

Ebolowa-Kribi Road Project in Cameroon

ARRC Task Force's comments on Phase II great apes wet season survey results and Phase II dry season survey design

December 6th 2023

The ARRC Task Force has been asked to provide feedback on the results of the wet season survey for Phase II of the baseline data collection for great apes (chimpanzees and gorillas) along the proposed Ebolowa-Kribi road upgrade in Cameroon, and for the proposal for dry season baseline surveys.

To that effect, we received a PowerPoint (PPT) presentation entitled 'EAK Project- Great Apes Surveys - Result Wet Season - 23.11.23_rev.0' (received November 24th, 2023) which provides an overview of the results of the wet season surveys and next steps for the dry season surveys, as well as a more detailed word document entitled 'EAK Project_Great Apes_Survey Rainy_results' (received November 16th, 2023).

Phase II entails conducting field surveys across both the wet and dry seasons to obtain quantitative data on the distribution, relative abundance and density of great apes, as well as habitat use, their movement patterns and further information on threats (i.e., hunting pressure, crop foraging and crossing points), as well as the intensity of human activities within the area of influence.

Generally, we found that the wet season surveys have been well conducted following proposed recces design with training and expertise being provided both in- and ex-situ. The results are well presented, supported by useful maps and methodological details. However, concerning the level of impacts of the anthropogenic threats on great apes, we would not recommend classifying these by high or medium impact as currently presented in the PPT slides as these different human activities can vary in terms of their impact on great ape habitat depending on the context, and it is hence hard to gauge their relative impact.

Upon review of the documents provided, the ARRC panel for this project recommends the following:

- **Proposed dry season surveys:**

- We suggest continuing to collect information on crossing points for great apes (often these are shared by multiple wildlife species so not just great apes) via information gathered from villagers and while travelling up and down the road. Both confirmed (evidence of signs recorded within min. 50 m on either side) and potential (local people claim to have witnessed wildlife and great ape cross but no signs of great apes were recorded within min. 50 m on either side) crossing points are important information for helping to inform placement of speed bumps and signage in crossing hotspot areas, as well as any other possible mitigation measure such as, underpass for example, that could be put in place. When it comes to explaining to local people why such information on wildlife crossings (for all large mammals including great apes) is critical to gather, all teams should potentially emphasize the benefits, e.g., avoid collisions that could be dangerous for both wildlife and people and could disrupt traffic.
- As outlined in the PPT, the proposed dry season great ape survey work would involve placement of camera-traps (CTs) in a systematic design across three great ape hotspot

areas (based on data gathered from the recces during the wet season) and require 961.48 km of line transects (LT); this distance was estimated based on nest encounter rate (ER) during the wet season recces following Buckland et al. (2001); this effort is significant because of the low great ape nest ER recorded during the wet season survey. To capitalize on the data already gathered and the survey effort already completed, as well as to gather more details data on critical great ape hotspots, we recommend the following:

- focus line transects on key hotspot areas for great apes located around the middle section of the road, as highlighted by the data gathered via recent recces and where more suitable habitat is located for great apes. This refocus will require recalculating the nest ER for that 'middle section' and revising the LT effort needed to estimate great ape density and abundance in that area. In addition, we would also encourage a stratified LT sampling design by vegetation type.
- flipping the recce design used during the wet season (i.e., end point to the south is flipped to the north) to ensure better coverage across the defined Area of Influence (AoI) of the project and to generate a more comprehensive map of great ape distribution across the whole area while recording the same type of data as in the wet season.
- leaving the current 50 CTs where they are located for now. After the 2nd round of recces (flipped recce surveys), any CTs that have not yielded any great ape images over the several months in place could be moved to new locations where great ape signs have been confirmed along new flipped recces (**you should remove the white sheet placed above the CTs at the next opportunity as it could act as a deterrent and affect capture rate of wildlife and great apes**). We appreciate the intention with these, but in effect it is more efficient to inform the villagers as people entering the forest may also not all be able to read. The camera trap data collected will help the project gather key baseline data on gorillas and chimpanzees separately, on their physical health, signs of snare injuries, group structure and demographics which are also key for future monitoring of great ape health. This approach can also be integrated into any future monitoring plans hence providing continuity in the data collected.

- **Baseline data for wildmeat trade study:**

- To gather robust pre- and post-road construction data on the wildmeat trade can be challenging and requires a very carefully crafted study design. Such data are not always easy to gather, especially when it comes to species that people know are illegal to kill and trade; if questioned, hunters or villagers are unlikely to confirm directly whether they have killed or consumed or used parts of great apes. **Some information has already been gathered on the wildmeat trade by the project (e.g., hunting signs on recces), and thus a summary would be useful to assess additional data still to be collected.**

- **Suggestions for managing local people's expectations:**

- Suggest working closely with the social team who by now should have built strong relationships with locals living in villages along the road to also ensure coherence in messaging across all teams.
- Key messaging concerning CTs and content on white sheets, also emphasising that none of the images of people will be used for any purposes other than for surveying wildlife.

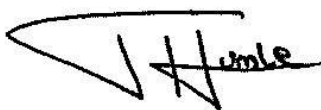
- Important to emphasize that these baseline studies whether social or environmental are a legal requirement and are part of best practices to help avoid, minimize, and restore impacts of the road on the environment and local people (e.g., collision with wildlife-see above), as well as their ecosystem services (e.g., water sources) on which they depend.
- It can also be noted with local people that aside from being endangered, great apes are key seed dispersers of wild fruit (same for other wildlife that play role in seed dispersal or pollination of wild and crop plants) and have a key role in maintaining the forest around their village.
- The hiring of local people to partake in biodiversity surveys and future monitoring may also be beneficial, although we recognise that this could also lead to jealousies etc. that are complex to manage.
- Longer-term benefits to the local people could come from putting in place environmentally friendly livelihood activities with the help of proven partners in this area; some could address wildmeat trade or consumption as an indirect impact of the project. Projects could include, if feasible and culturally appropriate, domestic animal farming or improvements in livestock management for example to increase yield; but success in reducing wildmeat hunting, consumption and trade will entirely depend on whether people are likely to switch to such alternatives (e.g., taste preference, economic benefits). The challenge here is to ensure sustainable funding as the road is not per say a revenue generating enterprise and there are many villages along the road; if tolls are installed, a small percentage of the revenue could go back to such initiatives.

It is also important to start establishing good relationships with a wider range of stakeholders present in the Aol of the project and in the region, such as private companies (e.g., logging, agroindustry), park authorities, etc. This will help manage indirect impacts of the road and ensure the long-term success of the mitigation measures that will be implemented by the project.

We would like to review the final dry season survey design prior to its implementation, and the results from dry season surveys once the surveys and analysis are completed.

Should you have any queries, please do not hesitate in reaching out to us.

Best regards,



Dr Tatyana Humle

On behalf of the ARRC Task Force panel for this project