

# Review of: "Social and Environmental Drivers of Black-Necked Crane (BNC) Habitat Suitability in Bhutan: Insights from Maxent Modelling and Conservation Implications"

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Potential competing interests: No potential competing interests to declare.

This study contextualizes the significance of the BNC within its ecological and cultural contexts while providing a comprehensive overview of its conservation status and efforts. It lays a solid foundation for the subsequent analysis on habitat suitability assessment and conservation strategies. I enjoyed reading this paper; however, there are some corrections that could improve the quality of the paper as follows.

1. How did they address potential limitations associated with using presence-only data in species distribution modeling, such as sampling bias or incomplete species occurrence records?
2. The introduction mentions the seasonal migration of BNCs to various valleys in Bhutan between October and March. Could the authors provide insights into the factors influencing BNC migration patterns and the implications of these migratory behaviors for conservation planning and management?
3. Briefly summarize the key steps involved in the Maxent modeling process, particularly focusing on how environmental variables are incorporated into the model and how model outputs are interpreted to generate habitat suitability maps.
4. The section on data processing and parameter optimization outlines several steps, such as spatial filtering of occurrence points and multicollinearity analysis, aimed at improving model accuracy and reducing overfitting. Provide justification for the specific methods chosen for data processing and explain how these methods contribute to enhancing the reliability of the Maxent model predictions.
5. The study acknowledges the limitations of data availability, particularly regarding foraging and roosting sites. However, it could further discuss the potential implications of these limitations on the accuracy and generalizability of the findings.
6. Providing insights into potential avenues for future research, such as exploring the effects of climate change on BNC habitats or conducting participatory assessments with local communities, would enrich the study and guide future conservation initiatives.
7. By addressing the identified areas for improvement, such as discussing data limitations in more detail and considering social and legal factors in conservation planning, the study could further enhance its contribution to the field of biodiversity conservation.

