SCENARIO-BUILDING METHODOLOGY

How to build scenarios in preparation for or during humanitarian crises

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INTRODUCTION

ACAPS scenario-building workshops are facilitated processes that bring together experts in both the context of a potential or active humanitarian crisis and humanitarian operations to identify plausible ways the crisis could develop. Building scenarios is a part of forward-looking analysis and fits within the analysis spectrum in the anticipatory analysis stage.
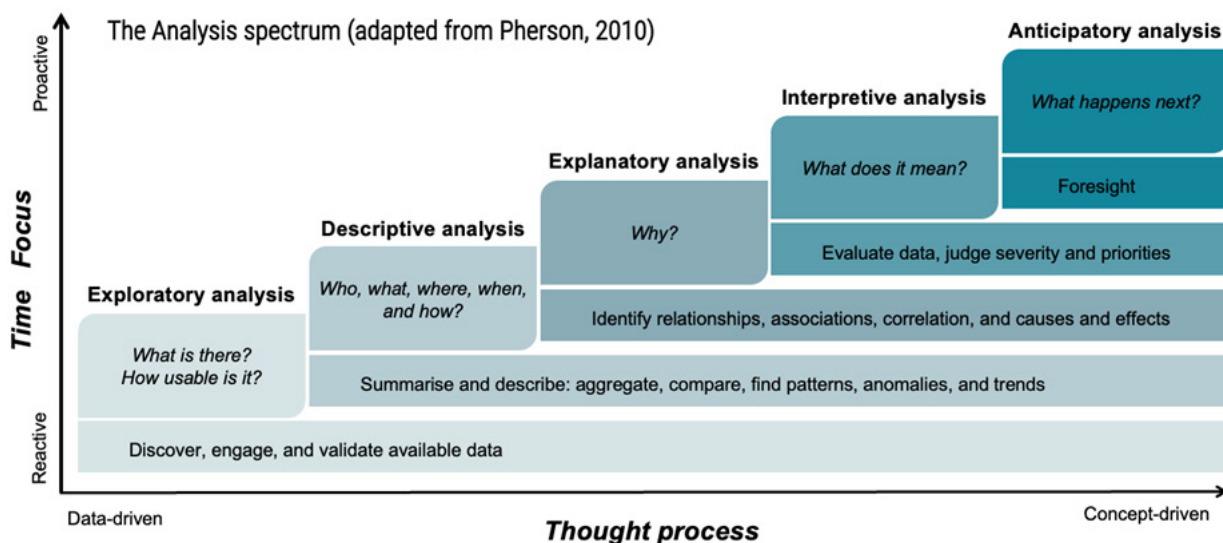
During scenario-building, the range of plausible developments, their predicted impact on the people affected, and related needs are identified. In so doing, scenario-building covers a range of activities, including identifying future developments that may affect people (risks); determining issues most likely to cause change; estimating the impacts of that change on people and humanitarian activities; and gauging the probability that a scenario will occur.

This technical brief provides a step-by-step approach to building scenarios. The methodology can be applied to a range of settings and time frames, from a protracted conflict to a sudden-onset disaster.

Scenario-building is best undertaken by a group of experts: while one person or organisation can create scenarios on their own, more inclusive processes usually yield stronger and more informative results. Guidance on selecting suitable participants and facilitating virtual and in-person workshops is available separately.

THE PURPOSE OF SCENARIO-BUILDING

The humanitarian community often finds itself unprepared for unfolding humanitarian developments or sudden events: the 2010 cholera outbreak in Haiti, the sudden spread of Islamic State areas of control in 2013 in Syria, the rapid escalation of violence in Ethiopia in 2021, and the COVID-19 pandemic since 2020 are just a few of many examples. Scenario-building – an analysis of how situations might evolve – is essential for humanitarian operations as it informs contingency planning and preparedness measures before possible developments. It can also help ensure programming is sufficiently robust or adaptable to withstand changes in the operational environment. The scenario-building process should ideally result in three to five significantly different descriptions of the future that highlight the key issues and developments in each. During a separate contingency planning exercise, appropriate preparedness measures and detailed response plans are developed based on the existing and anticipated future capacity to respond to the identified scenarios.

