

08. Develop EAP activation system

Summary ↓

This chapter delves into the development of an effective activation system for (s)EAPs. Acknowledging the time sensitivity in implementing early actions, the chapter emphasizes the need for a streamlined process. It introduces three pivotal components:

- Forecast monitoring and activation system,
- Early action implementation process and timeline,
- Communication protocol.

The primary objective of establishing these processes is to clarify steps, roles, and responsibilities during EAP activation. A key recommendation is the creation of a comprehensive implementation process chart or activation plan, outlining activities from trigger activation to communication protocol (see step 2 below).

The practical implementation is broken down into five steps, including setting up a forecast monitoring system, crafting a communication protocol, and ensuring the necessary technical setup.

Step 1: Set-up a forecast monitoring and activation system

Now that you have developed a trigger, you need to ensure there is a system in place to monitor the forecasts (and/or trigger related indicators) and alert relevant actors when a trigger is reached to initiate the early actions (Section 6.2 in full EAP template). The best option is to develop an automated system that monitors the forecasts, creates an intervention map and sends an automatic alert message to relevant actors. If automation is not possible, you will need to find another way to ensure consistent monitoring.

Ideally, the national meteorological agency or a regional forecasting agency will monitor the forecast. However, national societies have developed different monitoring systems, including the following:

- The national society has access to the forecasting data (e.g. via an ftp server) and processes the data themselves
- The forecast is monitored by the meteorological agency. When a trigger is reached, the Met office communicates the alert and where the trigger was reached to the appropriate actors within the national society (e.g. emergency centre of the national society) for further processing

The meteorological agency or disaster management authority provides an analysis of where to intervene to the national society. Note that in order to harmonise trigger across agencies (e.g. harmonizing with WFP, FAO or other anticipatory action actors) it is helpful if the trigger is owned and monitored by a governmental authority.

Please find an examples of monitoring and activation systems below.



To create a practical forecast monitoring and activation system for their drought EAP, the Somalia Red Crescent Society (SRCS), in partnership with the German Red Cross and HeiGIT, developed a straightforward approach using QGIS.

Case Study: Forecast Monitoring in Action

In Somalia, droughts can have severe impacts on food security. To address this, SRCS needed a way to predict when communities might face critical shortages and activate resources quickly. This led to a system based on two key indicators:

- **Drought Conditions:** Measured by the Standardized Precipitation Index (SPI-12), which assesses long-term rainfall patterns.
- **Food Insecurity:** Assessed through FEWSNET's food insecurity projections, a standard tool for monitoring and projecting food access across Somalia.

When these indicators reach specific thresholds – for example, when SPI-12 shows a drought level below -1 and FEWSNET's food insecurity index reaches at least 0.7 – the system signals an activation. This activation allows the SRCS to plan and mobilize resources with a 90-day lead time.

