

**ANNEX 3: Total Budget and Workplan**

<b>Award ID:</b>							
<b>Project Title: Mainstreaming Conservation of Migratory Soaring Birds into Key Productive Sectors along the Rift Valley/Red Sea Flyway</b>							
<b>GEF Outcome/Atlas Activity**</b>	<b>Responsible Party</b>	<b>Source of Funds</b>	<b>Amount (USD) Year 1</b>	<b>Amount (USD) Year 2</b>	<b>Amount (USD) Year 3</b>	<b>Amount (USD) Year 4 (etc)</b>	<b>Total (USD) All Years</b>
<b>OUTCOME 1:</b> Raised Awareness of the flyway and altered social and cultural behaviours	BLI	62000	800,000	800,000	250,000	207,500	2,057,500
		NGO fund code	0	100,000	0	0	100,000
			<b>800,000</b>	<b>900,000</b>	<b>250,000</b>	<b>207,500</b>	<b>2,157,500</b>
<b>OUTCOME 2:</b> Increased national and regional capacity to effect double mainstreaming and application of flyway concept	BLI	62000	250,000	200,000	85,000	56,000	591,000
			<b>250,000</b>	<b>200,000</b>	<b>85,000</b>	<b>56,000</b>	<b>591,000</b>
<b>OUTCOME 3:</b> Content and tools to enhance flyway friendly practice developed, delivered, and mainstreamed effectively into sector processes and programmes	BLI	62000	686,250	686,250	686,250	686,250	2,745,000
			<b>686,250</b>	<b>686,250</b>	<b>686,250</b>	<b>686,250</b>	<b>2,745,000</b>
<b>OUTCOME 4:</b> Learning, Evaluation, and adaptive management increased	BLI	62000	212,436	212,436	212,436	212,436	849,744
			<b>212,436</b>	<b>212,436</b>	<b>212,436</b>	<b>212,436</b>	<b>849,743</b>
			<b>1,948,686.00</b>	<b>1,998,686</b>	<b>1,233,686</b>	<b>1,162,186</b>	<b>6,343,243</b>

**ANNEX4: Map of Flyway**

Maps for Annex 4 were added to a separate file due to the large size of the Annexes

**Stakeholders identified**

The list of key stakeholders varies by country, according to the national problem analysis (particularly the key threats to MSBs in each country) and the national opportunities for “mainstreaming” MSBs concerns into key sectors other than environment or biodiversity conservation. Project stakeholders were grouped into the following categories: governmental agencies; non-governmental organizations; local community groups; national agencies; private sector; international agencies.

*Governmental agencies*

Names and responsibilities vary between countries but across the region governmental stakeholders include ministries and their agencies responsible for: environment (may include hunting, wildlife trade, biodiversity, protected areas); agriculture (hunting, pesticides, some protected areas); forestry (some protected areas/ habitat restoration); waste management; local administration/ municipalities; electricity/ energy/ power; renewable energy; land use; planning; water/ irrigation; marine/ coastal management; climate change/ desertification; transport/ roads; petroleum; tourism; education. Others such as ministry of interior (hunting, trade), social affairs, health, justice, finance, defense and economy were identified in some country analyses.

Across the region, key ministries and agencies are characterized by lack of awareness of MSBs, their conservation needs and the actual or potential impacts of their sector on MSBs and biodiversity generally. The readiness to collaborate with the project is very variable in different countries and in different sectors with some encouraging results from the PDF-B stage (e.g. Willingness of Lebanon and Sudan Ministries of Power/ Electricity to consider mitigation measures on power lines and siting of distribution networks away from flyways once the negative impacts on MSBs were explained). Government agricultural extension services working with rural communities were identified as useful existing mechanisms for awareness-raising and community involvement in the project.

*Non-governmental organizations and local community groups*

In 7 of the 11 project countries, the lead implementing agency is a national NGO which forms part of the Middle East or Africa Partnership of BirdLife International. (In other countries there is no strong tradition of NGO leadership in biodiversity conservation and the project will be led by a relevant government agency – e.g. Nature Conservation Sector of Egyptian Environmental Affairs Agency; National Commission for Wildlife Conservation and Development in Saudi Arabia). In most project countries there is a wide range of other NGOs and community based organizations (CBOs) with interests and skills in wildlife, sustainable development, agriculture etc. which will contribute to project implementation (e.g. farmers' and fishermen's cooperatives and local community development organizations in Yemen). Particular NGO strengths identified in stakeholder analyses in several countries (e.g. Jordan, Lebanon, and Ethiopia) include community involvement, awareness-raising, environmental education and project management (e.g. through experience of managing regional and national BirdLife International Important Bird Areas programmes). In Palestine, the non-governmental Hunting Club will work with the project on an anti-hunting campaign to stop hunting of rare, threatened species.

*National agencies*

National agencies in some countries are key stakeholders whose involvement in the project is essential for success. In Jordan, the Aqaba Special Economic Zone Authority (ASEZA) and Jordan Valley Authority (JVA) are the most influential bodies in terms of development, land management and enforcement of policy and legislation in the Aqaba and Jordan Valley bottlenecks. The Lebanese Council for Development and Reconstruction is responsible for planning and implementation of all large rehabilitation and development projects nationally. National unions and syndicates in Syria (e.g. Students, farmers, writers and teachers) are identified as key stakeholders in relation to public awareness.

*Private sector*

Key stakeholders in the private sector include hunting clubs and their members (e.g. Lebanon); Universities, research institutes and natural history museums; various branches of the media (TV, radio, newspapers); general public; private tour company operators (ecotourism potential).

## *International agencies*

UNDP Country Offices (COs) played strong roles in project development, through involvement in stakeholder workshops and in identifying opportunities for “mainstreaming” MSB conservation into other sectors and existing projects (“double mainstreaming”). Suitable projects for this approach, in agriculture, waste management, hunting and tourism have been identified through UNDP in 7 project countries; 6 projects in Djibouti, Egypt, Jordan and Lebanon will be part of the project Tranche I. COs also assisted project development and stakeholder participation through production of communication tools (project briefing sheets, fund-raising brochure, Power Point presentation on raptor migration). Other contributing international bodies include international NGOs (BirdLife International), other projects and donors (e.g. International development aid agencies).

### **Project beneficiaries**

Although 4 sectors (agriculture, hunting, waste management and energy production) have been identified as representing significant threats to MSBs, this does not mean the stakeholders in these sectors will be disadvantaged by the project. Staff of government agencies, NGOs and some private sector groups will benefit from training and capacity building opportunities offered by the project. The “double mainstreaming” approach means that the project will add value to existing projects in these sectors and bring benefits to these sectoral groups – e.g. Hunters and farmers (Sustainable Hunting Project; Agricultural Development Project, both in Lebanon). Other MSB project inputs may be neutral in terms of impact on local communities but will benefit stakeholders directly involved in implementation (e.g. the Power Access and Diversification Project, Djibouti – siting and monitoring of wind turbines to ensure that these are “flyway-friendly”). There will also be “general public” benefits in terms of increased awareness and access to information. In other cases, the double mainstreaming approach means that the project will assist governments to improve and/ or enforce existing legislation and meet their own obligations in relation to international conventions (e.g. Strengthening the Lebanese Judiciary System in the Enforcement of Environmental Legislation; Strengthening Environmental Enforcement, Jordan).

In relation to the tourism sector, the addition of MSB information and concerns can bring benefits in terms of new opportunities to attract tourists to bottleneck sites and to interpret both the MSBs experience and other natural heritage interest. There is potential for local community benefits through increasing ecotourism activity and revenues and this may have a positive impact on other sectoral groups (e.g. Farmers, hunters) who become involved in ecotourism (e.g. Sustainable Economic Growth in the Red Sea Governorate Project, Egypt). More details of all these projects and the “double mainstreaming” approach are given in Outcome 3, Project Strategy.

### **Risks of negative impacts/ opposition to the project**

The national stakeholder analyses for each country revealed widespread lack of awareness of MSBs concerns. In some cases there was lack of interest and concern for MSBs even after approaches had been made by the project. (This was manifest particularly as reluctance by government staff to provide relevant sectoral information for national reviews during the PDF-B stage). However, there was no outright opposition to the project and its aims and no specific stakeholders were identified as being likely to suffer negative impacts or to oppose project activities.

Hunters and farmers might be stakeholder groups who would take a negative attitude to attempts by the project to support strengthening or enforcement of relevant legislation (hunting, trade and pesticide use/ control). However, such activities will be carried out alongside awareness campaigns targeted at hunters, farmers and other key targets, to explain the importance and values of MSBs and the details and reasons for the legislation. The “double mainstreaming” approach means that opportunities can be found for hunters, farmers (and other stakeholder groups) to benefit from MSBs conservation (e.g. through ecotourism development or other local community projects along the flyway). The same principle applies in the energy and waste management sectors but in practice it is likely that project activities to influence these sectors will be of mutual benefit to local communities (e.g. In terms of human health and improved environmental practices) and to MSBs along the flyway. (For example, strengthened EIA for energy developments can lead to improved design and siting, with better landscape outcomes; better management and treatment of wastes to help protect MSBs is likely also to be better for human health and local communities generally).

**ANNEX 6: Key Socio-economic Indicators**

	<b>Djibouti</b>	<b>Egypt</b>	<b>Eritrea</b>	<b>Ethiopia</b>	<b>Jordan</b>
<b>Demographic indicators</b>					
Population	476,703	77,505,756	4,561,599	73,053,286	5,759,732
Population growth	2.06%	1.78%	2.51%	2.36%	2.56%
Median age of population	18.23 years	23.68 years	17.54 years	17.75 years	22.62 years
<b>Economic indicators</b>					
Economic growth (GDP)	3.5%	4.5%	2.5%	11.6%	5.1%
GDP	\$619 million	\$316.3 billion	\$4.154 billion	\$54.89 billion	\$25.5 billion
Per capita income	\$1,300	\$4,200	\$900	\$800	\$4,500
<b>GDP composition by sector</b>					
Agriculture	3.5%	17.2%	12.4%	47.0%	2.4%
Industry	15.8%	33.0%	25.9%	12.4%	26.0%
Services	80.7%	49.8%	61.7%	40.6%	71.6%
Inflation	2%	9.5%	10%	2.4%	3.2%
Unemployment – official (unofficial)	50%	10.9%	N/A	N/A	15% (30%)
Main products: agriculture	fruits, vegetables; goats, sheep, camels, animal hides	cotton, rice, corn, wheat, beans, fruits, vegetables; cattle, water buffalo, sheep, goats	sorghum, lentils, vegetables, corn, cotton, tobacco, coffee, sisal; livestock, goats; fish	cereals, pulses, coffee, oilseed, sugarcane, potatoes, qat; hides, cattle, sheep, goats	wheat, barley, citrus, tomatoes, melons, olives; sheep, goats, poultry
Main products: industry	construction, agricultural processing, salt	textiles, food processing, tourism, chemicals, hydrocarbons, construction, cement, metals	food processing, beverages, clothing and textiles, salt, cement, commercial ship repair	food processing, beverages, textiles, chemicals, metals processing, cement	phosphate mining, pharmaceuticals, petroleum refining, cement, potash, inorganic chemicals, light manufacturing, tourism
Industrial production growth rate	3%	2.5%	N/A	6.7%	5%
<b>Poverty indicators</b>					
Life expectancy (male/female)	41.84 / 44.39	68.5 / 73.62	51.14 / 53.22	47.67 / 50.03	75.75 / 80.88
Infant mortality	10.413%	3.259%	7.487%	9.532%	1.735%
Literacy (male/female)	78% / 58.4%	68.3% / 46.9%	69.9% / 47.6%	50.3% / 35.1%	95.9% / 86.3%
<b>Environment</b>					
Key environmental issues	inadequate supplies of potable water; limited arable land; desertification; endangered species	agricultural land being lost to urbanization and windblown sands; increasing soil salinisation below Aswan High Dam; desertification; oil pollution threatening coral reefs, beaches, and marine habitats; water pollution from agricultural pesticides, raw sewage, and industrial effluents; very limited natural freshwater resources away from the Nile; rapid growth in population overstraining the Nile and natural resources	deforestation; desertification; soil erosion; overgrazing; loss of infrastructure from civil warfare	deforestation; overgrazing; soil erosion; desertification; water shortages in some areas from water-intensive farming and poor management	limited natural fresh water resources; deforestation; overgrazing; soil erosion; desertification

	<b>Lebanon</b>	<b>Saudi Arabia</b>	<b>Sudan</b>	<b>Syria</b>	<b>Yemen</b>
<b>Demographic indicators</b>					
Population	3,826,018	26,417,599	40,187,486	18,448,752	20,727,063
Population growth	1.26%	2.31%	2.6%	2.34%	3.45%
Median age of population	27.34 years	21.28 years	18.07 years	20.37 years	16.54 years
<b>Economic indicators</b>					
Economic growth (GDP)	4%	5%	6.4%	2.3%	1.9%
GDP	\$18.83 billion	\$310.2 billion	\$76.19 billion	\$60.44 billion	\$16.25 billion
Per capita income	\$5,000	\$12,000	\$1,900	\$3,400	\$800
<b>GDP composition by sector</b>					
Agriculture	12.0%	4.2%	38.7%	25%	15.5%
Industry	21.0%	67.2%	20.3%	31%	44.7%
Services	67.0%	28.6%	41%	44%	39.7%
Inflation	2.0%	0.8%	9%	2.1%	12.2%
Unemployment – official	18% (1997)	25%	18.7%	20%	35%
Main products: agriculture	citrus, grapes, tomatoes, apples, vegetables, potatoes, olives, tobacco; sheep, goats	wheat, barley, tomatoes, melons, dates, citrus; mutton, chickens, eggs, milk	cotton, peanuts, sorghum, millet, wheat, gum arabic, sugarcane, cassava (tapioca), mangos, papaya, bananas, sweet potatoes, sesame; sheep, livestock	wheat, barley, cotton, lentils, chickpeas, olives, sugar beets; beef, mutton, eggs, poultry, milk	grain, fruits, vegetables, pulses, qat, coffee, cotton; dairy products, livestock (sheep, goats, cattle, camels), poultry; fish
Main products: industry	banking, food processing, jewelry, cement, textiles, mineral and chemical products, wood and furniture products, oil refining, metal fabricating	crude oil production, petroleum refining, basic petrochemicals, ammonia, industrial gases, sodium hydroxide (caustic soda), cement, construction, fertilizer, plastics, commercial ship repair, commercial aircraft repair	oil, cotton ginning, textiles, cement, edible oils, sugar, soap distilling, shoes, petroleum refining, pharmaceuticals, armaments, automobile/light truck assembly	petroleum, textiles, food processing, beverages, tobacco, phosphate rock mining	crude oil production and petroleum refining; small-scale production of cotton textiles and leather goods; food processing; handicrafts; small aluminum products factory; cement; commercial ship repair
Industrial production growth rate	N/A	2.8%	8.5%	7%	3%
<b>Poverty indicators</b>					
Life expectancy (male/female)	70.17 / 75.21	73.46 / 77.55	57.33 / 59.8	68.75 / 71.38	59.89 / 63.71
Infant mortality	2.452%	1.324%	6.250%	2.953%	6.150%
Literacy (male/female)	93.1% / 82.2%	84.7% / 70.8%	71.8% / 50.5%	89.7% / 64%	70.5% / 30%
<b>Environment</b>					
Key environmental issues	deforestation; soil erosion; desertification; air pollution in Beirut;	desertification; depletion of underground water resources; the lack of	inadequate supplies of potable water; wildlife populations threatened	deforestation; overgrazing; soil erosion; desertification; water	very limited natural fresh water resources; inadequate supplies of

	<b>Lebanon</b>	<b>Saudi Arabia</b>	<b>Sudan</b>	<b>Syria</b>	<b>Yemen</b>
	pollution of coastal waters from raw sewage and oil spills	perennial rivers or permanent water bodies has prompted the development of extensive seawater desalination facilities; coastal pollution from oil spills	by excessive hunting; soil erosion; desertification; periodic drought	pollution from raw sewage and petroleum refining wastes; inadequate potable water	potable water; overgrazing; soil erosion; desertification

SOURCE : *World Fact Book*

**Soaring bird migration in the Middle East and North East Africa: the bottleneck sites  
6 July 2005**

**R F Porter**

**BirdLife International  
Wellbrook Court  
Girton Rd  
Cambridge  
CB3 0NA**

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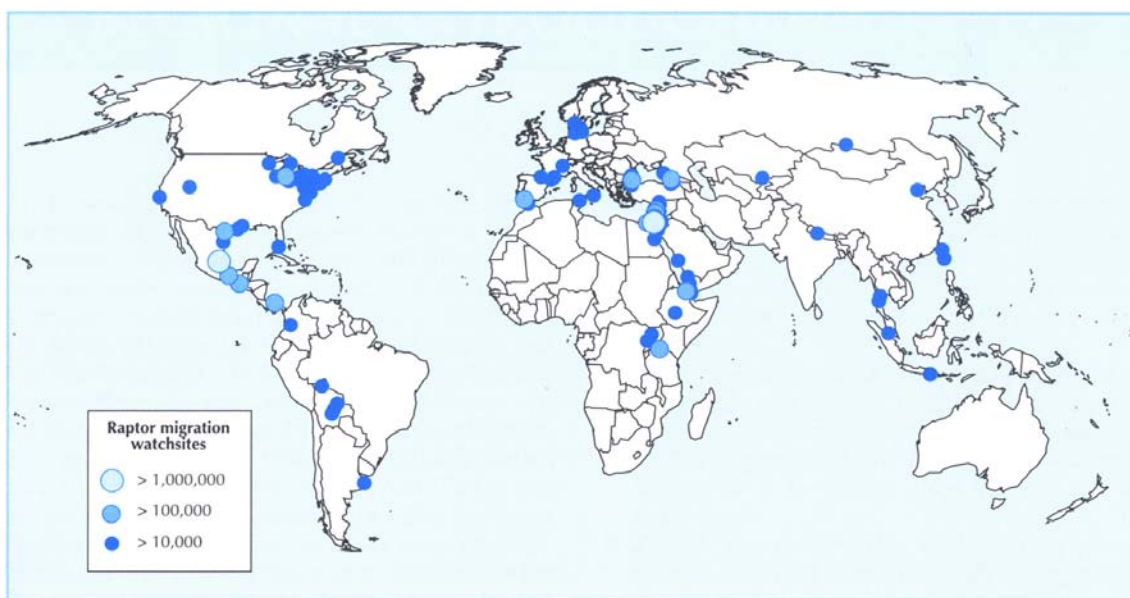
## INTRODUCTION

Throughout the ages, birds and other animals have made epic journeys on their annual migrations. Journeys triggered by a time-clock which, almost to the day, starts a spectacular movement whose origins are lost in the mists of time. Birds of prey, storks, cranes, pelicans and even the rare Bald Ibis are no exception and their dramatic migrations - north in the spring and south in the autumn - can be witnessed each year at key 'bottleneck' sites throughout the world. This report is about those migrations in the Middle East and North East Africa, the routes taken and the importance of the bottleneck sites.

Birds of prey, storks and pelicans are at the end of food chains. They are top predators, vital components of a healthy ecosystem. Thus they are excellent biological indicators of the state of the environment. Any adverse activity will be reflected in a change in population of these top predators. So it was, for example, that the world was alerted to the dangers of pesticides. These creatures are also important in their own right. Spectacular to watch, they can provide great enjoyment for birdwatchers and tourists alike and thus form a component for the attractions of ecotourism: an expanding industry that is bringing additional wealth to many developing countries. Also, one should not forget the educational value in teaching the wonders of migration and the importance of wildlife conservation. So, one can argue, the conservation of soaring birds and the places they live in and migrate through is essential for a healthy world.

## THE GLOBAL CONTEXT

Raptors are found on all continents of the world except Antarctica and at least 63% (183 of 292) are migrants (Zalles and Bildstein, 2000). The most spectacular migrations are performed by the larger, broad-winged raptors that use a soaring technique, along with the other soaring birds (the storks, pelicans and cranes). Soaring birds employ a special technique utilising local hot air thermals formed over land to provide uplift, enabling them to gain height by circling upwards in these rising warm air columns. At the top of a thermal the soaring birds - usually in large flocks - glide slowly down until they reach the next thermal where they rise again. Thus many can fly over 300 km in a single day, almost without a wing-beat: an amazingly energy-efficient migration. Because thermals do not form over the sea, where soaring birds need to pass from one land-mass to another they do so where the sea is at its narrowest. Thus classic world 'land-bridges' are the Gulf of Panama (in the Americas), Falstero, Gibraltar and the Bosphorus (in Europe) and the Gulf of Suez and the Bab al-Mandeb in the Middle East. The migration flyways that connect to these land-bridges have been studied to a greater or lesser extent at certain so-called 'bottleneck' sites. These are strategic points where the soaring birds are funnelled or guided by lines of hills, mountains, edges of valleys and other places where their flying height can be maintained by thermals. Figure 1 shows the bottleneck sites, world-wide, where over 10,000 raptors have been recorded annually on migration.



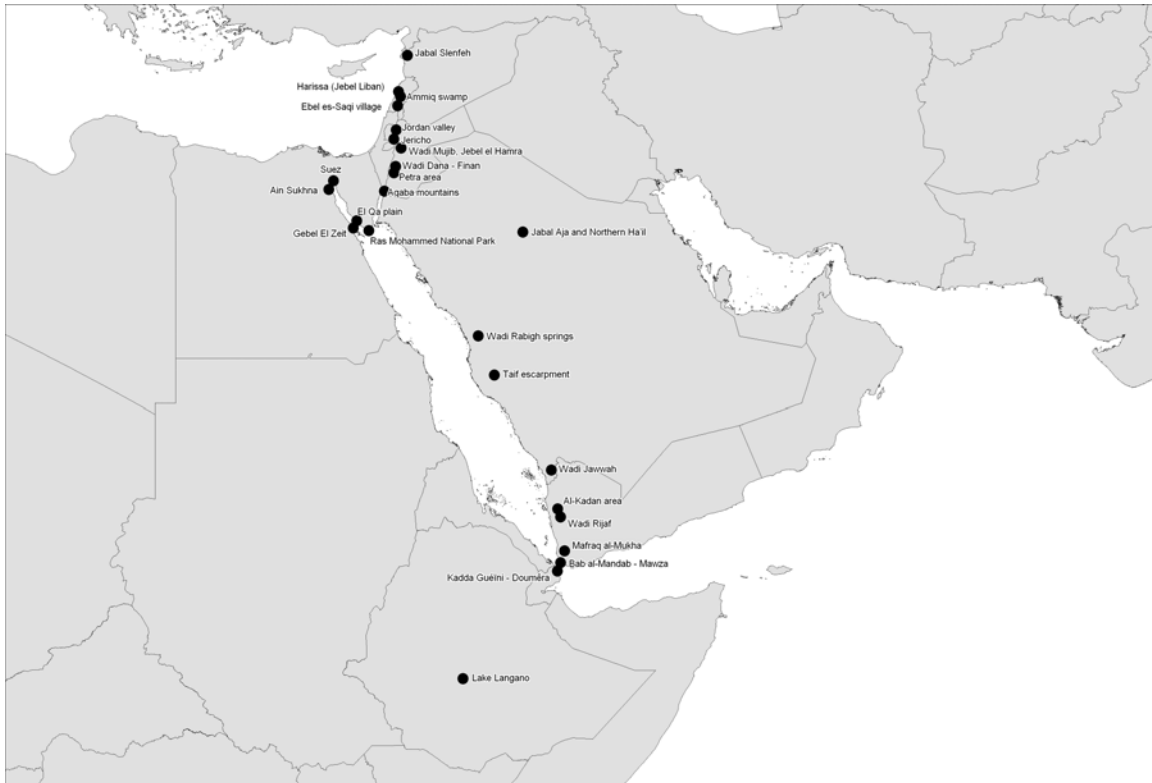
**Figure 1: Global bottleneck sites where over 10,000 raptors have been recorded annually on migration (adapted from Zalles and Bildstein (2000)).**

## THE RIFT VALLEY AND THE RED SEA ROUTES

In the Middle East comprehensive counts of soaring birds at bottleneck sites started in 1966 (Porter and Willis, 1968). Since then a number of sites have been systematically surveyed revealing that over 1.2 million birds of prey and over 300,000 storks pass through the region each year on their annual migrations between Eurasia and East Africa. Because these counts have only been made at bottleneck sites (where the migration is concentrated and where most birds pass)

they take no account of any broad-fronted migration that is also known to take place. It would not be unreasonable to suggest that the annual soaring bird migration of raptors, storks and pelicans that pass through the region exceeds two million birds.

In simple terms, the soaring birds that are the subject of this report depart from their breeding grounds in Eastern Europe and Western Asia in early autumn and head south for their wintering areas in Africa, though some remain to spend the winter in the Middle East. Certain species, notably the harriers and falcons, migrate more on a broad front, though they frequently engage in soaring and will join those species that follow historical routes (Figure 1) which they also use for their return journey in spring. Once the migrant soaring birds have passed through Turkey their routes through the Middle East concentrate on the line of the Rift Valley and the Red Sea coastal mountains. As mentioned previously they generally follow lines of hills and the cliffs of valley edges and this is where most of the bottleneck sites are found. They exit (and enter) the Middle East at two main points, where the sea is at its narrowest: the Gulf of Suez in Egypt and the Straits of Bab al-Mandab at the southern end of the Red Sea between Yemen and Djibouti.



**Figure 2: The main soaring bird migration routes through the Middle East and North Africa and the bottleneck sites at which they are known to concentrate.**

Table 1 shows the bottleneck sites in the Soaring Bird Project study area and summarizes the information known about the migration recorded at each. These sites vary greatly in their characteristics but all are either at points where the sea is at its narrowest or along the lines of hills, mountains or cliff-edges that provide thermals for soaring birds to maintain height for their migration. As will be noted, the only sites in the project area that have recorded more than 100,000 migrant soaring birds annually are the so-called 'land-bridges' of Bab al-Mandab and the Gulf of Suez

**Table 1: Bottleneck sites in the project area.**

	Spring coverage	Highest total count	Coverage Autumn	Highest total count	Species for which important (with highest seasonal count)
<b>Djibouti</b>					
**Kadda Guéini – Doumêra (at the Bab al-Mandab straights) (	None		Two surveys: 15 Oct - 1 Nov 85; 3 Oct - 7 Nov 87	246,478	Abdim's Stork (713) Black Kite (579) Egyptian Vulture (554) Short-toed Eagle (1,202) Sparrowhawk (2,135) Steppe Buzzard (98,339++) Steppe Eagle (76,589) Booted Eagle (1,123)
(See also Bab al-Mandab)					
<b>Egypt</b>					
<b>Suez crossing</b>					
**Ain Sukhna	occasional day counts	100,000	occasional day counts	100,000	No species totals
**Suez	comprehensive 82 and 90	125,000	comprehensive 81 and 84	134,000	Black Kite (3,860) Levant Sparrowhawk (539) Steppe Buzzard (80,890) Lesser Spotted Eagle (31,560) Steppe Eagle (64,900)
<b>South Sinai crossing, Gulf of Suez</b>					
**El Qa plain	occasional	100,000	occasional	100,000	White Stork (estimated 200,000 minimum)
**Ras Mohammed National Park	two days known	20	27 days Aug-Sept 98	275,743	White Stork (275,743, but estimate higher)
**Gebel El Zeit	occasional	36,000	occasional	156,000	No individual species counts known
<b>Jordan</b>					
<b>All sites on Rift Valley</b>					
**Aqaba mountains	One brief count		None known		Steppe Buzzard (3,900)
	poor		poor		Levant Sparrowhawk (1,680))
**Petra area	occasional		none known		Honey Buzzard (650) Black Kite (200)
**Jordan Valley					Steppe Buzzard (2,000+)
**Wadi Dana - Finan	Comprehensive 95	7,600	Comprehensive 96	6,800	Honey Buzzard (2,170) Levant Sparrowhawk (665) Steppe Buzzard (6,173) Steppe Eagle (209)
**Wadi Mujib, Jebel el Hamra	occasional		occasional		Levant Sparrowhawk (8,000)
<b>Lebanon</b>					
**Ammiq swamp	One comprehensive (97)		None known		White Stork (19,292) Black Stork (555) Black Kite (155)

	Spring coverage	Highest total count	Coverage Autumn	Highest total count	Species for which important (with highest seasonal count)
					Steppe Buzzard (857) Lesser Spotted Eagle (1942)
Harissa (Jebel Liban)	none		4 days in 68 and 10 days in 69	10,210	Short-toed Eagle (349) Honey Buzzard (5,050) Levant Sparrowhawk (2,255) Lesser Spotted Eagle (3,474)
Ebel es-Saqi village	2004 and 2005		Only 2004		White Pelican (1327) White Stork (1819) Black Stork (331) Honey Buzzard (7,384) Lesser Spotted Eagle (49) Steppe Eagle (40) Levant Sparrowhawk (329) Steppe Buzzard (39) Common Crane (60,000)
<b>Palestinian Authority Territories</b>					
**Jericho	Good 2004	79,656	Good 2004	34,510	Black Stork (1,600) White Stork (32,000) Honey Buzzard (23,000) Black Kite (1,700) Short-toed Eagle (120) Steppe Buzzard (16,000) Lesser Spotted Eagle (1,480) Steppe Eagle (2,050) Booted Eagle (70) Common Crane (1,600)
<b>Saudi Arabia</b>					
**Jabal Aja and Northern Ha'il	poor		poor		
**Taif escarpment	None		2 weeks, Oct 91	25,300	Steppe Buzzard (22,500) Steppe Eagle (2,000) Sparrowhawk (272)
**Wadi Jawwah	none		very occasional		Steppe Buzzard (975) Steppe Eagle (650) Imperial Eagle (36)
Wadi Rabigh springs	poor		poor		
<b>Syria</b>					
**Jabal Slenfeh	None		very occasional; count in Sept 04		no counts available
<b>Yemen</b>					
**Bab al-Mandab – Mawza (see also Djibouti)	4 days in March 88		occasional	See Bab al-Mandab	Egyptian Vulture (773) Booted Eagle (737)
**Al-Kadan area	one day 82		3 days 85		Steppe Eagle (2,043) Steppe Buzzard (490)
**Wadi Rijaf	poor		poor		
**Mafraq al-Mukha	None		7 days	5,000	Black Kite (273) Levant Sparrowhawk (100)

	Spring coverage	Highest total count	Coverage Autumn	Highest total count	Species for which important (with highest seasonal count)
					Steppe Eagle (373)

Table 2 summarises the known information about the soaring birds that use the Rift Valley and Red Sea Flyway, giving for each species, the period of the peak migration in spring and autumn and the highest seasonal counts. The timing of migration varies between species. In autumn, for example, the first of the soaring birds to migrate south are the White Storks, Black Kites and Honey Buzzards, which generally have the peak of their migration at the end of August and early September. They are followed by the Levant Sparrowhawks in mid-September; then the Black Storks, Steppe Buzzards and Lesser Spotted Eagles at the end of September and early October and finally the Steppe Eagles in the latter half of October. These timings are only given for general guidance as migration periods can vary between years. Also the times at individual bottleneck sites will differ: in general terms it will take the average migrating soaring bird 10 days to cover 3,000 km: as the migrating eagle flies that is approximately the distance between Georgia and Djibouti.

**Table 2: Soaring Bird Migration: approximate peak migration time (at latitude 31 degrees) and highest seasonal counts made in the Middle East.**

	Spring peak passage	Highest spring count at a bottleneck site		Autumn peak passage	Highest autumn count at a bottleneck site	
<b>Honey Buzzard</b>	May 1 - 15	850,000	Eilat	Sept 1 - 15	420,000	Kfar Qassem
<b>Crested Honey Buzzard</b>	Very rare	14	Eilat	Very rare	0	
<b>Black Kite</b>	March 22 - April 6	36,700	Eilat	Sept 1 - 15	5,800	Pontics
<b>Red Kite</b>	Very rare			Very rare	10	Bosphorus
<b>White-tailed Eagle</b>	Very rare			Very rare		
<b>Egyptian Vulture</b>	March 8 - May 3	1,200	Suez	Sept 14 - 30	1,000	Suez
<b>Griffon Vulture</b>	Rare	140	Suez	Rare	1,300	Suez (1984)
<b>Short-toed Eagle</b>	March 25 - April 5	3,100	Suez	Sept 25 - Oct 12	12,100	Suez (1984)
<b>Marsh Harrier</b>	March 25 - May 5	371	Eilat	Sept 10 - Oct 5	1,600	Kfar Qassem
<b>Hen Harrier</b>	Rare	34	Pontics	Rare	40	Pontics
<b>Pallid Harrier</b>	March 25 - April 15	113	Eilat	Sept 20 - Oct 10	165	Burqu
<b>Montagu's Harrier</b>	April 5 - 25	65	Pontics	Sept 1 - 15	252	Kfar Qassem
<b>Goshawk</b>	March 20 - April 15	12	Pontics	Oct 20 - Nov 10	53	Pontics
<b>Sparrowhawk</b>	April 10 - 25	4,000	Pontics	Oct 1 - 15	2,100	Bab al Mandab
<b>Levant Sparrowhawk</b>	April 20 - 30	49,800	Eilat	Sept 15 - 25	60,400	Northern Valleys
<b>Common Buzzard</b>	March 20 - April 15	136,300	Pontics	Sept 25 - Oct 10	205,000	Pontics
<b>Long-legged Buzzard</b>	March 15 - April 15	105	Eilat	Oct 15 - 30	1,800	Suez
<b>Lesser Spotted Eagle</b>	March 20 - April 10	16,200	Qirat shemona	Sept 25 - Oct 5	142,000	Kfar Qassem
<b>Greater Spotted Eagle</b>	March 15 - April 5	74	Suez	Oct 5 - 20	85	Kfar Qassem
<b>Steppe Eagle</b>	March 1 - 15	75,000	Eilat	Oct 20 - 31	76,600	Bab al Mandab
<b>Imperial Eagle</b>	Rare	95	Eilat	Rare	70	Bab al Mandab
<b>Booted Eagle</b>	April 1 -20	950	Bab al Mandab	Sept 15 - 30	2,000	Kfar Qassewm
<b>Osprey</b>	March 25 - April 20	130	Eilat	Sept 20 - Oct 10	125	Kfar Qassem
<b>Lesser Kestrel</b>	March 15 - April 15	500	Sinai	Oct 1 - 15	110	Eilat

	Spring peak passage	Highest spring count at a bottleneck site		Autumn peak passage	Highest autumn count at a bottleneck site	
<b>Kestrel</b>	March 20 - April 10	190	Eilat	Oct 1 - 20	450	Pontics
<b>Red-footed Falcon</b>	Rare	1,000	N E Turkey	Sept 20 - Oct 5	11,400	Qfar Qassem
<b>Hobby</b>	April 15 - 25	55	Eilat	Sept 20 - Oct 5	190	Pontics
<b>Eleanora's Falcon</b>	Rare	33	Eilat	Rare	44	Kfar Qassem
<b>Sooty Falcon</b>	Rare			Rare		
<b>Lanner Falcon</b>	Rare	4	Eilat	Rare		
<b>Saker Falcon</b>	Very rare			Very rare	6	Eilat
<b>Peregrine Falcon</b>	Rare	5	Eilat	Rare	20	Kfar Qassem
<b>White Stork</b>	March 10 - April 10	300,000	Bet Shean and area	Aug 20 - Sept 5	338,000	Bosphorus
<b>Black Stork</b>	March 15 - 31	4,200	Eilat	Sept 20 - 30	8,300	Bosphorus
<b>White Pelican</b>				Oct 1 - 31	70,000	E Med coastlands
<b>Common Crane</b>	March 20 - 30	450	Bosphorus			

### THREATS TO MIGRATING SOARING BIRDS AT BOTTLENECK SITES

There is much concern over the conservation status of many birds of prey, storks, pelicans and, of course, the Bald Ibis. Such soaring birds are particularly at risk because they are generally large, long-lived and often naturally scarce. They are vulnerable to threats such as shooting, trapping, poisoning, persecution, collisions and electrocution from overhead power-lines, disturbance and deterioration in habitats that affects their ability to feed. On migration soaring birds have to fly over long distances and pass a network of bottleneck sites where they may become particularly vulnerable to threats. However it must be remembered that at most sites and on most days birds will be passing high above the bottleneck site and thus are rarely subject to any threat or potential threat that is man-induced. An exception is when flying over hyper-arid regions in particularly hot weather when soaring birds might be attracted to water sources; if these are heavily polluted they can pose a threat. However it is usually only when they are forced to fly low, or land, because of bad weather, or if they happen to roost at or adjacent to the site that they become potentially at risk. In this paper only threats relating to bottleneck sites are discussed. For a full assessment of threats to migrating raptors through the Middle East and North East Africa see Tucker (2005).

In this study the compilers of the Site Data Sheets (see Annex 1) were asked to detail the threats they considered were (or had the potential of) impacting on soaring birds at the site in question. Data were collected from 22 sites most of which are internationally recognised bottleneck IBAs), and the results are presented in Table 3. Shooting was perceived as the most serious threat, recorded at seven (32%) of the 22 sites. This varied from indiscriminate shooting through to shooting for stuffed trophies, which is a particularly common practice in Syria (also recorded in Lebanon). There has been no systematic assessment of the numbers killed by shooting or trapping at bottleneck sites, but it is known to be common in Syria, Lebanon, Egypt and Yemen.

The trapping of falcons (notably Peregrine, Saker and Lanner) for the falconry trade was recorded at, or in the close vicinity of, five sites. At some sites this practice also entailed the trapping of smaller falcons and harriers that are then used as lures to attract the target species. Both of these threats - shooting and trapping - are illegal in most of the countries and simply require active enforcement programmes to reduce them.

Whilst habitat degradation (including agricultural intensification, pesticide-use and drainage) was also recorded as a threat at five sites, it is unclear as to the true impact this has on migrating soaring birds at bottleneck sites. In the case of birds of prey the vast majority will pass overhead and not stop unless to roost as most do not feed on migration. The species that do are mainly those which migrate on a broad front, notably the harriers and falcons (especially Lesser Kestrel and Red-footed Falcon), but these are not known to gather in any concentration at the bottleneck sites that are the subject of this report. Storks are known to gather to feed on migration if the habitat is suitable; similarly White Pelicans will congregate on lakes where fish are abundant. But such gatherings are usually not associated with the bottleneck sites.

The threat of power lines and their associated infrastructure was also recorded at five bottlenecks, though in three cases this was a potential threat because of planned developments. Such structures can cause an impact by injuring or killing soaring birds that hit them in flight. They can also cause death by electrocution if used as perches when roosting, but

only when two wires are touched and the circuit is completed. Baha El Din (*in litt.*) believes that the true impact of these structures has not been fully realized especially along the Gulf of Suez.

Whilst tourism is given as a threat, there is little evidence to show how serious a problem this really is, except in the case of the small minority of foreigners that visit the region to engage in the so-called 'sport' of hunting birds of prey. Tourist activities can result in disturbance to resting, feeding or roosting birds and this will always be a potential threat. The effects of built developments associated with an expanding tourist industry (notably along the Gulf of Suez and Aqaba) give cause for concern especially in relation to the disposal of contaminated solid and liquid waste. Tourism may, however, have a positive impact in that in most cases it almost certainly results in the reduction of illegal trapping and shooting as well as providing a 'market' for showing people the spectacle of bird migration.

Although the problem of urbanization was recorded as threat at three sites, it is widely acknowledged that its true impact is not known. Birds flying high over a sprawling conurbation are unlikely to be affected by what happens below. However there are concerns that resting and roosting sites might be affected.

The last Tranche of threats are specific to only one or two bottleneck sites, though several are known to be a threat to migrating soaring birds throughout their flyway paths. Oil pollution and water contamination has affected raptors and storks in particular in the Gulf of Suez. Again Baha El Din (*in litt.*) believes that the effects of birds drinking contaminated water have been underestimated. Whilst solid waste dumping (and the possibility of subsequent use of poisons for killing foxes, feral dogs and rats) is a concern to migrating soaring birds, only one such dump is known in the vicinity of a bottleneck site. Similarly, entrapment in sewage is only known at Suez, where because of the construction of the tanks, raptors which dropped-in to drink were unable to exit the plant because of the steep sides. Smoke from wood fires was only noted as a threat at the Syrian site of Jebel Slenfeh. In future, there may well be an additional problem caused by the turning blades of wind turbines, the siting of which could potentially be along lines of hills where many of the bottleneck sites occur. Large eagles and storks will be at greatest risk from the expanding wind energy industry (as is known from studies in Europe and America).

