Participatory Vulnerability and Capacity Assessment (PVCA) and Forecast based Action (FbA) plan

Locally Led Anticipatory Action Toolkit

Purpose

The purpose of this tool is to provide guidance on the key information to be captured and outputs (deliverables) that need to be produced for use in the development of community contingency plans and in the enhanced participatory contingency planning (EPCP) process. It is also to highlight how the information gathered is used for the development of Early Action Protocols (EAPs).

Guidance

A combination of hazards, exposure and vulnerability contribute to defining risk and determining the impact of that risk if realised. Developing an 'Overview of Impact' table is a critical component of an impact-based forecasting system to ensure that what is being forecast is clear and focused. Impact tables, and associated planning, are location specific. They are based on the local geography, local vulnerabilities and other features in an area.

As the information in this tool is gathered, identifying and clarifying the severity of the impacts is essential. This information can be used to write an impact statement that is precise enough to be useful if a hazard does occur. By taking steps to construct accurate descriptions of the potential impacts a prioritised hazard can pose, forecasts will provide people in different locations with more useful information than they are currently receiving.

Develop the 'Overview of Impact' table by following three steps, but note that you may need to repeat the steps more than once to ensure the table is effective as possible:

1. Gather information through stakeholders, in preparation for the EPCP workshop, and to achieve Deliverable 1: Community and Consolidated PVCA report
    a. Identify most prevalent priority hazard and its sub-hazards
        i. Types and associated impacts

    b. Determine exposure and vulnerability associated with the hazards
        i. Identify what kind of data is available and what gaps exist
        ii. Determine which partners and stakeholders need to be involved to gather location-specific data
        iii. Meet with stakeholders and partners to obtain information about populations and vulnerable areas
    c. Identify thresholds for particular hazards
2. Refine information and draft Overview of Impact Table, conduct in the EPCP workshop and to achieve Deliverable 2: FbA plan
    a. Determine relevance of data received
    b. Identify what level of detail needs to be provided
    c. Draft impact statements for specific hazards
    d. Set (identify / clarify) severity levels
    e. Define and adjust thresholds for specific hazards and locations
3. Test the Overview of Impact Table and revise, following the EPCP workshop
    a. Test tables with stakeholders, partners, and forecasters
        i. Identify what language and approach might be best received
    b. Revise layout, language, and design from feedback

All text in the example deliverables below, as to be seen as guidance text, but it is recommended that the headings remain the same. Headings are indicated in blue.

Deliverable 1: Participatory Vulnerability and Capacity Assessment (PVCA) - Report Template

This template can be used for both individual community reports and for the consolidated findings report. The consolidated report should summarise common information but also indicate those areas most exposed and the most vulnerable elements (target groups and assets). As required, communities need to be supported to update or develop their preparedness plans and contingency plans using information gathered during the participatory vulnerability and capacity assessment (PVCA).

Guidance: PVCA information collected needs to be relevant to the prioritised hazard (i.e., flooding, or cyclones, or droughts) focused on in the forecast-based action (FbA) planning (refer to section below, 'Deliverable 2').

a) Historical profile

Details on previous crises and disasters, the timing of these events, the magnitude of the hazard and associated sub-hazards, and the scale of impact of these events. Projections for future events should also be determined with reference to climate projections for the prioritised hazard event.

b) Frequency and Timing of hazard events

Provide a summary of the frequency of the different severity levels of the focus hazard event (based on the historical profile). Include details of the period in which these hazard events occur and how long these events occur for. A seasonal calendar can also be included, indicating details of when livelihood, or other seasonal events and activities, coincide with these events.

c) Vulnerabilities and Impacts

Vulnerabilities which contribute to the impact of the hazard events or disasters/crises, including the different sub-hazards. The effects of initial impacts on the affected population (including data on number of households, people or assets affected by each event) and specific groups [considering gender, age, disability, and livelihoods] which caused people to suffer, and impacts on the wider community. Also include factors affecting the communities' ability to recover.

d) Actions and Opportunities

Actions taken, or proposed to be taken, by the community and individuals (before, during and after), including actions which take advantage of any opportunities to strengthen disaster resilience. Details on external support typically received (i.e., assistance from local authority or NGOs) and the relevance and effectiveness of this support.