Scenario-building ensures that humanitarians are not surprised by any possible development given a crisis. It differs from risk analysis in that the purpose is not to identify probable risks or even the most probable future. It is important to begin by considering a wide range of possible futures with as different characteristics as possible. It does not matter that the probability of any of the scenarios materialising will be low; what matters is that we have considered a sufficiently wide range of potential futures such that the actual future is not too different to at least one of them.

A set of plausible, logical, and clearly explained scenarios will enable humanitarians – especially at the policy and strategic levels but also at the programme level – to test potential interventions against each scenario to evaluate their suitability to address potential needs. Humanitarian interventions can also be designed to be sufficiently adaptable to withstand the variety of potential changes to the operating environment in each scenario.

KEY PRINCIPLES

- Scenario-building is strongest when undertaken by a group of people with different areas of expertise. These areas should include the context, crisis (or potential crisis) dynamics, and humanitarian operations. While one or two people can drive the process, hold at least one workshop to ensure the process is as informed as possible and that participants can share information jointly.

- Include the scope for review from key informants and local experts in the scenario-building process.

- Be flexible and creative. The past does not always repeat itself. Scenarios should challenge the user to consider futures other than those expected.

- Acknowledge that the scenarios developed will never exactly predict the future and be completely right.

- Ensure each scenario is sufficiently different from the others. Aim for a few very different futures instead of many with small differences.

- During the creation process, do not worry about how probable a scenario might be. If it is plausible, logical (i.e. you can understand how the future could materialise), and interesting, then it is worth developing. That said, developing more than four scenarios can become a heavy and unwieldy process – and rarely adds much extra value.

- Include enough detail for each scenario to permit planning and to communicate the anticipated conditions and needs of the affected population but avoid more detail than necessary.

CHAIN OF PLAUSIBILITY

There are different approaches to examining possible futures. A commonly used method within humanitarian crises is the backcasting approach. This approach starts by looking at the outcome (e.g. 500,000 people displaced or a dysfunctional government) and then identifies the chain of events that can lead to this outcome (e.g. fighting in area X or a coup). It asks, "What would it take for this to occur?" Identifying the best-case/most likely/worst-case scenarios is a type of backcasting. While this approach can be relatively quick and light, it is also likely to focus on extreme futures and neglect alternative futures that are not currently imagined.

A more comprehensive scenario-building approach for humanitarian contexts is the chain of plausibility approach, which includes a detailed review of all possible events and developments. Scenario-building using this approach starts with identifying variables that are likely to spark a chain of events resulting in a humanitarian impact. Informed assumptions are then made on the most important variables and the direction these variables will develop in. The table below gives three examples of variables and associated assumptions.

VARIABLE	ASSUMPTION (I.E. A POSSIBLE DIRECTION OF CHANGE)	IMPACTS AND HUMANITARIAN OUTCOMES
Rainfall over the next three months	Below average	Delay in planting crops Reduction in harvest Increased food insecurity
	Above average	Increased harvest Reduced prices of locally grown foods in the market
Inflation	Rises sharply	Increased costs of imported goods Decreased purchasing power
Conflict	Reduces significantly	Improved safety and security Increased return movement Increased demand for essential services in areas of return
	Increases significantly	Increased displacement Reduced access to essential goods and services Reduced humanitarian access

VARIABLES
- Current drivers of the crisis
- Possible future drivers of the crisis
- People's resilience and vulnerability
- In-country capacity to respond

ASSUMPTIONS
- How current drivers could evolve
- How future drivers could evolve
- How the capacity of the population to cope with the crisis could evolve
- How the ability of national and international organisations to respond to needs could evolve

IMPACTS

The chain of plausibility approach can be used for short- or long-term time frames. It suits contexts with a limited number of important events (e.g. flooding) and complex, protracted crisis situations with multiple interlinked variables.

