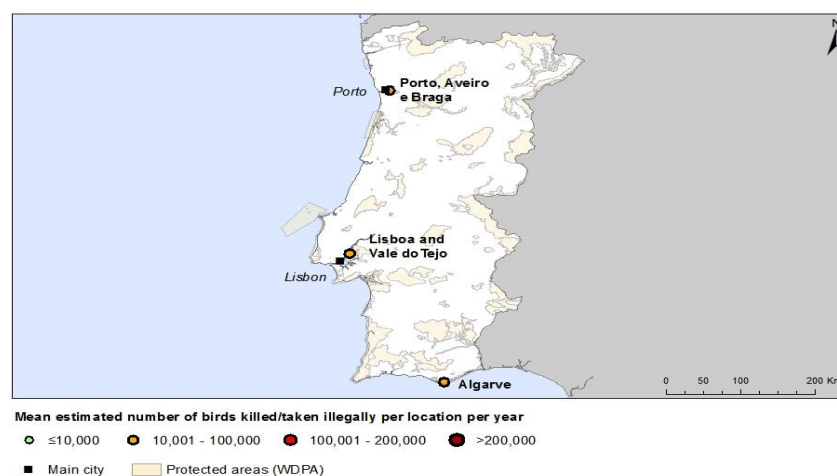


Figure A.19. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Portugal. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types



Map A.19. Potential worst locations for illegal killing/taking of birds in Portugal.

A.20. Serbia

Contributors to the review

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**BIRD PROTECTION AND
STUDY SOCIETY OF SERBIA**

Hunting and trapping legislation

The legislation is comprehensive in Serbia. Licensed hunting is permitted during certain seasons for 23 bird species, but although the law grants protection to all species during the breeding season, hunting season opening and closing dates don't respect this period and some species (Great Cormorant, Northern Goshawk, Grey Heron and Carrion Crow) are huntable all year round. Trapping is prohibited in Serbia.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to different sources of information: data from social media, published report, official report and monitoring of exhibitions. **104,000-163,000 individual birds may be illegally killed each year in Serbia** (Table A.20). Estimates are based on all the sources of information quoted previously and adjusted by expert opinion. The five bird species reported to be the most affected represent 65% of the total estimated number of individual birds illegally killed in the country (Table A.20). 'Sport' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality (Figure A.20).

Worst areas for illegal killing and taking of birds

Four worst locations were identified in Serbia (Map A.20), accounting for 16-25% of the total estimated number of individual birds illegally killed each year in the country. They are all located in North Serbia, vast area with very good habitats for waterfowl, Common Quail and Turtle Dove. However illegal killing and wildlife trade is spread throughout the whole country. Catching and trade of song birds is much more common in South Serbia, but worst locations are difficult to locate according to current knowledge.

Recommendation to tackle the illegal killing and taking of birds

BPSSS have formed the 'Serbian Bird Crime Task Force' in 2012. This team is collecting data during field visits and on social media. All available published reports, news in media, official statements by Governmental bodies, etc., related to bird crime issues are also



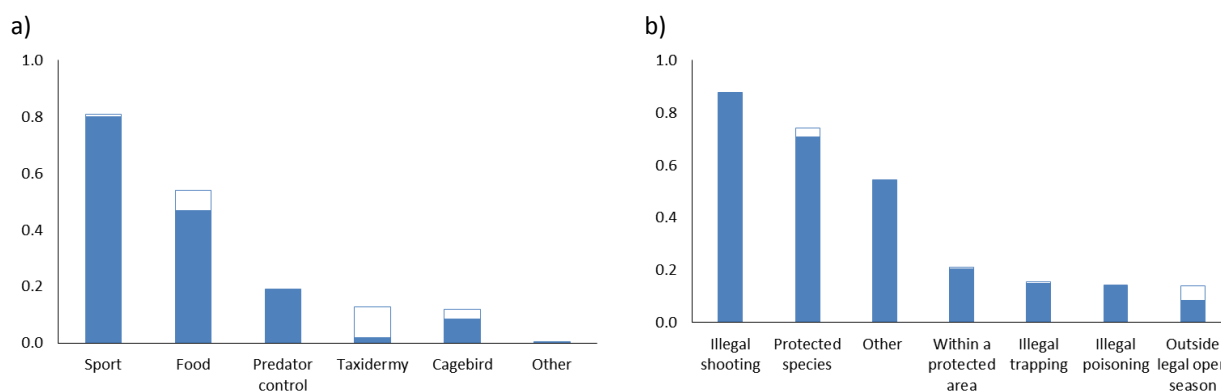
*Bird seizing at the Serbian
border © BPSSS*