**Table 3: Threats to soaring birds at bottleneck sites in Syria, Lebanon, Jordan, Palestine, Saudi Arabia, Yemen, Egypt and Djibouti.**

Threat	Number of sites affected	Degree of threat (and species most likely affected)
Shooting	7	High (all raptors and storks)
Trapping of falcons	5	Moderate (large falcons, some small falcons, occasionally harriers)
Habitat degradation/agricultural intensification/pesticide use/drainage	5**	Low ( White Storks, White Pelicans, harriers and small falcons - species that sometimes feed on migration)
Erection of power lines and associated infrastructure	5	Low (storks, pelicans, vultures, kites and large eagles)
Tourism	4	Low
Urbanisation	3	Low
Oil pollution	2	Low
Solid waste dumping (with associated use of poisons for fox/feral dog control)	2	Probably low ( carrion feeders - kites, vultures, Steppe and Spotted Eagles; also White Storks)
Water contamination	2	High: mostly White Storks and eagles
Entrapment in sewage	1	Low (buzzards and large eagles, when drinking)
Smoke from wood fires	1	Low
Wind turbines	1	Low at present but potentially high if badly sited
NO THREAT	8	

\*\* based on limited evidence and requiring further investigation



## SURVEYS AND MONITORING

### Counting Raptors

Few surveys of soaring bird migration have been undertaken in the Project area. At most bottleneck sites there have just been counts over a day or two; rarely have there been counts for more than a week and only in the case of Bab al-Mandab, the Suez sites and Wadi Dana have there been counts for four weeks or more. Unlike other Middle East sites outside the Project area there have never been counts over an entire season. For a summary of the main counts for each site, see Table 1 and the Site Data Sheets: Annex 1.

Counting soaring birds and using the results for monitoring purposes is fraught with problems. The author has taken part in surveys at 12 the bottleneck sites in the Middle East (including six in the Project area) and thus has considerable experience of the difficulties. First, the identification of many species is challenging and requires much training and practice as birds are often at a distance and several species are very similar. Identification of the *Aquila* eagles (Steppe, Greater Spotted and Lesser Spotted), buzzards and large falcons is especially difficult. Second, the actual counting can be problematic as birds frequently fly over at heights which make them invisible to the naked eye; they can also be in large mixed flocks - thus making both counting and identification difficult. Third, migration streams are greatly affected by weather, especially wind strength and direction, and may move out of vision from the chosen observation site. Fourth, it is often impossible to know just how much of the actual flyway stream one is counting: some mountain bottleneck sites, for example, may simply be localities where part of a broad-fronted movement is close enough to be observed. Fifth, the problem of the counting conditions, particularly the intense heat and bright sunlight, should not be underestimated. Sites in the Project Area can be unbearably hot and humid, especially along the Red Sea. Finally, to undertake a comprehensive count at any site would require a commitment to watch for an entire season for at least eight hours per day. Two observers present for all of the time would be essential and up to four when there are large numbers passing. They would need to be capable of total concentration for searching for high flying birds against a brilliant blue sky, for counting large and wheeling flocks and, of course, tricky identification.

It would be possible just to count selected species. The migration of most species is accomplished over about a six week period through any one bottleneck site in the region, with the majority of birds passing over a two week period. Thus it would be possible to count only the passage of the species selected. Two species that are considered worthy targets for this approach are White Stork (large, easy to count and most passing through one site) and Steppe Eagle. Because it is relatively easy to identify juvenile Steppe Eagles then additional information on productivity might be obtained. (Table 2 shows more details of timings and numbers of migrations of the different species); see also Annex 2 for guidance.

In practice, it is the author's considered opinion that actual monitoring (to assess soaring bird population changes over time) is unrealistic in the time-frame of this project, especially at sites in the Project area. Should such monitoring ever be considered then co-ordinated, simultaneous counts at the three exit bottlenecks from the Middle East into Africa would be essential, namely:

- Bab al- Mandab
- South Sinai (Ras Mohammed/El Qa/Gebel El Zeit)
- Suez (Ain Sukna/Suez)

Studies suggest that these sites do truly concentrate the migratory stream as they are the shortest sea crossings between two land-masses. Thus it is reasonable to assume that the majority of soaring birds that exit and enter the Middle East pass over these sites. Indeed these 'land-bridges' have a great importance in the context of counting and monitoring at bottleneck sites in the Project Area.

Notwithstanding, systematic counts at one bottleneck site at least in each country should be encouraged. This would provide valuable data on general numbers and species passing through the country and the region and give a focus for encouraging future protection of the bottleneck sites and soaring birds whilst on migration. The following sites are considered to be the top priority for further study:

1. Syria: Jabal Slenfah
2. Lebanon: Ammiq Swamp
3. Jordan: Wadi Dana; Gulf of Aqaba
4. Palestine: Jericho
5. Saudi Arabia: unsure
6. Yemen and Djibouti: Bab al-Mandab
7. Egypt: Ras Mohammed; Suez

To assist with the systematic recording of soaring bird migration at the bottleneck sites in the Project area, guidelines have been produced and are presented in Annex 2.

## **2. Evaluating and Monitoring Threats**

Whilst the main threats to soaring birds on migration have been studied elsewhere in the world, there is a serious lack of quantitative data for the Middle East. For example it is known that the shooting of raptors for the stuffed-bird trade is a common practice in Syria but there is no information on the numbers involved. Similarly the true effects of changes in agricultural practices on migrating raptors have never been studied, though one suspects these are small.

Therefore, in addition to the need for systematic counts of migrating birds at bottleneck sites, an assessment of the impact of actual and perceived threats at these sites requires attention. It is unclear how this is best addressed but a helpful starting point would be to enquire of other bottleneck sites, particularly in Europe and America how they have collated, assessed and monitored threats and perceived threats to soaring birds at their site.

Whilst Table 3 lists the threats reported at bottleneck sites, most require further study and verification and this is a priority for action. Those considered to be the most important for such study are: shooting, trapping of falcons, effects of power lines and associated structures, potential impact of wind farms and solid waste dumping. Also any future developments at or near bottleneck sites that might impact on the soaring bird migration should be subject to an EIA as a matter of course.

### **EDUCATION**

There are few known conservation activities at the bottleneck sites in the soaring bird Project area and the only public awareness programmes are at:

- Ammiq Swamp (Lebanon)
- Wadi Dana (Jordan)
- Jericho, Northern Lower Jordan Valley (Palestine)
- Ras Mohamed (Egypt)
- Bab al-Mandab (Yemen), only occasionally.

Out of these five sites, only the awareness programme at Bab al-Mandab specifically targets the soaring bird migration as an educational resource.

Whilst the migration of soaring birds can be dramatic and awe-inspiring, with swirling masses of storks and eagles riding the thermals overhead, it can also be boring. This is because close views are obtained relatively infrequently, depending as they do on weather conditions and often time of day. With the low boredom threshold level of most people, especially children, any site that develops a strategy for showing people soaring birds must have other wildlife education back-up to sustain interest. Thus sites chosen to develop "Showing People Birds" programmes must consider the other wildlife interest of the site, and even use facilities such as the internet to witness migration in progress.

Notwithstanding the difficulties, the following sites, additional to those listed above should be examined for their educational potential:

- Jabal Slenfah (Syria), where the NGO has proposed a field station
- Petra (Jordan) which already attracts large numbers of tourists
- Ras Mohammed (Egypt), which again attracts large numbers of tourists

### **SITE PROTECTION**

Of the 23 bottleneck sites in the Project Area that qualify as Important Bird Areas under the 'migration bottleneck' criterion of BirdLife International, only eight are fully, or partially protected through national legislation, these being:

- Jabal Slenfah, Syria. (State Forest)
- Ammiq Swamp, Lebanon. (Part protected by private owners)
- Northern Lower Jordan Valley, Palestine. (Part Nature Reserve)
- Wadi Mujib, Jordan. (Wildlife Reserve)

- Wadi Dana-Finan, Jordan. (Wildlife Reserve)
- Petra, Jordan. (National Park)
- Taif Escarpment, Saudi Arabia. (Part protected as National Park)
- Ras Mohamed, Egypt. (National Park)

The priority for recommending better protection for bottleneck sites has not been considered further in this report.

#### **CHECKLIST OF SUGGESTED ACTIONS RELATING TO SOARING BIRDS AT BOTTLENECK SITES**

1. Initiate a programme of systematic counts at selected sites.
2. Select sites for “Showing People Birds” and develop associated public -awareness programmes. Ensure all IBA bottleneck sites are watched for World Bird watch Day each year.
3. Catalogue all incidents of man-induced soaring bird mortality in the Project Area.
4. Undertake a detailed assessment of threats and perceived threats at all sites. See also 3 above and 9 below.
5. Ensure there is an EIA for all developments at bottleneck sites and their surrounding environs.
6. Write-up results of all unpublished soaring bird migration counts in e.g. *Sandgrouse*.
7. Devise a training programme in soaring bird identification and counting, perhaps in conjunction with a foreign BirdLife Partner with an appropriate and relevant bottleneck site. (e.g. Bulgaria or Turkey).
8. Consider merits of satellite tagging to assist with the further research into the origins and migrations of birds that pass through the Project area.
9. The most serious threats at bottleneck sites identified in the Data Sheets are shooting and trapping of falcons. Action to tackle these should be the highest conservation priority.
10. Threats specific to a site, which could be remedied by relatively simple actions should be addressed immediately. E.g. floating pontoons in sewage tanks as refuges for drowning raptors at Suez.

## REFERENCES

- Baha El Din, S. M., and M. B. Baha El Din. 1997. Report on avian utilization of the new sewage treatment facility at Suez. Winter and Spring 1997 with final conclusions and recommendations. ABB SUSA, Cairo, Egypt.
- Baumgart, W., M. Kasparek, and B. Stephan 1995, (2003). Birds of Syria. Max Kasparek / Verlag. English edition by the Ornithological Society of the Middle East, Berlin.
- Busuttill, S., Flumm, D. and Gotham, P. 1997. Birds recorded at Ammiq Swamp in March and April 1997. A Rocha Lebanon Report 01/97.
- Clark, W. S. 1987. Oil contamination of raptors migrating along the Red Sea. *Environmental Pollution* 46:307-313.
- Cramp, S., editor. 1977-93. Handbook of the birds of Europe, the Middle East and North Africa: the birds of the Western Palearctic. Oxford University Press, Oxford.
- Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.
- Fishpool, D. C., and M. I. Evans 2001. Important Bird Areas in Africa and Associated Islands. Priority sites for conservation. (BirdLife Conservation Series No. 11). Pisces Publications and BirdLife International, Newbury and Cambridge, UK.
- Goodman, S. M., and P. L. Meininger 1989. The birds of Egypt. Oxford University Press, Oxford.
- Langston, R. H. W., and J. D. Pullan. 2003. Windfarms and birds: an analysis of the effects of windfarms on birds, and guidance on environmental assessment criteria and site selection issues. Council of Europe, Strasbourg.
- Newton, I. 1979. Population ecology of raptors. T and A D Poyser Ltd, Hertfordshire, England.
- Nielsen, B.P. and Christensen, S. 1970. Observations on the autumn migration of raptors in Lebanon. *Ornis Scandinavica* 1: 65-73.
- Porter, R.F. and Christensen, S. 1987. The autumn migration of raptors and other soaring birds in North Yemen. *Sandgrouse* 9: 121-124.
- Porter, R.F. and Willis, I. 1968. The autumn migration of soaring birds at the Bosphorus. *Ibis* 110: 520-536.
- Shirihai, H., R. Yosef, D. Alon, G. M. Kirwan, and R. Spaar 2000. Raptor migration in Israel and the Middle East. A summary of 30 years of field research. International Birding and Research Centre, Eilat, Israel.
- van Rooyen, C. S. 2000. Raptor mortality on powerlines in South Africa. Pages 739-750 in R. D. Chancellor, and B.-U. Meyburg, editors. Raptors at risk: proceedings of the V world conference on birds of prey and owls. Johannesburg, South Africa 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.
- Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK.

## DATA SHEETS FOR SELECTED BOTTLENECK SITES

### SYRIA

#### JABAL SLENFEH, WEST SYRIAN MOUNTAINS

35 km east of Lattakia

**Coordinates:** 35.29-35.41 N, 36.10-36.17 E.

#### **Description**

Located on the northern part of the coastal mountains overlooking the Mediterranean Sea to the west and Al Ghab Valley and Orontes River to the east. This site contains the highest summit of the coastal mountains (Al Nabimatta 1562m asl.) and comprises deciduous and evergreen forests of some 88 sq km: Cedar forest in the northern part, Fir forest in the south, and Pine forest on the eastern slopes. Mixed forest occupies the remaining areas.

#### **Key soaring birds**

A poorly known site but the following are frequently recorded: White Stork, Black Stork, White Pelican, Honey Buzzard, Black Kite, Egyptian Vulture, Short-toed Eagle, Steppe Buzzard, Lesser Spotted Eagle and Levant Sparrowhawk.

#### **Maximum counts**

No systematic counts published \*but occasional observations have recorded several hundred large raptors per day passing south in late September.

The raptor stream at Jabal Slenfeh is probably a continuation of that which passes through the bottleneck site of Belen in southern Turkey where at least 30,000 raptors and 100,000 White Storks pass through each autumn. This is also part of the same stream that continues through Lebanon to Jordan/Palestine and connects to the Rift Valley/Red Sea Flyway.

\*Gianluca Sera made observations in September 2004, which will be published in Sand grouse.

#### **Human activities**

Agriculture and tourism are the main human activities. . Apple, pear, grape, cherry and olive orchards have increased in the last three decades. Due to the attractive weather the number of tourists have increased in summer and this has led to additional services requiring buildings and associated infrastructure.

#### **Threats**

Hunting is the main threat. Locals shoot raptors (even using machine guns to fire at flocks) to gain unusual birds for taxidermy, however the true extent of this in this protected area has not been studied. Similarly the trapping of falcons, whilst common in Syria may not be a major threat at this site. Wood fires are also considered a threat to soaring birds. Other reported threats include wood-cutting, and the erection of buildings and communication networks, including power lines. The effect of pesticide use is not known.

#### **Protection status of site**

State Forest Protected Zone and proposed as managed nature reserve or multi-use management area by UNDP task force in 1989. No known action since.

#### **Conservation activities**

Those commensurate with the running of State Forest Protected Zone. The site has been used as a conservation training area for Syrian children.

#### **Conservation needs**

None necessary for the management of the site. It clearly has great potential as a site to promote the awareness of soaring bird migration as it is the only known place in Syria where such migration can be easily observed.

#### **Research and monitoring**

No regular recording of soaring bird migration has been undertaken and there are no observations at all for spring. Systematic observations initially for three weeks in March/April and for late September/early October should be

encourage to inform on the importance of the site. This could be accomplished by a small multi-national team with Syrian NGO and government counterparts. This could lead to the establishment of permanent field station, which has been proposed by the Syrian NGO.

### **Syria generally**

Whilst the route through the western mountains is the most important in Syria, other records of soaring birds in large numbers have been recorded regularly but sporadically in areas of central Syria. These suggest that the migration is broad-fronted. For example flocks of up to 2,000 White Storks have been recorded north of Palmyra in late August and up to 5,000 over Damascus in early September. (Baumgart 1991, Gianluca Sera *In press*). The oasis at Palmyra has supported up to 5,000 roosting Steppe Buzzards and over 80 Black Kites in early April.

### **Threats**

The known threats to this broad-fronted migration through Syria are:

- The uncontrolled shooting of passage migrant raptors; many shot birds (including pelicans) are sold to the Syrian stuffed bird trade.
- Falcon trapping, fuelled by the lucrative trading by Gulf falconers. This can also involve the trapping of harriers (especially Pallid Harrier, globally threatened) and small falcons which are used to trap the larger falcons.
- Poisoning of vultures (especially Griffon Vulture), because of the practice of poisoning carcasses to control wolf populations. This could seriously impact on birds such as Steppe Eagles which will also feed on carrion. (Gianluca Sera *pers. comm.*).

### **References**

Baumgart, W., M. Kasparek, and B. Stephan 1995, 2003. [Birds of Syria]. Max Kasparek / Verlag. English edition by the Ornithological Society of the Middle East, Berlin.

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK.

Dr Akram Darwish and Dr Adwan (*pers. comm.*) on behalf of the Syrian Conservation Society

## **LEBANON**

### **HARISSA, LEBANON**

(20 km NE of Beirut) - SEE ALSO FOOTNOTE

**Coordinates:** 33°58'N 35°38'E

#### **Site description**

Mountainside watchsite on the seaward slope of Jebel Liban (Lebanese Mountains) and 2 km from the Mediterranean Sea.

#### **Key soaring birds**

White Stork, Black Stork, Honey Buzzard, Steppe Buzzard, Lesser Spotted Eagle, Booted Eagle, Short-toed Eagle, Levant Sparrowhawk.

#### **Maximum counts:**

No spring counts; Autumn: two counts only: 10, 210 raptors counted in 4 days in September 1968; 6,870 raptors counted in 10 days (September - October 1969).

Honey Buzzard (5,050 in 1968); Egyptian Vulture (37 in 1968), Short-toed Eagle (349 in 1968), Levant Sparrowhawk (2,255 in 1968), Lesser Spotted Eagle (3,474 in 1969), Booted Eagle (142 in 1969), White Stork? Black Stork?

#### **Human activities:**

Agriculture. Bird-shooting is a popular leisure activity.

#### **Threats:**

Shooting is the main threat to soaring birds.

#### **Protection status of site:**

None.

#### **Conservation activities:**

None

#### **Recognised conservation needs at site**

Reduce shooting. Maintain local community's interest and enthusiasm for protecting / monitoring the site by increasing ecotourism to the area.

#### **Research and monitoring**

The only counts are those in September 1968 (4 days) and September- October 1969 (10 days)

#### **References**

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK.

Nielsen, B.P. and Christensen, S. 1970. Observations on the autumn migration of raptors in Lebanon. *Ornis Scandinavica* 1: 65-73.

## **LEBANON**

### **AMMIQ SWAMP, LEBANON** (West Bek'a Valley)

**Coordinates:** 33.46 N; 35.46 E

#### **Description**

The largest remaining wetland in Lebanon, lying on the western side of the Bek'a Valley at 865 . The main area floods in winter but dries out in summer, leaving extensive *Phragmites* reedbeds mixed with open fields of coarse pasture.

#### **Key soaring birds**

One of the best sites in Lebanon for observing soaring bird migration.

Black Stork, White Stork, Black Kite, Steppe Buzzard, Lesser Spotted Eagle, Lesser Kestrels

#### **Maximum counts**

All March - April 1997: Black Stork (555); White Stork (19,292); Black Kite (155); Steppe Buzzard (875); Lesser Spotted Eagle (1942)

#### **Human activities**

Sheep and goat grazing in the dry season; small-scale cultivation, fishing; hunting (one of the most popular hunting areas in Lebanon from early autumn to late spring) and this has resulted in many raptors being shot.

#### **Threats**

Agricultural intensification, drainage of the wetland margins for agriculture; also pesticide poisoning. The shooting and trapping of birds is at an excessive level.

#### **Protection status of site**

Protected through landowners rangers and conservation efforts of A Rocha Lebanon and a MedWet Coast project. Part a privately-owned nature reserve, with a formulated management plan

#### **Conservation activities**

Education centre; privately owned nature reserve

#### **Conservation needs**

Formulated land-use policy. Enforcement of laws protecting birds (to prevent shooting of raptors and storks) as this is a site that is used as a stop-over for roosting and feeding. This is an ideal site for showing people birds.

#### **Research and monitoring**

A general survey from 13 March to 7 April 1997, is the only occasion that the soaring bird migration has been counted. This is a site that would merit a comprehensive count in spring and possibly autumn. A Rocha have an on-going involvement at the site as does SPNL.

#### **References**

Busuttill, S., Flumm, D. and Gotham, P. 1997. Birds recorded at Aammiq Swamp in March and April 1997. A Rocha Lebanon Report 01/97.

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.



## **LEBANON**

### **EBEL ES-SAQI VILLAGE (NABATIYEH GOVERNORATE, LEBANON)**

**Coordinates:** 33°21'N 35°38'E

#### **Description**

Typical open Mediterranean uplands( 760 m a.s.l.) in southern Lebanon, dissected by the small, south flowing Hasbani river, bounded by Jebel esh-Shaikh (Mount Hermon) to the east and the most southerly tip of Mount Lebanon range. The area of interest centres on Ebel es Saqi, an ancient village atop a small hill, c. 8 km east of Marjayoun (the nearest large town).

#### **Key soaring birds**

White Pelican, White Stork, Black Stork, Honey Buzzard, Black Kite, Lesser Spotted Eagle, Steppe Eagle, Levant Sparrowhawk, Long-legged Buzzard, Common Crane.

#### **Maximum counts**

White Pelican (1327, Sept/Dec 04), White Stork (1819, Sept/Dec 04), Black Stork ( 331, 5 Oct), Honey Buzzard (7384, Sept/Dec 04), Black Kite ( 105, 4 Oct), Short-toed Eagle (18, Sept/Dec. 04), Marsh Harrier (22, Sept/Dec. 04), Sparrowhawk (24, Sept/Dec. 04), Lesser Spotted Eagle (49, Sept/Dec 04), Steppe Eagle (40, Sept/Dec. 04), Booted Eagle (12, Sept/Dec. 04), Levant Sparrowhawk (329, Sept/Dec 04), Steppe Buzzard (39, Sept/Dec. 04), Long-legged Buzzard (50, May/Aug 04), Lesser Kestrel (13, Sept/Dec. 04), Common Crane (60,000, Spring 05)

#### **Human activities**

Human land-uses dominate the landscape and include:

- cultivation (128 ha) -- olive groves (109 ha; some ancient) and rain-fed cereal fields (19 ha), and (along 3.7 km of the Hasbani river) small traditionally irrigated areas of vegetables and fruit trees;
- sheep-grazing (97 ha)-- garrigue on rocky hillsides;
- forestry (38 ha) -- a small plantation, mainly of pine.

There is a thin strip of little-used semi-natural woodland and scrub along the banks of the Hasbani ( river ecotone). Tourism is at a low level, but local aspirations to increase tourism seem high, and rehabilitation of local archeological remains is proceeding apace with money from USAID through Mercy Corps Association. Bird-shooting is a popular leisure activity.

#### **Threats**

Shooting is the main threat to soaring birds, especially at the hilltop pine plantation (which may be a big attractant to roosting raptors, as there is little other woodland in the area). Shooting by locals has been curbed in the immediate vicinity of the plantation (see below), but non-complying local shooters and visiting non-local shooters remain a threat. Other threats to the site include fires (plantation).

#### **Protection status of site**

There is no protection or recognition of the natural value of this site by the national government. A by-law has been passed by the municipality (local authority) of Ebel es Saqi decreeing the small hill at the north-west end of the village (c.85 ha, including pine plantation of 38 ha) as a no-shooting zone ( 'Hima' in Arabic).

#### **Conservation activities**

SPNL has run courses for locals on B&B operation, bird watching skills, and ecotourism guiding. SPNL with local community held Lebanon's national World Bird Festival at the village in October 2004, attracting in excess of 1000 visitors over 2 days. Local community have mainly abided by the new 'no-shooting' bye-law and some have carried out daily patrols in the Hima during autumn 2004 migration. SPNL and local municipality have drawn up a management plan for the Hima and anticipate USAID to fund relevant infrastructure through Mercy Corps Association(small pond, hide).

#### **Research and monitoring**

Site was 'discovered' in 2004. Since then, monitoring of soaring-bird migration were carried out by SPNL researchers in spring (May-Aug.) and autumn (Sept.-Dec.) 2004; and spring 05.

**Conservation needs**

Reduce shooting. Maintain local community's interest and enthusiasm for protecting / monitoring the site by increasing ecotourism to the area, bringing benefits to local B&Bs and strengthening morale of interested locals.

**References**

No published references; SPNL and local community are the main players w.r.t. surveying migration of soaring birds. Mike Evans.

## **JORDAN**

### **WADI DANA - FINAN, JORDAN**

(Eastern edge of the Rift Valley, 160 km SSW of Amman)

**Coordinates:** 30.37 N 35.32 E

#### **Description:**

Scenically beautiful, major wadi running from the largely sandstone Sharrah Mountains at 1,200 m down to the Rift Valley floor at sea-level. The higher slopes have a mix of *Quercus calliprinos* woodland with *Pinus halepensis*, *Pistacia atlantica*, *Juniperus phoenica* and *Cypress sempervirens*. There are extensive gentle slopes of herbs and scrub. The total area is 15,000 ha.

#### **Key soaring birds**

Honey Buzzard, Levant Sparrowhawk, Steppe Buzzard

Maximum counts

Spring: 7,640 raptors counted in 60 days in Spring 1995

Autumn: 6,814 raptors counted in 45 days in Autumn 1996

Honey Buzzard (2,170 spring), Black Kite (105 spring), Levant Sparrowhawk (665, spring), Steppe Buzzard (4,290 spring; 6,173 autumn), Lesser Spotted Eagle (34, spring); Steppe Eagle (91, autumn)

#### **Human activities**

No cultivation apart from traditional orchards at Dana village. The main land-uses are wildlife conservation and tourism

#### **Threats :**

None of any consequence

#### **Protection status:**

A protected site being a Wildlife Reserve managed by RSCN.

#### **Conservation activities**

Managed as a wildlife reserve by RSCN; an excellent visitors centre and facilities for the wildlife tourist

#### **Conservation needs**

None, but more opportunity could be made of the raptor migration for training in identification and showing people birds for which it has excellent potential as the raptors, when present, afford good views.

#### **Research and monitoring**

Although this site has been watched more comprehensively for soaring bird migration than any other in Jordan, only rather small totals have been recorded in spring and autumn; thus it is not considered a suitable site for any future monitoring programme

#### **References**

All counts by M I Evans and R F Porter

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK

## **JORDAN**

### **RIFT VALLEY AND EASTERN DESERT SITES, JORDAN**

This covers, briefly, those sites in Jordan, outside Wadi Dana, which lie on the Rift Valley Flyway or in the Eastern Desert for which there are only occasional soaring bird observations.

#### **Rift Valley**

All the sites below lie on the same flight-line on the eastern flank of the Rift Valley. Essentially what flies over one site may well fly over the others and thus they have been grouped and summarized together.

#### **WADI NA'UR (15 KM SW OF AMMAN):**

31.52 N, 35.50 E

#### **Highest counts:**

Honey Buzzard (160 on 1 May); Levant Sparrowhawk (1,680 on 1 May). Birds pass over very high. Mountainside, overlooking Jordan Valley. Land-use mainly agriculture; not threatened; not protected; no conservation activities or needs relevant to soaring birds; no research or monitoring potential. As this site is so close to Amman it is worthy of investigation to see if it is a suitable site for showing people birds.

#### **JEBEL EL HAMRA, WADI MUJIB, FAQU' 63 KM SW OF AMMAN:**

31.27 N, 35.48E

#### **Highest counts in spring (most at Faqu'):**

Levant Sparrowhawk (8,000, 24 April); Steppe Buzzard (300, April). Highest counts in autumn: Steppe Buzzard (7079 in 4 days, Oct); Steppe Eagle (45, Oct).

Mountainside on east edge of Rift Valley. Sparse vegetation. Wildlife reserve managed by RSCN. Faqu' (31.39 N, 35.69 E) particularly good for observing soaring bird passage. No threats to soaring bird migration, but note construction of new highway and overgrazing. No further conservation activities thought necessary. Probably no monitoring potential.

#### **PETRA (100 KM NNW OF AQABA):**

30.20 N, 35.27 E

#### **Highest counts:**

Honey Buzzard (650 on 10 May); Black Kite (200 on 10 April); Steppe Buzzard (>2,000 on 4 April); Steppe Eagle (10 on 4 April)

Mountains overlooking Wadi Araba (Rift Valley). National Park which is not threatened (from point of view of soaring birds as they pass over high). Some illegal shooting reported in past. No conservation activities or needs relevant to soaring birds. As this site is one of the greatest tourist attractions in the Middle East it may have potential for showing people birds; this would be worthy of investigation.

#### **AQABA MOUNTAINS:**

29.32 N, 35.00 E

#### **Highest counts:**

Steppe Buzzard (3,930 spring); Steppe Eagle (175 spring).

However hardly any observations have been made at this bottleneck at the head of the Gulf of Aqaba. In theory it should have a very large migration of soaring birds.

Mainly urban land, especially industrial and shipping; heavy tourism; not threatened (from point of view of soaring birds as they pass over high) but note port expansion, coastal development and increase in tourism. No conservation activities or needs that are relevant. Worthy of systematic observation, initially for two weeks in March, to see if the site has potential for monitoring and showing people birds

## **EASTERN DESERT**

### **BURQU**

32.42 N, 37.57 E

Sparsly vegetated hammada plain with near-permanent 200 ha. spring-fed freshwater pool at Ghadir Burqu. On autumn migration Ghadir Burqu is an important source of water for large numbers of raptors. It is also an overnight roost site (e.g 30 Steppe Eagles and several Pallid Harriers on 2 Oct 03).

#### **Highest daily counts:**

Montagu's Harrier (85, September); Pallid Harrier (26 September); Steppe Buzzard (2,000 September). These birds are clearly part of a broad-fronted movement that probably joins the Rift Valley Flyway further south. Trapping and shooting of birds of prey is a major problem that requires attention.

### **AZRAQ**

31.49 N, 36.48 E

A desert oasis wildlife reserve managed by RSCN. Small numbers (<300 in spring) of soaring birds stop-over to roost or drink. True importance for soaring birds difficult to quantify, but over 3,000 Levant Sparrowhawks recorded passing over in spring 2004; also high numbers in spring 05, when on 28 April over 2,000 departed from roost at the oasis in early morning.

#### **References**

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK

Miscellaneous observations by: Peter Ellis (RSPB), M I Evans (BirdLife), Chris Hewson (BTO), Khaldoun Al-Omari (RSCN), Laith El-Moghrabi and R F Porter

## **PALESTINE**

### **JERICHO DISTRICT (NORTHERN LOWER JORDAN VALLEY), PALESTINE**

**Coordinates:** 31 51 N, 35 27 E

#### **Description**

The Jordan Valley is situated along the northern edge of the Great Rift Valley. The western part is the eastern boundary of the West Bank (Palestine). This comprises a narrow strip between the eastern slopes and the Jordan River, which drops to 400 m below sea level near the Dead Sea. Within this region the Jericho District (of some 40 km sq) is located. It extends from the Dead Sea in the south to the southern part of Fasayel in the north, and from the eastern slopes of the Jerusalem and Ramallah Mountains in the west to the Jordan River in the east. Jericho City is located in the south of Jericho District. The barren cliffs of the edge of the Rift Valley, north west of the City of Jericho provide the flight-line for the soaring bird migration.

#### **Key soaring birds**

Black Stork, White Stork, Honey Buzzard, Black Kite, Steppe Buzzard, Lesser Spotted Eagle, Steppe Eagle, Common Crane.

#### **Maximum counts**

79,656 (spring 2004); 34,510 (autumn 2004)

Black Stork (850 spring; 700 autumn); White Stork (32,500 spring; 21,000 autumn); Honey Buzzard (23,000 spring; 6,000 autumn); Black Kite (1,700 spring); Short-toed Eagle (120 spring); Steppe Buzzard (16,000 spring; 5,300 autumn); Lesser Spotted Eagle (1,480 spring); Steppe Eagle (16,000 spring); Common Crane (1,600 spring; 1,200 autumn).

#### **Human activities**

Mainly farming and small commercial enterprises

#### **Threats**

As elsewhere in the world, the natural environment of the Jericho District is being severely impacted by development and population growth. Rapid industrialization has resulted in high levels of pollution from pesticides, herbicides, factory waste and sewage, which affects all inhabitants. Habitat loss and degradation have been widespread throughout the whole Jordan Valley, especially from intensive agriculture.

#### **Protection status of site**

Partly protected at the important archaeological sites.

#### **Conservation activities**

As with other cities in the West Bank Jericho has a poor record of environmental activities. In the last three years however the PWLS has been established a conservation awareness programme, has supported the protection of breeding Lesser Kestrels and started the Jericho Wildlife Monitoring Station.

#### **Conservation needs**

The most urgent conservation needs are the creation of protected areas within the Jericho District and increasing public awareness. Because of the high levels of tourism this is an ideal site for an educational programme focusing on the soaring bird migration.

#### **Research and monitoring**

The counting of soaring birds has been undertaken by the Palestine Wildlife Society since 2002. This has involved up to 45 days of counts each season.

This is the most important site in Palestine for observing (and counting) soaring birds.

#### **References**

The above information has been supplied by the Palestinian Wildlife Society

## **SAUDI ARABIA**

### **AL HADA, SAUDI ARABIA**

(15 km W of At Ta'if)

**Coordinates:** 21.22 N 40.15 E

#### **Description:**

Mountainside watchsite at the northern end of the Taif Escarpment on the western flank of the North Asir Mountains. It lies 90 km from the Red Sea. Rocky, scrub-covered terrain.

#### **Key soaring birds**

Sparrowhawk, Steppe Buzzard, Steppe Eagle

#### **Maximum counts**

25,300 raptors counted from 14 - 27 October 1991; the only systematic count made. Sparrowhawk (272); Steppe Buzzard (22,500); Steppe Eagle (2,000)

#### **Human activities**

Some forestry, agriculture and tourism

#### **Threats :**

None of importance to soaring birds

#### **Protection status :**

Partly protected as a forest and national park

#### **Conservation activities:**

Managed as a protected forest and national park.

#### **Conservation needs**

The only site in Saudi Arabia that reliably provides the opportunity for showing people soaring birds on migration.

#### **Research and monitoring**

Only watched systematically for one 14 day period in October 1991 (Welch and Welch 1991). Probably a suitable site for encouraging future counts, both in spring and autumn.

#### **References**

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK

Geoff and Hilary Welch

## **SAUDI ARABIA**

### **WADI JAWWAH, SAUDI ARABIA**

(Central Asir Mountains, close to Yemen border)

**Coordinates:** 17.00 N, 43.00 E

#### **Description:**

River Valley in the foothills of the Central Asir Mountains at 100 - 300 meters

#### **Key soaring birds**

White Stork, Steppe Buzzard, Steppe Eagle, Common Crane

#### **Maximum counts**

Only sporadic counts made in autumn

Short-toed Eagle (18); Steppe Buzzard (975); Steppe Eagle (650); Imperial Eagle (36)

#### **Human activities : Agriculture, grazing and wood-gathering Threats**

Agricultural intensification (overgrazing), large human population and road construction are noted threats, though these are unlikely to impact on soaring birds

#### **Protection status**

Unprotected. The site was proposed as a Special Nature Reserve in 1991 by NCWCD but this has not been acted upon

#### **Conservation activities:**

None known

#### **Conservation needs :**

None known

#### **Research and monitoring:**

None considered necessary

#### **References**

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK



## YEMEN AND DJIBOUTI

### BAB AL-MANDAB STRAITS, YEMEN AND DJIBOUTI

**Coordinates:** 43°29' East, 12°46' North

#### Site description

Bab al-Mandab is the name of the straits between extreme southwest Yemen and Djibouti. As the narrowest point in the southern Red Sea it is a significant bottleneck for migrating raptors. On the Yemen side the area comprises *sabkha* at sea level with areas of rocks, hills, and small mountains rising to 259 meters. The site from which migrating raptors are annually observed is sited about 3 km north of the fishing village of Guarayrah. Here there is large *chor* fringed with mangroves, but otherwise vegetation in the area is sparse.

On the Djibouti side the raptor watch points are the area between the small hill of Kadda -Gueini, the promontory of Ras Siyan and the low ridge of Doumeira, 32 km to the north with its adjoining offshore island. Both lie in a rather featureless coastal plain and look out to Perim island in the Red Sea including the offshore islands of Sept Freres.

#### Key soaring birds

Black Kite, Steppe Buzzard, Steppe Eagle, Sparrowhawk, Short-toed Eagle, Booted Eagle (especially in spring), Egyptian Vulture (especially in spring), Abdim's Stork.

Note only small numbers of other storks and Common Cranes.

#### Maximum counts

Autumn (all 3 October - 7 November 1987):

Total raptor count: 246,478

Steppe Buzzard 98,339 (plus 29,851 "*Buteo* sp.")

Steppe Eagle 76,586 (plus 27,922 "*Aquila* sp.")

Sparrowhawk 2,135; Short-toed Eagle 1,202; Booted Eagle 1,123;

Egyptian Vulture 584; Black Kite 579; Abdim's Stork 643.

Spring:

Booted Eagle: 953 (5 - 7 March 1990)

Egyptian Vulture: 773 (5 - 7 March 1990)

#### Human activities

Fishing, chopping of acacia (inland) and possibly dead mangrove, falcon trapping, military training, local small-scale commercial transport.

#### Threats (Yemen side)

In the interior desert areas threats are habitat-related and concern the unsustainable use of natural resources through tree felling of woody vegetation and overgrazing. Agriculture intensification for cash crops in wadi Mawza (north eastern part of the sites), is depleting water resources and heavy application of pesticides might pose additional threats to soaring birds. However, the following threats at advance crossing points of the site are as follow:

- Bedouin falcon trappers annually trap Peregrine, Lanner, and other falcons (up to 85 taken in a season at Bab al-Mandab; catches appear to be declining)
- Military personnel occasionally shoot at migrating raptors
- A coastal tarmac road has recently been constructed through the area, which has significantly increased the mortality of migrating raptors.
- Tourism: with the easy access of these previously remote areas, tourism may become increasingly favored by local people.
- Development: as a result of the accessibility by road between Mokha and Aden new settlements will be encouraged. This would constitute an additional threat through land occupation and more human presence causing disturbances to soaring birds at sites previously known as quite roosting areas.

#### Threats (Djibouti side)

Illegal shooting by foreigners may be a problem, though prosecution and army presence may have remedied this.

### **Protection status**

On the Djibouti side part of the IBA has been declared a protected area, but this has not yet been ratified. On the Yemen side there is a sensitive military base and entry to the area, especially by foreigners, is restricted. This enhances the threat to soaring birds as falcon trapping and shooting can take place with 'protection.' On the Djiboutian side there is also an army presence but this is thought to curtail illegal shooting.

### **Conservation activities**

None on Djiboutian side but groups of up to 37 schoolchildren from Sana'a International School, with accompanying adults, have visited the Yemen side annually since 1996 to observe the migration. Yemen's foremost conservationist, Dr. Omar Al-Saghier makes frequent visits to lecture on conservation of soaring birds and enlist support of military personnel in the cause of conservation.

### **Conservation needs**

#### *Yemen side.*

The upper reaches of the *khor* at Bab al-Mandab are fringed with dead mangroves indicating a relatively recent change in the nature of the *khor* and its associated mangroves - whether the result of human activity should be examined. Falcon trapping, although a longstanding traditional activity at the site, should probably be curtailed. Military forces should be educated not to interfere with the migration by shooting at birds. The spectacle of the migration should be promoted for its educational value and ecotourism potential, including the raising of awareness at the two main settlements of Doubab and Ghurayrah. Training of local people who would be involved in site's monitoring and management should be considered.

#### *Djibouti side*

On the Djibouti side of the straits there are many signs that the area is being exploited by man. The mangroves of Godoria, Khor Angar and Ras Syan are used for camel-grazing, building materials and fuel. As hunting with falcons is traditional on the Yemeni side and as most of the fishing activities are conducted by Yemenis this activity is often reported. As on the Yemeni side the military should be made more aware of the importance of the bird migration. Birds and migration should also be included in the development of the tourism industry. Local communities could be organized as support groups for the area and be trained in the management and protection of the site and its natural resources.

### **Research and monitoring**

Three soaring bird surveys have been conducted from the Djibouti side of Bab al-Mandab by Geoff and Hilary Welch and their colleagues: March 90; October 85 and October 87 And three days observation in March 1990. In March 1998 they conducted a four-day survey of soaring birds from the Yemen side of Bab al-Mandab.

This is a vital site for conducting any future flyway population counts of soaring birds.

In addition further research should: map interior regions for roosting sites; identify land-use threats to soaring birds in the interior areas; monitor and evaluate impact of the new road to soaring birds, especially in relation to the erection of powerlines.

### **References**

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Welch, G. and Welch, H. 1988. The autumn migration of raptors and other soaring birds across the Bab el-Mandeb straits. *Sandgrouse* 10: 26-50.

Welch, G., and Welch H. 1991. Spring Raptor observations from Djibouti. *OSME Bull.* 26: 25-27.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK

Further information provided by Dr Omar Al-Saghier, David Stanton and Hilary Welch.

## **YEMEN AND DJIBOUTI**

### **AL-KADAN, YEMEN (AND WADI RIJAF -BELOW)**

(100 km W of Sana'a)

**Coordinates:** 15.15 N, 43.18 E

#### **Description**

A mountainside watch site in the Tihama foothills where Wadi Surdud meets the Tihamah plain. The area is heavily populated by man and animals. Sorghum fodder, mango and banana fruits are the major cash crops. Al-kadan town is the largest settlement in the area, otherwise population is scattered in farms and villages.

#### **Key soaring birds**

Steppe Buzzard, Steppe Eagle, Lesser Kestrel

#### **Maximum counts**

Only 3 days of observations - all in autumn  
Steppe Buzzard (488), Steppe Eagle (2,040)

#### **Human activities**

Small scale agriculture and grazing

#### **Threats**

None of relevance for soaring birds. (Note: with intensive agriculture activities, more pesticides is used in the agriculture. Near the site is a breeding colony of Abdim's Storks. Major threats to this breeding species are the change in the housing materials and style. The species use to breed on top of the traditional huts. The change towards concrete blocks provides no suitable nesting habitat).

#### **Protection status of site**

Not protected

#### **Conservation activities**

None

#### **Conservation needs**

The only conservation activity relevant to the soaring bird migration is the protection and reintroduction of the declining *Dobra glabra* an important tree-species for roosting (and nesting). Awareness-raising is needed within the agriculture communities. In addition, there is a need to assess the impact of the change in housing style on breeding storks, including the building of artificial nesting sites.

