Raptors MoU – Suite of Project Proposals seeking funding

1. Preserving the Lesser Kestrel in Croatia
2. Complex protection of migratory birds in Czech Republic
3. Wintering ecology and conservation of the pallid harrier in Ethiopia
4. Ecology and migration of the Red-footed falcon in North-Central Kazakhstan
5. Saker Falcon Conservation Measures in Lower Danube Region
6. Monitoring of flagship bird species in Serbia
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8. Black Harrier movements outside the breeding season in South Africa
9. Migrating Kestrel Survey and Conservation in South Africa
10. A Portal to Enhance Trust for Sakers
11. Tagging 100 Sakers - Compiling information on movement patterns, diet and habitat of Saker Falcons for revealing potential threats and preparing better targeted conservation measures
12. Deploying 30 satellite tags on Saker Falcons (in Iran and one or two countries in the region)
13. Towards 1000 nest-boxes
14. 1,000,000 Safe Poles for the Saker Falcon (Phase I)
15. Assessment of the impact of falconry on the Globally Endangered Saker Falcon in five countries within the Gulf Region
16. International Single Species Action Plan (ISSAP) for the Sooty Falcon - Development and Implementation
17. Mitigating the impact of electric power grids on migratory birds of prey at bottleneck sites in the African-Eurasian Region
18. Monitoring breeding Osprey at Egyptian Red Sea islands
19. Action Research and Conservation of the Pallas's Fish-eagle in Bangladesh
20. Analysis of raptor movement data to support implementation of the goals of the "Action Plan for the Conservation of Birds of Prey"

Project Proposal 1: Preserving the Lesser Kestrel in Croatia

1. Background

Lesser Kestrel (*Falco naumanni*) a migratory gregarious raptor, has recently (2010) emerged as breeding species in Croatia. The breeding population of about 25 breeding pairs is critically endangered on national level due to its small range and population size. The species is enlisted in Appendix I of the CMS and in Category 1 of the Raptors MoU. Lesser Kestrel is strictly protected by the law in Croatia, however, as the population has been recently established, the nesting and foraging areas of the population are not yet included as a Protected Area. The immediate and effective conservation of the Lesser Kestrel colony is thus of primary interest as it is the only recorded breeding population on the eastern Adriatic coast that could act as source population for further range expansion in the region and on adjacent islands.

2. Project objectives

The overall objective is to preserve the Lesser Kestrel in Croatia and to achieve a favourable conservation status through research and effective conservation actions such as awareness raising, provision on artificial nesting sites, through involvement of relevant stakeholders in sustainable monitoring programme and drafting of the National Species Action Plan.

3. Brief description of activities

a) **Involvement of local stakeholders in species protection**: A meeting with local sheep breeders will be organised to inform them about the possibility of agri-environmental subsidies. Possible Lesser Kestrel friendly modification of community land use plan will be discussed with the Local Municipality of Rab Island.

b) **Awareness raising in local community**: Tourism is the main income of local community, however birdwatching is not yet developed. In order to promote protection of migratory bird species and birdwatching, promotional material will be produced and lectures will be held to the public and pupils of local schools.

c) **Monitoring of the Lesser Kestrel population**: Monitoring will be conducted with help of an employee of Public Institution 'Priroda' who will be trained in raptor surveys. The aim of the monitoring is to identify threats and to assess population trends.

d) **Provision of artificial nesting sites:** Nesting boxes will be installed on existent structures and, if accepted by Lesser Kestrels, it will lower predation risk as the current populations consists of ground breeding pairs.

e) **Research of migration behaviour**: Colour ringing of Lesser Kestrels will be implemented as an a cost effective tool to discover migration routes, including roosts, stop-over sites and wintering grounds.

f) **Habitat quality assessment:** An assessment will include a research on vegetation structures and potential prey abundances.

g) **Development of National Species Action Plan (NSAP)**: A 5-year NBSAP will be drafted through multi-stakeholder process and in collaboration with the State Institute for Nature Protection.

4. Timeline and Milestones

The project duration is 2 years.

Phase 1	Involvement of stakeholders and awareness raising	6 months
Phase 2	Training on raptor surveys, threats and habitat monitoring, colour ringing	12 months
Phase 3	Writing Guidelines for proper management	6 months

5. Expected results (outputs, deliverables and quantified impact of the project)

It is expected that the population of Lesser Kestrel will expand due to the provision of artificial nest sites. A long-term conservation of Lesser Kestrel will be achieved through monitoring programme and Species Action Plan. Ultimately, the Croatian population could on the long-term serve as stepping stone for the reoccupation of the former breeding grounds of this species in the neighbouring countries of Croatia where Lesser Kestrel is extinct: Austria, Hungary and Slovenia.

6. Contributing organisations and experts (lead organisation/expert, contributors)

Association BIOM (www.biom.hr), nongovernmental organisation is the lead organisation. Contributing organisations include two State Agencies: State Institute for Nature Protection and Public Institution for Management of Protected Areas 'Priroda'.

7. Estimated budget

The total budget is EUR 15,181 (EUR 13,381 is requested and EUR 2,380 will be provided from the Government and Association BIOM).

Category	**Cost (EUR)**
Personnel	6,000
Travel and subsistence	1,250
Equipment and supplies (nesting boxes, colour rins…)	3,700
Office/administrative costs	1,380
Publications and materials	2,400
Workshop/training courses	Co-financed
Writing Species Action Plan	Co-financed
Total	14,730
Miscellaneous (7%)	1,031
Grand Total	**15,781**
Other sources (Government and association BIOM)	2,380

Project Proposal 2: Complex protection of migratory birds in Czech Republic

1. Background

Czech Republic hosts many migratory bird species, including the following 7 priority migratory species: Corncrake (*Crex crex*), Common Quail (*Coturnix coturnix*), Saker Falcon (*Falco Cherrug*), Eastern Imperial Eagle (*Aquila heliaca*), White-tailed Sea Eagle (*Haliaeetus albicilla*) and Great Bustard (*Otis tarda*). The populations of Corncrake and partly Common Quail are quite strong in comparison to the situation in the rest of Europe. Saker Falcon, Eastern Imperial Eagle and White-tailed Sea Eagle have small, slightly increasing breeding populations, while the historically breeding Great Bustard is not more regular breeder for more than 10 years.

The main long term problem in conservation of these species are on-going bird crime activities, especially quite widespread poisoning cases. Tackling of the bird crime issues is one of important measures in conservation of birds of prey mentioned in the Action Plan for the Conservation of Migratory Birds of Prey in Africa and Eurasia and the poisoning itself is covered by the UNEP/CMS/Resolution 10.26. Because of quite limited population sizes and spatial distribution the populations of Saker Falcons and Eastern Imperial Eagles are highly vulnerable to the prospective poisoning offence. The general knowledge of poisons as a danger not only for birds but also for other wildlife, domestic animals and humans is still very low. Because the issue itself is very sensitive, it is vital when the information is mediated by local authorities. Tackling this requires a long term continual work, in which Czech Society for Ornithology (CSO) is involved as leading organisation for more than 10 years. After significant changes in the approach of police to the wildlife crime, the next target groups are state prosecutors and judges. Their low professional knowledge and awareness on nature crime and its impacts appear to be the current bottleneck in the investigation process and prosecution of offenders.

Additional problem is dependence of Corncrake and Common Quail populations on agricultural activities (mowing practices, usage of pesticides). The agro environment programme for Corncrake was introduced in 2004, but it needs further amendments to meet conservation targets.

2. Project objectives

The project has two objectives - to promote two major threats that priority bird species listed under CMS are facing today in the Czech Republic – intensification of agriculture and bird crime, and to increase public knowledge about the phenomenon of migration.

3. Brief description of activities

a) **Protection of bird species threatened by agricultural activities (Corncrake, Great Bustard, Common Quail)**: 10 one-day workshops will be organized for landowners and farmers where measures and agricultural policy tools for Corncrake and Common Quail protection will be discussed in detail. Supplementary 5 000 copies of a brochure on Corncrake will be published and distributed. In the historical breeding area of Great Bustard a special motivation workshop for farmers and local authorities will be organized with a visit to near Austrian region with successful conservation measures.

b) **Bird crime prevention and investigation**: We plan to co-operate with local mayors offices. A half-day basic training in bird crime issue and environmental criminality for public prosecutors and judges in co-operation with the Ministry of the Interior will be organised.

c) **Promotion of the miracle of bird migration**: For better dissemination of the information about migratory birds we want to integrate the project with the Spring Alive www.springalive.net , the on-going international educational programme of BirdLife International. On-line educational materials for teachers will be created. In addition, a series of events for wide public will be organized during main migration seasons throughout the whole Czech Republic in order to approach local people. The programme of events will include birdwatching, recognition of bird voices, example of bird ringing, games and quizzes for children etc.

4. Timeline and Milestones

The total project duration is 16 months.

5. Expected results

We expect to achieve significant steps toward re-establishing a breeding population of Great Bustard in Czech Republic. Corncrake will benefit from adjustments of the agri-environmental schemes aimed to avoid unsuitable agricultural work. Common Quail will profit from all the measures to conserve Corncrake and Great Bustard. Saker Falcon, Eastern Imperial Eagle, White-tailed Sea Eagle will benefit from lower levels of poisoning and other types of bird crime.

The substantial part of the project is based on work with local communities. Participants of workshops and other farmers in the respective areas will profit from the possibility to adjust the conservation measures including financial instruments to suit their needs.

The project also develops further existing long term programs of the CSO. Agricultural activities, against-bird-crime activities and general protection of migratory species will continue after the end of the project. Outcomes from the project are vital basement for long term sustainability.

6. Contributing organisations and experts

The leading organisation is Czech Society for Ornithology (CSO) and the main contributing organisation is the Ministry of Interior of Czech Republic.

7. Estimated budget

The total project budget is: EUR 13,383.

Additional co-finance will be available from the following resources: Municipality of Prague (EUR 3,600 confirmed), Mitsubishi Corporation Fund for Europe and Africa and from CSO internal resources.

Project Proposal 3: Wintering ecology and conservation of Pallid Harrier in Ethiopia

1. Background

Pallid Harrier *(Circus macrourus)* is a nomadic specialist predator, and a long-distance migrant whose core populations are located in North-central Kazakhstan and South-western Siberia. As Pallid Harriers are highly dependent on small rodents during the breeding period, core breeding populations may be vulnerable to recent land-use changes in central Asia, causing the loss of high-quality vole-rich habitats such as natural steppe and set-asides. However, some evidence suggests that the most critical conservation issues for the species may reside in the wintering period. Satellite telemetry data showed that the species spends considerable time in prospection phases before and after the breeding season and suggest significant mortality during wintering and migration. Satellite tracking also evidenced an intercontinental migratory divide within Central-Asian Pallid Harrier populations, with individuals wintering in either Africa or India. To date, very little information exists about the area-specific information on the ecological and conservation requirements of Pallid Harrier in winter.

Our satellite telemetry data have indeed confirmed the importance of the area for individuals of the core central Asian populations of Pallid harriers and allowed the localization of presumed winter roosts. The project will build on this valuable information and on effective field techniques already tested in Kazakhstan and India to provide critically needed information on the diet and habitat use of pallid harriers during their wintering in Ethiopia.

2. Project objectives

The main goal of this proposal is to provide novel scientific information on the wintering ecology of pallid harriers, and more specifically on the influence of land-use changes on diet composition and foraging success for this declining migratory raptor species, in order to inform conservation actions for this species during winter.

3. Brief description of activities

a) **Study foraging habitat selection and prey availability:** In order to describe the foraging behaviour of harriers, we will use an effective, successfully tested approach based on the direct observation of foraging birds encountered during road transects, in order to quantify habitat selection and prey encounter rate. Foraging habitat will be classified according to cover type and structure. In order to assess habitat preferences, we will compare the proportion of time spent by an individual in every habitat type to its availability in the local landscape using compositional analysis (Aebischer 1993). We will then assess habitat selection at a large scale by comparing the proportion of time spent in every habitat to its availability at the scale of the entire road transect.

b) **Study diet composition and habitat-specific foraging success:** Diet composition and foraging success vary in relation to year (climate) and habitat. Foraging observations are to be made at a range of distances from the roosts (0 to at least 20Km depending on harrier density). Once a foraging bird is detected, we report its species identity, sex, location using GPS coordinates of the observer and the foraging behaviour. Using the data collected, we will thus compute the number of prey encounters and captures per unit time for every habitat in order to assess the profitability of each habitat type.

c) **Study wintering habitat quality changes:** Land-use changes in last 35 years will be studied through Landsat satellite images, in order to assess how land-use changes may have affected prey availability, and prey capture rates in areas differing by their levels of degradation.

4. Timeline and Milestones

Total project duration is 18 months.

5. Expected results (outputs, deliverables and quantified impact of the project)

Expected results are:

- to understand more accurately the factors limiting populations of Pallid Harrier
- to propose more efficient conservation measures, particularly in terms of wintering habitat management
- to investigate the patterns of foraging specialization of wintering pallid harriers and understand how this could be affected by current land-use changes
- to better understand trophic relationships between pallid harriers, grasshoppers or other prey in Africa

6. Contributing organisations and experts:

Julien Terrauble, PhD Researcher of University of Turku, Department of Biology, Section of Ecology is the lead contributor. Other contributors include five experts from University of Turku, Estación Experimental de Zonas Áridas (EEZA-CSIC), University of Aberdeen and Ethiopia Wildlife and Natural History Society (EWNHS/Birdlife Ethiopia).

7. Estimated budget

The total budget requested is EUR 14,988.