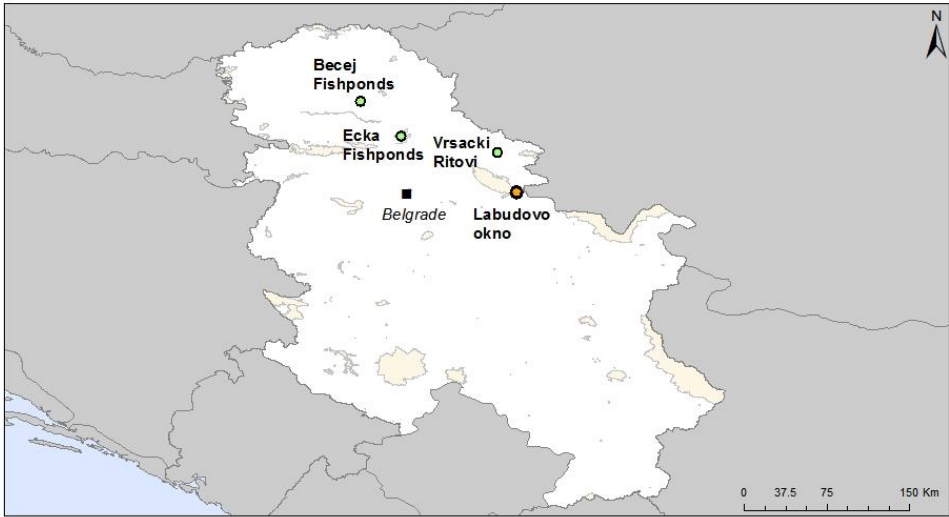
collected. All data are gathered in one database. The official inspections that would be key to controlling hunting and illegal killing in Serbia are almost absent and this current lack of law enforcement hampers tackling this issue.

Table A.20. Results of the review of the illegal killing/taking of birds in Serbia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (302)	104,000 - 163,000	Stable	100% / 1%
Common Quail	50,000 - 60,000	Moderate increase	41% / 3%
Greater White-fronted	7,000 - 10,000	Stable	6% / 65%
Eurasian Buzzard	7,000 - 10,000	Moderate increase	6% / 37%
Mallard Anas	5,000 - 10,000	Moderate increase	6% / 10%
European Turtle-dove	5,000 - 10,000	Stable	6% / 1%

Figure A.20. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Serbia. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.





Mean estimated number of birds killed/taken illegally per location per year

- ≤10,000
- 10,001 - 100,000
- 100,001 - 200,000
- >200,000

■ Main city ■ Protected areas (WDPA)

Map A.20. Potential worst locations for illegal killing/taking of birds in Serbia.

A.21. Slovenia

Contributors to the review

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Hunting and trapping legislation

The legislation is comprehensive in Slovenia. Hunting is permitted during certain seasons for 6 bird species. Rifle shooting and falconry are the only legal methods for hunting birds. All the areas of Slovenia, no matter if it is private or public, are divided amongst the local hunting societies, who are managing the game and have public authorisation through concessions. Trapping is prohibited in Slovenia.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, according to the lack of information on this issue. **200-15,700 individual birds may be illegally killed each year in Slovenia** (Table A.21). Estimates are based on anecdotal data, reported incidents, knowledge and experience of experts consulted from this assessment. The five bird species reported to be the most affected represent 32% of the total estimated number (Table A.21). 'Food' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality reported (Figure A.21).

Worst areas for illegal killing and taking of birds

Nine worst locations were identified in Slovenia (Map A.21), accounting for 9-93% of the total estimated number of individual birds illegally killed each year in the country. They are located in all parts of the country, but the main worst location is West Slovenia where a lot of passerines are caught on autumn migration for Italian and Slovenian restaurants. There is also a tradition of keeping goldfinches, greenfinches and similar birds in cages in this region.

Recommendation to tackle the illegal killing and taking of birds

Little information about the illegal killing of birds in Slovenia is available but doesn't seem to be an important conservation issue. The biggest issue may be the collection of Golden eagle and Peregrine Falcon eggs and/or pulli for falconry. Slovenian Golden eagles are supposedly a well-known brand amongst falconers.



*Cormorant illegally shot at
lake Žovnek © DOPPS*

Collecting more standardised information about illegal killing should allow a better assessment of the illegal killing in the country.