Note: Categories of actions need to be explored (example activities are included to assist with explaining these categories)

- ☐ Preparedness, mitigation and adaptation: simulation exercises, securing assets and resources, adapted agricultural practices
- ☐ Readiness: pre-positioning of items needed in the first 72 hours after impact of a disaster
- ☐ Early Action: mobilising local structures and rapid refresher training; provision of essential equipment; rapid mitigation activities to protect assets and mitigate impacts; rapid microgrants disbursement for supporting community-led response (sclr) action
- ☐ Response: addressing the needs of the affected population

- ☐ Recovery: rehabilitation of livelihoods
- ☐ All phases: advisories and alerts; microgrants to local committees and groups

e) Impacts table and Actions

Developed by categorising prioritised information from the 'historical profile' and 'vulnerability' information and the proposed 'actions' and 'opportunities'.

Note: When working at community level it may not always be relevant to make different action plans (Plan A, B, C) for the different severity levels. Two options are presented below. There do not need to be three severity levels, information on the different historical events is used to determine the number of severity levels to be used.

OPTION 1: Developing different plans for the different scenarios (severity levels).

Prioritised Hazard:	i.e., Drought		
Severity levels (scenarios):	Minor or 'Best case'	Significant or 'Most probable case'	Severe or 'Worst case'
Hazards and sub-hazards	•	•	•
Impacts statements	•	•	•
Plans (actions taken by the community)	•	•	•
Opportunities	•	•	•

OPTION 2: Developing one common plan for the different scenarios (severity levels).

Prioritised Hazard:	i.e., Landslide		
Severity levels (scenarios):	Minor or 'Best Case'	Significant or 'Most Probable Case'	Severe or 'Worst Case'
Hazards and sub-hazards	•	•	•
Impacts statements	•	•	•
Plans (actions taken by the community)	•		

Prioritised Hazard:	i.e., Landslide		
Severity levels (scenarios):	Minor or 'Best Case'	Significant or 'Most Probable Case'	Severe or 'Worst Case'
Opportunities	•		

f) Hazard exposure and vulnerability mapping

Indicating, or defining, zones for different hazard severity levels and critical vulnerabilities exposed to the hazards. Different zones impacted by the different intensities of a hazard event should be indicated on these maps. For example, indicating the different areas affected by minor and major flood events.

g) Community Early Warning Systems

Including details on the systems in place, and their effectiveness and limitations (i.e., accuracy, and reliability of information and communication channels) in relation to enabling communities to determine the severity level of an expected hazard event and to determine appropriate actions. This includes the hazard monitoring and forecasting sources and warning signals, the information (advisories) received, and the time period of forewarning communities prior to a hazard event. [Relevant information gathered using Tool #4 Gap Analysis can be included here.]

h) Community preparedness and contingency plans

Including details on available community Emergency Preparedness Plans; Contingency Plans, and other relevant plans. Hazards and sub-hazards considered. Status of these plans and any actions planned for their development [i.e., details on whether the plans are up to date, have been communicated, or whether they are registered with the local authority and any funds or support available to enable the implementation of these plans]. [Relevant information gathered using Tool #4 Gap Analysis can be included here.]

i) Institutional and social networks, and emergency coordination

Including details of community committees, CBOs, or other community groups (VSLAs, Youth, livelihood groups, etc.). Details on existing capacities within the community to manage funds (i.e., microgrants). Details regarding the engagement of these community structures in coordination mechanisms in the event of an emergency or crisis. [Relevant information gathered using Tool #4 Gap Analysis can be included here.]

Deliverable 2: Forecast-based Action Plan – Report Template

This report is drafted prior to the enhanced participatory contingency planning (EPCP) workshop, drawing on input from forecasting and warning technical experts and PVCA findings. The content of the draft report is then reviewed, agreed and finalised with all relevant stakeholders during the EPCP workshop and any necessary follow up meetings.

Note: Local contingency planning processes commonly utilise seasonal forecasts to inform the development of contingency plans and to identify appropriate preparedness, mitigation and adaptation measures. Seasonal forecasts can also be used to raise Alerts for Early Actions for slow-onset hazards (i.e drought seasonal forecasts). However, a common gap in local contingency planning is the use of shorter-term forecasting services and early warning systems to plan for Early Actions for more rapid-onset hazards. To do this we need to identify usable forecasting systems, set triggers and plan Early Actions, which can be implemented rapidly within the days or weeks prior to hazard impact. This is a gap which needs to be addressed.