KEY TERMS

Assumption	A direction that a variable can take (e.g. increase, decrease, no change)
Compounding factor	A significant event that would worsen the situation and that is not specifically mentioned in any scenario but could happen in combination with any scenario (e.g. a significant disease outbreak, an earthquake, a global fuel crisis)
Humanitarian consequences	Changes to humanitarian needs and overall wellbeing as a result of the impact
Impact	Changes to the environment (both positive and negative)
Mini scenario	A set of assumptions combined into a mini story that forms the foundation of a detailed scenario
Scenario	A description of an imagined future state
Trigger	An event that signals an increased probability of a scenario occurring (i.e. an event that brings about the future state); triggers can be adapted to specific contexts into measurable indicators that can be monitored over time
Variable	A factor considered to have a determining influence over the direction the future will take; variables are neutral (e.g. conflict, humanitarian access, and food prices not increasing conflict; increased humanitarian access)

OVERVIEW OF THE PROCESS

Before beginning, it is important to clarify the purpose of the scenarios and their scope. Agreeing to a clear and specific research question that defines the time frame, geographical scope, and focus of the scenarios will help keep the process on track.

Upon generation of the research question, the process of creating scenarios can be split into two parts:

• part 1: defining the scenarios, imagining and describing a variety of futures and the logical way in which they would materialise

• part 2: deducing the impacts of each scenario on people and its humanitarian implications

Part 1 necessarily begins with understanding the current situation: what is happening at present, why it is happening, what the most significant drivers of change are, and how (or where) people are most vulnerable. Assumptions are then made about how some of the most significant and volatile drivers will change and be used to create some distinctly different futures. Creating a scenario involves describing the situation as it might be in six, 12, or 18 months (depending on the desired time frame). A good set of scenarios contains those significantly different to the current situation and from one another while also being plausible. The reader should be challenged and educated, understanding that a scenario could materialise and realising the need to take it into account.

During part 2, participants consider possible effects on people in each of the identified scenarios and the main changes (such as in needs, caseload, locations, and access) to the humanitarian environment.

The report produced at the end provides a comparison of the different scenarios and sufficient detail for each scenario to inform strategy and planning processes.

WHOM TO INVOLVE

Participation in scenario-building can take different forms, meaning that experts can be involved to varying degrees, which enables more insights to be gathered. The process of identifying the scenarios (part 1) should lean more heavily on the involvement of contextual experts (such as political, governance, economic, climate, and social), while deducing the impacts and consequences of each scenario (part 2) should receive greater input from humanitarian experts.

A small core group of three to six people who will identify participants, facilitate sessions, and draft the final report should drive the whole process. Annex A provides guidance on running a scenario-building process.