Table A.21. Results of the review of the illegal killing/taking of birds in Slovenia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (283)	200 – 15,700	Unknown	100% / <1%
Blackcap	10 - 1,000	Unknown	6% / <1%
Garden Warbler	10 - 1,000	Unknown	6% / 1%
Eurasian Chaffinch	10 - 1,000	Unknown	6% / <1%
European Serin	10 - 1,000	Unknown	6% / <1%
European Greenfinch	10 - 1,000	Unknown	6% / <1%

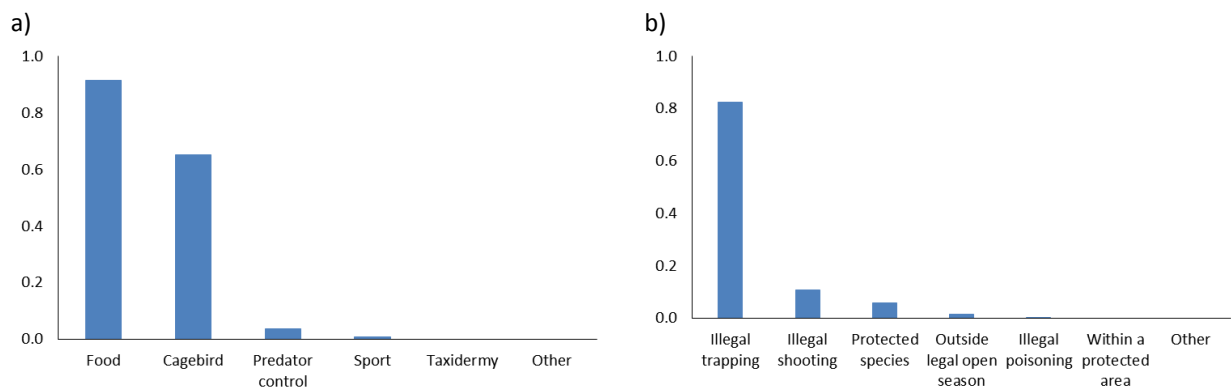
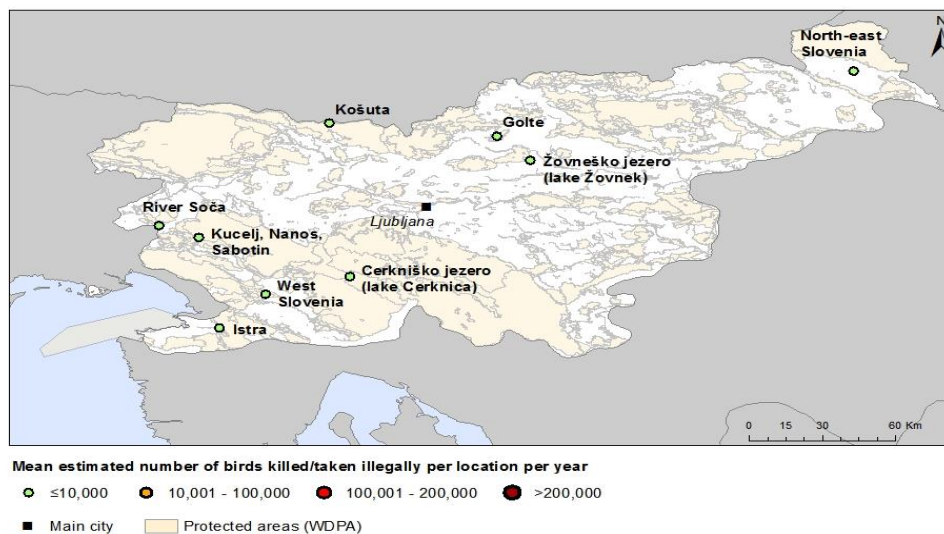


Figure A.21. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Slovenia. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.21. Potential worst locations for illegal killing/taking of birds in Slovenia.

A.22. Spain



Contributors to the review

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Hunting and trapping legislation

In Spain there is no national law common to all regions. The powers on wildlife and hunting are transferred to the autonomous communities and therefore each region has at least two or three hunting laws. According to the Annex 2 of the EU Birds directive, 43 bird species are huntable in Spain, but Spanish law only allows legal hunting of 33 species.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to illegal wildlife mortality causes recorded in wildlife rehabilitation centres. **103,000-405,000 individual birds may be illegally killed each year** (Table A.22). Estimates are based on rehabilitation centre data corrected by detection rate, monitoring of 'paranys' and expert opinion. The five bird species reported to be the most affected represent 71% of the total estimated number (Table A.22). 'Food' was the main reason reported for killing birds and 'illegal trapping' the main type of illegality (Figure A.22).

Worst areas for illegal killing and taking of birds

Four worst locations were identified in Spain (Map A.22), accounting for 71-90% of the total estimated number of individual birds illegally killed each year in the country. These worst locations correspond to large administrative regions, as illegal practices are reported to be widespread in Spain.

Recommendation to tackle the illegal killing and taking of birds

There is no national monitoring of illegal killing/taking of birds in Spain. It is necessary to implement a standardised monitoring, especially by the Spanish authorities, in order to have more robust data to tackle this issue. SEO and other local NGOs have started a survey on the Mediterranean coast to map



Parany © SEO

all the 'paranys' observed. The parany is an illegal method of trapping birds when they land in trees specially pruned and covered with lime. The birds get glued and cannot fly and eventually fall to the ground, where they are collected by the trappers and killed. In recent years there has been a decrease in the number of paranys. The penalties for illegal trappers have declined and local authorities do not intervene as it is considered a 'traditional' activity, but in recent times there has been a turnaround

and authorities are increasing the penalties. Better law enforcement should allow to tackle this illegal practices in Spain (1.5 million bird estimated to be killed in more 2,000 illegal paranys in 2012).

