

'PASCHALIS' CASE

INTEGRATED REPORT (VER. 140604)

LIFE+ PROJECT "THE RETURN OF THE NEOPHRON" LIFE10 NAT/BG/000152



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ABOUT THE PROJECT

This report was prepared under the frames of action A5 of the **LIFE+ project "The Return of the Neophron"** (LIFE10 NAT/BG/000152, www.LifeNeophron.eu), further referred as "the LIFE project" funded by the European Commission and co-funded by the "A. G. Leventis Foundation", and implemented by the Bulgarian Society for the Protection of Birds (BirdLife Bulgaria), the Hellenic Ornithological Society (BirdLife Greece), the World Wildlife Fund Greece and the Royal Society for the Protection of Birds.

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Summary

Paschalis is a juvenile Egyptian Vulture hatched in 2013 in Greece and tagged with satellite transmitter under the LIFE+ project “The Return of the Neophron”. The bird flew successfully to the wintering grounds and settled in southern Niger. On 27.2.2014 last signal from the bird into the wild was received from a site at about 115 km NE of Zinder (about 140 km from the border with Nigeria) and the next signals were from a house in the near village. Several days later, the transmitter was exported to Nigeria. LIFE project partners initiated an investigation on the case thanks to collaboration with the Sahara Conservation Fund in Niger and the A. P. Leventis Ornithological Research Institute in Nigeria. The investigation revealed that Paschalis was killed by a traditional vulture hunter coming regularly from Nigeria. The aim was to sell the bird to customers in Nigeria for traditional ‘blood money’ ceremonies. In the area between Nigeria and Niger, vultures and crows are persecuted intensively for this commercial purpose by Nigerian hunters and based on the collected data, the losses of vultures (all species) should be expected to be significant.

The situation is different in Niger and in Nigeria. While in Niger, local people speak openly on the issue and do not really consider the vulture hunting as a crime, in Nigeria they refused to give answers to many of the questions and in general were closed to provide information. The attitude of local communities in Niger to vultures is not good as vultures are considered dirty and ugly animals, eating their ‘relatives’, while in Nigeria the birds are seen as commercial target. Regarding legislative status, in Nigeria vultures are protected, and muti market trade is widespread but illegal. In Niger, the protection status of vultures needs to be rechecked, however, considering the country has signed all the international conventions for wildlife, the vultures should be protected by the law. Cast a spell to someone in Niger is a crime according to the ‘moral’ law in Niger.

Different level conservation approaches are listed to mitigate the problem with illegal vulture trade in Nigeria and Niger, amongst which an integrated international conservation strategy is on central long-term place.

Background information

Paschalis is a juvenile Egyptian Vulture hatched in 2013 in Dadia, Greece, and tagged with satellite transmitter (45g solar Argos/GPS PTTs by Microwave Telemetry Inc.; Transmitter No 130670) and a metal ring (ID: K000456) under the LIFE+ project “The Return of the Neophron” on 7.8.2013. It was one of the two juveniles (out of 10 tagged in 2013) who survived and migrated to the wintering grounds successfully. Moreover, it was the only one who crossed the Mediterranean Sea successfully. Paschalis was wintering in Niger (Figure 1).



Figure 1. The track of Paschalis during migration and wintering.

On 27.2.2014 last signal from the bird into the wild was received from a site at about 115 km NE of Zinder, and about 140 km from the border with Nigeria (Figure 2). The next signals were from a house in the near village and the signal disappeared for several days. On 3.3.2014 the signal appeared again from the same house and moved from settlement to settlement by following roads. On 4.3.2014 the transmitter was exported to Nigeria: there was a signal from Maigatari (4.3.2014, 3:00h in the night), and few other settlements on the road to Kano in the same day. The very last signal was from a settlement 17 km north-east from Kano and 8 km south west from Minjibir (4.3.2014, 17:00h).



Figure 2. Map of the last signals sites from the bird into the wild (indicated in yellow as “Trap points”) and the nearest village (indicated in yellow as “House”), where the bird/transmitter was first took.