Category	**Cost (EUR)**
Travel and subsistence	9,420
Office/administration cost	4,768
Publications	300
Total	15,488
Miscellaneous (max 10%)	500
Grand total	**14,988**
Other sources and in-kind contributions - *relate to staff costs for personnel from University of Turku, CSIC, University of Aberdeen and EWNHS/Birdlife Ethiopia. Additional fieldwork expenses (GPS, maps of the study area…) will be funded by other staff projects. Binoculars and telescopes will be provided by staff.*	62,994

Project Proposal 4: Ecology and migration of the Red-footed falcon in North-Central Kazakhstan

1. Background

Red-footed Falcon is a small, poorly-known species that breeds from the central part of eastern Europe (e.g., Hungary, Bulgaria), through the northern parts of the Caucasus range and into the great steppe habitats of central Asia. For a number of years red-footed falcons were listed as being of least concern by BirdLife International. However, recently the conservation status of this species has been upgraded to Near Threatened because of concerns about rapid declines in population size owing to habitat degradation and loss.

Conservation of this species requires a good understanding of its basic biology and ecology, and a complete picture of the routes and timing of the passage and wintering sites red-footed falcons nesting in north-central Kazakhstan.

The great length of transit routes to wintering places is an unknown factor that could have a major impact on the populations of Red-footed falcon. The geography of that route is so far almost completely unstudied, especially for birds starting in Central Asia. What is known suggests that large numbers of individuals are seen in the northern Caucasus in autumn, but in the southern Caucasus the species is only rarely observed. Likewise, out of more than 200 individuals ringed in northern Kazakhstan, only one return was recorded, from Lebanon in the early 1980s. By conducting this work on stable breeding populations in north-central Kazakhstan, some of the most pristine habitat that the species currently utilizes, we will provide a novel perspective on the natural behavior and breeding ecology of this species. The data we will generate on breeding biology and migration will also be compared with those from Hungary, where red-footed falcons have been studied extensively in recent years, and where recent population declines have been reported.

Project will be conducted at the Naurzum National Nature Reserve in north-central Kazakhstan.

2. Project objectives:

The main objective of this project is to get a complete picture of the routes and timing of the passage and wintering sites red-footed falcons nesting in north-central Kazakhstan. We aim to collect data to characterize the demography and ecology of the species and to build collaborative relationships between scientists in Kazakhstan and other countries and support development of a field research station at our primary study site.

3. Brief description of activities

a) Quantifying distribution and number of species through counting routes and breeding pairs in some areas
b) Evaluation of migration trough satellite transmitters and geolocators
c) Colour ringing of adults and juveniles to evaluate behaviours of the Red-footed Falcon
d) Monitoring of breeding to analyse breeding success
e) Data analysis, preparation of scientific results and reporting

4. Timeline and Milestones

The total project duration is 2 years. Monitoring of Red-footed Falcons, fitting of satellite transmitters and colour ringing will be conducted from end of May to early August, during both project years. Collected data will be analysed throughout the project duration.

5. Expected results (outputs, deliverables and quantified impact of the project)

The intended outcomes for this project include determination of migratory routes and connectivity between summer and wintering grounds, information on breeding status and basic ecology of the species, and development of both the north Kazakhstan biological field station and research, and institutional collaborations between West Virginia University (USA) and Kostanay Pedagogical Institute (KZ).

6. Contributing organisations and experts

Dr Evgeny A. Bragin, associate professor and senior researcher from Kostanay State Pedagogical Insitute. Other contibuting organisations are: Naurzum National Nature Reserve, Science-Research Center of Biology and Ecology of KSPI, NGO "Naurzum" and West Virginia University.

7. Estimated budget

The total project budget is EUR 14,950.

Category	**Cost (EUR)**
Travel and subsistence	11,930
Field supplies	1,020
Geolocators	2,000
Total	**14,950**

Project Proposal 5: Saker Falcon Conservation Measures in Lower Danube Region

1. Background

Saker Falcon *(Falco Cherrug)* is an endangered globally threatened species due to its very rapid population decline. It is listed in Appendix I of CMS Convention and in Category 1 of the Raptors MoU. Saker Falcon has a total European breeding population of 450 pairs. The juveniles are roaming in very large areas from Spain to Kazakhstan but they spend more time in Bulgaria, Romania, Republic of Moldova, Ukraine Slovakia and Hungary where there are more, less populated suitable habitat. These habitats can be potential expansion areas for the population if there would be enough nesting place and the endangering factors would be reduced. The main factors thought to affect the population are loss and degradation of natural nest sites, degradation of feeding habitat and loss of food resources, increased mortality caused by electrocution and hunting, reduced breeding success by collapsing natural nests, human disturbance and possibly increased mortality on migration route and/or wintering grounds. A number of nesting pairs of Saker Falcon is constantly declining. In 2008 only 4 nesting pairs were recorded in Moldova.

The project will be conducted in 5 territories identified as compact Saker Falcon nesting and inhabiting areas, in the southern part of Republic of Moldova, and stabilizing the population not only in Moldova but also in neighbouring countries.

2. Project objectives

This project aims to help the Saker Falcon in creating favorable nesting conditions in the southern part of Republic of Moldova, and stabilizing the population not only in Moldova but also in neighboring countries. Ultimately, it aims to strengthen the European populations of Saker Falcon.

3. Brief description of activities

A basic assessment of the situation of Saker Falcon populations will be performed in the beginning of the project. Assessment will focus on the areas of potential nesting territories, and will cover possible nesting habitat: tall trees, woodsides, etc. Participants in this activity will seek to identify adult birds. Activity will be performed by the project team, volunteers and experts from the Institute of Zoology of the Republic of Moldova.

The project activities will also be focused on the creation and protection of suitable nesting sites, by installation and monitoring of artificial nests.

A working meeting will be organized at Danube Biosphere Reserve, Ukraine, which will support the transfer of practices and measures in species conservation through international cooperation.

4. Timeline and Milestones

The total project duration is 18 months:

a) Assessment of Saker Falcon population: Month 1 - Month 4

b) Building and installation of five nests: Month 8 - Month 9
c) Monitoring of nests: during breeding period
d) Working meeting at Danube Biosphere Reserve: Month 2 - Month 3
e) Awareness raising, production and dissemination of Saker Falcon materials, mass media activities: Month 1 - Month 18
f) Reporting and project management: Month 1 - Month 18

5. Expected results (outputs, deliverables and quantified impact of the project)

Conservation conditions of Saker Falcon will be improved significantly in the South region of the Republic of Moldova thanks to the creation of favourable nesting conditions. The species will benefit from creation of favorable nesting conditions which will allow a successful breeding in target region. Experience shared and exchanged practices/measures in migratory species conservation between partners from Republic of Moldova and Ukraine, will create favorable conditions for extending the population of Saker Falcon in neighboring countries and at the same time to stabilize this population in country.

6. Contributing organisations and experts

The lead organisation is Ecological Counseling Center Cahul. Contributing organisations include Danube Biosphere Reserve from Ukraine and Institute of Zoology of the Republic of Moldova.

7. Estimated budget

The total project budget is EUR 14,610.

Category	**Cost (EUR)**
Personnel	5,900
Travel and subsistence	1,300
Equipment and supplies	1,800
Office/administrative cost	990
Workshop/training cost	600
Publication/info material	2,720
Total	13,310
Miscellaneous (maximum 10%)	1,300
Grand total	**14,610**
Other sources (Ecological Counseling Center Cahul)	3,960

Project Proposal 6: Monitoring of flagship bird species in Serbia

1. Background

Among animals considered under CMS, birds represent one of the most endangered groups in Serbia, where monitoring of different bird species are/were very scarce and only few were sustainable with different intensity and range of research. Monitoring of both breeding and migration/winter bird populations was not a practice on national level in Serbia so far. Without sufficient data, it is impossible to define Action Plans, recognize and deal with problems which have negative impacts to migratory birds. Partial monitoring so far existed for several bird species, including White-tailed Eagle (*Haliaaetus albicilla)*, Golden Eagle(*Aquila chrysaetos*), Saker Falcon (*Falco cherrug*), Mediterranean Gull (*Larus melanocephalus*), and Roller (*Coracias garrulous*). Data about these species can be found in ornithological journal Ciconia which is annually published by our society (BPSSS). Problem with these monitorings was that they were irregular, didn't have coordinators on national level and were practiced usually only regionally and with varying intensity from year to year. All this indicate that it is possible to upgrade current situations and initiate coordinated national monitorings for these five species, which will also have umbrella effect on all other bird species living on their habitats.

2. Project objectives

The aim of the project is to train, plan and start monitoring two CMS Appendix I species: White-tailed Eagle and Saker Falcon and three Apendix II species: Golden Eagle, Saker Falcon, Mediterranean Gull and Roller, which will cover the whole territory of Serbia. All mentioned species in Serbia also represent rarest breeders with populations of around 100 pairs, fluctuating from year to year. Beside those five direct monitorings, project will also be dealing with full implementation of monitoring schemes of International Waterbird Census (IWC) in Serbia.

3. Brief description of activities

The main activities include:

a) **Two-day International Waterbird Census training workshop**: Number of IWC volunteers which are working on national level will be trained how to gather data and fill forms after field-work properly. This is crucial for full implementation of the IWC as a monitoring scheme.

b) **Two International Waterbird Census in Serbia in 2013 and 2014:** During two years, data about around 70 waterbird species will be collected. Reports about results of IWC will be published in Ciconia journal and presented to the wider community.

c) **Workshops on methodology for monitoring five priority species:** During the workshops experts from Serbia and surrounding countries will create common monitoring schemes and forms for volunteers which they will use in the following years.

d) **Monitoring of five priority species**: Collected data will be used to draft Action Plans.

4. Timeline and Milestones

The total project duration is 12 months.

5. Expected results (outputs, deliverables and quantified impact of the project)

The expected result is the creation and implementation of six self-sustainable monitoring schemes on national level. With data collected from monitoring, BPSSS will be able to make Action plans and present them annually to the Government of Serbia and international community. Together with public promotion of the counting and increasing number of volunteers involved on national level, importance and vulnerability of wintering/migratory species will be highlighted in local communities all across the country.

6. Contributing organisations and experts

The leading organisation is Bird protection and study society of Serbia (BPSS). Borut Štumberger from EURONATUR and Luka Božić from DOPPS BirdLife Slovenia are collaborating experts specialised for implementation of International Waterbird Census.

7. Estimated budget

The overall amount requested is EUR 14,870.
EUR 3,000 EUR will be provided by BPSSS**.**

Category	**Cost (EUR)**
Personnel	1,400
Travel and subsistence	7,500
Equipment and supplies	800
Office/administrative cost	1,600
Workshop/training cost	3.070
Publication/info material	300
Total	14,670
Miscellaneous (maximum 10%)	200
Grand total	**14,870**
Other sources (BPSS)	3,000

Project Proposal 7: Save the steppe species of birds of prey in Slovakia

1. Background

The primary target species of the project will be the Red-footed Falcon (*Falco vespertinus*). The population of Red-footed Falcons in Slovakia is in the brink of extinction. In 2010 nesting of only 2 pairs was recorded, both breeding attempts were unsuccessful.

Saker Falcon (*Falco cherrug*) and Lesser Spotted Eagle (*Aquila heliaca*), as additional target species, are using the same type of hunting and/or nesting habitat as the Red-footed Falcon. Both species are threatened by the loss and degradation of habitats as well as illegal activities, such as poisoning, nest robberies and shooting. In the last 3 years, at least 7 individuals of Saker Falcons and 5 individuals of Lesser Spotted Eagle have been recorded as victims of illegal activities. The population of both species is not more than 40 pairs of each in the whole territory of Slovakia and is an important part of Carpathian population of the species.

2. Project objectives

The project will help to implement conservation measures to prevent the extinction of Red-footed Falcon in the country. These measures will help to eliminate negative factors influencing the population. The project will also help to get exact data of the size and distribution of the population of Red-footed Falcon, Saker Falcon and Lesser Spotted Eagle. All of the species use similar habitat, so the monitoring will be carried out with the highest effectiveness - during one visit all of the target species will be under monitoring. The first draft of the Action Plan for Red-footed Falcon will be prepared together with the State Nature Conservancy, as a basic document to ensure the sustainable conservation of the species.

3. Brief description of activities

a) **Regular monitoring of breeding population, wintering sites, roosting areas and hunting sites of Red-footed Falcon, Saker Falcon and Lesser Spotted Eagle:** Threats will be recorded as well. The aim is to get exact data about size and distribution of the population and negative factors. The monitoring will be carried out on present and historical breeding and wintering sites of the species in Western and Eastern Slovakia by the members of RPS and volunteers.

b) **Planting of 50 trees in potential breeding sites of Red-footed Falcon in Ostrovné lúky**: Especially grown trees will be planted to ensure the optimal result. A professional care will be ensured, such as watering, cutting, protection from destroying, diseases etc. Native tree species will be planted such as Oak, Morus, Maple, Wild Pear. The trees will contribute to increase of the total biodiversity in the area and offer opportunities for rook colonies in the future.

c) **Installation of 50 wooden nest boxes for Red-footed Falcon on suitable sites in Ostrovné lúky:** The nest boxes will be installed in high density to simulate colonies and checked regularly.

d) **Preparation of 1st draft of the National Action Plan for Red-footed Falcon in Slovakia**: The draft will be prepared by RPS with the cooperation of State Nature Conservancy of Slovak republic. After its finalisation it will be submitted to the Ministry of environment for approval.

