MODEL EVALUATION MATRIX - DRC FORESIGHT MODEL - July 2020

Model Card Section	Strengths	Weakness	Recommended Actions
1. Intended Use	The limitations of the model are clearly explained and the scope is well understood and documented. In addition to providing displacement estimates the model provides insights on the root causes of displacement. The model can inform humanitarian reponse at the national-level.	The model cannot be used for targeted intervention, nor real-time decision-making. The model is not capturing dynamic/sudden onset displacement situations but it is mainly applicable to protracted displacement situations, where data quality is good and the situation is not too dynamic. The team has identified potential use cases but the model's applications are yet to be explored.	The modeling team should provide evidence supporting a specific use of the model, i.e. what is the added value of using the model? When engaging with decision makers the team should be transparent regarding the strengths and weakness of the projections.
2. Model Development	The model takes into account several underlying factors from different sectors.	The model relies on indicators from the World Bank and other sources which are not available in a timely way. The limited quality of displacement data is the main limiting factor in the model reliability.	The modeling team should be clear in documenting how the model has been validated (how training/testing and cross-validation sets are defined) to ensure it's in line with the intended use of the model. The team should improve information reward (IR) metrics (rewarding/penalizing predicted vs missed forecast) according to the risk tolerance of decision makers.
3. Model Evaluation	The model has strong evaluation metrics for protracted situation (e.g. Afghanistan). The model automatically updates when new data is available.	Even though there is an attempt to highlight the root causes of displacement, the explainability and interpretability elements of the projections can be improved.	The modeling team should compare the projections of the model with a simple linear model to show the added value of the model and the increase in performance. The modeling teams should conduct sensitivity analysis test to understand the weight of the predictors.
4. Operational Readiness	The model can provide national level evidence for supporting strategic global/regional/national level planning.	Data inputs are sometimes outdated, potential not reflecting the current situation in the country. The model assumes that past conditions will hold in the future, this may impose a limit on its use for operational readiness and emergency preparedness.	Test more situations (beyond Afghanistan and Myanmar) to have a reliable proof of concept with both protracted and sudden onset displacement situations. The team should provide guidelines for dealing with wrong projections and false positive/false negatives.