

THE LARGE SCALE PERSPECTIVE: A RANGE-WIDE META-ANALYSIS OF BONOBO SURVEY DATA

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Over the last decades an enormous amount of effort has been put into collecting Bonobo population data and threat information. Most datasets have been collected separately and have been location-specific. However, “the whole is more than the sum of its parts”: a systematic compilation and meta-analysis of these data provides new insights and a more coherent picture of global Bonobo population status. In addition to a detailed data availability assessment, this added value are macro-scale predictive Bonobo population models, easy comparability of different regions for conservation planning purposes, and possibilities to evaluate future population, management, and threat scenarios for both regional subsets and across the entire Bonobo range.

Here, we provide an overview of this “global perspective” approach, resulting from compiled Bonobo presence/absence, distributional and abundance data, as well as spatially-explicit threat information. A gap analysis provides range wide sampling effort and data availability. It evaluates to which extent existing datasets can be used to predict Bonobo population status, facilitate comparability between sub-sets, and aid in the evaluation of future population, management and conservation scenarios. In addition, the applicability of different spatial modeling approaches is examined with regard to Bonobo occurrence probability, abundance, and spatio-temporal trends of threats. This includes presence-only modeling approaches, such as maximum entropy models, or other static statistical models, such as, “Generalized Linear Models”, or “Generalized Additive Models”. Last, the synthesis of modeling requirements and data gap analysis assists in identifying locations for future sampling efforts to fill current data gaps and validate developed spatial models.

Keywords: spatial models, presence only models, threat information, gap analysis