Table A.22. Results of the review of the illegal killing/taking of birds in Spain for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (376)	103,000 - 405,000	Stable	100% / 1%
Song Thrush	62,800 - 176,000	Substantial decline	47% / 10%
European Goldfinch	5,600 - 40,600	Moderate increase	9% / 5%
Redwing	6,900 - 21,200	Substantial decline	6% / 6%
Fieldfare	6,700 - 20,800	Substantial decline	5% / 17%
Eurasian Chaffinch	900 - 21,000	Moderate increase	4% / <1%

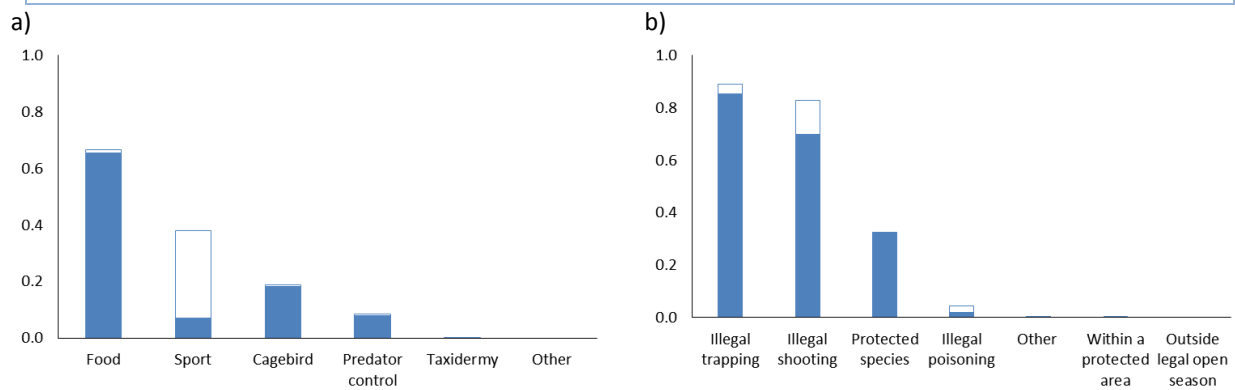
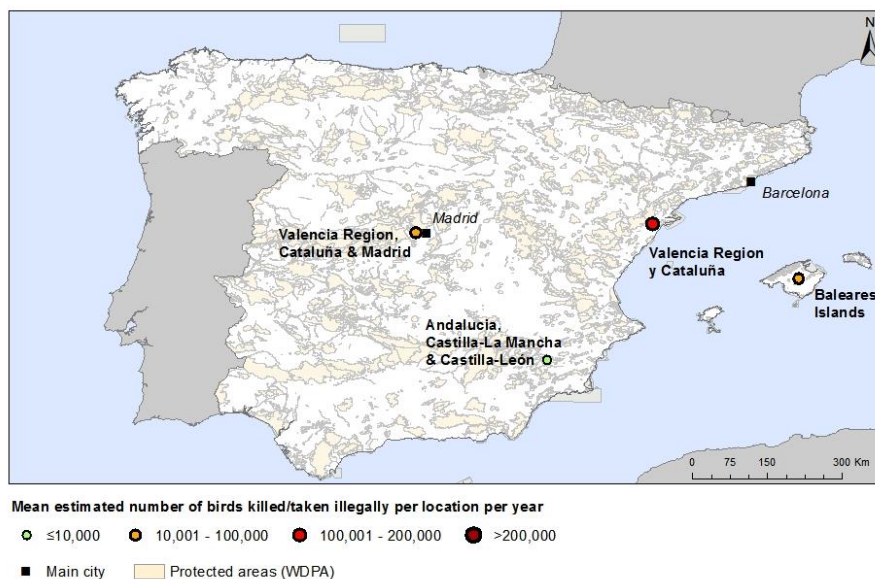


Figure A.22. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Spain. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.2. Potential worst locations for illegal killing/taking of birds in Spain.

A.23. Syria

Contributors to the review

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Hunting and trapping legislation

A complete hunting ban decision was implemented in 1994, and is still legal on. A new hunting law is currently in discussion, with licensed hunting in certain seasons and for certain species under consideration. Trapping in general is illegal in Syria, but not for controlling pest species (based on approval from authorities).