4. Timeline and Milestones

The total project duration is 2 years. The main project phases are:

Phase 1 – Management measures: planting of trees, installation of nest boxes (15 months)
Phase 2 – Monitoring of species (throughout the project)
Phase 3 – Preparation of 1st draft of the National Action Plan for the species (throughout the project)

5. Expected results (outputs,rdeliverables and quantified impact of the project)

The project will help to implement conservation measures to prevent the extinction of Red-footed Falcon in the country. We expect that the project will also help to gather exact data about size and distribution of the population of target species, as well about threats. This information is essential to the preparation of suitable management of the species (National Action Plans).

6. Contributing organisations and experts (lead organisation/expert, contributors)

The lead organisation is a non-governmental organisation, Raptor Protection of Slovakia (RPS). The contributing governmental organisations are: State Nature Conservancy of Slovak republic and Slovak Environmental Agency.

7. Estimated budget

The overall amount requested is EUR 13,661.

Category	**Cost (EUR)**
Personnel	720
Travel and subsistence	6,586
Equipment and supplies	4,850
Office/administrative cost	1,920
Total	14,076
Miscellaneous (maximum 10%)	1,408
Grand total	**15,076**
Total requested	13,661
Total to be received from other sources (government)	1,823

Project Proposal 8: Black Harrier movements outside the breeding season in South Africa

1. Background

The Black Harrier (*Circus maurus*) is a threatened (IUCN) bird of prey endemic to southern Africa, and one of the most iconic species of South Africa in particular, where most of its breeding population occurs. The Black Harrier population has declined in recent years to less than 1000 birds due to the destruction of its original breeding habitat, South Africa's natural shrubland, the fynbos, which has been greatly reduced by encroaching cereal culture and urban expansion. A recent study has highlighted the importance of this species for conservation, not only on its own, but as an indicator of other biodiversity values. The knowledge about the needs or threats of this species during the non-breeding season remain extremely scarce. Recently, the use of satellite transmitters on 3 birds have allowed to identify that birds breeding in Cape area migrate to Lesotho outside the breeding season, although this pattern is apparently not homogeneous (another bird stayed closer to their breeding grounds). Assessing factors influencing migratory strategy and how this in turn affects individual fitness and population dynamics, identifying the most important wintering areas for this species at the population level, the connectivity between breeding and wintering areas, and evaluating the ecological factors potentially limiting this species outside the breeding season will be essential to protect this emblematic endemic raptor.

2. Project objectives

With this proposal we propose to satellite track another four breeding black harriers, in order to add to the data already obtained by RS from the satellite tracking of three previously tagged black harriers. This will lead to more information about the movements and migration of this species, based on a total of seven satellite tracked individuals, a sample size large enough to offer new opportunities to investigate in detail:

a) To what extent the long distance migratory movements such as the one recently described (c. 1200km from the Cape region to Lesotho) characterise this species, and to what extent black harriers use separate breeding and non-breeding areas;

b) To statistically analyse and model the movements of black harriers throughout the year, in particular those towards non-breeding season areas, or potential prospection or nomadic movements within the southern african region;

c) To identify and map the best suitable habitats for black harriers in southern Africa during the non breeding season

d) To determine the species diet throughout the year, by collecting pellet and prey remains at nest sites and at roost sites outside the breeding season.

3. Brief description of activities

The following activities are planned:

a) **Trapping and satellite tracking**: We will trap and tag four harriers from four different nests in the cape region, during breeding (July-Sept) of the first year.

b) **Diet, habitat selection and foraging success during and outside the breeding season, and in key stop-over areas during migration**: During both the first and second breeding season, we will conduct field surveys on known breeding areas to determine habitat use and availability, and to conduct behavioural observations to quantify black harrier foraging success in each habitat.

c) **Habitat use and ecological niche model of black harriers outside the breeding season**: We will assess the habitats used by black harriers outside the breeding season using the GlobCover global land cover map V.2.3/ We will assign a habitat type to every location recorded outside the breeding season, and will calculate the proportions of fixes in every habitat type for every bird.

4. Timeline and Milestones

The total project duration is 2 years.

5. Expected results (outputs, deliverables and quantified impact of the project)

Information obtained in this project will be directly beneficial for improving conservation for this emblematic vulnerable species, as it will help identify areas where conservation actions need to be implemented and habitats that need to be protected to ensure whole-year protection for the black harrier. Results can be used to promote other migratory species within South Africa.

6. Contributing organisations and experts

The leading organisation is Fitzpatrick Institute. Contributing organisations are: Instituto de Investigación en Recursos Naturales (IREC) and Estación Experimental de Zonas Aridas (EEZA-CSIC),

7. Estimated budget

The total project budget is EUR 12,400.

Additional EUR 14,500 will be provided: 6,000 EUR will be co-financed from National Research Foundation and EUR 8,500 will be provided in satellite transmitters, GPS, trapping and other equipment. In-kind contributions will be provided partially for staff time and travel.

Category	**Cost (EUR)**
Personnel	6,000
Equipment and supplies	6,100
Publications/info materials	300
Total	**12,400**

Project Proposal 9: Migrating Kestrel Survey and Conservation in South Africa

1. Background

Three long-distance migratory `kestrel' species occupy Eurasian breeding ranges and spend the boreal winter in the subtropics, migrating primarily to areas of central and southern Africa. These are Lesser Kestrel (*Falco naumanni*), Amur Falcon (*Falco amurensis*) and Red-footed Falcon (*Falco vespertinus*).

The following five facts form the basis for the proposed work with these migratory falcons:

1. A significant proportion of the global population of each species over-winters in southern Africa;
2. When in southern Africa, they generally favour grasslands or open, arid areas, that are highly threatened or poorly conserved habitats in the region;
3. They generally feed on arthropods that may either be depleted by agrochemicals or contaminated by toxic levels of persistent pesticides;
4. They aggregate in large, communal roosts, that are relatively easy to locate and count; and
5. There is limited knowledge or understanding of the points of origin and the migratory routes which they follow on passage to and from southern Africa.

In combination, these traits present a strong motivation for increased monitoring of these species in southern Africa, in terms of their dependence on changing and potentially hazardous environmental conditions while wintering in southern Africa.

2. Project objectives

In this initial phase, the project aims to determine the population size and distribution of these species during their annual visit to South Africa in the summer months. Thereafter, the aim is to expand this project to collaborate with international partners, e.g. Eastern Europe, Asia and China, to determine their migratory routes using tracking devices and to improve conservation efforts in all areas where these species spend time throughout the year.

3. Brief description of activities

The following activities are planned:

a) **Conduct annual counts** of three migratory falcon species at their wintering roosts across southern Africa in South Africa, Namibia, Zimbabwe and Moçambique.

b) **Create awareness** of the status and threats facing all 3 species within their range and, where applicable, along their migratory flyways and Promote suitable mitigation measures to reduce the impact of man-made threats to all 3 species.

c) **Ensure the protection of wintering roosts** of migratory falcons across their southern African range.

d) **Provide a broad-scale assessment of the habitat preferences** based on distribution of roosts and numbers of birds at roosts, in relation to regional GIS-based maps of vegetation type and land-use.

e) **Fit tracking devices and Work with partners** active in the breeding grounds of the migratory falcons in studies of migratory patterns of these species.

4. Timeline and Milestones

The total project duration is 17 months.

5. Expected results (outputs, deliverables and quantified impact of the project)

Besides providing significant knowledge on these three species, the project will enhance working relationships with a number of partner organisations in Europe and Asia with whom we plan to conduct tracking studies of these species over the next few years.

6. Contributing organisations and experts

The leading organisation is Endangered Wildlife Trust (Birds of Prey Programme). The contributing organisation is the University of Witwatersrand, School of Animal, Plant and Environmental Sciences.

7. Estimated budget

The total project budget is EUR 14,950 EUR.

Category	**Cost (EUR)**
Personnel	3,000
Travel and subsistence	2,000
Equipment and supplies	3,500
Office/administrative cost	1,500
Publication/info materials	3,000
Other costs (EWT support services)	1,950
Total	**14,950**

Project Proposal 10: A Portal to Enhance Trust for Sakers

1. Executive summary

This proposal is for a multilingual portal to build trust by linking falconers, trappers, falcon hospitals and researchers in an exchange of information that enables estimation of harvests and sizes for Saker Falcon populations, and encourages best practice, most importantly for not trapping adults in breeding areas. Costing an estimated €25,000, it would facilitate a more expensive system to manage trade in Sakers if a voluntary approach is inadequate. Trappers and falconers will be encouraged to register by a prize-linked smart-phone survey.

2. Background

The Saker Falcon (*Falcon cherrug*) is the world's second largest falcon, with breeding populations distributed across the breadth of Eurasia, with some migration to Africa for winter. Falcons have for many centuries been trapped sustainably for use in falconry, typically while on migration and with subsequent release of trained birds back to the wild at the end of the hunting season.

As a result of electrocution, poisoning and excessive trapping, as well as large scale anthropogenic changes in land use, Saker populations declined globally, leading to Red Listing of the species as threatened, and growing pressure for action through the Convention on the Conservation of Migratory Species (CMS 2003) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1979).

Concerned with the rapid decline of the species, the Saker Falcon Task Force (STF) was formally established through a CMS Resolution 10.28 adopted at the 10th Conference of the Parties (COP10) in November 2011. The STF aims to bring together Range States, Co- operating Partners and other interested parties to develop a coordinated Global ActionPlan, including a management and monitoring system to conserve the species. The STF drafted a Saker Falcon Global Action Plan (SakerGAP) to inform a Stakeholders' Workshop in September 2013, which included a Working Group on sustainable use of the species, primarily for falconry, and a report by members of IUCN Sustainable Use and Livelihoods Specialist Group on "Elaboration of a modelling framework to integrate population dynamics and sustainable use of the Saker Falcon *Falco cherrug*".

That report reviewed demographic modelling of raptors, built models for the Saker Falcon, surveyed falconers and trappers in Saudi Arabia; it also developed a conceptual socio- economic model for Saker Falcon management and produced a costing of the main software tool that would be needed. A simple, flexible and transparent population model, developed in Microsoft Excel by the International Association for Falconry and Conservation of Birds of Prey (IAF) used best estimates of productivity and survival (tested against observed growth of the Saker Falcon population in Hungary) to predict resilience of compact European and central Asian Saker populations above 80 pairs if not subject to trapping of breeding adults.

It noted the potential for using recapture of falcons marked in breeding areas to estimate population sizes as well as well harvests, and that liaison with falcon hospitals during the 1990s had played an important role in testing the practicality of using markers in this way.

Survey results showed that falconers and trappers in the Gulf States are consistent visitors at falcon-hospitals, which thus have potential to collect the data needed to model demography of Sakers and socio-economics of their use in falconry. The report therefore recommended engagement of CMS Saker Falcon Task Force with falconers, falcon hospitals and trappers (as well as with biologists to build networks of local land managers in breeding areas, and governments plus international NGOs to support cooperative management). It also proposed development of a portal in Arabic to attract trappers and falconers (by providing useful knowledge, sponsoring of birds marked in breeding areas, surveys and competitions), to promote the idea of not trapping adults in breeding areas, to provide tools for monitoring populations and potentially also to host a system for regulating trade.

At the Stakeholders' Workshop, as a first step towards an internet-based Saker Adaptive Management System, it was agreed to develop a system to try to engage with as many stakeholders as possible, in their own languages, which should include Pashto, Persian and Russian as well as Arabic. Discussion with falcon hospitals in Abu Dhabi and Saudi Arabia indicated that they would be prepared to help, with about 10 hospitals to be involved. Discussion with IAF indicated willingness to find funding to build a Phase I portal, through which Saker Falcon harvests and populations could be estimated on a voluntary basis, with Phase II development for more systematic monitoring of trade if required.

3. Objectives

Overall objectives are to encourage:

- Marking wild sakers to best monitor populations and conserve habitats;
- Reporting trapped sakers to monitor populations and adopt best practice;
- Recording all sakers in falcon hospitals to assess harvest and check reporting rates.

Phase I objectives are:
(i) to construct an internet portal, in at least 4 languages, through which falconers and other conservation interests can engage with some 10 falcon hospitals; and
(ii) to attract the interest of as many falcon trappers as possible throughout the Saker Falcon Range States by "Smartphones for Saker Conservation" survey.

Phase II: If funded, to build a Saker Adaptive Management System through which
(i) registration of Saker Falcons marked by biologists at nests;
(ii) reporting of falcons when trapped, and
(iii) registration at hospitals of falcons in training, can be used estimate harvests, assess population sizes and encourage only that trade which is legal and sustainable.

Practical Phase I targets include engagement of all existing falcon hospitals, and obtaining as close to 1000 visits to the portal by falconers and trappers as possible by the next CMS CoP.

4. Activities

The main actors to be engaged by the trust-building portal are markers of nestlings, trappers and falconers, falcon hospitals and a research/administrative group of interests.

Markers of nestlings will initially be biologists or conservationists in countries where breeding occurs, but should later be local people trained and directed to the system by the biologists and conservationists. They will attach rings and microchip to nestlings and submit data (where, when, sex, brood-size, ID).

Phase I data will be in Excel, but Phase II would use smart-phone and also include submission of a feather from each bird for a reward.

Trappers and falconers will be attracted to the system by smart-phone survey: providing data and contact details will qualify for entry to a prize draw. The system will also motivate by providing information on marked birds in general and on practises that will benefit them and conservation (e.g. health tips). In Phase II, trappers would submit data (where, when, age, sex, existing/new ID) on smart-phones, with a feather from each bird in exchange for more detailed information plus tangible rewards.

