

National Report on Hunting

Country:
The Hashemite Kingdome of Jordan

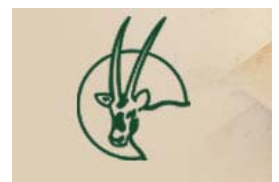
2005

**BUILDING CAPACITY FOR SUSTAINABLE HUNTING OF MIGRATORY BIRDS IN
MEDITERRANEAN THIRD COUNTRIES**

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National Report on Hunting

Country:
The Hashemite Kingdome of Jordan

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2005

Table of Contents

Table of Contents.....	3
Hunting and hunting activities	4
Names and coordinates of main hunting localities in country.....	4
Main migratory species hunted.....	4
Hunting methods	9
Lead shots.....	9
Hunters.....	9
Hunting and research	10
Legislation and law enforcement related to hunting of migratory birds	11
Organization of management of hunting	11
Hunting legislations	11
Legislations and Regulations on ammunition and trapping equipment.....	17
Figures of illegal trade in wild caught birds.....	17
Hunting in relation to areas of biodiversity significance	18
Protected areas including nature reserves	18
Important Bird Areas.....	19
Training courses for hunters.....	20
Socio-economic and cultural importance of hunting of migratory birds	21
Sale of migrant birds in country	21
Guns and ammunition and other hunting equipment.....	22
Restaurants and taxidermists.....	22
Cultural importance of migratory birds.....	23
Coverage of hunting and conservation of migratory birds in formal education and the media	23
Alternatives to hunting migratory birds.....	24
Status of resident game bird species and relationship to current hunting patterns	24
Release programmes for resident and exotic species.....	24
Alternatives economic models to hunting.....	25
Current status and potential of bird-watching and ecotourism.....	25

Hunting and hunting activities

Names and coordinates of main hunting localities in country

There are two main regions of the country where hunting is known to be one of the main threats to wildlife (**Map 1**). These regions are:

- The Jordan Valley and its margins
The whole Jordan Valley, locally called Al-Ghor, as a whole starting from Yarmouk River in the northern part of the country until the Dead Sea is considered to be the most popular site for hunting in the country. Specific sites in the Jordan Valley include the following:
 1. Northern Shuna (N, E)
 2. Al-Karameh Dam (N, E)
 3. Southern Shuna (N, E)
 4. Dair 'Alla (N, E)

Hunting in these localities is mainly in agricultural fields along the Jordan River.

- The Eastern Desert
Hunting in this part of the country is restricted to seasonal water bodies that form through winter and in some wet seasons might last until late spring (May). There is only one water body in the desert that is wet through the whole year. The site is called Ghadeer Burqu' and it is one of the most well-known sites for hunters in the country. Other hunting sites in the desert include the following:
 1. Qa' Azraq (N, E)
 2. Rajil Dam (N, E)
 3. Al-Bqai'awiyat (N, E)

Main migratory species hunted

Migratory species hunted in Jordan belong to several families and groups. The hunting of these species is usually linked with certain sites where these species are known to pass on their migration. Below are the main migratory species that are being hunted in Jordan and their localities (RSCN, Wildlife Enforcement Section Database, 2005) (**Map 2**):

- Saker, *Falco cherrug*
Falcons in general and Sakers in specific are trapped alive, mainly in the Eastern Desert in Areas such as Ruwaished and Jafr.

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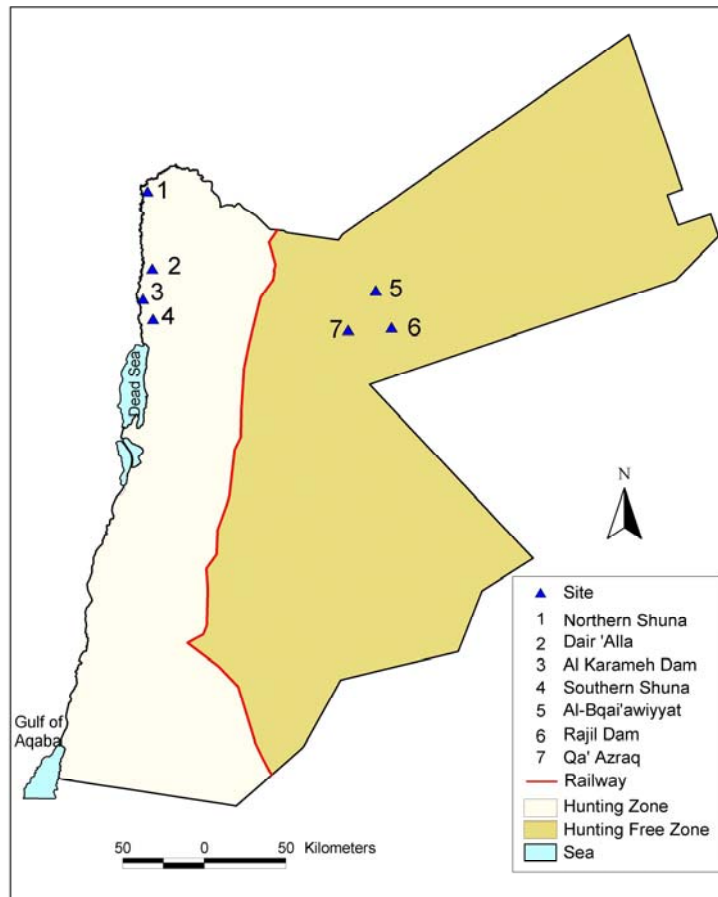
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- Wigeon, *Anas Penelope*, Teal, *Anas crecca*, Mallard, *Anas platyrhynchos*, Pintail, *Anas acuta*, Garganey, *Anas querquedula*, Shoveler, *Anas clypeata*

These are the main waterfowl species that are hunted in Jordan. Teal is the most commonly hunted since it is the most common duck species that passes through Jordan. Pintail is the most preferred and most popular between hunters. Other species are very well known between hunters. The main areas for hunting waterfowl in Jordan are King Talal Dam, Karameh Dam, Ghadeer Burqu' and Qa' Azraq.

- Quail, *Coturnix coturnix*

This species is mainly hunted through its migration through the Jordan Valley – Al Ghor area (northern, middle and southern) and the northern plains (Ramtha and Irbid areas).