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as stable**, according to information from poachers and local communities, as well as some local officers in worst locations for illegal killing. **2.9-4.9 million individual birds may be illegally killed each year in Syria** (Table A.23). Estimates are based on information from poachers, local communities, authorities and expert opinion. Many total estimates were estimated for groups of species, then divided according to species relative abundance in Syria (Pelicans, Kestrels, Shrikes, Tits, Warblers, Thrushes, Wagtails, Pipits, Finches, Sandgrouses, Larks, and Wheatears). The five bird species reported to be the most affected represent 61% of the total estimated number (Table A.23). 'Food' was the main reason reported for killing birds and 'illegal shooting' the main type of illegality reported is (Figure A.23).

Worst areas for illegal killing and taking of birds

Ten worst locations were identified in Syria (Map A.23), accounting for 75-100% of the total estimated number of individual birds illegally killed each year in the country. More than 100,000 individual birds are estimated to be killed illegally in these worst locations. Nine of the worst locations are among the 20 worst locations in the Mediterranean.

Recommendation to tackle the illegal killing and taking of birds

Hunting has always been a traditional pastime in Syria; however, it has now become widespread and indiscriminate. Lack of enforcement of the hunting ban has led to a new generation of shooters who lack basic hunting skills and ethics. SSCW is leading the way in updating the law through an action plan. This is expected to



Birds illegally shot in Syria © SSCW

be finalised in 2015 to be authorised by the government and the parliament and to propose a force of wildlife wardens (after appropriate training) to monitor hunting and other environment breaches on the ground. These suggestions should help to tackle the illegal killing of birds in Syria.

Table A.23. Results of the review of the illegal killing/taking of birds in Syria for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (333)	2,900,000 - 4,900,000	Stable	100% / 17%
Blackcap	600,000 - 1,000,000	Moderate decline	21% / 46%
Eurasian Skylark	370,000 - 592,000	Stable	12% / 64%
Common Quail	400,000 - 500,000	Moderate increase	12% / 27%
Common Whitethroat	250,000 - 438,000	stable	9% / 86%
Greater Short-toed Lark	210,000 - 336,000	Stable	7% / 97%

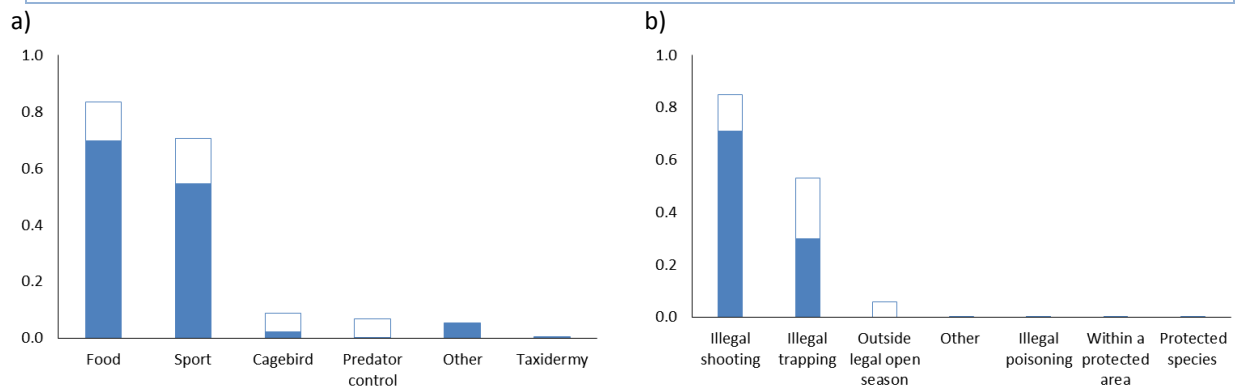
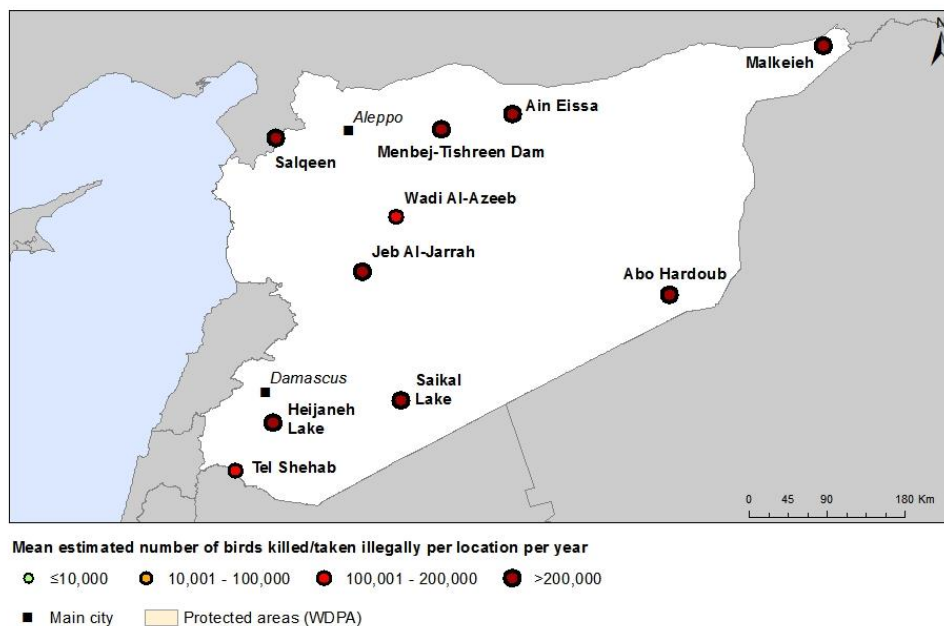