Hospitals also need to be attracted to the system, at the least by exchange of information. In Phase I, they submit simple survey data and report markers from outside their system. A Phase II system would help record all birds' data (where, when, age, sex, existing/new ID) with storage of feathers, exchanged for information plus more tangible incentives.

The Research/Administrative Group of interests includes those managing and translating for the system and others engaged in research. In Phase I, they gain from data exchange, with pay for expenses and contracted reporting. Phase II would need paid editing and system management (perhaps shared part-time across 2 people to provide insurance against illness, replacement, etc) with competence in English and Arabic. They would receive and process data from the system, liaise with other actors, supervisor(s) and the system provider, ensure feather collection/storage and administer site content plus distribution of tangible rewards.

The portal will be based on an existing multilingual design for sustainable use stakeholders (www.naturalliance.eu, Figure 1), in which editors use a back-office for translation of its text content (Figure 2). The portal design operates on desktops, laptops and smart-phones. However, additional work will be required for handling right-to-left Arabic content.

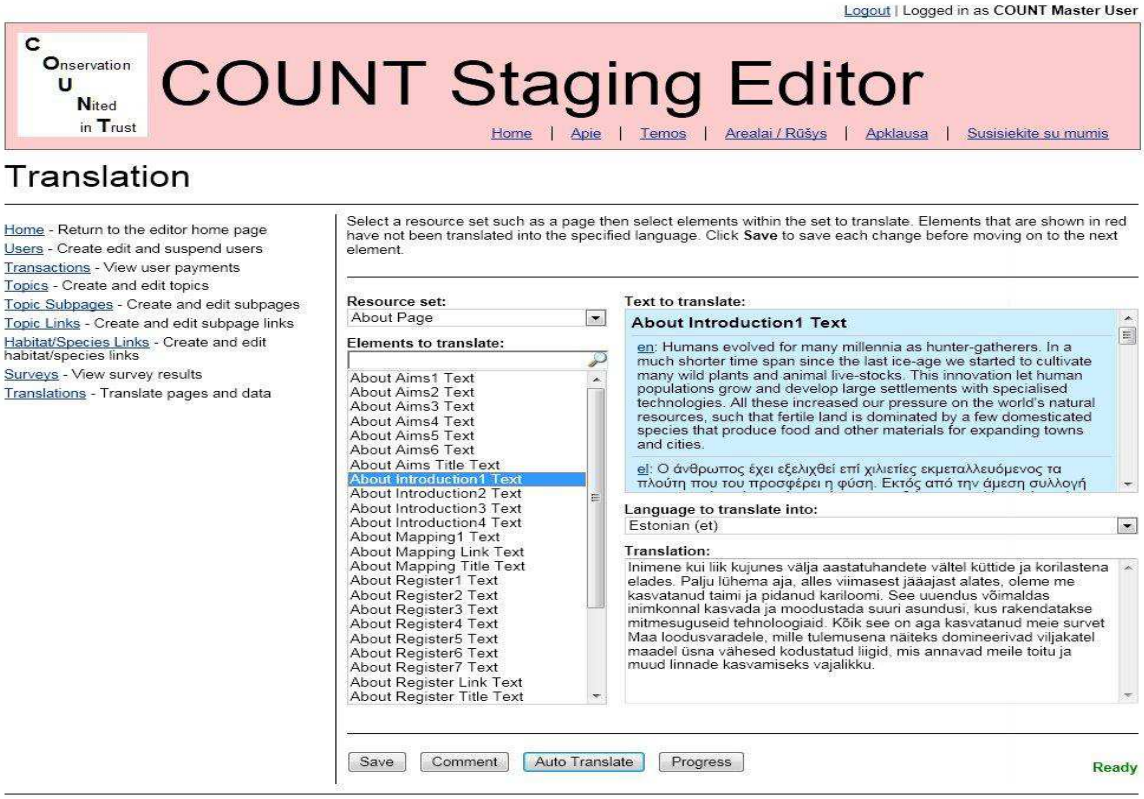
Figure 1. The Naturalliance portal currently handles 23 languages.

Initial content will be produced in Arabic and English for translation into Pashto, Persian and Russian.

Content will include:
• useful knowledge on care of trapped and trained falcons;
• information about re-stocking, explaining why trapping breeding adults is unwise;
• information about movements of satellite tracked falcons, with scope to sponsor them;
• survey and competition results for those providing data on trapping and marking;
• scope to register for further information and incentives deliverable in Phase II.

Entry to the portal for Trappers and Falconers (TaF) will have an internet address that is memorable in the relevant languages. On separate pages from the main navigation, the portal will also host pages for the research/administration group (RAG) to download Saker material in English (e.g. digests of new information and maps and summaries of Saker population estimates, ecology, migration routes), with a link for blogging. This will provide easy access to the latest scientific information on the species (in synthesis and also in the original publications), both to government agencies and to researchers. There will also be scope for those marking wild falcons to upload data, and for hospitals to report birds which reach them marked, so that both groups and trappers can be rewarded for reporting by provision of information on origins of the birds they record. However, this will be an Excel- based system, rather than the automated system that would replace it in Phase II, to also enable payments for information and monitoring of trade. It may be most convenient to access the SAG pages through the back-office which handles translation (Figure 2).

Figure 2. A back-office handles translation of content between languages and would, with more appealing graphic design than its strictly functional use in Naturalliance, be a main focus for portal visits of researchers, administrators and government.



The portal design has facility for survey, but it is considered that initial attention of trappers and falconers will be attracted most readily through Smartphones, of which UAE and KSA are two of the three countries with highest penetration (Figure 3). A "Smartphone for Saker Conservation" marketing survey will therefore be used to engage TaF interests.

Figure 3. Smartphones are extremely popular in Arab countries.

Falconers and trappers will have several ways to take part in the survey. One will be to enter the address for an internet site, but many will prefer to access using their phones to scan QR code on a leaflet provided by their clubs (which exist already in UAE and Qatar) or in waiting rooms in falcon hospitals. Of course, the survey will also work on desktops, laptops and tablets as well as on phones. Proposed questions for the survey, which must be kept very simple, are in Box 1. The questionnaire will be multilingual, with a choice of language on the start page.

Box 1. Questions for trappers/falconers in the initial SMS survey

A. Are you a falcon trapper? Yes/No [if "yes" – continue this question list] B. About how many female Sakers have you trapped in the last 5 years?
C. In which country do you spend most time trapping falcons? D. How many years have you been trapping falcons?
E. Do you understand that Saker numbers are decreasing? F. Will you help us help you to continue trapping?

Falconers [from "no" at A]
a. About how many wild Sakers have you owned in the last 5 years? b. How many other wild falcons have you owned in the last 5 years? c. How many hybrid falcons have you owned in the last 5 years?
d. How long have you been a falconer?
e. In what country do you live?
f. Do you take all your birds to falcon hospitals?

As there are relatively few falconry hospitals and their engagement is so important, survey to engage their interest and start trust-building will involve a more personal approach. Each will receive an invitation to participate from the CMS Saker Falcon Task Force, with an explanation of the importance of the project both for conservation and for the long-term future of falconry, the passion of their clients. Phase I will request information in Table 1 and Table 2, with agreement to provide data on numbers of falcons that they register annually and to contact system admin whenever they encounter a falcon that they have not marked themselves. Participating hospitals will be closely involved in any design for Phase II.

Table 1. Registration data required from falcon hospitals.

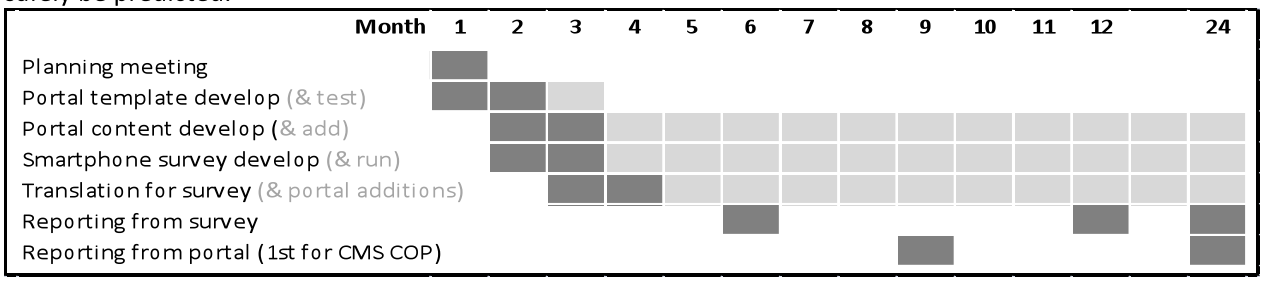
Date:		
Country:		
Falcon Hospital:		
Period of operation:	**Opening year:**	**Closing year:**
Address:		
Phone:		
Fax:		
E-mail:		
Web:		
Data provider		
Name (title & first & family):		
Affiliation:		
Position:		
Address:		
Phone:		
Fax:		
E-mail:		

Table 2. Induction survey for falcon hospitals

Roughly how many of your clients keep Saker Falcons?	
Approximately what % of Saker Falcons are individually marked when first presented at the Hospital?	
Do you mark any or all previously unmarked falcons during treatment? If yes, what method(s) is used?	
Do you record re-visits of each marked Saker Falcon?	
What equipment manufacturer(s) do you use for reading the identity markers (e.g. microchips)?	
Would you be interested for the CMS Saker Falcon Task Force to inform you of the origin of falcons with pre-existing identity codes?	
Would you be willing, if clients agreed, to collaborate with the Task Force by providing a body feather sample from trapped Saker Falcons for DNA extraction, as a long term project to identify populations from which they originated?	

5. Timeline and Milestones

The Phase I proposal will involve contracts to deliver (i) the software of a Portal Enhancing Trust for Sakers (PETS) and (ii) Smartphone App for Saker Conservation. Timelines for these deliveries and reporting from them, with data at 3 month intervals and an annual report, respectively, can be projected with confidence. However, these contracts will provide only the potential for build trust and obtain data. The capability of the PETS to obtain data from Falconers and Trappers, and from Markers and Falcon Hospitals, will depend on the work of partners who provide content, translation and data handling. Training in these tasks will be provided, but the quality and timeliness of partner contributions cannot safely be predicted.



6. Outputs, deliverables and impact

Outputs and deliverables will include:

- Tested software template of a Portal Enhancing Trust for Sakers
- On-line instruction and training documents.
- Summaries at 3 month intervals from the mobile phone survey
- Annual report on data received through the portal and phone surveys

Impacts will be registered through numbers of visitors to the site, duration and page-view counts of visits, provision of data, and trends in response to at least one attitude question in surveys. Important measures of success will be the participation of falcon hospitals, and the registration and provision of data by trappers, without whose cooperation a system for regulation of trade cannot be effective.

The ultimate aim of this project is the creation of a network of enthusiasm, knowledge and funding for conserving Saker Falcons. If traditional falconry is to thrive, based on sustainable use of falcons and prey which depend on vulnerable grassland ecosystems, it is essential that falconers become organised to help (i) collect data for sustainable harvests, (ii) reduce poisoning and electrocution, (iii) halt trapping of breeding adult Sakers and (iv) restock depleted Saker populations. One target for this proposal is the completion of development, with funding by falconers, early in 2014. This is essential in order to obtain extensive engagement with falconers and trappers, through falcon hospitals, before the CMS COP late in 2014, and thereby to reach the second target, which is support of Parties for this attempt to build voluntary compliance with current regulations. The longer term targets are for falcon hospitals to be registering an increasing proportion of wild Saker Falcons with legal origin, and for depleted wild populations to be recovering.

7. Contributing organisations and experts

The lead organisation for this work is provisionally IUCN Sustainable Use and Livelihoods Specialist Group, working together with the International Association for Falconry and Conservation of Birds of Prey and Birdlife International, who are both IUCN members. IAF will be responsible for helping IUCN run the TaF content of the portal, including translation for the portal and the smart-phone survey, while Birdlife International will help run the RAG content. Support will be requested from Environment Agency – Abu Dhabi for contacting falcon hospitals, from the Saudi Wildlife Authority for contacting falcon trappers and falconers in Saudi Arabia, and from Al Gannas for all contacts in Qatar. An advisory board, who will be consulted on drafts and asked for help according to their expertise, will consist of Prof Robert Kenward, Dr Margit Muller, Dr Monif AlRashidi, Dr Mohammed Shobrak, Dr Leon Bennun, Dr Salim Javed, Mr Matyas Prommer, Mr Janusz Sielicki and Mr Nick Casey.

8. Estimated budget

The budget estimate below is for Phase I, which corresponds to Saker Management Pathway Stage I in the report of the Modelling Contract. It is for provision of the software and portal initiation alone, plus smartphone survey, for outputs and deliverables as detailed in 6. This cost is €20,000 (US$ 27,000), with a €5,000 travel budget added for supervision and training. This budget does not include costs of overall management, nor of content and translation, which will need to be provided by STF and on a voluntary basis by partner organisations above, whose logos will all appear on the Research and Administration Group (RAG) entry to the portal (only falconry logos will appear in the TaF section). Nor does this budget include the cost of prizes for those who contribute information. Essentially, it is what IAF has kindly agreed to seek to raise. Completion will depend also on goodwill from other organisations. Details of software construction for a Saker Adaptive Management System, also given in the previous Modelling Contract report as Saker Management Pathway Stage II, were estimated to cost ca. US$90,000.