#### **Research and monitoring**

None considered necessary

### **WADI RIJAF**

(14.53 N, 43.26 E)

Situated in the Tihama foothills on Jebal Bura, this heavily wooded site lies south of Al-Kadan but on the same flight-line. There are many other potential watchsites in the Tihama Foothills.

Small numbers of migrating raptors have been recorded in spring and autumn, but no more than 200 of any one species. The site (Jebel Bura) has been recently declared a protected area by the government of Yemen, and Preparation of management plan for the site is underway, funded by World Bank and implemented by the Environmental Protection Authority (EPA). There are no known threats to migrating soaring birds.

#### **References**

Evans, M. I. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.

Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK.

Additional information from M I Evans and R F Porter.

## **EGYPT**

### **RAS MOHAMMED, SINAI, EGYPT**

The southern tip of the Sinai Peninsula

**Coordinates:** 27.44 N, 34.15 E

#### **Description**

Sandstone desert and mountains with gravel plains and bordering coral reefs, sandy bays, mudflats and mangroves.

#### **Key soaring birds**

White Stork (the most important bottleneck in the world for this species)

#### **Maximum counts**

27 days counted in August and September 1998; no spring observations of note

White Stork (275,743), but the total number passing is estimated to be 390 - 470,000

Many birds use the beaches and sometimes higher ground in the neighboring desert to rest and roost. Instead of striking out from Ras Mohamed to cross the Gulf of Suez, it appears that most of the birds the Gulf further north along the El Qa Plain

#### **Human activities**

A marine park with some of the world's spectacular coral reefs. One of Egypt's premiere sites for tourism, for which there is much on-going development.

#### **Threats**

A communications mast is estimated to kill up to 50 White Storks a year. Waste water contamination at Sharm El Sheik (part of the Ras Mohamed bottleneck complex) is believed to claim hundreds of soaring birds as does the nearby contaminated rubbish tip.

#### **Protection status of site**

Protected. Egypt's oldest protected site.

#### **Conservation activities**

Would make an excellent site for showing people White Stork migration, and literature on storks is available for the many tourists.

#### **Conservation needs**

The threats created by the communication mast and contaminated water and solid waste require remedial action

#### **Research and monitoring**

Only one period of systematic observation has been made at this site: 27 days in autumn 1998; since then annual counts have been made, though none comprehensive. Occasional observations have been made in spring but few raptors recorded (eg 27-28 March 1976 when less than 20 passed north; personal obs).

Because of the great importance of this site for counting White Storks it would be worthy of further systematic observations covering a six week period from 20 August to first week of October.

#### **References**

Baha El Din, Sherif M.1999. *Directory of Important Bird Areas in Egypt*. BirdLife International, Cairo, Egypt.

Clemins (1998)

## **EGYPT**

### **EL QA PLAIN, SINAI, EGYPT**

Lies on the Gulf of Suez coast just north of Ras Mohammed

**Coordinates:** 27.47 N, 28.40 E

#### **Description**

A long wide plain, north of Ras Mohammed (which see as the two sites are integrally linked) that lies between the South Sinai mountain and the Gulf of Suez. There is a narrow range of mountains (to the north of El Tor) which overlook the Gulf and which are thought to be an important point of departure for soaring birds crossing the Gulf of Suez

#### **Key soaring birds**

White Stork

#### **Maximum counts**

None available but hundreds of thousands of White Storks and other soaring birds pass through in spring and especially autumn, after they have arrived at Ras Mohammed. Some 70% of the White Storks that arrive at Ras Mohammed fly north to cross the Gulf of Suez over the El Qa Plain.

#### **Human activities**

Development for tourism is planned for the coastline along El Qa Plain.

#### **Threats**

Tourism developments could cause a threat to soaring birds especially when resting. Of most concern, however is the construction of powerlines near the coast which could be a serious hazard to migrating storks, especially in spring when birds tend to fly low as they come ashore after crossing the Gulf of Suez.

#### **Protection status of site**

Not protected

#### **Conservation activities**

None but the threats created by the construction of powerlines requires investigation.

#### **Conservation needs**

Unknown

#### **Research and monitoring**

No systematic counts have been made at this site. Because of the importance of the site for observing White Stork migration is would seem worthy of future attention. The threat created by powerlines should be monitored as a matter of urgency.

#### **References**

Baha El Din, Sherif M.1999. *Directory of Important Bird Areas in Egypt*. BirdLife International, Cairo, Egypt.

## **EGYPT**

### **GEBEL EL ZEIT, EGYPT**

Lies on the west side of the Gulf of Suez opposite Ras Mohammad and the soaring bird migration path is integrally linked.

**Coordinates:** 27.40 N, 33.25 E

#### **Description**

An isolated 450 m high mountain that overlooks the southern end of the Gulf of Suez.

#### **Key soaring birds**

White Stork, Black Stork, White Pelican, Honey Buzzard, Levant Sparrowhawk, Steppe Buzzard, Steppe Eagle. The area is important as resting and roosting site for migrating birds.

#### **Maximum counts**

*Spring:* Raptors (16,000) and White Storks (20,000) in a two week period.

*Autumn:* White Stork (56,000 in one day); Soaring birds (100,000 in a single day)

#### **Human activities**

Tourism is spreading to the area; shipping and oil facilities are important.

#### **Threats**

Oil pollution from both onshore and offshore is considered to be the most important threat to the area but it is unclear as to the importance for soaring birds; the development of tourism is also given as a threat. Of the projected onshore developments, powerlines and wind farms are seen as a potential threat to soaring birds. Falcon trapping has expanded in recent years, especially in autumn.

#### **Protection status of site**

Not protected

#### **Conservation activities**

None.

#### **Conservation needs**

The threats listed above should form the major focus of any future conservation activity.

#### **Research and monitoring**

Short periods of observation in spring. This is probably not an ideal site for any proposed monitoring programme, but the monitoring of developments that might pose a threat to migrating soaring birds is regarded as a high priority.

#### **References**

Baha El Din, Sherif M.1999. *Directory of Important Bird Areas in Egypt*. BirdLife International, Cairo, Egypt.

## **EGYPT**

### **SUEZ, EGYPT**

North end of the Gulf of Suez

**Coordinates:** 29.59 N, 32.33 E

#### **Description**

A coastal plain watch site at the southern entrance to the Suez Canal. The city of Suez has a busy port and a growing industrial complex.

#### **Key soaring birds**

White Pelican, White Stork, Black Stork, Steppe Buzzard, Lesser Spotted Eagle, Steppe Eagle and Common Crane

#### **Maximum counts**

*Spring:* 125,000 raptors (1982)

Honey Buzzard (630); Black Kite (3,860); Levant Sparrowhawk (539); Steppe Buzzard (80,890); Long-legged Buzzard (168); Lesser Spotted Eagle (7,755); Steppe Eagle (15,780); Imperial Eagle (36); Booted Eagle (457);

*Autumn:* 134,000 raptors (1981)

Honey Buzzard (79); Black Kite (106); Griffon Vulture (1,284); Egyptian Vulture (1,002); Short-toed Eagle (12,136); Levant Sparrowhawk (41); Steppe Buzzard (856); Long-legged Buzzard (1,816); Lesser Spotted Eagle (31,560); Spotted Eagle (86); Steppe Eagle (64,900); Imperial Eagle (556); Booted Eagle (761); Red-footed Falcon (462)

#### **Human activities**

An expanding urban and industrial international port.

#### **Threats**

Entrapment in sludge at sewage lagoons (overwhich the migrant soaring birds pass in spring. Contaminated water, at which migrant birds drink. Oil pollution? High tension powerlines. Urban and port expansion?

#### **Protection status of site**

None.

#### **Conservation activities**

None.

#### **Conservation needs**

The problems created by the sewage lagoons and high tension powerlines need addressing urgently. A possible site for showing people birds?

#### **Research and monitoring**

Two fairly comprehensive spring counts have been carried out: 1982 and 1990; and two years in autumn: 1981 and 1984. The data from some of these are questionable (in my opinion). This is an important site for any future soaring bird monitoring programme.

#### **References**

Baha El Din, Sherif M.1999. *Directory of Important Bird Areas in Egypt*. BirdLife International, Cairo, Egypt.

Zalles, J. A., and K. L. Bildstein, editors. 2000. *Raptor watch: a global directory of raptor migration sites*. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK



## **EGYPT**

### **AIN SUKHNA, EGYPT**

(50 km south of Suez)

**Coordinates:** 29.35 N, 32.20 E

#### **Description**

A brackish spring at the north-eastern foot of Gebel El Galal El Bahariya and overlooking the Gulf of Suez. It adjoins a wide coastal plain with a dense saltmarsh vegetation. This is an important site for soaring birds to roost and drink.

#### **Key soaring birds**

White Stork, Black Kite, Steppe Buzzard, Steppe Eagle, Lesser Spotted Eagle, Egyptian Vulture, Common Crane.

#### **Maximum counts**

No systematic counts have been made but numerous single-day counts indicate over 100,000 storks and raptors pass through each spring and probably autumn.

#### **Human activities**

##### **Threats**

Oil pollution is considered the most serious threat to migrating birds as the Ain Sukhna oil terminal often causes minor spills into the Gulf of Suez; oil has also been released onshore and contaminated fresh water where birds of prey come to drink. Power lines may be a problem too in this industrial area. The impact of dust, from a cement factory (to the north), on migrating soaring birds is not known. Other developments (such tourism, solid waste dumping etc) are causing degradation of the natural habitat. A project to establish a shipping port, airport and industrial zone may have further implications that are harmful for soaring birds.

##### **Protection status of site**

Not protected

##### **Conservation activities**

None known

##### **Conservation needs**

The threats, outlined above, need assessing in more detail and, as necessary, conservation actions promoted. This would appear to be the priority site for conservation action in the project area.

##### **Research and monitoring**

There has been no survey of soaring birds at this site, only occasional observations. A comprehensive survey of spring migration would be very useful.

Also the monitoring of the threats and potential threats is considered very important and this could provide a useful checklist of actions to consider at other sites.

##### **References**

Baha El Din, Sherif M.1999. *Directory of Important Bird Areas in Egypt*. BirdLife International, Cairo, Egypt.

**ANNEX 8:**

**CONSERVATION OF BIRDS IN THE EASTERN SECTOR OF THE AFRICAN-EURASIA FLYWAY SYSTEM**

**Migratory Soaring Birds: Review of status, threats and priority conservation actions**

**10<sup>th</sup> May 2005**

**Dr Graham Tucker** BSc, MSc, PhD, MIEEM

Report to  
**BirdLife International**  
Wellbrook Court  
Girton Rd  
Cambridge  
CB3 0NA

**ECOLOGICAL SOLUTIONS**



5 Rosenthal Terrace, Hemingford Grey, Huntingdon, PE28 9BL  
Tel. +44 (0)1480 498395  
E-mail [g.tucker@ecological-solutions.co.uk](mailto:g.tucker@ecological-solutions.co.uk)  
[www.ecological-solutions.co.uk](http://www.ecological-solutions.co.uk)

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**LIST OF ABBREVIATIONS**

AEWA	African-Eurasian Migratory Waterbirds
CITES	Convention on International Trade in Endangered Species
CMS	(Bonn) Convention on Migratory Species of Wild Animals
DEFRA	Department for Environment, Food and Rural Affairs
EC DG	European Commission Directorate General
ETS	European Threat Status, as defined by BirdLife International
EU	European Union
FAO	UN Food and Agriculture Organisation
FCS	Favourable Conservation Status, as defined under CMS (see 3.2)
GROMS	Global Register of Migratory Species
IBA	Important Bird Area, as defined by BirdLife International
IGO	Intergovernmental Organisation
IUCN	World Conservation Union (formerly International Union for Conservation of Nature and Natural Resources)
JNCC	Joint Nature Conservation Committee
MEA	Multi-lateral Environmental Agreement
NGO	Non-governmental Organisation
SPEC	Species of European Conservation Concern, as defined by BirdLife International (see 3.3, Table 3.1)
UCS	Unfavourable Conservation Status, as defined under the CMS (see 2.1)
WWGBP	World Working Group on Birds of Prey and Owls

## MIGRATORY SOARING BIRDS: REVIEW OF STATUS, THREATS AND PRIORITY CONSERVATION ACTIONS

### Executive SUMMARY

Migratory birds are subject to a number of potential risks whilst on migration. Furthermore soaring birds are particularly vulnerable as they tend to follow regular flight paths to avoid long sea crossings and high mountains and therefore often concentrate at particular bottleneck sites. Many soaring birds are also large long-lived species that have slow reproductive rates, which makes them especially susceptible to additional sources of adult mortality.

The Eastern Mediterranean, River Jordan to Nile Valley corridor and the route that follows the Red Sea to the Bab al Mandab is considered to be one of the most important migratory flyways in the world but there is concern over some threats to birds migrating through the region. Consequently, BirdLife International has been developing a GEF funded project, which aims to reduce threats to significant populations of globally threatened migratory soaring birds along the Eastern sector of the Africa-Eurasia flyway (Rift Valley and Red Sea Flyway), which comprises the entire Jordan Rift Valley and Red Sea flyways, from their northern limit across Syria, Lebanon, Jordan, Palestine, Egypt, Sudan, Eritrea, Ethiopia and Saudi Arabia to the southern end in Djibouti and Yemen.

As part of the preparatory phase of the GEF project, this report reviews the status of, and threats to, soaring birds that undertake inter-continental migrations through the Rift Valley / Red Sea Flyway, and existing initiatives to address their conservation.

The key conclusions arising from this review are that:

- A high proportion of the populations of migratory soaring birds that pass through the Rift Valley / Red Sea flyway have an Unfavourable Conservation Status according to the Convention on Migratory Species definition. Overall, 27 (c. 69.2%) of the 39 assessed species have an Unfavourable Conservation Status. Furthermore, 6 (15.4%) are globally threatened, and a further 3 species (7.7%) are Near Threatened. This underlines the importance of the current project and the need for conservation actions to address the most important threats to these species, as described in the next section.
- Few recent scientific studies exist of the threats to soaring birds migrating through the Rift Valley / Red Sea flyway. Thus it is difficult to assess the degree to which soaring birds are at threat in the region and to identify specific threats that may be leading to population levels impacts.
- Analysis of the known threats suggests that shooting is the most widespread cause of mortality. Other particularly significant causes of direct mortality of soaring birds include accidental poisoning of birds, trapping for falconry and collisions with man-made structures (and the latter is of particular concern because it is likely to increase in the future as a result of development in the region).
- The impacts of habitat change on migratory soaring birds are particularly poorly understood and probably overlooked. Because these habitat impacts are widespread, the Red Sea / Rift Valley flyway as a whole is likely to become more hostile to soaring birds, resulting in increasing overall risks of migration through the region. Furthermore, climate change is expected to exacerbate these habitat-related problems profoundly across the entire African-Eurasian region.
- It is clear, that despite a lack of information on the impacts of specific threats, measures are required to reduce the known risks of migration through the region as well as to prevent likely increases in threats and as a response to inevitable climate change.
- There are several multilateral environmental agreements that most countries covered by this study have ratified or signed, that should address the conservation of soaring birds across the flyway. However, this review indicates that, for many species, the current arrangements are inadequate. This is largely because compliance with these MEA obligations, and implementation of national legislation and environmental policies, varies between countries depending on resources, capacity and commitment.
- A problem analysis carried out for the Soaring Birds Project helped to identify, at a regional level, the root causes of the immediate threats described above and some of the recent problems limiting conservation action that need to be addressed. In particular the following limitations were identified:
  - Policy, legal and planning environment not supportive.

- Low awareness of and low value accorded to bird conservation.
- Inadequate information.
- Few incentives for sustainable management.
- Actions for soaring bird conservation are not coordinated.
- Individuals and institutions do not have the skills or resources to effectively implement a regional programme for soaring bird conservation.
- The highest priority measures urgently needed to tackle the identified threats and constraints on conservation action will include:
  - Protection of bottleneck IBAs from shooting, trapping, disturbance, construction of aerial structures which could result in high collision risks and habitat degradation.
  - Promotion of sustainable land and water resource use policies in the wider environment, and the conservation of remaining semi-natural habitats.
  - Implementation of Strategic Environmental Assessment and Environmental Impact Assessments, with consideration of impacts on soaring birds during such assessments.
  - Increasing awareness of the importance of the Rift Valley / Red Sea Flyway to soaring birds and the threats to them.
  - Comprehensive legal protection of all soaring birds from all forms of killing and thorough enforcement of protection.
  - Legislation to prevent trapping and trade of raptors unless they are in Favourable Condition and trapping is shown to be sustainable.
  - Legislation to prohibit the use of poisons to control predators.
  - Improved regulation to reduce environmental pollution.
  - Coordinated international action to reduce greenhouse gases and climate change.
  - Further research and monitoring of population impacts of threats to soaring birds, especially regarding shooting, habitat degradation and loss, and disturbance.
- Some of these priority measures will need to be taken by governmental departments responsible for nature conservation issues but many key actions will be required from other sectors. Successful conservation of soaring birds will probably be mostly dependent on the development of more environmentally sustainable policies and activities. To achieve this it will be necessary to mainstream conservation measures into all economic sectors, including forestry, agriculture, industry, energy production, transport, tourism etc.

## **INTRODUCTION**

### **BACKGROUND**

Conserving migratory bird populations is particularly challenging, due to the wide range of habitats they occupy during the course of their annual cycle and the added threats that they may encounter whilst flying between their breeding and wintering areas. Furthermore, soaring migrants are particularly vulnerable. These birds use thermals of hot air to soar and ascend to great heights, and then move on to the next thermal by long, shallow, downward glides. Such birds tend to follow regular flyways that provide good opportunities for soaring flight, whilst minimizing migration distances. Also, because thermals do not form over water, the birds have to follow migration routes that avoid long sea-crossings. Soaring birds also tend to avoid high mountain ranges.

As a result soaring birds can become concentrated along their migration routes, particularly at so called 'bottleneck sites', such as mountain passes, land-bridges and peninsulas. Migratory populations of soaring birds are therefore particularly vulnerable to threats at such bottleneck sites because impacts may affect a large proportion of their migratory populations. Furthermore, the predictable presence of high numbers of large birds may attract large numbers of hunters and trappers at some sites, further concentrating threats.

BirdLife considers the Eastern Mediterranean, River Jordan to Nile Valley corridor and the route that follows the Red Sea to the Bab al Mandab to be an important focus and has classified it as a priority for conservation

action as part of the IBA programme in 2000-2004<sup>1</sup>. Consequently, BirdLife International has been developing a GEF funded project, the aim of which is to reduce threats to significant populations of globally threatened migratory soaring birds along the Eastern sector of the Africa-Eurasia flyway (Rift Valley and Red Sea Flyway), and make this a system that is safe for their passage. The geographical scope for intervention of the project is the eastern sector of the Africa-Eurasia Flyway, hereafter referred to as the Rift Valley / Red Sea Flyway, which comprises the entire Jordan Rift Valley and Red Sea flyways, from their northern limit across Syria, Lebanon, Jordan, Palestine, Egypt, Sudan, Eritrea, Ethiopia and Saudi Arabia to the southern end in Djibouti and Yemen. A project concept was submitted to GEF and PDF-Block A resources secured to start a planning process for this project in 2002. Subsequently, PDF-Block B resources were requested and approved by GEF and the project formally launched in October 2004.

The aim of the activities during this preparatory stage of the project is to gather and analyze the necessary information and baseline data to develop a full GEF project. As part of this process the project requires an assessment of the conservation status of and threats to the soaring migratory bird species using the eastern sector of the Africa-Eurasia flyway (Rift Valley and Red Sea Flyway), and a review of current conservation initiatives directed at or benefiting soaring migratory birds. This report aims to provide this assessment of the conservation status of soaring birds and the threats to them.

### **Objectives of this report**

The overall objective of this study is to review the status of, and threats to, soaring birds that undertake inter-continental migrations through the Rift Valley / Red Sea Flyway, and existing initiatives to address their conservation.

In particular, the objectives of the review are to:

- Identify all species of inter-continental migratory soaring birds and the importance of the Rift Valley / Red Sea Flyway for their global and European/African/Middle Eastern populations.
- Describe the conservation status of migratory soaring birds and threats facing them, both in their breeding and wintering areas, but particularly along the Rift Valley / Red Sea Flyway, based on published and unpublished information, on both a national and regional basis.
- Describe current conservation measures and their effectiveness, particularly regional and international initiatives, including coverage by the Convention on Migratory Species (CMS) and other international or regional biodiversity-related agreements, related to migratory soaring birds, based on published and unpublished information.
- Identify conservation priorities, and gaps in conservation action for migrating soaring birds along the Rift Valley / Red Sea Flyway, particularly in relation to different sectors ( e.g. agriculture and energy), in the region.

This study focuses on birds that frequently soar (i.e. fly on fully extended wings with infrequent flapping) over land in thermals (i.e. columns of rising warm air) during migration to reduce flight costs (Norberg 1990, 1995), and therefore follow regular flyways and congregate at 'bottleneck' sites. Within the African-Eurasian region such birds are the White Pelican (*Pelecanus onocrotalus*), Northern Bald Ibis (*Geronticus eremita*), Dalmatian Pelican (*Pelecanus crispus*), White Stork (*Ciconia ciconia*), Black Stork (*Ciconia nigra*), Osprey (*Pandion haliaetus*), old-world vultures, buzzards, hawks and eagles (Accipitridae), Common Crane (*Grus grus*) and Demoiselle Crane (*Anthropoides virgo*).

Falcons (Falconidae) do not migrate by soaring and are generally broad-front migrants (i.e. they do not do follow particular migration routes) and therefore do not usually concentrate in large numbers. However, they will occasionally soar with migrating raptors and often occur at bottleneck sites where they are subject to threats similar to those affecting soaring raptors (e.g. shooting and trapping). Thus all falcons occurring within the region are also included in this study.

This study also focuses on migratory populations of inter-African migrants, primarily because these are the species that congregate along flyways, and are thus most likely to benefit from conservation measures in these areas. Thus the study does not, for example, deal with Golden Eagle (*Aquila chrysaetos*) or Mountain Buzzard (*Buteo oreophilus*) which are soaring species with resident populations within the region. However, it is

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<sup>1</sup> See *BirdLife 2000 - the strategy of BirdLife International 2000-2004* and *The Middle East Regional Programme 2000-2004*.

expected that many of the conservation measures identified as being of value for inter-African migrants (such as habitat conservation) will also benefit local migrants and non-migratory soaring species, and probably a wide range of other species.

## STUDY METHODS AND DATASETS

### Species taxonomy and nomenclature

The report follows the taxonomy, scientific nomenclature and English names used by BirdLife International.

### Data sources

The study has reviewed data in BirdLife International's World Bird Database ([www.birdlife.org](http://www.birdlife.org)) and key literature sources, including the following publications by the World Working Group on Birds of Prey and Owls (WWGBP): *Raptors in the Modern World* (Meyburg and Chancellor 1989), *Raptor Conservation Today* (Meyburg and Chancellor 1994), *Raptors at Risk* (Chancellor and Meyburg 1998), *Raptors in the New Millennium* (Yosef *et al.* 2002), *Raptors Worldwide* (Chancellor and Meyburg 2003); BirdLife International: *Threatened Birds of the World* (BirdLife International 2004c), *Birds in Europe* (Tucker and Heath 1994, BirdLife International 2004b), *Important Bird Areas in Europe* (Heath and Evans 2000), *Important Bird Areas in the Middle East* (Evans 1994), *Important Bird Areas in Africa* (Fishpool and Evans 2001); Wetlands International: *Waterbird population estimates* (Delany and Scott 2002) and others, e.g. *Handbook of the Birds of the World* (del Hoyo *et al.* 1992, 1994, 1999) *Birds of Africa* (Brown *et al.* 1982) and *Raptors of the World* (Ferguson-Lees and Christie 2001).

Key journals have also been checked for relevant papers, including Biological Conservation, Bird Conservation International, Journal of Raptor Research and Sandgrouse (and references listed under Recent Literature). And searches have been carried out using internet biographic databases, including the Raptor Information System at [www.ris.idbsu](http://www.ris.idbsu).

## SOARING BIRDS AND THEIR MIGRATION THROUGH THE EASTERN SECTION OF THE AFRICAN-EURASIAN FLYWAY

### MIGRATION ROUTES

The migration of soaring birds through the Rift Valley / Red Sea Flyway has been relatively well studied and the general routes and timings taken by most species are fairly well known, although the importance of some specific sites is less certain. The following summary of migration through the region is largely taken from key ornithological handbooks ((Cramp 1977-93; del Hoyo *et al.* 1992, 1994) ) and two recent reviews of raptor migration (Shirihai *et al.* 2000; Zalles and Bildstein 2000). The Rift Valley / Red Sea Flyway has two principle points of entry/exit between south-west Asia (Middle East) and the African continent (see Fig 12 in Zalles and Bildstein 2000), the:

- **Eastern Mediterranean, River Jordan to Nile valley corridor.** The main eastern corridor between Europe/Asia and Africa has a series of passage sites starting from the north-eastern corner and south along the eastern coast of the Mediterranean, into the Jordan valley, through Sinai and across to the Nile valley. About 1.5 million soaring birds regularly pass along this route each season largely following lines of hills and concentrating at the bottleneck sites of Aqaba, Suez and south Sinai. This is the second most important corridor for soaring bird migration in the world.
- **Bab al Mandab.** A further crossing for probably mostly central Asian birds into eastern Africa at the mouth of the Red Sea. This has only been known to be a significant bottleneck relatively recently and is still not surveyed on the Yemeni side. Over 250,000 raptors have been counted crossing these straits in autumn.

Southbound migrants reach the area from eastern Europe (having crossed the Bosphorus) or Asia (having skirted either the Black or the Caspian Sea) by crossing Turkey and entering Syria as they round the northeastern corner of the Mediterranean. The majority of the birds follow the eastern shore of the Mediterranean but evidence suggests that those birds heading further south in order to cross at Bab al Mandab branch off to the east in Syria.

The bulk of the birds form a mass flyway through Syria, Lebanon, Israel, Palestine and Jordan—the Jordan valley is a particularly important part of the corridor. An additional smaller branch from central and eastern Asia joins the main flyway in Jordan. The raptors branch westwards across the northern Sinai to skirt round the north of the Gulf of Suez before crossing the eastern desert to reach the Nile valley. White Storks (*Ciconia ciconia*) head due south across the Sinai and bridge the Gulf of Suez from the south-west shore of the Sinai to make landfall



around Gebel el Zeit before heading over to the Nile valley and then turning southward. Some birds do, however, track along the western shore of the Gulf of Suez and it is thought that they continue on south along the Red Sea coast into Sudan and Eritrea. This latter route is probably most important in spring.

In Arabia the stream of migrants grows with the addition of migrants from further east and these birds then flow across Bab al Mandab into Djibouti. There is some evidence that this stream crosses Ethiopia to reach the eastern edge of the northern highlands – where the birds may be joined by those migrating along the western shore of the Red Sea – before following the Rift valley southwards.

In the spring the migration differs, in that a greater proportion of birds appear to take a more northerly route.

A significant proportion of the following soaring birds use this Rift Valley / Red Sea Flyway, including White Pelican (*Pelecanus onocrotalus*), Common Crane (*Grus grus*), Black Stork (*Ciconia nigra*), White Stork (*Ciconia ciconia*), Honey Buzzard (*Pernis apivorus*), Short-toed Eagle (*Circaetus gallicus*), Levant Sparrow Hawk (*Accipiter brevipes*), Steppe Buzzard (*Buteo buteo vulpines*), Lesser Spotted Eagle (*Aquila pomarina*), Steppe Eagle (*Aquila nipalensis*) and Imperial Eagle (*Aquila heliaca*).

### **BOTTLENECK SITES FOR SOARING BIRDS**

As discussed previously the requirements for thermals (and hence the need to avoid large stretches of water and high mountains) results in the concentration of soaring birds at some points on their migratory journey – the so called bottleneck sites. Such sites are therefore of particularly high international importance for bird conservation and qualify as Important Bird Areas (IBAs) as defined by BirdLife International using globally consistent criteria<sup>2</sup> (Evans 1994; Fishpool and Evans 2001; Heath and Evans 2000). There are four main categories by which a site may qualify as an IBA, one of which, “Congregations”, includes the following criterion relating to migratory bottlenecks: “a site known or thought to be a bottleneck where more than 20,000 storks, pelicans, raptors or cranes, or a combination thereof regularly pass during migration”.

Along the Eastern Mediterranean, River Jordan to Nile valley corridor and the eastern sector of the Africa-Eurasia flyway a total of 308 IBAs have so far been identified in the countries that make up this migratory route; of these 28 are bottleneck IBAs that support soaring birds on migration (see Table 2.1.). These bottleneck IBAs are listed in Annex 2.

In addition to these 28 IBAs, there are other sites within the region that are suspected of being bottleneck IBAs based on their geography, location and 'circumstantial' evidence (see Annex 3). The status of these sites needs to be verified by more surveys during the spring and autumn migration periods.

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<sup>2</sup> See Annex 1 for further details.

**Table 2.1. Total numbers of IBAs and bottleneck IBAs in each country in the Rift Valley / Red Sea Flyway<sup>3</sup>.**

Country	Total number of IBAs (all criteria)	Bottleneck IBAs	Notes
Syria	22	1	Poorly known – probably more sites
Lebanon	4	1	Poorly known – probably more sites
Palestine	13	2	
Jordan	27	7	Poorly known
Egypt	34	5	Poorly known – probably some sites
Sudan	22	?	Poorly known – probably some sites
Eritrea	14	2?	Two sites (needs confirmation)
Djibouti	7	1	
Ethiopia	69	?	Up to five sites (needs confirmation)
Saudi Arabia	39	3	
Yemen	57	4	Poorly known – probably more sites
<b>TOTALS</b>	<b>313</b>	<b>26</b>	

## THE STATUS OF SOARING BIRDS

### INTRODUCTION AND DATA SOURCES

This section aims to assess the conservation status of the populations of soaring birds that pass through the Rift Valley / Red Sea flyway. This is largely based on the known status of birds in Europe because these are relatively well known as a result of fairly extensive and detailed atlas surveys and monitoring programmes, and two recent European wide assessments of available data (BirdLife International 2004a; Tucker and Heath 1994). It is thus possible to review the status of most soaring bird populations in Europe with some confidence, although some species such as Levant Sparrowhawk (*Accipiter brevipes*) remain relatively poorly known.

However, the proportion of the European populations evaluated by BirdLife that pass through the Rift Valley / Red Sea flyway varies between species. In some species, such as Lesser Spotted Eagle (*Aquila pomarina*) the vast majority use the Rift Valley / Red Sea flyway, and therefore the overall European status of such species will reflect the status of the Rift Valley / Red Sea flyway population. However, in others, such as White Stork (*Ciconia ciconia*) and Common Crane (*Grus grus*), there are substantial populations that migrate to Africa via other routes, and/or remain in large numbers in Europe. Thus the overall European population status of such species may not reflect that of the Rift Valley / Red Sea flyway if trends differ between those that migrate via the Rift Valley / Red Sea flyway and other populations. This issue could be further investigated by assessing the populations and trends of each species according to countries that are a source for the Rift Valley / Red Sea flyway populations. However, this is beyond the scope of this review, and for some species it would be difficult to carry out reliably because the origins of birds migrating through the Rift Valley / Red Sea flyway are uncertain. Some countries may also hold partially migratory populations, and populations that take a number of different migratory routes, so it would be difficult to ascribe trends in these countries to particular migratory flyway populations.

Unfortunately, our knowledge of the current status of soaring birds in Asia, the Middle East and Africa is much less complete and reliable than in Europe. Few countries in these regions have prepared bird atlases or established bird monitoring schemes. In parts of Asia, some detailed studies have been carried out of some species of high conservation importance, such as Saker Falcon (*Falco cherrug*), (Galushin 2004). But the status of most species is very poorly understood in most areas of the Asian Palearctic. This is highlighted by the clear discrepancy in some species between known breeding populations and the numbers seen during migration counts. For example, the numbers of Lesser Spotted Eagles (*Aquila pomarina*) observed on migration in Israel alone is many times greater than the cumulative total number of known breeding birds in Europe and Asia (Shirihai *et al.* 2000), even if one allows for possible double-counting on migration.

<sup>3</sup> See Annexes 2 and 3. Sources were regional inventories of Important Bird Areas (Evans 1994, Fishpool and Evans 2001), supplemented by national IBA inventories where these were more up-to-date (Atrash 1999, RSCN 2000).

Intensive surveys of raptor migration have been undertaken in some areas of the Middle East, especially Israel for over a decade now. And these surveys have built up a considerable amount of data on migration numbers, which have been analysed for broad trends (e.g. see Shirihai *et al.* 2000 for review). However, information on numbers and trends in breeding populations in the Middle East is very fragmentary and incomplete.

Information on the status of raptor populations (breeding and wintering) is particularly scarce and incomplete for the African part of the Rift Valley / Red Sea flyway.

Thus, although it would be valuable to review the status of the breeding populations of soaring bird species within the Rift Valley / Red Sea flyway countries, there are currently insufficient available data to allow reasonably comprehensive and reliable assessments to be made for the region.

## **THE DEFINITION OF UNFAVOURABLE CONSERVATION STATUS**

The assessment of conservation status has been made here in relation to Favorable Conservation Status (FCS) and Unfavorable Conservation Status<sup>4</sup> (UCS) as defined in the Convention on Migratory Species<sup>5</sup> (CMS). According to the CMS text “‘Conservation status’ will be taken as ‘favorable’ when:

- (1) Population dynamics data indicate that the migratory species is maintaining itself on a long-term basis as a viable component of its ecosystems;
- (2) the range of the migratory species is neither currently being reduced, nor is likely to be reduced, on a long-term basis;
- (3) there is, and will be in the foreseeable future sufficient habitat to maintain the population of the migratory species on a long-term basis; and
- (4) the distribution and abundance of the migratory species approach historic coverage and levels to the extent that potentially suitable ecosystems exist and to the extent consistent with wise wildlife management.”

In this study, the CMS definition has been interpreted with respect to available data and existing conservation assessments. Taking this into account, species are considered in this study to have an Unfavorable Conservation Status if they are:

- Globally Threatened or Near Threatened (i.e. not assessed as being of Least Concern), according to BirdLife International (2004b); or
- a Species of European Conservation Concern (SPEC) according to BirdLife International (2004a); or
- Considered in Asian flyway countries to be declining in population or range by more than 1% per annum, or are regionally threatened by reduced population size or imminent substantial habitat loss.

## **RESULTS OF THE ASSESSMENT OF STATUS**

The status of each species' Rift Valley / Red Sea flyway population is presented in Table 3.1, and a summary of the European status across all soaring birds is provided in Table 3.2.

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<sup>4</sup> Capitals are used in this report when referring to the CMS definition of Favourable Conservation Status (FCS) and Unfavourable Conservation Status (UCS), to distinguish between these and the same terms used by other organisations (e.g. BirdLife International) which differ in their definition.

<sup>5</sup> Also known as the Bonn Convention

**Table 3.1. The status of African-Eurasian soaring bird populations that migrate through the Rift Valley / Red Sea Flyway**

**Key**

Species with an Unfavorable Conservation Status (UCS) according to CMS (see Section 3.2) are indicated in bold. Species that only occasionally occur within the flyway are placed in brackets.

Global Status: CR = Critically Endangered; EN = Endangered; VU = Vulnerable; LC = Least Concern (i.e. not Globally Threatened); NT = Near Threatened. See Annex 4 for threat category criteria.

European Species of Conservation Concern (SPEC): SPEC 1 = Species of Global Conservation Concern (i.e. classified as Globally Threatened, Near Threatened or Data Deficient); SPEC 2 = Species that are concentrated in Europe and have an unfavourable conservation status; SPEC 3 = Species that are not concentrated in Europe but have an unfavourable conservation status; N = Non-SPEC status. \* = Species meeting IUCN Red List Criteria for Europe.

European Threat Status: CR = Critically Endangered, E = Endangered, V = Vulnerable, D = Declining, R = Rare, H = Depleted, S = Secure (i.e. in favorable condition). Brackets indicate that the status is provisional. See Annex 4 for threat category criteria.

Asia, i.e. status of populations that migrate through the Rift Valley / Red Sea flyway. UCS qualifying criteria: d = declining in numbers or range; r = rare or depleted population; h = threatened by habitat loss. FC = Favorable conservation Status; ? = unknown status, or uncertain status if combined with UCS or FC.

Migration trends: BFM = Broad-front migrant and therefore migration watch point counts do not provide relevant data.

Species	English Name	Global Status	European		Asia	Migration trends in Middle East
			SPEC	Threat Status		
<i>Pelecanus onocrotalus</i>	<b>White Pelican</b>	LC	<b>3</b>	<b>R</b>	<b>UFCd<sup>4</sup></b>	?
( <i>Pelecanus crispus</i> )	( <b>Dalmatian Pelican</b> )	<b>VU</b>	<b>1</b>	<b>R</b>	FC <sup>4</sup>	?
<i>Ciconia nigra</i>	<b>Black Stork</b>	LC	<b>2</b>	<b>R</b>	-	?
<i>Ciconia ciconia</i>	<b>White Stork</b>	LC	<b>2</b>	<b>H</b>	-	?
<i>Geronticus eremita</i>	<b>Northern Bald Ibis</b>	<b>CR</b>	<b>1</b>	<b>CR</b>	-	?
<i>Pernis apivorus</i>	European Honey-buzzard	LC	N	(S)	?	No change
<i>Milvus migrans</i>	<b>Black Kite</b>	LC	<b>3</b>	<b>(V)*</b>	<b>UCS?</b>	No change
( <i>Haliaeetus albicilla</i> )	( <b>White-tailed Eagle</b> )	<b>NT</b>	<b>1</b>	<b>R</b>	FC? <sup>1</sup>	?
<i>Neophron percnopterus</i>	<b>Egyptian Vulture</b>	LC	<b>3</b>	<b>E</b>	?	<b>Sharp decline?</b>
<i>Gyps fulvus</i>	Eurasian Griffon	LC	N	S	FC?	<b>Sharp decline?</b>
( <i>Aegypius monachus</i> )	( <b>Cinereous Vulture</b> )	<b>NT</b>	<b>1</b>	<b>R</b>	?	?
<i>Circus gallicus</i>	<b>Short-toed Snake-eagle</b>	LC	<b>2</b>	<b>(R)</b>	?	BFM
<i>Circus aeruginosus</i>	Western Marsh-harrier	LC	N	S	FC	BFM
( <i>Circus cyaneus</i> )	( <b>Northern Harrier</b> )	LC	<b>3</b>	<b>H</b>	?	BFM
<i>Circus macrourus</i>	<b>Pallid Harrier</b>	<b>NT</b>	<b>1</b>	<b>(E)</b>	<b>UCSdh<sup>1</sup></b>	BFM
<i>Circus pygargus</i>	Montagu's Harrier	LC	N	S	FC?	BFM
( <i>Accipiter badius</i> )	(Shikra)	LC	N	(S)	?	?
<i>Accipiter brevipes</i>	<b>Levant Sparrowhawk</b>	LC	<b>2</b>	<b>(V)*</b>	FC?	Stable
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	LC	N	S	FC?	BFM
<i>Buteo buteo</i>	Common Buzzard	LC	N	S	?	No change
<i>Buteo rufinus</i>	<b>Long-legged Buzzard</b>	<b>LC</b>	<b>3</b>	<b>(V)*</b>	?	?

Species	English Name	Global Status	European		Asia	Migration trends in Middle East
			SPEC	Threat Status		
<i>Aquila pomarina</i> ( <i>pomarina</i> )	Lesser Spotted Eagle	LC	2	(D)	?	Sharp decline
<i>Aquila clanga</i>	Greater Spotted Eagle	VU	1	E	?	No change
<i>Aquila nipalensis</i>	Steppe Eagle	LC	3	(E)	?	Sharp decline
<i>Aquila heliaca</i>	Imperial Eagle	VU	1	R	UCSd? <sup>1,2</sup>	No change
<i>Hieraetus pennatus</i>	Booted Eagle	LC	3	(R)	?	No change
<i>Pandion haliaetus</i>	Osprey	LC	3	R	?	BFM
<i>Falco naumanni</i>	Lesser Kestrel	VU	1	H	?	BFM
<i>Falco tinnunculus</i>	Common Kestrel	LC	3	(V)	UCSd?	BFM
<i>Falco vespertinus</i>	Red-footed Falcon	LC	3	(V)*	?	BFM
<i>Falco eleonora</i>	Eleonora's Falcon	LC	2	D	-	BFM
<i>Falco concolor</i>	Sooty Falcon	LC	-	-	?	BFM
( <i>Falco columbarius</i> )	(Merlin)	LC	N	(S)	?	BFM
<i>Falco subbuteo</i>	Eurasian Hobby	LC	N	(S)	?	BFM
<i>Falco biarmicus</i>	Lanner Falcon	LC	3	V*	-	BFM
<i>Falco cherrug</i>	Saker Falcon	EN	1	E	UCSd <sup>2,3</sup>	BFM
<i>Falco peregrinus</i>	Peregrine Falcon	LC	N	S	?	BFM
<i>Grus grus</i>	Eurasian Crane	LC	2	H		?
<i>Grus virgo</i>	Demoiselle Crane	LC	N	S	FC <sup>4</sup>	?