STEP-BY-STEP APPROACH

Scenario-building based on the chain of plausibility involves ten steps.
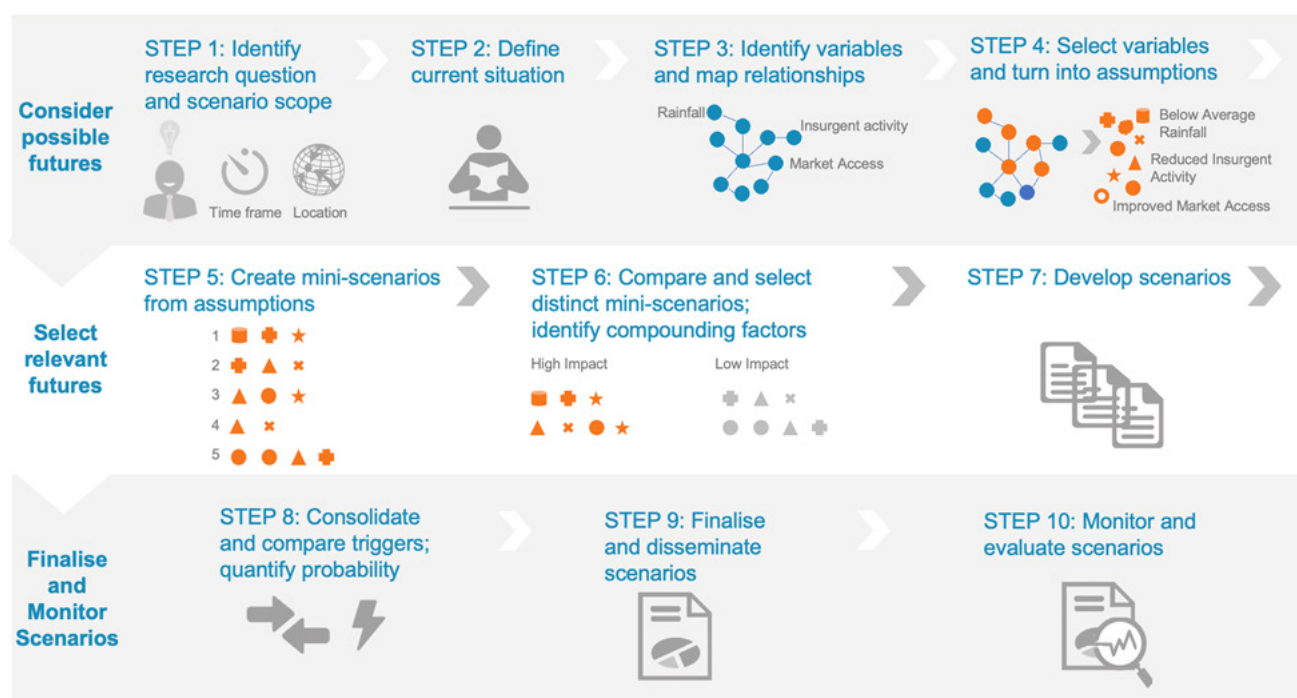
STEP 1: Identify research question and scenario scope

Form a core team to drive the process. This team should include the person commissioning the scenario exercise, key partners, and a technical advisor to facilitate the process. Having three to six people is ideal. The core group should:

- Decide on a research question. This question is important as it helps centre the process and ensures that the scenarios fit the purpose. The research question should relate to the decisions the scenarios need to inform. The research questions should consider how the situation in country/region X might develop over the next Y weeks or months.

- Define the geographical area and population of interest (scope).

- Specify the time frame covered by the scenarios. Account for upcoming events, seasonal cycles, and trends.

- Identify suitable participants for the scenario development workshops.

- Plan and manage the scenario-creation process (usually within four to six weeks).

Examples of research questions:

- How might the movement of people from, to, and within Afghanistan change during 2023?

- How might humanitarian access within Borno state in Nigeria change over the next 18 months?

- How might the ability of those living in rural areas of Burkina Faso to access essential goods and services change over the next two years?

Duration and number: scenarios, as used in initial and rapid humanitarian needs assessments, usually attempt to cover a period of four to eight months for conflict situations and two to four months for sudden-onset disasters. In more protracted crises, a time frame of 12–24 months can be more appropriate. The number of scenarios is highly dependent on the type of crisis, the number of variables, and the resources available to develop these scenarios. Four scenarios are usually sufficient to cover the range of plausible futures, although more may be useful in some instances.

STEP 2: Define the current situation

Collect the information required to understand the current situation and drivers of change. Look for:

- contextual information on the crisis, including descriptions of current impacts and pre-crisis conditions

- the main factors that have caused and continue to drive the humanitarian situation; consider the trends in key issues as well (e.g. conflict, weather patterns, inflation, unemployment, and protest movements)

- information on important forthcoming events, including secondary effects of the crisis (lack of access to healthcare and clean water supply resulting in disease outbreaks and other issues) and key recurring events (such as the rainy season, winter, elections, harvest period, and the lean season) that have the potential to influence the evolution of the situation

- information on the typical effects of similar crises in comparable contexts (for example, appeals for funding, ACAPS Disaster Summary sheets, country contingency plans)

- lessons learnt, as well as experiences and studies from previous interventions in similar contexts (such as after-action reviews and programme evaluations)

- information on 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 (such as the government, private companies, and armed groups).

Produce a short (one- to two-page) summary of the key elements of the current situation, which will eventually be included as an annex to the report.

The current situation summary should then be discussed with participants in the first workshop to ensure a common understanding of what is important or significant and the current issues of concern.