Name	costed in Euros	US$
Anatrack Ltd - portal template	7,000	9,459
Tanglewood - 2 year supervision, reporting	4,000	5,405
IRC - smartphone survey	4,000	5,405
Janusz Sielicki - 2 year data & reporting	5,000	6,757
Contracts	**20,000**	**27,027**
Travel	**5,000**	**6,757**
Totals	**25,000**	**33,784**

Project Proposal 11: Tagging 100 Sakers - Compiling information on movement patterns, diet and habitat of Saker Falcons for revealing potential threats and preparing better targeted conservation measures

1. Background

The Saker Falcon (*Falcon cherrug*) is the world's second largest falcon, with breeding populations distributed across the breadth of Eurasia, with some migration to Africa for winter. Falcons have for many centuries been trapped sustainably for use in falconry, typically while on migration and with subsequent release of trained birds back to the wild at the end of the hunting season.

As a result of electrocution, poisoning and excessive trapping, as well as large scale anthropogenic changes in land use, Saker populations declined globally, leading to Red Listing of the species as threatened, and growing pressure for action through the Convention on the Conservation of Migratory Species (CMS 2003) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1979).

Concerned with the rapid decline of the species, it was listed in Annex I. Of CMS, as well as included in CMS Resolution 10.23 as a species for concerted action. More importantly, the Saker Falcon Task Force (STF) was formally established through a CMS Resolution 10.28 adopted at the 10th Conference of the Parties (COP10) in November 2011. The STF aims to bring together Range States, Co-operating Partners and other interested parties to develop a coordinated Global Action Plan, including a management and monitoring system to conserve the species. The STF drafted a Saker Falcon Global Action Plan (SakerGAP) to inform a Stakeholders' Workshop in September 2013, which included a Working Group on sustainable use of the species, primarily for falconry, and a report by members of IUCN Sustainable Use and Livelihoods Specialist Group on "Elaboration of a modelling framework to integrate population dynamics and sustainable use of the Saker Falcon *Falco cherrug*".

The model has shown clearly that conservation of breeding adult birds, "saving the capital" is – from the population point of view – more important than focusing on juveniles. Up to now, most of the researches studying Sakers' movements have dealt with juveniles that are easier to tag. It is very important, however, to learn more about the movements of adult birds, their habitat use and diet composition, and subsequently the threats they are posed to, especially in breeding season, when they maintain a family. All those information contributes to better setting the conservation target and create a more efficient species conservation approach. Learning more about juveniles' movements, with special regard to their migration, are also important in the areas and populations that have not yet been studied.

Regular research activities on Sakers have two main focuses: Central Europe and Mongolia. In addition, regular (annual or at least biannual) surveys are carried out in certain parts of Ukraine and Russia. There have been occasional, or once or twice repeated surveys in other areas (in Central Asia, Asian Russia, Kazakhstan, NW China), however there are vast areas and meta-populations that have never been studied. It is important, therefore, to focus the project activities on: parts of Eastern Europe (East Romania, Moldova, East and Southwest Ukraine, European Russia), Turkey, Azerbaijan (?), Asian Russia (especially in the Altai area), Kazakhstan (Ustyurt plateau, Central Kazakhstan), the Central Asian countries (Uzbekistan, Kyrgystan, Tajikistan, maybe Afghanistan), China (Tibetan Plateau and East China).

2. Project objectives

The primary aim is to reveal the potential threats posed on adult Sakers in the breeding habitat through the collecting information on their movements. The secondary aim is to list potential risks factors posed both on adult and juvenile Sakers on migration and in the wintering areas. The project aims to collect information on the movement patterns of Saker Falcons, including breeding and wintering habitat use, and migration. Gathering information on the habitats, diet composition and prey species is also planned.

3. Brief description of activities

a) **Satellite-tracking adult Saker Falcons**: In the breeding range, from East Europe to East China 50 adult Sakers will be tagged to follow their movements. Tagging will be carried out on ten selected locations, where tags will be deployed on five adult Sakers in each area. Selected locations should co-incide with the long-term monitoring areas across the range proposed by STF. Primarily, adult, breeding males should be targeted, as they maintain the family through most of the breeding season, thus risks affecting them impact the entire family. Tagging should be done before the breeding season or during the incubation period and tagged pairs should be supported by extra food in the first days. In addition, five wintering birds should be tagged in five wintering areas (North Africa, Gujarat/India, Tibetan Plateau) to increase our knowledge on their wintering movements and habits.

b) **Satellite tracking juvenile Saker Falcons**: In areas, where no previous tracking studies where done, juvenile birds will be tagged to learn more about dispersal, habitat use and migration. Five areas should be selected, where five birds will be tagged in each area.

It is important to note, that according to our recent knowledge, previously and recently used (17-30g) satellite tags can have significant negative impact on the survival rate of tagged birds, which is especially expressed in case of juveniles. We suggest, therefore, to use the lightest available tags. In case of adults, use of 5g-7g solar-powered GPS/UHF tags is suggested. The advantages are (1) light weight and small size; (2) no data transfer fee; (3) data frequency may be very high or even continuous depending on light conditions; (4) two-way communication capability, thus tags can be re-programmed even when they are already deployed. Disadvantages: (1) no long-distance communication (Argos or GSM), receiver needs to be within a range of few hundred metres to download data (which can collected and stored by the tags as long as two years) and that requires extra field work; (2) the small size requires smaller solar panel and that may pose problems in poor light conditions. This type can be used very well for studying habitat use of breeding adults that remain at the nest throughout the season. According to our recent knowledge, Sakers stay in their eyrie most of the year, and they are phylopatric, which attributions support the use of this type of tag. Juveniles are not attached to a specific place, therefore different tags should be used for tracking them. 5g-9.5g Argos tags can be an optimal solution. “Marshall-type” harness made of Teflon® or special neoprene can be used for deployment.

c) **Installing nest camera traps to nests of satellite-tracked breeding adults**: Nest cameras will be installed on satellite-tracked adults' nests. Cameras are embedded with movement sensors and take photos every time when adults feeding the chicks. Prey items can be identified from the photos and linked to satellite-tracking data. Cameras also help to reveal mortality factors (e.g. predators) to chicks in nest.

d) **Installing camera traps on threatened nests:** In certain areas, chicks are known to regularly disappear from nests. Camera traps will be installed at some of those nests to reveal the reason of chicks' disappearance.

e) **Ringing and colour-ringing chicks, when collecting data on breeding success**: When monitoring breeding success on selected pilot areas and preparing for satellite-tracking of juveniles, chicks will be ringed with ornithological and colour rings. Ornithological rings have a website address (www.ring.ac), where ring number can be reported. Several Hungarian Sakers trapped for falconry in Libya have already been reported due to this type of ring. Colour rings help to identify birds from the distance.

f) **Analysing data**: Data collected on movements (habitat use and dispersal), diet, prey species and habitat, as well as various background data (vegetation, agricultural practices, infrastructure in the area, etc.) collected based on movement patterns will be analysed with special regard to potential direct and indirect risks to Saker Falcons.

4. Timeline and Milestones

I. Phase
December 2013 – adopting 'Tagging 100 Sakers' project plan and select project areas (that would also serve as long-term monitoring sites), elaborating detailed project plan, as well as starting to compile budget for actions;
January 2014 – starting to deploy satellite-tracking devices on adults and juveniles in the wintering areas;
January 2014 – starting to deploy satellite-tracking devices on adults in the breeding areas;
March 2014 – starting to install nest camera traps at nests of tracked Sakers and camera traps at problematic nests;
April/May 2014 – monitoring breeding success on selected areas, ringing chicks and selecting chicks for later tagging;
May 2014 – starting to deploy satellite-tracking devices on juveniles;
June/July 2014 – downloading data from adults' satellite-tracking devices and removing (nest) camera traps;
August/September 2014 – first analysis of initial data on adults' habitat use and photos of camera traps and reporting to CMS COP;

II. Phase
September 2014 - January 2015 – tagging individuals on wintering areas;
March - June 2015 – re-visiting nests of tagged adults to record their presence/absence and download data;
March 2015 – setting cameras on appropriate sites based on previous year's experience;
April/May 2015 – monitoring breeding success on selected areas, ringing chicks and selecting chicks for later tagging;
June/July 2015 – downloading data of adult birds' devices;
September/October 2015 – analysis of compiled data and reporting.

5. Expected results (outputs, deliverables and quantified impact of the project)

The expected outputs and deliverables of the project are databases on the (1) breeding habitat use and migration of adult birds by tracking 75 adult birds; (2) dispersal and migration of juvenile birds by tracking 25 juveniles; (3) wintering habitat use of adult and juvenile birds by tracking the above-mentioned 100 individuals; (4) diet composition and prey availability (status of prey species populations) by analysing

photos of 30 camera traps installed at nests of tracked adult Sakers; (5) subsequently, direct and indirect threats on Sakers by analysing data from 100 tracked individuals, 30 nest camera traps and 10 camera traps (installed at problematic nests). In addition, 500+ chicks will be ringed with informative rings with website address, and colour rings. As a result, Saker GAP will have better targeted conservation measures based on improved information.

6. Contributing organisations and experts (lead organisation/expert, contributors)

Organisations and persons responsible for overall co-ordination (technical, administrative and financial): CMS Raptor MoU (Nick Williams), Environmental Agency – Abu Dhabi (Salim Javed); MME/BirdLife Hungary (Matyas Prommer), International Wildlife Consultants Ltd. (Andrew Dixon) and the Saudi Wildlife Authority (Mohammad Sulayem).

Organisations and persons contributing in various regions and countries: Milvus Group (Luca Dehelean, Attila Nagy) – Romania; Ukrainian Birds of Prey Research Centre (Yuri Milobog, Maxim Gavrilyuk) – Ukraine, Moldova; Vulture Conservation Foundation (José Tavares) – Turkey; Siberian Environmental Centre (Igor Karyakin, Elvira Nikolenko) – Russia, Central Asia; Xinjiang Institute of Ecology and Geography, CAS (Ma Ming) – China; Naurzum State Nature Reserve (Yevgeni Bragin), Association for the Conservation of Biodiversity of Kazakhstan (Sergey Skylarenko), Kazecoproject (Anatoly Levin) – Kazakhstan, Central Asia; International Wildlife Consultants (Andrew Dixon) – Mongolia.

7. Estimated budget

(For Phase I only)

Item	Quantity	€/unit	*US$/ unit*	Total €	*Total US$*
5g solar GPS/UHF tags	75	1 100	*1 430*	82 500	*107 250*
17g solar GPS/GSM tags	25	1 100	*1 430*	27 500	*35 750*
UHF receiver	15	1 000	*1 300*	15 000	*19 500*
GSM signal/year	15	640	*832*	9 600	*12 480*
roll of teflon	5	310	*403*	1 550	*2 015*
Personel (full time/year)	2	20 000	*26 000*	40 000	*52 000*
Personel (part time/year)	10	10 000	*13 000*	100 000	*130 000*
Travel (km, domestic, fuel, including rent)	50 000	0,13	*0*	6 500	*8 450*
Travel (international, flight, accommodation)	10	1 300	*1 690*	13 000	*16 900*
rings	2 000	2	*3*	4 000	*5 200*
camera traps	40	300	*390*	12 000	*15 600*
Total				**311 650**	***405 145***

Project Proposal 12: Deploying 30 satellite tags on Saker Falcons (in Iran and one or two countries in the region)

1. Background

The main objective of this project is to utilize the scientific technology and local community capacity in order to deploy satellite tags on approximately 30 Saker Falcons. This project will help researchers determine whether tagging is a viable platform for long-term deployment of satellite tags. Project researchers will also determine the contribution of local community on sighting, tagging and release. Data results from the tags will provide insight into SF movements and habitat use and will further investigate the potential for using environmental variables and patterns to augment location estimates. If the method in this pilot effort proves successful, the use of these techniques may be expanded both nationally and internationally - e.g., off of Middle East and Central Asia.

2. Project objectives

The objectives of this project are four-fold:

a) First, by working with local communities (even trappers) based on project areas, researchers will determine the potential for using locals to deploy satellite tags for up to 10 months. Current data show some promise, however, the population size is currently too small to make any meaningful conclusions.
b) Second, in an effort to develop methods for long-term attachments, different methods will be tested.
c) Third, the satellite tags will be used to begin to examine reports on migration routes in the different seasons. Movements will be inferred from the release and sighting points. The behaviours and habitats encountered will be determined from the temperature and indicators data transmitted by the tags.
d) Fourth, because the long term working with SFs, we will examine the potential for using solar tags, as well. The goal is to determine the highly accurate geo location rather than a rough geographic region, which is unlikely**.**

3. Brief description of activities

In the summer and fall of 2014 -2016 project researchers will work with local communities to deploy a total of 30 satellite tags on SFs in Iran and perhaps in UAE, 6 in 2014 and 12 each in 2015 and 2016. Tags will be deployed for periods of 6 and 10 months using two different types (battery and Solar). If successful, this will provide a method for future researchers to obtain critical information necessary for the management of SFs in the region, information that has been impossible to obtain using other methods.

4. Timeline and Milestones (see above point 3.)

5. Expected results (outputs, deliverables and quantified impact of the project)

One of the main objectives of this project is to determine the potential for using the local communities to deploy satellite tags. The success will be indicated by the incidence of breeding, migration routes, wintering, mortality, etc. Comparisons of retention rates between the two tag types will indicate which is better suited for long-term tag attachments. For the data recovered from the tags, efforts will focus on integrating the behavioural and environmental data to determine the influence of physical features on behaviours. The behavioural data will include the habitat condition and conservation status, as well as the percentage time spent in different areas. Additional efforts using the behavioural and environmental data will explore the potential for improving location estimates between tag deployment and signals. The objective is to obtain a precise latitude and longitude, used by SFs. It should, for example, be possible to determine whether SFs from Middle East or Central Asia visit or move to the same or other regions.

