Proposal to the African Elephant Fund

1.1 Country: NIGER

1.2 Project Title: Eco ethology of savannah elephant (Loxodonta Africana, Blumenbach 1797) facing climate change in W National Park of Niger

1.3 Project Location: South east of Niger Republic

1.4 Overall Project Cost: Niger requesting amount from African Elephant Fund: **3726.50 US $**

1.5 Project Duration: 17 months

1.6 Project Proponent: Ecological monitoring service of W National Park of Niger

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1.8 Address of Project Supervisor: Statistics Direction of Ministry in charge of Wildlife and Protected Areas

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1.12 Date proposal submitted: 07/01/2019
2.0 Project Summary:

W National Park of Niger Elephant populations are not well known. Several aspects among which biology, ecology and demography deserve to be explored. The method of counting by dung measure will be used. At least five sites will be monitor during the cool and the hot dry season. This research proposal will provide scientific information on dynamic and social behaviour of W National Park of Niger Elephants so as to contribute to a better management of the species.

The general objective of the study is to improve knowledge on ethology and ecology of savannah elephants in West Africa. The specific objectives are i) determine the defecation rate and dung decay, ii) estimate the savannah elephant population to update the local database, iii) appreciate the savannah elephant distribution related to the protected area resources and the climate change.

3.0 This proposal is line on African Elephant Action Plan priority objectives:

**PRIORITY OBJECTIVE 2: Maintain elephant habitats and restore connectivity**

**Activity 2.1.5** Identify and rehabilitate migration corridors and dispersal areas for effective protection of the African elephant.

**Activity 2.2.3.** Assess and monitor habitat change and fragmentation, with a focus on transboundary populations.

**Activity 2.4.5.** Investigate impacts of climate change on elephant habitat and elephant populations through appropriate research.

**PRIORITY OBJECTIVE 5: Strengthen range states knowledge on African elephant management.**

**Activity 5.1.2.** Conduct inventories for unknown/less known populations to ascertain their biological status and their habitats.

**Activity 5.2.1.** Maintain and update databases on elephant populations for management purposes.

4.0 Project Rationale –

Niger part of W Park appears among the richest Park of West Africa in term of wildlife and ecosystems diversity (Hibert, 2007). This Park with other protected areas of western Africa constitute the complex WAP which is a continuous group that comprises the other parts of W of Benin, Burkina Faso and Niger; the Arly and Pendjari Parks in Burkina Faso and Benin respectively and others neighbouring hunting zones. It is the most important stock of biodiversity of the
country and contains big mammals populations such as savannah elephants now in the northern borders of their area distribution (Ipavec, 2006). On the whole complex, elephant population was estimate at least 7945 individuals roughly 2% of the total population of Africa (Bouche, 2012; Bouche et al, 2013).

These elephants populations often fragmented in less than 200 individuals confined in some protected areas (Ipavec, 2006) representing currently 5% of the soudano-sahelian zone (CITES, 2011). Indeed according to Bouche (2012) the sub region is subject to a strong population growth which is characterized by a quadrupled human population in 60 years (from 1950 till 2010) with a density growing from 13 to 60 inhabitants/square km. needs of space for farming, breeding and others human settlements lead to a considerable reduction of elephants'home range (Sebogo, 2003). Nevertheless, elephants of Africa registered on the appendix I of CITES with vulnerable status are entirely protected by many states of the sub region including Niger Republic (DFC/AP, 2010).

Unlike certain parts of Africa which deal with a revealing overpopulation and where the “elephant problem” appears (Whyte et al, 1997; Pimm et al, 2001; Fazio, 2014); elephants of western Africa are subject to anthropological pressures such as fragmentation and degradation of their home range, poaching as well as variability and climate change effects (DFC/AP, 2010).

Little information such as age structure, sex ratios, seasonal movement and home range preferences are available on elephants of western Africa compared with those of East Africa where the information is of determined type (Sebogo, 2003). Information is indeed of capital interest for the implementation of a good elephants management, conservation (Pereboom, 2006) and safeguard measures. Efforts were supplied by researchers (Barnes et al, 2004; Ipavec, 2006; Bouché, 2012) and by certain institutions (Save the elephant, the Wild Foundation, Africa elephant Fund, African Elephant Specialist Group) and Conservation Programs (MIKE, ECOPAS).

