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 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*".

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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.

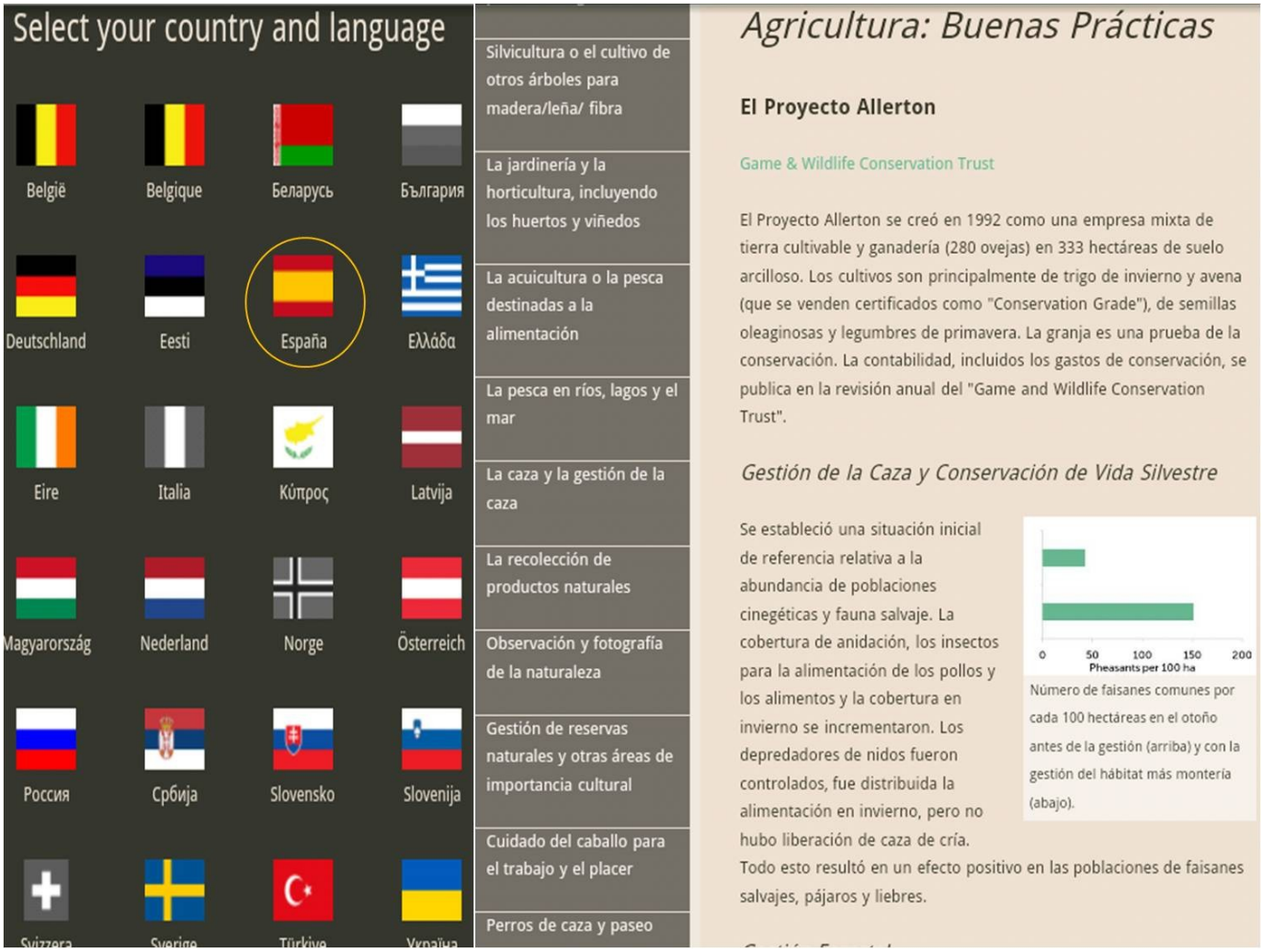
Trappers and falconers will be attracted to the system by smart-phone survey: providing data and contact details will qualify for entry to a prize draw. The system will also motivate by providing information on marked birds in general and on practises that will benefit them and conservation (e.g. health 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.



