Section 1. **PROJECT INFORMATION**

Project title:	Saving the lions of Mpem-Djim National Park in Cameroon
Organization:	BEDD_BIODIVERSITE-ENVIRONNEMENT ET DEVELOPPEMENT DURABLE
Project code:	2019B-020
Current reporting period:	12/07/2019-11/07/2020

Section 2. **PROJECT PROGRESS**

a) *Provide a brief description of progress toward your stated objectives and any key accomplishments achieved during this reporting period.*

This study confirms the presence of lions (two sub adult males identified), which have most likely dispersed over several hundreds of kilometers from the Northern region of Cameroon to find themselves in a forest-savannah mosaic landscape, in the Central Region of Cameroon. Their movement patterns are now known and the local people have been sensitized to cope with lions in the area. The lions are still roaming in the region, so far with limited attacks on livestock, also because they now spend considerable time inside the MDNP. Therefore, the government agreed to continue monitoring these lions while looking for additional sources of funding to try another translocation mission. Monitoring is done by ecoguards and local guides (representative of cattle owners). They report to the conservator and local authority evidence of the presence of lions (roar, footprint and any attack of livestock). Ecoguards have been trained for this purpose and material such as compass and GPS provided for orientation, navigation, and geo-referencing lion position.

A short communication has been written for publication in the IUCN Catnews journal and posters established for sensitization in local villages. All the educational materials were transferred to local authority to continue the community outreach activity. BEDD was responsible for the sensitization of the local population on how to cope with the lion in the area. However, community outreach, as well as all other activity in the area, is done in collaboration with the local authority and all stakeholders (GIZ/ProPSFE, BRL).
Lion scats samples were collected as well as hair samples for further analysis and the survey design for prey survey has been prepared.

b) *Briefly describe any concrete conservation results/impacts achieved during this period using appropriate indicators and any quantitative and/or qualitative data available.*

11 villages which have suffered livestock loss due to the lions attacks were identified and approximately 115 farmers were surveyed and sensitized. The local population is due to our sensitization activity more likely to coexist with lions and the importance of conserving wildlife and biodiversity is actually well known in the area. However, the impact of the sensitization program could be measured on the local people's

behavior and perception about the lion. They increasingly became more tolerant of the presence of the lion.

c) *List and attach any formal products that have been produced as a result of the project during this period.*

- Short communication for publication in IUCN Catnews;
- Report of the sensitization activity;
- Posters established for sensitization;
- Attendance lists from sensitization meetings,
- Lion movement patterns in the study area. This was established through a Geographic Information System program, using Quantum GIS and coordinates of lion presence (footprints and scat, cattle attacks) recorded in the area;
- Survey design for prey survey.

Section 3. **PROJECT PERFORMANCE REPORTING BY COMPONENT**

Please use additional sheets as necessary and compile according to Objectives, Results and Activities listed in the project Logical framework. Add as many rows as needed to include all the Objectives, Results and Activities listed in the logical framework (including those activities not implemented during the reporting period or already completed).

Objective 1: Secure the persistence of lions in and around the Mpem-Djim National Park		
Result & Activities	**Progress during reporting period**	**Planned for next reporting period**
R.1.1 Status of lion population is known	Two male lions have been identified in the area after approximately two weeks of fieldwork, combining surveys of local population, information gathered by local authorities, calling stations and camera trap techniques. A short communication has been prepared and submitted for publication in IUCN Catnews to increase awareness on those lions and the Government remain vigilant to their persistence in the area.	
A.1.1.1 Collaring at least one lion for monitoring	Satellite collar has been bought and is available for a second translocation attempt	In progress
A1.1.2: Lion scat collected and analysed for lion DNA and for prey remains (hairs and bones)	Lion scat and hair sample have been collected	In progress
A1.1.3 : Camera trap grid maintained to monitor lion populations	Camera traps have been mounted in the National Park and the peripheral zone, mainly in the grazing areas. The program is working with 15 Camera traps in the national park	In progress in the National Park, but achieved in grazing areas