Map 1: Main regions of hunting in the country

- Crane, *Grus grus*

This species is mainly hunted in the desert areas of the country. Hunting in these areas is not restricted to seasonally wet areas. Areas of known hunting activities of Cranes in the country include Burqu', Al-Wasad, Safawi, Rum.

- Turtle Dove, *Streptopelia turtur*

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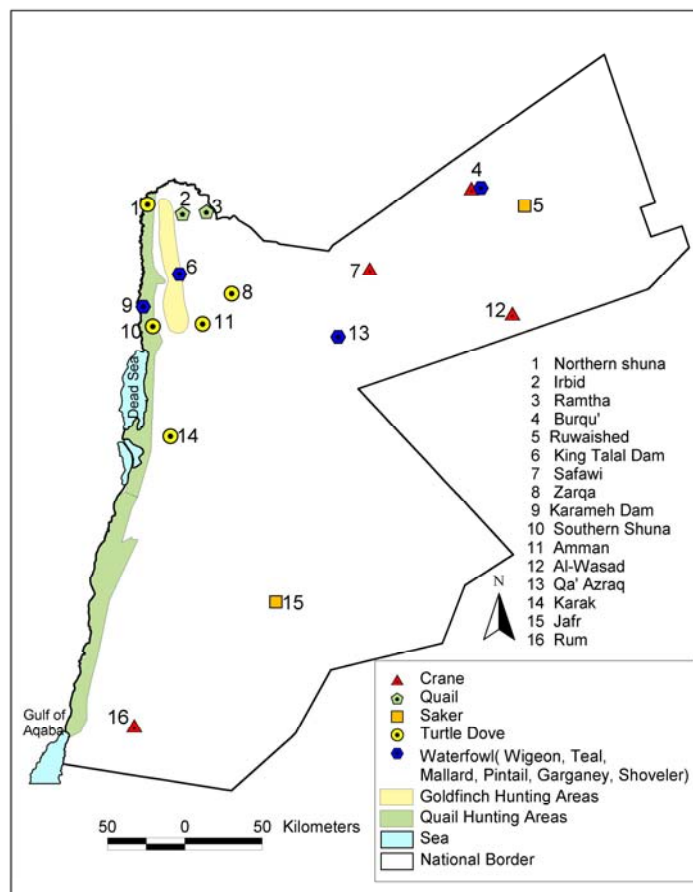
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One of the most popular migrant birds hunted in Jordan. The highest hunting activities are concentrated in Al-Ghor area, especially in Northern and Southern Shuna. It is also hunted around open areas in the population-dense areas in the country such as Zarqa, Karak and even Amman.

- Goldfinch, *Carduelis carduelis*

This is the most popular songbird in the country. It is usually caught by nets in order to be sold in local markets all over the country. Trapping this species is widespread all over the northern rift margins from Irbid to Amman.

As for the globally threatened species and species listed in **Annex I** of the EU Birds Directive, below are the species that are belong to these categories and are known to be hunted in Jordan. There are no specific data about the numbers hunted of these species.



Map 2: Locations of main targeted migratory species in the country

Table 1: Hunted migratory bird species in Jordan belonging to Annex 1 of the EU Birds Directives

Scientific name	English name	Global Status	Status in Jordan	Hunting Localities	Hunting status
<i>Ciconia ciconia</i>	White Stork	LC	Common passage migrant	Along the Jordan valley and its margins	Rarely hunted, taxidermy and personal collections
<i>Tadorna ferruginea</i>	Ruddy Shelduck	LC	Vagrant winter visitor that has been recorded more commonly in the past few years in the Eastern Desert	Qa' Azraq, Burqu' and Qatraneh Dam	Not really known by hunters. A single stuffed specimen was confiscated lately by RSCN rangers (the only incident ever for this species)
<i>Aythya nyroca</i>	Ferruginous Duck	NT	Passage migrant and winter visitor (low numbers) mainly in Aqaba	No known localities	Very little known duck between hunters. Not hunted since it was recently recorded in Aqaba sewage works only (a military protected zone)
<i>Pernis apivorus</i>	European Honey-buzzard	LC	Common passage migrant (mainly in spring)	All along the Jordan Valley	Hunted like any other common raptor in order to be sold for personal keeping
<i>Circaetus gallicus</i>	Short-toed Snake-eagle	LC	Passage migrant, summer breeder	Jordan valley margins and plains	Hunted like any other common raptor in order to be sold for personal keeping
<i>Aquila pomarina</i>	Lesser Spotted Eagle	LC	Passage migrant	Jordan valley margins and plains	Hunted like any other common raptor in order to be sold for personal keeping
<i>Aquila clanga</i>	Greater Spotted Eagle	VU	Uncommon passage migrant	Jordan valley margins and plains	Hunted like any other common raptor in order to be sold for personal keeping

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<i>Aquila heliaca</i>	Imperial Eagle	VU	Passage migrant and winter visitor	Plains and Eastern desert	Hunted like any other common raptor in order to be sold for personal keeping
<i>Falco peregrinus</i>	Peregrine	LC	Passage migrant and winter visitor	Along the Jordan Valley, its margins and close plains	One of the targeted falcons in order to be sold for falconers
<i>Crex crex</i>	Corncrake	NT	Passage migrant	Along the Jordan Valley, its margins, close plains and Aqaba	Hunted with Quail. Not known to be specifically targeted
<i>Grus grus</i>	Crane	LC	Passage migrant, common winter visitor	See above	See above
<i>Pterocles orientalis</i>	Black-bellied Sandgrouse	LC	Winter visitor	Eastern Desert and Wadi Araba	Very dependant on good rainy seasons and availability of water in the desert.
<i>Melanocorypha calandra</i>	Calandra Lark	LC	Passage migrant, common winter visitor	Western plains along the JV (Karak, Amman and Salt)	Hunted locally in agricultural fields around the mentioned cities

Hunting methods

The data obtained from the Wildlife Enforcement Section showed that the main hunting method in Jordan is using the shotgun. It should be mentioned that this data is obtained from hunting violations. There is no data that shows how many hunters in the country are using a certain method of hunting. So, from the all the violations that are recorded in the database since 1996 until 2004, 61.4% of these violations hunters were using shotguns. Air guns are the second most used weapon in hunting method with 16.6% of violations. Nets are the third most used method of hunting with 13.4% of the violations.