**References.** Global Threat Status: BirdLife International World Bird Database online ([www.birdlife.org](http://www.birdlife.org); accessed 1 March 2005). European SPEC / Threat Status; BirdLife International (2004a). Asia. General: del Hoyo *et al.* (1992, 1994, 1999), Ferguson-Lees and Christie (2001). Migration trends; Shirihi *et al.* (2000). Specific species references (see table superscript codes): 1 BirdLife International (2004a); 2 BirdLife International (2001); 3 Galushin (2004); 4 Delany (2002).

**Table 3.2. Summary of the status of soaring birds of the Rift Valley / Red Sea flyway**

	Number	% with unfavourable conservation status
Globally Threatened	6	15.4
Near Threatened (globally)	3	7.7
Unfavourable status in Europe	27	69.2* <sup>1</sup>
Unfavourable status in Asia	6	42.8* <sup>2</sup>
<b>Total with an Unfavourable Status</b>	<b>27</b>	<b>69.2</b>

\*1 Of 39 species that regularly occur in Europe. \*2 Of 14 species with known or uncertain status.

#### Global status

Table 3.1 reveals that of the 39 soaring birds of the Rift Valley / Red Sea flyway, 6 (15.4%) are globally threatened, i.e. classified as Vulnerable (VU), Endangered (EN) or Critical (CR) by BirdLife International (2004b) according to the current IUCN criteria (IUCN 2001). A further 3 species (7.7%) are Near Threatened (NT). This is of considerable concern, and a high priority should be given to urgently identifying and implementing key conservation measures for these species.

## European status

It is also clear that a high proportion of those species that occur in Europe have an unfavorable status in Europe. Overall some 27 (69.2%) of soaring species that occur in Europe and use the Rift Valley / Red Sea flyway have an unfavorable conservation status compared to 43% of all 526 regularly occurring European species (BirdLife International 2004a). A relatively large proportion of these are also in high threat categories, with 1 species (Northern Bald Ibis) Critically Endangered, 5 (12.8%) considered to be Endangered in Europe and 6 (15.4%) categorized as Vulnerable.

Further examination of national population trends in Europe (BirdLife International 2004a) indicates that there are few species with clear differences in trends between central/eastern populations, which are likely to predominately use the Rift Valley / Red Sea flyway, and populations that migrate to Africa by other routes (such as via Gibraltar or Italy). However, the White Stork (*Ciconia ciconia*) is predominately stable or increasing in most of Europe, but is declining in south-east Europe, and the Black Kite (*Milvus migrans*) and Eurasian Griffon (*Gyps fulvus*) appear to be declining in most central or eastern European countries, but are stable or increasing in the west. The status of the populations migrating via the Rift Valley / Red Sea flyway may therefore be less favourable than implied by their overall European status.

## Asian status

This analysis confirms that it is not possible within the scope of this study to reliably assess the status of Asian populations of most migrants that use the Rift Valley / Red Sea flyway. However, it is clear that the Asian populations of some species are in an Unfavorable Conservation Status, including Pallid Harrier (*Circus macrourus*), Saker Falcon (*Falco cherrug*) and probably Imperial Eagle (*Aquila heliaca*). These species are also Globally Threatened or Near Threatened and have an unfavorable status in Europe, and therefore are of particular concern.

## Overall status

The conclusion that can be drawn from this assessment, is that a high proportion of the populations of migratory soaring birds that pass through the Rift Valley / Red Sea flyway have an Unfavorable Conservation Status according to the CMS. Overall, 27 (c. 69.2%) of the 39 assessed species have an Unfavorable Conservation Status. This underlines the importance of the current project and the need for conservation actions to address the most important threats to these species, as described in the next section.

# THREATS TO SOARING BIRDS IN THE RIFT VALLEY / RED SEA FLYWAY

## INTRODUCTION

There are many well known and documented threats to migratory raptors and other soaring bird species in the African-Eurasian region (e.g. Chancellor and Meyburg 1998; Meyburg and Chancellor 1989, 1994; Newton and Chancellor 1985; Salathe 1991; Thiollay 1994; Tucker and Evans 1997; Tucker and Heath 1994; White *et al.* 1994; Zalles and Bildstein 2000). These are listed in Table 4.1 and briefly described below, but it is not the intention in this study to discuss these in detail. Instead the aim here is to identify those that occur within the Rift Valley / Red Sea flyway and are most likely to have significant detrimental impacts on species with an unfavorable Conservation Status (as identified above) as they migrate through the region.

Table 4.1 lists for each commonly occurring species known threats in the Rift Valley / Red Sea flyway, and in the breeding and wintering areas that are probably having a significant population impact. The threats occurring in the Rift Valley / Red Sea flyway are further described below and an assessment of their extent in each country within the region is presented in Table 4.2. A summary of their overall importance across the region to soaring birds is provided in Table 4.3.

**Table 4.1. Known threats to soaring birds of the Rift Valley / Red Sea flyway**

Species with an Unfavorable Conservation Status are in bold type. Species that only occasionally occur within the flyway as indicated in Table 3.1 are omitted.

**Key to threats.**

H = Habitat Loss/Degradation: ai = loss to agriculture and agricultural intensification; aa = abandonment; og = over-grazing; fm = forest management and loss; af = afforestation; w = wetland loss and degradation; b = burning / fire; is = Infrastructure development.

T = Taking of birds i.e. harvesting / hunting: t = trapping and trade for falconry and collections); e = egg-collection; s = shooting and trapping for sport.

A= Accidental mortality: c = collision; e = electrocution on power lines; p = poison baits; ls = lead-shot poisoning through ingestion of prey with high lead content; nd = nest destruction by agricultural machinery.

C = Control of predators / pests (persecution), including deliberate poisoning.

P = Pollution (affecting habitat and/or species): l = land pollution (e.g. uncovered refuse); w = water pollution (e.g. eutrophication from sewage, toxic chemical discharges, oil pollution); p = pesticides (toxicity effects not indirect effects).

D = Disturbance (human).

O = Other: hy = hybridisation; ns = nest site loss in old buildings; de = desertification from drought and over exploitation of wood; ip = introduced predators (e.g. rats and cats); pd = prey disease, i.e. myxomatosis and other diseases in rabbits.

Species	English Name	Global Status	Breeding areas	Rift Valley / Red Sea Flyway	Wintering areas	Refs
<i>Pelecanus onocrotalus</i>	<b>White Pelican</b>	LC	Hw Ac Pw D	Hw Ts Ac C Pw	TS C	
<i>Ciconia nigra</i>	<b>Black Stork</b>	LC	Hfm,w Ac Pw,p	Ts Ac	Ts Ac	
<i>Ciconia ciconia</i>	<b>White Stork</b>	LC	Hi,w	Hai,w Ts Ac,p Pw	Hog	19,20
<i>Geronticus eremita</i>	<b>Northern Bald Ibis</b>	<b>CR</b>	Hog Tts D Ode	?	?	21
<i>Pernis apivorus</i>	European Honey-buzzard	LC	Hfm D	Ts		
<i>Milvus migrans</i>	<b>Black Kite</b>	LC	Hai,aa,w Ac,e C Pp D	Ts Ap	Ts Ap	
<i>Neophron percnopterus</i>	<b>Egyptian Vulture</b>	LC	Ap C	Ts Ap		
<i>Gyps fulvus</i>	Eurasian Griffon	LC	Hai,aa Ap C	Ap		
<i>Circaetus gallicus</i>	<b>Short-toed Snake-eagle</b>	LC	Hai,aa,af,b Ae C D	Ts		
<i>Circus aeruginosus</i>	Western Marsh Harrier	LC	Hw C Pp,ls	Hw Ts Pw		
<i>Circus macrourus</i>	<b>Pallid Harrier</b>	NT	Hai Ap C Pp	Hai Ts	Hai,og	5, 6
<i>Circus pygargus</i>	Montagu's Harrier	LC	Hai And Pp	Ts	Hog	
<i>Accipiter brevipes</i>	<b>Levant Sparrowhawk</b>	LC	Hai		Hai	18
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	LC	C	Tt		
<i>Buteo buteo</i>	Common Buzzard	LC	Hai C Ap Pp	Ts Ap		

Species	English Name	Global Status	Breeding areas	Rift Valley / Red Sea Flyway	Wintering areas	Refs
<i>Buteo rufinus</i>	Long-legged Buzzard	LC	Hai Ae C D	Ts Ap		
<i>Aquila pomarina</i>	Lesser Spotted Eagle	LC	Hai,fm,w D	Ts Ap	Hai	16,18
<i>Aquila clanga</i>	Greater Spotted Eagle	VU	Hai,fm,w Te D Ohy	Tt,s		
<i>Aquila nipalensis</i>	Steppe Eagle	LC	Hai Ae C D	Hai Ap	Hai	18,8
<i>Aquila heliaca</i>	Imperial Eagle	VU	Hai,af,fm Tt Ap,e? C D	Ts Ap	Ap	1e
<i>Hieraetus pennatus</i>	Booted Eagle	LC	Hai,fm,b Ae C Pp	Ts Ap	Pp	6
<i>Pandion haliaetus</i>	Osprey	LC	Hfm,w Te Ac C Pp,w D	Ts Ac C Pp,w	Ac C Pp,w	
<i>Falco naumanni</i>	Lesser Kestrel	VU	Hai,aa,is,af Ts,e Pp D Ons	Ts	Hai,og	1a, 7,18, 6
<i>Falco tinnunculus</i>	Common Kestrel	LC	Hai Ae Ts	Ts,t	Tt	
<i>Falco vespertinus</i>	Red-footed Falcon	LC	Hai,w Pp	Ts	Hai,w	6
<i>Falco eleonora</i>	Eleonora's Falcon	LC	Tt,e,f C D Oip	Ts		
<i>Falco concolor</i>	Sooty Falcon	LC	D			
<i>Falco subbuteo</i>	Eurasian Hobby	LC				
<i>Falco biarmicus</i>	Lanner Falcon	LC	Tt C D	Tt		16
<i>Falco cherrug</i>	Saker Falcon	LC	Hai,aa,af Tt C D	Tt		2,9,19
<i>Falco peregrinus</i>	Peregrine Falcon	LC	Tt C D	Tt		
<i>Grus grus</i>	Eurasian Crane	LC	Hw Ac D	Ts		
<i>Grus virgo</i>	Demoiselle Crane	LC	Hai	Ts	Pp	

**References.** General: BirdLife International (2004c); Brown, Urban and Newman (1982), del Hoyo *et al.* (1994, 1999), Ferguson-Lees and Christie (2001); Tucker and Heath (1994); Tucker and Evans (1997).

Specific species references: 1a Biber (1996); 1b Heredia (1996a); 1c Heredia (1996b); 1d Gonzalez (1996); 2 (Barton 2002); BirdLife International (2004a); 2 BirdLife (2001); 3 Krone (2003); 4 Harrison *et al.* (1997); 5 Barnes (2000); 6 Thiollay (1989); 7 Pepler (2000); 8 Flint *et al.* 1983, Lopushkov 1988; 9 Galushin (2004); 10 Mateo *et al.* (2003); 11 Whitfield *et al.* (2001); 12 Pain *et al.* (2005); 13 Ferrer (2003); 14 Watson (1992); 15 Marquis, Ratcliffe and Roxburgh (1985); 16 Shirihai *et al.* (2000); 17 Tucker (2003); 18 Zalles and Bildstein (2000); 19 Chancellor and Meyburg (1998); 19 Schulz (1988); 20 Schulz (1998); 21 C. Bowden pers. com.



**Table 4.2. Extent of threats to soaring birds in each country covered by this study Key**

Extent: Low = Infrequent activity (e.g. occasional hunting) or habitat impact only affecting a small proportion of the land area and unlikely to cause detectable population impacts in most soaring birds migrating through the country; Moderate (Mod) = common activity or impact affecting a significant proportion of the country; High = very common activity or impact affecting a significant proportion of the country. Blank = threat currently unknown in region. “?” = possibly occurs, or magnitude uncertain (if combined with a magnitude).

Threat type (Primary and secondary types)	Table 4.1 code	Djibouti	Egypt <sup>R1</sup>	Eritrea	Ethiopia	Jordan <sup>R2</sup>	Lebanon <sup>R3</sup>	Palestine <sup>R4</sup>	Saudi Arabia	Sudan	Syria <sup>R5</sup>	Yemen <sup>R6</sup>
<b>Habitat Loss/Degradation (human induced)</b>	H											
• Loss to agriculture and agricultural intensification	ai		High		Mod	Mod	High	Mod	?		High	High
• Abandonment	aa						Low				?	Mod
• Over-grazing	og	High	High	High	High	Mod	Mod	Low	?	?	Mod	High
• Forest loss and management	fm	High		High	High		Mod			?	High	High
• Afforestation	af			High			Low				High	High
• Wetland loss and degradation	w		High	?	?	?	?	?	?	?	High	?
• Burning / fire	b						High				High	Low
• Infrastructure development	is	Mod	High			Mod	High	Mod	?		High	Low
<b>Taking of birds (harvesting / hunting)</b>	T											
• Trapping and trade for falconry and collections	t	?	High			Mod	Mod		Mod?		High	High
• Shooting and trapping for sport	s	Low	Mod	Low		High	High	Mod	Low	?	High	High

Threat type (Primary and secondary types)	Table 4.1 code	Djibouti	Egypt <sup>R1</sup>	Eritrea	Ethiopia	Jordan <sup>R2</sup>	Lebanon <sup>R3</sup>	Palestine <sup>R4</sup>	Saudi Arabia	Sudan	Syria <sup>R5</sup>	Yemen <sup>R6</sup>
<b>Accidental mortality</b> * <sup>1</sup>	<b>A</b>											
• Collision with man-made structures	c		High			Low	?		?		?	
• Electrocution on power lines	e		Low									
• Poisoning (e.g. by baits for other species)	p	Mod	Low	?	?	Mod	Mod	Mod	Mod?	?	High	Low
<b>Control of predators / Persecution</b>	<b>C</b>						High					
<b>Pollution</b>	<b>P</b>											
• Land pollution * <sup>2</sup>	l	Mod	High			Mod	High	Mod			Low?	Low
• Water pollution * <sup>2</sup>	w	Mod	High				High	Mod			Low?	High
• Toxic pesticides	p		High		Mod?	Mod	High	Mod	Mod?		High?	Mod
<b>Disturbance (human)</b>	<b>D</b>		Mod			Low	High	Low	Low?			Mod

**Notes:** \*<sup>1</sup> Individuals are killed accidentally (but see Pollution where this may also be the case) rather than intentionally (see Hunting, Persecution). \*<sup>2</sup> Other than pesticides.

**References:** General: Fishpool and Evans (2001). R1 S. Baha El Din *pers. comm.* R2 Laith El-Moghrabi *pers. comm.* R3 Bassima Khatib, Mireille Atallah-Auge *pers. comm.* R4 Imad Atrash *pers. comm.* R5 A. Saheb *pers. comm.* R6 O. Al-Saghier *pers. comm.*

## THREAT DESCRIPTIONS AND EVIDENCE

### Habitat loss / degradation

Habitat loss and degradation, especially in the breeding areas, is the most frequent threat to soaring bird populations, and is probably the primary cause of Unfavorable Conservation Status in most species. However, the form and importance of these threats varies greatly between species and regions.

The impacts of habitat change on soaring birds in the Rift Valley / Red Sea flyway appear to be poorly documented in the scientific literature. It is likely that agricultural intensification is a problem in many parts of the region, but the most extensive cause of habitat degradation is probably overgrazing of the sensitive arid grasslands and deserts. For example, in Eritrea extensive degradation of the uplands has occurred as a result of longstanding intensive cultivation and livestock-grazing (Coulthard 2001), leading to severe water erosion problems over 19% of the country (DOE 2000). Similarly, in Syria overgrazing is widespread and causing damage to the steppe and desert vegetation (Baumgart *et al.* 1995, 2003).

Forest loss is also a significant land-use impact, though this is largely historical in some countries. In Eritrea much of the original highland forest has been removed for fuelwood, and it is estimated that the proportion of natural forest land fell from 30% to 1% over the course of the twentieth century (EAE 1995). There have been major reforestation projects in recent years, but these new forest are likely to be dominated by fast growing non-native species (such as Eucalyptus) and will be of lower ecological value than the original forests. Such forest may, however, still provide suitable roosting sites for raptors, even if they support fewer prey species.

Overstocking in Syria and other more developed countries is partly a result of water supplies now being provided to livestock, where before livestock numbers were limited by natural water sources. And in turn these irrigation projects result in further habitat degradation through wetland drainage and impoundment, especially in the vicinity of human settlements. This may deprive some soaring water birds (in particular pelicans) of safe roosting sites and feeding areas. On the other hand, the creation of large irrigation schemes across the arid zone, often using diverted rivers or groundwater abstraction, can support prey (e.g. insects, reptiles, passerines and small mammals) for raptors. However, the attracted raptors may then fall victim to persecution or ingestion of toxic chemicals (see below).

### Harvesting / hunting / shooting

The harvesting or hunting of birds remains a significant threat in many areas of the African-Eurasian region despite its illegality in most places. Within the Rift Valley / Red Sea flyway the most common and important threats are the trapping of raptors for falconry, and the shooting of raptors for 'sport' and trophies (see persecution below for a discussion of shooting and for control of predators / pests).

Falconry is a particularly widespread and institutionalized sport in Saudi Arabia and the Gulf States of Arabia, and primarily depends on large numbers of Saker Falcons (*Falco cherrug*) and Peregrine Falcons (*Falco peregrinus*), the majority of which are wild-caught. The larger female falcons are used for hunting Houbara Bustard (*Chlamydotis undulata*) but some Sakers are used for hunting Arabian Hares (*Lepus capensis*). Smaller male Peregrine Falcons are more suited for catching Stone Curlews (*Burhinus oediacnemus*). Other African-Eurasian migratory falcons that are taken include Lanner Falcon (*Falco biarmicus*) and Barbary Falcon (*Falco pelegrinoides*).

In Dubai, where most falcons are taken to a professional veterinary clinic at the start of each season, records suggest that there has been a huge increase in falconry in recent years: 73 falcons being brought to the hospital in 1983-84 compared to 2,594 in 1997-98 (Barton 2002). More than 10 years ago, it was thought that there might be some 8,600 Saker Falcons (*Falco cherrug*) and Peregrine Falcons (*Falco peregrinus*) in captivity across the Middle East as a whole (Riddle and Remple 1994).

Falcons are trapped for falconry from as far as eastern China to the Red Sea Coast, and constitute an important business in the Middle East (Bijlsma 1990), probably resulting in significant losses to some raptor populations. For example, at the migratory bottleneck site of Bab al Mandab in the Yemen, bedouin trappers annually trap up to 85 Peregrine, Lanner, and other falcons in a season (David Stanton *in litt.* to BirdLife International 2005). Quoted estimates in Shirihai *et al.* (2000), of annual national numbers taken include 30-40 large falcons, or 100 in a good year, in Egypt (Goodman and Meininger 1989), and 100 Lanner Falcons (*Falco biarmicus*) in the Yemen (David Stanton in *The Lammergeier*, cited in Shirihai *et al.* 2000), as well as the annual capture in Syria of several hundred -- if not a thousand - large falcons, for export to Saudi Arabia and the Gulf States (Baumgart *et al.* 1995, 2003).

For some species, the most significant trapping impacts, whilst emanating from falconry needs in the Middle East, take place outside the Rift Valley / Red Sea flyway. This is a cause of particular concern for Saker Falcon (*Falco cherrug*), with adults and young being caught in Russia, Mongolia (Shijirmaa *et al.* 2000), Kazakhstan (Levin *et al.* 2000) and the Kyrgyz Republic (Gott *et al.* 2000). Various estimates indicate that some 6,000-8,000 female Sakers have been taken annually during the 1990s in the Asiatic part of its range (Galushin 2004). Such trapping is unsustainable and is probably causing serious population declines. As a result of this the species has recently been placed on the globally threatened list (as Vulnerable) by BirdLife International ([www.birdlife.org](http://www.birdlife.org)).

Shooting of soaring birds for sport and trophies is also a significant threat for many species. Soaring birds are particularly vulnerable to shooting because they are large and relatively slow flying, and therefore obvious and easy targets, and because they may congregate in large numbers at bottleneck sites (Zalles and Bildstein 2000). Thus the daily passage of hundreds and even thousands of soaring birds at predictable places and times presents hunters with an abundant source of targets. Although the shooting of all soaring bird species is generally illegal, huge numbers were routinely shot in the early 1990s in many countries, particularly in the Mediterranean region and parts of the Middle East, for trophies, for the taxonomic trade, and for sheer enjoyment. For example tens of thousands of raptors were being shot annually in the recent past in both Lebanon (Shirihai *et al.* 2000) and Syria (Baumgart 1991a,b, WWGBP 1994). The Syrian military have also been observed using migrating raptors as targets for shooting practice (Baumgart *et al.* 1995, 2003).

Unfortunately, there is a considerable lack of quantitative data on the numbers of raptors and other soaring birds currently being shot within the region. It is likely that shooting levels have decreased since some of these studies were conducted, as a result of greater public awareness, new legislation and better enforcement of national laws. For example, in Lebanon in 1993 new legislation was ratified banning all hunting of birds between 15<sup>th</sup> March and 15<sup>th</sup> September, which should have reduced the impact on raptors considerably (Evans 1994). However, such laws appear to be poorly enforced and consequently shooting and trapping of birds are still reported in the Lebanon (Mireille Atallah-Auge *pers. comm.*). And elsewhere there is abundant anecdotal evidence that shooting of migratory raptors remains widespread and largely indiscriminate in some countries. For example, frequent and indiscriminate shooting of raptors has been recently witnessed in Syria and Yemen by R. Porter (*pers. comm.*). In Egypt White Storks are frequently shot for food, although the numbers taken are not known (S. Baha El Din, *pers. comm.*).

Although impacts of shooting on population levels have not been quantified in any species, the numbers taken annually are probably sufficient to have significant population level impacts in some species. Many shot birds are adults and this is of considerable concern because increased adult mortality has a much greater effect on populations of long-lived slow-reproducing species, such as many larger raptors, than either reduced productivity or increased mortality/loss of juvenile age classes. Some species that are routinely shot in large numbers, e.g. Common Buzzard (*Buteo buteo*) and Honey Buzzard (*Pernis apivorus*) appear to have stable breeding populations, which suggests that hunting may not be a significant mortality factor. But some other species that are subject to high hunting pressures, such as Lesser Spotted Eagle (*Aquila pomarina*) (Shirihai *et al.* 2000), are declining (BirdLife International 2004a). Although it has been suggested that habitat degradation may be the cause of the decline in this species (Tucker and Heath 1994), hunting maybe a compounding factor.

### **Accidental mortality**

Soaring birds have been known to be killed by a wide variety of accidental causes, but three of the most common appear to be collisions, electrocution and poisoning.

As migrating birds spend a considerable amount of time flying they are exposed to a relatively high probability of colliding with aerial structures such as power and telephone-lines, wire communication aerials, tower support wires and wind turbines. And the large and less maneuverable species such as *Aquila* eagles and vultures are particularly susceptible. Collisions with power-lines are likely to be a widespread cause of accidental death, though in most areas at a relatively low level. The majority of studies of collisions with wind turbines indicate that collision rates per turbine are low, but this does not necessarily mean that mortality is insignificant, especially for rarer longer-lived species, and where wind farms comprise several hundreds or thousands of turbines (Langston and Pullan 2003).

Collision risks may therefore be significant in bottleneck sites along the Rift Valley / Red Sea flyway where there are also high densities of aerial structures, which is mostly likely to be in the more developed regions. For example, expansions of the power supply industry and increases in power-line construction have also been noted in Egypt (M. Baha El Din and S. Baha El Din *in litt.* to BirdLife International, 2005) and this is probably

occurring over much of the region (van Rooyen 2000). Furthermore, parts of the Middle East, such as along Gulf of Suez and northern Red Sea coast, have a high wind energy resource, and windfarms are being developed or planned in the region (M. Baha El Din and S. Baha El Din *in litt.* to BirdLife International, 2005). If not carefully located these could place large numbers of vulnerable species, such as Lesser Spotted Eagle (*Aquila pomarina*) and Steppe Eagle (*Aquila nipalensis*) at risk.

The use of poison baits for the control of predators such as Red Fox (*Vulpes vulpes*), Wolf (*Canis lupus*), jackals (*Canis* spp.) and feral dogs is a widespread activity over much of the Rift Valley / Red Sea flyway region that often results in the accidental death of scavenging raptors, such as eagles, kites and vultures. Accidental poisoning of raptors at rubbish tips is also a particular serious cause for concern in the Middle East, due to the large numbers of migrating raptors in the region, the large number of open tips and the practice of leaving poison baits out for feral dogs around such dumps (R. Porter *pers. comm.*).

Another accidental cause of mortality that may result in the death of hundreds of birds at some sites is accidental drowning in sludge lagoons. Migrating birds, and especially raptors often visit sewage treatment plants to drink from water at sludge drying lagoons. Birds can drown in these because they land on the surface crust of scum mistakenly thinking that it is solid. For example, in the past over 100 birds per migratory season have been calculated to drown at the Suez sewage treatment plant (Baha El Din and Baha El Din 1997). However, measures have been taken at the Suez plant that avoid this, and these can presumably be applied elsewhere.

A threat that is not currently known in Africa or the Middle East, but which could potentially cause devastating declines, is the poisoning of vultures which feed on Diclofenac-treated livestock. Diclofenac is an anti-inflammatory drug which is widely used in much of the Indian subcontinent for veterinary purposes, and has been found to be the cause of the recent catastrophic decline in vultures in the region (Oaks *et al.* 2004; Shultz *et al.* 2004). Diclofenac is lethal to *Gyps* vultures at concentrations found in carcasses of normally treated livestock. Other avian scavengers may be just as susceptible, but this has not been tested.

### **Persecution**

Historically, human persecution has been a key factor causing population declines and range contractions in many raptors. Farmers, game managers and gamekeepers have attempted to reduce perceived losses of livestock and game species to raptors through intensive trapping, poisoning, egg and nest destruction and shooting. However, as a result of legal protection of most if not all raptors in almost all developed countries, deliberate killing has been greatly reduced over most of Europe (Thiollay 1994). But in the Rift Valley / Red Sea flyway legal protection is particularly poorly enforced in many countries. For example, in the Bekaa Valley of Lebanon, game-bird farms and hunting reserves have been established where all predators, and especially birds of prey, are routinely controlled by poisoning, shooting and trapping. Farmers are also known to occasionally kill large raptors in the belief that they are protecting their livestock.

### **Pollution**

The widespread uses of organochlorines, such as DDT, and other toxic pesticides have also had massive, well documented impacts on many raptors and fish-eating species (e.g. Mineau *et al.* 1999; Newton 1979; Salathe 1991; Thiollay 1994; White *et al.* 1994). Predators at high trophic levels are at particular risk because some pesticides and other toxic compounds accumulate in the fat of their prey and then themselves, thus becoming concentrated upwards through the food chain. Once the impacts on birds and other animals were identified, these persistent organochlorine and mercury-based pesticides were phased out over most of the developed world, and residues in raptors slowly declined.

However, the problems are not over in the African-Eurasian region, as toxic pesticides continue to be manufactured and used in developing countries (Thiollay 1994). In Israel, for example, pesticide problems have decreased, since the 1980s, but there are still cases of raptor mortality from pesticides, including the death of 30 Eurasian Griffons (*Gyps fulvus*) in a single day in the north of Israel in 1998 (Bahat 2001; Shlosberg and Bahat 2001). Pesticide poisoning is also thought to occur in Saudi Arabia, although it is rarely detected as a cause of death (Ostrowski and Shobrak 2001).

Waste disposal is poorly regulated in much of the region. For example there is no national strategy for solid waste management in Lebanon and as a result municipal, industrial, and medicinal waste is dumped in the open on land and in rivers and the sea (Mireille Atallah-Auge *pers. comm.*). Where rubbish tips exist these are also frequently poorly managed. Such unregulated dumping and waste management results in large amounts of exposed waste which then attracts scavenging birds including soaring raptors. Although such tips provide sources of food which may support local bird populations, they may be a significant hazard because visiting

birds ingest toxic substances and frequently become entangled in plastic and other debris. For example, the solid waste dump at Sahrn El Sheikh dump has been implicated in the death of hundreds of White Storks (*Ciconia ciconia*) (S. Baha El Din *pers. comm.*).

Water pollution is also widespread, and contamination with toxic wastes is thought to result in the deaths of hundreds, if not thousands, of raptors every year (S. Baha El Din *pers. comm.*). For example, in Sharm El Sheikh over a thousand birds die every season at the sewage ponds there due to water contamination.

Another possibly significant but little researched cause of adult mortality in migrating raptors may be from oil contamination. Clark (1987) found oil-based asphalt on 55 individuals of 9 species out of 1,052 raptors (5.2%) captured and examined in the spring of 1985 and 1986 at Eilat, Israel. Some were extensively contaminated and probably succumbed to the effects of ingested asphalt. The birds probably became contaminated while drinking water from pools with surface oil. Although the possible impact on populations is unclear it could be significant if such a high percentage of birds are affected.

### **Disturbance**

Tourism in many parts of the region has increased considerably in recent years, especially in the coastal resorts of the Sinai Peninsula, the northern Red Sea islands and the Dead Sea coast in Jordan. Associated activities in these areas may cause disturbance to resting migrants, although there appears to be no documented evidence of this or its impacts on populations. Everyday activities such as farming and forestry operations may also disturb roosting migrants. If this occurs in the early morning, before thermals have developed, then flying will be difficult and energy-demanding particularly if there are no suitable alternative roost sites nearby. This could increase mortality rates during migration.

Disturbance problems are also likely to increase as tourism, agriculture and industrial development continues, and new roads are constructed which allow access to formerly remote and inaccessible areas.

### **Climate change**

Although this has been rarely mentioned in previous reviews of the threats to raptors (and is therefore not listed in Table 4.1), it is becoming increasingly clear that the most important future threat to these species, and all others, is climate change. The Inter-governmental Panel on Climate Change has now stated that there is no significant doubt that the world's climate is changing as a result of human activities, and in particular the release of carbon dioxide and other 'greenhouse gases' into the atmosphere. The impacts of this climate change on the world's ecosystems and habitats, and associated species are, however, much less certain.

Nevertheless, it is becoming clear that climate change will result in considerable changes in ecosystems, particularly in polar and temperate regions. And as a result there will be profound detrimental impacts on associated species (Green *et al.* 2001). For example, one recent modeling study using projections of species distributions from future climate scenarios (based on mid-range climate change predictions) predicted that between 18% and 35% of global species are likely to go extinct (Thomas *et al.* 2004).

The future impacts of climate change on soaring birds are uncertain at the moment. But migratory species may be particularly vulnerable, because as habitats and the timing of biological events change these birds may become less adapted to their environment, and possibly no longer viable over at least parts of their range. It might be that migratory species will be better able to find and therefore colonize alternative suitable habitats in the future; but as with other climate change impacts, this is largely speculative. It is therefore appropriate to take a precautionary approach and assume that their migratory strategies will be detrimentally disrupted. Climate driven habitat change will also exacerbate existing human induced habitat changes, which are already significant threats to many soaring birds in the Rift Valley / Red Sea flyway.

## **OVERALL ASSESSMENT OF THREATS**

It appears from this review that few recent scientific studies exist of the threats to soaring birds migrating through the Rift Valley / Red Sea flyway. And of those studies that do exist most relate to specific parts of the region or specific incidents. Thus it is difficult to assess the degree to which soaring birds are at threat in the region and to identify specific threats that may be leading to population level impacts.

Analysis of the known threats suggests that for most species shooting is the most widespread cause of mortality (Table 4.3). In fact shooting appears to be indiscriminate and therefore probably affects all species to some degree. There is the greatest potential for significant impacts from shooting on species that congregate at the bottleneck sites, though at the moment it is not known if shooting at such sites is particularly intense. Other particularly significant causes of direct mortality of soaring birds include accidental poisoning of birds, trapping

for falconry and collisions with man-made structures. The latter is of particular concern because it is likely to increase in the future as a result of development in the region. At the moment collisions do not appear to be a major issue at any of the bottleneck sites for soaring birds, but this could change if power lines or wind turbines etc are erected without careful consideration of their location with respect to migratory birds' flight paths.

The impacts of habitat change on migratory soaring birds are particularly poorly understood and probably overlooked. It is therefore likely to affect more birds than would appear to be the case from known threats listed in Table 4.1 and summarized in Table 4.3. The overall impact of the loss of semi-natural prey-rich habitats (such as steppe grasslands and wetlands) and their degradation through overgrazing, the use of pesticides and pollution etc is likely to be a general decrease in feeding opportunities for migrating birds. The loss or increased disturbance of forests, scrub and wetlands may also decrease the availability of suitable roost sites. Because these impacts are widespread, the Red Sea / Rift Valley flyway as a whole is likely to become more hostile to soaring birds, resulting in increasing overall risks of migration through the region. Furthermore, climate change is expected to exacerbate these habitat-related problems profoundly across the entire African-Eurasian region. It is therefore clear, that despite a lack of information on the impacts of specific threats, measures are required to reduce the known risks of migration through the region as well as to prevent likely increases in threats and as a response to inevitable climate change.

**Table 4.3. Summary of threats to migratory raptors in the Rift Valley / Red Sea flyway**

Threat type (Primary and secondary types)	% of species impacted <sup>*1</sup>	Threat trend <sup>*2</sup>	Overall extent
<b>Habitat Loss/Degradation (human induced)</b>		Increasing	
• Loss to agriculture and agricultural intensification	9	?	High
• Abandonment		?	Low
• Over-grazing		?	High
• Forest loss and management		Increasing	Mod
• Afforestation (e.g. Eucalyptus or spruce plantations)		Increasing	Low
• Wetland loss and degradation	9	?	Mod
• Burning / fire		?	Low
• Infrastructure development		Increasing	Mod
<b>Taking of birds (harvesting / hunting)</b>			
• Trapping and trade for falconry and collections	18	?	Mod
• Shooting and trapping for sport	70	Possibly decreasing	High
<b>Accidental mortality<sup>*3</sup></b>			
• Collision with man-made structures	15	Increasing	Medium
• Electrocutation on power lines		?	Low
• Poisoning (e.g. by baits for other species)	27	?	Mod
<b>Control of predators / Persecution (includes deliberate poisoning)</b>	6	?	Mod
<b>Pollution (affecting habitat and/or species)</b>			
• Land pollution <sup>*4</sup>	Uncertain	Increasing	High
• Water pollution <sup>*4</sup>	12	Increasing	High
• Toxic pesticides (not including indirect effects)	3	?	Mod
<b>Disturbance (human)</b>	Uncertain	Increasing	Mod

**Notes:** \*1 Of 33 species from Table 4.1. \*2 A subjective assessment for the next 10 years. \*3 Individuals are killed accidentally (but see Pollution where this may also be the case) rather than intentionally (see Hunting, Persecution). \*4 Other than pesticides.

## **PROVISIONS UNDER EXISTING MULTILATERAL ENVIRONMENTAL AGREEMENTS FOR CONSERVATION OF SOARING BIRDS IN THE RIFT VALLEY / RED SEA FLYWAY**

### **INTRODUCTION**

From a legal, policy and institutional context, there are several multilateral environmental agreements (MEAs) that have (or could have) significant relevance for the conservation of soaring birds across the Rift Valley / Red Sea flyway, that most countries covered by this study have ratified or signed (Table 5.1). Annex 5 summarizes the key objectives of each of these agreements.



**Table 5.1 Status of conventions in the region****Key**

x = Ratified or otherwise acceded. s = Signed only (=not a Party). CBD = Convention on Biological Diversity. Ramsar = Ramsar Convention on Wetlands. CMS = Convention on Migratory Species. CITES = Convention on International Trade in Endangered Species of Wild Fauna and Flora. UNCCD = United Nations Convention to Combat Desertification. WHC = World Heritage Convention. AEWA = African-Eurasian Migratory Waterbird Agreement.

Country	Africa	CBD	CITES	CMS	CMS-AEWA	Ramsar	UNCCD	WHC
Djibouti		x	x				x	
Egypt		x	x	x	x	x	x	x
Eritrea		x	x				x	x
Ethiopia		x	x				x	x
Jordan		x	x	x	x	x	x	x
Lebanon		x			x	x	x	x
Palestine		n/a	n/a	n/a	n/a	n/a	n/a	n/a
Saudi-Arabia		x	x	x			x	x
Sudan		x	x		x		x	x
Syria		x	x	x	x	x	x	x
Yemen		x	x				x	x

**PROTECTION OF IBAS**

Some of the MEAs listed in Table 5.1 require the protection of sites of high biodiversity importance (e.g. Ramsar) and all countries in the region have national legislation for the designation of protected areas. However, the levels of protection vary greatly, between countries and depending on the perceived value of each area. Thus some areas may be given strict protection and managed for nature conservation purposes. Others may be partially protected with respect to certain components of the site, e.g. trees in a forest reserve, or activities (e.g. a hunting reserve).

As previously discussed, bottle-neck IBAs are of particular importance. Although the airspace is important at bottleneck IBAs for soaring birds, conservation of the land beneath may be necessary to protect the site from threats, such as hunting and the construction of radio masts, etc. In addition to being sites where high concentrations of flying migrants pass, some sites are important staging or roosting sites for large numbers of birds.

Protection of these bottleneck IBAs is therefore particularly important. However, examination of the degree of protection given to bottleneck IBAs in the region (as listed in Annex 2) indicates that there is inadequate formal protection of key sites for soaring bird biodiversity within the flyway system. Of the 28 confirmed bottleneck IBAs in the region only 11 have any protected area status at present (Table 5.2).

**Table 5.2. Protection status of bottleneck IBAs in the Rift Valley / Red Sea Flyway (see Annex 2).**

National Park	Other Area	Protected	Partial protection	Unprotected	Total
2	5		4	17	28

**CONCLUSIONS**

All the MEAs listed in Table 5.1 require that actions and measures be taken at national and local levels to protect biodiversity and national heritage. Indeed together the MEAs show a wide range of interlocking (if not overlapping) legislation that, in principle, covers all the threat issues raised in Section 4 above.

However, the assessment of the status of soaring birds indicates that, for many species, the current arrangements are either inadequate or simply failing. This is largely because compliance with these MEA obligations, and implementation of national legislation and environmental policies, varies between countries depending on resources, capacity and commitment.

A problem analysis carried out for the Soaring Birds Project (PDF-A workshop in Jordan -May 2002) helped to identify, at a regional level, the root causes of the immediate threats described above and some of the recent problems limiting conservation action that need to be addressed. In particular the following limitations were identified:

- *Policy, legal and planning environment not supportive.* Proper policies and effective management enforcing measures and regulatory frameworks supporting bird conservation are lacking. There is also a general lack of urban planning, biodiversity-friendly tourism guidelines and effective measures for sustainable hunting and bird trading. Policy in all productive sectors needs to provide mechanisms for integrating biodiversity conservation in ways that reflect specific country context and biodiversity issues. At the same time that heterogeneity is recognized, the relative uniformity of the region (shared problems, issues, ecosystem types) means that there is potential to develop demonstration projects, which have high replication value.
- *Low awareness of and low value accorded to bird conservation.* There is low awareness and appreciation in all echelons of society in the countries concerned of their biodiversity and its importance. Correspondingly, there are few organisations active in the field of bird and biodiversity conservation.
- *Inadequate information.* Little up-to-date information is available in the countries on modern environmental management methods and techniques to mitigate hazards to migratory birds. Although BirdLife International and others have done some baseline work on the distribution and biology of soaring birds in the region, many information gaps remain to be filled.
- *Few incentives for sustainable management.* Stakeholders at sites have few incentives for development and management that is sensitive to the needs of soaring birds. Local/national authorities and companies are often unaware of alternatives to development that can mitigate negative impacts (through sensitive design or strategic positioning of infrastructure for example). Local communities and their support agencies do not have information on development options that bring social and economic benefits to local people, whilst maintaining biodiversity values. Participation of local people and the private sector in biodiversity conservation projects (at PAs and in the wider landscape) will be enhanced if these groups are involved in their design, and if it can be demonstrated that biodiversity conservation can be integrated with agriculture, tourism, energy production etc. There is a need for projects which show how production for the market and subsistence use can be efficient without loss of biodiversity.
- *Actions for soaring bird conservation are not coordinated.* Conservation of migrating soaring birds requires a regional as well as inter-sectoral approach. Poor coordination within the region (due to absence of effective information networks and mechanisms for storage and dissemination of data) and within countries is an obstacle to conservation of soaring birds.
- *Individuals and institutions do not have the skills or resources to effectively implement a regional programme for soaring bird conservation.* Limited capacity exists at the national level in bird identification and survey techniques, as well as in the application of appropriate management and conservation measures. Capacity for long-term sustainability of soaring birds conservation requires development of technical, institutional and managerial skills, through legislative, policy and organizational measures and through training of individuals in key positions. This is needed both to support sustainability of protected areas conservation measures, and to support conservation more widely, through its integration into other sectors and the wider landscape.

