

Step 3: Conduct the initial desk review

During the period of pre-mission desk review, initial analysis should be completed in the following areas:

- Review of completed feasibility studies. The 2019 FS in Nepal focusing on floods is a good example that follows the methodology outlined in this guidance.
- Initial analysis of extreme events for all hazard types, including information on the magnitude of past events, their impacts, whether the events were forecasted, and previous humanitarian responses. Where possible, information on the future expected occurrence (as a result of climate change, land-use change, major infrastructural developments, etc.) should be reviewed.
- Review of existing assessment documents on the institutional capacities of the National Society, such as those completed as part of the PER process, to get a sense of NS's strengths and how FbF could support the NS's strategic plan
- Review of the skill of global forecasting products for the hazards of interest in the country, and any documentation of the skill of forecasts produced nationally (if available)
- Initial identification of existing information management platforms (these are increasingly becoming open source and accessible online in recent years)

Scientific Criteria	High FbF Feasibility	Medium FbF Feasibility	Low FbF Feasibility
10-day probabilistic rainfall and temperature forecasts available by National Meteorological Service	X - E.g. Forecast is validated since 3 years ago		
Probabilistic 3-month seasonal rainfall and temperature forecasts available by national institutions			
20-day probabilistic hydrologic forecasts available by national institutions		X - E.g. there are few data collection stations, however there are approved plans to improve the system	
Historical forecast data or hind casts available for more than 10 years, and forecast verification analyses published		X - E.g. Historical forecast is available since 5 years ago, due to conflict in some areas of the country during 10 years, there was not data collection in place. Since 5 years ago data is being collected.	
Historical forecast data or hind casts available for more than 20 years, and forecast verification analyses published			X - E.g. Historical forecast is available since 5 years ago
Historical forecast data for ENSO			X. E.g. no systematic information has been collected
Climate change models		X. E.g. some progress has been made since the elaboration of NAPAs, still the scenarios are models are low resolution.	

Based on desk review, interviews with hydro-meteorological departments and research institutions and review of technical documentation about forecast skills in the study area it will be possible to determine the level of quality of the available forecasts in a given time, for example:

Type of hydro-meteorological Forecast	Flood	Cyclone	Drought	Cyclonic wind	Heat wave
Seasonal (3 months) – country/region x	poor	unknown	good	unkown	poor
Short term (3 to 5 days) – country/ region x	good	good	good	good	good
Short term (6 to 10 days) – country/ region x	good	poor	good	poor	good

In addition to the analysis, the following steps are recommended pre-departure:

- Request pre-mission informational interviews with relevant persons to shape the focus of the study, including IFRC regional staff, Climate Centre regional coordinators for the region of interest, relevant experts of PNS and IFRC, and the FbF focal point (if already assigned) of the National Society to hear their views on which hazards they'd been keen to address through FbF, possible actions, and possible sources of forecasted information.
- Make a list of all institutions working in the FbF, EWS, hazard forecasting, DRR, preparedness, risk assessment, climate adaptation or early action space within the country, including academic research programs. This can be done in the pre-mission informational interviews by asking others for the institutions they are aware of. It is also recommended to do a quick online search using key terms such as 'early warning system AND country name' and 'hazard forecasting' or 'impact based forecasting AND country name' in English and the local language, to identify additional institutions or early warning products.
- Based on the above, prepare a draft list of interviewees for the FbF focal point to begin making appointments.

Note: this "living" list can be added to throughout the mission. See below for more guidance on the selection of interviewees.

Guidance on assessments at sub-national level

Discussions with stakeholders at sub-national level provide invaluable insights to the context for the study team, especially if the study team comes from outside of the country. FbF FSs should therefore aim to include key informant interviews at lower administrative levels of government (regional and/or district offices) and the Red Cross Red Crescent structure (branch/chapter offices), as well as interviews or focus groups at the community level in disaster exposed areas. Key insights can be gained on hazard exposure, autonomous coping capacities and adaptive strategies of the population which could be supported by FbF interventions, and on the capacity at lower administrative levels to carry out FbF action. There is typically only time and budget to visit one or two areas outside the capital city. As such, the study can (1) lead to recommendations that are uniquely suited to the areas visited and to the authorities encountered, which may make the program less suitable for other areas of the country and give a false sense of confidence that the wider context across the country is understood by the study team. And (2), the selection of communities to visit is typically done by the National Society branch in the region/district visited, which may mean that the communities selected for a visit will be unusual in several important ways. They may have a relatively stronger relationship with the local branch than other communities, may have received an above-average amount of programming and support from the local branch or government, and as such would not be representative of the larger area in terms of their preparedness, knowledge of warning systems, access to humanitarian relief, and disaster-related infrastructure etc.

To counteract these biases, it is important that the study team gather insights as much as

possible about other regions of the country (exposed to the potentially prioritized hazards) through interviews and by continually asking how what they are seeing compares to other areas. Further, it is strongly recommended to visit a wide variety of communities in the area where the field-level visits are taking place, including ones where the local branch does not have a pre-established relationship. If possible and acceptable to the hosts, and there are no elevated security concerns, it can be a valuable exercise to complete impromptu interviews by asking people for interviews in local markets, stopping the car periodically and asking residents of nearby houses for interviews, or doing transect walks within hazard-prone areas.

Guidance on selecting the scope of hazards

It is recommended to begin the study open to all possible hydro-meteorological hazards, and then narrow the study down to one to three hazard types based on an initial light-touch assessment (desk review). In this case, the report includes a base level of information on non-prioritized hazards, and a more in-depth analysis of the prioritized hazard(s). The information on the non-prioritized hazards may be of future interest, for example, if a new forecast becomes available that makes an FbF system for that hazard valuable. Exploring non-traditional FbF hazards, may also prove fruitful, such as country- specific hazards (e.g. Dzud in Mongolia), or weather-related cascading hazards such as epidemics or the wind-driven trajectory of an erupted volcano's ash plume.

Often, the actors involved in commissioning the feasibility study may already have a prioritized hazard in mind. However, it is also possible that the hazard most prioritized initially, may not have the highest potential within an FbF system, due to forecasting challenges and viability of potential FbF early actions within the lead time. Keeping the hazard focus open in the beginning, increases the likelihood of designing an FbF system with high viability. It also provides an opportunity to explore 'hidden' or overlooked hazards, such as heatwaves, which may have high impacts that go unnoticed by humanitarian and government actors.

The following table taken from the Nepal feasibility study outlines the results of the initial hazard analysis, which ultimately prioritized riverine flood, with the possibility of including flashfloods for no- cost rapid actions (due to very short lead time) and a recommendation to explore heat and cold waves in future.

	Can forecast the hazard?	Can currently forecast the impact?	Prioritized in NRCS strategic plan?	Technically feasible to make an IBF?	Meaningful early action to take?
Flood (riverine)	Yes (at certain timescales)	No	Yes	Yes	Yes
Flood (flash)	Yes (at very short lead times)	No	Yes	Yes	Yes
Drought	Yes (unsure of skill)	Unsure	No	Unsure	Unsure (not within Red Cross strategic advantage as primary impacts concern food security)
Landslide	In development	No	Yes	Unsure	Yes
Epidemic	Some factors technically feasible	No	Yes	Some disease types	Yes
Cold Wave	Yes, but national forecasts are qualitative	No	No	Yes	Yes
Heat Wave	Yes, but national forecasts are qualitative only	No	No	Yes	Yes

Example Initial Hazard Analysis. Source: Nepal FbF Feasibility Study.