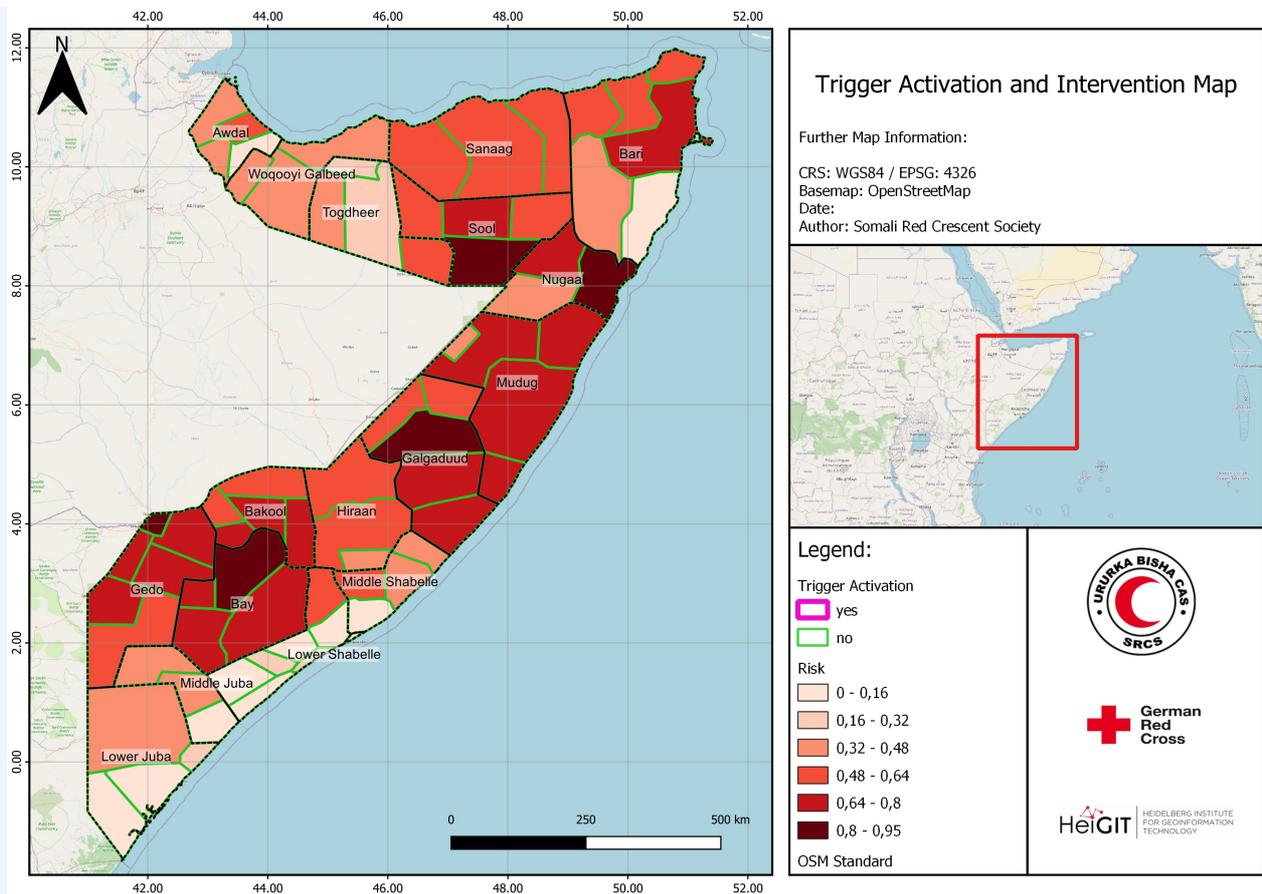
Implementing the System: Key Steps

- **Setting Up Monthly Folders:** Each month, SRCS staff create a new folder with the latest forecast data, using templates to keep records organized. This ensures they are consistently prepared with up-to-date data.
- **Gathering Key Data:** Staff download SPI-12 data from ICPAC and food insecurity data from FEWSNET. This data is the basis for monitoring drought conditions and food access issues in Somali districts.
- **Loading Data into QGIS:** In QGIS, a mapping software, team members open a project file and load all the data they need for analysis. This includes district boundaries, population data, and the latest forecasts for drought and food insecurity.
- **Running the Trigger Model:** With all data loaded, they activate a pre-built model in QGIS. This model processes the data and automatically checks each district to see if the drought and food insecurity thresholds are met. If these conditions are met in a district, the model indicates that the trigger is reached.
- **Map Visualization and Sharing:** Finally, the team creates a clear visual map that highlights any districts where the trigger is reached. This map, complete with labels and key information, can be saved as an image or PDF for easy sharing with decision-makers.

Impact of the Forecast Monitoring System

Through this system, SRCS can anticipate critical drought-related food shortages and respond before they reach a crisis level. By visualizing drought and food security risks monthly, SRCS can prioritize districts in need and allocate resources for the most vulnerable communities, ensuring that anticipatory action is implemented on time.

Please find more info on the QGIS workflow [here](#).



Example of trigger activation and intervention map (Source: SRCS and HeiGIT)



Flood Early Action Protocol in Bangladesh - Jamuna River Basin

Background

Bangladesh's geography and climate, combined with its extensive river systems, make it extremely vulnerable to annual flooding, particularly along the Jamuna River. Floods disproportionately impact low-income populations living in low-lying areas with fragile housing and high dependency rates. The direct effects of these floods include loss of life, spread of waterborne diseases, infrastructure destruction, and significant agricultural and livestock losses. The economic cost of floods is substantial, with the 1998 flood losses reaching \$2 billion,

equivalent to 6% of the national GDP.