6. Contributing organisations and experts (lead organisation/expert, contributors)

Iranian Department of Environment; Environment Abu Dhabi (potential)

7. Estimated budget

Total estimated budget is USD 150,000.

Project Proposal 13: Towards 1000 nest-boxes

1. Executive summary

Grids of 100-200 Dixon nest-boxes will be placed in Kazakhstan, extending south into empty steppe from a tree-nesting Saker population at Naursum, and north from cliff-nesting populations in the south. Falcons of appropriate Kazakh stock will be released on each grid. All birds will be ringed and microchipped, and also young from the neighbouring existing populations to assess immigration to grids. A sample of birds will be tagged with GPS- retransmission tags to record movements and fates, and to enhance interest in the project through displays on the CMS-IAF Portal for Enabling Trust, so that trappers can be encouraged to report any captures of marked birds (for possible rewarded release) and so that sponsorship can be sought for more release and tagging of birds. Monitoring for 3 years will be used to compare colonisation onto grids or natural sites from both origins, and with results from grids in Mongolia, thereby gaining information about (a) what factors most strongly affect colonisation of artificial nests; (b) how suitable is habitat for sakers adjacent to traditional nesting areas; (c) movements and survival of Sakers fledged in northern and southern Kazakhstan; (d) how origin nest type affects choice of breeding site in Sakers; (e) which release techniques produce best survival; (f) harvest rates of Saker populations using Arabian Peninsula flyways; (g) whether ordinary falconers will contribute to conserving wild breeding stocks; (h) whether local communities will contribute to conserving Sakers and nesting areas; (i) how access and local engagement can contribute to protecting breeding populations; and (j) which techniques are most cost-effective overall for restoring Saker populations. If results from first grids in the north, and releases in the south, show scope to increase the Kazakh Saker population, more than 1000 boxes will be installed.

2. Background

The Saker Falcon (*Falcon cherrug*) is the world's second largest falcon, with breeding populations distributed across the breadth of Eurasia, with some migration to Africa for winter. Falcons have for many centuries been trapped sustainably for use in falconry, typically while on migration and with subsequent release of trained birds back to the wild at the end of the hunting season.

As a result of electrocution, poisoning and excessive trapping, as well as large scale anthropogenic changes in land use, Saker populations declined globally, leading to Red Listing of the species as threatened, and growing pressure for action through the Convention on the Conservation of Migratory Species (CMS 2003) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1979). Concerned with rapid decline of the species, the Saker Falcon Task Force (STF) was formally established through CMS Resolution 10.28 adopted at the 10th Conference of the Parties (COP10) in November 2011. The STF aims to bring together Range States, Co-operating Partners and other interested parties to develop a coordinated Global Action Plan, including a management and monitoring system to conserve the species. The STF drafted a Saker Falcon Global Action Plan (SakerGAP) to inform a Stakeholders' Workshop in September 2013, which included a Working Group on sustainable use of the species, primarily for falconry. That working group was informed by a report by members of IUCN Sustainable Use and Livelihoods Specialist Group on "Elaboration of a modelling framework to integrate population dynamics and sustainable use of the Saker Falcon *Falco cherrug*", which used data from recent studies of Saker breeding populations.

That report reviewed demographic modelling of raptors, built models for the Saker Falcon and developed a socio-economic model for Saker management (tested against observed growth of the Saker population in Hungary) to predict resilience of compact European and central Asian Saker populations above 80 pairs if not subject to trapping of breeding adults. It noted the potential for using recapture on migration of falcons marked in breeding areas to estimate population sizes as well as harvests. Help by Saudi Wildlife Authority enabled survey of falconers and trappers and resulted in plans for a multi-lingual portal to attract these practitioners (by giving useful knowledge, sponsoring birds marked in breeding areas, surveys and competitions), to promote the idea of not trapping adults in breeding areas, to provide tools for monitoring populations and also to host a system for regulating trade.

The Working Group on Sustainable Use, reporting at the Stakeholder Workshop in Abu Dhabi in September 2013, also noted extensive work by International Wildlife Consultants (IWC) to enhance Saker populations in Mongolia with grids of Dixon nest boxes in habitats without Saker nesting sites. Prompt settlement of these grids indicated a surplus of non- breeding falcons in Mongolia, as predicted by modelling. Previous work in Kazakhstan (like IWC, funded by Environment Agency - Abu Dhabi and its precursor) showed that Sakers in the north had healthy populations which use a flyway through Saudi Arabia, where numbers of migrant falcons appear fairly stable, but that there were relatively few tree-nesting sites for them in Kazakhstan compared to the area of steppe. In the south, cliff nest sites too were fairly rare, but this was not limiting because the population needed restoration after overharvesting (probably of adults in breeding areas that are easily accessible). The northern area has few access roads, migratory Sakers that leave after breeding and a supportive human population, which has conserved the stock. There is therefore scope for enhancing breeding populations by releasing birds in areas that are less accessible to trappers in the south, and perhaps to enhance the northern population by providing artificial sites extending south across the steppe.

3. Objectives

Overall objectives are to:

- Discover how artificial nest sites can best enhance Saker breeding in Kazakhstan;
- Test whether local communities can promote conservation of breeding Sakers;
- See how much Sakers can benefit from conservation through use in Saudi Arabia.

Phase I objectives are, during the first 3 years, to:
(i) lay 2 linked grids of 100-200 artificial nests, in north and south Kazakhstan;
(ii) hack domestic-bred and wild-origin fledglings from the boxes, and elsewhere;
(iii) monitor migration and fate of falcons fledged in these areas with GPS-SMS tags;
(iv) record settlement patterns on the grids for released and wild-origin falcons;
(v) test whether falconers in the Arabian Peninsula, kept informed through the portal project, are likely to sponsor extension of such work for the long term.

Phase II: if justified by Phase 1 results, during 2 further years, additional objectives are to:
(vi) add further linked grids of 100-200 artificial nests;
(vii) monitor changing attitudes and actions of local communities in the areas;
(viii) use all these data to roll-out the techniques to more of the Saker distribution.

Information from this work will be as much sociological as ecological; to ecological data on
(a) what factors most strongly affect colonisation of artificial nests;
(b) how suitable is habitat for Sakers adjacent to traditional nesting areas;
(c) movements and survival of Sakers fledged in northern and southern Kazakhstan; (d) how origin nest type affects choice of breeding site in Sakers;

(e) which release techniques produce best survival;
will be added socio-economic information on:
(f) harvest rates of Saker populations using Arabian Peninsula flyways;
(g) whether ordinary falconers will contribute to conserving wild breeding stocks;
(h) whether local communities will contribute to conserving Sakers and nesting areas;
(i) how access and local engagement can contribute to protecting breeding populations; (j) which techniques are most cost-effective overall for re-storing Saker populations.

4. Activities

The proposed techniques and their application are as follows:

Grids

Completed grids will contain artificial nests in rows of 10 at 5 km intervals away from the natural nest sites. However, for the first year there will be only 5 per row in ten rows (extending 50 km from natural nests in total) so that fewer are placed while construction techniques are improved and risk of tampering or theft of the metal structures is assessed. Dixon boxes are essentially oil-drums mounted vertically on poles, with access openings cut in the sides (Figure 1). In the second year, when grids are completed, the two running south in the north will have some tree simulations added, to see if these are more attractive, especially for wild birds reared in natural tree nests.

Figure 1. *Sakers breeding in a Dixon box on Mongolian steppe.*

Releases

Standard hacking techniques will be used to release fledging birds from the structures at maximum distance from na tural sites, to encourage philopatric birds to nest on the structures rather than transfer to na tural nests. Some birds will also be released from tree-nest structures in an area of southern Kazakhstan where preliminary releases indicate this approach to be suitable; hacking success was very good for large groups of fledglings. Young will be obtained from breeding centres and, if licensed, also from a north Kazakh population by techniques to increase eggs laid by wild Sakers, so that additional

young can be reared by domestic surrogates. Areas subjected to excessive harvest often have lone males remaining; if practical, a few females for the south may be trained and provided in the south in ways that encourage wild males to pair with them for breeding without full release.

Monitoring falcons

All young released and reared wild in the project areas will be fitted with leg rings and internal microchips, to enable reporting either by trappers or by falcon clinics to which falconers routinely take newly acquired birds in Saudi Arabia (survey results). This will build further data on harvest rates and sizes of the Saker population using the Red Sea flyway. All released birds will be equipped with recently developed GPS-retransmission tags that weigh 17g and store up to 30,000 GPS locations for download when they encounter a mobile phone system, as they will do at least in the marking areas and on migration. The locations are accurate typically (80%) to 20m, and use solar cells to last several years, which will build a rich database of Saker movements in relation to remote-sensed habitats.

Dissemination

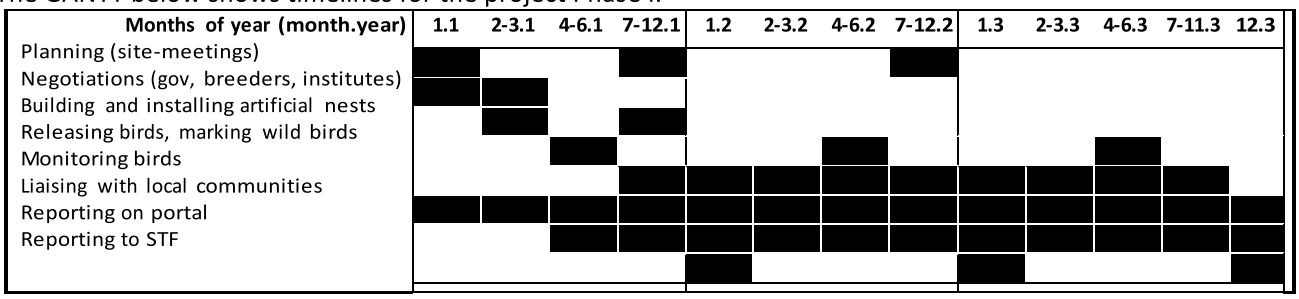
Details of movements of tagged birds will be downloaded soon after receipt to the Portal for Enhancing Trust (PET), which is aimed to attract falconers and trappers in Arabic, Kazakh, Persian, Pashto and Russian and will link to Falcon Clinics. A synopsis of the project, with inducements to sponsor release and tagging of more birds, as well as to help the project by reporting trapped Sakers, will be updated four times a year. There will also be annual reports in English to the UNEP-CMS Saker Task Force.

Monitoring people

As well as use of the PET to contact the trappers and falconer communities, through computers and smart-phones, local people in the areas of natural breeding and grids will be made aware of the project through the PET and through direct contact (e.g. school visits, local stakeholder meetings). They will be involved in building artificial nests, reporting wild nests and tagged birds, recording unrecognised visitors in areas, and in all other ways possible in order to build interest in Sakers and their habitats. Before-and-after surveys will provide additional data on the potential development of community conservation benefits.

5. Timeline and Milestones

The GANTT below shows timelines for the project Phase I.



6. Outputs, deliverables and impact

Outputs and deliverables will include:

- Trial grids with 200-300 nest structure in northern and southern Kazakhstan.
- Release of at least 50 falcons from these structures and elsewhere over 3 years.
- Three-monthly multilingual update of progress on the Portal for Enhancing Trust.
- Annual report to UNEP CMS and sponsors of ecological and socio-economic results.

Potential ecological impacts will be increased breeding of Sakers in Kazakhstan, especially on the migratory flyway that passes through Saudi Arabia. However, if the project also successfully engages local communities and the community of practitioners visiting the multilingual Portal for Enhancing Trust, the eventual outcome for funding and protection on of Saker falcons and their steppe habitats could be even more important. The ultimate aim of this project and the portal is the creation of a network of enthusiasm, knowledge and funding for conserving Saker Falcons. As noted for the Portal project, if traditional falconry is to thrive, based on sustainable use of falcons and prey which depend on vulnerable grassland ecosystems, it is essential that falconers become organised to help (i) collect data for sustainable harvests, (ii) reduce poisoning and electrocution, (iii) halt trapping of breeding adult Sakers and (iv) restock depleted Saker populations.

7. Contributing organisations and experts

The lead organisation for this work will provisionally be IUCN Sustainable Use and Livelihoods Specialist Group. Support will be requested from Environment Agency – Abu Dhabi and from the Saudi Wildlife Authority for extending Saker conservation management to Kazakhstan, for which permission and help will also be needed from the Kazakh Government, Institute of Zoology and Sunkar Falcon Centre. An advisory board, which will be consulted on drafts and asked for help according to their expertise, will consist of Prof R Kenward, Dr A Dixon, Drs Y and T Bragin, Mr R Pfeffer, Mr J Sielicki and Mr M Prommer. Robert Kenward and Andrew Dixon have, between then, some 20 years experience of work with wild Saker falcons in Central Asia and much longer with releasing and monitoring raptors, especially with radio-tracking. Yevgeny Bragin and Ralf Pfeffer have each been working on Saker falcons in Kazakhstan for more than 30 years, in the latter case also managing release of birds from the Sunkar Centre. Dr Tatyana Bragina has experience with IUCN and WWF of working with local community projects. Janusz Sielicki, also experienced in releasing falcons, will link to the International Association for Falconry and Conservation of Birds of Prey (IAF) for the CMS-IAF portal project. Mátyás Prommer is experienced in working with Birdlife International on Saker telemetry and will link to the project for Satellite Tagging 100 Saker Falcons.

8. Estimated budget

The budget estimates below are separate for Phase I, which will test techniques during the first 3 years, and provisionally also for a Phase II to roll-out the project to at least 1000 nest boxes for Saker Falcons during the following 3 years.