Aim of the survey

The primary aim of the survey was to investigate the case of the tagged Egyptian Vulture *Paschalis*: if it was killed, by whom, why and how. The secondary aim was to understand how this knowledge refers to the ‘destiny’ of other vultures and birds as a whole in the studied areas.

Methods

Simultaneous investigations were conducted in Niger (by Sahara Conservation Fund, SCF) and in Nigeria (by A. P. Leventis Ornithological Research Institute, APLORI) in March and April 2014. The sites with the last signals from the transmitter were visited and semi-structured questionnaires were used to collect information from the local people (Appendices 1 & 2).

Data collection in Niger

Period: the fieldwork in Niger was conducted during the period 22-23.3.2014 by a team of SCF Niger. This mission aimed to investigate the facts and circumstances in which the bird was killed or captured.

The specific objectives were:

- To visit the places where the bird was cough and where the transmitter was kept (Table 1)
- To fill the questionnaire prepared by the experts of the LIFE+ project (Annexes)
- To collect all relevant information on the bird, including feathers and other parts of the body
- To take pictures of different sites visited

Field team:

Abdoulaye Harouna - Technical Assistant SCF/Niger

Amadou Mahamane – Director of the forestry service in Tesker

Maimouna Ibrahim – Director of the breeding programme for the Ostrich (SCF)

Abba Malam - ONG CERNEK

Djibril Moussa - Guide

The team has adopted a simple approach: the coordinates of the last signals from the bird and houses were input in a GPS device and the visits started by the closest point.

Table 1. Localities to be visited by the SCF field team in Niger. Table 1. Localities to be visited by the SCF field team in Niger.

No	Point name	Latitude	Longitude	Comments
1	Trap point 1	14°26'41.39"N	9°47'48.01"E	27.2.2014, 11:00 h; the site where bird was potentially found/trapped/killed
2	Trap point 2	14°26'43.80"N	9°47'37.21"E	27.2.2014 13:00 h; the site where bird was potentially found/trapped/killed
3	Trap point 3	14°26'43.80"N	9°47'37.79"E	27.2.2014 15:00 h; the site where bird was potentially found/trapped/killed
4	House 1	14°27'6.59"N	9°48'25.81"E	27.2.2014, 17:00 h; First house where bird/transmitter was took. It stayed there for 5 days (till 3.3.2014).
5	House 2	14°13'1.81"N	9°57'55.19"E	3.3.2014 08:00h; house in Damou Kaodi where the bird/transmitter were transported on 3.3.2014.
6	House 3	14°13'31.19"N	9°58'14.99"E	3.3.2014 11:00h; Another place in Damou Kaodi where the bird/transmitter were transported on 3.3.2014.

Data collection in Nigeria

Period: there were two visits to Minjibir region in March (on 20.03.2014 and on 29.03.2014) and one to Maigatari in May (17.5.2014).

The specific objectives were:

- The objective of the visit in Minjibir on 20.03.2014 was to visit the sites from where the last signals from transmitter were received (Table 2).
- The objective of the visit in Minjibir on 29.03.2014 was to revisit the sites to collect additional information and visit new sites based on the information collected during the first visit.
- The objective of the visit in Maigatari on 17.05.2014 was to meet and speak with local chiefs and respected traditional hunters.
- To fill the questionnaire prepared by the experts of the LIFE+ project (Annexes).
- To collect all relevant information on the bird, including the transmitter.
- To take pictures and other evidences.

Field assistant:

Sulaiman Inuwa Muhammad - APLORI

Table 2. Localities to be visited by the APLORI field assistant in Nigeria.

Point name	Latitude	Longitude	Comments
1	12°10'30.00"N	8°39'36.00"E	4.3.2014, 8:00 h; settlement 5 km south-east of Minjibir, signal from the southern part of the settlement, near a main street.
2	12° 8'39.59"N	8°35'49.20"E	4.3.2014, 9:00 h; signal near few buildings next to a main road.
3	12° 8'16.80"N	8°35'49.81"E	4.3.2014, 15:00 h; signal next to a house in a small village.
4	12° 7'38.39"N	8°35'44.99"E	4.3.2014, 17:00 h; Last signal from a yard in the north-eastern part of the settlement.