> **The importance of setting the scene:** erroneous scenario-building can often be traced back to an incomplete or incorrect interpretation of the current situation. Ensure that all those involved in building a specific set of scenarios have the same idea of the context, humanitarian needs, and priorities. In some settings, large information gaps prevent a clear understanding of the situation. To move ahead, agree on a set of estimates that will be used to fill these gaps. If there is, for instance, no information regarding the current food security situation, use expert opinion and information from previous years or similar contexts to get an understanding of (and agreement on) the current status.

STEP 3: Identify variables and map relationships

Identify variables from the information gathered during Step 2. A variable is a factor that has a determining influence over the direction the future will take. Variables are 'neutral', as they do not indicate a direction – e.g. humanitarian funding instead of an increase in humanitarian funding and rainfall instead of above-average rainfall. Variables can be organised into four main categories.

| VARIABLES	EXAMPLES OF VARIABLES
Current drivers of crisis	Fighting, rainwater precipitation level, aftershocks, price evolution, displacement, malnutrition, food production, the activity of armed groups
Possible future drivers	Epidemics, flooding, winter, economic sanctions, elections, the rise of extremist movements, social unrest, price inflation
Resilience / vulnerability of the affected population	Coping mechanisms, level of remittances, structural vulnerabilities, social protests, competition over resources, purchasing power, livelihood opportunities
National/international response capacity	Number of responders in relation to the scale of the crisis, humanitarian space and access, government capacity and willingness to respond, donor funding

- After identifying variables, **identify relationships between variables.** A relationship implies that a change in the direction of variable A influences the behaviour of variable B.

- **Visualising** the variables and relationships will help in better understanding, sharing, and storing thought processes. This process, in turn, decreases the risk of omitting key variables. Variables can be grouped by type as shown below.
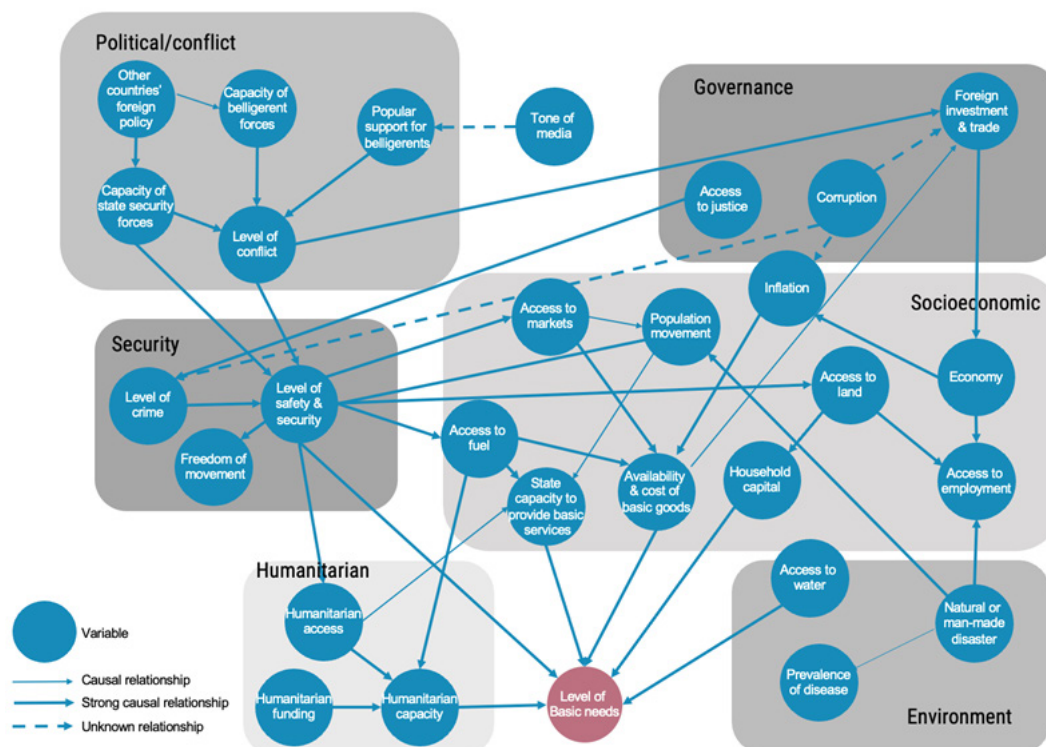
- **Draw lines between the variables to visualise causal relationships,**[1] with the thickness and format of the line indicating the type of relationship. In the generic example, there is a relationship between the variables level of safety and security and population movement – an improvement in safety and security will reduce the number of people being displaced and possibly increase the number of those returning home.