Figure A.23. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Syria. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.23. Potential worst locations for illegal killing/taking of birds in Syria.

A.24. Tunisia

Contributors to the review

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جمعية أصدقاء الطيور
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Hunting and trapping legislation

The legislation is comprehensive in Tunisia. Licensed hunting is permitted during certain seasons and for certain bird species, but the hunting decree does not always go into detail of listing species, hence 58 potential huntable species. Trapping is authorised for female Eurasian Sparrow Hawks for members of the Falconer Association in the Nabeul Governorate. Annual tacking of a limited number (4) of young falcons at the nest is allowed following specific authorisation for members of the Falconer Association.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**. Since 2011 (year of the revolution), significant increase in bird poaching and trafficking has been observed. **50,500-227,000 individual birds may be illegally killed each year in Tunisia** (Table A.24). Estimates are based on survey report, annual hunting reports, surveillance of online sale websites, surveillance of bird markets, surveillance of restaurants, leisure centres, monuments, markets, etc. where the birds are displayed as an attraction, AAO database of birds in distress (injured, confiscated, etc.), hunter interviews, informal discussions with hunting guards. The five bird species reported to be the most affected represent 55% of the total estimated number (Table A.24). 'Food' was the main reason reported for killing birds and 'illegal egg collection' and 'hunting without licence' the main types of illegality (Figure A.24).

Worst areas for illegal killing and taking of birds

Seven worst locations were identified in Tunisia (Map A.24), accounting for 43-75% of the total estimated number of individual birds illegally killed each year in the country. They are located in the whole country as illegal practices were reported to be widespread in Tunisia.



Recommendation to tackle the illegal killing and taking of birds

AAO is currently collecting information about illegal killing and taking of birds in Tunisia, but not in a systematic way, so it is currently difficult to validate these data and extrapolate them to obtain an overall vision of the situation in Tunisia. Better data collection and management should allow improved estimates the scale and scope of illegal killing of birds in Tunisia. However, better law enforcement focusing on black spots like bird markets, sales points, internet sale, etc. and threatened species should be the priority action to tackle illegal killing of birds in Tunisia.

Birds trapped by children in the Oasis of Gabès during spring migration @ Naoufel Hamouda

Table A.24. Results of the review of the illegal killing/taking of birds in Tunisia for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (303)	50,500 - 227,000	Unknown	100% / 1%
Common Quail	27,500 - 41,300	Moderate increase	25% / 2%
Barbary Partridge	1,700 - 24,100	Moderate increase	9% / 63%
Common Starling	5,000 - 20,000	Moderate increase	9% / 3%
European Serin	2,000 - 20,000	Substantial increase	8% / 7%
Slender-billed Gull	2,600 - 9,200	Unknown	4% / 94%