Early Action Protocol (EAP) Objectives

The Early Action Protocol (EAP) by the Bangladesh Red Crescent Society (BDRCS) aims to reduce the impact of flooding by implementing proactive measures based on forecasts. This protocol is focused on safeguarding lives, protecting livelihoods, and minimizing household asset loss in flood-prone regions, particularly along the Jamuna River. The EAP's primary goals are:

- Reducing Human Casualties through early warnings, evacuation support, and provision of first aid.
- Minimizing Livelihood Losses by protecting livestock, crops, and other essential resources.
- Preserving Household Assets by providing cash grants to enable families to make preventive and recovery efforts.

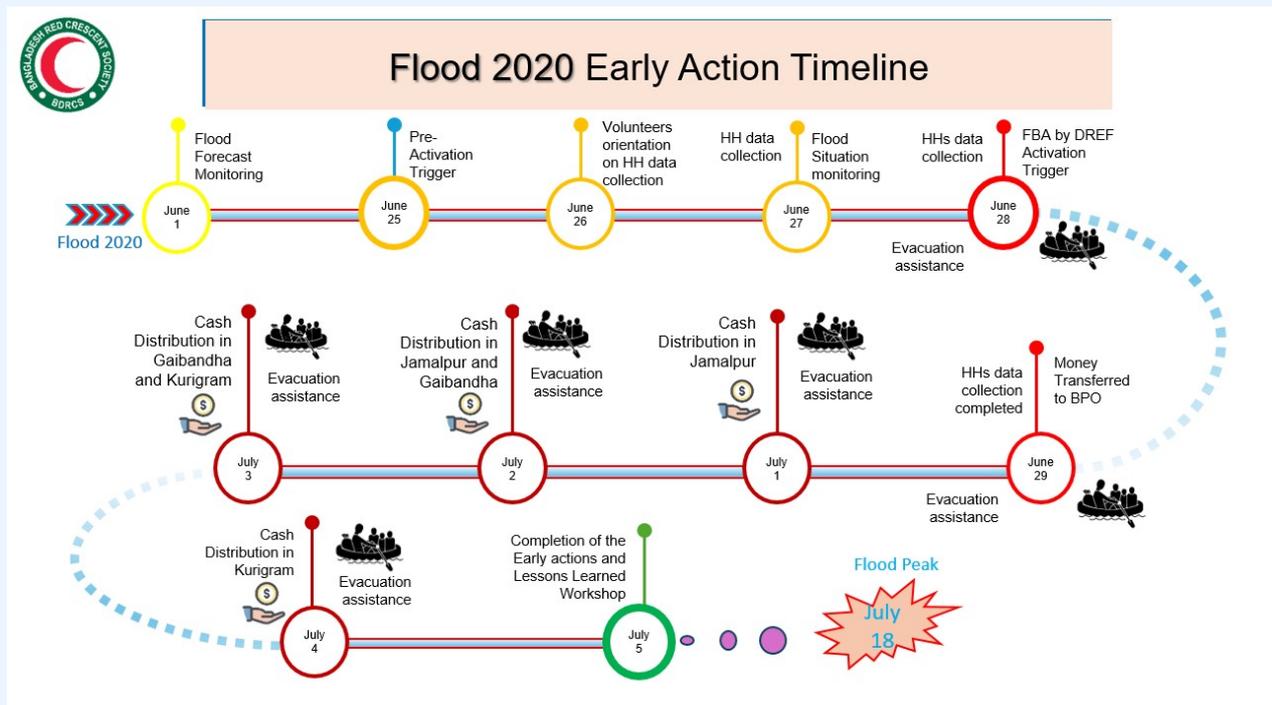
Core Components of the EAP

- *Unconditional Cash Grants*
Targeting 4,200 vulnerable households, the cash grants provide essential financial resources to support early preparations and recovery, including food purchases and livestock protection. Studies have shown that these grants help families reduce livestock losses and avoid negative coping mechanisms like selling household assets.
- *Evacuation Support by Boat*
The EAP provides evacuation services for families at high risk of being stranded by floodwaters. This includes mobilizing boats to help 200 families relocate to safer areas, reducing the risk of drowning and other flood-related hazards.
- *Early Warning Dissemination*
An effective early warning system is in place to alert communities to upcoming floods, giving them crucial lead time to take protective actions. The dissemination of warnings is coupled with instructions on evacuation procedures and safety measures to increase community preparedness and responsiveness.
- *Basic First Aid Provision*
First aid resources are available to address immediate health needs arising from the flood. This includes care for injuries, snakebites, and initial treatments for waterborne diseases, aiming to reduce health risks among displaced and affected populations.

