

Scenario Development

A scenario projects alternative ways in which a situation might evolve. It is a set of informed assumptions about a situation that may require humanitarian action. Building scenarios involves speculating about an uncertain future and envisaging different possible outcomes for a given initial situation. When applied to the framework of a needs assessment, scenarios are used to plan for possible future humanitarian crises and needs.

Scenario building relies on:

- Analysis of the current humanitarian situation
- Assumptions about expected future risks and opportunities
- The resilience and vulnerability of affected population
- Existing and anticipated capacity to respond
- Experiences from previous “similar” crises

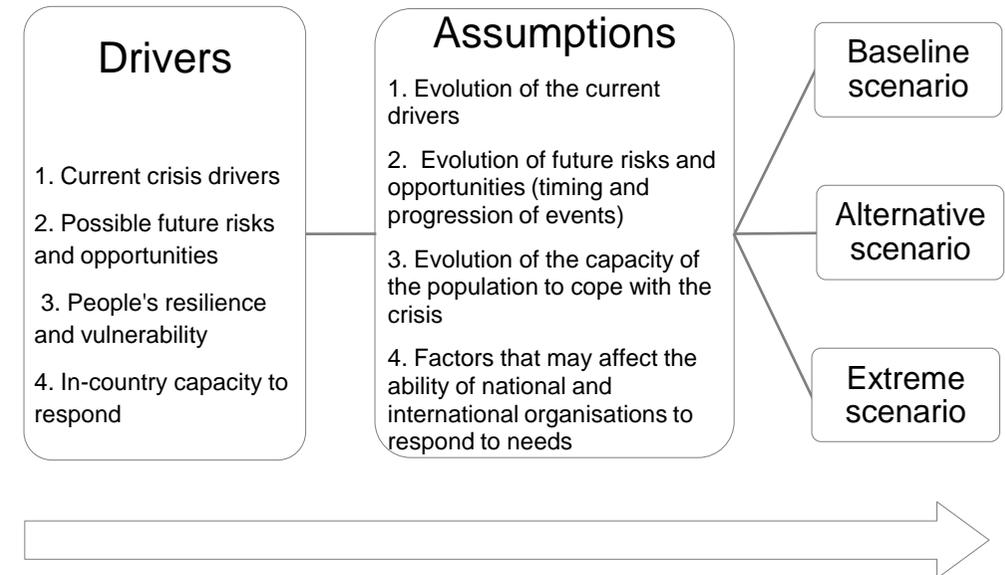
The most practical, flexible and recommended method for scenario building is the “**chain of plausibility**” approach. Compared to more traditional approaches (“most likely case”, “best case” and “worst case” scenario), this method helps in integrating potential events into a **plausible and realistic** narrative, rather than just sorting them by a differentiated order of intensity or impact.

The use of the “chain of plausibility” approach helps develop realistic scenarios for crisis situations. It works by identifying:

- Drivers that are likely to trigger a chain of events that lead to each scenario;
- Informed assumptions about a given situation.

By gradually combining and modifying the drivers and the assumptions, it is possible to analyse different potential outcomes from the baseline (projection of the current situation) to the most extreme.

Chain of Plausibility



The approach can be used for short or medium term time frames. It can easily be linked to early warning activities or the monitoring of a situation by evaluating which scenario seems to be the most likely at any given time. It suits contexts with a limited number of important drivers, as well as situations with multiple interlinked drivers.

Scenario building based on the chain of plausibility involves **5 steps**:

1. Gather and review relevant information
2. Define number and scope of scenarios
3. Identify drivers
4. Select assumptions
5. Develop scenarios

Step 1: Gather and Review Relevant Information

1. Country contingency plan
2. Information on the typical effects of similar crises in comparable contexts (CAP or Flash appeals, ACAPS Disaster Summary sheets)
3. Context information on the crisis (crisis secondary data review, including description of current impact and pre-crisis conditions)
4. Forthcoming important events, including secondary effects of the crisis, and key recurring events (rainy season, winter, elections, harvest period, lean season, etc.) that have the potential to influence the evolution of the situation
5. Lessons-learnt, experiences and studies from previous interventions in similar contexts (after-action review, program evaluations, etc.)
6. A mapping identifying the main stakeholders who have an interest or are involved in a given issue or aspect of the crisis and have a significant capacity to influence its development (Government, private companies, armed forces, civil protection, etc.)