The database of violations of the wildlife enforcement shows that there are three main species that are targeted by hunters. Below is a description of the methods used to hunt/catch each one of these species:

- Quail, *Coturnix coturnix*
They are usually hunted by shotguns. 85.2% of all violations that involved hunting of Quail showed that hunters were using shotguns. The other percentage had either nets or air guns.
- Turtle Dove, *Streptopelia turtur*
Shotguns are also the most widely used weapons for hunting turtle doves. 85.4% of documented incidents showed that violators used shotguns to hunt the dove species. The rest of the percentage are almost equally covered by both nets and air guns.
- Goldfinch, *Carduelis carduelis*
Being one of the main songbirds that is sold in the local markets, Goldfinches are mainly caught alive by nets. 90% of the violators were using nets in order to catch the bird species.

Lead shots

There are about 70 licenses that are issued on yearly basis in order to give permission to sell hunting ammunition (cartridges). Each one of these licenses allows its holder to sell 15,000 cartridges. It is estimated that 1,500,000 are exported yearly. These have a value of JD162,000. It is also reported that 62,000 cartridges are imported yearly. Those have a value of JD 4,000. Most of the cartridges used in the country are lead cartridges with a range from 28 to 42 grams of lead per cartridge. The 32gram lead cartridge is the widely used type. It is estimated that 33.5 tons of lead are shot yearly in Jordan (Social Security Department Database, 2005).

Hunters

Licensed hunters are 4,000. They renew their licenses annually. In 1998, the number of licensed hunters was about 1,200. The number of unlicensed hunters is not really known but it is expected to be five times the number of licensed hunters. Number of violations average is 250 per year. Considering the low manpower in enforcement, violations are expected to be much more.

Only 10% of these violations are by licensed hunters (wildlife enforcement section database, 2005). The data about hunters does not show what are the species each one targets. Details about hunters, especially licensed ones, are not very specific. There are some notes about licensed hunters and what do they hunt from rangers' reports. Other than that, there is no information about licensed hunters concerning their species of interest.

As for hunters associations, there are none in Jordan. There were several plans to establish an association but all have failed. Until late 80s, the Azraq Lodge in Southern Azraq was considered as the main gathering point for hunters when they go hunting in Azraq Oasis and the rest of the Eastern Desert. After banning hunting in the Eastern part of the country, the lodge with its bungalows became a bed and breakfast site for recreation. The latest hunters association was established three years by some of the licensed hunters and it had plans of establishing some cooperation with the RSCN in controlling and sustaining hunting in the country. The association has failed and no activities were carried out through it.

Hunting tourism is prohibited in Jordan. There is nothing in the law that mentions that but the RSCN has been enforcing this. Tourism agencies do not arrange nor carry out these kinds of activities. On the other hand, some "tourist hunters" are invited by Jordanians on the personal level. These tourist hunters are usually from Gulf countries. The Jordanians who invite them are usually hunters, some of them are licensed, and they usually work as guides for the tourist hunters especially in areas such as the Eastern Desert where hunting is completely banned throughout the year. In most of the documented cases, tourist hunters were usually falconers who either came to the country in order to catch/train falcons or to hunt other birds by falcons. In other cases, tourist hunters come to Jordan in order to hunt Cranes.

Hunting and research

Although RSCN has been carrying out ornithological research in the country for the past 15 years, none of this research has been targeted in order to evaluate the hunting in the country. There were some plans in order to carry out a comprehensive research on all "hunnable" species in the country including resident and migrant species. Unfortunately, a small part of this has taken place since 1999. Later in the year 2000, several country studies have been designed and were planned to take place through 2000, 2001 and 2002 in order to evaluate the status of most of the huntable species in the country. RSCN has managed to coordinate the participation of several volunteers, mainly from the RSPB and BirdLife Austria but unfortunately the number of volunteers was not enough to carry comprehensive in the appropriate periods of the year. Additional funding was sought in order to carry out these studies later but fundraising did not succeed then.

The only research activity of the planned ones was the national waterbird census which has been carried in Jordan by the RSCN since October 2000. This study includes direct counts of waterbird species all over the wetlands, permanent and seasonal, in the country starting by October until March in

order to cover the winter season in addition to some parts of the autumn and spring migration. Results from this study have helped in identifying key sites for waterbirds and the main species that use each site. A report on the study from October 2000 until March 2002 was published internally at the RSCN and its recommendations are being used in shaping the waterbirds hunting schedule in Jordan.

Ringling in Jordan is a very new research activity. It was initiated by the RSCN through the Birds Know No Boundaries project. Pilot ringling studies were carried out in several parts of the country. A ringling station was established in Azraq Wetland Reserve and ringling has been carried out in spring seasons for the past three years. Unfortunately, there no hunting records from shot birds until now.

Since RSCN has already planned to carry out research on "hunnable" species but could not apply it due to the above-mentioned reasons. It is recommended that these studies should be carried out after finding the suitable funding. There is a clear need to carry out research targeting hunters. This research would help in understanding the hunter's preferences concerning species and sites.

Legislation and law enforcement related to hunting of migratory birds

Organization of management of hunting

RSCN is the main body that is managing hunting in the country. They have a mandate by the government concerning the Agriculture Law which includes all legislations concerning hunting in the country. RSCN rangers are legally empowered to carry out hunting enforcement. Nevertheless, being an NGO, RSCN's policy states that rangers should always involve the police. It is believed that this would give an extra legal power for RSCN's work. By the year 2000, this partnership was institutionalized between the RSCN and the police. Since then, RSCN wildlife enforcement activities are being carried with formal coordination with the police. RSCN has also been giving special training for police officers concerning the wildlife enforcement regulations. Training workshops on this matter also included awareness items which focused on Jordan's biodiversity, nature reserves and other conservation concepts.

After establishing the partnership, the police has established an environmental branch at its headquarters. This branch is responsible for managing and coordinating the activities of police officers with wildlife enforcement section and its rangers.