Implementation Strategy and Geographic Scope

The EAP is executed with a focus on the most vulnerable districts within the Jamuna River Basin, covering 3-4 districts. Early actions are triggered by the Flood Forecast and Warning Centre (FFWC) and global forecast models, which monitor water levels to predict the likelihood and severity of floods. Upon reaching the danger level, the EAP activates its protocol, facilitating timely intervention in at-risk areas.

Please find the summary of the EAP [here](#).



Source: BDRCS

Step 2: Develop a communication protocol

During an EAP activation, it is crucial that everyone knows what to do and whom to inform. Especially for the fast onset hazards, information getting stuck or is slowed at any stage can undermine the timeliness of the entire activation. The communication plan or protocol indicates who should communicate to whom, what and when through the entire process of forecast monitoring, trigger activation, funding release, distributing

warning messages, implementing early action(s), monitoring activation through to evaluating the intervention. This can also be part of the activation plan that is outlined in the next step.

The table below provides an example communication protocol that you can adjust according to your needs (e.g. add names and telephone numbers of the responsible parties). You can also find a simple template in the [toolbox](#) at the end.

Phase	Institution	Person	Informs who?	Means of communication	Purpose of communication
Phase 1: 8-24 hours after activation	Hydromet agency	Head of department	Head of DM	Email, phone	Inform about the hazard, trigger being reached and where
	HQ national society	Head of DM	Director General	Email, phone	Informing about the upcoming hazard in the respective region(s)
	HQ national society	Director General	All respective department managers	Emergency briefing	Taking decisions on initial steps and distribution of tasks
	HQ national society	Director General	IFRC	Email	Report on the activation of the EAP
	HQ national society	Head of DM	Provincial Branches	E-mail, phone, WhatsApp	Informing about the upcoming hazard in the respected region(s) and preparation of resource mobilization
Phase 2: 24-96 hours after activation	HQ national society	Head Finance and Logistics	Local suppliers and transport company	E-mail, phone	Preparing/packing of distribution items
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Step 3: Develop early action implementation process

Section 6.1 of the full EAP asks you to outline an implementation process

showing that each step of the activation has been thought through and that implementation in the lead time available is possible. This implementation process should cover all activities from the moment the trigger is reached (day X) to staff/volunteer deployment, transport, distribution and the completion of post-distribution monitoring and/or impact evaluation (Day Y) with clear timelines and responsibilities.

Note that this timeline is different from the IFRC operational matrix that will also outline main tasks of the EAP but over the lifetime of the EAP rather than only the activation.

To ensure everyone is aware of their tasks, distribute the plan or process chart widely. This can be done by designing tailored training materials for staff and volunteers and/or the distribution of “pocket EAP,” which outline key EAP information on a single sheet for rapid reference. You can find an example of a pocket EAP from Latin America below in the [toolbox](#).

You find different templates of the implementation process which are also partly pre-filled, in the [toolbox](#) below.



Establishing an implementation process for typhoons in the Philippines

Objective and Approach

To reduce typhoon impacts, the FbF system mobilizes preemptive actions based on forecasts, coordinated by the Philippine Red Cross (PRC) with regional and local partners. This involves prepositioning Shelter Strengthening Kits (SSKs) across key PRC warehouses and enabling quick activation to protect vulnerable communities.