## **PRIORITY CONSERVATION ACTIONS**

Although growing in significance, the problems outlined above are not yet severe in many areas of the flyway, and could therefore be effectively regulated by improving conservation measures, introducing sustainable management concepts and creating effective monitoring programs. Although some of these measures will be the responsibility of governmental departments responsible for nature conservation issues (e.g. legal protection of species and designation of protected areas) many of the key actions will require actions by all sectors. Successful conservation of soaring birds (and many other species) will probably be mostly dependent on the development of more environmentally sustainable policies and activities. To achieve this it will be necessary to mainstream conservation measures into all economic sectors, including forestry, agriculture, industry, energy production, transport, tourism etc.

Some of the highest priority actions necessary are listed in Table 6.1 according to sectoral responsibilities.

**Table 6.1. Priority conservation actions for soaring birds in the Rift Valley / Red Sea flyway (based on analysis of previous sections)**

Threat types and actions to address them	Responsibility for action									
	Env policy / legislation	Education / research institutions	Agriculture / forestry	Industry	Energy	Tourism	Transport	Water resources	Waste	Housing
<b>Habitat Loss/Degradation</b>										
Protection of habitats in bottleneck IBAs	✓									
Promotion of sustainable land and water resource use policies	✓		✓					✓		
Implementation of SEA and EIAs, with consideration of impacts on soaring birds during such assessments				✓	✓	✓	✓	✓	✓	✓
Increase awareness of the threats from agricultural change	✓	✓	✓							
Research habitat loss and degradation impacts on migrating soaring birds		✓								
<b>Taking of birds (harvesting / hunting) and control of predators / persecution</b>										
Comprehensive legal protection of all soaring birds from all forms of killing, enforcement of protection and monitoring of shooting and trapping	✓		✓							
Legislation to prevent trapping of birds unless they are in Favourable Condition and trapping is shown to be sustainable	✓		✓							
Raise awareness of threats	✓	✓	✓							

Threat types and actions to address them	Responsibility for action									
	Env policy / legislation	Education / research institutions	Agriculture / forestry	Industry	Energy	Tourism	Transport	Water resources	Waste	Housing
Designation of bottleneck IBAs as Protected Areas, to give full protection against shooting and trapping	✓		✓							
<b>Accidental mortality</b> <sup>*1</sup>										
Protection of Bottleneck IBAs from erection of structures that may risk collision	✓									
Carryout Strategic Environmental Impact Assessment for wind farms and require mandatory EIA for all wind turbines	✓				✓					
Legislation against use of poison baits and enforcement	✓		✓							
Awareness and education regarding use of poison baits			✓							
Modification of electricity lines and appropriate sighting of lines					✓					
Raise awareness amongst plant operators of risks of birds drowning in sludge drying beds, and measures to prevent this								✓	✓	
<b>Pollution</b>										
Increased sewage / waste treatment								✓	✓	
Improved waste management procedures									✓	
Regulation of use of toxic pesticides	✓		✓							
Regulation of toxic discharges	✓			✓				✓	✓	

Threat types and actions to address them	Responsibility for action									
	Env policy / legislation	Education / research institutions	Agriculture / forestry	Industry	Energy	Tourism	Transport	Water resources	Waste	Housing
<b>Disturbance (human)</b>										
Protection of Bottleneck IBAs from activities that disturb feeding or roosting birds (ensure disturbance issues are dealt with in site management plans)	✓									
Include consideration of disturbance as a mandatory consideration in EIAs at soaring bird sites			✓	✓	✓	✓	✓		✓	✓
Raise awareness of the threats to migrating birds from disturbance		✓								
<b>Climate change</b>										
Raise awareness of the problem and the need for urgent international action	✓	✓								
Coordinated international action to reduce greenhouse gases	✓		✓	✓	✓	✓	✓		✓	✓

## REFERENCES

- Atrash, I. 1999. [Important Bird Areas in Palestine.] Jerusalem: Children for Protection of Nature in Palestine.
- Baha El Din, S. M., and M. B. Baha El Din. 1997. (1995). Report on avian utilization of the new sewage treatment facility at Suez. Winter and Spring 1997 with final conclusions and recommendations. ABB SUSA, Cairo, Egypt.
- Bahat, O. 2001. Conservation of threatened raptor populations in Israel. Pages 177-189 in Y. Leshem, A. Froneman, P. Mundy, and H. Shamir, editors. Wings over Africa. Proceedings of the International Seminar on Bird Migration: Research, Conservation, Education and Flight Safety.
- Barton, N. 2002. Numbers of wild-caught Saker Falcons (*Falco cherrug*) used in falconry in the Middle East (1993-2002). Pages 10-14 in N. Fox, editor. The Conservation of the Saker Falcon (*Falco cherrug*) and the role of CITES in UAE 2002. ERWDA, and Falcon Research Institute, Abu Dhabi, UAE, and Camarthen, UK.
- Baumgart, W. (1991a) Gegenwärtiger Status und Gefährdungsgrad von Greifvögeln und Eulen in Syrien [Current Status and level of endangerment of raptors and owls in Syria]. Birds of Prey Bulletin 4: 119-131.
- Baumgart, W. (1991b) Raptor problems in Syria. Newsl. World Working Group on Birds of Prey and Owls 14: 15-16.
- Baumgart, W., M. Kasperek, and B. Stephan 1995, 2003. [The birds of Syria]. Max Kasperek / Verlag., Berlin (2003 English translation by the Ornithological Society of the Middle East).
- Bijlsma, R. G. 1990. Bottleneck areas for migratory birds in the Mediterranean region. An assessment of the problems and recommendations for action. International Council for Bird Preservation, Cambridge.
- BirdLife International 2000 - the strategy of BirdLife International 2000-2004 Unpublished. Cambridge
- BirdLife International 2000 - The Middle East Regional Programme 2000-2004. Unpublished Cambridge
- BirdLife International 2001. Threatened birds of Asia: the BirdLife International Red Data Book. BirdLife International, Cambridge, UK.
- BirdLife International 2004a. Birds in Europe: population estimates, trends and conservation status. BirdLife International, Cambridge.
- BirdLife International. 2004b. Threatened birds of the world. CD-ROM. BirdLife International, Cambridge.
- Brown, L. H., E. K. Urban, and K. Newman 1982. The birds of Africa. Volume 1. Academic Press, London.
- Chancellor, R. D., and B.-U. Meyburg, editors. 1998. Raptors at risk: proceedings of the V World Conference on Birds of Prey and Owls. Midrand, Johannesburg, South Africa, 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.
- Chancellor, R. D., and B.-U. Meyburg, editors. 2003. Raptors worldwide: proceedings of the VI World Conference on Birds of Prey and Owls. Budapest, Hungary, 18-23 May 2003. World Working Group on Birds of Prey and Owls and MME/BirdLife Hungary, Berlin and Budapest.
- Clark, W. S. 1987. Oil contamination of raptors migrating along the Red Sea. Environmental Pollution 46:307-313.
- Coulthard, N. D. 2001. Eritrea. Pages 273-290 in D. C. Fishpool, and M. I. Evans, editors. Important Bird Areas in Africa and associated islands. Priority sites for conservation. Pices Publications and BirdLife International, Newbury and Cambridge, UK.
- Cramp, S., editor. 1977-93. Handbook of the birds of Europe, the Middle East and North Africa: the birds of the Western Palearctic. Oxford University Press, Oxford.
- del Hoyo, J., A. Elliott, and J. Sargatal, editors. 1992. Handbook of the birds of the world. Vol. 1. Lynx Edicions, Barcelona.
- del Hoyo, J., A. Elliott, and J. Sargatal, editors. 1994. Handbook of the birds of the world. Vol. 2: New World vultures to guineafowl. Lynx Edicions, Barcelona.
- del Hoyo, J., A. Elliott, and J. Sargatal, editors. 1999. Handbook of the birds of the world. Vol. 5: Barn Owls to Hummingbirds. Lynx Edicions, Barcelona.
- Delany, S., and D. Scott 2002. Waterbird population estimates (3rd edition). Wetlands International, Wageningen.
- DOE 2000. National biodiversity strategy and action plan for Eritrea. Department for Environment, Ministry of Land, Water and Environment, Asmara.
- EAE 1995. National environmental action plan for Eritrea. Eritrean Agency for the Environment, Asmara.
- Evans, M. I., ed. 1994. Important Bird Areas in the Middle East. (BirdLife Conservation Series No. 2). BirdLife International, Cambridge, UK.
- Ferguson-Lees, J., and D. A. Christie 2001. Raptors of the world. Christopher Helm, London.
- Fishpool, D. C., and M. I. Evans, eds 2001. Important Bird Areas in Africa and Associated Islands. Priority sites for conservation. (BirdLife Conservation Series No. 11). Pices Publications and BirdLife International, Newbury and Cambridge, UK.
- Galushin, V. M. 2004. Status of Saker in Russia and Eastern Europe. Falco. The newsletter of the Middle East Falcon Research Group 24:3-8.
- Goodman, S. M., and P. L. Meininger 1989. The birds of Egypt. Oxford University Press, Oxford.
- Gott, E. J., H. MacDonald, and N. C. Fox. 2000. The Saker Falcon *Falco cherrug* in the Kyrgyz Republic. Pages 269-273 in R. D. Chancellor, and B.-U. Meyburg, editors. Raptors at risk: proceedings of the V world conference on birds of prey and owls. Johannesburg, South Africa 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.

- Green, R. E., M. Harley, M. Spalding, and C. Zöckler 2001. Impacts of climate change on wildlife. RSPB, Sandy, UK.
- Heath, M. F., and M. I. Evans 2000. Important Bird Areas in Europe: priority sites for conservation. BirdLife International, Cambridge.
- IUCN 2001. IUCN Red List categories and criteria: Version 3.1. IUCN Species Survival Commission, Gland, Switzerland and Cambridge, UK.
- Langston, R. H. W., and J. D. Pullan. 2003. Windfarms and birds: an analysis of the effects of windfarms on birds, and guidance on environmental assessment criteria and site selection issues. Council of Europe, Strasbourg.
- Levin, A., M. Watson, H. MacDonald, and N. C. Fox. 2000. The Saker Falcon *Falco cherrug* in Kazakstan. Pages 259-262 in R. D. Chancellor, and B.-U. Meyburg, editors. Raptors at risk: proceedings of the V world conference on birds of prey and owls. Johannesburg, South Africa 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.
- Meyburg, B.-U., and R. D. Chancellor, editors. 1989. Raptors in the modern World: proceedings of the III World conference on birds of prey and owls. Eilat, Israel 22-27 March 1987. World Working Group on Birds of Prey and Owls, Berlin and London.
- Meyburg, B.-U., and R. D. Chancellor 1994. Raptor conservation today. World Working Group on Birds of Prey and Owls and Pica Press, Berlin and Mountfield, U.K.
- Mineau, P., M. R. Fletcher, L. C. Glaser, N. J. Thomas, C. Brassard, L. K. Wilson, J. E. Elliot, L. A. Lyon, C. J. Henny, T. Bollinger, and S. L. Porter. 1999. Poisoning of raptors with organophosphorous and carbamate pesticides with emphasis on Canada and UK. *Journal of Raptor Research* **33**:1-37.
- Newton, I. 1979. Population ecology of raptors. T and A D Poyser Ltd, Hertfordshire, England.
- Newton, I., and R. D. Chancellor, editors. 1985. Conservation studies on raptors. (Technical Publication No. 5). International Council for Bird Preservation, Cambridge.
- Norberg, U. M. 1990. Vertebrate flight. Springer-Verlag, Berlin.
- Norberg, U. M. 1995. Wing design and migratory flight. *Israel Journal of Zoology* **41**:297-305.
- Oaks, J. L., M. Gilbert, M. Z. Virani, R. T. Watson, C. U. Meteyer, B. A. Rideout, H. L. Shivaprasad, S. Ahmed, M. J. I. Chaudhry, M. Arshad, S. M. Mahmood, A. Ali, and A. A. Khan. 2004. Diclofenac residues as the cause of vulture population decline in Pakistan. *Nature* **427**:630-633.
- Ostrowski, S., and M. Shobrak. 2001. Poisoning by acetylcholinesterase inhibiting pesticides in free-ranging raptors: a case reported from Saudi Arabia. *Falco*. The newsletter of the Middle East Falcon Research Group **20**:8-9.
- Riddle, K. E., and J. D. Remple. 1994. Use of the Saker and other large falcons in Middle East falconry. Pages 415-420 in B.-U. Meyburg, and R. D. Chancellor, editors. Raptor conservation today. Pica Press, Mountfield, U.K.
- RSCN [Royal Society for the Conservation of Nature]. 2000. Important Bird Areas in the Hashemite Kingdom of Jordan. Amman: BirdLife International and Royal Society for the Conservation of Nature.
- Salathe, T., editor. 1991. Conserving migratory birds. International Council for Bird Preservation, Cambridge, UK.
- Shijirmaa, D., E. Potapov, and S. Banzragch. 2000. The Saker Falcon *Falco cherrug* in Mongolia. Pages 263-268 in R. D. Chancellor, and B.-U. Meyburg, editors. Raptors at risk: proceedings of the V world conference on birds of prey and owls. Johannesburg, South Africa 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.
- Shirihai, H., R. Yosef, D. Alon, G. M. Kirwan, and R. Spaar 2000. Raptor migration in Israel and the Middle East. A summary of 30 years of field research. International Birding and Research Centre, Eilat, Israel.
- Shlosberg, A., and O. Bahat 2001. The risks of toxicoses from pesticides and pollutants in raptors and wildlife in Israel - the present situation and recommendations for the future. Proceedings of an International Workshop at Jerusalem Biblical Zoo, Israel, April 9-10th 2000. SPNI, Tel-Aviv.
- Shultz, S., H. S. Baral, S. Charman, A. A. Cunningham, D. Das, G. R. Ghalsasi, M. S. Goudar, R. E. Green, A. Jones, P. Nighthot, D. J. Pain, and V. Prakash. 2004. Diclofenac poisoning is widespread in declining vulture populations across the Indian subcontinent. Proceedings of the Royal Society London B (supplement) DOI **10.1098/rsbl.2004.0223** <http://www.vulturedeclines.org/gypdiclo1.pdf>.
- Thiollay, J.-M. 1994. Accipitridae (Hawks and Eagles). Pages 52-105 in J. del Hoyo, A. Elliott, and J. Sargatal, editors. Handbook of the birds of the world. Vol. 2: New World vultures to guineafowl. Lynx Edicions, Barcelona.
- Thomas, C. D., A. Cameron, R. E. Green, M. Bakkenes, L. J. Beaumont, Y. C. Collingham, B. F. N. Erasmus, M. F. Siqueira, A. Grainger, L. Hannah, L. Hughes, B. Huntley, A. S. van Jaarsveld, G. F. Midgley, L. Miles, M. A. Ortega-Huerta, A. T. Peterson, O. L. Phillips, and S. E. Williams. 2004. Extinction risk from climate change. *Nature* **427**:145-148.
- Tucker, G. M., and M. Evans 1997. Habitats for birds in Europe: a conservation strategy for the wider environment. BirdLife International, Cambridge.
- Tucker, G. M., and M. F. Heath 1994. Birds in Europe: their conservation status. BirdLife International, Cambridge.
- van Rooyen, C. S. 2000. Raptor mortality on powerlines in South Africa. Pages 739-750 in R. D. Chancellor, and B.-U. Meyburg, editors. Raptors at risk: proceedings of the V world conference on birds of prey and owls. Johannesburg, South Africa 4-11 August 1998. World Working Group on Birds of Prey and Owls, Berlin.
- White, C. M., P. D. Olsen, and L. F. Kiff. 1994. Falconidae (Falcons and Caracaras). Pages 216-247 in J. del Hoyo, A. Elliott, and J. Sargatal, editors. Handbook of the birds of the world. Vol. 2: New World vultures to guineafowl. Lynx Edicions, Barcelona.

- WWGBP [World Working Group on Birds of Prey and Owls]. 1994. Resolution 15 of World Conference IV on Raptors and Owls, Berlin 1992. Pp. 795-799 in Meyburg and Chancellor 1994 (q. v.).
- Yosef, R., M. L. Miller, and D. Pepler, editors. 2002. Raptors in the New Millennium. Proceedings of the World Conference on Birds of Prey and Owls. International Birding and Research Centre, Eilat, Eilat, Israel.
- Zalles, J. A., and K. L. Bildstein, editors. 2000. Raptor watch: a global directory of raptor migration sites. Hawk Mountain Sanctuary and BirdLife International, Kempton, Pennsylvania and Cambridge, UK.



## BIRDLIFE INTERNATIONAL'S IMPORTANT BIRD AREA CRITERIA

### IBA categories and criteria

(A) IBAs of global significance

The criteria used to select IBAs of global significance are as follows:

#### **A1. Globally Threatened Species**

*Criterion:* The site regularly holds significant numbers of a globally threatened species, or other species of global conservation concern.

#### **A2. Restricted-range Species**

*Criterion:* The site is known or thought to hold a significant component of a group of species whose breeding distributions define an Endemic Bird Area or Secondary Area.

#### **A3. Biome-restricted Assemblage**

*Criterion:* The site is known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome.

#### **A4. Congregations**

This category applies to those species that are vulnerable as a consequence of their congregatory behaviour at regularly used sites, either at breeding colonies or during the non-breeding season, including at foraging, roosting and migratory stop-over sites. Such stop-over sites may not hold spectacular numbers at any one time yet, nevertheless, do so over a relatively short period due to the rapid turnover of birds on passage.

*Criteria:*

A site may qualify on one or more of the four criteria listed below:

*i).* Site known or thought to hold, on a regular basis, more than 1% of a biogeographic population of a congregatory waterbird species.

The term waterbird is used here in the sense that the Ramsar Convention uses waterfowl and covers the list of families as more precisely defined by Rose and Scott (1994).

*ii).* Site known or thought to hold, on a regular basis, more than 1% of the global population of a congregatory seabird or terrestrial species.

Includes those families of seabird not covered by Rose and Scott (1994).

*iii).* Site known or thought to hold, on a regular basis, more than 20,000 waterbirds or 10,000 pairs of seabirds of one or more species.

*iv).* Site known or thought to be a 'bottleneck' site where at least 20,000 migrating individuals of soaring species pass regularly.

This covers sites over which migrants congregate e.g. before gaining height in thermals.

(B) IBAs of regional significance In the geographical area under consideration, only sites in the Middle East region have so far been assessed against region-level IBA criteria.

The criteria used to select IBAs of regional (Middle Eastern) significance are as follows:

#### **B1. Regionally important congregations**

The site may qualify on any one of the three criteria listed below:

*i).* The site is known or thought to hold 1% or more of a flyway population or other distinct population of a waterbird species.

*ii).* The site is known or thought to hold 1% or more of a distinct population of a seabird species.

*iv).* The site is a 'bottleneck site' where 5,000 or more storks (Ciconiidae), or 3,000 or more raptors (Accipitriformes and Falconiformes) or cranes (Gruidae), pass regularly on spring or autumn migration.

There is no B1iii IBA criterion in the Middle East region (so far, it has only been applied in the European region).

#### **B2. Species with an unfavorable conservation status in the region**

The site is one of the five most important sites in the country/territory for a species with an unfavorable conservation status in the Middle East (threatened or declining throughout all or part of its range in the region) and for which the site-protection approach is thought to be appropriate.

#### **B3. Species with a favorable conservation status but concentrated in the region**

The site is one of the five most important sites in the country/territory for a species with a favorable conservation status in the Middle East, but with its global range concentrated in the Middle East, and for which the site-protection approach is thought to be appropriate.

**IMPORTANT BIRD AREAS WITHIN THE RIFT VALLEY / RED SEA FLYWAY, WHICH ARE CONFIRMED AS BEING INTERNATIONALLY IMPORTANT FOR SOARING MIGRANTS ON PASSAGE**

The following table lists sites which qualify as Important Bird Areas (IBAs) of international (global or regional) significance under the 'migration bottleneck' criteria of BirdLife International. The global significance of a migration bottleneck is judged against IBA criterion A4iv, whereas regional significance is judged against criterion B1iv (see Annex 1 for more details of IBA criteria). Qualification of all sites in this table has been publicly documented (Evans 1994, Atrash 1999, RSCN 2000, Fishpool and Evans 2001) and much further detail is available on most sites at <http://www.birdlife.org/datazone/sites/index.html>. Many of the regionally important bottlenecks listed here for the Middle East are very poorly known and may prove to be of global significance following further investigation. In addition, new IBAs (regionally important bottlenecks) are likely to be identified in Africa once the regional IBA criteria are applied there (see Annex 3 for a list of suspected or recently discovered (undocumented) bottleneck IBAs in both Africa and the Middle East).

IBA	Protection status	Threats*	Mitigation measures identified	Significance
Syria				
Jabal Slenfah	State Forest Protection Zone	Hunting Wood cutting Olive orchards Land encroachment	Proposed as managed nature reserve or multiple-use management area by a UNEP task force.	Regional
Lebanon				
Ammiq Swamp	No official protection, but protected by private owners  Educational centre was established for awareness purposes	Agricultural intensification Draining of wetland margins Over extraction of water supply and diversion for irrigation Overgrazing of marsh vegetation in dry seasons Hunting, disturbance and over-exploitation by trapping of birds at excessive level Introduction of non-indigenous species Toxic pollution and damming	Formulate land use policy	Regional
Palestine				
Northern Lower Jordan Valley	Nature Reserve (280 ha - part) Forest	Agricultural intensification and grazing Forest destruction Solid waste problem from unmanaged tourism	Educational programme and advocacy and policy	Global
Jericho	Unprotected Partly protected for its Cultural values, old Christian Monasteries	Pesticide use in fields Urbanisation Tourism influx Road construction Water extraction	Land use policy and educational programme	Global

IBA	Protection status	Threats*	Mitigation measures identified	Significance
<b>Jordan</b>				
Jordan Valley	Unprotected	Overgrazing excessive disturbance of birds by human activities Solid and liquid waste problems Hunting Rural development schemes Unmanaged tourism	Land use policy and master plan	Regional
Madaba - Hisban	Unprotected			Global
Khirbat As Samra	Unprotected, Sewage treatment plant one of the most polluted areas in Jordan	Sewage Treatment Plant expansion Heavy industrial area Oil refinery Urbanisation Surface water pollution	Educational Action plan	Regional
Wadi Mujib	Wildlife Reserve	Construction of highways, overgrazing and change in land use, dam.	None identified	Regional
Wadi Dana-Finan	Wildlife Reserve	Urbanisation Wood cutting Water extraction Dead Red Canal Copper mining	Land use policy, advocacy	Regional
Petra area	National Park Proposed World Heritage Site	Influx of Tourism Urbanisation and rural development	None defined	Regional
Aqaba mountains	Unprotected	Port expansion, and coastal development for industrial, military and tourist uses Free zone	None identified	Global
<b>Saudi Arabia</b>				
Jabal Aja and Northern Ha'il	Proposed protected area No hunting zone	Overgrazing Water extraction for agricultural use	None identified	Regional
Taif escarpment	Partly protected as forest and national park	Agricultural development Unmanaged tourism Urbanisation	None identified	Regional
Wadi Jawwah	Unprotected	Agricultural intensification Heavily populated Road construction	None identified	Regional

IBA	Protection status	Threats*	Mitigation measures identified	Significance
<b>Yemen</b>				
Al Kadan area	Unprotected	Loss of nesting habitats for nesting birds Depletion of water table	None identified	Regional
Wadi Rijaf	Unprotected	Rural development Overgrazing Wood	None identified	Regional
<b>Mafraq al-Mukha</b>				
Mafraq al-Mukha	Unprotected	Illegal hunting Water extraction Agricultural expansion Wood cutting of natural acacia forests	None identified	Regional
Bab al-Mandab - Mawza	Unprotected Proposed for protection	Illegal hunting and trapping of raptors Army disturbance Illegal land acquisition	Advocacy and policy and educational programmes for army and local communities	Global
<b>Egypt</b>				
Suez	Unprotected	Sewage pollution, land reclamation, high-tension power lines	None identified	Global
Gebel el Zeit	Unprotected	Oil pollution, uncoordinated tourist development, falcon catching	None identified	Global
El Qa Plain	Unprotected	Planned tourism development; planned construction of powerlines	Currently low human population in the area	Global
Ras Mohamed National Park	National Park	None - well managed national park	None identified	Global
Ain Sukhna	Unprotected	Oil pollution, high tension powerlines, Industrial development including planned establishment of airport and shipping port, tourist development, land reclamation, unregulated quarrying, solid waste dumping;	None identified	Global
<b>Djibouti</b>				
Kadda Guéini - Douméra	Unprotected	None known to migratory birds at present	None identified	Global
<b>Sudan</b>				
No information				

\* These threats apply to the site and its biodiversity generally, and are not specific to the soaring birds that visit or over-fly the site

**ADDITIONAL SITES THAT ARE EITHER EXISTING IMPORTANT BIRD AREAS SUSPECTED AS BOTTLENECKS, OR POTENTIAL IBAS (IDENTIFIED SINCE THE PUBLICATION OF REGIONAL/NATIONAL IBA DIRECTORIES) SUSPECTED AS BOTTLENECKS.**

<b>IBA</b>	<b>Protection status</b>	<b>Threats*</b>	<b>Mitigation measures identified</b>	<b>Notes</b>
Syria				
Tadmur and Sabkhat Muh	Declared as protected area	Water extraction Salt mining Tourism influx	Set up a management plan and land-use policy	Existing IBA, suspected bottleneck (needs confirmation).
Jabal Abdul Aziz				Existing IBA, suspected bottleneck (needs confirmation).
Al-Layat				Potential IBA, suspected bottleneck (needs confirmation).
Jabal Abu Rujmayn				Potential IBA, suspected bottleneck (needs confirmation).
Abu Gubres				Potential IBA, suspected bottleneck (needs confirmation).
Lebanon				
Al-Shouf Cedar Nature Reserve	Largest protected area in Lebanon (5% of the area of Lebanon). Protected by governmental law since 1996. Mostly public land owned by the government.	Quarrying around the reserve Illegal sheep and goat herding Previous wood harvesting Previous artificial afforestation	It already has a land-management plan endorsed by the government.	Existing IBA, suspected bottleneck (needs confirmation).
Harisa area				Potential IBA, suspected bottleneck (needs confirmation).
Bhamdoun				Potential IBA, suspected bottleneck (needs confirmation).
Beirut Valley				Potential IBA, suspected bottleneck (needs confirmation).
Ebel es-Saqi	Declared as “Hima” (old tradition of protecting land in the Arab World) by	Land abandonment Man-caused fires Human disturbance Firewood collection / shrub removal	Land-use management has been drafted by SPNL team, and it is now in the stage of consultation with the local community for	Potential IBA, suspected bottleneck (needs confirmation).

IBA	Protection status	Threats*	Mitigation measures identified	Notes
	Municipal Council decision <sup>6</sup> . Also, hunting in the site is banned by another decision. Communal land owned by the Municipality of Ebel es-Saqi.	Urbanization Roads Overgrazing Tree disease Power-lines Habitat fragmentation Pesticides Liquid and solid waste (absence of waste treatment) Unsustainable exploitation; such as irresponsible hunting and trapping of birds and mammals, over harvesting of medicinal and edible plants. Introduction of non-indigenous flora Feral dogs and cats Uncontrolled recreation Quarries	adoption.	
Litani Valley - Rihan (Khalet Khazen)				Potential IBA, suspected bottleneck (needs confirmation).
Jordan				
Yarmouk valley	Unprotected			Existing IBA, suspected bottleneck (needs confirmation).
Maghtas - Sweimeh	Unprotected			Existing IBA, suspected bottleneck (needs confirmation).
Azraq	Wetland Reserve			Existing IBA, suspected bottleneck (needs confirmation).
Wadi Ibn Hammad - Al Haditha	Unprotected			Existing IBA, suspected bottleneck (needs confirmation).
Safi - Fifa	Unprotected			Existing IBA, suspected bottleneck (needs confirmation).
Wadi Araba	Unprotected			Existing IBA, suspected bottleneck (needs confirmation).
Yemen				
Ta'izz wadis	Unprotected Proposed as protected	Lowering of groundwater levels due to excessive water pumping leading to habitat	None identified	Existing IBA, suspected bottleneck (needs confirmation).

IBA	Protection status	Threats*	Mitigation measures identified	Notes
	area	destruction Solid-waste problems Urban development and land acquisition		
Al-Mukha - Al-Khawkhah				Existing IBA, suspected bottleneck (needs confirmation).
Hodeidah wetlands (Al-'Urj)				Existing IBA, suspected bottleneck (needs confirmation).
Nukhaylah - Ghulayfiqah				Existing IBA, suspected bottleneck (needs confirmation).
<b>Egypt</b>				
Upper Nile				Existing IBA, suspected bottleneck (needs confirmation).
Aswan reservoir				Existing IBA, suspected bottleneck (needs confirmation).
Lake Nasser				Existing IBA, suspected bottleneck (needs confirmation).
Hurghada archipelago				Existing IBA, suspected bottleneck (needs confirmation).
Hurghada				Potential IBA, suspected bottleneck (needs confirmation).
Safaga				Potential IBA, suspected bottleneck (needs confirmation).
Ein Mousa				Potential IBA, suspected bottleneck (needs confirmation).
Sharm El Sheik				Potential IBA, suspected bottleneck (needs confirmation).
<b>Djibouti</b>				
Sept Frères islands				Existing IBA, suspected bottleneck (needs confirmation).
<b>Eritrea</b>				
Dahlak islands and Massawa coast				Existing IBAs, suspected bottleneck (needs confirmation).
Hazommo plain				Potential IBA, suspected bottleneck (needs confirmation).
<b>Ethiopia</b>				
Awash National Park				Existing IBA, suspected bottleneck (needs confirmation).

<b>IBA</b>	<b>Protection status</b>	<b>Threats*</b>	<b>Mitigation measures identified</b>	<b>Notes</b>
Koka Dam and Lake Gelila				Existing IBA, suspected bottleneck (needs confirmation).
Lake Zeway				Existing IBA, suspected bottleneck (needs confirmation).
Lake Langano				Existing IBA, suspected bottleneck (needs confirmation).
Abijatta-Shala Lakes National Park				Existing IBA, suspected bottleneck (needs confirmation).



## CRITERIA FOR GLOBAL THREAT STATUS AND EUROPEAN POPULATION STATUS

### THE CURRENT (VERSION 3.1) IUCN RED LIST CATEGORIES FOR GLOBAL THREAT STATUS

Full details of the current IUCN Red List Categories and criteria are provided in IUCN (2001). They can also be obtained together with guidelines on their use at [http://www.redlist.org/info/categories\\_criteria.html](http://www.redlist.org/info/categories_criteria.html)

#### Globally Threatened

**Critically Endangered** (CR): A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild. Criteria A to D relate to numerical thresholds for species in rapid decline, with small, fragmented, declining or fluctuating ranges, or with very small populations or ranges. Criterion E is an unfavorable PVA indicating a probability of extinction >50% within 10 years or 3 generations (whichever is longer).

**Endangered** (EN): A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to D for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild. Or under Criterion E, a PVA indicating a probability of extinction >20% within 20 years or 5 generations.

**Vulnerable** (VU): A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to D for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild. Or under Criterion E, a PVA indicating a probability of extinction >10% within 100 years.

#### Not Globally Threatened

**Near Threatened** (NT): A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

**Least Concern** (LC): A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

### EUROPEAN CONSERVATION STATUS

See BirdLife International (2004a) for full details.

#### Species of European Conservation Concern (SPEC)

BirdLife defines the following three categories:

**SPEC 1:** Species of Global Conservation Concern, i.e. classified as Globally Threatened, Near Threatened or Data Deficient (BirdLife International 2004c; IUCN 2004).

**SPEC 2:** Species that are concentrated<sup>7</sup> in Europe and have an unfavourable conservation status.

**SPEC 3:** Species that are not concentrated in Europe but have an unfavourable conservation status.

A species is considered to have an unfavourable conservation status by BirdLife if its European population is considered to be any of the following:

- small and non-marginal;
- declining more than moderately (i.e. > 1% per year);
- depleted following earlier declines; or
- highly localised.

### EUROPEAN THREAT STATUS

According to various levels of decline, population size and localization, BirdLife defines 10 categories of European Threat Status (ETS). The following 7 are categories of species in unfavorable condition: Critically Endangered, Endangered, Vulnerable, Declining, Rare, Depleted, and Localized. In addition a species may be considered to be Secure (i.e. in favorable condition), Data Deficient or Not Evaluated.

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<sup>7</sup> i.e. more than 50% of its global breeding or wintering population or range occurs in Europe.

**THE KEY OBJECTIVES OF MULTILATERAL ENVIRONMENTAL AGREEMENTS THAT ARE RELEVANT TO THE CONSERVATION OF SOARING BIRDS THROUGH THE RIFT VALLEY / RED SEA FLYWAY**

**AFRICAN CONVENTION**

Full title African Convention on the Conservation of Nature and Natural Resources (Algiers 1968)

Objectives “The Contracting Parties shall undertake to adopt the measures necessary to ensure conservation, utilization and development of soil, water, flora and faunal resources in accordance with scientific principles and with due regard to the best interests of the people”.

Web page <http://www.africa-union.org/home/Welcome.htm> [Official Documents]

**CONVENTION ON BIOLOGICAL DIVERSITY**

Full title UN Convention on Biological Diversity (Rio de Janeiro 1992)

Objectives Article 1 – Objectives

“The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.”

Web page [www.biodiv.org](http://www.biodiv.org)

**CITES**

Full title Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington 1973)

Objectives To ensure that international trade in specimens of wild animals and plants does not threaten their survival.

Web page <http://www.cites.org/index.html>

**CONVENTION ON MIGRATORY SPECIES**

Full title Convention on the Conservation of Migratory Species of Wild Animals (Bonn 1979). Also known as the Bonn Convention.

Objectives To conserve terrestrial, marine and avian migratory species throughout their range

Article II – Fundamental Principles

“1. The Parties acknowledge the importance of migratory species being conserved and of Range States agreeing to take action to this end whenever possible and appropriate, paying special attention to migratory species the conservation status of which is unfavourable, and taking individually or in co-operation appropriate and necessary steps to conserve such species and their habitat.

2. The Parties acknowledge the need to take action to avoid any migratory species becoming endangered.

3. In particular, the Parties:

a) should promote, co-operate in and support research relating to migratory species;

b) shall endeavour to provide immediate protection for migratory species included in Appendix I; and

c) shall endeavour to conclude Agreements covering the conservation and management of migratory species included in Appendix II.”

Web page <http://www.cms.int/>

## **AFRICAN-EURASIAN WATERBIRD AGREEMENT**

Full title	Agreement on the conservation of Africa-Eurasian migratory waterbirds (AEWA)
Objectives	Article II – Fundamental Principles “1. Parties shall take co-ordinated measures to maintain migratory waterbird species in a favorable conservation status or to restore them to such a status. To this end, they shall apply within the limits of their national jurisdiction the measures prescribed in Article III, together with the specific actions determined in the Action Plan provided for in Article IV, of this Agreement. 2. In implementing the measures prescribed in paragraph 1 above, Parties should take into account the precautionary principle”.
Web page	<a href="http://www.cms.int/species/aewa/aew_text.htm">http://www.cms.int/species/aewa/aew_text.htm</a>

## **RAMSAR CONVENTION**

Full title	Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar 1971)
Objectives	"The Convention's mission is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world."
Web page	<a href="http://www.ramsar.org">www.ramsar.org</a>

## **UN CONVENTION TO COMBAT DESERTIFICATION**

Full title	UN Convention to Combat Desertification (Paris 1994)
Article 2 – Objective	1. The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas. 2. Achieving this objective will involve long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.
Web page	<a href="http://www.unccd.int/">www.unccd.int/</a>

## **WORLD HERITAGE CONVENTION**

Full title	Convention Concerning the Protection of the World Cultural and Natural Heritage
Objectives	II. NATIONAL PROTECTION AND INTERNATIONAL PROTECTION OF THE CULTURAL AND NATURAL HERITAGE Article 4 “Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain”.

**Annex 9: GEF Tracking Tool**

**I. Project General Information**

1. Project name: **Mainstreaming conservation of migratory soaring birds into productive sectors along the Rift Valley/Red Sea flyway**

2. Country (ies): Djibouti, Egypt, Eritrea, Ethiopia, Jordan, Lebanon, Palestine, Saudi Arabia, Sudan, Syria and Yemen

National Project: \_\_\_\_\_ Regional Project: **YES** Global Project: \_\_\_\_\_

3. NAME OF REVIEWERS COMPLETING TRACKING TOOL AND COMPLETION DATES:

	Name	Title	Agency
<b>Work Program Inclusion</b>	Nigel Varty	Project Manager	BirdLife International
<b>Project Mid-term</b>			
<b>Final Evaluation/project completion</b>			

4. Funding information

	Tranche I	Tranche II	
GEF support:	\$6,743,243	\$3,500,000	
Co-financing	\$5,096,482	\$10,500,000	expected leveraged resources
Total Funding	\$11,839,725	\$14,000,000	

5. Project duration: **Planned** 10 years **Actual** \_\_\_\_\_ years

6. a. GEF Agency: x **UNDP**  UNEP  World Bank  ADB  AfDB  IADB  EBRD  FAO  IFAD  UNIDO

6. b. Lead Project Executing Agency (ies): **BirdLife International**

7. GEF Operational Program:

- x **drylands** (OP 1)
- x **coastal, marine, freshwater** (OP 2)
- forests (OP 3)
- mountains (OP 4)
- agro-biodiversity (OP 13)
- integrated ecosystem management (OP 12)
- sustainable land management (OP 15)

Other Operational Program not listed above: \_\_\_\_\_

## 8. Project Summary (one paragraph):

Bird migration is an energetically costly activity and places the birds under considerable physiological stress. Many large broad-winged birds e.g. raptors, storks, cranes, pelicans, conserve energy while migrating by soaring in thermals. These thermals do not form over large areas of water or tall mountain ranges, which restricts these birds to traditional routes or ‘flyways’. These migratory soaring birds (MSBs) are particularly vulnerable on migration because a large proportion of their global or regional populations become concentrated at a small number of bottleneck sites at predictable times of the year where they can be disproportionately susceptible to localized threats. The Rift Valley/Red Sea Flyway, which includes 11 countries, is the second most important flyway in the world for soaring birds in terms of numbers with over 1.2 million birds of prey and over 300,000 storks involved. Thirty-nine species of MSB use this flyway, of which six are globally-threatened and three globally near-threatened. Between 50% and 100% of the world population of seven species pass along it twice yearly. Threats to MSBs are apparent along the Rift Valley/Red Sea flyway, in particular, from hunting, energy developments, and poor agricultural and waste management practices. *Double mainstreaming* is an innovative approach to facilitate cost-effective entry of MSB issues into productive sectors by making agreements with existing or planned “vehicles” of reform to provide specified technical services enabling MSB issues to be mainstreamed through those “vehicles”. It is an extremely cost-effective method of achieving the necessary changes since, despite the anticipated payment of transaction costs, it will be co-financed by each partner reform “vehicle” and will have no need to set up independent project management and implementation structures thereby making significant savings. The intervention will establish a mechanism that can replicate the double mainstreaming approach along the flyway and across any number of targeted sectors, so that eventually all relevant practices can be declared responsive to MSB issues (“flyway friendly”). This is anticipated to take at least 10 years to achieve so the project will be implemented in two Tranches over the period, with the possibility of a follow-up project providing a third phase. The first Tranche will establish the enable environment required to initiate the double mainstreaming approach and. It will also apply it in a number of pre-identified practical examples (called double mainstreaming “vehicles”). This will involve establishment of the Flyway concept and its application as a marketing tool to raise awareness; establishment of a Regional Flyway Facility to act as a coordinating unit; as well as capacity building of national and regional content providers and recipients to effect double mainstreaming and provide the technical content necessary to deliver it in practical examples of the double mainstreaming approach. The second Tranche will establish the sustainability of the Flyway Facility and expand the application of the double mainstreaming approach to more participating flyway countries once adequate capacity has been built, and to additional sectors and reform “vehicles” in the first group of countries. The third phase would seek to leverage the Flyway marketing tool, the expertise of the regional Flyway Facility, and the double mainstreaming experiences into a financially viable mechanism that is able to offer technical mainstreaming services on a commercial basis and to recognised standards. Endorsement of the second Tranche by the CEO would be subject to the satisfactory achievement of triggers detailed in the Pro Project Document.

## 9. Project Development Objective:

Globally threatened and significant populations of soaring birds that migrate along the Rift Valley/Red Sea flyway are effectively maintained

## 10. Project Purpose/Immediate Objective:

Conservation management objectives and actions for MSBs are mainstreamed effectively into the hunting, energy, agriculture, waste management and tourism sectors along the Rift Valley/Red Sea flyway, making this a safer route for soaring birds

## 11. Expected Outcomes (GEF-related):

1. Raised awareness of the flyway and altered social and cultural behaviors among target groups that threaten MSBs in the key sectors, decision-makers and the general public
2. Increased national and regional capacity to effect double mainstreaming and application of flyway concept
3. Content and tools to enhance flyway friendly practice developed, delivered and mainstreamed effectively into sector processes and programmes

4. Learning, evaluation and adaptive management increased

12. Production sectors and/or ecosystem services directly targeted by project:

12. a. Please identify the main production sectors involved in the project. Please put “P” for sectors that are primarily and directly targeted by the project, and “S” for those that are secondary or incidentally affected by the project.