A.1.1.4: Prey data combined with scat data to assess prey preference	Survey design and the Cybertracker data base have been developed. Survey will be done in February. The reason for the delay is mainly administrative (leadership conflict). We are obliged anytime to organize a meeting with the local authority and with the steering committee before implementing the activity. And more often harmonizing the schedule for such a meeting could take some weeks, especially when the activity will occur in the national domain (the prerogative of the departmental delegate) while the national park is the prerogative of the conservator.	Only partially, in progress
A.1.1.5: Ranger patrols trained on the use of smartphone application	Smartphone has been bought and the training will be implemented in February 2020. The conservator recommended us follow up on his schedule since most of the eco guards were not present at the moment we were supposed to do the activity. He also suggested to co-organize the training with BRL, Technical Advisor of Mpem-Djim National Park and harmonizing the schedule was not simple at all.	Only partially, in progress
A.1.1.6 Ranger patrols record footprints and sightings, using a smartphone application	Smartphone has been bought and the training will be implemented in February 2020. The conservator recommended us follow up on his schedule since most of the eco guards were not present at the moment we	Only partially, in progress

Result & Activities	Progress during reporting period	Planned for next reporting period
were supposed to do the activity. He also suggested to co-organize the training with BRL, Technical Advisor of Mpem-Djim National Park and harmonizing the schedule was not simple at all.		

Objective 2:

Result & Activities	Progress during reporting period	Planned for next reporting period
R.2.1 Prey population abundance and distribution is assessed	All stakeholders have been informed and the training of rangers was schedule for February 2020.	
A2.1.1: Line transect implemented for density assessment	Survey design has been established	In progress
A.2.1.2: Georeferenced data used to establish the distribution map of prey species	Data will be collected during the prey survey in February	In progress
A.2.1.3: Line transect implemented for threats assessment	Survey design has been established	In progress
A.2.1.4: Ranger patrols trained on the use of smartphone application (CyberTaker, SMART)	Smartphone has been bought and the training will be implemented in February 2020	In progress
A 2.1.5: Ranger patrols record prey and threats data using a smartphone application	Smartphone has been bought and the training will be implemented in February 2020	In progress

Objective 3:

Result & Activities	Progress during reporting period	Planned for next reporting period

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R3.1 R.3 Human-lion conflict is reduced	The number of attacks has been reduced at the rate of 65% since we started the activity in the area. Local population is increasingly tolerant and getting prepared to cope with lion presence in the area. This is based on the report (none published) of the steering committee and our field observations discussing with the local population. We do not ascertain at 100%. We also assumed that lions could have found natural prey sources within the landscape, and the prey survey we are preparing now will help to test this hypothesis.	
A3.1.1: Translocate lions into MDNP	The operation was not completely successful due to constraints like the difficult access to the forest-savanna mosaic ecosystem. However, the lions have been located during this mission.	Not achieved, although the activity has been done. However, we are preparing another translocation with MINFOF for the upcoming months.
A.3.1.2 Build bomas to raise community awareness	Sensitization has been done in the targeted villages and boma techniques (using local material) have been explained this to deter depredation presented to population	Achieved. The boma has not been built due to time constraints. However, the demonstration has been made through sensitization material (Posters in dropbox). We let the population know they can use the material such as (dry straw, earth brick, and tarpaulin) to build a boma.
A.3.1.3 Community consultation to raise awareness	Sensitization has been done in the targeted villages. The sensitization was done using a poster and a local guide as a translator. 115 people in 11 villages were surveyed. The key messages shared during sensitization included the sustainable use of biodiversity, the importance of wildlife and other resources for an ecosystem like Mpem-Djim National Park. The sensitization also allows the local population to know more about lion behavior and how to cope with this	achieved

	carnivore in the area. This report is found in dropbox as well as the attendance list at each village.	
A.3.1.4: A de-snaring programme established to reduce snares targeting bush meat	Will be done after the prey survey. This will be combine with the prey survey activity, what is actually prepared. Training of ecoguard on survey techniques and pilot study have been done already.	In progress
A.3.1.5: Regular patrolling is established in lion core areas.	Already being done on a regular basis, but will be intensified this year. The lion is monitored following the Standard Operating Procedure developed by the steering committee and other actors (BEDD, BRL, and GIZ). The core area is the Mpem-Djim National Park and other hotspots (savanna and grazing area) where the lion has been seen before.	In progress

Performance Reporting

Describe any delays or changes in activities implementation, any problems that have led to this and any actions taken to adjust the plan in order to achieve stated results. Include details on any staff turnover that occurred during the reporting period.

We faced many difficulties implementing the activities in the field.. Since there are two lions roaming in the area, the government instructed us to invite two experts for lion translocation although we budgeted only one expert in the proposal.
Even locally there were misunderstandings between local population and national authority providing information on the location of lions, and we spent more time than expected in the field searching for lions. Prey survey was delayed for February mainly for climatic and logistics constraints, It was rainy in November and the high vegetation in savanna and flooding in the park were not suitable for prey survey, these conditions would not have given an accurate actual picture of the status of the ecosystem.