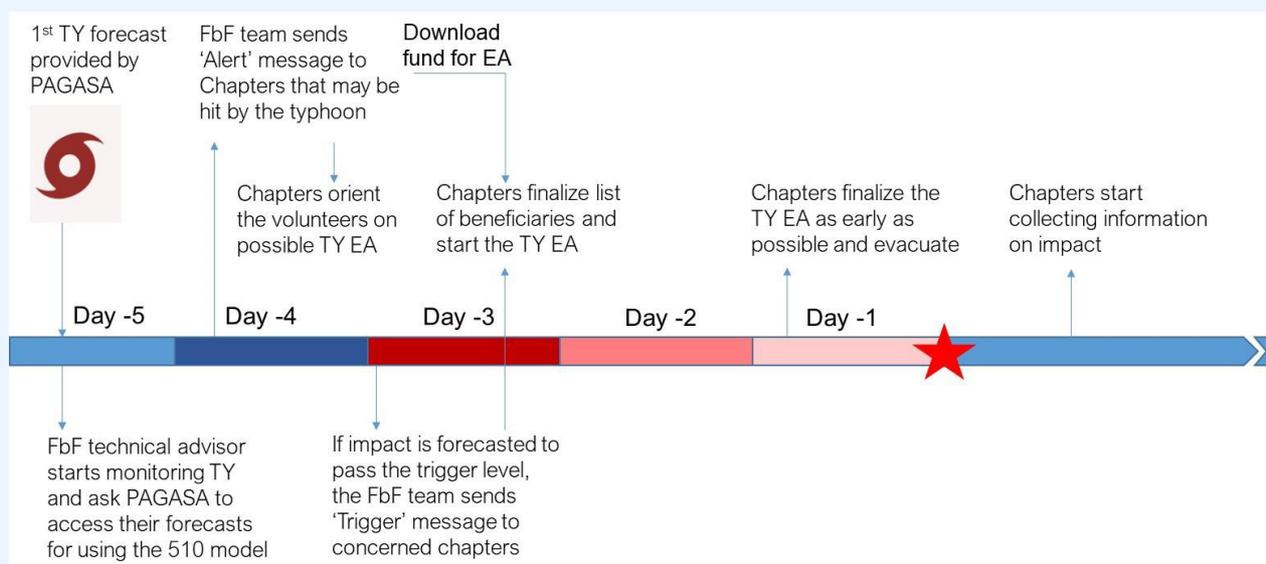
- *Preparatory Actions*

Essential SSK items—nylon ropes, nails, tie wires, and iron bars—are stored in five regional warehouses (Subic, Albay, Tacloban, Cebu, and Surigao del Sur). Additional tools and protection materials are set for local procurement upon activation.

Simultaneously, 3,000 information material copies are pre-printed to guide residents on shelter and livestock safety, ensuring community awareness in advance.

- **Alert Stage (Day -4)**
When a typhoon nears, automated alerts with impact forecasts are sent every six hours. Chapters in at-risk areas prepare for possible activation by coordinating with local suppliers and participating in Pre-Disaster Risk Assessment (PDRA) meetings to prioritize response actions.
- **Activation Stage (Day -3 to Day 0)**
If forecasted impacts surpass trigger thresholds, a “trigger” message activates response, guiding chapters to implement protective measures. Barangays receive SSK materials, residents undertake protective steps like early harvesting and drainage clearing, and preemptive evacuations are completed by Day -1.

In the pocket EAP you also find a very detailed checklist of who has to do what at which point in time. In the slider below you also find the checklist.