Step 2: Define Scope and Number of Scenarios

1. Define the geographical area and population of interest (scope).
2. Specify the time frame covered by the scenarios. Take into account upcoming events; assess trends and their in-time validity.
3. Avoid thinking immediately of developing scenarios which broadly correspond to the status quo, the ideal, and the worst-case scenario. Rather, explore a range of plausible futures, think about different drivers (game changers), and set the number of scenarios accordingly.

- Scenarios, as used in initial and rapid humanitarian needs assessments, usually attempt to cover a period of 4-8 months for conflict situations and 2-4 months for sudden onset disasters
- For complex emergencies, 3 to 5 smaller scenarios may be necessary to define the main possible evolutions. For sudden onset disaster, 2 to 3 scenarios are usually sufficient.

Step 3: Identify Drivers

A **driver** is a factor that is considered to have a determining influence over the direction the future will take. The first stage in identifying drivers is to examine the findings of your review (**Step 1**) to detect and isolate specific dynamic factors within a given context. These factors are called “drivers” and may have a positive (opportunities) or a negative (risk) impact on the context. Drivers can be organized in four main categories:

Driver categories	Examples of Drivers
Current Crisis Drivers	Fighting, rainwater precipitation level, after-shocks, price evolution, displacement, malnutrition, food production
Possible Future Risks and Opportunities	Epidemics, flooding, winter, spill-over effects, economic sanctions, elections, rise of extremist movements, social unrest, price inflation
Resilience/ Vulnerability of Affected Population	Coping mechanisms, level of remittances, structural vulnerabilities, social protests, competition over resources, purchasing power, livelihood opportunities
National/ International Response Capacity	Number of actors vs. scale of the crisis, humanitarian space and access, qualification of humanitarian staff, government capacity/ willingness to respond, donor funding and issued calls for external assistance, contingency stocks

Not all drivers need to be considered for scenario building. Select only those which rank high with respect to their probability of occurrence and their expected impact on the affected population, using the following matrix.

Probability of Occurrence vs. Expected Impact

Probability of Occurrence (%)	Expected Impact				
	Insignificant	Minor	Moderate	Important	Major
Very likely (90-100%)	Orange	Orange	Orange	Red	Red
Likely (66-100%)	Orange	Orange	Orange	Red	Red
Maybe (33 to 66%)	Yellow	Orange	Orange	Orange	Red
Unlikely (0-33%)	Yellow	Orange	Orange	Orange	Orange
Very unlikely (0-10%)	Yellow	Yellow	Orange	Orange	Orange

- Scenarios are a tool for presenting alternative futures and should **not** integrate factors that are certain to occur.
- Only drivers with a likely or very likely probability of occurrence should be included in the final document.
- Only drivers that are likely to have a moderate, important or major impact on the situation should be selected.
- As much as possible, combine or cluster **drivers that influence each other** (e.g. rainwater precipitation level + displaced population + camp capacity + logistic access to affected sites + epidemic risks).

Step 4: Select Assumptions

- Assumptions describe the direction a driver can take: positive or negative in terms of humanitarian impact. By determining the evolution of each driver, it is possible to produce a set of assumptions.
- By assessing the relationships between the driver-assumption pairs, it is possible to identify elements that are related (e.g. overcrowding/ protection issues, return/ land ownership issues, water pollution/ water borne diseases, conflict resuming/ new population displacement, etc.).
- By combining different sets of related or connected assumptions, it is possible to develop several mini stories or groups of assumptions that will form the basis of the scenarios.