Lessons Learned

Describe any lessons learned during this period.

Lions may have found natural prey sources in the Mpem-Djim National Park and could adapt to coexist in a humanized landscape dominated by pastoralists with their livestock. Unfortunately, the implementation of activities didn't follow the real time knowledge and information as planned in the proposal. The main issue here as I know are the external factors (lion of Mpen-Djim is a critical national issue) on which we don't have any main power. Most of the time we have to follow schedule set up by the local authority.

Describe how you have involved relevant stakeholders or project partners during this period.

Since this project is a national concern, the Government established a steering committee including different administrations and traditional authorities. Before going to the field a meeting is organized with the committee and relevant stakeholders are designated to be involved in each activity. Organizing this meeting always take time and is one of the key constraints to implement the activity on time. The steering committee has a meeting each month and members include the following:

- Président : Préfet du Mbam et Kim, assisted by 04 Sous-préfet: Ntui, Yoko, Ngoro et Mbangassina ;
- Secretaries général et rapporteur : Délégué départemental des Forêts et de la Faune du Mbam et Kim.;
- Membres: Conservateur du Parc National de Mpem et Djim, Commandant Compagnie du Mbam et Kim, Délégué Départemental du MINEPIA du Mbam et Kim, Délégué à la Sûreté du Mbam et Kim, 04 Chefs de PFCF (Ntui, Mbangassina, Yoko et Ngiro).

a) ESMS questionnaire

Please fill in the ESMS questionnaire in Annex A.

b) Sustainability

Describe how you have managed any external assumptions or risks during this period that were identified during the planning stage. Have any new risks developed? Please address all assumptions and risks listed in the project proposal.

We assumed that the lions are attacking livestock because of a reduced natural prey base and/or do to the habituation of eating livestock, therefore they can be killed by farmers protecting their livestock. Most of the population has been sensitized and informed on how to protect livestock from lion attacks. Since the lions are still in the area and the livestock is reducing (due to seasonal livestock migration), we assume that lions may have found natural prey base in the Mpem-Djim national Park which could sustain their persistence. We will be able to confirm this after the prey abundance and occupancy assessment in the Park.

c) Additional comments

Provide any additional comments you feel have not been captured in the previous sections of this report.

Please write your text here.

Section 4. **PROJECT IMPACT REPORTING**

Provide a detailed response for results achieved during the reporting period and from inception of SOS support to date. Provide responses within the context of stated project objectives, where possible. (Attach annexes, if necessary)

4.1 Species population – Did you stabilize or improve the conservation status of a species or important species population?

a) Global or target population

Note: Please state whether the project affected the global population or a target population of the target species. In the case of a target population, please provide the estimated percentage of the global population affected.

The targeted species, the lions have identified as two males sub-adult male lions. This is approximately 0, 5 - 1% of the adult lion population in Cameroon.

b) Indicate type and level of improvement or decline within the context of the following parameters:

    (i)   **numbers of individuals** (use quantitative assessments, if available, otherwise state increasing, decreasing, or remaining the same over project period, with justification and methods).

So far two male lions have been positively identified by experts

    (ii)   **population trajectory** over a 5-year period from monitoring date as increasing, decreasing, or remaining the same (with natural ranges of variation taken into consideration; give quantitative estimates, if available).

Without any lionesses, there will not be an establishment of a population. Although, other roaming nomad lions can come to the same region.

4.2 IUCN Red List status – After project implementation, can the species globally be considered for a change of Red List status, either positive or negative? If shirts of status within a category are applicable, describe relevant Red List metrics used to support assertion. Provide quantitative data, if applicable.

not relevant

4.3 <u>Critical habitat</u> – Did your project improve the quality or condition of a threatened species' critical habitat within the project target area? Present in terms of the following parameters, where relevant:

(a) **the total area** (that is, the suitable habitat available to the target or global population);

With the results of prey survey and the satellite data we can better determine the state of the habitat and the suitability for the re-establishment of a lion population

(b) **condition** (note, this must be defined for suitability for each target species; for example, degree of fragmentation, edge effects, impact of invasive species, etc.); and

With the results of prey survey and the satellite data we can better determine the state of the habitat and the suitability for the re-establishment of a lion population

(c) **estimated trajectory** (that is, increasing, stable, decreasing) of critical habitat required by the population of the target species within the area addressed by the project.