Results

Investigation in Niger

The SCF field team visited all locations in Niger where the last signals from Paschalis came from. This was the surrounding of the village Damou Kadi village (Figure 3) which was the starting point of the investigation.



Figure 3. Damou Kadi village.

The village: it is inhabited by ca. 500 people. The house No 3 (Table 1) was the closest from the village and it was located in a rural community whose cattle market – Kazaweeye (Figure 4) is very famous in local and regional scale: it has a population of about 5,000 inhabitants



Figure 4. Photos of Paschalis shown to local people living in the houses around Kazaweeye.

House No 3: This is actually a market and Monday is the only day when the market is functioning. This corresponds exactly to the date of 03.03.2014 when the last signal from the transmitter was received at 11:00 AM and the local guy who is 'in possession' of the transmitter took a vehicle to Maiguatari in Nigeria (135 km away). Only on Monday there are vehicles that depart for Nigeria. The results from the interview at the market are clear: no one has seen the bird or the transmitter. Here the vultures are not loved because they symbolize deceit and cowardice - "living from the carcasses of the others".



Figure 5. The home of the traditional hunter from Niger.

House No 2: This house (Figure 5) belongs to a traditional hunter from Niger. The questions posed to the family of the hunter who was absent, allowed to understand that the hunter himself is not interested by vultures because for him they are evil. However, he is regularly visited by a hunter who comes from Nigeria and who is interested only by vultures and crows. His name is Mahamadou Akiné and according to the traditional hunter's family, the Nigerian hunter comes with a lot of money so it is welcomed.

After the hunt which can last more than a month Mahamadou Akiné always returns to Kazaweye with dried meat of vultures and crows to take a ticket to Nigeria during the market day and the family confirmed he just left for Nigeria on 3rd of March. Again, nobody has seen the transmitter. The Director of the forestry service (who was part of the mission) confirmed he know about vulture hunting but as the law for wildlife protection in Niger does not consider vultures, he does not make attention to these cases.



Figure 6a. The village where house No 1 is located.



Figure 6b. House No 1 – the house used by the Nigerian vulture hunter

House No 1: This was the house where the Nigerian vulture hunter was staying and it belonged to a local woman who was his girlfriend (Figures 6 and 7). The SCF team understood that Paschalis was killed by this hunter and brought here. The transmitter was indeed in this house for 5 days until the hunter went to Nigeria. The woman was important source of information on the activities of Nigerian vulture hunter. In particular, she provided information that together with Paschalis, 7 other vultures were killed (she could not tell us exactly what species because the vulture hunter comes just with plucked and skinned birds) and 43 crows. The vulture hunter returns every three months according to her. The hunter also confided her that these are rich and famous people from Nigeria who make the orders and according to the information provided the vulture can have high prices. These people make alliances with the devil for more wealth and money (so called **“blood money”** - a common witchcraft in Africa). The SCF team explained to the woman that she could be prosecuted by the forestry service for complicity and that cast a spell to someone in Niger is a crime according to the ‘moral’ law in Niger. The woman stated that among all the birds the hunter kills, some of them

are incidentally found to be ringed and this is the first time he found a bird with a satellite transmitter. He was convinced **that the device is valuable and can be sold** in Nigeria.



Figure 7. The girlfriend of the Nigerian vulture hunter (with the dark clothes, on the left).

Trap point No 1: This site is a wetland (Figure 8) of about 10 ha in the rainy season, Sahelian type, with all around dominance of *Acacia raddiana*, *Leptadenia pyrotechnica*, *Balanites aegyptiaca*, *Maerua crassifolia*, *Faidherbia albida*, etc. The depth of the pond does not exceed 3 meters, and it is the only of its type in the area of the massif Koutous. It lasts about 7-8 months depending on the abundance of rain. It is frequently visited by Fula pastoralists and nomads. The wetland shelters an impressive number of bird species including: *Neophron percnopterus*, *Necrosyrtes monachus*, *Circus pygargus*, *Circus aeruginosus*, *Bubulcus ibis*, *Corvus albus*, *Corvus ruficollis*, etc (Figure 9). The presence of the rocky massif creates favorable habitat for many vultures and other birds of prey. Indeed, the ponds are rare in this Sahel environment and they are major refuges in the dry and hot season. This is the reason for large congregations of birds there as well. Very few of the ponds are permanent and majority of them last for about 2-3 months.