A. Forecasting and Early Warning Information (Local and Scientific)

Guidance: Gather forecasting information on the priority hazard and sub-hazards, and local (including community-based) hazard monitoring systems including information on early warning systems for rapid onset hazards. This information is used to define the indicators and trigger thresholds used to forecast hazard severity categories. Forecasters need to be consulted to validate whether forecasting information is available for the severity levels and to clarify the lead-times for these forecasts.

Prioritised hazard	(Either: flooding, droughts, cyclones, etc.) **Note: It is important to be very specific about the prioritised hazard for which the FbA Plan is being developed. For example, the type of flooding, which point or factor relates to drought (i.e. dry spells) or, for cyclones, is it in relation to wind speed, rainfall and flooding, or tide surge?**
Available hazard monitoring systems	• Weather forecasts of the Meteorological department. • Community-based early warning. • Disaster Management early warning and alert systems. • Etc.
Indicators	These can include, among others: • Seasonal forecast • Short-term hydrometeorological forecast using threshold method. • Bulletin / Advisories • Alerts • Vulnerability factors • Exposure factors

Trigger thresholds	Triggers provide humanitarian and development decision-makers with the necessary information on who, and what, is likely to be impacted by future hazards and where, and when, early action should take place. Forecasts that exceed danger levels and probability thresholds will lead to the launch of early actions, and to trigger is to act in advance based on these warnings. (Refer to section below: Guidance on forecasting information and triggers for different hazards). **Note: Triggers are key for anticipatory action. The threshold for a trigger must be based on a high degree of certainty/probability (but there will not be 100% certainty) that an impact requiring humanitarian assistance will occur. The threshold also needs to provide a long enough lead time so that early actions can be implemented. Defining when the severity level of a hazard results in impacts on the community requiring external humanitarian assistance, helps to define an appropriate threshold for the trigger.**
Lead-time	This is the amount of time (hours, days, weeks or months) between the threshold for the trigger being exceeded as determined from forecasting or early warning information, and the point at which the hazard will impact. For example, for different forecasting and early warning systems: - Seasonal forecast: x months or weeks - Bulletin / Advisories: x weeks - Short term weather forecasts: days (i.e., 5 to 10 days) - Alerts: days or hours

B. Hazard Categories and Probabilities of Occurrence

Guidance: Use the forecasting and early warning information to determine the different severity categories of hazard events (i.e., minimal, minor, significant, severe). The different severity categories can also be determined by grouping historical events into different categories based on the severity of their impact. The different types of historical disaster events that have occurred will define the number of severity levels to be used. Use historical data on past events to determine the frequency / return period of occurrence of the different categories of hazard events (i.e., on average after how many years will each severity category event occur?).

Severity levels (scenarios):	Minimal	Minor	Significant	Severe
Prioritised hazard severity categories (example provided for flood)	5-year return period flood (20% probability per year)	10-year return period flood (10% probability)	20-year return period flood (5% probability)	50-year return period flood (2% probability)
Trigger Indicator (for activation of the Early Action Protocol – refer to Tool #6)	Forecast indicates rainfall levels leading to flooding for a 10-year return period or more severe for areas with vulnerable housing and livelihoods.			

C. Scenarios

Guidance: Develop scenarios for the different severity categories of hazard events which stakeholders prioritise there is a need to develop plans for. This should include significant and severe hazard category events.	
Required information	General Guidance
Hazards	Define the hazards and sub-hazards associated with each severity category of the primary hazard event (e.g., for storms this can include strong winds, heavy rain, storm surge, outbreak of waterborne diseases, etc.).
Impacts statements	When constructing impact statements, you will need to be sure that the impact statements developed are concise, easy to understand, and relevant. Define the prioritised impact(s) of the primary hazard and sub-hazards, including details of who (vulnerable groups) or what (assets, livelihoods, livestock, etc.) suffers the most, and specific exposed areas impacted the most. Refer to community maps displaying details on hazard exposure and vulnerability. Consider which sectors are affected the most. Select only impacts that are specific to a hazard and which can be linked to a specific severity level of the hazard. Those areas / communities identified as having the most severe humanitarian impacts should be prioritised when developing EAPs.