Savannah elephants deserve to be well known, It’s in this context that we should consider the present research proposal “Eco ethology of savannah elephant (Loxodonta Africana, Blumenbach 1797) facing climate change in W National Park of Niger”

This project is very important for our conservation area because little information is known on elephant trend and dynamic in the W National Park of Niger since 1980. Elephant populations are facing climate change and poaching. Their movements are not known, for example there was a wildlife survey (2015) during which any elephant is observed. But on the ground, few days before the survey they were observed.

**Activities to be carried out:**

**Phase 1: Planning**
The planning phase will involve preparation of sites for conducting dung count.
Phase 2: Procurement
This project will procure laptops, ranger finder, GPS and a satellite phones to be used to determine elephant population in W. National Park.

Phase 3: Project Implementation
Dung count will be conducted in five sites across W. National Park which will then be analysed to determine elephant population.

Phase 4: Monitoring and Evaluation
A detailed report will be published and disseminated to various stakeholders for this project.

Phase 5: Reporting
A final report will be prepared and submitted to African Elephant Fund.

5.0 Detailed Proposal Timelines

<table>
<thead>
<tr>
<th>Periods</th>
<th>Activities</th>
<th>Expected Outputs</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 25th to 29th 2019</td>
<td>Identification of sites</td>
<td>5 identified sites</td>
<td>Where the monitoring will take place</td>
</tr>
<tr>
<td>February 1st to 10th 2019</td>
<td>Dung measure, defecation rate assessment</td>
<td>Defecation rate is known (1st time)</td>
<td>Session of cold dry season in the chooses sites</td>
</tr>
<tr>
<td>April 1st to 10th 2019</td>
<td>Dung measure, defecation rate assessment</td>
<td>Defecation rate is known (1st time)</td>
<td>Session of hot dry season in the chooses sites</td>
</tr>
<tr>
<td>January 1st to 10th 2020</td>
<td>Dung measure, defecation rate assessment</td>
<td>Defecation rate is known (2nd time)</td>
<td>Session of cold dry season in the chooses sites</td>
</tr>
<tr>
<td>April 1st to 10th 2020</td>
<td>Dung measure, defecation rate assessment</td>
<td>Defecation rate is known (2nd time)</td>
<td>Session of hot dry season in the chooses sites</td>
</tr>
</tbody>
</table>

After each session of field, data will be compiled and analyse in the laptop. A final report will be made at the end of the project.

Equipment to be purchased

<table>
<thead>
<tr>
<th>Nº</th>
<th>Designation</th>
<th>Number</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PC (Laptop)</td>
<td>01</td>
<td>Data processes</td>
</tr>
<tr>
<td>2</td>
<td>GPS</td>
<td>01</td>
<td>For field positions</td>
</tr>
<tr>
<td>3</td>
<td>Rangefinder</td>
<td>02</td>
<td>Distance measurement</td>
</tr>
<tr>
<td>4</td>
<td>Satellite phone</td>
<td>01</td>
<td>For rescue</td>
</tr>
</tbody>
</table>

Reporting procedures
A Report will be issued after each field mission; a final report will be done in the end of project.
The results will be shared with law enforcement service of the Park and in general with all the managers of the protected area.

**Identification:** A team of 3 persons will prospect sites in the W Park where the research will be conducted. They must be representative of the different kinds of ecosystems.

**Procurement:** In this step, all the devices will be purchased for the project.

**Implementation:** It is the step of field activities when dung count will take place, during 10 days according to the season (Cold dry or hot dry) in the target sites. A team of 3 persons will follow transects for the survey.

**Reporting:** At the end of each field activity, a report will be made and a final report at the end of the project.

**Evaluation:** At the end of the project, AEF and the Direction of Wildlife and Protected areas will assess the project.

### 6.0 Project Timeline

**Identification:** January 25th to 29th
5 days will be used to identify representative sites. They will be followed during two years (2019 et 2020).

**Procurement:** January 20th to 24th
The material will be purchased at Niamey, Niger Republic.

**Implementation:** January 2019 to April 2020
The project will be implemented over 2 years January 2019 to April 2020. Counting by dung measure, determination of defecation rate will take place and will be led by a team of 3 persons.

**Reporting:** At the end of each field activity, data will be compiled, analyzed and a seasonal report will be made (January 2019 to April 2020).

**Evaluation:** June 2020
The evaluation will take place after field activities (June 2020). The Direction of Wildlife and Protected Area and AEF will evaluate the project (strengths and weaknesses) and the best practices.