**Agriculture** \_\_\_\_\_ **P** \_\_\_\_\_

Fisheries \_\_\_\_\_

Forestry \_\_\_\_\_

**Tourism** \_\_\_\_\_ **S** \_\_\_\_\_

Mining \_\_\_\_\_

Oil \_\_\_\_\_

Transportation \_\_\_\_\_

Other (please specify) Hunting (P), Energy (P), Waste Management (P) \_\_\_\_\_

12. b. For projects that are targeting the conservation or sustainable use of ecosystems goods and services, please specify the goods or services that are being targeted, for example, water, genetic resources, recreational, etc

1. Migrating soaring birds targeted as a recreational and tourism resource \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**II. Project Landscape/Seascape Coverage**

13. a. What is the extent (in hectares) of the landscape or seascape where the project will directly or indirectly contribute to biodiversity conservation or sustainable use of its components? An example is provided in the table below.

<b>Targets and Timeframe</b>	<b>Foreseen at project start</b>	<b>Achievement at Mid-term Evaluation of Project</b>	<b>Achievement at Final Evaluation of Project</b>
<b>Project Coverage</b>			
<b>Landscape/seascape<sup>8</sup> area directly<sup>9</sup> covered by the project (ha)</b>	53,700 sq km		
<b>Landscape/seascape area indirectly<sup>10</sup> covered by the project (ha)</b>	540,000 sq km		

Note: Direct coverage includes the section of the flyway covered by the project “vehicles” identified for Tranche I, that is the Rift Valley in Jordan (estimated 35,000 sq km), all of Lebanon (10,500 sq km), 8100 sq km of the Red Sea Project in Egypt and estimated 100 sq km of the Djibouti Wind Farm project.

<sup>8</sup> For projects working in seascapes (large marine ecosystems, fisheries etc.) please provide coverage figures and include explanatory text as necessary if reporting in hectares is not applicable or feasible.

<sup>9</sup> Direct coverage refers to the area that is targeted by the project’s site intervention. For example, a project may be mainstreaming biodiversity into floodplain management in a pilot area of 1,000 hectares that is part of a much larger floodplain of 10,000 hectares.

<sup>10</sup> Using the example in footnote 5 above, the same project may, for example, “indirectly” cover or influence the remaining 9,000 hectares of the floodplain through promoting learning exchanges and training at the project site as part of an awareness raising and capacity building strategy for the rest of the floodplain. Please explain the basis for extrapolation of indirect coverage when completing this part of the table.

Explanation for indirect coverage numbers: The calculations for indirect coverage are based on a flyway width of 100km for the two main flyway routes along the Rift Valley (Syria-Turkey border to Ethiopia-Kenya border, approx. 3,400km long) and Red Sea coast (Aqaba to Bab al Mandab, approx. 2,000km long), which together total 5,400 km.

13. b. Are there Protected Areas within the landscape/seascape covered by the project? If so, names these PAs, their IUCN or national PA category, and their extent in hectares.

	<b>Name of Protected Areas</b>	<b>IUCN and/or national category of PA</b>	<b>Extent in hectares of PA</b>
	<b>Djibouti</b>		
1.	Iles des Sept Frères (IBA n°DJ003)	Aire Protégée marine (catégorie nationale AP)	4,144
2.	Kadda Gueni-Doumera (IBA n° DJ004)	Aire Protégée terrestre (catégorie nationale AP)	20,000
	<b>Egypt</b>		
3.	Elba National Park	National Park	4,500
4.	St. Catherine	National Park	575,000
5.	Nile Islands	Natural Area	5,500
6.	Ras Mohamed	Marine Reserve	48,000
7.	Bura Protected area	Under establishment	600ha core, 1000ha buffer zone
	<b>Jordan</b>		
8.	Dana Biosphere Reserve	Natural Reserve	30800
9.	Mujib nature Reserve	Natural Reserve	21200
10.	Ajloun woodland reserve	Natural Reserve	1200
11.	Dibbin nature Reserve	Natural Reserve	800
12.	Azraq wetland reserve	Ramsar Site	1200
13.	Showmari wildlife reserve	Natural Reserve	2200
14.	Rum protected area	Natural Reserve	54000
	<b>Lebanon</b>		
15.	Ammiq Swamp	Private Reserve	
16.	Al-Shouf Cedar Nature Reserve	Nature Reserve	5500
17.	Hima Ebel es-Saqi, South Lebanon	Municipal Reserve	267
18.	Litani Valley-Rihan (Khalet Khazen)	Private Reserve	

### **III. Management Practices Applied**

14.a. Within the scope and objectives of the project, please identify in the table below the management practices employed by project beneficiaries that integrate biodiversity considerations and the area of coverage of these management practices? Note: this could range from farmers applying organic agricultural practices, forest management agencies managing forests per Forest Stewardship Council (FSC) guidelines or other forest certification schemes, artisanal fisherfolk practicing sustainable fisheries management, or industries satisfying other similar agreed international standards, etc. An example is provided in the table below.

Targets and Timeframe Specific management practices that integrate BD	Area of coverage foreseen at start of project	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
1. Responsible hunting practices at hunting reserves	1000 ha		
2. Wind turbines to follow international best practice operating guidelines to reduce mortality to MSBs	100 wind turbines		
3. Management of waste sites to reduce mortality and injury to MSBs	50 sites		

Please note: These figures are combined totals for the 11 participating countries as the project is seeking to mainstream MSB issues into the flyway as a whole.

14. b. Is the project promoting the conservation and sustainable use of wild species or landraces?  
 Yes  **No**

If yes, please list the wild species (WS) or landraces (L):

Species ( <i>Genus sp.</i> , and common name)	Wild Species (please check if this is a wild species)	Landrace (please check if this is a landrace)
1.		
2.		
3.		
4...		

14. c. For the species identified above, *or other target species of the project not included in the list above (e.g., domesticated species)*, please list the species, check the boxes as appropriate regarding the application of a certification system, and identify the certification system being used in the project, if any. An example is provided in the table below.

Certification Species	A certification system is being used	A certification system will be used	Name of certification system if being used	A certification system will not be used
1. E.g., Australian Rock Lobster	X		Marine Stewardship Council “Fish Forever”	
2				

14. d. Is carbon sequestration an objective of the project?

Yes  **No**

If yes, the estimated amount of carbon sequestered is: \_\_\_\_\_

#### **IV. Market Transformation and Mainstreaming Biodiversity**



15. a. For those projects that have identified market transformation as a project objective, please describe the project's ability to integrate biodiversity considerations into the mainstream economy by measuring the market changes to which the project contributed.

The sectors and subsectors and measures of impact in the table below are illustrative examples, only. Please complete per the objectives and specifics of the project.

Name of the market that the project seeks to affect (sector and sub-sector)	Unit of measure of market impact	Market condition at the start of the project	Market condition at midterm evaluation of project	Market condition at final evaluation of the project
Hunting sector	- Income from hunting reserves managed under 'responsible hunting' practices	- US\$0 at selected hunting reserves along flyway		
Energy sector (wind turbine generated electricity)	- Income from 'flyway friendly' electricity generation from wind turbines	US\$0 from 'flyway friendly' wind farms		
Ecotourism (birdwatching) at selected bottleneck sites	- Income from birdwatching tours to bottleneck sites - Number of birdwatchers to bottleneck sites - Number of tourism companies offering bird tours to bottleneck sites	US\$X from bird watching tours, Y birdwatchers, Z tourism companies at start of year 1		

15. b. Please also note which (if any) market changes were directly caused by the project.

## **V. Improved Livelihoods**

16. For those projects that have identified improving the livelihoods of a beneficiary population based on sustainable use /harvesting as a project objective, please list the targets identified in the logframe and record progress at the mid-term and final evaluation. An example is provided in the table below

Improved Livelihood Measure	Number of targeted beneficiaries (if known)	Please identify local or indigenous communities project is working with	Improvement Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
Not applicable					

## **VI. Project Replication Strategy**

17. a . Does the project specify budget, activities, and outputs for implementing the replication strategy? **Yes** \_\_\_  
No \_\_\_

17. b. Is the replication strategy promoting incentive measures and instruments (e.g. trust funds, payments for environmental services, certification) within and beyond project boundaries?

**Yes** \_\_\_ **No** \_\_\_

If yes, please list the incentive measures or instruments being promoted:

The project will undertake a feasibility study for a ‘flyway friendly’ accreditation or certification systems during phase I for the hunting, energy, tourism and waste management sectors that will be implemented during phase II.

17. c. For all projects, please complete box below. Two examples are provided.

<b>Replication Quantification Measure (Examples: hectares of certified products, number of resource users participating in payment for environmental services programs, businesses established , etc.)</b>	<b>Replication Target Foreseen at project start</b>	<b>Achievement at Mid-term Evaluation of Project</b>	<b>Achievement at Final Evaluation of Project</b>
1. Number of existing and planned mainstreaming “vehicles” into which flyway content and tools are mainstreamed	15		
2. Number of hunters endorsing responsible hunting practices and Code of Conduct	1,000		
3. Hectares of land under responsible hunting management that incorporates MSB considerations	1,000ha		
4. Number bottleneck sites with ‘flyway friendly’ practices along flyway	23		
5. Number wind turbines accredited with ‘flyway friendly’ design or operation (in line with mortality rates from international sites with ‘best practice’ designs and operations)	100		
6. % of existing waste management sites within project “vehicles” where ‘flyway friendly’ best practice measures have been adopted	80%		
7. % of EIAs for new waste management projects in LIFE Red Sea Project area and along Egyptian Red Sea Coast that address MSB concerns	100%		
8. Number tourism operators labelled ‘flyway friendly’ in target countries	22		
9. Number of new private sector projects and schemes incorporating MSB concerns in each target sector	11		
10. Number of government and private sector requests to project for ‘flyway friendly’ guidelines, best practice, and related materials	100		

Please note: These figures are combined totals for the 11 participating countries as the project is seeking to mainstream MSB issues all along the flyway.

## VII. Enabling Environment

For those projects that have identified addressing policy, legislation, regulations, and their implementation as project objectives, please complete the following series of questions: 18a, 18b, 18c.

An example for a project that focused on the agriculture sector is provided in 18 a, b, and c.

18. a. Please complete this table at work program inclusion for each sector that is a primary or a secondary focus of the project. Please answer YES or NO to each statement under the sectors that are a focus of the project.

<b>Sector Statement: Please answer YES or NO for each sector that is a focus of the project.</b>	<b>Agriculture</b>	<b>Tourism</b>	<b>Hunting</b>	<b>Energy</b>	<b>Waste management</b>
<b>Djibouti</b>					
Biodiversity considerations are mentioned in sector policy	YES	YES	NA	NO	NA
Biodiversity considerations are mentioned in sector policy through specific legislation	NO	NO	NA	NO	NA
Regulations are in place to implement the legislation	NO	NO	NA	NO	NA
The regulations are under implementation	NO	NO	NA	NO	NA
The implementation of regulations is enforced	NO	NO	NA	NO	NA
Enforcement of regulations is monitored	NO	NO	NA	NO	NA
<b>Egypt</b>					
Biodiversity considerations are mentioned in sector policy	YES	YES	NO	YES	YES
Biodiversity considerations are mentioned in sector policy through specific legislation	YES	NO	NO	NO	NO
Regulations are in place to implement the legislation	YES	NO	NO	NO	NO
The regulations are under implementation	YES	NO	NO	NO	NO
The implementation of regulations is enforced	NO	NO	NO	NO	NO
Enforcement of regulations is monitored	NO	NO	NO	NO	NO
<b>Lebanon</b>					
Biodiversity considerations are mentioned in sector policy	YES	NO	YES	NO	NO
Biodiversity considerations are mentioned in sector policy through specific legislation	YES	NO	YES	NO	NO
Regulations are in place to implement the legislation	YES	NO	NO	NO	NO
The regulations are under implementation	YES	NO	NO	NO	NO
The implementation of regulations is enforced	YES	NO	NO	NO	NO
Enforcement of regulations is monitored	NO	NO	NO	NO	NO
<b>Jordan</b>					

Biodiversity considerations are mentioned in sector policy	YES	NO	YES	NO	NO
Biodiversity considerations are mentioned in sector policy through specific legislation	NO	NO	YES	NO	NO
Regulations are in place to implement the legislation	NO	NO	YES	NO	NO
The regulations are under implementation	NO	NO	YES	NO	NO
The implementation of regulations is enforced	NO	NO	YES	NO	NO
Enforcement of regulations is monitored	NO	NO	YES	NO	NO

PLEASE NOTE: The above countries are those involved in all project activities during Tranche I (first 5 years), including double-mainstreaming activities; the remaining 7 countries will be included in Tranche II (years 6-10). NA = Not applicable because sector not identified as of concern for MSBs.

18. b . Please complete this table at **the project mid-term for each sector** that is a primary or a secondary focus of the project.

Please answer YES or NO to each statement under the sectors that are a focus of the project.

<b>Sector Statement: Please answer YES or NO for each sector that is a focus of the project.</b>	<b>Agriculture</b>	<b>Fisheries</b>	<b>Forestry</b>	<b>Tourism</b>	<b>Other (please specify)</b>	<b>Other (please specify)</b>
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						
The implementation of regulations is enforced						
Enforcement of regulations is monitored						

18. c. Please complete this table at **project closure for each sector** that is a primary or a secondary focus of the project.

Please answer YES or NO to each statement under the sectors that are a focus of the project.

<b>Sector Statement: Please answer YES or NO for each sector that is a focus of the project.</b>	<b>Agriculture</b>	<b>Fisheries</b>	<b>Forestry</b>	<b>Tourism</b>	<b>Other (please specify)</b>	<b>Other (please specify)</b>
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						
The implementation of regulations is enforced						
Enforcement of regulations is monitored						

All projects please complete this question at the project mid-term evaluation and at the final evaluation, if relevant:

18. d. Within the scope and objectives of the project, has the private sector undertaken voluntary measures to incorporate biodiversity considerations in production? If yes, please provide brief explanation and specifically mention the sectors involved.

An *example* of this could be a mining company minimizing the impacts on biodiversity by using low-impact exploration techniques and by developing plans for restoration of biodiversity after exploration as part of the site management plan.

**VIII. Mainstreaming biodiversity into the GEF Implementing Agencies' Programs**

19. At each time juncture of the project (work program inclusion, mid-term evaluation, and final evaluation), please check the box that depicts the status of mainstreaming biodiversity through the implementation of this project with on-going GEF Implementing Agencies' development assistance, sector, lending, or other technical assistance programs.

<b>Time Frame Status of Mainstreaming</b>	<b>Work Program Inclusion</b>	<b>Mid-Term Evaluation</b>	<b>Final Evaluation</b>
The project is not linked to IA development assistance, sector, lending programs, or other technical assistance programs.			
The project is indirectly linked to IAs development assistance, sector, lending programs or other technical assistance programs.			
The project has direct links to IAs development assistance, sector, lending programs or other technical assistance programs.	YES		
The project is demonstrating strong and sustained complementarity with on-going planned programs.	YES		

**IX. Other Impacts**

20. Please briefly summarize other impacts that the project has had on mainstreaming biodiversity that have not been recorded above.



## **ANNEX 10: Birdlife and Double Mainstreaming**

BirdLife International is the most appropriate agent of change to deliver this mainstreaming agenda because of: its technical expertise as world leaders in the issues of making flyways safer; its structure as a global network for knowledge management and support to national partners; the trusted role of national partners at national level and their connections to government and other spheres of influence; the representation of civil society through national partner memberships; their experience and capacity in mobilising local community action; the Partnership's track record of experience in working with actors in the productive sector; and BirdLife's experience of implementing regional, multi-country projects.

BirdLife International is a partnership of worldwide reputation working for the diversity and conservation of birds and birds' habitats. BirdLife International pursues several programs devoted to: 1) targeted research and analysis to identify and monitor threatened bird species and critical sites for the conservation of nature; 2) policy development and advocacy to promote conservation of birds and biodiversity through sustainability in the use of natural resources; 3) country conservation programs and field actions, ranging from community-based land use and management to species recovery programs benefiting both wildlife and humans; 4) networks and capacity building to strengthen global partnerships of conservation organizations and to promote worldwide interest in conservation of birds and the wider environment.

Globally, BirdLife has been a key player in efforts to make flyways safer and has amassed considerable technical expertise in this area. Examples include:

- Studies by RSPB (BirdLife in UK) and NABU (BirdLife in Germany) on impact of wind farms on birds
- Swainson's Hawk and pesticides campaign (Aves Argentinas, BirdLife partner in Argentina)
- Cooperation of BirdLife Partners in Europe with the hunting sector to pressure strategic conservation objectives<sup>11</sup>
- Building capacity for sustainable hunting of migratory birds in the Mediterranean countries of North Africa and the Middle East<sup>12</sup>

BirdLife International is a global network of national organizations, coordinated and supported through a small Secretariat with a global office (Cambridge, UK) and relevant regional offices including those in Amman (Jordan) and Nairobi (Kenya). National BirdLife Partners are independent NGOs, which are committed to working towards an agreed and common Global BirdLife Strategy. Regional and Global Councils elected from Partner organizations define regional programmes of work (discussed and approved at Annual Regional Meetings) to achieve the strategic objectives at regional level. This BirdLife International structure provides an effective and powerful global network for knowledge management, influence, and sharing of information and experience, and for coordination of, and support to, national partners at a flyway scale. The BirdLife Partnership is represented in Jordan, Lebanon, Palestinian Authority, Yemen, Saudi Arabia, Egypt and Ethiopia.

BirdLife Partners are trusted to lead on delivery of the BirdLife programme at national level. To this end, Partners have established strong collaborative relations with national governments and other institutions. For example: in Jordan, the Royal Society for Nature Conservation (BirdLife in Jordan) has been entrusted by the Government of Jordan with the responsibility of protecting the country's wildlife and natural reserves; in Ethiopia, staff of the Ethiopian Wildlife and Natural History Society (BirdLife in Ethiopia) have been actively involved in the development of the National Biodiversity Strategy and Action Plan; and in Lebanon, the Society for the Protection of Nature in Lebanon (BirdLife in Lebanon) are regularly consulted by the Government on issues ranging from conventions (e.g. CITES), the production of Environmental Impact Assessment guidelines, hunting issues and environmental legislation.

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<sup>11</sup> [http://www.birdlife.org/news/news/2004/11/hunting\\_agreement.html](http://www.birdlife.org/news/news/2004/11/hunting_agreement.html)

<sup>12</sup> [http://www.birdlife.org/action/change/sustainable\\_hunting/index.html](http://www.birdlife.org/action/change/sustainable_hunting/index.html)

A criterion for an organization to be admitted to the BirdLife Partnership is that it should be a membership-based organization with a transparent and democratic system of governance. Through their memberships, BirdLife Partners represent national civil society, and they are therefore a legitimate public voice on biodiversity issues. They are also well placed to activate and influence the general public through their membership.

Many BirdLife Partners have their roots in the mobilization of local community action. The national identity of BirdLife Partner organizations, their focus on national issues (within a regional and global framework), their national personnel (providing high levels of social and cultural affinity and understanding), and long-term presence (developing relations of trust) provide a platform for elements of the project concerned with on-the-ground, community-based action.

The BirdLife Partnership has a track record of experience in working with actors in productive sectors to achieve mainstreams of bird conservation issues. A good example of this is BirdLife's landmark effort to sign an agreement with the hunting association body in Europe. Progress towards this agreement began in 2001, when the European Commission launched the Sustainable Hunting Initiative (SHI) to create a constructive dialogue between conservationists (represented by BirdLife International) and hunters (represented by FACE – the Federation of Associations for Hunting and Conservation of the EU). In October 2004 BirdLife International and FACE signed an agreement recognising that the conservation of bird species and their habitats is a common objective. They also agreed to cooperate in promoting strategic conservation priorities, such as halting biodiversity decline by 2010, protecting sites, and reforming the Common Agricultural Policy.

Another example is BirdLife's work on the reform of agricultural policy in Europe. In 2001, the EU agreed to take measures to halt biodiversity decline by 2010 and to mainstream the environment in the Common Agricultural Policy (CAP). It is currently in the process of redesigning its agricultural policy support system as it moves towards eastern enlargement, and World Trade talks further embrace agricultural trade liberalisation. This reform offers an opportunity to turn the current system of intensive farming towards a more sustainable kind of agriculture. The BirdLife International Partnership in Europe is running a European campaign to ensure significant changes are seen in agriculture, which protect and improve Europe's natural landscapes and wildlife and which support sustainable rural and farming communities<sup>13</sup>.

BirdLife International will be able to draw from and build on its experience and lessons-learned from other regional, multi-country projects, including experience from implementing the 10-country "African NGO-Government Partnerships for Sustainable Biodiversity Action Project" across Africa.

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<sup>13</sup> [http://www.birdlife.org/action/campaigns/farming\\_for\\_life/index.html](http://www.birdlife.org/action/campaigns/farming_for_life/index.html)

**ANNEX 11: Double Mainstreaming Vehicles**

**Egypt LIFE Red Sea Sustainable Economic Growth**

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
A. Job Creation and Infrastructure	<ul style="list-style-type: none"> <li>➤ Developing and supporting implementation of a plan to generate job opportunities focusing on WGNP infrastructure, solid waste management and ecotourism</li> <li>➤ Establish SWM system(s) at selected sites to handle IDC, municipal, and safari boat wastes</li> </ul>	<ul style="list-style-type: none"> <li>➤ Creation of jobs and income for local communities</li> <li>➤ SW management systems operational and managed by local communities.</li> </ul>		<p>SWM system piloted in the selected areas is inductive to sound environmental management considerations at the level of implementation of the system through:</p> <ol style="list-style-type: none"> <li>1.enforcement of policy, legal and institutional frameworks</li> <li>2.development of models for community and private sectors involvement</li> <li>3.capacity development for SWM at planning, design, management and operations</li> <li>4.public awareness and community ownership of the SWM system</li> </ol> <p>Provide guidance and supervision for the design of the sites landscape and its implementation</p>	<p><b>Solid waste Management systems include MSB concerns at design and implementation level:</b></p> <ol style="list-style-type: none"> <li><b>1. Advice on siting.</b> Advise on the location of planned landfill sites in relation to flyways and known bottlenecks - away from potential hazards (wind farms, power lines, airports).</li> <li><b>2. Advice on design.</b> Advise on 'best designs' for minimizing injury and mortality of MSBs. This could include baffle devices for sewage ponds to prevent entry of birds or designs which make it easy for birds to escape if they become trapped, etc. The project would look to pilot some of these techniques. This could be a good link to the private sector and could generate a lot of potential work.</li> <li><b>3. Advice on operation.</b> Advise on 'best designs' and 'best operating practice' for minimizing injury and mortality of MSBs. The project could look at use of bioacoustics methods, propane canons and other scaring devices to drive birds away from these sites (often used airports) during the migration season, alternatives to the use of poisoned baits aimed at killing scavengers at landfill sites, promotion of in-filling of landfills, etc. The project could also assess the feasibility of alternatives, e.g. local recycling and composting schemes to reduce organic materials that have the additional benefit of reducing the attraction to soaring birds. We could also look to promote properly managed sites as sites for bird</li> </ol>



Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
					watching.
B. Sustainable Tourism -Enhanced Competitiveness of Egypt in International Natural and Cultural Tourism Market	<ul style="list-style-type: none"> <li>➤ Developing and implementing an ecotourism institutional framework for regulatory, financial, marketing and management support.</li> <li>➤ Build capacity and support local community(ies) to develop ecotourism projects</li> <li>➤ Support promotion, branding and enhancing competitiveness of SRS ecotourism in international, regional and local market</li> </ul>	<ul style="list-style-type: none"> <li>➤ Develop community ecotourism projects in the selected sites based on their carrying capacity.</li> <li>➤ Eco-tourism training for local communities</li> <li>➤ Branding and marketing of the sites.</li> </ul>		<p>Institutional framework for ecotourism is developed and adopted in selected sites</p> <p>Provide TA for the design of selected ecotourism projects</p> <p>Conduct Ecotourism training for local community members.</p> <p>Share in the establishment of bird watch needed infrastructure and associated services (Trails, shaded areas, signage, SW services.).</p> <p>In cooperation with Tourism Authorities support promotion, and branding of SRS ecotourism in international, regional and local market</p>	<p><b>Ecotourism framework accounts for “flyway friendly” issues at regulatory, financial, marketing and management support level, including:</b></p> <ol style="list-style-type: none"> <li>1. Fact sheets on sites with maps showing routes and best places to watch</li> <li>2. Feasibility study and identification of opportunities for ecotourism at bottleneck sites</li> <li>3. Improving linkage between local hoteliers, tour companies, chambers of commerce and tourism departments</li> <li>4. Input to national and local government policy and planning reviews</li> <li>5. Linkage with international tour companies and markets to promote region’s bottleneck sites to eco-tourists</li> </ol> <p><b>Training modules and delivery of training on MSB concern for ecotourism sector, including:</b></p> <ol style="list-style-type: none"> <li>1. Training of tour guides in leading birdwatching tours and MSB identification (private sector - tour companies to pay for this)</li> <li>4. Training/seminars to tours companies, hoteliers and municipal tourism departments on MSB issues and opportunities for income generation</li> <li>8. Awareness raising and training of LIFE Red Sea staff in MSB issues related to tourism</li> <li>9. Raising awareness on the potential</li> </ol>

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
					<i>economic value of bird watching and ecotourism at bottleneck sites</i> <b>Include MSB concern as part of ecotourism branding</b>
C. Conservation Management	<ul style="list-style-type: none"> <li>➤ Support the institutional and financial infrastructure of environmental management of the SRS with main focus on RSPs</li> <li>➤ Strengthen RSPs staffing and technical capacity</li> <li>➤ Continue acquisition and analysis of data for present and future conservation management (including serving the needs of CZM)</li> </ul>	<ul style="list-style-type: none"> <li>➤ The institutional and financial infrastructure for environmental management in the Red Sea is strengthened.</li> <li>➤ A comprehensive database for conservation management is established</li> </ul>		<p>Enforcement of legislation is strengthened for all environmental management related aspect of the LIFE Red Sea project</p> <p>Patrolling program is put in place.</p> <p>Legal pursuit system operated by Red Sea rangers</p> <p>Capacity building for staff is conducted</p> <p>Provision of monitoring equipments for environmental aspect</p> <p>WGNP equipped and trained.</p> <p>Database for conservation management is established</p>	<p>Enforcement of legislation is strengthened regarding soaring birds concerns in particularly at the level of <u>solid waste management and tourism</u> activities</p> <p>Capacity needs assessment and delivery of training related to MSB for concerned stakeholders</p> <p>Monitoring, surveys and training to establish a MSB related database: <i>the monitoring programme should determine injury and mortality at planned and some existing waste sites to ensure that whatever mitigation designs implemented were effective and to improve designs further. The project would look to train vehicle /waste site staff in bird ID and monitoring and once they are competent they would take over the scheme.</i></p>
D. Cross Cutting Activities	<ul style="list-style-type: none"> <li>➤ Environmental assessment (EA) for various project components/tasks of LIFE Red Sea</li> <li>➤ Environmental education, awareness and communications</li> </ul>	<ul style="list-style-type: none"> <li>➤ Red sea activities are in line with the environment policy programme</li> <li>➤ Public awareness and communication programme is</li> </ul>		<p>EAs are conducted for the Red Sea activities related to solid waste and ecotourism sector</p> <p>Environmental education, awareness and communication activities cover the solid waste and ecotourism sector</p>	<p><b>Environmental Assessment for solid wastes and ecotourism components of LIFE Red Sea includes “flyway friendly” considerations.</b> <i>The project could develop information, guidance and training to on integration of MSB concerns in EIAs being undertaken on waste management developments. This could also inform the National Policy</i></p>

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	<ul style="list-style-type: none"> <li>➤ Develop project M&amp;E system, including tracking the value of Red Sea biodiversity</li> <li>➤ Images, surveys, maps and GIS Services</li> </ul>	<p>developed and implemented</p> <ul style="list-style-type: none"> <li>➤ A biodiversity monitoring programme is established based on state-of-the-art tools and technologies</li> </ul>		A biodiversity monitoring programme is established	<p><i>and Planning process on waste management, at national and municipal level, especially as the project vehicles is piloting the implementation of the environment policy programme .</i></p> <p><b>Awareness related to MSB, RARE...</b>  <i>This would include background information to managers and general public is provided. It could also include provision of a training module on MSB issues and how MSBs are impacted by the waste management sector to waste site managers, and awareness raising in communities around bottleneck site on dumping of rubbish and its potential risk to MSBs.</i></p> <p><b>Management and reporting reflects “double mainstreaming” approach</b></p>
TOTALS			<b>\$12,000,000</b>	<b>\$1,100,000</b>	<b>\$6,000,000</b>

## Djibouti Power Access

Task Title	Actions	Deliverables	Overall cost	Baseline Co-financing	Soaring Birds Input
A. Construction of a 2 MWe wind-farm in Ali-Sabieh		<p>➤ In Ali-Sabieh, the proposed component comprises the erection of a 2 MWe wind-farm to be interconnected through a 2 kilometre transmission line and substation to the existing electricity network. The location of the proposed wind-farm has been subject to EIA.</p>		<p>Collisions and birds mortality monitoring and exchange of experience</p> <p>Assessments and implementation access necessary resources at conception and implementation level, and necessary training of staff of future investors regarding environmental protection</p>	<p><i>Turbine siting</i> Not seeking to change where the wind farm is located (at Ali-Sabieh) but could provide guidance on the micro-siting of the individual turbines as this can be critical, if the actual siting has not been decided. In Djibouti, the birds will probably be tired and flying low after the sea crossing, and thus at greater risk from wind turbines (or the power lines and pylons associated with them).</p> <p>One of the reasons for high mortality at some of the Californian sites was due to the substrate on which the turbines were built – concrete bases are recommended as they do not allow rodents and other ground dwellers to establish populations which can attract birds to feed.</p> <p>Similarly siting near marshy areas, and on a larger scale wetlands, can attract water birds to feed, e.g. pelicans, storks, cranes, and some of the raptors.</p> <p><i>Development and operation of monitoring program</i></p> <p>Monitoring program to determine mortality/MW at the wind-farm and turbine levels (this is based on the recommendation of the WB EIA). Would include surveys and training of wind-farm staff in bird ID and mortality analysis. Feed results into the strategy to scale-up wind energy to 10MW</p> <p><i>Testing mitigation measures of mortality rates are high</i> Investigate various schemes being tested in the US and Europe, including: factoring critical migration periods into the turbine operation schedule, painting blades with UV paints</p> <p><i>Training of wind-farm managers</i> Awareness in MSB issues, field surveys and monitoring techniques</p> <p><i>Awareness raising around the site</i> Community sensitisation of the wind-farm’s bird mitigation efforts</p> <p><i>Flyway friendly design</i> The Soaring Bird project’s long term goal is to develop a “flyway friendly” accreditation scheme. Wind-farm would be used to help develop a “flyway friendly” brand that could be</p>

Task Title	Actions	Deliverables	Overall cost	Baseline Co-financing	Soaring Birds Input
					used by the wind-farm and the electricity it sells
B. Institutional restructuring of the power sector	<ul style="list-style-type: none"> <li>➤ An options study financed by PPIAF is about to start which will identify options for the Government of Djibouti to consider</li> <li>➤ The project will implement the selected option which will include selection and contract award with the private sector and the formulation of a legal and regulatory framework</li> </ul>			<p>Institutional options will take into consideration environmental considerations</p> <p>Legal and regulatory framework are developed in line with environmental considerations</p>	Contribution of Migratory Soaring Bird (MSB) data and considerations into any national wind-power generating strategy
C. GEF funded component for the renewable energy aspects will supplement the overall limited IDA envelope available	<ul style="list-style-type: none"> <li>➤ A GEF consultant is currently identifying the scope of a GEF supported component and how GEF resources can be maximized under the project.</li> </ul>			This could be considered as a baseline rather than as cofinancing	Contribute to the choice of area in which the wind farms are sited, through: provision of national MSB data including migration data overlays for site selection and demarcation of critical bottleneck boundaries; input into field surveys as part of the EIA, etc
TOTALS			<b>IDA \$7M GEF \$3M</b>	<b>\$400,000</b>	<b>\$300,00</b>

## Lebanon Sustainable Hunting Project

Project Task	Actions	Deliverables	Overall cost	Co-financing	GEF Input
A. Information gathering	<ul style="list-style-type: none"> <li>➤ Establishing national data gathering arrangements</li> <li>➤ Conducting data collection in participating countries</li> <li>➤ Drafting of national reports</li> <li>➤ Drafting of position papers</li> <li>➤ Project webpage update</li> </ul>	<ul style="list-style-type: none"> <li>➤ Data collection methodology discussed documented</li> <li>➤ Reports, letters, and other sources of information</li> <li>➤ National reports and Position Papers distributed</li> <li>➤ Reports and Papers available for download from Project website</li> </ul>	<b>€9,000</b>	<ul style="list-style-type: none"> <li>Data gathering arrangements</li> <li>Conducting data collection</li> <li>National reports and position papers</li> <li>Project webpage</li> </ul> <p style="text-align: center;"><b>€7,000</b></p>	<p>MSB identification training provided for data gathering Collect data for project's indicators</p> <p>MSB data included in national reports and position papers <b>\$50,000</b></p>
B.Guidelines for Sustainable Hunting	<ul style="list-style-type: none"> <li>➤ Guidelines for Working Group established</li> <li>➤ Draft Guidelines and Code of Practice produced</li> <li>➤ Sub-regional meetings to discuss draft Guidelines and Code of Practice (CoP)</li> <li>➤ Revision of Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>➤ Documentation on group meetings and activities in Project Progress Reports (PPR)</li> <li>➤ Draft document Reports on meetings Workshop report,</li> <li>➤ Revised Guidelines and Code of Practice</li> <li>➤ Final version of Guidelines and CoP</li> </ul>	<b>€30,370</b>	<p>All activities <b>€25,370</b></p>	<p>MSB considerations included in the Guidelines</p> <p>Strategy paper reflects MSB considerations</p> <p>Guidelines are shared with other countries on flyway</p> <p>Study tour to Lebanon for other countries on flyway where hunting has been identified as a threatening sector <b>\$50,000</b></p>

Project Task	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	and CoP  ➤ Production and distribution of final draft of Guidelines and CoP  ➤ Development and distribution of strategy paper on how best to implement Guidelines and CoP in region	➤ 1000 copies of Guidelines and Code of Practice (in Arabic, French and English) 10 copies of strategy document			
C. Promotion of sustainable hunting behaviour	➤ Contracting of survey specialists  ➤ Development of hunter survey methodology  ➤ Hunter Surveys Contracting of design specialists  ➤ Design of educational materials  ➤ Production and distribution of educational materials  ➤ Presentations to hunting groups on migratory birds and the need for their conservation and more responsible hunting	➤ Contract with ToR Brief report on agreed methodology      ➤ Documentation of establishment and meetings (every 6 months)  ➤ Reports of hunter attitudes and behaviors  ➤ Records of meetings between project partners, hunting groups and design specialists and	<b>€36,350</b>	All activities <b>€30,350</b>	MSB specific information included in the public awareness campaign, materials and presentations  Establish links to the Soaring Birds RARE campaign <b>\$50,000</b>

Project Task	Actions	Deliverables	Overall cost	Co-financing	GEF Input
		<p>agreed design and approach</p> <p>30,000 posters (7,000 Arabic, 23,000 Arabic and French), and bird identification guides</p> <p>Documentation of talks, lectures, visits, etc</p>			
D.Improving public awareness	<ul style="list-style-type: none"> <li>➤ Development and distribution of national press information kits</li> <li>➤ Project updates for press</li> <li>➤ Development of public awareness programme</li> <li>➤ Specialists identified and contracted for design of educational materials</li> <li>➤ Development of public awareness materials</li> <li>➤ Production and distribution of public awareness materials</li> <li>➤ Public presentations to schools, natural history groups, etc on migratory birds and the need for their conservation</li> </ul>	<ul style="list-style-type: none"> <li>➤ 100 local Press kits on Project (in various languages). produced</li> <li>➤ Meetings between project Partners and key stakeholders</li> <li>➤ Contract with ToR</li> </ul> <ul style="list-style-type: none"> <li>➤ Brief report on approach adopted and list of target venues and groups for focus of public awareness campaign</li> </ul> <p>14,000 posters (4,000 in Arabic, and 10,000 in French and Arabic), 4,000 school kits (2,000 in Arabic and 2,000 in Arabic and French) Documentation of talks, lectures, etc</p>	<b>€8,500</b>	All activities <b>€50,500</b>	MSB specific information included in the public awareness campaign, materials and presentations Establish links to the Soaring Birds RARE campaign <b>\$50,000</b>



<b>Project Task</b>	<b>Actions</b>	<b>Deliverables</b>	<b>Overall cost</b>	<b>Co-financing</b>	<b>GEF Input</b>
F. Resolving conflict and building partnerships	<p>Review of institutional capacity needs</p> <p>Design and production of workshop and materials</p> <p>National workshops on communication and conflict resolution</p> <p>Distribution of workshop materials through BirdLife network</p> <p>Development of strategy paper on communication and information exchange relating to hunting issues</p>	<p>Report on capacity needs of national and local government bodies and conservation NGOs with regard to training in conflict resolution, ability to network and advocacy work</p> <p>50 sets of resource materials for in Arabic and French</p> <p>Reports on training workshops</p> <p>Strategy papers</p>	<b>€16,300</b>	All activities <b>€13,300</b>	Development of MSB modules for workshops <b>\$20,000</b>
G. Compliance with international agreements	<ul style="list-style-type: none"> <li>➤ Data gathering</li> <li>➤ Drafting and review of Position Papers</li> <li>➤ Production and distribution of Position Papers</li>   <li>➤ Identification of key international meetings for government attendance</li>   <li>➤ Facilitation of key government staff to meetings</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reports, letters, and other sources of information</li> <li>➤ Position papers on membership of international agreements and use of lead shot</li> <li>➤ 100 copies of each of the two Position Papers (in Arabic, English and French).</li> <li>➤ List of relevant international meetings and of key government personnel.</li> <li>➤ Reports on participation at international meetings</li> <li>➤ Reports of attendance, including</li> </ul>	<b>€5,775</b>	All activities <b>€5,775</b>	Support to all activities <b>\$10,000</b>

Project Task	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	<ul style="list-style-type: none"> <li>➤ Participation of selected MTC governments at AEWA meetings</li> <li>➤ Input to AEWA policy process</li> </ul>	<ul style="list-style-type: none"> <li>suggested policy changes, by government staff.</li> <li>➤ Relevant Project documents and associated materials made available to AEWA Secretariat as produced</li> </ul>			
H. Ensuring Project sustainability	<ul style="list-style-type: none"> <li>➤ Establishment of a Regional Action Plan Working Group(s)</li> <li>➤ Draft Regional Action Plan(s) for the Conservation of Migratory Birds</li> <li>➤ Sub-regional meetings to discuss draft RAP</li> <li>➤ Regional Workshop to review RAP(s)</li> <li>➤ Production and distribution of final RAP(s)</li> <li>➤ Development of strategy for implementation of RAP</li> <li>➤ Drafting of follow-up concept proposals</li> </ul>	<ul style="list-style-type: none"> <li>➤ Minutes of meetings and correspondence</li> <li>➤ Draft circulated before Regional Workshop.</li> <li>➤ Report of meeting, 150 copies of RAP produced</li> <li>➤ Report, strategy document</li> <li>➤ Concept papers and outline proposals</li> </ul>	<b>€8,980</b>	All activities <b>€8,980</b>	Linking the regional action plan process to the Soaring Birds regional flyway facility Production of RAP and dissemination to the SBP partners <b>\$30,000</b>
J.Task management and reporting	<ul style="list-style-type: none"> <li>➤ Appointment of Project staff</li> <li>➤ Project Offices established and operational</li> <li>➤ Quarterly Project Progress reports</li> </ul>	<ul style="list-style-type: none"> <li>➤ Staff contracts with ToRs</li> <li>➤ Purchase invoices for office equipment</li> <li>➤ Project Progress Reports, compiled</li> </ul>	<b>€77,388</b>	Project management arrangements and reporting requirements will integrate “double mainstreaming” as part of operational	Monitoring of impact and success of double mainstreaming Reporting to EU on the provision of technical content Reporting to UNDP on the service contract <b>\$40,000</b>

Project Task	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	<ul style="list-style-type: none"> <li>➤ Reports to EU Commission</li> <li>➤ Final Report to EU Commission</li> <li>➤ Project management and operational arrangements in place</li> <li>➤ Additional fund raising to meet funding shortfall</li> <li>➤ Project Audit</li> <li>➤ Mid-term Project review</li> <li>➤ End of Project Review</li> </ul>	<ul style="list-style-type: none"> <li>every 3 months</li> <li>➤ Report due every 6 months</li> <li>➤ Guidance notes on project management and its operation for Project staff.</li> <li>➤ Funding proposals, secured funds evidenced by letters and contracts</li> <li>➤ Audit report Carried out by BirdLife Staff Carried out by independent consultant and/or BirdLife staff</li> </ul>		arrangements <b>€47,388</b>	
TOTALS			<b>€287,758</b> <b>\$351,065</b>	<b>€227,758</b> <b>US\$277,865</b>	<b>\$460,000</b>

