Risk analysis and monitoring – multi-hazard (IASC)

07 mars 2023

Points clés

- Inter-agency country teams must collectively undertake regular risk analysis and risk monitoring led by the RC or HC.
- The risk ranking determines the type of preparedness actions that should be taken.
- When the risk for a particular hazard is ‘medium' or ‘high', ERP Advanced Preparedness Actions (APAs) and ERP contingency planning must be undertaken.
- When the identified risk is a refugee influx, UNHCR leads preparedness efforts and the inter-agency framework that applies is the Preparedness Package for Refugee Emergencies (PPRE).

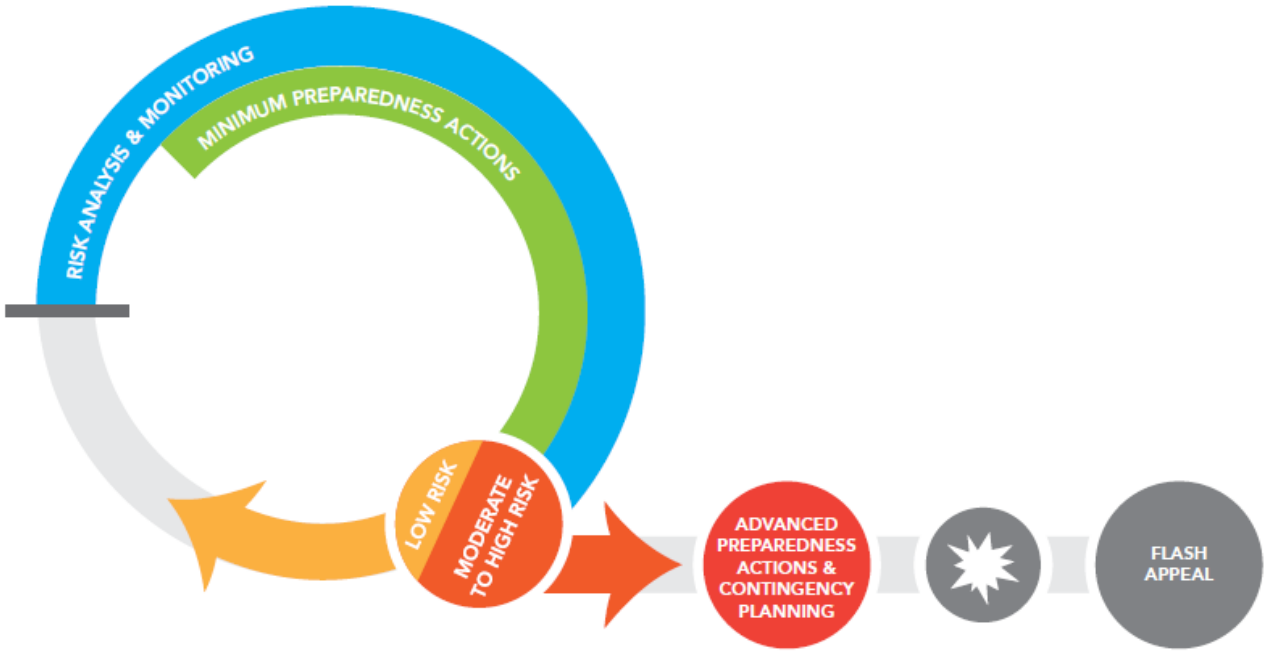
1. Aperçu

Note. This guidance forms part of the Emergency Response Preparedness (ERP) approach. In its current form, it reflects the "BETA" version of the ERP, which the Inter-Agency Standing Committee (IASC) Task Team on Preparedness and Resilience released for field testing in 2015. The final version of the ERP may look different, once released.