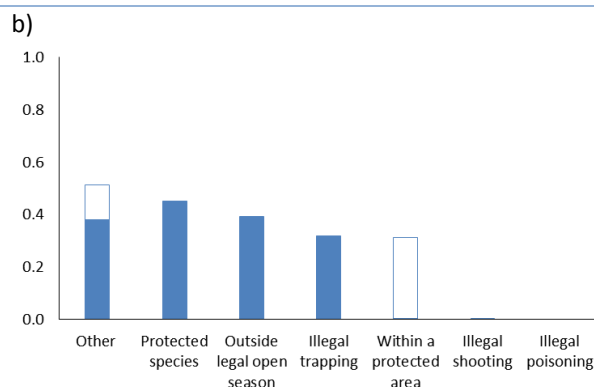
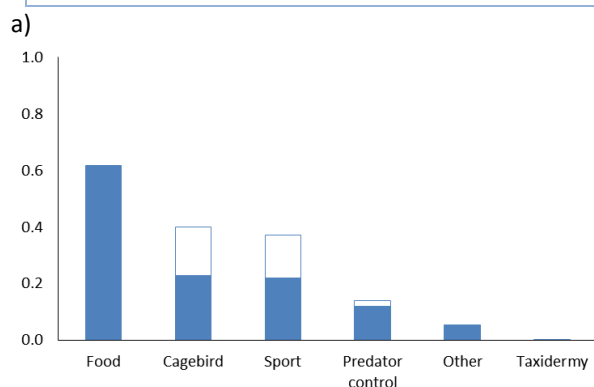
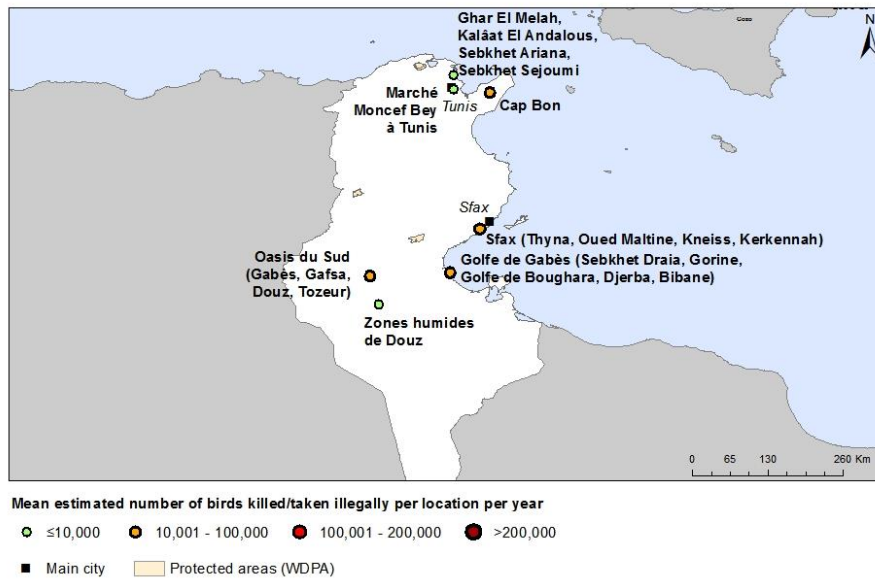


Figure A.24. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Tunisia. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types. Other = Egg and/or chick collection and hunting without licence



A.25. Turkey

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Hunting and trapping legislation

The legislation is comprehensive in Turkey. Licensed hunting is permitted during certain seasons for 27 bird species. The following methods are forbidden: use of calling devices and light, providing bait and shooting from a moving vehicle. Trapping is illegal, except for Eurasian Sparrowhawk for the purposes of falconry, although specific licences are required. A maximum of two red-backed shrikes per person each autumn can be taken under licence for the purposes of falconry.

Scale and scope of illegal killing and taking of birds

The **trend in the scale of illegal killing was reported as unknown**, according to the lack of information on this issue. **25,000-117,300 individual birds may be illegally killed each year in Turkey** (Table A.25). Estimates are based on unpublished data from the Ministry of Forestry, published articles, extrapolation of information from few sites and expert opinion. The five bird species reported to be the most affected represent 40% of the total estimated number (Table A.25). 'Sport' was the main reason reported for killing birds and 'illegal shooting' the main types of illegality (Figure A.25).

Worst areas for illegal killing and taking of birds

Nine worst locations were identified in Turkey (Map A.25), accounting for 37-61% of the total estimated number of individual birds illegally killed each year in the country. Key sites identified so far are largely concentrated in the west and south of the country and tend to be associated with wetlands.

Recommendation to tackle the illegal killing and taking of birds

The illegal killing and taking of birds was reported to be a widespread problem in Turkey. Hunter training programs are available for registered hunters, but the main problems appear to be related to unregistered hunters. According to the current data and knowledge, it is very difficult to make a robust assessment of the illegal killing and taking of birds in Turkey. Further studies are required to determine the extent of illegal killing across the country. Systematic monitoring should



*Lesser White-fronted Goose
illegally shot in Turkey ©
Mustafa Erturan*

be implemented as a matter of urgency. A high priority for the Government is to develop and implement a national strategy to tackle the issue of illegal killing and taking of birds in Turkey.

Table A.25. Results of the review of the illegal killing/taking of birds in Turkey for all and the five species reported to be the most impacted in terms of absolute numbers.