- **Balance the need for detail with the need for a clear and concise overview of the crisis.** The mapping can quickly become complex and unwieldy. To avoid this, group variables as much as possible. In the example above, capacity of belligerent forces encompasses separate variables concerning military strength, the territory under control, funding, and other similar categories.

- **Know when to stop.** This stage is an initial mapping that will be revised and expanded as necessary in succeeding steps.

- Please note that relationships between variables are causal; a change in variable A results in a change in variable B. The case of A (e.g. displacement) directly influencing B (e.g. protection concerns) and B directly influencing A cannot occur in the variable mapping. If such a double-arrowed line does appear, variables should be detailed or merged, or an additional variable (e.g. insecurity and human rights violations) is required to establish a direct relationship.

- Afterwards, sort and **rearrange the variables** to enable the most important relationships to be clearly seen.

Example: transforming a correlational relationship between variables into a causal one
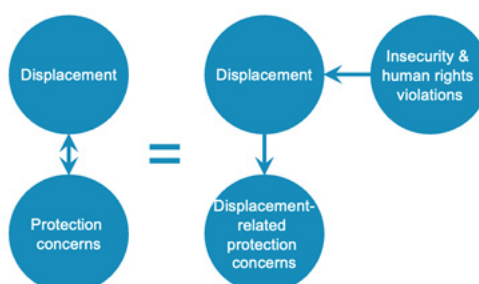
Keep your research question in mind: during the next steps, keep in mind the research question identified during Step 1. For example, if the research question is "Which events would lead to large-scale displacement and what are the expected impacts and probability?", review only the variables and assumptions relevant to displacement.

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1   A variety of software is available to facilitate the mapping of variables, including yEd Graph Editor, GoConqr, and Gephi.

STEP 4: Select variables and turn them into assumptions

While all possible outcomes of the identified variables are valuable for developing scenarios, limiting the time spent on highly unlikely or irrelevant ones is important. Keep the scenario-building manageable by selecting only the most pertinent from all the possible situations that could be reviewed:

- First, **use the information gathered and the views of experts** to select the most relevant variables, specifically those that:
- are the most volatile (i.e. likely to change direction during the scenario time frame)
- have the potential to influence several other important variables; use the mapping (Step 4) to identify the variables that have a number of relationships with other variables
- will have the most significant impact on humanitarian needs or the ability of humanitarian actors to respond.
- Identifying three variables from different groupings is usually sufficient.
- Afterwards, **define the possible directions** for each of the variables. Every variable has at least three possible directions: increase, decrease, or stabilise. The selection of a set of variables and directions provides the assumptions.

ASSUMPTION CATEGORIES	EXAMPLES OF ASSUMPTIONS
Evolution of current variables	Increased flooding, severe aftershocks, spread of epidemics, escalating conflict, economic collapse, no significant change in the situation
Evolution of opportunities and risks	Increased influx of refugees, political stalemate, eruption of conflict over resources, 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
Evolution of the ability of national/international actors to respond to needs	Washing out of roads and bridges, prevention of access to conflict-affected areas, failed negotiation with armed group for access

Note: the selection of key variables is primarily a tool to help develop differing futures. There is no right or wrong selection of key variables, but it makes the process easier if those chosen are not directly connected and have many connections to other variables. Any number of variables can be selected as 'key', but the greater the number, the more complicated Step 6 becomes. Having three or four key variables is ideal.

STEP 5: Create mini scenarios from assumptions

It is not possible (or even desirable) to build scenarios for all selected variables and directions as the number increases exponentially for every additional component, e.g. 3 directions for 3 scenarios (33) = 27 scenarios; 3 directions for 4 scenarios (34) = 81 scenarios. Select the most relevant directions to your audience while aiming for significantly different scenarios.