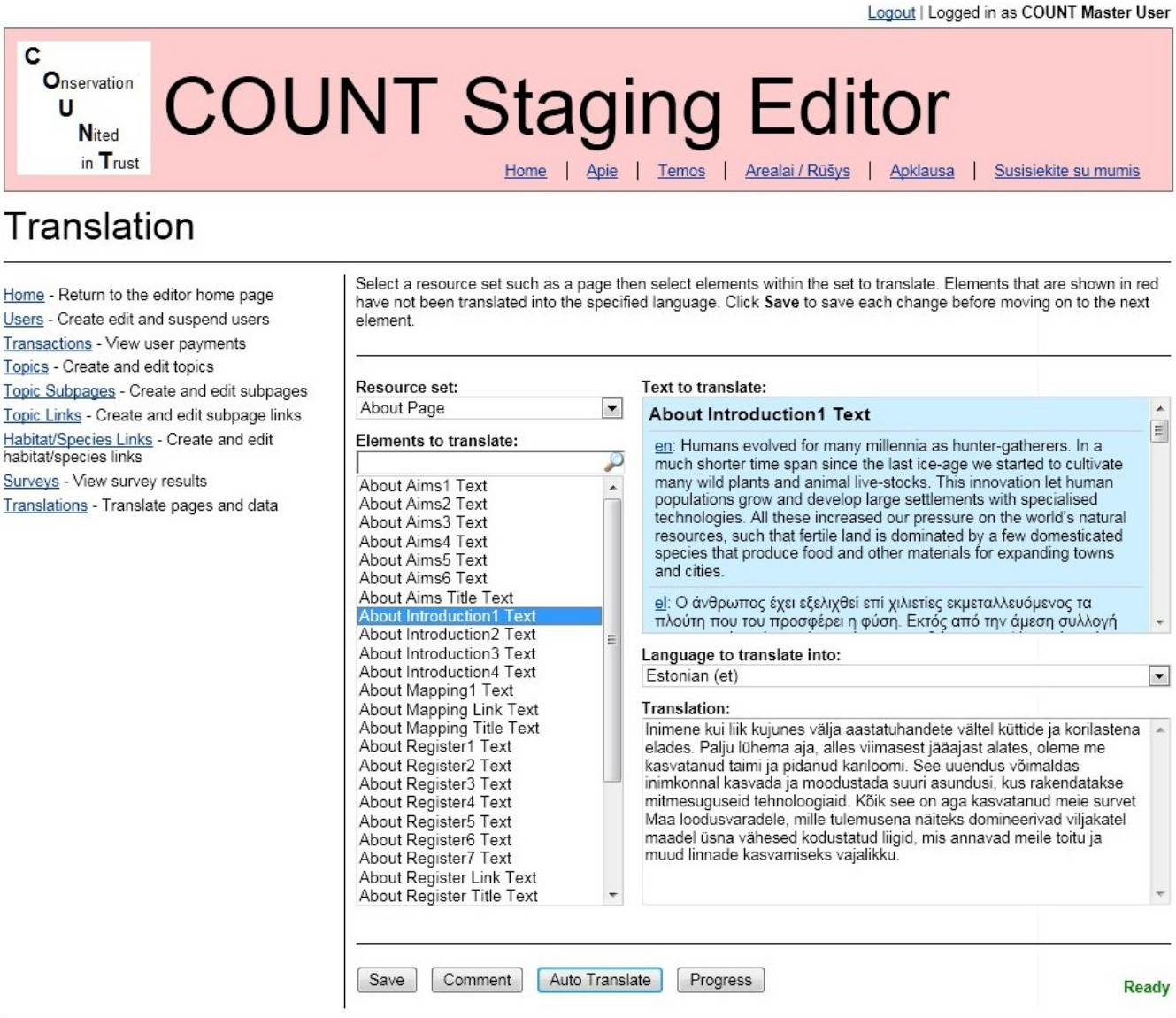
Initial content will be produced in Arabic and English for translation into Pashto, Persian and Russian. Content will include:

- 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

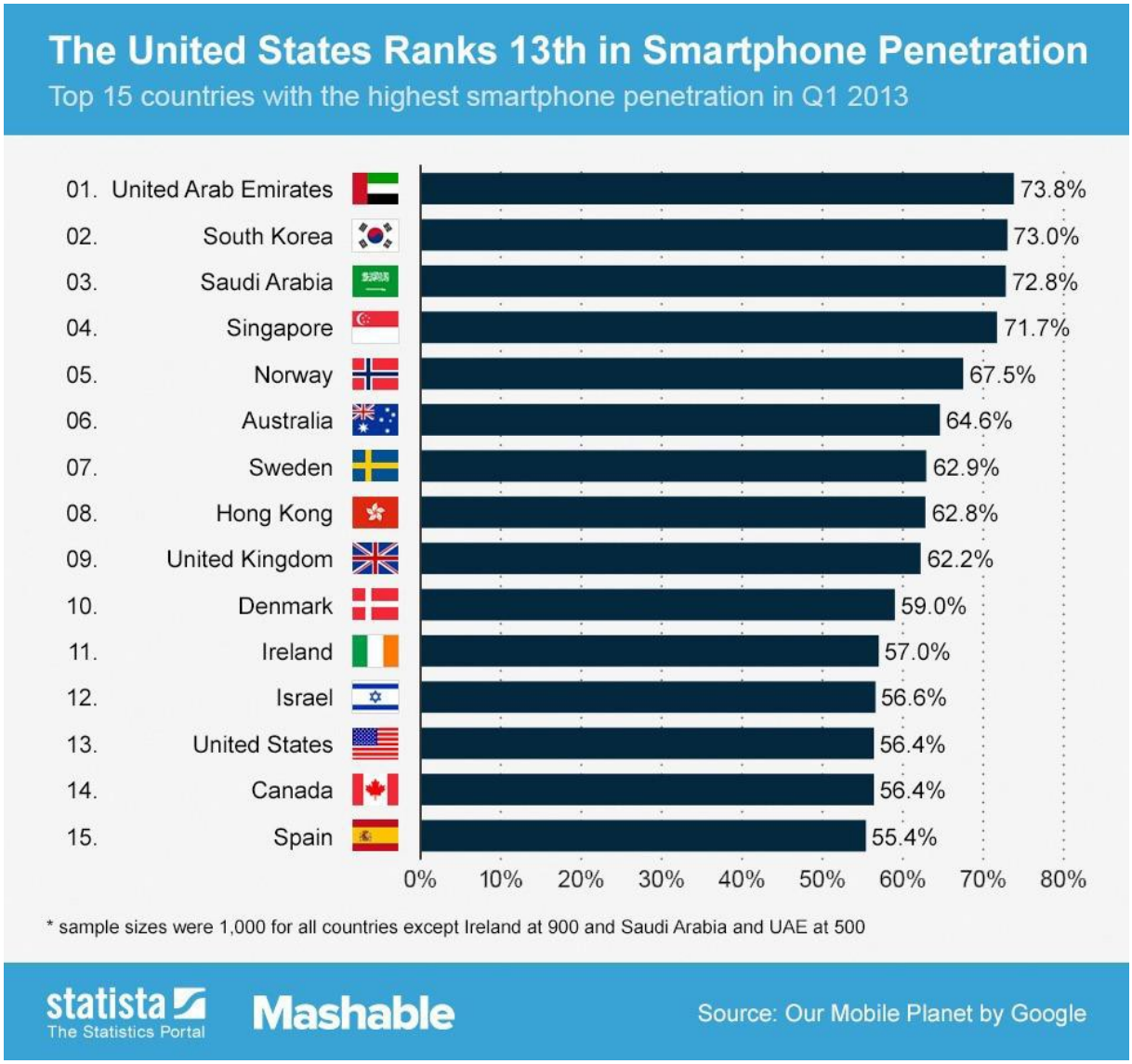
material in English (e.g. digests of new information and maps and summaries of Saker population estimates, ecology, migration routes), with a link for blogging. This will provide easy access to the latest scientific information on the species (in synthesis and also in the original publications), both 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:		

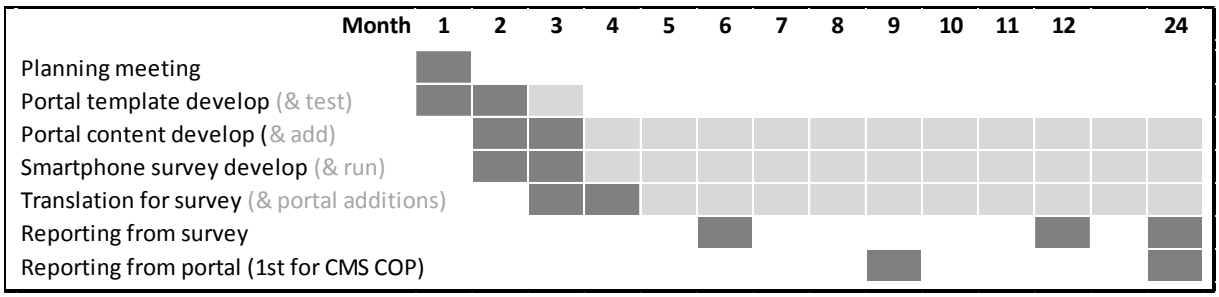
Address:	
Phone:	
Fax:	
E-mail:	

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.

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**

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, was estimated to cost ca US$90,000.