Phase I (first 3 years)	**costed in Euros**	**US$**
300 nest-boxes @ €75	22,500	30,405
50 falcons for release (@ €1,000)	50,000	67,568
50 GPS-SMS tags for released falcons (@€1430/tag+1y data)	71,500	96,622
Two vehicles @ €20,000	40,000	54,054
Misc. equipment (chips, rings, hack food, security sensors)	15,000	20,270
Travel budget (Kazakhstan & international)	30,000	40,541
Field staff (4 persons 3m/y, 3y, @€1000 pcm)	36,000	48,649
Training, supervision and reporting	30,000	40,541
Totals	**295,000**	**398,649**
Phase II (second 3 years)	**costed in Euros**	**US$**
700 nest-boxes @ €75	52,500	70,946
50 falcons for release (@ €1,000)	50,000	67,568
50 GPS-SMS tags for released falcons (@€1430/tag+1y data)	71,500	96,622
Misc. equipment (chips, rings, hack food, security sensors)	10,000	13,514
Travel budget (Kazakhstan & international)	40,000	54,054
Field staff (6 persons 3m/y, 3y, @€1000 pcm)	54,000	72,973
Supervision and reporting	20,000	27,027
Totals	**298,000**	**402,703**

Project Proposal 14: 1,000,000 Safe Poles for the Saker Falcon (Phase I)

1. Background

One of the main identified threats to the Saker Falcon is the electrocution on medium-voltage electricity poles, which occurs across the full extent of its range also affecting other threatened bird, including birds of prey, populations. Electrocution of birds on medium-voltage (i.e. distribution lines, 1-60 kV) electric line poles may take place when a bird touches two phase conductors or one conductor and an earthed device simultaneously (Bevanger, 1998). The key factor that determines the risk of bird electrocution is the pole design/configuration (Prinsen et al., 2011; BIO et al., 2012). Electrocution of the Saker Falcon was reported from different parts of Kazakhstan, Mongolia, Russia (Gombobaatar *et al.*, 2004; Medzhidov *et al.*, 2005; Smelansky, 2005; Karyakin, 2005, 2008; Starikov, 2007; Harness and Gombobaatar, 2008; Harness et al., 2008; Lasch et al., 2010; Dixon, 2011;). The large-scale impact of electric lines on birds is widely recognised by international environmental agreements including CMS Resolution 10.11 (2011) and the related Guidelines on how to avoid or mitigate the impact of electricity power grids on migratory birds in the African-Eurasian region (Prinsen et al., 2011).

The goal of the proposal is to made safe 1 million existing or new electricity poles for the Saker Falcon in priority breeding and wintering areas as well as along migration flyways in Central Asia by 2024. Phase I is the preparation/pilot phase and aims to ensure that coordination, partnerships, legal instruments, permits, data, expertise and long-term, cost-effective solutions are available and in place for the implementation (mitigation) phase on a larger scale.

2. Project objectives:

The objectives of Phase I are to

1. ensure that the project is effectively implemented in target countries;
2. ensure that new and fully reconstructed electric line sections are safe for birds by design in target areas from 2017 onward; and
3. ensure that existing killer poles (e.g. switch, strain and transformer poles) are gradually reduced by 20% in priority regions by 2024.

3. Brief description of activities:

1. Activities to achieve Objective 1
    - 1.1. Establish and maintain the project's Partnership (Steering Committee) to ensure coordinated and effective implementation in China, Kazakhstan, Mongolia and Russia.
    - 1.2. Agree detailed Project Work Plan, including actions and time-frame.
    - 1.3. Clarify partners' responsibilities and contributions.
2. Activities to achieve Objective 2
    - 2.1. Review relevant existing legislation and policies.
    - 2.2. Review potential bird-safe pole head types for new and fully reconstructed electric lines.
    - 2.3. Consult with government officials on the legal possibilities and policy needs to ensure that new and fully reconstructed electric line sections are safe for birds by design in target areas from 2017 onward.
    - 2.4. Develop appropriate legal, policy instruments and new pole designs as necessary.
    - 2.5. Promote the recognition of donors of the latest bird safety standards so that they only fund lines with bird-friendly design.
3. Activities to achieve Objective 3
    - 3.1. Review the spatial distribution and methods of previous mitigation activities.

3.2. Establish a spatial database (GIS), make an inventory and collect existing data about the distribution and abundance of the Saker Falcon and about the location and attributes of medium-voltage electric lines
3.3. Identify and map priority regions for action.
3.4. Conduct pre-mitigation pilot surveys along 2,500 km medium-voltage electric lines in the four target States (along a total of 10,000 km electric lines)
    3.4.1. Record the exact location (GPS), type, specification and number of the electric poles to be replaced or modified.
    3.4.2. Record all electrocuted raptors along the electric line.
    3.4.3. Identify priority areas and priority poles (for example near raptor congregation sites with abundant food sources) within the pre-selected priority regions.
3.5. Log field data into the spatial database (GIS), and make a pole inventory.
3.6. Select the best available and cost effective solution for the long-term bird-friendly modification of the electric poles in the project area. Avoid temporary solutions with costly maintenance needs; prefer permanent reconfiguration of lines with bird-friendly designs.
3.7. Consult with government officials and secure all necessary permits and approvals for the Implementation phase.

4. Timeline and Milestones

Project year	Year 1				Year 2			
Objectives/Quarters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Partnership for implementation								
Bird-safe new and fully reconstructed electric lines								
Surveys of existing electric lines								

5. Expected results (outputs, deliverables and quantified impact of the project)

- Partnerships for effective implementation are in place in China, Kazakhstan, Mongolia and Russia.
- Necessary legislation and policies to ensure that new and fully reconstructed electric line sections are safe for birds by design are in place
- Pre-mitigation surveys are conducted along a total of 10,000 km existing electric lines (equal to approximately 100,000 poles) in the four target States.

6. Contributing organisations and experts (lead organisation/expert, contributors)

Coordinating Unit CMS Raptors MoU (Lead), National Governments, Relevant national authorities, Utility companies (China, Kazakhstan, Mongolia, Russia), International Wildlife Consultants Ltd., Siberian Environmental Centre (NGO, Russia), Wildlife Science and Conservation Centre (NGO, Mongolia), NGO/Research Institute – China, NGO/Research Institute – Kazakhstan.

7. Estimated budget

Summary of costs (2 years)	EUR	US$
Partnership for implementation Coordination and Partnership Meetings' costs	88,800	120,000
Bird-safe new and fully reconstructed electric lines	44,400	60,000
Surveys of existing electric lines (10,000 km), data processing and analysis	133,200	180,000
Total:	266,400	360,000

Project Proposal 15: Assessment of the impact of falconry on the Globally Endangered Saker Falcon in five countries within the Gulf Region

1. Background

The Saker Falcon is a large and powerful bird of prey that breeds through Central and Eastern Europe to Asia, and annually migrates south, including through the Gulf Region, to its wintering areas. It is classified as a Globally Endangered species, due to recent rapid population declines (50% in the last 25 years). Due to it being used for traditional falconry purposes, the species commands immense cultural significance in the Arab world, including for the rulers and royal families of several countries. In addition to habitat degradation and the impact of agrochemicals, one of the major threats considered to be affecting Saker Falcon populations is taking them from the wild for falconry. Most falconers appear to prefer to use wild-origin Saker Falcons (as opposed to captive-bred stock), mainly originating from the core breeding areas in Central Asia. Given the apparent popularity of falconry and high demand for Saker Falcons, demonstrated by their increasing economic value, falconry is believed to have contributed significantly to the collapse of the Saker Falcon population over recent years. The project will focus on five countries in the Gulf Region: Bahrain, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates.

2. Project objective

The ultimate aim is to develop long-term solutions to enable an annual sustainable harvest of wild Saker Falcons for traditional falconry purposes, whilst at the same time retaining a healthy wild population in 'favourable' conservation status. The project will gather information and evidence to better understand the scale and impacts of the current levels of harvesting of wild Saker Falcons the needs of the trappers, traders and falconers. Also, the project will propose ways to minimize or mitigate any negative effects on the population.

3. Brief description of activities

a) **Research and survey work**, eg. literature search, issuing targeted Questionnaires, visiting markets, interviewing falconers and trappers, etc. in the 5 target countries - The research will include issuing targeted questionnaires, visiting falcon markets and conducting face-to-face interviews with falconers and trappers.

b) **Analysis of the results**, including developing computer modelling to estimate the impacts of present and future use of Sakers for falconry purposes.

c) **Preparation and production of a full written report and associated information materials**

4. Timeline and Milestones (see point 7)

5. Expected results (outputs, deliverables and quantified impact of the project)

A management and monitoring mechanism for sustainable use of the Saker Falcon in the long-term in Gulf Region will be produced. Ultimately, the benefits will be shared throughout the societies of over 70 range states of saker falcon. The biodiversity will be enhanced in all the countries where the species breeds, winters and occurs on migration. In addition, the development of a management and monitoring mechanism for the sustainable use of Saker Falcons, a species prized by civilizations for centuries, will

ensure traditional falconry practices can continue in harmony with the long-term conservation of the species.

6. Contributing organisations and experts

The project will be overseen by the Programme Officer who leads the Coordination Unit of the Raptors MoU who is based in Abu Dhabi, United Arab Emirates. An independent specialist consultant will be hired to carry out the research.

7. Estimated budget

The project requires funding of US$ 26k over 1 year, as follows:

	Cost (USD)
Phase 1 (8 months) – Research and survey work, eg. literature search, issuing targeted Questionnaires, visiting markets, interviewing falconers and trappers, etc. in the 5 target countries	US$ 18k
Phase 2 (3 months) – Analysis of the results, including developing computer modeling to estimate the impacts of present and future use of Sakers for falconry purposes	US$ 6k
Phase 3 (1 month) – Preparation and production of a full written report and associated information materials	US$ 2k
Total	**US$ 26k**

Project Proposal 16: International Single Species Action Plan (ISSAP) for the Sooty Falcon - Development and Implementation

1. Background

The Sooty Falcon (*Falco concolor*) is a fast, highly agile bird of prey that feeds on small birds and insects captured in flight. It breeds in harsh desert and semi-arid environments, in and around the Middle East, and spends the winter on Madagascar, with small numbers remaining along the South-East littoral zone of Africa. The species is classified as 'Near Threatened' in the *International Union for Conservation of Nature (IUCN)* Red List, due primarily to on-going population declines being suspected on the basis of fragmentary population figures, surveys and the intensity of threats. Accordingly, the species is listed in Category 1 (Globally and Near Threatened species) of the UNEP/CMS Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU).

There is a clear need to establish coordinated international actions to gather more accurate and comprehensive information on the global population status and the main threats faced by this spectacular species. Once this data has been collected, we will develop a strategic Action Plan document which will identify and create the roadmap of actions required to address the threats.

2. Project objectives

The primary objective of this project is to identify, develop and implement actions to effectively maintain and improve the overall conservation status of the Sooty Falcon throughout its range.

3. Brief description of activities

The activities of this project are:

a) **To research and consult** with Government and non-Government representatives in Sooty Falcon Range States (Phase 1).

b) **To host an Action Planning Workshop** in a Range State of the species, facilitated by a specialist consultant and overseen by the Coordinating Unit, to bring together specialist representatives from key Range States (Phase 2).

c) **To implement the Action Plan in key Range States** within the Sooty Falcon's breeding and wintering areas, and along its migration flyway, at the national and regional levels, with support and guidance provided by the Coordinating for the effective implementation (Phase 3).

4. Timeline and Milestones

a) **Phase 1 (Year 1)** – Compile and draft Action Plan through research and consultation with Government and non-Government representatives and specialists in Range States, to be considered at the Workshop. Revise, consult and finalise the strategic International Single Species Action Plan after the Workshop.

b) **Phase 2 (3rd Quarter of Year 1)** – Plan and host a 3 day Action Planning Workshop for up to 50 specialist representatives.

c) **Phase 3 (Years 2 – 5)** – Implementation of the Action Plan.

5. Expected results (outputs, deliverables and quantified impact of the project)

The expected outputs are:

a) To assess and better understand the status of the species and the current threats to which its populations are exposed;
b) To identify, develop and prioritise a comprehensive list of actions required to maintain and enhance its conservation status;
c) To support and assist the effective implementation of the Action Plan in key Range States within the Sooty Falcon's breeding and wintering areas, and along its migration flyway.

6. Contributing organisations and experts

The project will be overseen by the Programme Officer who leads the Coordinating Unit of the Raptors MoU. An independent specialist consultant has been recruited to act as the Compiler of the ISSAP, including supporting the Coordinating Unit in hosting the Planning Workshop due to be held during the second trimester of 2014 to bring together key specialists to develop the strategic document. The Coordinating Unit has established a Sooty Falcon Working Group to provide ongoing advice and guidance.

7. Estimated budget

A total of approximately US$ 600k over 5 years, as follows:

	Cost (USD)
Phase 1 (Year 1) – Consultancy to compile, draft and finalise the ISSAP	US$ 50k
Phase 2 (3rd Quarter of Year 1) – Action Planning Workshop *Costs are dependent on several variables for example the level of contribution offered by the host Government and the final number of participants.*	US$ 35k – 50k
Phase 3 – (Years 2 – 5) – Implementation of the Action Plan *Estimating the costs associated with implementing actions that have not yet being identified is challenging. However, based on ISSAPs produced for other species, it is reasonable to assume that a minimum of US$ 500k will be required over the proposed 4 year implementation period.*	To be determined based on findings, cUS$ 500k
Total	**US$ 600k**

The German Government has previously funded work on reducing the conflicts between birds and power grids, and has expressed a willingness to consider future proposals covering this topic.

