

Supplementary table 4: Recommendations for best practice

	Best Practice	Aim
1	Periodic catalogue of methods and progressive audit the methodological approaches	To provide a structured inventory of existing techniques employed in malaria risk mapping to guide the selection of appropriate modelling techniques.
2	Assessing the relative contribution of each model component (Variable selection)	To enhance better correlation properties/predictive validity and optimize computational time and model parsimony.
3	Validating the quality of data prior to their integration in the modelling framework.	Due to the proliferation of datasets that are spatially and temporally indexed and the attendant need to understand them.
4	Utility of cross-sectional prevalence surveys in addition routinely collected datasets	To address underreporting of cases sub-nationally and the declining prevalence of malaria in SSA, prevalence may not depict the true impact of malaria interventions.
5	Detailed spatial and temporal description of modelled phenomena	To enable an audit of the methods used for possible implementation in different contexts.
6	Access to timely, continuous and complete data	The production of more geospatially granular estimates of malaria outcomes hinges upon heightened accessibility to and collection of geo-referenced data at finer resolutions.