Figure 8. The wetland visited by the tagged Egyptian Vulture before its death.



Figure 9. Egyptian vultures, crows, kites, and harriers at the pond.

Trap point No 2: This is the vulture hunter's hide (Figure 10). From this point, he is looking for birds he wants to kill at this level. This is also a resting site for him. The site is at 500 m from the pond. The presence of the intestines on the site evidence that the birds were killed there (Figure 11).

Capture techniques:



Figure 10. Vulture hunter's hide side.



Figure 11. Intestines of trapped birds.



Figure 12. Rifles used from the traditional hunters.

- By shooting with fire guns (Figure 12).
- The use of tobacco in the waste from slaughter houses: the consumption of this mixture makes birds like drunk and unable to fly. According to the local people, this is the most effective technique to capture alive vultures.
- String traps (a string is tied around a mortar inside which is placed some meat; when the vulture tries to eat the meat, the string falls on its neck and as the bird fights to get rid of it, as the string tightens stronger its neck (this type of trap is mainly applied around the slaughterhouses).
- The search for nests in the cliffs of the mountains.

Unintentional poisoning: Another threat for vultures (and other scavengers) is the use of strychnine to fight the jackals which unfortunately has consequences to the vultures. The team visited a site where poison was used, a not-identified wing was found together with a freshly dead Barn Owl *Tyto alba* (Figures 13-14).



Figure 13. Not-identified wing at the poisoning site.



Figure 14. Dead Barn Owl at the poisoning site.

Legislative status

Niger has signed all of the international conventions for the wildlife. The rules of hunting and wildlife protection in Niger are managed under the law 98-07 from 29 April 1998 where under Art. 21, List I, all vulture species are under protection. The techniques and guns used to hunt vultures and crows are not allowed under the Decree No98-295/PRN/MH/E from 20 October 1998.

Niger has signed the following Conventions: /1/ The MAPUTO Convention; /2/ The Bonn Convention; /3/ The Convention of Biological Diversity; /4/ The Ramsar Convention; /5/ The CITES Convention; /6/ The World Heritage Convention.

Summarized information from the questionnaires

- **Reason of the death:** Paschalis was killed by a traditional vulture hunter (by a primitive rifle) coming from

Nigeria along the shore of the unique permanent wetland in the area. The bird was killed to be sold for traditional black magic ceremonies in Nigeria (the hunter wanted also to sell the device, but the bird was not killed because of this). The hunter camps in the area and shoots vultures and corvids all along the day (during his last hunt, the hunter shot 8 vultures and 43 corvids). After, he removes the feathers and makes the birds in pieces in order to dry the meat. He keeps the heads on the skeleton to prove to the customers (traditional healers and important people in Nigeria) that the meat belongs to the vulture. The price reported for a single vulture or crow/raven is high (NB: prices should be verified). In general, there are about 10 hunters coming from Nigeria regularly and spending months to kill vultures and crows/ravens

- **Attitude of local people to vultures:** In the local legends, the vulture is considered, like the hyena, – ugly, dirty etc., because it can feed on ‘its own mother’, and it is the worse insult if you call somebody ‘vulture’. Local people know very well the Egyptian Vulture (the Egyptian Vulture and the Hooded Vulture are the commonest vultures in the area). In the local language (Haoussa – the main language in Niger and Nigeria) the Egyptian Vulture is called ‘Angoulou’. However, nobody saw the precise bird *Paschalis*, neither the device, except for the hunter who came from Nigeria. He was surprised to see a bird with such device as he hunts a lot of ringed birds but this is the first time he founds a bird with such device.
- **Threats:** The main threats are the traditional vulture hunters and the poisoning against canids transmitting rabies (the local people use strychnine to fight against dogs and jackals with rabies). The SCF field team visited the service responsible for livestock resources to find out where from people buy poison and the director told that the poison comes from Nigeria.
- **Other information:** Nobody eats the Egyptian Vulture. According to the local people, there are not other species of vultures in the area except for the Egyptian Vulture and the Hooded Vulture. The Egyptian Vultures are present in the area mainly from December to June and they breed in the area on rocks and places unaccessible for people.