Species	Min - Max estimated number of individual birds illegally killed	Reported trend of the illegal killing over last 10 years	% of the total estimated number of individual birds illegally killed in the country/in the Mediterranean
All species assessed (387)	25,000 – 117,300	Unknown	100% / 1%
Common Coot	10,000 – 20,000	Stable	21% / 5%
Common Teal	2,800 – 5,600	Unknown	6% / 9%
Eurasian Buzzard	2,000 – 5,000	Stable	5% / 15%
Chukar	1,000 – 5,000	Unknown	4% / 6%
Northern Shoveler	1,400 – 4,200	Moderate increase	4% / 22%

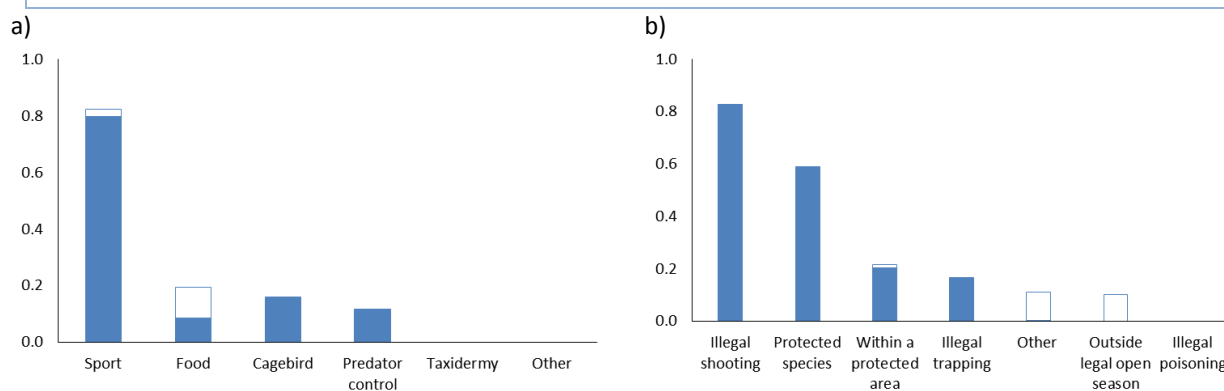
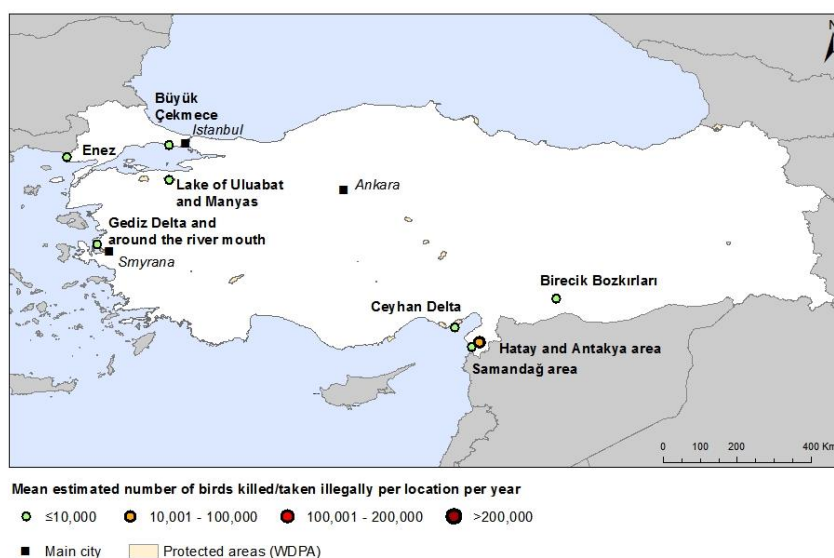


Figure A.25. Index of importance of a) the potential reasons and b) the potential types of illegality for killing/taking birds in Turkey. Solid bars indicate the primary reasons/types, open bars indicate secondary reasons/types.



Map A.25. Potential worst locations for illegal killing/taking of birds in Turkey.

A.26. Countries for which illegal killing and taking of birds is not an important conservation issue

- **Gibraltar**

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Hunting and trapping legislation

Hunting was completely banned in 1991 in Gibraltar. All hunting and trapping for non-scientific purposes (i.e., ringing) is illegal.

Scale and scope of illegal killing and taking of birds

Illegal killing and taking of birds was reported as not an important conservation issue in Gibraltar for this review. No instances of illegal killing and taking of birds have been reported in recent times.

- **Israel**

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Hunting and trapping legislation

The legislation is comprehensive in Israel. Israel Nature and Parks Authority (INPA) is in charge of law enforcement, and monitors illegal killing of birds in Israel. Licensed hunting is permitted during certain seasons for 15 bird species. Only shotguns may be used (no rifles, and no bows and arrows). The following hunting methods are prohibited: dazzling using lights; poisoning or drugging; pursuing with a motor vehicle or dog; using explosives; using traps, nets or adhesives.

Scale and scope of illegal killing and taking of birds

Illegal killing of birds was reported as not an important conservation issue in Israel. There are some localised problems that involve illegal killing of birds, e.g. trapping of Goldfinch for capture as cagebirds, shooting Chukar for food, and some cases of persecution of raptors in nests or by shooting. Around fish farms there are several cases a year of shooting of White Pelicans and other waterbird species conflicting with fish farmers. However, in a national scale, no species are illegally killed in non-

trivial numbers. INPA applies considerable efforts to reduce and minimize such cases of illegal killing, through strict law enforcement and education programs.