Assumption categories Examples of Assumptions

Evolution of Current Drivers	Increased flooding, severe aftershocks, spread of epidemics, escalating conflict, economic collapse
Evolution of Opportunities and Risks	Increased influx of refugees, political stalemate, eruption of conflict over resources, peace agreement, successful international intervention
Evolution of the Population's Capacity to Cope With the Crisis	Decrease of purchasing power, loss of assets, decreased access to resources, lack of access to humanitarian aid, disruption of remittances flow
Factors Affecting National/ International Response to Needs	Roads and bridges washed out, conflict preventing access to affected areas, failed negotiation for access with rebels, skilled staff unavailability, looting of contingency stocks, attacks on humanitarian staff

- The challenge is to identify 2-5 assumption groups that are plausible and are incorporating the most important drivers.
- The first group of assumptions should be based on a simple projection of the current situation without the influence of any significant new factor (it will be used to develop the baseline scenario).
- Then, the set of assumptions used in the baseline model is altered to develop a plausible alternative scenario. If repeated, this process will help produce several alternative scenarios.
- Finally, the set of assumptions is modified to form the basis of an extreme scenario that should still remain plausible enough. This scenario will usually be the one with the highest impact.

Step 5: Develop Scenarios

From sets of selected assumptions, full scenarios can be developed. The following template can be used as a short guide:

"Name of the scenario – e.g. "Heavy Rainfall Scenario"		Low			High
Affected Population	Probability level			X	
XXX.XXX – XXX.XXX	Impact level				X

Core Assumptions	<p><i>Short description of drivers and assumptions: (driver: heavy rainfall), e.g.:</i></p> <ul style="list-style-type: none"> After heavy rainfall in the south the flood waters did not recede for two months and a large area remains inaccessible for assessment and intervention. Government calls for international assistance to address the IDP issues. Very low in-country capacity of humanitarian actors to respond to the disaster.
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Context & Impact	<p><i>Overall effects and impact of the event. e.g.:</i></p> <ul style="list-style-type: none"> Influx of 150,000 IDPs in overcrowded and inadequate shelter expose the population to public health threats like during the 2008 floods when outbreaks were reported in camps. Affected urban population is attended to, but rural population has to wait several weeks before receiving first assistance due to road disruption. <i>Affected areas:</i> e.g. south west provinces of the country are the most affected area. <i>Affected groups:</i> e.g. IDPs in public building and camps as well as host population and their characteristics (number, demographics, and specific vulnerable groups). Duration of the emergency situation: Period of time during which emergency assistance may be required.
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Operational Constraints	<ul style="list-style-type: none"> Access, security, logistics and communication
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Priority Needs	<ul style="list-style-type: none"> Key interventions (including intervention/ assessment, preparedness measures): Food, water and NFI distribution will be required. Air transportation for relief items. Early warning system and surveillance for communicable diseases. Coordinated assessment mechanisms. Description of needs for specific affected groups: e.g. IDPs in camps and public building will need temporary shelter until access to their lands and homes is possible.
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Each scenario should include as a minimum:

- The **probability** of this given scenario happening and its expected **impact** on the affected population
- A range giving a **quantitative estimate** of the expected number of people that would be affected e.g. 100-200 and avoid point estimates.
- A **narrative** describing the main points of the scenario, including the population groups and the areas that would be affected
- The predicted **duration** of the emergency intervention and the potential operational constraints
- The **priority needs** of the affected population and the humanitarian response needs
- A specific or memorable **name** catching the core idea of a given scenario

Key Principles

- Do not base scenarios on factors that are certain, select drivers that are genuinely variable and are thus subject to in-time change
- Include support and review from selected key informants and local experts in the scenario building process
- Focus of the scenarios should be on their predicted impact on affected people, on their livelihoods' and the related needs
- Prioritize scenarios that are needed to move forward with planning instead of trying to develop all possible scenarios
- Include just enough detail to permit planning and communicate to others the anticipated conditions and needs of the affected population
- Acknowledge that the scenarios developed will never be able to predict exactly the future and therefore will never be completely right

The following examples from DPRK and Mali illustrate the process followed to develop the assumptions. Assumptions for the DPRK scenario are based on a single driver, while for Mali – a combination of drivers was used.

