



## FAQs: ACLED Conflict Pulse

### What is the ACLED Conflict Pulse Model?

The ACLED Conflict Pulse model predicts whether or not there will be an increase in the number of events for a given actor and event type as compared to the previous week, basing this prediction off of a number of factors. Certain event types can be more reliably predicted for certain actors, relative to looking at aggregate activity at large.

For example, if Al Shabaab engaged in 3 violence against civilians events this week:

- Predicted “Increase”: the model is predicting they will engage in more than 3 violence against civilians events next week.
- Predicted “No Increase”: the model is predicting they will engage in 3 or fewer violence against civilians events in the next week.

### What does the model provide for users?

The ACLED Conflict Pulse Model provides early warning of the expected activity levels for a given actor/event type combination. The model gives visibility to near-term conflict dynamics: users can anticipate the level of activity expected for the following week.

### How does the model work?

The ACLED Conflict Pulse Model is an ensemble of 7 separate machine learning models. It uses historical ACLED data for each actor and event type combination to predict outcomes. Such data includes the number of events, the number of fatalities, the number of unique locations and other actors active in a given location. The model is tuned to incorporate each of the underlying machine learning models to produce the most accurate prediction.

### How does the dashboard work?

The map shows the predictions for the selected event type. Upward facing arrows are showing a predicted “increase”, and rightward facing arrows are showing a predicted “no increase”. The location of the arrows on the map is the geographical centroid of the historical activity for these actors. *The location of the arrow does not coincide with a predicted location; it is only a reference point for the general vicinity in which this actor has historically acted.*

The dashboard allows the user to select both the event type and the actor. Once these are selected, the dashboard shows:

- Prediction: this is the prediction for the next week for the selected actor and event type

- Historical accuracy: this is the accuracy the model has produced for this selection over time. For example, 75% would mean 75% of all predictions were correct predictions, suggesting how trustworthy the model is at predicting a specific event type is; for some actors, certain event types may be more reliably predicted, while for others this may be less so. Such reliability can also change over time, in line with the activity and behavior of actors.
- Historical timeline: the timeline shows the historical predictions for the selections
  - Color code shows correct and incorrect predictions
  - A trend line shows the actual events for comparison to predictions
  - Arrows correspond with trends for actual events
  - The final arrow represents the prediction for the selection for next week