Obtaining a clear shared understanding of risks that may trigger a crisis significant enough to require a coordinated humanitarian response is fundamental to the entire ERP process. At country level, analysis informs planning while monitoring ensures that the process is responsive to emerging risks. The risk analysis process identifies hazards that could trigger a crisis and ranks them by impact and likelihood. Risk ranking determines whether thresholds are ‘low', ‘medium', or ‘high'. When risks rise to ‘medium' or above, it is recommended to develop a contingency plan.

At global level, IASC partners collaborate twice a year to develop an Early Warning Early Action (EWEA) report, which is submitted to the IASC Emergency Directors Group and concerned partners. The EWEA report draws on risk analysis and monitoring carried out at country level. It creates a shared understanding of global risks in the six months that follow, and recommends preparedness actions that should be taken. At global level, UNHCR participates in the EWEA process through the Division for Emergency Security and Supply (DESS) Emergency Services at HQ.

Terms
Hazard: A natural or man-made phenomenon that has negative humanitarian consequences.
Likelihood: The probability of a hazard occurring.
Impact: The humanitarian consequences of a hazard, if it occurs.
Risk: An attribute of a hazard, representing the combination of likelihood and impact.
Risk analysis: The process of determining the likelihood and impact of a hazard in a defined period, and consequently the risk that it presents.
Alert: A short term, high certainty notice that a hazard is likely to occur imminently, providing a scenario for short term (‘no regrets') early action.



2. Relevance for emergency operations

The first step of ERP is to assess risks faced by all sections of the country's population that might require a coordinated humanitarian response. Risk analysis is an essential component of ERP, because it provides a shared understanding of risks that could require a humanitarian response and prioritizes them. All risks ranked ‘medium' or higher need to be monitored to ensure that planning is responsive to changes in the risk context of the country.

3. Main guidance

Processus sous-jacent – Comment cela fonctionne?

Step 1. Risk analysis
a) Risk analysis begins by identifying potential hazards that may affect the country. For the purpose of ERP, the focus is placed on the following five threat categories that have potential humanitarian consequences:
1. Natural hazards that are hydro-meteorological (floods, landslides, storms, droughts) or geophysical (earthquakes, volcanic eruptions, tsunamis).
2. Armed conflicts and civil unrest.
3. Epidemics and pandemics.
4. Drastic changes in the socio-economic environment, such as a surge in prices of essential goods, restrictive government legislation such as export and import bans, or serious human rights violations.
5. Environmental hazards (industrial accidents, severe pollution).

b) Once hazards have been identified, they are ranked twice on a scale of 1 to 5. They are ranked once in terms of their perceived impact and once for likelihood of occurrence. Multiplying both variables provides a number that indicates the gravity (low, medium or high) of the risk in question. The table ‘Impact and likelihood scales' below provides guidance on how to assess impact and likelihood and rate gravity. When a risk has been ranked, it should be entered into the Country Risk Graph (see ERP, Annex I) that forms the basis of a country's risk profile.

To the extent possible, national authorities and other national actors should be engaged in the risk analysis process to ensure that understanding of risk is shared. Past risk analyses by national authorities, humanitarian or development agencies, and local or international research institutions, should be considered and taken into account.

Impact and likelihood scales

Impact	Likelihood
Negligible (1) Minor additional humanitarian impact. Government capacity is sufficient to deal with the situation.	**Very unlikely (1)** A remote chance of an event occurring in the current year (0-5%). For example, seasonal hazards that happened no more than once in the last twenty years.