Hunting legislations

As mentioned above, The Agriculture Law No. 44 of the year 2002 is the main reference for wildlife hunting in the country. Below are the main articles in this law that deal with the migratory birds and wildlife species in general (translated from Arabic):

Article 57-a

Minister of Agriculture sets the regulations that control conservation of, hunting of and trade in wild birds and wild animals in a way that these regulations do not oppose international agreements related to protecting wild birds and animals. These regulations include:

- Set conditions for hunting licenses, their fees and the bodies delegated to give them.
- Identify areas of hunting and areas where hunting is banned
- Identify wild bird and animal species that are not to be hunted, owned, transported, sold or present for sale
- Identify wild bird species that can be traded with and set the conditions for registering trade markets for these species

Article 57-b

Minister of Agriculture forms a special committee for the protection of wildlife and identifies its responsibilities and approaches

Article 57-c

It is strictly prohibited to do any of the following:

1. Hunt any wildlife species without the advanced permit and/or hunt outside the seasons or regions or exceeding the quotas.
2. Import or export any wildlife species (dead or alive) unless with a special permit by the minister.
3. Wildlife killing, keeping, transporting, selling, or present for sale.
4. Hunting of carnivores and/or birds of prey in any way or for any reason unless a special permit is granted by the minister himself.
5. Messing with the nests, chicks, and juvenile's wild species and/or collecting wild bird's species eggs.
7. Usage of toxins, or poisonous or drugs for killing and/or trapping wildlife species no matter what the reasons are.

Article 57-d

1. Each violator for items 1, 5 and 7 of section c shall be fined for JD50 for each individual species.
2. Each violator for item 2 of section c shall pay not less than JD100 and not more than JD1000.
3. Each violator for items 3 and of section c shall pay not less than JD25 and not more than JD1000.

Article 57-e

All protected species shall be classified into three categories, according to their degree of threat, through a by-law issued for this purpose, and each violator for any of the included species shall be penalized as follow:

1. Imprisonment for four months with a fine of JD2000 for each individual of species included in appendix 1.
2. Imprisonment for three months with a fine of JD1000 for each individual of species included in appendix 2.
3. Imprisonment for one month with a fine of JD100 for each individual of species included in appendix 3.

Article 57-f

Any unlicensed person who hunts and wild bird or wild animal that is not listed in the hunting lists that are published according to the to Article 57-e, except the Wild Boar (*Sus scrofa*) will be punished by imprisonment for a period of seven days or a fine of JOD25 for each wild bird or wild animal hunted.

Article 57-g

In addition to the above mentioned penalties, all killed species individuals and the used weapons and equipment shall be confiscated.

Article 57-h

In case of a repeated violation within the same year, the fine shall be doubled in addition to the other penalties.

Article 66

Conducting any of the actions listed below shall be considered as damaging the Environment, and shall form a violation to which the penalties stipulated in Paragraph (A) of Article 54 of the Law shall apply, as the case may be:

“Hunting or killing wild birds or animals, and possessing, transporting, selling, displaying for sale dead or live birds, or destroying nests eggs or nests of such birds”.

After this law was issued, specific regulations were issued later. These regulations (Regulations No. G/34 for the year 2003) focused on the protection of wild birds and animals and they were as follows:

Item 10

It is strictly prohibited to hunt, trap, transport, buy, sell or display any wildlife species which are not included in the hunting schedule.

Item 12

All shapes of trade in wildlife species are not allowed, even for huntable species unless a special permit is granted.

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Mediterranean Third Countries (SHP)**

LIFE 04 TCY/INT/000054

Item 13

It is not allowed to export, import and re-export any wildlife species, their derivatives, parts, and products unless a special permit is granted and in compliance with the international conventions signed by the kingdom.

Item 14

All violations of these regulations shall be penalized according to penalties mentioned in the temporarily Agricultural Law 44 for Year 2003.

According to Article 57-b, the wildlife committee that is formed by the minister is responsible for identifying hunting seasons, bag limits, species and restrictions of time of day. The table below shows the last list of "hunnable" species and the details concerning each species.

Species	Season	Day(s)	Region	Bag limit
Wild Boar <i>Sus scrofa</i>	All year	All days	West of Railway	2
Cape Hare <i>Lepus capensis</i>	15/9 – 30/11	Fridays & Sundays	West of Railway	1
Greylag Goose <i>Anser anser</i>	1/10 – 31/3	All days	West of Railway	1
Shelduck <i>Tadorna tadorna</i>	1/10 – 31/3	All days	West of Railway	10
Pintail <i>Anas acuta</i>	1/10 – 31/3	All days	West of Railway	10
Mallard <i>Anas platyrhynchos</i>	1/10 – 31/3	All days	West of Railway	10
Coot <i>Fulica atra</i>	1/10 – 31/3	All days	West of Railway	10
Woodcock <i>Scolopax rusticola</i>	1/10 – 31/3	All days	West of Railway	6
Snipe <i>Gallinago gallinago</i>	1/10 – 31/3	All days	West of Railway	6
Starling <i>Strunus vulgaris</i>	1/10 – 31/3	All days	West of Railway	15
Mistle Thrush <i>Turdus viscivorus</i>	1/10 – 31/3	All days	West of Railway	20
Skylark <i>Alauda arvensis</i>	1/10 – 31/3	All days	West of Railway	20
Black-bellied Sandgrouse <i>Pterocles orientalis</i>	1/10 – 31/3	All days	West of Railway	15
Pin-tailed Sandgrouse <i>Pterocles alchata</i>	1/10 – 31/3	All days	West of Railway	15
Calandra Lark <i>Melanocorypha calandra</i>	15/2 – 31/5	All days	West of Railway	15
Quail	15/2 –	All days	West of Railway	15

**Building Capacity for Sustainable Hunting of Migratory Birds in
Mediterranean Third Countries (SHP)**

LIFE 04 TCY/INT/000054

<i>Coturnix coturnix</i>	31/5			
Blackcap <i>Sylvia atricapilla</i>	15/8 – 31/10	All days	West of Railway	20
Collared Dove <i>Streptopelia decaocto</i>	1/7 – 15/9	All days	Jordan Valley (Al-Ghor)	15
	15/9 – 30/11	All days	West of Railway	15
Turtle Dove <i>Streptopelia turtur</i>	1/7 – 15/9	All days	Jordan Valley (Al-Ghor)	15
	15/9 – 30/11	All days	West of Railway	15
Rock Dove <i>Columba livia</i>	1/7 – 15/9	All days	Jordan Valley (Al-Ghor)	15
	15/9 – 30/11	All days	West of Railway	15
Sand Partridge <i>Ammoperdix heyi</i>	15/9 – 30/11	Fridays & Sundays	West of Railway	3
Chukar <i>Alectoris chukar</i>	15/9 – 30/11	Fridays & Sundays	West of Railway	3

Note: regulations in the hunting programme are changeable according to the regulations and recommendations of the wildlife committee

Regulations No. G/34 for the year 2003, also include items concerning the hunters licensing, licenses renewals and conditions. These are as follows (translated from Arabic):

Item 4

Licenses are provided for Jordanians and non-Jordanians residents for a fee of JOD30 according to the following conditions:

- a. The submitter should be at least twenty-one years old and already has a running gun-ownership license given for him by one of the national security centres in compliance with the firearms law and the considered regulations.
- b. It is allowed to provide a hunting license of who is under twenty-one years old but above sixteen years old where this license will be titled "hunting license with a father's supervision". The father in this case should have a running hunting license and he should sign a letter stating that he is completely responsible for providing the license to his son and that the son would not go away from his father for a distance more than ten metres while hunting.