**BUDGET**

7.0 This project will be co-funded by the government of Niger for a total amount of 1912.50 USD which represent the contribution for field data collectors fees and a part of logistic (motor bike hire of the Park).
7.1 Detailed proposed budget for this project (in US$).

**Identification:**
Hire motorbike (AEF): 5days *2 motorbikes*17/2 = 85 US $
Hire motorbike (Niger Govt): 5days *2 motorbikes*17/2 = 85 US $
Fuel (AEF): 5litres*2motobikes*5days*0.9 = 45 US $
Field lunch (AEF): 5days *3persons*3.5 = 52.5 US $
Field data collector fees (Niger Govt): 5days*3pers*8.5 = 127.5 US $
395 US $ are necessary for the team in charge of collecting data: AEF (182.5 US $), Niger Govt (212.5 US $).

**Procurement:** Purchase devices (Laptop, Rangeﬁnder, GPS, satellite phone for the project) before the project starts. AEF (100%)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop (PC)</td>
<td>01</td>
<td>833</td>
</tr>
<tr>
<td>Rangeﬁnder</td>
<td>01</td>
<td>167</td>
</tr>
<tr>
<td>GPS</td>
<td>01</td>
<td>417</td>
</tr>
<tr>
<td>Satellite Phone</td>
<td>01</td>
<td>667</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>2084</td>
</tr>
</tbody>
</table>

**Implementation:** Hire motorbike, fuel, field lunch will be necessary for the team in charge of collecting data

Hire motorbike (AEF): 40days *2 motorbikes*17/2 = 680 US $
Hire motorbike (Niger Govt): 40days *2 motorbikes*17/2 = 680 US $
Fuel (AEF): 5litres*40days *2motobikes*0.9 = 360 US $
Field lunch (AEF): 40days *3persons*3.5 = 420 US $
Field data collector fees (Niger Govt): 40days*3pers*8.5 = 1020 US $
2140 US $ are necessary for the team in charge of collecting data: AEF (1460 US $), Niger Govt (1700 US $).

**Reporting:** Laptop
**Evaluation:** Laptop

**For each activities receipts will be made:**

**Any other budget lines:**

7.2 The W National Park contribution for this proposal:
Field data collector fees: 45days*3pers*8.5 = 1147.5 US $
Motobike of W Park: 45days*2motobikes*17/2 = 765 US $
**Total:** 1912.5 US $
We will provide receipts for all the equipment purchase. The material will be used for field activities: a range finder helps to determine distance operator-dung; for the determination of position a GPS is used; a satellite phone help to communicate in the field with the office because there is no network in some parts of the Park.
With a laptop, data can be process and the reports can be made easily.

<table>
<thead>
<tr>
<th>FULL PROPOSAL BUDGET</th>
<th>Quantity</th>
<th>Cost/Unit</th>
<th>Expected source of funds and amounts</th>
<th>AEF</th>
<th>PROONENT (GOVT.)</th>
<th>Other (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUDGET LINE</strong></td>
<td><strong>Quantity</strong></td>
<td><strong>Cost/Unit</strong></td>
<td><strong>Expected source of funds and amounts</strong></td>
<td><strong>AEF</strong></td>
<td><strong>PROONENT (GOVT.)</strong></td>
<td><strong>Other (please specify)</strong></td>
</tr>
<tr>
<td><strong>EQUIPMENTS/ GEAR/ SUPPLIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laptop (PC) (AEF)</td>
<td>01</td>
<td>833</td>
<td>833</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Rangefinder (AEF)</td>
<td>01</td>
<td>167</td>
<td>167</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>GPS(AEF)</td>
<td>01</td>
<td>417</td>
<td>417</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Satellite Phone (AEF)</td>
<td>01</td>
<td>667</td>
<td>667</td>
<td>0</td>
<td>0</td>
<td></td>
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<tr>
<td><strong>Other expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorbike hire (AEF and Niger Govnt)</td>
<td>90</td>
<td>17</td>
<td>765</td>
<td>765</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel for motorbike (AEF)</td>
<td>450</td>
<td>0,9</td>
<td>405</td>
<td>0</td>
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<td></td>
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<tr>
<td>Field lunch (AEF)</td>
<td>135</td>
<td>3.5</td>
<td>472.5</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Field data collector fees (Niger Govnt)</td>
<td>135</td>
<td>8,5</td>
<td>0</td>
<td>1147.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>3726.5</strong></td>
<td><strong>1912.5</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Total request to AEF is 3726.5 US $**

**Co-funding from the government is 1912.5 US $**