Source: PRC

Philippine typhoon EAP checklists

SHELTER STRENGTHENING ACTIVATION CHECKLIST	WHAT	HOW	WHO IS IN CHARGE	RELEVANT DOCUMENTS	COMPLETED
	Orient the beneficiaries (including workers) & disseminate protective equipment	Orient the beneficiaries, workers and volunteers how the installation is done and the flow of work (see IEC material). HOW: 5 steps: (1st) make strong anchors (2nd) hold down roof (3rd) tie down the roof frame (4th) close down doors and windows, and (5th) brace the walls.	Staff and volunteers	Guide to Shelter Strengthening (SSK IEC)	<input type="checkbox"/>
	Fill in forms	For beneficiary HH <ul style="list-style-type: none"> Beneficiary card (c/o chapter) Award distribution sheet Goods received note (GRN) For beneficiary workers <ul style="list-style-type: none"> Insurance form (MAAB) Take a photo of their one (1) valid ID If they don't have a valid ID's: <ul style="list-style-type: none"> First, workers should fill-out the bio-data. Then, take a photo of the worker. Lastly, Bio-data should have signed and verified by Brgy. Captain. Fill-out one (1) service contract per Team. Composed of five members (2 skilled and 3 unskilled). Each team should have one skilled team leader. The Team Leader (skilled) signs the contract 	Staff, volunteers, BarCom, and workers	Beneficiary card Award distribution sheet GRN MAAB Service Contract (per team) Photo of the workers' ID/ Biodata	<input type="checkbox"/>
	Start installing the SSKs	It takes approximately one hour to install one SSK. This means that one team can install around 8 SSKs/day.	Carpenters (with guidance from Staff, Volunteers and BarCom)	Guide to Shelter Strengthening (SSK IEC)	<input type="checkbox"/>
	Payment to the workers (on day -2/in the end of each day. Payment needs to be processed before the impact)	Workers should sign in the following documents: <ul style="list-style-type: none"> Attendance sheet Acknowledgment receipt Conduct cash-distribution (recommendation is PhP 500.00/day/pp. However, unskilled workers are paid less) Payment for Skilled and Unskilled Workers (Skilled Workers = Php 500.00/day) (Unskilled Workers = Php 350.00/day)	Staff and volunteers	Attendance Sheet Acknowledgement receipt	<input type="checkbox"/>
	Finalization of work	On day -1 (or until the weather allows) finish the work and relocate the staff & resources to a safe location).Z	Staff, volunteers and workers		<input type="checkbox"/>
EARLY HARVESTING ACTIVATION CHECKLIST	WHAT	HOW	WHO IS IN CHARGE	RELEVANT DOCUMENTS	COMPLETED
	Hire a team of workers and validate the beneficiary farms (based on the vulnerability criteria and the stage of the crops)	Hire a team of at least 10 workers from the target/nearby barangays for early harvesting. It is estimated that it takes about a day/10 worker to harvest 1 HA. Workers can be a tenant, laborer, or fishermen or low those receiving low daily/monthly income. Only choose farms where the crops have developed.	Staff, volunteers and BarCom		<input type="checkbox"/>
	Fill in forms	For beneficiary HH/workers: <ul style="list-style-type: none"> Insurance form (MAAB) Take a photo of their one (1) valid ID If they don't have a valid ID's: <ul style="list-style-type: none"> Insurance Form (MAAB) Take a photo of their one (1) valid ID w/ signature. If they don't have a valid ID's: <ul style="list-style-type: none"> First, workers should fill-out the Bio-Data Then, take a photo of the worker. Lastly, BioData should have signed and verified by Brgy. Captain Fill-out one (1) service contract per Team. Composed of by (1) Team Leader and (9) Members The Team Leader (TL) is the one who signs the contract. 	Staff, volunteers, BarCom, and workers	MAAB Service Contract (per team) ID/Biodata	<input type="checkbox"/>
	Go through (i) reaping the crop, (ii) hauling the cut crops to central location for (iii) preparing bags of paddy	To fasten the process of harvesting, threshing and cleaning are not included in early harvesting of rice within the lead time. For abaca, the workers can either do (a) tumbling and store it in safe location, or (b) trimming of abaca leaves. Then assigned person should count the number of tumbled/trimmed abaca trees.	Workers (with guidance from staff, volunteers and BarCom)		<input type="checkbox"/>
	Transport the cut crops to a storage place	The cut crops need to be transported to a safe storage place/marketplace.	Workers (with guidance from staff, volunteers and BarCom)		<input type="checkbox"/>
	Payment of workers	Conduct cash-distribution (recommendation is PhP500.00/day/pp) Workers should sign in the following documents: <ul style="list-style-type: none"> Attendance sheet Acknowledgment receipt 	Staff, volunteers and workers	Attendance Sheet Acknowledgement receipt	<input type="checkbox"/>