A temporary hunting license is provided to a non-Jordanian resident for a fee of JOD50 according to the following conditions:

- a. The submitter should have a permission from the Ministry of Interior Affairs for the holding and using a hunting gun in Jordan.

- b. The submitter can use his license for a period of one week only from the day of its submission.

Item 5

Licenses are renewed for a fee of JOD30 after handing the expired license. As for non-Jordanian resident, the license is renewed after the approval of the Ministry of Interior Affairs that the submitter is allowed a hunting gun in Jordan.

Below are the terms of the hunting license:

- a. The license should have a photograph of the hunter.
- b. The license expires after one year of its submission and it practically expires after one week of the expiry date stated on the license.
- c. It is not allowed to be transformed to anyone other than the hunter himself.
- d. The license must be shown to any person who is delegated to apply the regulations of the Agriculture Law No. 44 for the year 2002.
- e. The license holder should incline to items of the Agriculture Law and its regulations, instructions and the decisions that are produced according to this law.
- f. The license holder must record all his hunting trips through the year. He must also record all wild bird and wild animal species and number of individuals of each species hunted in his hunting records notebook. He should be able to show this upon request to any person who is delegated to apply the Agriculture Law.
- g. The license is banned for a period of one year in case the holder has made two violations or more the same year.

Item 6

Taking into consideration Article 63, the Royal Society for the Conservation of Nature is the body responsible in managing all matters related to hunting licenses including submission, renewal and obtaining fees for hunting licenses.

Item 7

Hunting of wild animals and wild birds is carried out in regions and seasons declared by the Minister of Agriculture according to the recommendations by the Wildlife Committee. Regions and seasons are published in the Official Gazette – Jordan.

Item 8

All types of hunting are banned in all desert regions located to the east of the Hijaz Railway through the whole year except for species and regions identified and recommended by the Wildlife Committee and through a note that is published in the Official Gazette – Jordan.

Item 9

Licenses are provided for Jordanians and non-Jordanians residents for a fee of JOD30 according to the following conditions:

Legislations and Regulations on ammunition and trapping equipment

The law governing the ammunition and trapping equipments is the Fire Arms & Ammunition Law No. (34) for the year 1952 and the amendment thereto. There are specific regulations on the ammunition. Below is a list of these regulations¹:

1. The Fire Arms & Ammunitions Bylaw No. (75) for the year 2000.
2. The Fire Arms & Ammunitions Bylaw No. (58) for the year 1975
3. The Instructions for possessing and carrying of fire Arms in Aqaba Special Economic Zone for the year 2001.
4. The Instruction for delegation of powers for arms carrying licencing to the Director of Public Security.

Figures of illegal trade in wild caught birds

The only source for this type of data is the database of the wildlife enforcement section at the RSCN. It is documented in this database that there were 152 violations of illegal trade since 10/1/1996 until 31/12/2004. These violations involved ten species. The most common species confiscated in such violations is the Goldfinch (*Carduelis carduelis*) where 108 violations of this species were documented. The total number of individuals confiscated for this species was 309 birds. Being the most popular songbird in Jordan, this species is usually caught alive in order to be sold in bird markets. Violations were documented in variable locations in the country. 81 of the incidents were of goldfinches confiscated while the trappers were in the site of netting. These sites are widespread all over the country from Sahm El-Kfarat in northern Jordan all the way to Aqaba in the south. There are only 27 violations of goldfinches that were documented in bird markets and pet shops. Most of these were in shops in the bird market and other pet shops in Amman.

Other violations include 21 of different falcon species. Unfortunately, 16 of these violations do not show the exact species of the falcons confiscated although they are most probably believed to be Saker Falcons (*Falco cherrug*) since it is known to be the most widely used falcon in the region. Only a single violation was of a falcon being caught by a trap. As for the others, they were of falcons owned by hunters who use them for falconry. None of these violations were documented in bird markets since these falcons are never sold there. The other violations are of 2 Lanner Falcons (*Falco biarmicus*) and 3 of Kestrels (*Falco tinnunculus*). All kestrels were found in bird markets whereas the Lanners were of hunters using them for falconry.

¹ Source: the official website of the Ministry of Interior; http://www.moi.gov.jo/innerenglish.php?id_s=27

There is no documented data that shows how illegal bird trading is managed. There is no clear system of how, for instance, goldfinches are sold. Trappers might catch birds and sell them directly to anyone interested. Some of these trappers might try to sell the birds by the side of the road. Others have contacts with specific bird markets or pet shops to whom they sell these birds. It is not documented if the owners of these shops or markets actually trap these birds.