Investigation in Nigeria

During the first trip to Minjibir (in March) it was found that local people have not seen the bird (*Paschalis*) nor the transmitter. The APLORI field assistant gave them about a week to ask the neighboring villages and come up with something positive in that regards.

During the second trip in Minjibir (in March) there was not anything new as information. However, the village chiefs promised to provide update if any news come out.

Meeting with chiefs in Maigatari (in May): Two renowned hunter leaders - Mal Hassan in Maigatari (Figure 15) and Mal Iliya in Gujungu town (Figure 16) of Jigawa State were interviewed. They are very well aware that vultures bring money. These are only hunters from Nigeria who kill vultures. The market values for the eggs, head and body are \$310, \$7, and \$2, respectively. According to the interviewed people, local hunters sell the vultures on the market. Local people at Gujungu market in Jigawa State buy vulture products. Then these are taken to major market (Galadima road, Sabon Garin) in Kano. Generally, the Egyptian Vultures are rarely seen on the market, but are mostly seen in Niger republic around Malan Kudi and Dingas town. Though some places in North Western Nigeria (Kebbi, Sokoto, Zamfara, Kano, Jigawa, and Katsina) were suggested as roosting sites. People do not eat Vultures, rather used some parts for medical purposes and ‘Juju’ for instance, vulture droppings and nest are used to cure epilepsy and give protection against iron (metal objects such as knives, etc.) while the head is used for ‘Juju’. This pressing need results in high demands for vultures on the market. The commonest method used to kill vultures is shooting. However, poison (put on carcasses) is also used especially if the birds are congregated (“in colony”). Tobacco and salt are also used (this impedes them to fly).



Figure 15. Mal Hassan and APLORI field team at Maigatari.



Figure 16. Mal Iliya and APLORI field team at a town near Gujungu Market.

The transmitter was found heavily damaged (Figure 17). The device was provided (together with the metal ring of the bird; Figure 18) in April by a renowned hunter from Sanbona village, located about 9 km south of Minjibir. This hunter hunts between Niger and Nigeria. He kept the transmitter and the ring in his room, and he damaged it to avoid being detected.



Figure 17. The transmitter of Paschalis found heavily damaged.



Figure 18. The metal ring of Paschalis, provided together with the transmitter.

Legislative status

In Nigeria, vultures are Schedule 1 species under Decree No 11 which prohibits the killing and trade in all species of vultures. Crows are not protected at all. The importation of vulture parts into Nigeria is totally prohibited by Decree No. 11.

Summarized information from the questionnaires

- **Attitude of local people to vultures:** The local people know the Egyptian Vulture. There is a commercial interest to vultures (both large and smaller species) and pied crows as they are considered to bring money, and therefore can be found on the market. People in Nigeria eat vulture parts because they believe in the 'magical' power that will accrue to them as a result. Local religions would be against the consumption of vulture parts for these reasons.
- **Attitude of local people to the transmitter/ring:** The local people do not know the transmitter. After showing them a photo of the device, they consider it for a cell phone. However, they know the rings and recently they saw a ring from Korea. The local people are more interested in the vulture rather than in the transmitter, as the vultures 'bring money'. Regarding the rings, generally, they throw them away.
- **Threats:** There are cases of shot or other type of direct persecution of vultures in the area. However, local people refused to give answers of the questions on 'who sell the vultures' and 'what for'. They provided information that vultures are hunted mainly between Nigeria and Niger. The muti market trade in vulture parts is particularly prevalent in SW Nigeria where they can be found in most markets even though it is illegal. There was no information shared by the local people about use of poisons in the area.
- **Other information:** The local people are not open to give information. It is needed to organize meeting with the leaders of hunters, e.g. with leader/chairman of the Hunters' Association in Maigatari.