Minor (2) Minor additional humanitarian impact. Current country level inter-agency resources are sufficient to cover needs that the Government cannot meet.	**Unlikely (2)** The event has a low chance of occurring in the current year (5-15%). For example, seasonal hazards that happened up to three times in the last twenty years.
Moderate (3) Moderate additional humanitarian impact. New resources (up to 30% of current operations) are needed to cover needs that the Government cannot meet. Regional support is not required.	**Moderately likely (3)** The event has a viable chance of occurring in the current year (15-30%). For example, seasonal hazards that happened two or three times in the last ten years, or once or twice in the last five years.
Severe (4) Substantive additional humanitarian impact. New resources (up to 50% of current operations) are needed to cover needs that Government cannot meet. Regional support is required.	**Likely (4)** The event has a significant chance of occurring in the current year (30-50%). For example, seasonal hazards that happen every second or third year, or happened twice in the last five years.
Critical (5) Massive additional humanitarian impact. New resources (over 80% of current operations) are needed to cover needs that Government cannot meet. L3-scale emergency.	**Very Likely (5)** The event has a positive chance of occurring (over 50%). For example, seasonal hazards that happened three or more times in the last five years, or five or more times in the last ten years.
Risk = Impact x Likelihood	
Low: 1–7 **Medium: 8-14** **High: 15-25**	

Step 2. Risk monitoring
A risk monitoring mechanism should be applied to all hazards that have been identified in the risk analysis. ERP focuses on specifics: on indicators monitored in relation to risks identified. The indicators are analysed individually or collectively for tipping points that trigger decision-making. Monitoring the indicators through available early warning mechanisms and tools enables the UN Country Team (UNCT) or Humanitarian Country Team (HCT) to decide whether a risk has reached a threshold that requires an increased level of preparedness.

a) Risk monitoring should be indicator-based and should follow a regular, structured process. Each risk in the ERP risk profile should be assigned a set of indicators. At least one person or entity should be tasked to monitor the indicators for each hazard.

Indicators should be checked on a scheduled basis. Timing will depend on the availability of new information, the nature of the hazard being monitored, and the trend of the risk. If a risk is rising, for example, indicators should be checked more frequently.

b) For risk monitoring purposes, hazards in the risk graph are divided into three categories. This is important for determining when a hazard poses a risk that requires additional preparedness. The categories are:

- Seasonal hazards (such as floods, cyclones or drought) that pose a risk at regular, predictable times in the year.
- Evolving hazards (such as armed conflicts, serious human rights violations, economic hazards, and pandemics) that pose risks that change irregularly over time.
- Static hazards (such as earthquakes, volcanoes and tsunamis) that pose the same level of risk all the time, but the moment of their occurrence is impossible to predict.

Each category requires a different method for determining if and when additional action is necessary.

Seasonal hazards
These hazards (floods, cyclones, drought) have a regular cycle. With respect to seasonal hazards, the key objective is to ensure that Advanced Preparedness Actions (APAs) are implemented, and contingency plans (CPs) updated, before the seasonal or scheduled hazard occurs.

Key questions
1. When in the year do seasonal hazards occur, and how much advance notice is required to implement APAs and the CP?
2. Which seasonal hazard poses the highest risk?
3. What sources will be used to trigger short term alerts of imminent hazard events?

With respect to each seasonal hazard that ranks 10 or higher on the risk graph, set a specific action date one to two months before it is due to occur. The date should align with the plans of national authorities (where applicable). APAs and CPs should be implemented or reviewed on the action date.

With respect to droughts, which can be predicted with a relatively high degree of confidence

(following low rainfall), it may be preferable to implement programmatic responses rather than develop APAs and a CP.

Evolving hazards
The levels of risk associated with these hazards (armed conflict, serious human rights violations, economic hazards, pandemics) change irregularly over time. Their evolution should be monitored to identify the tipping points when risk increases.

Some evolving hazards (such as electoral violence) tend to occur at predictable intervals and may be managed more easily by following the guidance for seasonal risks.

Key questions
1. Ahead of time: what resources are available to monitor evolving hazards?
2. Periodically: is there a viable possibility that a hazard will need a coordinated international response in the next two months?

