

CONTENT

STEP 5: COMPILE A MENU OF FORECASTS

Step 5: Compile a menu of forecasts

In order for anticipatory action to allocate funding when a trigger is met, there must be a certain probability of the event. To safeguard this, it is crucial to select the best-suited forecasts. For weather-related hazards, this involves meteorological forecasts. For non-weather hazards, this could involve disease surveillance systems, early outbreak detection models, displacement monitoring tools, or qualitative alerts. Regardless of the hazard in question, for s/EAPs, but particularly full EAPs, an analysis of forecast and / or data verification, type, reliability, lead times, and sources of data for forecasts should be presented as an inventory, to allow an informed decision about which one to use. If the disaster is already imminent and you want to use an imminent DREF, you would most likely rely on a national early warning or similar information which has been already issued.

Note that forecasts do not need to be analysed or calculated by the National Society but can be jointly worked on or led by hydro-meteorological services, research institutions, or other experts.

Guiding questions for the forecast selection:

- Which agency produces relevant forecasts on local, national, regional or global level? Are there any community early warning systems that could be used or established?
- What kind(s) of forecast(s) are produced or how is the forecast produced? Tip: Choices include observed data (e.g. gauged precipitation), statistical forecasts (e.g. extrapolation of an upstream river flow to a downstream location, or an index based on El Niño sea-surface temperatures), and dynamic models (e.g. numerical weather-prediction systems and large-scale hydrological forecasting models). Check the [toolbox](#) for more information.
- What outcome is the forecast forecasting? E.g. seasonal total rainfall, flood levels, windspeeds.
- Is the forecast deterministic (showing a single outcome without conveying potential error and uncertainty) or probabilistic (showing the probabilities of one or more discrete outcomes or categories) or issued as an interval (showing an explicit upper and lower limit between which a value is expected to occur)?
- What is the spatial (e.g. what is the level of detail?) and temporal (e.g. how often is the forecast produced in a month?) resolution of the forecast?
- What is the lead time for each forecast, e.g. what is the time between forecast issuance and the shock?
- What regions are covered by the forecasts?
- What is the skill (the quality) of the forecast? How has the skill been assessed (e.g. skill at a specific location, skill at predicting extreme events)?
- Is the forecast available throughout the year? Does the accuracy / skill of the forecast change over time?
- Is the forecast reliable? Meaning that the forecast should be regularly and consistently produced and the forecasting agency should have the capacity to produce these forecasts throughout the lifespan of the s/EAP.

The menu of forecast required in the full EAP (section 4.2) requests to provide the following information about the available forecasts and requests to include an explanation about which forecast will be used and why. Especially for non-weather-related hazards, this menu might include relevant non-meteorological monitoring or surveillance systems (e.g. health or protection sector dashboards, and Internally Displaced People (IDP) tracking systems).

- Name of forecast
- Source
- Lead time
- False alarm ratio and missed events
- Number of times the forecast has been issued for this hazard in the last 10 years

You can download a template for the menu of forecast table and find a more comprehensive guide on forecast verification or skill analysis in the [toolbox](#) below.



Menu of forecast and skill analysis for the simplified EAP

For the sEAP a less thorough assessment can be done. The rationale is that perhaps there is less data available to assess the forecast skill which is particularly true for non-weather-related hazards. However, if data is available, information should be included as you want to avoid false alarms or missed events that will jeopardise the reputation of the National Society but also the mechanisms of anticipatory action.

Menu of forecast and skill analysis for community-based approaches

For community-based or very localized approaches, there may not be the capacity to carry out an in-depth forecast skill assessment. However, you can still compile an overview of the forecasts and warning information available, such as national forecasts, community-based early warning systems, and traditional or Indigenous forecasting methods.

Even at community level, you will need to select a forecast or signal to prompt early action. This selection process may not be as scientifically rigorous as in other contexts, but what matters is that the community trusts the information enough to act on it. For that reason, validating the chosen forecast or signal with the community is essential.

If there is significant uncertainty about forecast reliability, consider focusing on no-regret actions.