Hunting in relation to areas of biodiversity significance

Protected areas including nature reserves

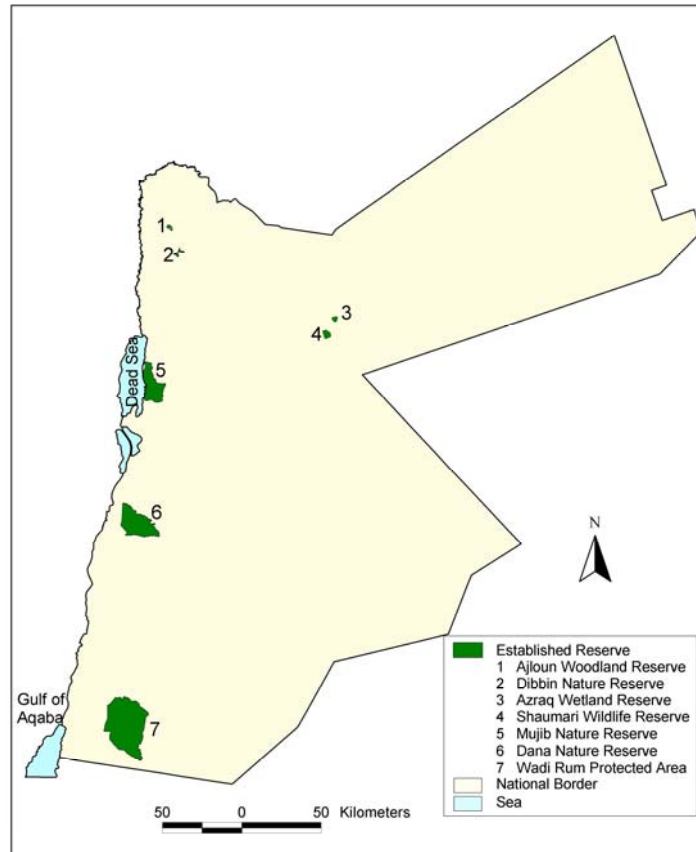
Hunting is not allowed in any sort in protected areas in the country. Most if not all protected areas in the country, see map 3, were known to be very popular sites for hunting before being declared as protected areas. Dana Biosphere Reserve and Mujib Nature Reserve were known to be the best sites to hunt Nubian Ibex (*Capra ibex nubiana*), Chukar (*Alectoris chukar*) and Sand Partridge (*Ammoperidix heyi*). None of the migratory bird species are known to be specifically hunted in these areas. Nevertheless, hunting in these two protected areas is under strict control at the present time.

As for Azraq Wetland Reserve, it used to be the most popular site for waterfowl hunting until the early eighties when hunting in the Eastern as a whole, including Azraq was banned. Hundreds of birds of different species of ducks were hunted during the good years when Azraq used to be composed of open waters. After the over-pumping of water from Azraq and after years of continuous drought, the situation in Azraq has worsened. In the year 2000, Azraq mudflat was completely flooded for the first time since 1995. Large numbers of waterfowl wintered there. The mudflat has been flooding on yearly basis since then but on different levels. A lot of hunters especially local hunters from Azraq have been asking the RSCN to allow hunting in the mudflat at least on weekends. RSCN has clarified that the mudflat and Azraq as a whole will never will be open for hunting for any reason since it is an IBA and Ramsar site that should be conserved. Temporarily, RSCN has allowed hunting in small mudflats in the Eastern Desert. There were three mudflats that were opened for hunting but with strict control where hunters have to get a special permission in order to hunt in these mudflats.

Hunting in Wadi Rum Protected Area is still a threat. The area has been popular for hunting Ibex and resident birds. The only migratory bird species that was and is still targeted in the area is Common Crane (*Grus grus*). Being the largest protected area in the country, Wadi Rum Protected Area is running a patrol plan in order to control hunting in the area.

Protected areas in Northern Jordan, Ajloun Woodland Reserve and Dibbin Nature Reserve are not considered as main sites for hunting. It is probable that songbird trappers could be going to these sites and the their neighbouring areas but there is no data that supports that except for very few violations.

Shaumari Wildlife Reserve is the only protected area where hunting of migratory birds was not documented in. Being completely fenced for the reintroduction programme of Arabian Oryx, nobody is allowed to enter the reserve except from the main entrance.



Map 3: Protected Areas in Jordan

Important Bird Areas

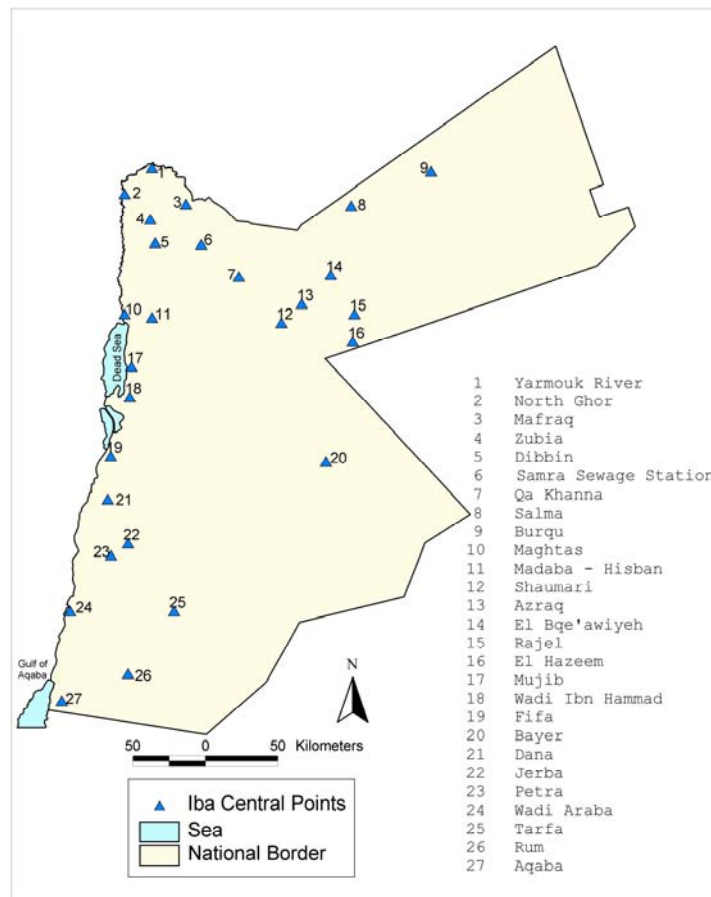
All IBAs that are not protected areas have no special regulations concerning hunting. Hunting is banned in all IBAs in the Eastern Desert since the whole desert is designated as a hunting-free area. Nevertheless, IBAs like Ghadeer Burqu' and Bqai'awiyyeh are well known for hunting waterfowl. Ghadeer Burqu' can become the only wetland for waterfowl in dry winter seasons. On the other hand, Bqai'awiyyeh was one of the mudflats that was opened for hunting two years ago when hunters wrote for the RSCN asking for giving permissions to hunters to hunt in the Eastern Desert but Ghadeer Burqu' was saved based on the fact that it is a proposed protected area and RSCN had no intention of permitting hunting in a future protected area. Rajil which is another IBA in the Eastern Desert has a seasonal dam but hunting waterfowl is not known to be in high numbers since no violations were recorded there for the past five years.