Single Driver Situation: DPRK 2011

Available Information and Identification of Drivers: Heavy rains and extensive flooding have impacted DPRK's main food producing provinces, escalating existing levels of chronic food insecurity and putting over six million North Koreans at risk of food shortages. DPRK is a country that is chronically food insecure. It heavily relies on bilateral food assistance and imports to address internal food production shortfalls. North Korea has recently called upon international relief agencies to help mobilise emergency aid to tackle severe food shortages. The continued lack of humanitarian access and provision of life-saving food and services to specific regions and affected population is increasing the vulnerability of already undernourished and food insecure North Koreans. The government recently granted greater access to affected provinces, but still continues to oversee and control carefully the delivery of external humanitarian assistance. The following drivers have been identified:

1. Humanitarian access granted by authorities
2. Humanitarian funding
3. Operating conditions
4. Failure of October/ November harvests

Three of the four identified drivers deal with the in-country capacity to respond. This group of drivers is the one that will mainly influence the development of the crisis. An evolution of these drivers will influence the humanitarian access to the food insecure population and will have a moderate to major impact on the crisis' scale. Assumptions will therefore be based on the assessment of the varying degrees of humanitarian access.

Selection of Assumptions and Scenario Outlines:

Baseline Assumption: *A slightly improved humanitarian access to the affected population.*

Alternative Assumption: *A progressive and significant easing of government restrictions on humanitarian access.*

Extreme Assumption (High impact/ Low probability): *Increasing constraints and control over humanitarian activities.*

DPRK - Improved Humanitarian Access Scenario

Affected population: Up to 4.000.000		Probability level			X	
		Impact level			X	
Core Assumptions	<ul style="list-style-type: none"> Continued easing of government restrictions affecting humanitarian access especially with regard to official permission to access affected population and use of non-DPRK translation and support staff. Increased humanitarian funding and improved operating conditions. 					
Context/ Impact	<ul style="list-style-type: none"> Substantial assistance is required to support the Public Distribution System (PDS) and increase the quantity and diversity of food delivery. Government/ donors ensure that the anticipated imports materialize; simultaneously, efforts are made to procure additional food supplies through bilateral resources. Improved external relations allow for the establishment and/ or implementation of economic agreements with other nations, leading to an increase of investment in DPRK. 					
Operational Constraints	<ul style="list-style-type: none"> Lack of control on delivery of goods and services to the most vulnerable population. Government continues to control NGO/ UN access to the population and the expatriates cannot directly talk with the population. 					
Priority Needs	<ul style="list-style-type: none"> Nutrition survey, surveillance and reference system. Emergency food security assessment. Provision of food assistance to the most vulnerable population that has specific needs – including children, pregnant and lactating women, older people without the support of relatives and low income PDS-dependent population, particularly in the northern part of the country and regions with highest levels of malnutrition. Ensure access to primary health care and potable water. Integrated programs tackling the underlying causes of the malnutrition. Consider a shift to large-scale rehabilitation and development programs. 					

DPRK - Deterioration of Humanitarian Access Scenario

Affected population: Up to 4.000.000		Probability level		X		
		Impact level				X
Core Assumptions	<ul style="list-style-type: none"> Downscaling of all UN/ NGO humanitarian programs. Decrease in access to areas and population in need. A severe natural disaster or the failure of the October/ November harvests would be a humanitarian catastrophe. 					
Context/ Impact	<ul style="list-style-type: none"> Households continue receiving rations from the PDS that are much below their needs. Under-nourishment continues for the majority of the population. Lack of health and nutrition interventions increases vulnerabilities and the risk of malnutrition, the risk of infectious diseases (tuberculosis, measles and/ or avian flu), impact of untreated chronic disease, and other public health issues. Accelerated deterioration of the nutrition and food security situation increases the acute malnutrition rates for children who are mild to moderately malnourished. 					
Operational constraints	<ul style="list-style-type: none"> Full restrictions in humanitarian access. Limitations or stoppages of humanitarian funding. 					
Priority Needs	<ul style="list-style-type: none"> Emergency food distribution. Targeted food assistance to the most vulnerable groups. Emergency water supplies in flood affected areas and distribution of water purification items in worst affected areas. Therapeutic and supplementary feeding for severely malnourished persons. 					