Plans	Planning needs to be developed which is focused on those people and areas affected first, and most severely. This planning needs to include community preparedness, early action, response actions and recommendations for contingency planning and response actions to be prioritised by specific sectors. Plans should also be developed to address issues which affect the wider community, for which collective community resources can be mobilised. The actions planned by different actors should be mutually supportive. **Note: Categories of actions need to be explored (example activities are included to assist with explaining these categories).** ☐ Preparedness, mitigation and adaptation - conducted according to the long-range seasonal forecast, or another appropriate time in the year: simulation exercises, securing assets and resources, adapted agricultural practices ☐ Readiness- coordinated based on a short-range forecast: pre-positioning if items needed in the first 72 hours after impact of a disasters ☐ Early Action - conducted on the trigger being reached: mobilising local structures and rapid refresher training; provision of essential equipment; rapid mitigation activities to protect assets and mitigate impacts; rapid microgrants disbursement for supporting community-led response (sclr) action ☐ Response - based on alert: addressing the needs of the affected population ☐ Recovery: rehabilitation of livelihoods ☐ All phases: advisories and alerts; microgrants to local committees and groups
Opportunities	Identify any opportunities which the hazard event may present for strengthening disaster resilience. For example, developing plans that make the best use of resources to improve livelihoods, while managing risks. For example, increased rainfall can provide an opportunity to improve agricultural production by making plans to harvest water and store it for use during dry periods, flooding can bring deposits of fertile soils which makes reseeding of rangelands possible. Discussion of opportunities encourages thinking around how activities by different communities or livelihood groups can be mutually supportive.

OPTION 1: Developing different plans for the different scenarios (severity levels).

Prioritised Hazard:	i.e., Drought		
Severity levels (scenarios):	Minor or 'Best case'	Significant or 'Most probable case'	Severe or 'Worst case'
Hazards and sub-hazards	•	•	•
Impacts statements	•	•	•
Plans (actions taken by the community // or by other actors)	•	•	•
Opportunities	•	•	•

OPTION 2: Developing one common plan for the different scenarios (severity levels).

Prioritised Hazard:	i.e., Landslide		
Severity levels (scenarios):	Minor or 'Best Case'	Significant or 'Most Probable Case'	Severe or 'Worst Case'
Hazards and sub-hazards	•	•	•
Impacts statements	•	•	•
Plans (actions taken by the community // or by other actors)	•		
Opportunities	•		

D. Advisories – for communities / individual members of the public

Guidance: Advisories need to be developed taking into consideration the trigger threshold and the scenarios developed for the different severity level. Refer to the list of community advisories presented in the communication plan below (section F. Communication Plan). The advisories are developed including an explanation of:	
What is going to happen?	Summary of the hazard impacts, avoiding technical terms
When will it happen?	• When will impacts begin? • When will impacts stop occurring? • Timing and location
How bad will it be and where?	Clear, jargon-free explanation of risk, focussed on impacts
What actions can be taken by communities / individuals to reduce impacts?	Advice and guidance on what actions can be taken to prepare, for early/anticipatory actions, and to respond (cope and recover). Present these activities in sequence as a clear timeline.

E. Advisories – for sector specific users

Note: Engaging in the development of sector specific advisories will not be relevant for all actors (NGOs). Therefore, the development of sector specific advisories is optional. NGOs, however, can plan an important role in providing information from the EPCP process to sector specific actors or agencies for them to use in the development of sector specific advisories.

Guidance: Technical summaries of forecast events and impacts with information for specific sectors – for organisations to use to inform development of their preparedness / readiness actions and / or response plans (including Early Action Protocols, refer to Tool #6), and then use, to activate their plans when a forecast or warning is provided. These advisories should be developed based on a defined 'Trigger indicator threshold' agreed with stakeholders (refer to section below: Guidance on forecasting information and triggers for different hazards).

• Summary of the hazard • Technical summary with detail of the weather/climate parameter, such as magnitude of the hazard, probability/likelihood of event • What are the potential impacts?	
• When will impacts begin? • When will impacts stop occurring? • Timing and location	

• Assessment of the risk • Potentially include risk matrices, risk maps/ intervention maps • Where will impacts take place? • How severe will the impacts be?	

F. Communication Plan

The table below indicates the types of advisories that could be developed, and timeline for their communication. The 'communication plan template' can be used to develop a plan for the communication responsibilities of each actor relating to a specific Advisory. Consider presenting the information gathered including a finalised impacts table, forecasting information, and visually, using vulnerability and exposure maps. Colour can be used very successfully to help highlight or compliment information within an impact-based forecast or warning.