WHAT	HOW	WHO IS IN CHARGE	RELEVANT DOCUMENTS	COMPLETED
Barangay Animal Evacuation Team (BAET) Activation	Orient the beneficiaries, workers and volunteers how the installation BAET is activated through the barangay chairman. The members immediately act on their roles and responsibilities.	PRC Chapter through Barangay Chairman	Livestock Evacuation Guidelines and Livestock IEC	<input type="checkbox"/>
Recruitment of workers and filling in forms	Hire a team of at least minimum 10 workers to work in setting up 1 fence/corral/pen for the livestock: - Can be anyone from the barangay who knows basic carpentry skills - Can be those receiving low daily income/monthly income For Beneficiary workers: • Insurance Form (MAAB) • Take a photo of their one (1) valid ID w/ signature • If they don't have a valid ID's: - First, workers should fill-out the Bio-Data - Then, take a photo of the worker. Lastly, Bio-Data should have signed and verified by Brgy. Captain • Fill-out one (1) service contract per Team. Composed of one (1) Team Leader and nine (9) Members • The Team Leader (TL) is the one who signs the contract	Staff, volunteers, BarCom, and workers	MAABs Service Contracts ID/Bio-Data	<input type="checkbox"/>
Establishing the evacuation/pooling areas	There is no standardized design for the corral. Materials can be any locally available materials, but the corral needs to be sturdy enough. Take the following into consideration: • Inside a corral, livestock should be segregated per species, and/or per gender • Allocated space per livestock is at least 2 square meters • Goat should be inside an area with roofing • Installation of temporary drainage (if possible) • If no corral was set up, cattle and carabao should be tied in strong tree. • They should be freed from the corral once there is severe strong wind	Logistics (BAET) and workers	Livestock Evacuation Guidelines	<input type="checkbox"/>
Confirm pick up schedules and needed manpower	Spearheaded by the Barangay Chairman, schedules shall be plotted out, along with the manpower needed to support in the evacuation. Once schedules are determined, it should be announced to the entire community for their information. Manpower should ideally be from the BAET and barangay officials.	Barangay Chairman and BAET	Livestock Evacuation Guidelines	<input type="checkbox"/>
Transporting the livestock to the pooling area	It is the responsibility of the entire barangay council to do the evacuation, from the early warning, to transporting of the livestock from the pick-up sites towards the evacuation/pooling area. Livestock should be transported in appropriate vehicles and in a manner that does not cause stress throughout the travel and does not predispose them to injury and disease. Extra precautions for sick, distressed or pregnant animals required. Note: if a livestock owner refuses to evacuate, sign a waiver.	Barangay Council and BAET	Evacuation waiver Livestock Evacuation Guidelines	<input type="checkbox"/>

LIVESTOCK EVACUATION ACTIVATION CHECKLIST

Registration/ identification of livestock in the evacuation/ pooling area	As soon as the livestock arrives, animals should be registered in various ways (depending on the availability of resources on the ground). Recording and marking are to be done based on species, sex, age/size, and reproductive status.	Record Keeper (BAET)	Master List Livestock Evacuation Guidelines	
Sorting and dispatching	Stockyard boss sorts and dispatches the animals to the holding corral based on species, sex, age / size, and reproductive status.	Stockyard Boss (BAET)	Livestock Evacuation Guidelines	
Payment of workers	Conduct cash-distribution (recommendation is Php500.00/day/pp.) Workers should sign in the following documents: • Attendance sheet • Acknowledgment receipt Payment should be processed in the end of each day	Volunteers and staff	Attendance sheet Acknowledgement sheet	
Regular monitoring and maintenance of the evacuation/ pooling area	Provisions of feeds/forage/pasture/water will be primarily done by the owner with the supervision of the Nutrition and Water in-charge. Monitoring of health status and reporting to the veterinary any observation that requires intervention. Proper sanitation maintenance and security monitoring needed; at least one person monitoring the animals all the time	Owner Nutrition in-charge (BAET) Herd Health Technician (BAET) Water & Sanitation in-charge (BAET) Security in-charge (BAET)	Livestock Evacuation Guidelines	
Provision of health supplements and drugs	Herd Health technician provides vitamin A, D, E, electrolytes, and antibiotics (broad spectrum) before animals are released.	Health Technician (BAET)	Livestock Evacuation Guidelines	
Release of livestock after end of emergency	Release begins based on the order of the barangay chairman. Owners provide a claim stub to the Record Keeper to claim the animals.	Record Keeper (BAET)	Livestock Evacuation Guidelines	
Restoration of evacuation/ pooling area (clean and fix)	The site must be cleaned from waste to be facilitated by the Water and Sanitation team of BAET, and community people are encouraged to take part as well. Fence installed should be dismantled and stored in a safe place for future use.	WASH (BAET) and Logistics in-charge	Livestock Evacuation Guidelines	
Close out meeting - evaluation and documentation	Gathering feedback from the owners of the animals through a close out meeting, is being encouraged to evaluate the action done and further gather information for improvement. Moreover, all forms will be gathered and collated as basis for the early action done. These forms can be references in any case there'll be same action in the future.	PRC Staff, Volunteers and BarCom	Livestock Evacuation Guidelines	