DPRK - Continued Status Quo Scenario

Affected population: Up to 4.000.000		Probability level			X	
		Impact level			X	
Core Assumptions	<ul style="list-style-type: none"> Slightly improved access to population, but continued government oversight of humanitarian activities. Humanitarian organizations are invited to feed into the PDS system, but cannot launch parallel support activities or freely access beneficiaries for assessment, consultation and design of integrated programs (WASH, Health and Food security). 					
Context/ Impact	<ul style="list-style-type: none"> Most of the people continue to have their basic food needs unmet. Lack of data does not allow humanitarian organizations and donors to get the big picture. No situation awareness is possible. On-going negotiation with authorities to gain more access and independence. 					
Operational Constraints	<ul style="list-style-type: none"> Food diversion from PDS stocks and impossibility to monitor distributions. No free access to affected population and areas. No credible data to measure needs and impact. Risk of missing certain areas and population in need. 					
Priority needs	<ul style="list-style-type: none"> A gradual revival of the food distribution system may lead to an improved outlook in the long term, but this will not be translated into immediate benefits for the most vulnerable population especially those in northern regions and rural areas. Integrated programs (WASH, Health, Food security and Nutrition) to address root causes of the malnutrition. 					

Multiple Drivers Situation: Mali 2012

Available Information and Identification of Drivers: Below-average rains in late 2011 resulted in drought conditions across the Sahel in the beginning of 2012. Current estimates indicate that over 4.6 million Malians are food insecure. The on-going drought compounded by an insurgence in the north and political power struggles in the south has resulted in serious food insecurity, malnutrition and large scale displacement in neighbouring countries. Humanitarian operations in northern Mali have been impeded by insecurity, armed violence and a regional proliferation of weapons following the Libyan crisis. Military escorts are being used by most humanitarian organizations to access the affected areas. What began as an attempt for independence by Tuareg rebels has been quickly taken over by militant Islamist groups asserting safe havens for criminal activities in the whole region. In Bamako, violence and protests have been reported after the coup d'état against the ousted President Amadou Toumani Touré. The Government has requested international military support to regain control of the north. The following drivers have been identified:

1. Conflict between armed groups in the North
2. Fighting between insurgents and Gov. forces in the North
3. Humanitarian space
4. Political stability in the South
5. Government control over the national territory
6. Food insecurity

Drivers deal principally with the consequences of the conflict in the north and the fragile political stability in the south, the pre-existing vulnerability of the population, as well as with the national and international capacity to respond to the crisis. Drivers can be re-organized into three categories:

1. Fighting, humanitarian space & food insecurity in the North
 2. Political instability and governance in the South
 3. General food insecurity
- The first group of drivers has the highest probability/impact.

Selection of Assumptions and Scenario Outlines:

- **Baseline Assumption:** *Ongoing competition between armed groups leading to increased insecurity. Limited space for operations, increasing humanitarian needs.*
- **Alternative Assumption:** *Successful international military offensive. Better access, decrease of humanitarian needs.*
- **Extreme Scenario:** *Formation of alliances against insurgents and in support of the Government forces fighting to liberate the North.*

Mali - Continued Competition for Power Scenario

Affected population: 500,000 - 1,000,000	Probability level				X	
	Impact level					X