Project Proposal 17: Mitigating the impact of electric power grids on migratory birds of prey at bottleneck sites in the African-Eurasian Region

1. Background

A major component of electric grids is above ground power lines. These pole and line structures are one of the major causes of unnatural death in birds, both through electrocution and collision. In the European Union, for example, millions of Euros are spent each year on the conservation of rare and threatened bird species, including specifically mitigating the effects of power grids on bird populations. However, it is estimated that hundreds of thousands of birds die each year on their way to their African wintering areas, through collision with, or electrocution by, power grids.

Resolutions and recommendations have emerged from various international gatherings that recognize this acute conservation problem and present a range of potentially effective solutions. The Action Plan of the CMS Memorandum of Understanding on the Conservation of Migratory Bird of Prey in Africa and Eurasia (Raptors MoU) includes power grids as one of the principle threats to migratory raptors.

2. Project objectives

The objective of this project is to tackle the threats posed to migratory raptors by power grids in the African-Eurasian Region. This highly focused project aimed at addressing the risks of power grids at major migration bottleneck sites, for example in the Suez region in northeast Egypt, both sides of the Bab-el-Mandeb Straits in Djibouti and Yemen has the potential to provide extremely cost effective risk management solutions.

3. Brief description of activities

The activities of this project are:

a) **To prepare a draft Risk Assessment** of the current and potential impact of Power Grids on migratory raptors at bottleneck sites in the African-Eurasian Region. This initial phase of the project will primarily involve a literature search, research, the development of the network of specialist contacts and early preparations for the Workshop.

b) **To organize a 2-day Workshop** for a restricted number of experts to review the Risk Assessment and to develop a 5-year Project Plan to manage the risks identified. The aim of this phase is to host a Specialists' Workshop within a Range State that holds a major migration bottleneck site within its territory. It will be organized by the CU of the Raptors MoU.

c) **To consult and finalize the 5-year Project Plan:** This consultation exercise will be undertaken by a consultant but facilitated by the CU to promote effective engagement of the Governments of all the countries involved.

4. Timeline and Milestones

The duration of this project is 9 months, including three phases:

a) **Phase 1 (Months 1 - 3)** – Research and preparation of the draft Risk Assessment for discussion, and preparation work for hosting the Specialists' Workshop;

b) **Phase 2 (Months 4 or 5)** – Organise and host a 2-day Workshop for up to 20 specialists;
c) **Phase 3 (Months 6 - 9)** – Period of consultation and preparation of the final version of the 5-year Project Plan.

5. Expected results (outputs, deliverables and quantified impact of the project)

The main outcomes are three-fold:
a) To establish a network of experts which can be called upon for advice during the future implementation stage;
b) To sensitize selected Governments to the issue and to secure their support for future implementation;
c) To publicize a 5-year Project Plan documenting the actions required to tackle the threats posed to migratory raptors by power grids.

6. Contributing organisations and experts

The project will be overseen by the Programme Officer (Birds of Prey) who leads the Coordinating Unit of the Raptors MoU. An independent specialist consultant will be hired to undertake the research, facilitate the planned Workshop, carry out the consultation and prepare the final version of the 5-year Project Plan.

7. Estimated budget

A total of approximately US$ 43k over 9 months, as follows:

	Cost (USD)
Research and preparation of a draft risk assessment, preparation for Workshop	US$ 9k
2-day Workshop for up to 20 specialists - *Costs are dependent on several variables, for example the level of contribution offered by the host Government, final number of participants, etc.*	US$ 25k
Consultation and preparation of 5-year project Plan final version	US$ 9k
Total	**US$ 43k**

Project Proposal 18: Monitoring breeding Osprey at Egyptian Red Sea islands

1. Background

Red Sea Ospreys have been breeding on the Egyptian Red Sea coasts and islands for over 30 years. Over the years, tourism of the Red Sea coast has increased dramatically and around the coast over 300,000 rooms has been developed. Because of this development Ospreys from the coast now migrate to the Red Sea islands and these islands are now heavily used by Red Sea Osprey for breeding, rearing chicks and forage & feeding areas. In the last 5 years many islands have been landed by scuba diving safari boats & kit surfing safari customers, and are used as cafeterias (approved from the government), camping, dancing, barbeques and even dumping areas for garbage. In our role as an environmental society we have begun to realize, through visiting Red Sea islands, that the habitat of the Osprey will change and decline.

2. Project objectives

The main object of our project is to monitor the Red Sea islands, to know the status of the breeding osprey and compare it with older surveys from 1984, 1997 and 1999. To know the breeding seasons, how many eggs per nest, how many chicks survive at the end of the seasons, and how those islands have been affected by landing boats and their customers.

3. Brief description of activities

Surveys will be undertaken 4 times per season in total eight times in two year during our project. The monitoring will start from Jan (approximate time to start breeding) till May (approximate time to fledging the chicks)every year, to study the population, count the number of pairs and look at the interaction between migratory northern Ospreys from Europe and local breeders (do not think there is anyone who has studied this before).

4. Timeline and Milestones

Summary of project activity schedule for year 2014 & year 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Monitoring	X	X	X	X	X							
Training for Rangers	X	X	X	X	X							
Workshops						X	X					
Public hearing	X											X
Writing report and action plan	X	X	X	X	X					X	X	

5. Expected results (outputs, deliverables and quantified impact of the project)

- Osprey population estimate for year 2014&2015
- Rangers trained in monitoring and conservation skill
- Public community will be aware about the important of Island for Osprey

- Action plan Report

6. Contributing organisations and experts (lead organisation/expert, contributors)

The following names are the responsible persons for the activity & Representing Abu Salama Association, Hurghada, Red Sea, Egypt:

- Prof Mohamed Abd El-Wahab NIOF Egypt
- Mohamed Habib diploma in Marine biology Abu Salama association
- Mohamed Abd –El Ghany diploma in Marine biology EEAA Red Sea

7. Estimated budget

Total cost of the project EUR 20,000. SGP will fund EUR 15,000 and Abu Salama Association will fund EUR 5,000 Euro (EUR 2,000 confirmed cash and EUR 3,000 is indirect support).

Project Proposal 19: Action Research and Conservation of the Pallas's Fish-eagle in Bangladesh

1. Background

Land-use change is a major driver of biodiversity loss in Bangladesh, through habitat degradation and destruction. Wetlands and riverbanks host unique biodiversity even in areas with varying degrees of human utilisation. However, their high biomass productivity also leads to ever-intensifying human use. Moreover, increased population pressure of Bangladesh has resulted conversion of natural wetlands into agricultural lands, commercial fisheries, encroachment and many other human activates creating intense pressure on resources available to native biota. A victim of this environmental degradation is the Pallas's Fish-eagle *(Haliaeetusleucoryphus),* a globally threatened raptor (recently recommended IUCN status Vulnerable). This breeding resident was quite common in the Bangladesh in the freshwater wetlands and along the major rivers with regular nesting records (Birdlife International 2009). However, to date this species has become a rarity and only few nesting sites are known to scientists. According to Birdlife International the decline of Pallas's Fish-eagle is taking place due to habitat loss, prey scarcity, lack of suitable nesting trees, pesticide use, etc. Currently in Bangladesh there is no initiative to study and conserve these rare raptors. This study aims to identify the current nesting sites in Bangladesh, study breeding biology, understand migration route, identify summering ground and recommend conservation measure to prevent further population reduction.

2. Project objectives

a) Map current distribution of nesting sites and range of Pallas's Fish-eagle;
b) Study the breeding ecology and measure overall breeding success;
c) Determine factors driving land-use changes by different stakeholders and identify other threats to Pallas's Fish-eagle;
d) Describe and quantify the diet components consumed by the Fish Eagle in order to identify feeding preferences.
e) Understand the migration route and identify the summering ground of the Fish Eagle.

3. Brief description of activities

We will carry out surveys in all historical and recently discovered nesting sites of Pallas's Fish-eagles between 1 October 2014 and 31 March 2015 during the breeding season. Interviews will also be made targeting locals to discover new nesting sites. To monitor reproductive success, we will revisit all occupied nests until the young leave the nest. Global Positioning System (GPS) coordinates will also be noted. Data on diet will be collected based on photos from camera traps attached near the nest, visual observations, prey remains and pellets collection near nests. Capture (using the Dho-gazatechnique) and affix satellite tags on three individuals (2 adults and 1 juvenile). Along with direct observations, questioner surveys will be conducted on pesticide use, wetland management techniques, waterbird hunting etc. to determine the threats to the Pallas's Fish-eagle.

4. Timeline and Milestones

Activities	Year 1 (2014)			Year 2 (2015)						Year 3 (2016)					
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hiring field staff, organizing necessary logistics, maps, purchase supplies															
Baseline Survey on the present status & distribution of Pallas's fish eagle															
Breeding biology study															
Interview survey															
Capture and attaching Satellite															
Satellite tracking															
Awareness campaign in local villages															
Data Analysis															
Submission of progress report															
Preparation of long-term Management Plan															
Final report submission															
Printing/Publishing the final report															

5. Expected results (outputs, deliverables and quantified impact of the project)

This study will provide the platform for longer-term conservation of this species, with an ultimate aim of building local support and consensus for long-term management of the wetlands as a natural resource for both mankind and the Pallas's Fish-eagles. Currently the breeding of Pallas's Fish-eagle occurs in the wetlands in North-East and South-West Bangladesh; both the sites will be thoroughly surveyed during the breeding season. The research findings will help to develop conservation action plan of this species for further action. Furnish the Government, International Community, NGOs, Journalist, and Community Leaders with information, suggestions and recommendations so that they feel obligated to actively render their valuable services for the conservation of the important habitats and globally threatened species.

6. Contributing organisations and experts (lead organisation/expert, contributors)

Project Leader: Dr.Tapan Kumar Dey, Conservator of Forests, Wildlife and Nature Conservation Circle, Bangladesh Forest Department. Email: deytkcfwild@gmail.com (Focal point of CMS in Bangladesh).
Co-investigator: IsratJahan, Wildlife Inspector, SRCWP project, Bangladesh Forest Department. Email: israt.jebin@yahoo.com; Cell: +8801672904459.
Individual Expert: Sayam U. Chowdhury, Department Environmental Science & Management, North South University. Email: sayam_uc@yahoo.com; Cell: + 8801717689413.
Project Advisor: Dr. Robert Sheldon,Head of International Species Recovery, Royal Society for the Protection of Birds (RSPB). Email: robert.sheldon@rspb.org.uk; Cell: +4407590 485838

7. Estimated budget

Activity	No of units	Unit price in Euro	Amount in Euro	Amount in BDT
Camera traps	5	220	1100	110000
GPS	2	220	440	44000
Binoculars	2	220	440	44000
Satellite tags	3	2750	8250	825000
GSM data collection	10 month x 3	25	750	75000
Field assistants/Research Assistants	6 months	50	300	30000
Hiring International experts	1 month	500	500	50000
International flights	1	1000	1000	100000
Hiring local expert	6	400	2400	240000
Salary of co-investigator	12	300	3600	360000
Field visits	5	400	2000	200000
Awareness campaign materials	N/A	1000	1000	100000
		Total amount	**21,780**	**2,178,000**

Project Proposal 20: Analysis of raptor movement data to support implementation of the goals of the "Action Plan for the Conservation of Birds of Prey"

1. Background

Improved knowledge of raptor movements and mortality factors acting in different parts of the flyways is urgently needed to support the implementation of the goals of the "Action Plan for the Conservation of Birds Prey". Here we propose an up to date analysis and web based presentation of information to support these aims.

The European Union for Bird Ringing (EURING) holds a database that harbours some 180,000 dead and live recoveries of individually marked animals of 41 species of birds of prey (incl. 3 of the 4 owl species listed in category 2 of the MoU). The EURING Data Bank (EDB) provides a unique set of data which are worth to analyse as they would significantly add to a better understanding of migratory routes and connectivity between breeding, stopover, and wintering areas of birds of prey. The EDB can also provide information about finding details, so to identify major threats such as hunting, electrocution or traffic. For species with many recoveries, spatial and temporal variation in finding circumstances as well as temporal changes in route choice and connectivity shall be analysed. Tracking data derived from satellite tracking, GPS or light-level geolocation shall be also considered wherever available and feasible, and in particular the tracking database MOVEBANK will play a particular role in this joint effort.

The main aim of the analysis is the identification of key areas and key subjects for effective conservation of raptor species. This work will develop approaches used for the pilot analysis of Black and Red Kite data.

2. Project objectives

This project proposal will provide analyses of the 41 raptor and owl species for which data are available from the EDB.

3. Brief description of activities

- Collation of supplementary data
- Undertake species analyses
- Write species accounts
- Cross species synthesis
- Website presentation
- Reporting
- Meetings and project management

4. Timeline and Milestones

Not specified

5. Expected results (outputs, deliverables and quantified impact of the project)

Key features for the analyses will be:

- Identifying migration flyways
- Identifying major staging areas and migration bottlenecks
- Identifying major wintering areas
- Identifying major anthropogenic mortality factors based on finding circumstances
- Providing a cross species synthesis of these migration patterns and mortality factors

6. Contributing organisations and experts

EURING

7. Estimated budget

	Costs in Euros excluding VAT
Collation of supplementary data	3,200
Undertake Species Analyses	31,000
Write Species Accounts	25,700
Cross species synthesis	13,500
Website presentation	6,500
Reporting	21,900
Meetings and project management	6,400
Travel	3,000
Direct costs	3,000
Total	**EUR 114,200**