As for other IBAs in the country, there is no specific control on hunting in these areas that is more than the general wildlife enforcement that is being carried out in areas where hunting is allowed. The IBA in North Ghor is one of

Building Capacity for Sustainable Hunting of Migratory Birds in Mediterranean Third Countries (SHP)

LIFE 04 TCY/INT/000054

the major sites where hunting is popular. Hunting in this IBA is mainly focused on Quail and Turtle Dove as migratory species. Madaba-Hisban IBA is very popular for trapping Goldfinches which are usually sold in bird markets or for pet shops in Amman.



Map 4: IBAs in Jordan

Training courses for hunters

There are no training courses for hunters in any field. Communications between the RSCN and hunters is relatively limited. Nevertheless, hunters are obliged to buy the hunter's guide when they applying for the license. This guide includes information about the hunting programme and also information about Jordanian wildlife. There is a special section that shows all species that are allowed to be hunted in Jordan and the species that are not allowed to be hunted. Other publications that are given to hunters include the RSCN quarterly magazine Al-Reem which includes the latest edition of the hunting programme. Meetings with hunters are carried out in certain cases. They are usually held due to some arising problem. This would usually include discussions of any recent changes in the hunting programme or proposals for opening mudflats for hunting in good winter seasons. It should be highlighted that in the regulations of the hunting law, it is mentioned that hunters should get some training before obtaining the license but this has not been enforced yet.

Socio-economic and cultural importance of hunting of migratory birds

Sale of migrant birds in country

As mentioned earlier, Goldfinch is the most popular migratory species that is sold in the country. It is mainly sold in local bird markets and pet shops in main urban areas of the country, mainly in Amman, Zarqa, Irbid and Madaba. The prices for goldfinches could be varying. A female would only be sold for JOD2 since it does not sing and so it is used for display only. Wild-caught male goldfinches could be sold for 8-10JOD. The price might get higher if the males are caught as chicks and were kept in cages since then. If these are trained to practicing variable songs, their price would normally reach to 20-25JOD and might exceptionally reach up to JOD50. There are no figures that show the numbers of goldfinches sold except for the violations figures which are mentioned earlier.

As for falcons, several species are targeted for different reasons. Saker Falcon is the species that is facing the highest pressure from trapping. Being a migrant species, trappers expect it to pass in Jordan in the period from the 15th of September until end of November. During this season, trappers go out in small groups on trips searching for falcons. According to Mr. Ghazi Howeitat, RSCN's only ranger in the Eastern Desert, it is estimated that there are around 500 trappers in the Eastern Desert of Jordan. If a falcon is caught, it could be sold in the same day to a trader who would then sell it to a falconer who would most probably be from one of the Gulf countries. A wild Saker could be sold for JOD15,000. In a different case, if the falcon that is shown for sale is a trained falcon that has been in captivity for some time, its price would drop drastically into JOD4,000. The main reason for this huge drop in price is that trained falcons would take much more time to become acquainted to their new owners who might usually have different techniques of training. As a result, more effort would be needed by the new owner in order to order to his falcon.

The highest targeted falcon species in the desert is the Lanner Falcon which is a rare resident species in Jordan. A wild bird could be sold for up to JOD70,000. It is known that if one Lanner was spotted at a certain area in the desert, hundreds of trappers would travel therein order to catch it and sell it as fast as possible.

Trapping Kestrels is becoming more common in recent years. Usually these birds are kept alive for display in houses and different types of shops especially barber shops. Around 10 kestrels are confiscated every year during the spring season. Usually, birds caught are juveniles who recently fledged.

Another species that was documented to be trapped is the Hobby (*Falco subbuteo*). It is not a very common bird to be caught in Jordan but still some people use to trap other falcons. The main technique used is that when a trapper spots a falcon (Saker and Lanner), he would put his Falcon (Hobby)

on a net and would feed it a pigeon. As soon as the wild falcon spots the Hobby feeding on the pigeon, it is believed that it would directly attack the Hobby in order to take the pigeon from it and that is how it gets entangled with the net. It is interesting to know that all these falcon species have common Bedouin names including the Hobby which is called "Al-Niggel" and that means "the transporter" describing how it is used in catching larger falcons.

Guns and ammunition and other hunting equipment

Economically, the number of shops that sell hunting equipment is increasing. These are mainly situated in main urban centres such as Amman, Irbid, Zarqa, Madaba, Karak and Ma'an. The number of these shops in the country are 73². There are about 70 licenses that are issued on yearly basis in order to give permission to sell hunting ammunition (cartridges). Each one of these licenses allows its holder to sell 15,000 cartridges. It is estimated that 1,500,000 are exported yearly. These have a value of JD162,000. It is also reported that 62,000 cartridges are imported yearly. Those have a value of JD 4,000. Most of the cartridges used in the country are lead cartridges with a range from 28 to 42 grams of lead per cartridge. The 32 gram lead cartridge is the widely used type. It is estimated that 33.5 tons of lead are shot yearly in Jordan.

A maximum of 875 shotguns are allowed to be imported yearly. In 2003, 35 licenses were given for traders in order to import shotguns. Each license allows its holder to import a total of 25 shotguns. The total value of such a trade in the same year was estimated to be JD177,500. Also, there are some items that are sold in the market as a hunting by-trade, which includes vests, cartridge belts, bags, caps and other hunting equipment. These are evaluated to be of a value of JD70,000 in 2003.

Jordan is considered as a link for importing and exporting hunting equipment. For example, a high number of shotguns that are imported to Jordan are exported to Lebanon. On the other hand, ammunitions are usually imported from central Europe countries, USA, Lebanon, Cyprus. Also, there is a local ammunition factory in Amman, Jordan. Prices of a single pack (20 shots) range between JD5 to JD20 depending on its source and quality (law enforcement section).

Bird cages are mainly imported from several countries. There are some that are made locally but usually people prefer imported ones. As for bird traps, they are mainly hand made for personal use. They are mainly used to catch songbirds.

Restaurants and taxidermists

There are no known restaurants in Jordan that offer wild birds. There are very few restaurants in Amman that offer farm-bred Quail. Although, in some cases, hunters might hunt more than what they need but surprisingly most of these hunters would wither store hunted birds in a freezer or maybe throw

² Source of information: Social Security Department.

them. So, generally speaking, hunting is not considered as a source of income.