Core Assumptions	<ul style="list-style-type: none"> • Competition over power between armed groups continues. Insecurity and limited space for humanitarian operations persist, increasing existing humanitarian needs.
Context/ Impact	<ul style="list-style-type: none"> • The competition for power between different armed groups in the North continues. However, better armed militant groups are able to suppress resistance from Tuareg rebels and local defence groups and assert control of the North, securing corridors for illegal goods and weapons trade as well as fighters from neighbouring countries. The militant groups are also able to attract and recruit civilians offering livelihood opportunities and basic services. Humanitarian needs increase, especially exacerbating the already poor food security status. Education remains disrupted. Internal displacement from rural areas to urbanized centres, as well as into remote rural areas continues due to violence and insecurity.
Operational Constraints	<ul style="list-style-type: none"> • High insecurity and increased violence limit humanitarian access for both humanitarian actors and the affected population. Operational constraints include road blockades, checkpoints, attacks of humanitarian personnel and goods as well as kidnapping for ransom of international staff.
Priority Needs	<ul style="list-style-type: none"> • Emergency interventions in nutrition, health, WASH, protection and education are needed. Needs are high for IDPs in remote rural areas and newly displaced (Emergency shelter, WASH and food and nutrition interventions).

Mali - International Intervention Scenario

Affected population: around 1,000,000	Probability level				X	
	Impact level					X

Core Assumptions	<ul style="list-style-type: none"> • An African Union (AU)-led military offensive is launched with communications, logistics and training support from international partners such as the EU as well as from neighboring countries providing support to secure borders. However, violence and guerilla attacks authored by the Islamist militants continue creating a longer-term conflict line. Loyalty of Malian soldiers is low and interests shifting, which hampers a decisive strike against the Islamist militants. Humanitarian access is re-established in parts under AU/ Government control. After a spike in humanitarian needs due to more humanitarian space, needs decrease once emergency humanitarian assistance has gained coverage.
Context/ Impact	<ul style="list-style-type: none"> • As fighting breaks out between Government/ International military forces and Islamist groups, displacement especially from rural areas to urban centres and remote areas increases, these areas are difficult to access for humanitarian actors. The population faces child recruitment, as well as increased targeting by the Islamist militant groups. Education is further disrupted.
Operational Constraints	<ul style="list-style-type: none"> • Insecurity remains a major factor impeding humanitarian access.
Priority Needs	<ul style="list-style-type: none"> • Emergency health care for conflict affected. Emergency protection, education and food and nutrition interventions for both conflict affected and non-conflict affected population. Restoration of livelihoods and WASH facilities.

Mali - Alliances Scenario

Affected population: up to 500,000	Probability level			X		
	Impact level				X	

Core Assumptions	<ul style="list-style-type: none"> • Increased formation of alliances against Islamist insurgents and in support of the Government including both local defence groups as well as Tuareg rebels. However, loyalties are shifting and instable. Due to low capacities on the part of the local defence groups, Tuareg rebels as well as the Government, only pockets of control can be regained. Porous borders cannot be secured. Humanitarian needs increase with health and protection needs being a major concern.
Context/ Impact	<ul style="list-style-type: none"> • Shifting alliances are formed, based on regional interests and affiliations. Power is distributed unequally among the groups in the North. Insecurity continues and inter-communal violence rises with increasing capacity of local defence groups. Although alternative market routes and supply are restored, food prices remain high, limiting access to food. Acute malnutrition rises quickly due to the lack of adequate treating centres, medical staff, equipment and medicines. Internal displacement from rural areas to urbanized centres and to remote rural areas continues due to violence and insecurity.
Operational Constraints	<ul style="list-style-type: none"> • Humanitarian access improves slightly in areas with Government presence and in areas where access has been negotiated between the Government and the power holding armed groups. Operational constraints include road blockades, checkpoints, attacks on humanitarian personnel and goods as well as kidnapping of international staff for ransom.
Priority Needs	<ul style="list-style-type: none"> • Emergency protection interventions, provision of psycho-sociological support for victims of violence and vulnerable groups such as children and adolescents, women and elderly. Provision of emergency health services and epidemiological surveillance as well as adequate services to treat acute malnutrition. Provision of emergency education services.