Step 9: Generate intervention map

Where and when should decision-makers carry out early actions?

Historically, vulnerability and exposure maps have been used primarily for planning and infrastructure, but not routinely to contextualize forecasts and warnings.

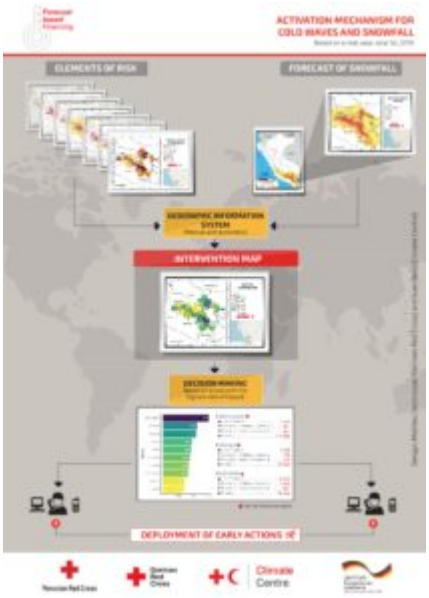
When an impact level is reached, we combine vulnerability and exposure information with the real-time forecast (selected from the inventory of forecasts) to identify which areas are likely to be most impacted.

How?

There are two main ways to do this. First, the most advanced form would digitally combine the forecast with vulnerability and exposure maps, to predict the expected impact. By overlaying the maps, it will become clear which areas are predicted to be most severely impacted. These areas can then be targeted as priority areas for early action to ensure the most at-risk communities receive assistance before the event happens. This first option will provide a map-based tool or a list of prioritized villages, municipalities, or other geographical areas where the early actions will be activated. Where feasible, using existing risk information management platforms can be a way to develop impact-based forecasting intervention maps. For example, in Indonesia, an impact-based forecasting functionality has been added to the existing InaSAFE platform which will allow the Indonesia Red Cross to use the platform for its trigger.

However, in a second approach, at its simplest, vulnerability and exposure information can be combined with forecasts using expert judgement to identify the places at highest risk. Where no digital system is available, this could also be done manually, e.g. if flooding is forecasted for a certain area, the poorest communities in the floodplain are selected. Or, if different weighted indicators are used to calculate a vulnerability index, check on the index which of the communities in the area for which the event is forecasted score highest.

Information technology capacity will vary between agencies and the design of tools needs to take this into account. Likewise, forecast skill and stakeholder engagement will also vary, but it can be expected to improve with engagement in the FbF process over time.



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What could go wrong?

Collecting data is often easier said than done. FbF National Societies are still learning, and it is important we share our experiences of what can and does go wrong.

Here are some commonly occurring challenges National Societies have experienced with potential solutions.

Data quality:

- Data quality can be a major hurdle. There may be gaps in existing data or the accuracy of values may be questionable.

Data Access:

- Sometimes government agencies wish for National Societies to pay for the data needed for FbF impact-based mapping despite the added value of National Societies' acting early in disasters. In these cases, consult the IFRC and your cluster branch. Create FbF champions within government (see chapter on Engaging stakeholders), and share your challenges (you never know who knows someone who may help).

Data scale:

- In many cases, risk data is only found at very high administrative level, not at lower levels, which make the use of such data not useful. The smaller the size of the administrative unit

for which data is available, the better. Using data sets such as OpenStreetMap is in some cases a way to mind this gaps.

Here you'll find more examples of what can go wrong.

Video: https://www.youtube.com/watch?v=ADLjOXIeK1A