As for taxidermists, there are four well-known individuals who are taking taxidermy as a profession. According to the RSCN wildlife enforcement section, these four taxidermists are very well known among hunters and bird traders. Hunters who hunt birds, mainly large ones such as herons, storks, eagles, buzzards and others are known to bring the dead birds into these taxidermists. There are various scenarios for this business. Some hunters bring their birds for taxidermists and then keep them for personal collections. Some taxidermists either hunt or keep birds from other hunters and sell them. One well-known taxidermist in centre Amman sells stuffed birds and he has been fined several times by the RSCN wildlife rangers and his birds were confiscated several times but still he is staying in the business. This implies that although this taxidermist is being fined every now and then but his business is still going very well. Another point would be that enforcement is not enough to force him to quit the business.

Cultural importance of migratory birds

Main migratory species that have a cultural value are generally the birds of prey. A falcon (most probably a Peregrine, *Falco peregrinus*) is on the centre of the country's emblem. Birds of prey are very popular in folk lore where different species of falcons and eagles in general are mentioned in Bedouin poetry. These birds are usually used as symbols of courage, pride, good sight, agility and strength. There are also several old Arabic names that are given to people that stand for different falcon species and eagles. Examples include *Sakir* which means falcon in Arabic, 'Igab which means eagle and Shaheen, which is a very well known family in Jordan and it means Peregrine. Other birds have also some significant indications in folk lore and local knowledge such as Hassoun (Goldfinch) and 'Andaleeb (Thrush Nightingale) which indicate the beautiful voice.

Coverage of hunting and conservation of migratory birds in formal education and the media

There is little, if any, coverage of hunting and conservation of migratory birds in formal education. On the other hand, in extra-curricular activities, conservation, in general, has become one of the main topics. RSCN, through its Environmental Education Section (formerly Public Awareness section), has worked on establishing school-based Nature Clubs all over the country. There are around 1,500 clubs all over Jordan. Members of these clubs visit RSCN HQ and nature reserves in order to become aware of the conservation activities. As for awareness on bird hunting in Nature Clubs, general presentations about conservation usually highlight the hunting as one of the threats on birds and biodiversity in general. In some cases, especially for nature clubs that are located in the Jordan Valley, special lectures are given about hunting. These lectures are presented by RSCN wildlife rangers.

As for media, articles about Jordan's biodiversity and conservation have clearly increased in daily newspapers and other media. Al-Reem, for instance,

is the quarterly magazine that is published by the RSCN. It is the only environmental magazine that is published on the national level. It deals with various subjects including RSCN activities and achievements, national and international environmental issues and articles about Jordan's biodiversity. This magazine is distributed for free for RSCN members and is sold for others for a low price.

Several articles published in newspapers and other magazines in the past couple of years had focused on or at least mentioned migrant species in one way or another. Subjects of recent articles included waterbirds in Jordan's waterbodies, omen birds and animals in Jordanian culture, the value of falcons in the Arabic tradition.

Alternatives to hunting migratory birds

Status of resident game bird species and relationship to current hunting patterns

By looking at the hunting programme, it can be clearly seen that there are only three resident bird species which are considered as "hunnable species". These species are Rock Dove *Columba livia*, Sand Partridge *Ammoperdix heyi* and Chukar *Alectoris chukar*. In 1995, the hunting programme was reviewed and it was decided that Chukar and Sand Partridge should be removed from the programme since it was believed then that these two resident species are facing a great threat from hunting. In 2000, the hunting committee decided to reintroduce these species into the hunting programme. It should be mentioned that removing the species and reintroducing them into the hunting programme was not based on scientific evidence. Both actions were decided according to the general feeling of the committee and the pressure they faced from the hunters in both occasions. There were some discussion in 2000 about extending the ban on hunting Chukar and Sand Partridge but the intensive pressure from hunters has forced the committee to put the species on the hunting programme.

In 1999, RSCN was planning to carry out an extensive study for two years in order to evaluate the status of the resident "hunnable species" but this only took place on a very small scale due to lack of funding, infrastructure and expertise.

Release programmes for resident and exotic species

Proposed release programmes for resident species have been thoroughly discussed internally at the RSCN but it was decided that such programmes need fundraising and RSCN cannot carry out them without finding the right source for funding. On the other hand, captive bred projects for resident birds, mainly Chukar, were established on personal levels. The main aim of these programmes was to increase the number of these birds so they would be released for hunters in certain locations. These locations are believed to become the only hunting reserves in the country. These projects have been initiated by His Majesty King Abdullah II. These projects also include captive

breeding programmes for exotic birds and mammals which include Pheasant, European Mouflon and European Deer. These programmes have only started few years ago there are no documented incidents of fleeing birds or mammals but this still remains as a potential threat.

Alternatives economic models to hunting

Current status and potential of bird-watching and ecotourism

Bird-watching is one activity that is starting to bloom in the tourism sector. Previously, bird-watching trips were limited to foreign excursions, mainly from the UK. Most, if not all, these bird-watching trips were through British tourism agencies. These groups would usually make comprehensive tours around the country where the most important bird-watching sites in the country would be visited. Major sites include Dana Biosphere Reserve, Aqaba, the Baptism Site (Jordan Valley), Azraq Wetland Reserve, Shaumari Wildlife Reserve, Ajloun Nature Reserve and some selected Amman national parks. While traveling to these locations, there would usually be some brief stops in some other locations along the way such as Wadi Araba and the Dead Sea (usually the lower part of Mujib Nature Reserve). At some cases, national bird-watchers would take part in these tours as guides.

National tourism agencies have lately started to work on bird-watching programmes. The “ecotourism” programmes in nature reserves has highlighted the huge business and income that bird-watching and other related ecotourism activities might generate. RSCN, being acknowledged as the NGO that has found the ecotourism concept in Jordan on the large scale has also worked on encouraging this business through national agencies and tour guides in general. In 2001 and 2002, RSCN has provided training on Ecotourism in general and bird-watching in specific through training packages that were called “Reading Nature”. These training packages were provided for more than 40 tour guides in coordination with their association. Additional, more specialized courses were designed in order to be provided for tour guides who would be interested in carrying out bird-watching tours in the country.

Later, after these courses were provided, several national tourist agencies have contacted bird-watching specialists in the country in order to design bird-watching programmes for foreign birdwatchers. Nothing has yet been established but several agencies are through the process of publishing these programmes.

Starting by 1995, nature reserves, especially Dana Biosphere Reserve, have become a major part of general tourist tours in the country. Mujib Nature Reserve’s water hikes, which include waterfall climbs and upstream swimming has become one of the favorite activities for some other tours that would be looking for more adventure rather than site-seeing and country touring.