Step 4: Develop process for targeting people at risk

The intervention map (please refer to [chapter 6: Develop a trigger system](#)) is the first step to targeting the people most at risk from the forecasted hazard. The intervention map shows you which areas to target. However, your EAP will also need to outline who you want to target with your early actions. To determine your community, household, or individual targeting criteria, you can refer to the impact and vulnerability assessment and data collected in [chapter 5: Collect risk, early action and impact data](#). The full EAP template asks you to provide the following information:

- A summary of the target population (e.g. number, location, specific vulnerable group)
- Description of how the target population will be selected, e.g. based on vulnerabilities, protection and gender aspects including considerations regarding the selected in the given lead time

- If the EAP is intending to use Social Protection systems or other government beneficiary databases, indicate how the number of targeted households will be selected

Guiding questions for the targeting process

- How are you currently targeting people? What are the criteria?
- Which criteria should be used to identify the household based on the prioritised impact?
- How will local authorities, community groups and other organisations, e.g. youth or women-led be included in selection of households and distribution?
- Who will register the target families? With which tools (e.g. paper forms or digital systems)? How much time does this take?
- What information is needed from the community (signature, name, age etc.)?

Note that there are different approaches to recipient registration given the often-short lead times associated with anticipatory action. For example, Bangladesh Red Crescent Society begins registering potential recipients for their flood EAP once the pre-activation trigger is reached. The Philippine Red Cross verifies the target population on an annual basis as part of their readiness.

In case you are using a social registry, please ensure to visit [chapter 07.1](#) for more information.

Step 5: Review security guidelines

To ensure safety and security of staff and volunteers during the implementation of the EAP, review your existing security guidelines and decide whether an additional assessment or measures are necessary during the implementation.

Currently, FbF is mainly implemented in non-conflict settings. However, the RCRC movement is exploring how FbF can be implemented during ongoing conflicts. This is a movement-wide initiative which includes national societies, and IFRC and ICRC. The [anticipatory action in conflict practitioners group](#) leads in developing guidance, methodologies and tools for anticipatory action in conflict settings.

Step 6: Document and institutionalize data storage and activation procedures

Your national society should establish processes for storing relevant risk data, monitoring forecasts, and translating forecasts and risk data into activation maps when a trigger is reached. It should also document these locations and procedures to ensure smooth transfer of information in the case of staff turnover.

Some tips and considerations for efficient and sustainable data management:

- QGIS: open-source GIS software can help you to manage your risk data and process the intervention map.
- Shared folder: Ensure that the data is stored in a shared folder that can be accessed by several national society staff (and all who may need access) rather than on an individual computer. Google drive or a shared Teams folder are simple options.
- EAP activation manual: The EAP document should guide you on what to do during an activation, but it is not necessarily an operational document. Therefore, you may need to develop a more detailed activation manual to guide you during the activation process.

How this data is stored and managed will depend upon whether this process is internal to the national society or is performed by a technical, forecasting or government partner. Several national societies have budgeted for technical staff in their EAPs to ensure that risk data is up to date and forecasts are monitored. Others outsource forecast monitoring and developing trigger maps to third parties. When it is time to review and resubmit your EAP, whomever oversees activation mapping should help review processes for trigger monitoring, risk analysis, and mapping activation areas.

Toolbox

Tools and templates

QGIS Software

TEMPLATE Implementation process

FILLED TEMPLATE Chronological activation process – actions and responsible

personnel

Examples

QGIS Trigger workflow Somalia

Pocket typhoon EAP Philippines

Other key reads, websites and documents

Anticipatory Action in Conflict Practitioners Group