Static hazards
These hazards (earthquakes, volcanic eruptions, tsunamis) pose the same level of risk consistently over time, but, though they rank as high-risk, the exact timing of their occurrence is impossible to anticipate. For this reason, it is usually impossible to monitor risks of this type.

c) Indicators will vary according to the hazard being monitored. The ideal indicator is an event that always precedes a hazard event, and never occurs at another time. Unfortunately, such indicators are rarely found, but the principle is important. Indicator events that happen frequently, regardless of whether or not a hazard event subsequently occurs, are of no use. Generic guidance with regard to indicators for evolving hazards covered by the ERP is available in Annex II, and in selected information sources at global level. In many cases local sources, including national services, will be most useful. The generic indicator guidance should be used to identify context-specific indicators for each hazard in a risk profile.

Country teams should regularly review the risk that each evolving hazard poses; this should be an agenda point at UNCT/HCT meetings. The objective is to decide whether or not it is necessary to implement APAs and develop a specific contingency plan.

Reporting risk and highlighting early warning
When a UNCT or HCT starts to develop or reviews APAs and contingency plans, a brief communication should be sent, collectively to the OCHA Regional Office and by agencies to their respective regional offices or HQ. The information will go to the Emergency Directors Group (EDG) and possibly the IASC Task Team for Preparedness and Resilience for appropriate follow-up action and support. In consultation with HCTs, the EDG, supported by an inter-agency group of experts, monitors situations and suggests preparedness actions for specific risks.

This communication should include:

- A description of the hazard.
- The best available estimate of the level of risk the hazard poses.
- Planned actions to increase readiness.

- The assistance needed to ensure readiness.

Implementing risk analysis and monitoring by the UNCT or HCT

Key questions

1. Who is responsible for monitoring each risk?
2. How will those responsible communicate changes in hazard context to the UNCT or HCT?
3. What indicators will be monitored, with what frequency? What information source(s) will feed the monitoring process?

Step 1. Hazard identification

The UNCT and/or HCT should initiate a process to identify potential hazards that may affect the country. Where possible and where appropriate, the UNCT or HCT should invite Government partners and other stakeholders (academics, technical experts, representatives of local communities) to participate in hazard identification processes. Examples and guidance on hazard identification is available at: ReliefWeb - Informing humanitarians worldwide