**Supporting Enforcement of Environmental Legislation (SEEL), Lebanon**

<b>Task Title</b>	<b>Actions</b>	<b>Deliverables</b>	<b>Overall cost</b>	<b>Co-financing</b>	<b>GEF Input</b>
A. Project Mobilization	<ul style="list-style-type: none"> <li>➤ Setting the office</li> <li>➤ Preparing the project inception report</li> <li>➤ Implement procedures to select external assistant</li> <li>➤ Prepare project website</li> <li>➤ Launch the project through a major event</li> </ul>	<ul style="list-style-type: none"> <li>➤ Project mobilized and exposed</li> <li>➤ Website finalized</li> <li>➤ Launching event and materials finalized</li> <li>➤ External assistants selected according to EC LIFE and local procedure</li> </ul>	<b>€41, 171</b>	Integrating “double mainstreaming” as part of the project’s inception (1.2.1) Finalizing SPNL technical content service contract with UNDP as part of the project’s external assistance (1.3.1) <b>€6,861</b>	Introduce the MSB flyway and impacts from weak law enforcement in the target sectors (hunting, agriculture, waste and energy) as part of the project’s inception <b>US\$10,000</b>
B. Review of Environmental Jurisprudence in Lebanon and International Experience	<ul style="list-style-type: none"> <li>➤ Review all existing environmental jurisprudence cases by sectors in Lebanon</li> <li>➤ Analyze and classify information in on-line database format</li> <li>➤ Conduct a comprehensive review of European jurisprudence with focus on countries with similar legislation culture (such as France)</li> <li>➤ Perform a comparative analysis between the national and the European case studies and prepare lessons-learned guide to be used as an effective tool by judges for guidance in similar cases</li> <li>➤ Prepare publication on Environmental Jurisprudence in Lebanon (to be used as key reference)</li> <li>➤ Define mechanism for updating the publication (including</li> </ul>	<ul style="list-style-type: none"> <li>➤ Publication on environmental jurisprudence in Lebanon with comparative analysis with European cases to be used as tool for enforcement and adequate decisions during cases of environmental non-compliance</li> <li>➤ On-line database of environmental jurisprudence</li> </ul>	<b>€189,036</b>	Review of jurisprudence cases in the flyway’s target sectors (2.1.2) Review of international jurisprudence in the flyway’s target sectors (2.3.1) Comparative analysis of case studies in the flyway’s target sectors (2.4.1) <b>€43,624</b>	Review of jurisprudence cases specifically related to birds Input to the publication and search engine <b>US\$40,000</b>

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	on-the-job training of ministry staff)				
C.Establishment of Environmental Experts Testimony Database	<ul style="list-style-type: none"> <li>➤ Identify environmental experts in Lebanon per sector/field</li> <li>➤ Establish categories of experts according to Lebanese system</li> <li>➤ Develop necessary steps to formalize the list (needed administrative steps, legal procedures including application decree, etc.)</li> <li>➤ Conduct training of identified experts on environmental jurisprudence and cost of environmental degradation for compensation purposes based on national and European cases</li> </ul>	<ul style="list-style-type: none"> <li>➤ List of environmental experts testimony per category legally allowed to serve as witnesses</li> <li>➤ Training materials for environmental experts and judges finalized based on national and European experiences</li> </ul>	<b>€63,162</b>	Identifying experts in the flyway's target sectors (3.1.2) Training of experts from the flyway's target sectors (3.3.1) <b>€9,717</b>	Identifying MSB experts relevant for the database Development of MSB training modules Training of experts and judges in flyway issues, the impacts from the target sectors and legislative enforcement Training of experts and judges in international law relevant to MSBs (CBD, CMS, etc) <b>US\$50,000</b>
D.Introduction of Environmental Course in the Institute of Judicial Training at the Ministry of Justice	<ul style="list-style-type: none"> <li>➤ Review of existing curriculum of the Institute where all judges follow a series of courses for 3 years</li> <li>➤ Review the course in similar institutes in Europe</li> <li>➤ Develop new course on Enforcement of Environmental Legislation in Lebanon with comparative analysis with European cases</li> </ul>	<ul style="list-style-type: none"> <li>➤ New course on enforcement of environmental legislation developed based on national and European experiences</li> <li>➤ Course formally adopted in the Institute of Judicial Training</li> </ul>	<b>€74,440</b>	Curriculum needs assessed in the flyway's target sectors (4.2.1, 4.2.2) Developing new course material (4.3.2) Testing the new course (4.3.3) Finalizing the course (4.3.4) Formally introduce new course in the Institute's curricula (4.4.1) <b>€40,604</b>	Review of environmental legislation materials relevant to MSBs Needs assessment Development of new modules for the course specific to the enforcement of legislation relevant to MSBs <b>US\$50,000</b>

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
	<ul style="list-style-type: none"> <li>➤ Formally include course in the curriculum of the Institute (prepare legal and administrative procedures, including necessary application decree)</li> </ul>				
E. Capacity Building, Awareness and Dissemination Program	<ul style="list-style-type: none"> <li>➤ Organize seminars for district attorneys, litigation judges, civil jurisdiction judges and trainee judges</li> <li>➤ Launch project deliverable especially environmental course at the Institute of Judicial Training</li> <li>➤ Organize awareness tour in European courts</li> <li>➤ Introduce environmental section in Judicial Review Publication and establish mechanism for its sustainability</li> </ul>	<ul style="list-style-type: none"> <li>➤ Awareness seminar materials for district attorneys prepared</li> <li>➤ Awareness seminar and training materials for litigation judges prepared</li> <li>➤ Awareness seminar and training materials for civil jurisdiction judges prepared</li> <li>➤ Awareness seminar and training materials for trainee judges prepared</li> <li>➤ Project deliverables disseminated in major deliverables launching event</li> <li>➤ Report on European awareness tour for judges prepared</li> <li>➤ Environmental section included in issues of Judicial Review Publication</li> </ul>	<b>€115,237</b>	<p>Organization of awareness seminars (5.1)</p> <p>Preparing materials related to the flyway's target sectors for the Judicial Review (5.5.1)</p> <p>€ 48,015</p>	<p>Input of MSB and flyway issues into the awareness seminars</p> <p>US\$30,000</p>
F. Reporting on process	<ul style="list-style-type: none"> <li>➤ Develop the inception report</li> <li>➤ Develop progress/interim reports</li> <li>➤ Develop the final reports</li> </ul>	<ul style="list-style-type: none"> <li>➤ Inception report prepared</li> <li>➤ Progress and interim reports prepared</li> <li>➤ Final report prepared</li> </ul>	<b>€25,792</b>	<p>Inclusion of flyway related issues in the project's reports (6.1, 6.2)</p> <p>€ 1,000</p>	<p>Reporting to SEEL on the provision of technical content</p> <p>Monitoring of impact and success of double mainstreaming</p> <p>US\$30,000</p>

<b>Task Title</b>	<b>Actions</b>	<b>Deliverables</b>	<b>Overall cost</b>	<b>Co-financing</b>	<b>GEF Input</b>
G.UNDP Co-financing	➤ Wherever needed		<b>€108,498</b>	Support for the double mainstreaming concept Oversight of the SPNL service contract € 27,125	Reporting to UNDP on the service contract US\$10,000
TOTALS			<b>€617,336</b> <b>US\$753,150</b>	<b>€176,946</b> <b>US\$215,874</b>	<b>US\$220,000</b>

## Lebanon Agriculture Development Project

Task Title	Actions	Deliverables	Overall cost	Co-financing	GEF Input
A. Technical Advisory Services	<ul style="list-style-type: none"> <li>➤ Review situation of existing advisory services</li> <li>➤ Recruit technical advisors</li> <li>➤ Prepare and carry out training of trainers</li> <li>➤ Provide technical assistance to trained staff</li> <li>➤ Train agricultural advisors</li> <li>➤ Develop and disseminate tech-packs, newsletter and internet website</li> </ul>	<ul style="list-style-type: none"> <li>➤ Global strategy regarding the extension services is finalized with clear roles of each stakeholder (MOA, private sector)</li> <li>➤ Technical information are made available and widely disseminated</li> </ul>	<b>€400,000</b>	<p>40 agricultural advisors and 8 MoA staff provide environmental expertise</p> <p>Environment and MSB focal point is appointed and acts as liaison</p> <p>Inclusion of environmental considerations in training</p> <p>Environmental considerations included in tech-packs etc <b>\$50,000</b></p>	<p>Experts on MSB are identified as part of the review and technical advisory provision</p> <p>Tech-packs, newsletter and website refer to findings related to MSB</p> <p>Experts on MSB are involved in groups visits and trainings <b>\$70,000</b></p>
B. Pest and Disease Forecast	<ul style="list-style-type: none"> <li>➤ Prepare grant contract with LARI and CNRS</li> <li>➤ Establish required stations</li> <li>➤ Measure volume of pesticides used and level of residues</li> <li>➤ Coordinate follow up and ensure sustainability</li> </ul>	<ul style="list-style-type: none"> <li>➤ Field stations for pest and diseases forecasting are established</li> <li>➤ Reliable and sustainable daily information service is established providing support to an efficient IPM</li> </ul>	<b>€2million</b>	<p>Establishment of agreements with LARI and CNRS that provide basis for monitoring impacts on MSBs</p> <p>Measurement of pesticides used and level of residues <b>\$200,000</b></p>	<p>Monitor the impact of pesticides on MSBs</p> <p>Research on links between pesticides and MSBs</p> <p>Develop “flyway friendly” pesticide use <b>\$150,000</b></p>
C. Market Information Service	<ul style="list-style-type: none"> <li>➤ Review and upgrade MOA and private sector services and train staff</li> <li>➤ Establish functioning MIS based on private and public sector partnership</li> <li>➤ Support market forecast and outlook at MOA</li> <li>➤ Prepare and deliver twinning</li> <li>➤ Develop and disseminate newsletter and internet website</li> </ul>	<ul style="list-style-type: none"> <li>➤ signed agreements with entities and collaboration agreements</li> <li>➤ complete, reliable and sustainable domestic marketing information service is available and widely disseminated</li> </ul>	<b>€300,000</b>	<p>Establish MIS and market forecasts that can be used for “flyway friendly” products</p> <p>Develop domestic marketing information <b>\$100,000</b></p>	<p>Pilot agreements ensuring promotion of “flyway friendly” products</p> <p>Develop “flyway friendly” marketing material</p> <p>Assess feasibility of “flyway friendly” markets for agricultural products <b>\$100,000</b></p>



<b>Task Title</b>	<b>Actions</b>	<b>Deliverables</b>	<b>Overall cost</b>	<b>Co-financing</b>	<b>GEF Input</b>
E. Support to artisanal and local products	<ul style="list-style-type: none"> <li>➤ Public awareness and workshops to promote brand names</li> <li>➤ Technical assistance and public awareness for UPOV convention</li> <li>➤ Niche products supported</li> </ul>	<ul style="list-style-type: none"> <li>➤ brand name linked to special high quality products and territories established and promoted</li> <li>➤ Lebanon joins the UPOV convention</li> <li>➤ Niche produce developed</li> </ul>	<b>€60,000</b>	Public awareness workshops to promote brand names Niche products supported <b>\$70,000</b>	Develop “flyway friendly” input for public awareness workshops  Adopt MSB bottlenecks as geographical indicators for territories and niches produce  Develop niche “flyway friendly” products <b>\$75,000</b>
F. Support to the Creation of Farmers Groups	<ul style="list-style-type: none"> <li>➤ Information, public awareness and sensitization towards farmer</li> <li>➤ Farmer groups elaborate a common strategy and design internal regulation and legally register</li> <li>➤ Farmer groups prepare business plans and Good Agriculture Practice charts</li> <li>➤ Farmer groups appraised by the selection committee</li> <li>➤ Registration of farmers and farmer groups in special CCIA/ADP registers</li> <li>➤ Bar code system and farmer ID delivered to farmer groups and members</li> </ul>	<ul style="list-style-type: none"> <li>➤ Farmer groups dealing with marketing established and formally registered</li> <li>➤ Group members benefit from economies of scale</li> </ul>	<b>€10,000</b>	Information material and awareness campaigns  Establish farmer groups  Prepare business plans and Good Agriculture Practice charters <b>\$200,000</b>	Provide MSB information material for awareness campaigns  Introduce MSB concerns to farmer groups  Develop “flyway friendly” practice guidelines for Good Agriculture Practice Charters <b>\$200,000</b>
<b>TOTALS</b>			Total project cost €12 million <b>\$14,640,000</b>	<b>\$620,000</b>	Monitoring of impact and success of double mainstreaming Reporting to MoAg/EU project team on the provision of technical content Reporting to UNDP on the service contract <b>\$40,000</b> <b>Total GEF funding</b> <b>\$635,000</b>

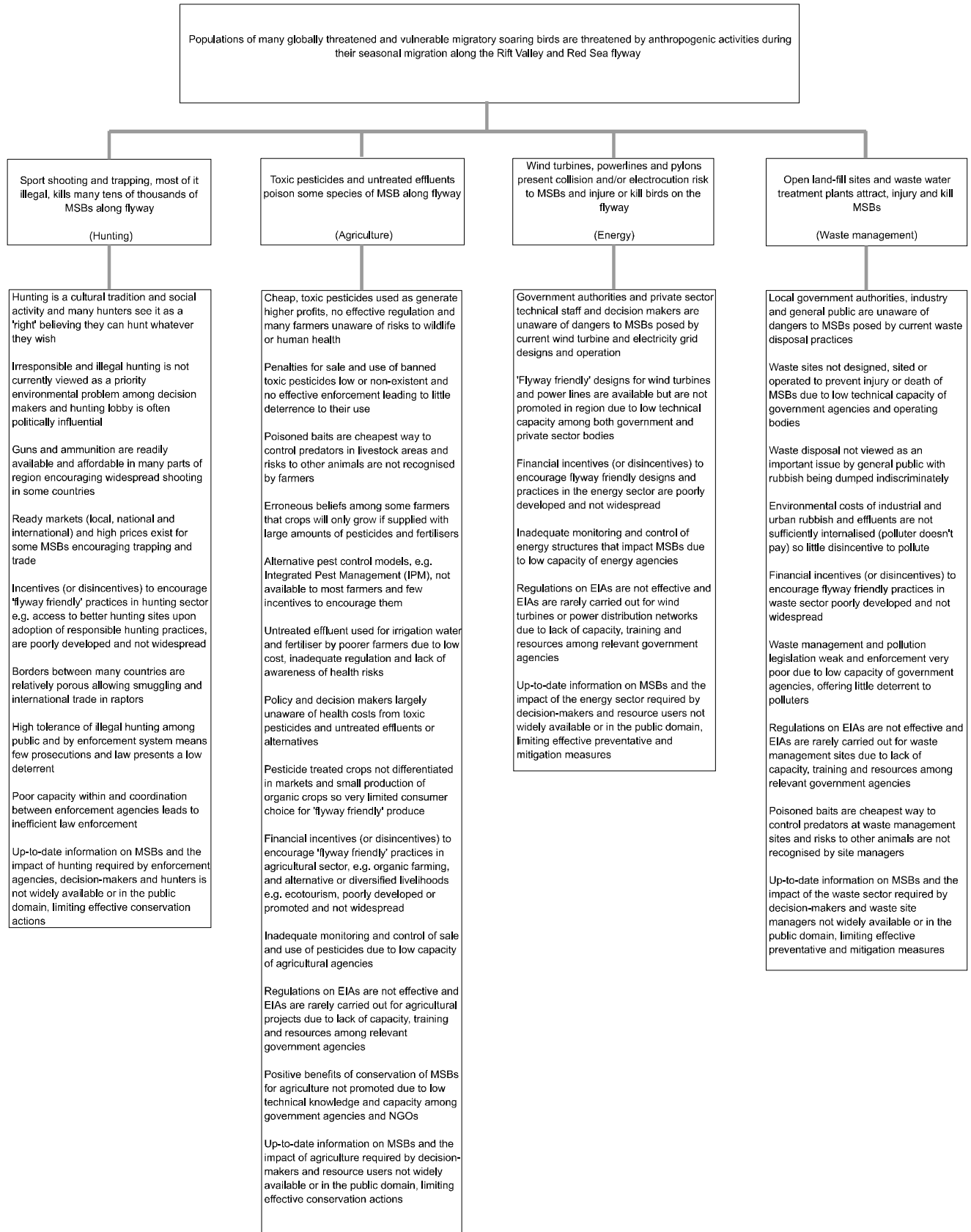
**Jordan RSCN's Wildlife Enforcement Section**

Task Title	Actions	Deliverables	Overall Cost	Co-Financing	GEF Input
<p>A. To maintain effective and operational networks between RSCN, the police force, and other key players to enforce the wildlife and hunting laws and conventions.</p>	<ul style="list-style-type: none"> <li>➤ Joint field patrols and field training for the <b><u>Police Officers</u></b> are conducted</li> <li>➤ Hunting database is updated with the environment branch within the police HQ</li> <li>➤ Training needs assessed and partnership evaluated</li> <li>➤ Investigate the feasibility of the establishment of the <b><u>Environment Dept within the Police</u></b></li> <li>➤ Nominated police officers in each district as <b><u>Wildlife Liaison Officers</u></b></li> <li>➤ Visits to boarders and training for staff involved in CITES is conducted</li> <li>➤ Regional cooperation mechanisms are established through holding a regional workshop</li> <li>➤ Continuously monitor the boarders and the local markets for any violation of CITES</li> </ul> <p>Focused <b><u>Hunters Groups</u></b> are defined with clear working mechanisms            Awareness program is reviewed and implemented            Targets and field working system with <b><u>MoA field staff</u></b> are defined and implemented</p>	<ul style="list-style-type: none"> <li>➤ Effectively managed network between RSCN and police Force to enforce the wildlife protection laws properly.</li> <li>➤ To effectively support the establishment of a separate environmental police department within the police directorate to enforce wildlife protection laws</li> <li>➤ More efficient mechanisms for organizing CITES with relevant authorities for a better enforcement</li> <li>➤ Focused Hunters Groups in the different regions to further build up the relation between hunters and RSCN and ease the information dissemination</li> <li>➤ Further developed awareness programme for hunters focused on the new laws and conventions</li> <li>➤ Well developed coordination and communication strategies with the MoA field staff to enhance their role in enforcing the wildlife protection laws</li> </ul>	<p><b>100,000US\$</b></p>	<p>All activities \$80,000</p>	<p>Joint field patrols during migration season and at critical bottleneck sites            MSB training needs assessed for environmental police department            MSB identification training provided for environmental police department and wildlife liaison officers            Training of wildlife liaison officers in flyway issues, impacts from the target sectors and legislative enforcement            Link regional cooperation to the regional flyway facility            Monitoring of local markets for MSBs for sale            Develop MSB sustainable hunting guidelines            Work with Hunters Groups to agree and apply sustainable hunting guidelines            Promotion of sustainable hunting at MSB bottleneck sites in Jordan  <b>\$US100,000</b></p>

Task Title	Actions	Deliverables	Overall Cost	Co-Financing	GEF Input
<p>B. Develop RSCN's ability to effectively manage and support the national enforcement networks and effectively enforce the wildlife protection laws and related international conventions</p>	<ul style="list-style-type: none"> <li>➤ The <b>National Patrol Plan</b> is reviewed and implemented</li> <li>➤ Training is identified and implemented</li> <li>➤ Revised and developed <b>Hunting License System and Violations Database</b></li> <li>➤ <b>Census Project</b> for game species is continued and recommendations are implemented</li> <li>➤ The current implementation system is reviewed and developed</li> <li>➤ Section Staff are well trained for better implementation</li> <li>➤ The <b>Conservation Officers System</b> is defined with clear job description and the needed resources</li> <li>➤ Training needs are defined, developed and implemented</li> <li>➤ The performance of the Conservation Officers is monitored all the year</li> </ul>	<ul style="list-style-type: none"> <li>➤ Improved operational efficiency of the section for more effective monitoring through regionalization</li> <li>➤ Completed computer database for licensing system, hunting violations and game species census</li> <li>➤ CITES Convention is effectively implemented by the section</li> <li>➤ Developed national system for conservation officers focusing on the efficient enforcement of the wildlife protection laws and related international conventions</li> </ul>	<p><b>30,000US\$</b></p>	<p>All activities <b>\$25,000</b></p>	<p>Review of existing legislative and regulatory enforcement and incentive systems related to MSB Assess the efficiency of existing systems to support enforcement of MSB protection laws Identify other legislation relevant to MSBs (eg. waste management) and develop training materials Training of experts and judges in international law relevant to MSBs (CBD, CMS, etc) <b>\$50,000</b></p>
<p>C. To support and promote the development of laws and legislation related to conservation of nature and environmental protection to make sure they are up to international standards</p>	<ul style="list-style-type: none"> <li>➤ The <b>Law Library</b> in the section is maintained and updated</li> <li>➤ The campaigning issues and laws are defined</li> <li>➤ Clarify the role of the <b>Wildlife Conservation Committee</b> and ensure it is more functional</li> <li>➤ Continue advising the Government on implementing and upgrading laws and conventions related to biodiversity</li> <li>➤ Laws and conventions related to biodiversity are identified</li> <li>➤ Establish contacts with concerned Government institutions involved in enforcing laws related to</li> </ul>	<ul style="list-style-type: none"> <li>➤ Efficient implementation for the strategies and the campaigns to update the priority laws related to Biodiversity conservation</li> </ul>	<p><b>10,000US\$</b></p>	<p>All activities <b>\$8,000</b></p>	<p>Review of jurisprudence cases specifically related to MSBs Provide best practice MSB legislation models from USA and Europe Establish links to the Soaring Birds RARE campaign <b>\$40,000</b></p>

Task Title	Actions	Deliverables	Overall Cost	Co-Financing	GEF Input
	biodiversity ➤ Monitor the performance in laws enforcement	➤ Continuous monitoring the governmental performance in relations to the biodiversity conservation laws and conventions			
TOTALS			<b>(140,000US\$ /year)</b> <b>\$560,000</b>	<b>(\$113,000/year)</b> <b>\$452,000</b>	Monitoring of impact and success of double mainstreaming Reporting to RSCN on the provision of technical content Reporting to UNDP on the service contract <b>\$40,000</b> <b>\$230,000</b>

## ANNEX 12: SBP Problem Tree and Project Structure



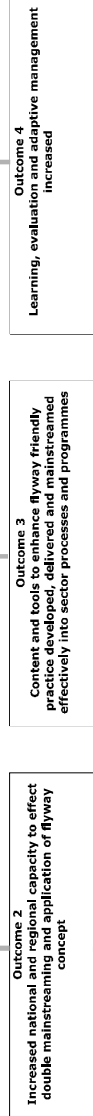
# GOAL

Globally threatened and significant populations of soaring birds that migrate along the Rift Valley/Red Sea flyway are effectively maintained

# OBJECTIVE

Conservation management objectives and actions for MSBs are mainstreamed effectively into the hunting, energy, agriculture, waste management and tourism sectors along the Rift Valley/Red Sea flyway, making this a safer route for soaring birds

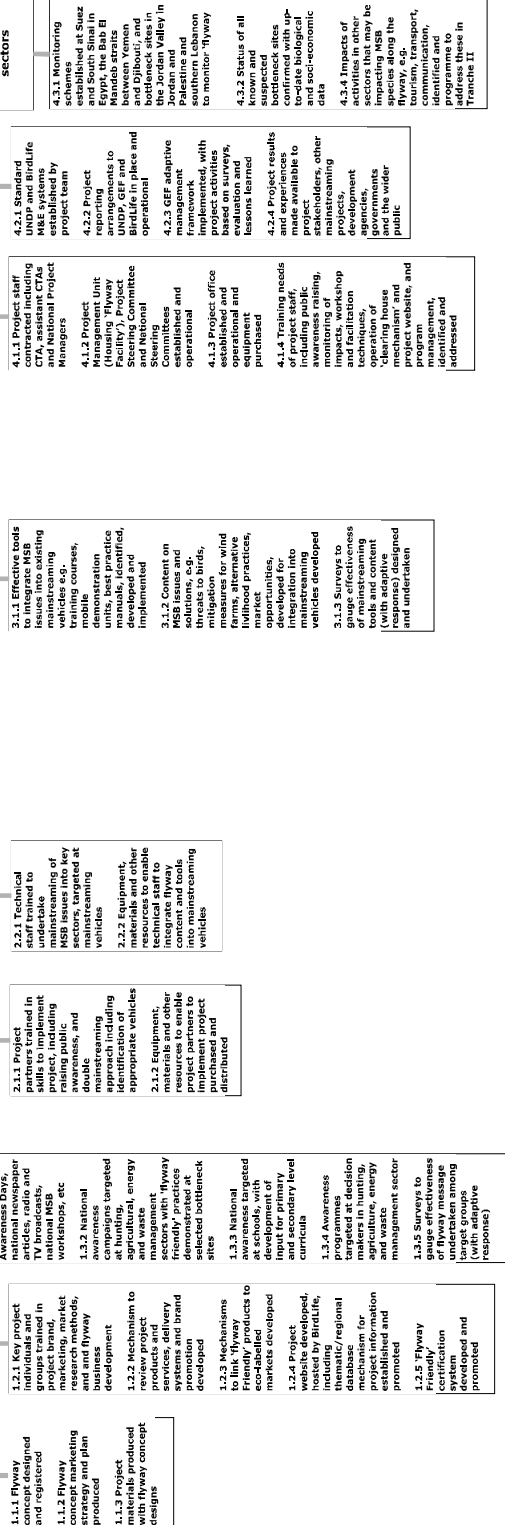
# OUTCOMES



# OUTPUTS



# ACTIVITIES



## **INTRODUCTION**

This document outlines the results of a capacity needs assessment of the national partners that will be engaged in the implementation of the regional project titled “Mainstreaming conservation of migratory soaring birds into key productive sectors along the Rift Valley/Red Sea flyway”. The assessment was undertaken using the guidelines provided by GEF<sup>14</sup> and involved three main stages:

- a. Listing of all the activities that will be implemented and identifying capacity requirements at system, institution and individual levels.
- b. Assessing the existing capacity of the partners to implement these activities
- c. Identifying approaches and activities that will be undertaken to address the capacity needs, especially for those countries that will implement mainstreaming activities during Tranche 1 of the project.

Additionally, the main capacity measures that need to be attained by a national partner for effective participation in mainstreaming activities have been prioritised. The result of this assessment forms the triggers that need to be met by the national partners that will implement mainstreaming activities in Tranche 2 of the project. These triggers are provided as Appendix 1 to this document.

## **ONGOING CAPACITY DEVELOPMENT WITHIN THE BIRDLIFE NETWORK**

The capacity development objectives within the project will be supported by a new capacity development mechanism – the “Quality assurance system for BirdLife NGOs” - that is being developed within BirdLife<sup>15</sup>. The concept for a “quality assurance system” that would help Partners identify their needs, select tools to address those needs and monitor their own progress has been developed by the BirdLife Secretariat and approved by BirdLife Global Council in May 2005. The Network Development Team comprising the BirdLife Secretariat, Regional Heads and Partner Development Officers has developed the concept further and designed a specific mechanism for a new capacity development approach within BirdLife. This will represent a NGO development “health check” system and “toolkit” for Partners to use for their own development. It will be user-friendly and available on line through the BirdLife website ([www.birdlife.org](http://www.birdlife.org)). It will also represent a shared “Pool of resources” with training reports, real examples of documents, plans, project management tools, etc. for Partners to easily access. It will be also used by Secretariat staff in supporting and monitoring NGO development within the BirdLife network. It will allow a much more specific analysis of the NGO development needs of individual Partners and generate far more specific solutions and action plans than ever before. The new mechanism will also function as a monitoring scheme to evaluate progress in the organisations and impact of the capacity development programme. This mechanism will be used to support the delivering of capacity development objectives within this project. It will become active by the end of 2006.

## **AFRICA**

The BirdLife Africa Partnership is a formal network of 18 African countries comprising independent conservation-oriented NGOs. There is a BirdLife presence in a further five countries through “country programmes” (2) and collaborative projects (3). This continental network, involved in conservation, education and sustainable development has been described as unique in Africa (Hagen *et al*, 2000). The growth and development of the network and the Africa Programme depends vitally on the building of indigenous capacity at a national level in support of national conservation action.

Through sustained indigenous capacity development, the Africa Programme has published a regional directory of IBAs in Africa (Fishpool and Evans, 2001), 11 national IBA directories and one subregional directory covering six

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<sup>14</sup> Capacity Development Indicators: UNDP/GEF Resource Kit (No. 4)

<sup>15</sup> The programme is organised around 12 key quality areas: Governance; Planning; Organisational management; Human resources and Staff/Volunteers management; Constituency: members, branches and supporters; Internal communications; Projects and activities management; Financial management; External communications; Networking and partnerships; Conservation delivering; and Monitoring and Evaluation. Each quality area has a number of indicators and respective means of verification which will be used to assess the needs, to provide targeted capacity development support and to monitor progress and impact.

countries. Over 111 Site Support Groups<sup>16</sup> have been established to contribute to the management and monitoring of more than 60 IBAs across the continent. In 2004/5, the BirdLife Africa Partnership monitored the status of over 250 IBAs continent wide. This experience and track record of successful conservation action will be placed at the disposal of the national partners in the MSB project.

The BirdLife Partnership is formally represented in Ethiopia and Egypt of the five countries involved in the MSB project. In the remaining three countries (Sudan, Eritrea and Djibouti), BirdLife has working relationships with the Sudanese Environment Conservation Society, the Ministry of Urbanisation, Land Management and Environment in Djibouti and the Department for Regulatory Services in the Ministry of Agriculture in Eritrea through which the PDF-B activities were performed. BirdLife “partner” organizations are intrinsically logical “change agents” in the MSB project because of their keen interest in birds and basic technical expertise in this area, linkages to the wider community, involvement of dynamic, committed and competent individuals at both regional and national levels, and the strong base of the BirdLife Partnership, which provides a mechanism for facilitating sustainability at the national level. In an independent evaluation of a previous GEF funded project, it was found that National NGOs, such as the BirdLife partners involved in this project have shown themselves to be efficient and effective implementers of biodiversity conservation; lessons are rapidly learned and implemented (Ref: Timberlake, J. & Fenton. R.E, 2003. Final project evaluation report on the African NGO-Government Partnerships for Sustainable Biodiversity Action Project – RAF/97/G31). Moreover, the use of a regional organization, as will be done in the MSB project, to retain a broader conservation vision was found to be important. The “partner” organisations selected for this project though they may have low capacity in specific aspects provide the best opportunity for national action.

### **How to build capacity in the MSB project over the next five years**

The MSB project will draw on the lessons learnt from prior capacity development initiatives, particularly the African NGO-Government Partnerships for Sustainable Biodiversity Action Project mentioned above to develop the main planks of the approaches that will be used to attain key targets for capacity development. These planks will comprise the following:

- d. South-south experience exchange and information transfer e.g. through annual participatory workshops involving all national partners to allow sharing of experiences to deal with specific aspects and build new skills and approaches in individuals and institutions. These workshops will as much as possible involve both the NGO partner and government counterpart. In addition, the annual meetings of the BirdLife Africa Partnership will be key instruments for information exchange, dissemination, as well as providing a peer-based mechanism for adaptive learning and planning.
- e. Skill- specific training to provide tools and information for project implementation. Information and skills will be provided for adaptation and formulation to fit the specific geographic areas and sectors concerned. For example, in building negotiation and participatory planning skills, short courses facilitated by the Regional Flyway Facility and BirdLife secretariat will be organized. UNDP country offices will also play a major role in technical support during the training. Once again, the training will as much as possible engage both the NGOs and government counterparts.
- f. Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas. This will involve country visits by staff of the Regional Flyway Facility, BirdLife secretariat and UNDP (regional bureaux and country offices) to provide hands-on mentoring and support. Specific technical groups comprising of representatives of the project implementation team may be created to plan and deliver the technical support according to needs.
- g. Support for improving the enabling environment in terms of relations between various stakeholders and access to national processes. The establishment of national forums for open discussion among the stakeholders regarding the project and the national development and conservation processes (so called national liaison committees) will be pursued in each country as the main mechanism for creating an enabling environment for the project. These meetings will target the participation of senior level management of the relevant institutions and directors of the NGOs.
- h. Building capacity from the bottom up with effective use of existing potential within the organisations themselves and the collaborators with whom partnerships will be established. The project will attempt to bring together capacity currently scattered within various institutions (especially in different government departments) and NGOs to participate in the project. This will build on the detailed capacity assessments planned as part of the inception phase.

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<sup>16</sup> Site Support Groups are organized local community groups that work, mainly on a voluntary basis to protect IBAs as part of a larger network through the BirdLife Partners



From previous experience, one of the critical elements in all of these “planks” will be identifying the “niche” of the participatory institutions and individuals within the context of the project, their relative strengths, the direction in which they wish to grow and the manner in which they wish to operate and to provide support for achieving the capacity to do so in terms of the goals and objectives of the project. Secondly, our experience has shown that it is important and more sustainable to engage the existing capacity within other national institutions and bring them on board so as to enhance efficiency, minimise the creation of new structures and the duplication of capacity development.

## **Approaches to ensure effective project implementation in Tranche 1**

### *Egypt*

In Egypt, the project will be based within the Nature Conservation Egypt (NCE), an NGO that aspires to become the BirdLife Partner in Egypt. Close and formal links already established with the Nature Conservation Sector (NCS) of the Egyptian Environment Affairs Agency will be strengthened to ensure that the project benefits from the considerable capacity within the government agency (NCS), while at the same time cutting out government bureaucracy by working through an NGO. By implementing the project through a national NGO, other NGOs and government departments can participate with less bureaucratic encumbrances. The NCE has the best ornithological expertise in the country in the person of Sherif Baha el Din, strong technical skills and advocacy influence in its members such as Prof. M. Kassas, Former IUCN President and Professor Emeritus Cairo University. Inadequate field, administration and logistical capacity will be offset by the partnership with the NCS. Dr Moustafa Fouda, the Director of NSC is already a strong supporter of the project and has pledged to maintain and strengthen the links between NCS and NCE (Pers. comm. to Hazell Thompson).

The main needs for capacity development in Egypt are listed in Appendix 2 and summarised as:

- Development of nation-wide programmes of awareness-raising and engaging the media. The main constraint here being lack of a strategy and skills to develop effective communication materials.
- Partnership building and participatory approaches to ensure that stakeholders in key sectors contribute effectively in the development, promotion and implementation of solutions for mainstreaming MSBs.
- Capacity development and training of staff to undertake tasks. Although the partner has the best ornithologist in Egypt, not many young members of the organisation are being developed to attain similar skills in ornithology, and also skills to address the mainstreaming of MSBs. This constrains the effectiveness of the partner especially since the ornithologist holds a senior positions within government and is very busy.
- Negotiation and conflict resolution
- Ecotourism development, management and marketing
- Double mainstreaming

The approaches to address the needs are listed in the appendix and in summary, these include:

- Institutional strengthening through the development of partnership with other relevant organisations, support from BirdLife International through a Network Strengthening Plan<sup>17</sup> for Egypt, participation in BirdLife regional meetings and training opportunities as well as support from the Regional Flyway Facility.
- Specific skill needs in terms of communications, negotiation, ecotourism development and awareness-raising will be addressed through recruitment of project staff with most of the skills and skills-specific training courses.
- Learning through sharing experiences with other project partners will be promoted through at least annual experience sharing workshops.
- Access to other national processes and to create the buy-in of the main sectors at senior level will be promoted through National Liaison Committees. The NLC will be a critical factor in maintaining and strengthening NCS-NCE links. In addition, a specific NCE-NCS project coordination unit will be formed that will hold regular meetings (e.g. monthly) and a formal MoU will be signed.

### *Djibouti*

In Djibouti, the project will be based within the Ministry of Housing, Urbanisation, Environment and Land Management but formal collaboration established with a local NGO to enhance civil society involvement. One of the local NGOs being considered is the Wildlife Protection Organisation (l'Organisation de Protection de la Faune Sauvage) (WPO). This NGO has a long track record of collaboration with BirdLife and other international bodies in conserving the biodiversity of Djiboputi (E.g. Conservation of the Critically endangered Djibouti Francolin now

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<sup>17</sup> A Network Strengthening Plan is a tool developed in a participatory manner between a BirdLife Partner and BirdLife Secretariat that charts out the main capacity development actions to be undertaken in a fixed time limit, that will ensure that the Partner complied with the BirdLife Partnership Criteria

known from only one small forest in the country). However, the NGO lacks the capacity to manage the project at the moment, but through participating in capacity development elements and undertaking activities during Tranche I and the institutional support provided by BirdLife international, it will be empowered to play a leadership role in Tranche II. The Directorate of Land Management and Environment (DLME), which deals specifically with environmental policy and planning, policy implementation, management of protected sites and species, information and awareness-raising (contributes to integration of environment into national education system) and monitoring will be the key implementing institution. The team at the ministry headquarters including the General Secretary and the Advisor to the Minister on Environmental issues are very supportive of the project and will help to ensure the involvement of institutional and individual capacity from DLME and the rest of the departments.

The main needs for capacity development in Djibouti are similar to Egypt and are listed in Appendix 2. Additional needs specific to Djibouti are in terms of:

- Knowledge of MSBs and the technical solutions required to mainstream issues affecting these birds into the key sectors
- Organisational strength including the allocation of adequate proportions of the national budget to the key departments involved in natural resources management.
- Internal organisational management including systems of evaluation, quality control and efficiency.

The approaches to address the needs are similar as in Egypt with the following additions:

- Specific skill needs in terms of ornithology addressed through recruitment of project staff with the skills and through skills-specific training courses.
- Institutional strengthening through the engagement of an experienced consultant to support project set-up and development of strategies for communications, partnership development, training programmes and project management.

#### *Countries not undertaking mainstreaming activities in Tranche 1*

In Ethiopia and Sudan, the project will be based within the Ethiopia Wildlife and Natural History Society (EWNHS) and Sudanese Environment Conservation Society (SECS) respectively. These are already well established NGOs and capacity development will be achieved through institutional support and targeted skills development. In both countries, the main capacity needs are in terms of:

- Working outside their core biodiversity remit to address energy, agriculture and waste management.
- Knowledge of MSBs and the technical solutions required to mainstream MSB issues into the key sectors
- Participation in national and sector processes regarding the activities of the key sectors into which MSBs issues will be mainstreamed, for example, participation in the development of national energy strategies.
- Taking advantage of the web to disseminate information and raise awareness
- Human resource management, including the provision of adequate incentives and salaries to promote the recruitment and retention of highly skilled staff
- Capacity development and training of staff to undertake tasks.
- Negotiation and conflict resolution
- Ecotourism development, management and marketing
- Double mainstreaming

In Eritrea, the project will be based within the Department of Regulatory Services of the Ministry of Agriculture but formal collaboration will be established with other institutions that can provide a neutral base for the engagement of other government departments and NGOs, such as the University of Asmara.

The main needs for capacity development in Eritrea are listed in Appendix 2 and summarised as:

- Knowledge of MSBs and the technical solutions required to mainstream MSB issues into the key sectors
- Development of nation-wide programmes of awareness-raising and engaging the media and taking advantage of the web.
- Organisational strength including the allocation of adequate proportions of the national budget to the key departments involved in natural resources management.
- Internal organisational management including systems of evaluation, quality control and efficiency.
- Partnership building and participatory approaches to ensure that stakeholders in key sectors contribute effectively in the development, promotion and implementation of solutions for mainstreaming MSBs.
- Capacity development and training of staff to undertake tasks.
- Negotiation and conflict resolution

- Ecotourism development, management and marketing
- Double mainstreaming

## **MIDDLE EAST**

There is a growing strength of BirdLife Network in the Middle East that would enable partners to meet MSB project objectives. The network comprises four NGOs (in Jordan, Lebanon, Palestine and Yemen) and two governmental institutions in Saudi Arabia and Syria. Amongst the NGOs, the first three have a Partner Status within BirdLife Partnership and the fourth (Yemen) has an affiliate status. The process of upgrading status within BirdLife Partnership is a lengthy process and requires intimate working relations within BirdLife and building capacity within the NGO to respond to BirdLife Missions, Strategy and Programmes. Indeed, the selected NGOs are the in-country pioneering organizations to implement conservation programmes in general and build strong bird specific programmes. Furthermore, BirdLife is developing currently a quality assurance mechanism which will serve to monitor growth of national partners, respond to capacity needs and requirements and measure the conservation impact of partner's activities.

Network in the Middle East are recognized to pioneer work that extended for decades for establishing national network of protected areas, influence and develop environmental laws and regulations, and implement conservation and awareness and education programmes. This strength has even been furthered through mainstreaming IBAs programme into their workplans. Two national IBAs inventories has been produced (Jordan, Palestine) and currently Lebanon, Saudi Arabia are working towards their national inventories update. The process of update requires specialized experiences and human resources, and long term monitoring. The IBAs programme has provided partners with unique opportunity to work beyond green areas and initiated various initiatives such as development of local economies, awareness campaigns, training of local communities and creating linkages between biodiversity conservation and birds with the livelihood of local communities. Biodiversity conservation has been successfully mainstreamed into School formal curricula and extra curricula (Jordan, Lebanon and currently Palestine). Building partnership with Governmental institutions has also enabled partners to influence national environment and biodiversity policies and strategies (influencing EIAs protocols, hunting control). In Jordan, management of Protected Areas and hunting control have been mandated by the government to the NGO. RSCN has set up over 1000 Nature Conservation Clubs in schools in order to raise children's awareness regarding environmental issues by making them practically involved in conservation activities and projects.