With the results of prey survey and the satellite data we can better determine the state of the habitat and the suitability for the re-establishment of a lion population

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4.4 <u>Direct threats</u> – Did your project stop or reduce important direct threats to a threatened species within the target area? Please state if the direct threats are for: (i) the target species; (ii) its critical habitat, or both. Present in terms of the threats:

(a) **intensity** (that is, high, moderate, low with criteria tailored to threat);

Direct threat 1: Prosecution possibility of the lions by local pastoralists, was of high intensity, however due to sensitization and improved husbandry and mitigation techniques, this threat has reduced in the last months
Direct threat 2: Human-wildlife conflict, was of high intensity, due to sessions in which local communities learned new improved husbandry and mitigation techniques, the threat has also reduced over the last months.
Etc.

(b) **distribution** (that is, widespread, common, localized); and

The threats mentioned above are localized, to the localities where the lions are moving to/from.

(c) **area affected over time** (that is, expanding, decreasing, stable using defined boundary) of 1-3 major, direct threats to the target species within the projects' target areas.

In the rainy season the threats seem to be less, as the transhumance of livestock leaves the area.

4.5 People and livelihoods

a) Benefits to local communities in terms of improved livelihoods

By reducing the loss of cattle for the local communities and pastoralists, we are reducing income losses and safeguarding their livelihood. This statement has been made based on the steering committee information and discussion with the local community during sensitization.

b) Alternative livelihoods sources for income

Not relevant

c) Long-term sustainability of resource use and reduced conflicts with wildlife

Sensitization of the local communities can in the long term change mentalities and increase the co-existence between wildlife and humans

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4.6 Enabling conditions – Did your project contribute to improving, no impact on, or worsening enabling conditions that facilitate successful conservation for threatened species? Present in terms of the degree (that is, favorable, neutral, unfavorable) to which local socio-economic, political, and cultural conditions (that is, 'enabling conditions') contribute to the probability of success for conservation of the target species with the project area. Protected area tracking protocols are required, where applicable (consult with the SOS Secretariat on the appropriate PA tracking tool to use). Applicable metrics include:

(a) **Legislative tools associated with species' protection** (poor, fair, good, very good);

fair

(b) **financing for conservation** (poor, fair, good, very good – based on available resources for conservation, sustainable financing mechanisms are developed and in place, public-private partnerships, positive benefits for community livelihoods, etc.);

fair

(c) **wildland or protected area management effectiveness** (poor, fair, good, very good – based on PA tracking tool indices applied to target area); and

poor

(d) **existence of robust conservation strategy or Action Plan for the species or critical habitat** (poor, fair, good, very good – based on important features such as priority areas identified and ranked, representation analysis complete, thresholds of habitat and species population size and condition identified, conceptual model and conservation action plan developed, actions prioritized and results chains elaborated, monitoring program).

poor

Section 5. **COMMUNICATIONS REPORT**

5.1 Key communications updates since last report

a) What is the most exciting and newsworthy thing that has happened in the project since your last report?

Example: 45 turtles hatched, the project de-snared nine animals etc.

The two lions are still alive and the location is known by the local authorities (max. 150 words).

b) Has there been any negative communications regarding your project since your last report?

not relevant
Please write your text here (max. 150 words).

5.2 List of communications – please ensure you list ALL communications regarding your IUCN Save Our Species funded project published since your last report. Ensure that photographs/videos are added to your project Dropbox. If the communication is not electronic (newspaper article, print publication), please add a PDF version/scanned copy to your project Dropbox.

Date published	Title	Channel/media	Reach/impressions (if known)	Photos/video added to Dropbox?	Link (if no link, ensure copy is saved in Dropbox)
12/08/2019	*45 Turtles hatched*	*Facebook*	*1,074 reach*	*Yes*	*www.facebook.........*
30/01/2020	Short communication	Dropbox		yes	https://www.dropbox.com/home/2019B-020%20BEDD/Pictures_BEDD
30/01/2020	Poster	Dropbox		yes	https://www.dropbox.com/home/2019B-020%20BEDD/Pictures_BEDD
13/01/2020	Picture from translocation activity	website			https://www.bioedd.org/2020/01/13/lion-project/
30/01/2020	Lion evidence in the research area	Facebook	1000		https://www.facebook.com/BEDD-Biodiversity-Environment-Sustainable-Development-922831941160813/
23/03/2020	Cat News reviewers comments	Dropbox			https://www.dropbox.com/s/7huobfn7l7d5fz8/Kirsten%20et%20al%20%20Cat%20News%20reviewers%20comments.pdf?dl=0