Conclusively, hunting and human disturbances coupled with the need for vultures parts for 'Juju' and medicinal purposes result in rapid declined of vultures in Northern Nigeria. Vultures are no longer seen frequently; even people that live around abattoir hardly see vultures unlike before and even complain of too many rotten carcasses. However, research and awareness campaign against the killing of vultures in Northern Nigeria especially Western part is needed to safeguard these birds.

Conclusions and recommendations for further actions

Conclusions

- **The tagged Egyptian Vulture Paschalis was killed** by a traditional vulture hunter coming regularly from Nigeria. The aim was to sell the bird (and also the transmitter; however bird was not killed because of the transmitter) in Nigeria.
- In the area between Nigeria and Niger, **vultures are persecuted intensively with commercial purposes** by hunters from Nigeria to be used for traditional 'blood money' ceremonies in Nigeria (this is valid also for corvids). Based on the collected data, the losses of vultures (all species) should be expected to be significant.
- **The attitude of local communities** in Niger to vultures is not good as vultures are considered dirty and ugly animals, eating their 'relatives', while in Nigeria the birds are seen as commercial target.
- Regarding **legislative status**, in Nigeria vultures are protected, and fetish market trade with their parts is widespread but illegal. In Niger, the protection status of vultures needs to be rechecked, however, considering the country has signed all the international conventions for wildlife, the vultures should be protected by the law. Cast a spell to someone in Niger is a crime according to the 'moral' law in Niger.
- **The situation is different** in study areas in Niger and in Nigeria. While in Niger, local people speak openly

on the issue and do not really consider the vulture hunting as a crime, in Nigeria they refused to give answers to many of the questions and in general were closed to provide information.

- **Integrated international conservation strategy** is needed to mitigate the problems found.

Recommendations for future actions

Research

- Status of the Egyptian (and other) vultures: provide information on the numbers during the different periods of the year; identification of congregations of the species (if such exist in the country); breeding status (if possible information for the number of breeding pairs and their distribution). For instance, there is virtually no study on vultures in Niger apart of those developed by the SCF under the project Sahelo- Saharan Antelopes and Pan- Saharan Wildlife Surey – PSWS [Wacher et al. 2013, Bull ABC, 20(2): 186-199]. In Niger, the team observed the Lappet-faced Vultures (which nest on trees in the National Nature Reserve of Termit and Tin-Toumma), Rüppell Vulture (*Gyps rueppelli*) which also nests on trees in the Wildlife Reserve Gadabéji, Egyptian Vultures nesting on the cliffs of Mount Koutous, African vulture (*Gyps africanus*), etc.
- Profound investigation on the threats: the risk and magnitude of the threats like intentional and non-intentional poisoning, direct persecution, electrocution, etc. Special focus should be done on the muti market problem. Before acting to control the problem, further detailed investigation is needed to better understand the ‘marketing’ network and the main ‘players’, in the following lines: /1/ what is the real price of the vulture products;/2/ who sell them; /3/ who buy them; /4/ where they are sold. This also includes identification of potential information providers – e.g. traditional hunters coming from Nigeria know very well the places frequently visited by vultures (ponds, livestock markets, slaughter houses). Therefore, awareness campaigns should start at these points which should be considered strategic for conservation.

Legislation

- It should be noted, that in most countries of western Africa the laws for nature protection do not consider vultures.
- Niger: The Law 98-07 from 29 April 1998 and the Decree No98-295/PRN/MH/E from 20 October 1998 in Niger need to be carefully investigated (under the assistance of a jurist/lawyer) for the protection status of vultures and other endangered bird species in Niger. Use international pressure and lobbying the government might be needed to enforce the vulture protection based on existing conventions signed and to enforce the control for the implementation of the national nature-protective legislation. There should be also an effort to stop the illegal export of vulture parts on the Niger side of the border (as it is harder to ensure effective actions in this line in Nigeria).
- Nigeria: improve the control on the muti market trade and the import of vulture parts through the border. Nigerian Conservation Foundation (NCF) should be pressed to pursue the matter with the Minister for the environment there.