In Lebanon, Palestine, Saudi Arabia, network represents a reliable source of information on biodiversity in general and birds in particular. National partnerships have also been established with the private sector. The vast experience within the regional partnership in biodiversity conservation in general and birds in particular and the demonstrated capacity at several successful interventions place them as the top agents to undertake activities at national level.

The capacity assessment of indicators for all the countries at system, institutional and individual levels are presented in Appendix 3. Below is a description for the Tranche I and II countries and identification of capacity needs for Tranche I countries and triggers for involvement of Tranche II countries in the 2<sup>nd</sup> phase of the project.

### **Tranche I countries**

Two countries have been identified for tranche I countries in the Middle East, namely Jordan and Lebanon. In Jordan (RSCN) the partner has been mandated to establish and manage the network of protected areas in the country, some of which has recognized as pioneering at global level, enforce wildlife hunting and trade regulations. The NGO has also been mandated to implement the CITES in the country and has contributed to the development and implementation of the CBD and related environmental strategies and action plans. It also implanted successful conservation economics programmes and has recently mainstreamed conservation issues into Water policy and School curricula.

In Lebanon, the Partner, SPNL, is a steadily growing NGO which has previously implemented the establishment and management of Protected areas in the country. SPNL strives to protect nature, birds and biodiversity in Lebanon, and to promote sustainable use of natural resources. Within this context, SPNL is advocating the traditional Hima system (Community Based Protected Areas) over a thousand year old in the Middle East Region. This is done through awareness, education and empowering local people for the sustainable management of their natural sites especially IBAs; thus, supporting in mainstreaming conservation concerns from local to national (from bottom up). The NGO has diversified its sources of income to cope with increased challenges of conserving nature and wildlife.

Main capacity needs from analyzing the assessment results in Appendix 3 has resulted in identifying the following areas as an immediate target for capacity building:

### 1. Engage and build consensus among all stakeholders in the productive sectors

This involves:

- Identify and mobilize stakeholders.
- Create partnerships with public and private sector.
- Raise awareness among key sectors and general public.
- Find “win-win” approaches.
- Appropriately involve all stakeholder groups in decision-making and implementation.
- Accept sharing arrangements and resolve conflicts.

### 2. Mobilize information and knowledge

This involves mainly identifying problems and potential solutions.

### 3. Monitor, evaluate, report, and learn

This involves mainly the use lessons learned for policy dialogues and planning.

Within these areas the various systemic, institutional and individual capacity building targets have been identified in table below:

Level	Target for Capacity Building
<b>Systemic</b>	Partner capacity to operate within productive sectors
<b>Institutional</b>	Governance and Organizational strategy Resource and Operational management Quality assurance Knowledge management Human resources management
<b>Individual</b>	Staff with skills in/ experience of Policy and strategy development, Conflict resolution and negotiation and Knowledge of and training in impact indicators.

### Tranche II countries

The remaining four countries are Palestine, Yemen, Saudi Arabia and Syria.

- In Palestine, there is a well established NGO (Palestine Wildlife Society) with a track record of good site project implementation, awareness raising, field research and promoting ecotourism. The society has pioneered work to develop ecotourism in the country and has established a monitoring station in Jericho area. Furthermore, the Society has created important partnership with key ministries such as the Environment Quality Authority, Water Quality Authority, Ministry of Agriculture, Ministry of Tourism and donor organizations in the territories. It has full partner status with BirdLife International and newly a member of IUCN and has been accredited as the focal point for the UNCCD & GEF "NGO's network".. Capacity needs are mainly in terms of advocacy and building capacity to mobilize resource and emerging vehicles to mainstream MSB friendly approaches. Institutional management practices also need strengthening. More details and triggers for involvement in phase 2 of the project are presented in the table below.
- In Yemen, a young NGO (Yemen Wildlife Protection Society) is a birdlife affiliate and in the process of building capacity to upgrade status. The society has a fair track record of project implementation and awareness raising. The society has created a modest capacity of its personnel to provide monitoring of bottleneck site but again this need further capacity building in this respect. Other capacity needs are mainly in terms of advocacy and in creating structures for NGO-government partnerships and mobilizing civil society involvement in the uptake of MSB friendly approaches. Institutional management practices also need strengthening.
- In Saudi Arabia, Birdlife affiliate is the National Commission for Wildlife Conservation and Development). A government institution with a long track record of project implementation, creating and managing protected areas, support and contribution to regional and international agreements, conventions and initiatives and research. NCWCD has also started several initiatives to involve local communities in and around protected areas. There is however a paucity of advocacy to mobilize resources to address mainstreaming activities and awareness-raising skills within the government agencies. There is no appropriate NGOs in the country.
- In the case of Syria, The Birdlife contact for the project is the General Commission for Environmental Affairs/ The Ministry of Local Administration and Environment and acted focal for implementing various national,

regional and international initiatives and projects. NGO movement is growing in the country. Capacity needs are mainly in terms of advocacy and in creating structures for partnerships and mobilizing civil society involvement in the uptake of MSB friendly approaches. There is weak ornithological, advocacy and awareness-raising skills, Institutional management practices also need strengthening.

Capacity building priorities at key areas for these countries has been identified as:

<b>Area</b>	<b>Saudi Arabia</b>	<b>Palestine</b>	<b>Yemen</b>	<b>Syria</b>
<b>1. Conceptualize and formulate technical responses to address threats to MSBs within productive sectors</b>	High	Medium	High	High
<b>2. Deliver technical input into double mainstreaming “vehicles”</b>	Medium	Medium	Medium	Medium
<b>3. Engage and build consensus among all stakeholders in the productive sectors</b>	Medium	Low	Medium	Medium
<b>4. Mobilize information and knowledge</b>	Medium	Low	Medium	Low
<b>5. Monitor, evaluate, report, and learn</b>	low	Low	High	Medium

## **APPENDIX 1: General triggers for the involvement of countries in Tranche 2 and how they will be measured**

The approach proposed in delivering this project “Double Mainstreaming” relies to a large extent on the participating national partners having the ability in terms of skills, knowledge, contacts, systems and most importantly, the credibility to discuss, negotiate and convince people in the key sectors and the ‘vehicle’ projects to alter their behaviours in a manner that benefits soaring birds. To find out what this ability entails, an extensive identification of the capacity required by the national partners to carry out the above was done and applied in assessing capacity needs for each of the participating national partners. A prioritisation was undertaken of the comprehensive list of capacity requirements to identify those elements that are critical for engaging in mainstreaming activities.

A shortlist of nine general triggers that demonstrate credibility of the national partner (All triggers), and the possession of internal management systems (Triggers 1, 2, 3, 4 & 7) and technical skills to provide quality products (Triggers 5, 6, 8, 9), and project management skills that will ensure efficient and effective implementation of the activities (Triggers 3, 4, 6, 7) with wide participation of stakeholders (6, 8, 9) was developed. For any national partner to engage effectively in mainstreaming (and hence participate in Tranche 2) it must score at least 2 on each of the nine general triggers below. The countries will also be assessed according to a fuller set of capacity needs presented in the table below.

### **General Triggers**

1. Organisation has a management structure that provides effective monitoring and acts on performance results.
  - 0 = No management structure and reporting procedures in place
  - 1 = Management structure in place and documented but not implemented
  - 2 = Management structure in place and followed in terms of reporting
  - 3 = Management procedures in place and implemented with clear feedback showing that appropriate action is taken based on the results of monitoring
2. Organisation has a strategic plan with appropriate goals and targets established and clear indicators to measure progress
  - 0 = No strategic plan or similar guiding document exists
  - 1 = Draft strategic document exists but does not have appropriate targets and indicators
  - 2 = Strategic document exists that has appropriate targets and indicators, but is not implemented
  - 3 = Strategic plan is in place, is implemented with effective monitoring and feedback
3. Organisation has adequate financial control mechanism in place.
  - 0 = No financial management procedures in place
  - 1 = Financial procedures in place and documented but do not meet the UNDP standards
  - 2 = Financial procedures in place, documented and meet the UNDP standards but are not implemented
  - 3 = Financial procedures are in place, well documented, implemented and meet the UNDP standards.
- 4 Organisation has adequate monitoring and supervision mechanism in place to ensure quality products.
  - 0 = Internal quality assurance measures (e.g. internal review of documents) is lacking.
  - 1 = Internal quality assurance measures documented.
  - 2 = Internal quality assurance measures documented and applied.
  - 3 = Technical reports produced are of adequate quality for publication in refereed journals"
5. Staff are available that have technical competence, knowledge and expertise of the flyway ecosystems and habitats
  - 0 = No ecologist/ornithology trained to MSc level in place
  - 1 = At least one ecologists/ornithologist trained to M.Sc level in place
  - 2 = Several ecologists/ornithologists are available and engaged in the project
  - 3 = Several ecologists/ornithologists at PhD level available and providing input to mainstreaming
6. Staff have access to regional/global mentoring and experience exchange support systems (e.g. attendance at BirdLife International partnership meetings, IUCN, relevant conventions, etc)
  - 0 = Does not participate in regional meetings and is not part of any networks
  - 1 = Staff invited to participate in regional/global networks
  - 2 = Staff formally invited and effectively participate in regional/global networks.
  - 3 = Staff play leadership roles in regional/global networks
- 7 Organisation has appropriate staff performance management systems in place

- 0 = No staff appraisal system in place
- 1 = Annual staff appraisal procedures in place
- 2 = Annual staff appraisal and continuous assessment procedures in place and documented
- 3 = Annual staff appraisal and continuous assessment procedures in place and implemented

8. Staff have skills in applying participatory approaches to finding solutions.

- 0 = no skills in participatory planning
- 1 = Staff have training in participatory approaches but no experience
- 2 = Staff have skills and experience in participatory approaches
- 3 = Staff have skills and experience in participatory approaches and these are being deployed in the project.

9. Staff have adequate communication skills and are able to present information effectively to a wide range of audiences

- 0 = No skills in communication
- 1 = Staff have skills in communicating to a wide range of stakeholders
- 2 = Staff have skills in communicating to a wide range of audience and have developed communication strategies
- 3 = Staff are effectively engaged in communicating to a wide range of audiences according to an existing communications strategy

Other triggers that will be assessed include:

Function	Capacity level	Triggers
<b>1. Conceptualize and formulate technical responses to address threats to MSBs within productive sectors</b>	Systemic	<ol style="list-style-type: none"> <li>1. Understanding of the key sectors and how they operate.</li> <li>2. Knowledge of national legal and policy situation relating to MSBs.</li> <li>3. Consistent and transparent performance measurements in place.</li> </ol>
	Institutional	<ol style="list-style-type: none"> <li>1. Experience of working with multiple national stakeholders.</li> <li>2. Human capacity development strategy.</li> <li>3. Training and capacity needs assessment system.</li> </ol>
	Individual	<ol style="list-style-type: none"> <li>1. Staff with skills/experience of knowledge of key sectors and how they operate.</li> <li>2. Staff with skills/experience of knowledge of threats to MSBs and technical solutions.</li> <li>3. Staff with skills/experience of Policy and strategy development.</li> </ol>
<b>2. Deliver technical input into double mainstreaming “vehicles”</b>	Systemic	<ol style="list-style-type: none"> <li>1. Participation in relevant sector review and reform processes.</li> <li>2. Corporate risk management.</li> <li>3. Adequate monitoring and evaluation frameworks.</li> </ol>
	Institutional	<ol style="list-style-type: none"> <li>1. Track record of integrating conservation issues into national/local policy and planning work.</li> <li>2. Appropriate goals and targets established with clear indicators to measure progress.</li> <li>3. Experience of equipment and services procurement at national and international levels.</li> </ol>
	Individual	<ol style="list-style-type: none"> <li>1. Staff with skills/experience of Participatory approaches to finding solutions.</li> <li>2. Staff with skills/experience of data gathering and analysis.</li> <li>3. Staff with skills/experience of feasibility studies for ecotourism and development of market incentives (labeling/certification).</li> </ol>
<b>3. Engage and build consensus among all stakeholders in the productive sectors</b>	Systemic	<ol style="list-style-type: none"> <li>1. Access to regional/global mentoring and experience exchange support systems.</li> <li>2. Adequate training provided.</li> <li>3. Technical competence, knowledge and expertise of the flyway ecosystems and habitats.</li> </ol>
	Institutional	<ol style="list-style-type: none"> <li>1. Joint projects with relevant sector agencies.</li> <li>2. Track record of developing and implementing successful national awareness raising programme.</li> <li>3. Nation wide coverage.</li> </ol>

<b>Function</b>	<b>Capacity level</b>	<b>Triggers</b>
	Individual	<ol style="list-style-type: none"> <li>1. Staff with skills/experience of Advocacy and Networking.</li> <li>2. Staff with skills/experience of negotiation skills.</li> <li>3. Staff with skills/experience of conflict resolution.</li> </ol>
<b>4. Mobilize information and knowledge</b>	Systemic	<ol style="list-style-type: none"> <li>1. knowledge of threats to MSBs from sectors and technical solutions to problem.</li> <li>2. Web based system for dissemination of information.</li> <li>3. Capacity to design and or produce publications.</li> </ol>
	Institutional	<ol style="list-style-type: none"> <li>1. Technical linkages and communication to other flyway states.</li> <li>2. Effective communication and collaboration frameworks in place.</li> <li>3. Availability of or access to flyway specific information.</li> </ol>
	Individual	<ol style="list-style-type: none"> <li>1. Staff with skills/experience of data gathering and analysis.</li> <li>2. Staff with skills/experience of communication skills able to present effectively to wide audience.</li> <li>3. Staff with skills/experience of participatory approaches.</li> </ol>
<b>5. Monitor, evaluate, report, and learn</b>	Systemic	<ol style="list-style-type: none"> <li>1. Consistent strategic direction established.</li> <li>2. Management structures acts on performance results.</li> <li>3. Organizational strategy based on mandate</li> </ol>
	Institutional	<ol style="list-style-type: none"> <li>1. Adequate internal guidance.</li> <li>2. Resource allocation in line with business plan.</li> <li>3. Organizational strategic plan linked to management plans.</li> </ol>
	Individual	<ol style="list-style-type: none"> <li>1. Staff with skills/experience of data gathering, analysis and technical report production.</li> <li>2. Staff with skills/experience of knowledge and training in UNDP, BirdLife and other donors.</li> <li>3. Staff with skills/experience of MSB field knowledge/ID skills with ability to develop and comment on technical content.</li> </ol>



**APPENDIX 2: Key capacities needed to achieve double-mainstreaming outcomes in Africa**

		Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)						
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
<b>Partner capacity to operate within productive sectors</b>								
	· Understanding of the key sectors and how they operate (including private sector)	2	1	2	2	2	Based on the content and quality of sector reviews produced as part of the pdf-b	a, b
	· Knowledge of threats to MSBs from sectors, and technical solutions to problems facing MSBs	2	1	1	3	1	Based on the quality of problem analyses and sector analyses	a, b
	· Knowledge of national legal and policy situation relating to MSBs	2	2	3	3	3	Based on content and quality of policy and legislation reviews	a, b
	· Joint projects with relevant sector agencies (with MoU)	1	2	3	3	3	The government agencies in Eritrea, Egypt and Djibouti are responsible for enforcement of environment management laws (EIAs, Wildlife laws, etc) and hence are involved in most sector projects in agriculture, energy, urbanisation, etc as environmental advisors. SECS is involved in broader environmental issues e.g. EIA for Molowe dam. EWNHS collaborates with the agriculture sector in the design of site projects e.g. at Bale mountains	a, b, c, d
	· Participation in relevant sector review and reform processes	1	1	3	3	3	The government agencies in Eritrea, Egypt and Djibouti are mandated to provide input into policy and legislation development.	a, c, d
	· Track record of integrating conservation issues into national/local policy and planning work	2	2	2	2	2	All partners have some experience of traditional mainstreaming approaches e.g. IBAs recognition in Ethiopia, PA systems in Sudan, Eritrea, Egypt and Djibouti	b

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	· Track record of developing and implementing successful national awareness-raising programmes	2	2	1	1	1	Targeted awareness - raising activities have been attempted by EWNHS and SECS but conservation of biodiversity in churches and monasteries and pollution respectively	a, b
	· Experience of working with multiple national stakeholders, including major donor-funded (e.g. UNDP, WB, USAID) projects	3	3	3	3	3	All partners have some experience of participatory processes, e.g. development of NBSAPS and implementing donor funded projects	
	· Nationwide operational coverage	3	3	3	3	3	All partners have a national mandate.	
<b>Institutional level indicators</b>								
	<b>Governance</b>							
	· Consistent strategic direction established	3	3	2	2	2	Strategic plans available for the NGOs (Ethiopia and Sudan) that spells out their conservation and education priorities. The remaining government programmes have plans, but most are not promoting civil society involvement.	a
	· Corporate risk managed appropriately	3	3	3	3	3	All institutions are registered as NGOs or government departments mandated to undertake the conservation of biodiversity	
	· Management structure acts on performance results	3	1	2	2	2	SECS in Sudan subcontracts work to its members and this may compromise taking action to correct poor performance	a, c
	<b>Organisational strategy</b>							
	· Organisational strategy based on mandate	3	3	3	3	3	Strategic plans that aim to protect biodiversity in place. However, the approach of mainstreaming viewed in traditional sense of advocacy.	

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	· Organisational strategic plan linked to management plans	3	3	3	3	3	Advocacy to protect biodiversity and the environment feature in strategic plans, but addressing it through double mainstreaming is new	
	· Appropriate goals and targets established with clear indicators to measure progress	2	2	1	2	2	No strategic plan exists for Eritrea, while the existing plans in EWNHS and SECS do not specify mainstreaming as an approach to achieve objectives	a,c,e
	<b>Resource management</b>							
	· Resource allocation in line with management/business plan	3	3	1	2	1	The government departments in Djibouti, Eritrea and to a less extent Egypt do not have enough staff to carry out mandate. Ethiopia and Sudan have core staff and employ new staff on contract basis depending on available projects.	b,c
	· Adequate financial control mechanism established	3	3	3	2	3	All partners produce audits. In Egypt, the partner was skeptical about using government department to manage pdf-b funding.	b,c
	<b>Operational management</b>							
	· Clear operational targets set	3	3	2	3	2	Annual workplans are developed	a, b, c,e
	· Procedures adhere to agreed operational targets and timetable	3	3	1	1	2	Bureaucratic procedures often delay implementation of planned activities within the government agencies	b, c
	· Effective communication and collaboration frameworks in place	3	2	2	1	1	MSB project institutionalised in Ethiopia and to a less extent in Eritrea and Sudan such that even when the project manager is out of office, other staff members can address MSB issues	a, e

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	<b>Quality assurance</b>							
	· Adequate internal guidance and review in place	2	2	1	2	1	There is limited technical capacity within the partners in Eritrea and Djibouti to address MSB issues in energy and waste disposal sectors.	a, b,c
	· Adequate monitoring and supervision mechanism established	3	2	3	3	3	Supervision and reporting structures in place and followed. In the case of SECS, executive members undertake some project activities as volunteers which reduces cost but may hamper supervision	a, b,c
	· Well-functioning internal audit process in place	3	3	3	3	3	Internal audits done by the treasurers of the NGOs and by government agencies in Eritrea, Egypt and Djibouti	a
	· Well-functioning evaluation system in place	3	3	0	1	2	Low technical skills hamper the effectiveness of the evaluation systems in Eritrea,	a, b,c
	<b>Project and programme delivery and management</b>							
	· Management of project staff, including consultants, at national and international level	3	3	3	3	3	All partners have experience of recruiting staff and consultants	c
	· Experience of equipment and services procurement at national and international levels	3	3	3	3	3	All partners have experience of procurements	c
	· Capacity to design and/or produce publications	2	2	1	3	1	EWNHS and SECS produce regular publications for members and national newspapers. NCS in Egypt has produced several strategies, EIA reports and other publications.	c, b

	<b>Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)</b>							
<b>System level Indicators</b>	<b>Main functions</b>	<b>Ethiopia</b>	<b>Sudan</b>	<b>Eritrea</b>	<b>Egypt</b>	<b>Djibouti</b>	<b>Basis for assessment and comments</b>	<b>Proposed actions</b>
	· Internal review mechanism to ensure production of high quality studies and reports	3	3	2	3	1	Mechanisms in place, but in Djibouti and to a less extent Eritrea, the partners has limited technical knowledge of how agriculture, energy and waste disposal affects MSBs	c
	· Technical competence, knowledge and expertise of the flyway ecosystems and habitats	3	3	2	3	2	Technical knowledge of MSB issues low in Eritrea and Djibouti.	a, b, c
	· Technical linkages and communication to other flyway states	3	3	3	3	3	The partners in all countries have links to the others in the flyway through biodiversity programmes such as Africa Waterfowl Census and IBAs. Sudan, Egypt, Ethiopia and Eritrea (on observer basis) have links in the energy sector through the Nile Basin Initiative. Links also exist in agriculture through locust control programmes, PERSGA, etc	d,
	<b>Knowledge management</b>							
	· Availability of or access to flyway specific information (libraries, databases, institutions holding data), especially grey literature	3	3	2	3	2	All partners best suited to access grey literature through links to university (Sudan, Eritrea, Ethiopia and Egypt), external researchers working in the countries (All), and EIAs of projects in production sectors	d, c,
	· Web-based system for dissemination of information	2	1	1	2	1	Only in Egypt does the partner have an official website. EWNHS has website focusing on the IBA programme and access through to the BirdLife website	b,c
	<b>Human resources management</b>							

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	· Recruitment process ensures qualified personnel appointed	3	3	3	3	3	Systems in place to ensure transparent recruitment processes	
	· Appropriate salaries and incentives provided	1	1	1	2	2	Salaries paid by NGOs very low compared to international scales, but commitment and passion of staff keep good people within these organisations. Salaries of government agencies related to GDP and are quite low in Eritrea and Djibouti.	a, e,c
	· Appropriate staff performance management system in place	2	2	2	2	2	Capacity exists but needs strengthening to include measures that assess performance in mainstreaming	c, a
	· Possibility of career advancement provided	2	2	2	3	2		c, a
	· Adequate training provided to gain skills necessary to conduct tasks effectively	1	1	1	1	1	There is very low experience in double mainstreaming	a,b,c,d, e
	· Clear staff reporting and accountability system in place	2	2	2	2	2	Capacity exists but needs strengthening to include UNDP performance measures	c, a
	· Consistent and transparent performance measurement system in place	2	2	2	2	2	Capacity exists but needs improvement	c, a
	· Training and capacity needs assessment system	2	2	0	1	1	Needs assessments have been done but limited implementation	c, a
	· Human resources capacity development strategy	2	2	2	3	2	Strategies in place	c, a
	· Access to regional/global mentoring and experience exchange support systems (e.g. attendance at BirdLife International partnership meetings)	3	3	2	3	2	Through the BirdLife International Partnership, Ethiopia and Egypt have access. Sudan is also a partner to IUCN and many national networks.	c, a, d
<b>Individual level indicators</b>								

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	<b>Function 1. Staff with skills in/ experience of:</b>							
	· Data gathering and analysis	3	3	1	3	2	Eritrea has least skills in field ornithology, while Djibouti too has only one ornithologist. Interpretation of results to develop solutions for mainstreaming is weak in both countries.	b, e
	· Capacity/knowledge needs assessment	2	1	1	2	1	Capacity assessment of the sectors for mainstreaming is lacking in all countries	c
	· Policy and strategy development	1	2	2	2	2	In Egypt, Djibouti and Eritrea, the institutional partners have developed NBSAPS, NEAPs, etc. Need to ensure that the full breadth of capacity within these institutions is involved in project	b, a
	· Feasibility studies for ecotourism and development of market incentives (e.g. labeling or certification schemes) in key sectors	0	0	0	0	0	Non-existent	b, a
	· Participatory approaches to finding solutions	2	2	2	1	1	limited experience across the partnership	b,a
	· Business development models	0	0	0	0	0	Non-existent	b
	<b>Function 2. Staff with skills in/ experience of:</b>							
	· Communication skills able to present effectively to wide audience	3	3	2	3	2	Experience in international meetings and conference exists throughout the partners, but in terms of biodiversity. Egypt has experience of EIAs	a, b, e

	Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	· Technical training and workshop facilitation	2	2	1	3	1	Capacity exists to convene workshops and training courses, but trainers in the sector issues relating to the MSBs are lacking	a, b, e
	· Negotiation skills	1	1	1	1	1	Low capacity in all partners	a, b,
	<b>Function 3. Staff with skills in/experience of:</b>							
	· Advocacy and networking	1	2	1	2	2	Variable but generally low.	a, b,e
	· Conflict resolution and negotiation	1	1	1	1	1	Low	a, b,
	· Experience of participatory methods	2	2	2	1	2	Capacity exists but has been tried in biodiversity activities and not in the production sectors	a, b,e
	<b>Function 4: Staff with skills in/experience of:</b>							
	· Data gathering and analysis	2	2	1	2	1	Generally low	a,b,e, c
	· Knowledge of key sectors and how they operate	1	1	1	1	1	Very low	a,b
	· Knowledge of threats to MSBs and technical solutions	2	2	1	3	1	Generally low information available for bird conservation and much less knowledge for mainstreaming except in Egypt	b, c, e, a
	<b>Function 5. Staff with skills in/experience of:</b>							
	· Data gathering and analysis and technical report production	2	2	1	3	1	Generally low	b, c, e
	· Knowledge of and training in UNDP, BirdLife and other donor (“vehicle”) agency reporting requirements	2	2	2	2	2	Needs	c, b



		Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)						
System level Indicators	Main functions	Ethiopia	Sudan	Eritrea	Egypt	Djibouti	Basis for assessment and comments	Proposed actions
	· Knowledge of and training in impact indicators	2	2	1	2	1	Very low	a, b, c
	· MSB field knowledge/ID skills with ability to develop and comment on technical content	2	2	1	3	2	Generally low	b,a
	· Capacity/knowledge needs assessment	2	3	2	2	1	Generally low	a, b, c
	<b>Total Score</b>	<b>136</b>	<b>132</b>	<b>109</b>	<b>138</b>	<b>114</b>		
	<b>Menu of approaches</b>							
	a. South-south experience exchange and information transfer (e.g. participatory workshops to allow sharing of experiences to deal with specific aspects and build new skills and approaches in individuals and institutions)							
	b. Skill- specific training to provide tools and information for project implementation. Information and skills will be provided for adaptation and formulation to fit the specific geographic areas and sectors concerned							
	c. Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas							
	d. Support for improving the enabling environment in terms of relations between various stakeholders and access to national processes							
	e. Building capacity from the bottom up with effective use of existing potential within collaborating institutions							

**APPENDIX 3: Key capacities needed to achieve double-mainstreaming outcomes in the Middle East**

		Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
Area	Main functions	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
<b>1. Conceptualize and formulate technical responses to address threats to MSBs within productive sectors</b>								Input and response to PDF-B activities, Identifying vehicles and capacity to advocate and produce positions. Partners (NGOs and Government institutions) vary in their ethnical and human capacities to influence policy dialogue. Although governments are essential to provide technical support, the NGOs have stronger human capacities and act as agents for change.	Building technical capacities
	· Analyse existing project vehicles and key sector activities impacting MSBs	1	1	1	2	3	3		Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas
	· Identify potential responses to address threats to MSBs	1	1	1	2	3	3		
	· Formulate strategy and plan for delivery of technical input	1	1	1	2	3	3		Support for improving the enabling environment in terms of relations between various stakeholders and access to national processes
	<b>Sub Score</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>9</b>		
<b>2. Deliver technical input into double mainstreaming “vehicles”</b>								All partners have implemented projects and have considerable managerial capacities. Mostly activities are funding dependent and specialized human resources vary between partners.	
	· Mobilize and manage human, material, and financial resources for delivery	2	2	2	3	3	3		Building stronger pro-active and leadership capacities.
	· Negotiate agreements with stakeholders on design and delivery of response	1	1	1	2	3	3		Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas
	· Produce technical content and tools for delivery	2	2	2	3	3	3		
	· Execute and manage delivery effectively	1	2	1	2	3	3		
	<b>Sub Score</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>10</b>	<b>12</b>	<b>12</b>		
<b>3. Engage and build consensus among all stakeholders in the productive sectors</b>									
	· Identify and mobilize stakeholders	1	1	2	2	3	2	NGOs have demonstrated stronger capacities to build	Build human capacities to adopt participatory approaches.

		Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
Area	Main functions	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	· Create partnerships with public and private sector	1	2	2	3	3	3	constituencies and consensus. All partners have conducted nation wide awareness programmes. Involvement of local communities better demonstrated by the work of NGOs.	Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas
	· Raise awareness among key sectors and general public	2	1	2	3	3	2		
	· Find “win-win” approaches	1	1	1	1	2	2		
	· Appropriately involve all stakeholder groups in decision-making and implementation	1	2	2	2	3	2		
	· Accept sharing arrangements and resolve conflicts	2	2	2	2	2	2		
	<b>Sub Score</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>16</b>	<b>13</b>		
<b>4. Mobilize information and knowledge</b>									
	· Gather, analyze and synthesize information	2	3	2	3	3	3	Varying technical and financial capacities. Partners are reliable sources for information	Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas
	· Identify problems and potential solutions	1	2	2	2	2	2		
	<b>Sub Score</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>		
<b>5. Monitor, evaluate, report, and learn</b>									
	· Monitor and measure progress	1	2	2	2	3	3	All partners had track records of projects with capacity to share experience. No national clearing house mechanisms exist to influence policy dialogue.	Institutional and technical support to national institutions and individuals to develop a range of technical, individual and organizational capacity in specific areas
	· Identify and distribute lessons learned	1	3	2	3	3	3		
	· Use lessons learned for policy dialogues and planning	1	2	1	2	2	2		

		Capacity assessment (None = 0, low = 1, medium = 2, adequate = 3)							
Area	Main functions	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	· Report to donors, UNDP Country Office, GEF Operational Focal Point, the Regional Flyway Facility and BirdLife International	1	1	1	3	3	3		Support for improving the enabling environment in terms of relations between various stakeholders and access to national processes
	<b>Sub Score</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>11</b>	<b>11</b>		

**APPENDIX 4: Capacity needs in terms of systemic, institutional and individual levels**

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
<b>System level Indicators</b>									
	· Understanding of the key sectors and how they operate (including private sector)	2	1	2	2	3	3	Based on the sector reviews produced as part of the pdf-b	Enhance cross sectoral dialogue. Success cases working in tourism development
	· Knowledge of threats to MSBs from sectors, and technical solutions to problems facing MSBs	2	2	1	2	3	2	Based on the problem analyses, workshop reports and sector analyses	Increase knowledge at National level
	· Knowledge of national legal and policy situation relating to MSBs	1	1	1	2	3	3	Based on policy and legislation reviews	Increase knowledge and policy discussions at National level
	· Joint projects with relevant sector agencies (with MoU)	1		1	3	3	3	MoUs developed between NGOs and Ministries, Between Ministries, Ministries and Private sectors and establishment of forums. Participatory approaches are usually used National development Plans.	Enhance cross sectoral dialogue and policy discussions at National level
	· Participation in relevant sector review	1	2	2	2	2	2	Main involvement in tourism and Education sector. Input	Enhance cross sectoral dialogue and policy discussions at National level

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	and reform processes							into land use policy and EIAs directories	
	· Track record of integrating conservation issues into national/local policy and planning work	1	2	2	2	3	2	All partners have some experience of traditional approaches such as PA systems and influencing Land use planning. Education has been a sector that largely invested by Partners	Enhance cross sectoral dialogue and policy discussions at National level
	· Track record of developing and implementing successful national awareness-raising programmes	1	1	2	3	3	3	Most partners have track record of conducting nation wide awareness programmes utilizing Media	Develop capacity to make positions and conduct advocacy campaigns
	· Experience of working with multiple national stakeholders, including major donor-funded (e.g. UNDP, WB, USAID) projects	1	2	1	2	3	3	Varying experience between partners. Success cases in Jordan and Lebanon.	Build National capacity on networking and participatory approaches
	· Nationwide operational coverage	1	3	2	2	3	3	Varying capacities between partners. In Jordan, SA and Syria it is the mandate to have a nation wide coverage.	Build capacity where needed
<b>Institutional level indicators</b>									
<b>Governance</b>									
	· Consistent strategic direction established	1	3	1	2	3	2	Strategic plans available for the NGOs and Ministries (Jordan, Lebanon, Palestine, Syria and SA) that spell out their conservation and education priorities.	Build up capacity where needed

<b>Level of capacity</b>	<b>Partner capacity to operate within productive sectors</b>	<b>Yemen</b>	<b>SA</b>	<b>Syria</b>	<b>Palestine</b>	<b>Jordan</b>	<b>Lebanon</b>	<b>Basis for assessment and comments</b>	<b>Proposed actions</b>
	· Corporate risk managed appropriately	1	3	1	2	3	2	All institutions are registered as NGOs or government departments mandated to undertake the conservation of biodiversity	Build up capacity for corporate risk management
	· Management structure acts on performance results	1	3	1	2	3	2	Varying capacities where this strong in Jordan, SA.	Build up capacity where needed
<b>Organisational strategy</b>									
	· Organisational strategy based on mandate	1	3	2	2	3	2	All partners have plans according to their conservation priorities. Some had mandates provided by the Government (SA, Syria, Jordan)	Build up capacity where needed
	· Organisational strategic plan linked to management plans	1	3	2	2	3	2	as above	Build up capacity where needed
	· Appropriate goals and targets established with clear indicators to measure progress	1	3	2	2	2	1	Varying capacities. Strong mandate for partners in Jordan, SA and Syria	Build up capacity where needed
<b>Resource management</b>									
	· Resource allocation in line with management/business plan	1	3	2	2	3	2	Varying capacities with regard to human and financial resources. Strong planning in Jordan and SA	Develop human and financial resources where needed
	· Adequate financial control mechanism established	1	3	2	3	3	2	Most partners produce audits mainly in response to project requirements or as a general role (e.g. Jordan, SA, Palestine)	Build up capacity where needed

<b>Level of capacity</b>	<b>Partner capacity to operate within productive sectors</b>	<b>Yemen</b>	<b>SA</b>	<b>Syria</b>	<b>Palestine</b>	<b>Jordan</b>	<b>Lebanon</b>	<b>Basis for assessment and comments</b>	<b>Proposed actions</b>
<b>Operational management</b>									
	· Clear operational targets set	1	3	2	2	3	2	Varying capacities between partners	Build up capacity where needed
	· Procedures adhere to agreed operational targets and timetable	1	3	2	2	3	2	as above	Build up capacity where needed
	· Effective communication and collaboration frameworks in place	1	3	2	2	3	2	as above	Build up capacity where needed
<b>Quality assurance</b>									
	· Adequate internal guidance and review in place	1	2	1	2	3	2	Varying capacities between partners. Strongest in Jordan and SA	Build up capacity where needed
	· Adequate monitoring and supervision mechanism established	1	2	1	2	3	2	as above	Build up capacity where needed
	· Well-functioning internal audit process in place	1	2	1	2	3	2	as above	Build up capacity where needed
	· Well-functioning evaluation system in place	1	2	1	2	3	2	as above	Build up capacity where needed
<b>Project and programme delivery and management</b>									
	· Management of project staff, including consultants, at national and international level	2	3	2	3	3	3	All partners have experience of recruiting staff and consultants	

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	· Experience of equipment and services procurement at national and international levels	2	3	2	3	3	3	All partners have experience of procurements	
	· Capacity to design and/or produce publications	2	3	2	3	3	3	Most partners have experience in producing publications	
	· Internal review mechanism to ensure production of high quality studies and reports	1	3	2	3	3	3		Build up capacity where needed
	· Technical competence, knowledge and expertise of the flyway ecosystems and habitats	2	3	2	3	3	3	Partners are the recognized nation wide as the source of info on flyway ecosystems and habitats. Good working relationships with academia	
	· Technical linkages and communication to other flyway states	2	3	2	3	3	3	Good levels of communication maintained, exchange of data. BirdLife network facilitates the exchange and flow of info	
<b>Knowledge management</b>									
	· Availability of or access to flyway specific information (libraries, databases, institutions holding data), especially grey literature	1	3	2	2	3	3	Varying capacities within network. No national clearing house mechanisms exist. Network are reliable sources if info.	Build up capacity where needed
	· Web-based system for dissemination of information	1	3	1	3	3	2	Jordan, SA, Palestine have strongly employed web based systems to disseminate knowledge and as advocacy tool.	Build up capacity where needed



Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
<b>Human resources management</b>									
	· Recruitment process ensures qualified personnel appointed	2	3	2	3	3	3	Through national advertising and/or expatriates	
	· Appropriate salaries and incentives provided	2	3	1	3	3	3	Varying between partners and countries status of economy.	
	· Appropriate staff performance management system in place	1	3	2	3	3	2	High investments in developing human resources	
	· Possibility of career advancement provided	2	2	1	3	3	3	High investments in developing human resources	
	· Adequate training provided to gain skills necessary to conduct tasks effectively	1	3	1	3	3	3	Through BirdLife partnership and there are Two regional center do exist in the ME (Jordan and SA)	
	· Clear staff reporting and accountability system in place	1	2	1	2	3	2	Varying between partners.	Build up capacity where needed
	· Consistent and transparent performance measurement system in place	1	3	2	2	3	2	Varying between partners.	Build up capacity where needed
	· Training and capacity needs assessment system	1	3	2	2	3	2	Varying between partners.	Build up capacity where needed
	· Human resources capacity development strategy	1	2	2	2	3	2	Varying between partners.	Build up capacity where needed

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	· Access to regional/global mentoring and experience exchange support systems (e.g. attendance at BirdLife International partnership meetings)	2	3	2	3	3	3	Strong access exist amongst partnership	
<b>Individual level indicators</b>									
<b>Function 1. Staff with skills in/ experience of:</b>									
	· Data gathering and analysis	1	3	1	3	3	3	Varying capacities with regard to human resources and financial resources	Build up capacity where needed
	· Capacity/knowledge needs assessment	2	3	2	3	3	3	A priority for all partners	Build up capacity where needed
	· Policy and strategy development	1	3	2	3	3	2	All partners have contributed to the process of developing NBSAPS and NEAPs which usually led by Government Institutions. The level of contribution varies between partners.	
	· Feasibility studies for ecotourism and development of market incentives (e.g. labeling or certification schemes) in key sectors	1	2	1	2	3	3	Success cases in Jordan and Lebanon. Developing in Yemen, Palestine, SA and Syria. Jordan had launched its Tourism plan and ecotourism is part of it.	Build up capacity where needed
	· Participatory approaches to finding solutions	1	1	1	2	3	3	frequently applied in Jordan and Lebanon involving stakeholders	Build up capacity where needed
	· Business development	1	1	1	1	3	2	Varies between Partners	Build up capacity where needed

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	models								
<b>Function 2. Staff with skills in/ experience of:</b>									
	· Communication skills able to present effectively to wide audience	1	2	1	2	3	3	Strong communication skills in Jordan and Lebanon	Build up capacity where needed
	· Technical training and workshop facilitation	1	1	1	2	3	3	as above	Build up capacity where needed
	· Negotiation skills	1	1	1	2	3	3	as above	Build up capacity where needed
<b>Function 3. Staff with skills in/experience of:</b>									
	· Advocacy and networking	1	1	1	3	3	3	Strong networking capacities in Jordan, Palestine and Lebanon	Build up capacity where needed
	· Conflict resolution and negotiation	2	2	2	2	3	2	Varies between Partners	Build up capacity where needed
	· Experience of participatory methods	1	1	1	2	3	3	Varies between Partners	Build up capacity where needed
<b>Function 4: Staff with skills in/experience of:</b>									
	· Data gathering and analysis	2	3	2	3	3	3	Most have good experience in gathering data and analysis	
	· Knowledge of key sectors and how they operate	1	2	2	2	3	3	Varies between countries	Build up capacity where needed

Level of capacity	Partner capacity to operate within productive sectors	Yemen	SA	Syria	Palestine	Jordan	Lebanon	Basis for assessment and comments	Proposed actions
	· Knowledge of threats to MSBs and technical solutions	2	2	2	2	3	3	Varies between countries	Build up capacity where needed
<b>Function 5. Staff with skills in/experience of:</b>									
	· Data gathering and analysis and technical report production	2	3	2	2	3	3		Build up capacity where needed
	· Knowledge of and training in UNDP, BirdLife and other donor (“vehicle”) agency reporting requirements	1	2	1	2	3	2		Build up capacity where needed
	· Knowledge of and training in impact indicators	1	2	2	2	2	2		Build up capacity where needed
	· MSB field knowledge/ID skills with ability to develop and comment on technical content	3	3	1	3	3	3	Bottleneck reviews	Build up capacity where needed
	· Capacity/knowledge needs assessment	2	2	2	2	3	3	Sector analyses	Build up capacity where needed
	<b>Total Score</b>	<b>81</b>	<b>146</b>	<b>97</b>	<b>145</b>	<b>183</b>	<b>156</b>		