Comments from the IUCN SSC PSG ARRC Task Force on the Tripa hydropower project in Indonesia

15-02-2022

General feedback

Thank you for reaching out to the IUCN SSC PSG SGA SSA ARRC Task Force regarding the planned 48 MW Tripa hydropower project which is located within the range of the Critically Endangered Sumatran Orangutan (*Pongo abelii*), the Endangered Siamang (*Symphalangus syndactylus*) and Endangered Lar Gibbon (*Hylobates lar*). A panel has reviewed the two memos sent by Mott MacDonald summarizing ape baseline surveys conducted in March 2021 (scoping site visit), August/September 2021 (dry season surveys) and in December 2021 (wet season surveys).

Obtaining robust baseline data prior to the construction of a project is essential for anticipating potential impacts and guiding the development of mitigation measures to reduce these impacts. The panel felt that the data collected to date by the project is not sufficient to assess impacts and guide mitigation for the project. This is mainly because: 1) the potential area of impact has not been adequately defined in particular with regard to ecological relevance; 2) the survey effort was not sufficient and did not cover the extent of potential impacts from the project; and 3) no data on population abundance was collected. In the following section we provide some guidance for planning the additional surveys that will need to be conducted BEFORE any construction take place to complete the baseline data.

The area of impact needs to be carefully thought of to include not only the direct impacts and footprint in the immediate neighborhood of the planned project, but also the extent of indirect impacts and possible alteration of essential ecological processes, such as species movement, migration and dispersal or interactions. Indirect impacts can occur even several kilometers away or over the long-term (e.g. when reduced ability for movement and dispersal affects orangutan or gibbon reproduction), and could impact the larger Tripa watershed which is an important habitat for orangutans and gibbons. The number of workers to be employed by the project was not mentioned but could also lead to in-migration to the area by people looking for work. The construction and upgrading of access roads are also expected to facilitate access and exacerbate existing threats to apes in the area. Several orangutan nests and gibbon presence points have been found close to planned infrastructures, but the project need to survey a much wider area to obtain a better picture of ape's distribution and abundance in relation with the proposed project.

It should be noted as well that even though some of the areas where infrastructures have been planned appear to be low ape density, their ecological significance for apes may remain high, as for example the transmission line and access roads will increase the barrier effect and reduce further the connectivity of sub populations within the Leuser ecosystem. A low number of ape signs may indicate low density, but does not necessarily justify interpretations as low value area. Ape ranging patterns will naturally cause areas to have high to low density of signs, independent of their function as e.g. transitional zones.

The panel was also concerned with potential cumulative and long-term impacts of this project. Several dams have been planned within the same ecosystem, and increasing landslides and drought have been recorded which are caused by deforestation and other large-scale habitat disturbances. We would therefore like to know if and how cumulative impacts have been considered by the project, and if other alternative project options/locations/types were investigated, which is a requirement under IFC PS1.

Specific comments for conducting additional orangutan and gibbon surveys

The memo presents the framework for conducting additional orangutan survey in 2022. Additional surveys should also be planned for gibbons, as the project has not gathered a robust baseline for both taxa.

Several methods are proposed, and the panel also supports the combination of survey methods to complement results. However, the survey effort needs to be increased to gather meaningful results, and to be able to estimate abundance (for example the total length of transects needed to estimate orangutan abundance should be derived from the nest encounter rate, see the formula in Kuehl et al. 2008). The surveys also need to be extended to include the area of direct and indirect impacts, and thus we would advise the project to conduct the surveys in two phases: 1) Conduct interviews and aerial surveys in the area of impact to assess ape distribution and habitat suitability; and 2) Conduct line transect surveys and acoustic surveys in targeted areas based on results from phase 1 to assess abundance. Appropriate program and statistical analyses must be used to plan surveys and interpret results (e.g. the program DISTANCE).

The project should also record existing threats as these can be exacerbated by the project, and thus can help with the development of appropriate minimisation measures.

A summary of aspects to consider when planning further surveys:

- Appoint ape expert to conduct surveys and analyze the data;
- Define the survey area to include the entire extent of direct and indirect impacts considering ecological relevance;
- Identify appropriate survey methods that will provide information on distribution and abundance of apes in the potentially impacted area;
- Determine survey effort based on results from preliminary surveys. Survey effort must be sufficient to be able to estimate abundance with an acceptable confidence interval and coefficient of variation (<15%), both number of transects and total transect length depend on target precision of abundance and density estimates;
- For the line transect survey, we would advise to use a site-specific nest decay rate using the methodology described in Laing et al. (2003) instead of doing PH measurements for predicting nest decay;
- Data analysis should use the most up to date statistical analyses and programs.

If the project pursues further with these additional surveys, the task force would like to be involved throughout the process and consulted early to help review the survey plan (i.e. survey area, survey methods, survey effort) as the first step before surveys start. It would also be helpful to receive more

information on the project to guide mitigation, for example to know if there are different alternative locations for the access road and transmission line.

Please do not hesitate to contact us if you need further information or clarification,

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On behalf of the IUCN SSC PSG SGA SSA ARRC Task Force