Step 2. Risk ranking

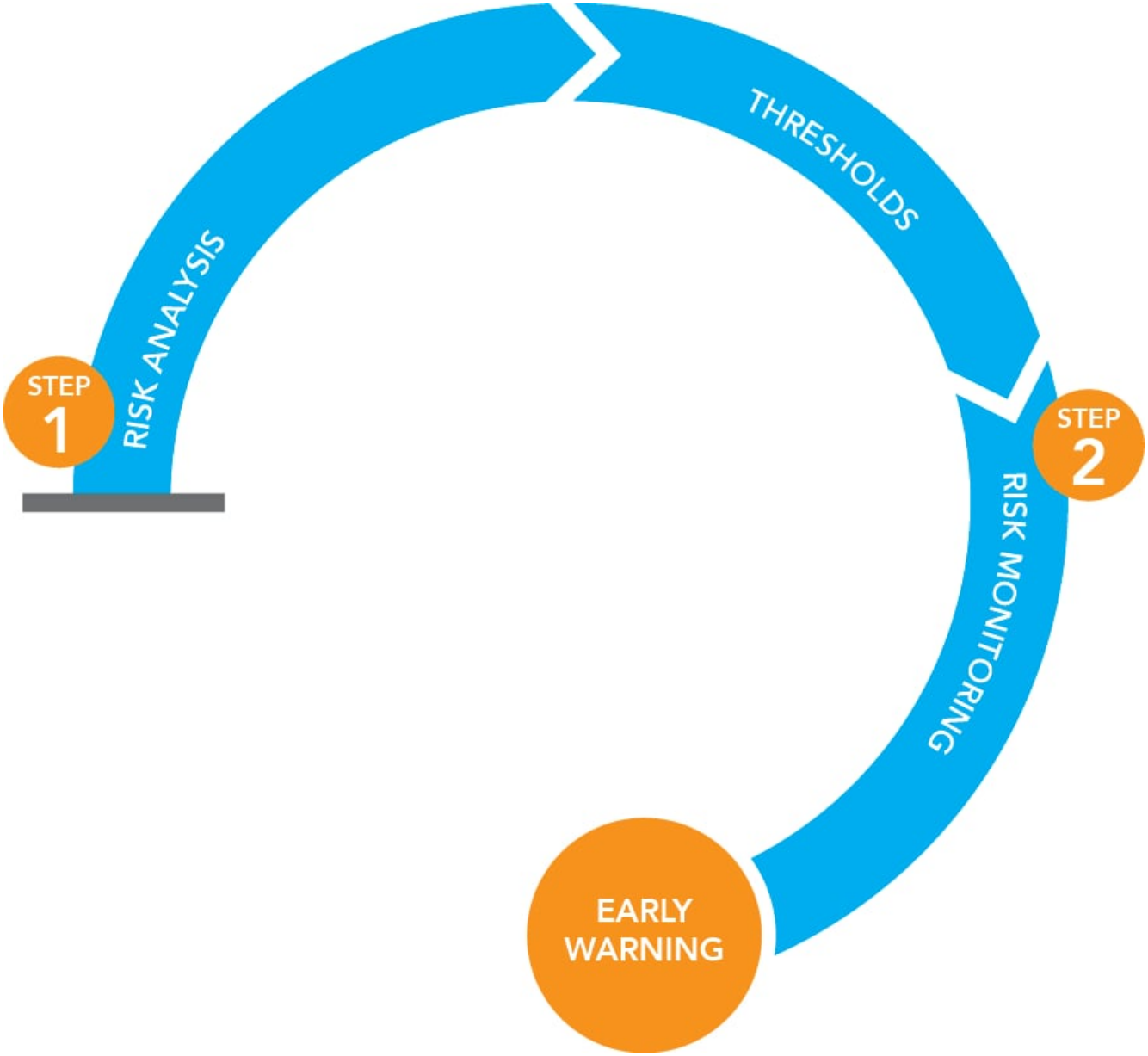
When all hazards have been identified, they should be ranked in order of perceived impact and likelihood of occurrence. Risk = impact x likelihood. Risks should be ranked from low to high using the risk graph in Annex I. Further examples and guidance are available at: ReliefWeb - Informing humanitarians worldwide

Step 3. Defining thresholds

The UNCT or HCT should use the risk ranking to define risk thresholds and decide whether additional preparedness actions need to be taken (for example implementation of APAs and development of contingency plans). The UNCT or HCT is advised to take additional preparedness action when the level of risk reaches a score of 10 or higher.

Step 4. Risk Monitoring

A risk monitoring mechanism should be established to track all hazards identified. Particular attention should be given to hazards with a risk ranking score of 10 or higher. Monitoring updates should be a standing item on the UNCT or HCT agenda. Risk monitoring is one of the ERP Minimum Preparedness Actions (MPAs).



Le rôle et les responsabilités du HCR

UNHCR country offices participate in inter-agency risk analysis and risk monitoring, led by the Resident Coordinator (RC) or Humanitarian Coordinator (HC). They contribute analysis to this process whenever appropriate. They regularly report the results of this process to regional bureaux and to DESS Emergency Services. They should alert UNHCR offices in neighbouring countries when identified hazards might lead to refugee outflows.

In the case of ‘risk analysis and monitoring – refugee emergencies' (when a refugee influx may occur in a country), the UNHCR Representative leads the analysis process in consultation with UNHCR regional bureaux and UNHCR offices in neighbouring countries.

Annexes

Emergency Response Preparedness July 2015

4. Liens

The site is currently down - Famine Early Warning Systems Network (FEWSnet, dro... World Meteorological Organisation (WMO, seasonal forecasts)

5. Main contacts

UNHCR Division for Emergency Security and Supply (DESS), Emergency Services. At: hqemhand@unhcr.org