Awareness campaign

- Identification of target groups: e.g. traditional hunters and therapists; authorities (ministries, forestry and wildlife services); nomad livestock breeders; slaughter houses owners and butchers; conservationists; inhabitants of the villages where vulture persecution was evidenced; purchasers of vulture parts.
- Identification of opinion-makers and create a database with their contacts (e.g. local chiefs, respected traditional not-vulture hunters, religious leaders, representatives of the authorities, etc.). Local opinion makers should be involved in the awareness campaign.

- Organize awareness workshops about the current status and problems of endangered vultures, the benefits of the local people from vultures (ecological, eco-service, cultural and other values), potential consequences (in different aspects) on the local people by wildlife crimes and extinction of vultures. Once sensibilized on the issue, the local people (e.g. the Fulani nomad herders of cattle and goats who move from one water pond to another in search of pasture), may prohibit or denounce poaching the vultures at the ponds. If respecting the vultures is something the local people have lost from their tradition (or maybe they never even had it), they might need some type of “incentive” in order to re-establish this tradition.
- Production of information materials: leaflets, flyers etc., which are attractive and comprehensive enough to the local people.
- Medicine: provide evidences that vulture’s meat does not cure and what could be the consequences on the human health by consuming it (in terms of deceases transmission).
- Religion: According the Muslim religion, the vultures being not appropriate for food are not allowed to be killed.

Financial support

- Local support for vulture conservation: Investigate the idea of getting local support for conservation in Niger for enlisting local help. This could even consider providing a small financial incentive for the locals to protect the vultures - for instance by acting as ‘guards’ to patrol the area or other financial incentives which would weaken the dependence of the local population on the Nigerian hunters and the money they bring (see Treves & Bruskotter 2014, Science 344, 476-477). This might be only a solution in the short term and applied only as an urgent conservation action.

International collaboration

- Development of an international action plan, like Flyway Action Plan, considering the Sahel countries. It is more urgent than ever to develop international cooperation for the conservation and protection of vultures. The death of Paschalis is an opportunity to create a network for international cooperation for the protection of vultures.

Appendices

Questionnaire for Niger

Main questions to be answered:

1. Do local people know this bird? If they are interested from the device, ask them what they think it is about?



2. Was the tagged Egyptian Vulture (Paschalis) killed, trapped alive or found dead?
3. If the bird was killed:
 - How exactly this happened?
 - Why was killed (do people look for this species; for any marked birds or something else)?
4. If the bird was trapped:
 - In what condition was the bird (was it ill, injured, weak, etc.)?
 - How it was trapped?
 - Why was trapped (do people look for this species; for any marked birds or something else)?
5. If the bird was found dead:
 - Were there any other dead birds or other animals around?
 - Do interviewed people have any idea what could be the reason of the death?
6. Do the local people know what happened to the bird (and transmitter) after?

Additional information to be collected, if possible:

1. Are there any cases of poisoned vultures or other birds of prey in the area?
2. Are there any cases of shot or other type of direct persecution of vultures or other birds of prey in the

area?

3. Are there in the area “vulture head hunters”; if yes, are they from Niger or from Nigeria?
4. Do people know this bird?



Questionnaire for Nigeria

Main questions to be answered:

1. Do local people know this bird?
2. Do they know the device on its back? What they think it is about?



3. Are local people more interested in the device or in the bird? Why?
4. Could you find vultures on the market? If yes:
 - Who sell them?
 - And what for?
 - Small vultures or big vulture species?
5. Did they see similar bird/device recently shown by people? If YES:
 - Could they provide any details (e.g. was it was used for)?
 - Do the local people have idea what happened to the bird/transmitter after they saw it?

Additional information to be collected, if possible:

1. Are there any cases of poisoned vultures or other birds of prey in the area? If yes, why?
2. Are there any cases of shot or other type of direct persecution of vultures or other birds of prey in the area? If yes, why?
3. Are there in the area “vulture head hunters”? If yes, do they operate only in Nigeria or in other countries (e.g. Niger) as well?
4. Do people know this bird? Is it used for something (e.g. traditional medicine, juju etc.)?