Note: The development of Community Readiness and Early Action Advisories should be prioritised, which should include a timeline of readiness and early actions. This will provide a clearer understanding of the early action mechanisms which are aimed to be established.

Advisory Type	Timeline	Example of early warning / forecast	Examples of advisory messaging	Examples of early actions
Vulnerability and exposure map(s), impacts table, and forecasting information	Before high-risk season	N/A	N/A	N/A
Community Preparedness Advisory	Months	Forecast of strong above-average rainfall for the coming season. Note: it is important to remember that the skill of precipitation forecasts is largely only a few days.	Inform communities about enhanced risk and what to do if the risk materialises, e.g., clear channels, etc.	Revisit contingency plans, replenish stocks.
Community Readiness Advisory	Weeks	High ground saturation and forecast of continued rainfall leading to high probability of floods.	Alert volunteers and communities, to enable	Meet with other response agencies to enable better coordination,

Advisory Type	Timeline	Example of early warning / forecast	Examples of advisory messaging	Examples of early actions
			better coordination, closely monitor rainfall forecasts.	closely monitor rainfall forecasts.
Community Early Action Advisory	Days	Heavy rainfall and high-water levels upstream, likely to result in floods.	Get warnings and instructions out to communities at risk.	Prepare evacuation (if needed), mobilise volunteers.
Sector Advisory			Information on potential impacts and sector specific readiness and early action priorities to actors engaged in this sector.	Conduct assessment of markets.
Community Alert Advisory	Hours	Flood water moving down to the river to affected areas.	Evacuation and personal safety messaging.	Evacuate.

Communication Plan template – to be developed for each Advisory

Stakeholders (Those responsible for communicating Advisories to different groups)	Information to be communicated (The timing for communicating advisories depends upon the type of Advisory and the lead-time associated with indicator thresholds)	Target / Audience (Exposed and vulnerable groups to be targeted by each stakeholder with Advisory information, and the number to be reached.)	Agreed channel of communication (i.e., field visits, brochures, radio programme, community meetings, loudspeaker, SMS, social networking sites (WhatsApp, Facebook), village news board, loudspeaker, etc.)	Resources (Available and required resources)
A.				
B.				
C.				
Add more rows as needed				

Guidance on forecasting information and triggers for different hazards

The table below provides examples, and work in progress, for information that could be used to determine suitable triggers. This information is to inform the development of triggers and be used in early action protocols (EAPs). Further information on triggers is available from:

- ☐ Anticipation Hub Trigger Database
- ☐ OCHA Centre for Humanitarian Data

Note: Larger agencies engaged in anticipatory action use short lead-times for their triggers because they mobilise large amounts of resources which can result in lost investment. Local and national organisations should initially develop triggers with longer lead times (which come with less certainty that communities will be impacted), so that they have more time to test, practice and improve their early action mechanisms. Learning from this process also provides more information to further improve trigger models (as below). The Alert Note and Proposal for early actiol review process also ensures that there are low- or no-regrets associated with supporting the proposed early actions (or in other words, that the early actions proposed will still contribute to strengthening local preparedness mechanisms, or still benefit communities even if there is no or less impact than was foreseen.

Hazard (select from the given options)	Forecast source(s)	Lead time	Return period of hazard event	Probability of hazard event	Trigger description and details (provide as much detail as possible about the trigger activation process)	Stop mechanism (provide description of the stop mechanism process)	Early Action Activations (record when activated)
Rapid onset hazards							
Cyclone / Typhoon (considering wind speed) (Red Cross example).	• National Meteorological Institute (INAM) • Regional Specialised Meteorological Center (RSMC La Reunion)	3 days	5 years	Not applied	The cyclone EAP is triggered based on forecast information distributed 72 hours before the event, indicating a category 3 cyclone with a speed of 120 km/h or more making landfall. The trigger of early actions will depend on the released forecast.	Potential to reroute actions to alternate communities if cyclone path shifts. If cyclone changes track dramatically and targeted communities unlikely to suffer impacts, actions are stopped.	
Slow onset hazards							
Drought				Probabilities determined for the occurrence of best case, most probable case, and worst case	Example: Phased approach based on combination of information: normal, alert, alarm and emergency, using qualitative information method. Combination of indicator thresholds reached for the 'critical' severity level for specific communities and vulnerable groups.	When the indicators have dropped below the threshold for critical severity level early actions need to be reviewed and revised as appropriate depending upon the severity of drought impacts and opportunities arising from the change in conditions.	

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