- **Create assumption sets** using related assumptions from one or more variables (e.g. overcrowding/protection issues, return/land ownership issues, water pollution/waterborne diseases, conflict resuming/new population displacement).
- Develop **mini scenarios** by combining different sets of assumptions. This strategy is a creative and imaginative process that some people find challenging. The trick is to forget about the probability of anything happening and create a future in which the assumptions chosen are true – then brainstorm how that future might plausibly occur.
- Ideally, 15–24 people will be involved in this process. They should break into smaller groups of five to eight to create a number of mini scenarios (three per group is usual).

A mini scenario is simply a short three- to four-sentence description of a future state and a brief reasoning of how the state has come about. It can be phrased as one or two of the most obvious trigger events (or assumptions). It could also include another sentence or two on the main impact as it relates to the research question.

It should be noted that this is a creative process. Combining different assumptions does not 'create' a future scenario like a mathematical formula; there are no right or wrong answers. Imagining a plausible future in which different assumptions hold true is a tool to encourage thinking beyond expectations. Sometimes, it is challenging – but it usually results in a rich, more nuanced future. If the assumptions cannot be sensibly combined, scrap them and select a different combination.

STEP 6: Compare and select distinct mini scenarios and identify compounding factors

While Steps 2–5 are best done in a group (we recommend 15–24 people), Step 6 can be done by the core group:

- Compare all the mini scenarios and combine any that are similar.
- Discard any that are highly improbable, irrelevant, or uninteresting. Keep any interesting yet less probable scenarios – but any that are too improbable can be discarded.
- During the mini scenario development, some issues (such as a disease outbreak, bad weather, or international relations) may not be considered specifically in any scenario but could occur in the future and compound any of the selected scenarios. These issues are retained as compounding factors.
- Some scenarios may be (or contain elements that are) interesting but not worth developing into a full scenario. These can be added to the compounding factors.

STEP 7: Develop scenarios

From the selected set of mini scenarios, develop full scenarios. Each scenario should include, as a minimum:

- a short **narrative** of the scenario describing its main points: significant changes from the current situation, the logic for these changes, and the expected **impacts** on the affected population
- the main trigger events that would contribute to bringing the scenario about
- the likely **duration** of any resultant (or worsening of the) humanitarian crisis
- details of its humanitarian consequences
- the geographic areas and population groups expected to be the most affected
- a quantitative estimate of the number of **additional people that would be affected** (e.g. 10,000–20,000 – avoid point estimates)
- the potential **operational constraints** that humanitarians may face.
- The **priority needs** of the affected population and humanitarian response needs may also be included if desired.
- It would be useful to give each scenario a **name** that catches the core idea and summarise the main ways in which they differ.

Enter the key elements into a table (or other structure) to enable easier comparison. This process ensures that the key elements that need to be covered, and the differences between the scenarios, are included and clear in each scenario.

The following template can be used as a guide.

NAME OF THE SCENARIO – E.G. "HEAVY RAINFALL CAUSES WIDESPREAD DISPLACEMENT AND CROP LOSS."	
Likely onset of the humanitarian crisis: September Likely duration of the humanitarian crisis if scenario materialises: three to six months	
Description	Short description of context, variables, and assumptions: After heavy rainfall in the south, floodwaters do not recede for two months, and a large area remains inaccessible for assessment and intervention. Many communities are displaced in temporary camps where shelter and WASH facilities are inadequate. Significant crop loss worsens the underlying food insecurity. There is very low in-country capacity for humanitarian responders to the disaster.
Impacts and humanitarian consequences	Overall effects and impacts of the event: The influx of 150,000–300,000 IDPs in overcrowded and inadequate shelters exposes the population to public health threats, similar to the 2008 floods when outbreaks were reported in camps. State assistance is sufficient for the affected urban population, but aid to the rural population is delayed because of road disruption. Affected areas: southwest provinces are the most affected. Affected groups: IDPs in public buildings and camps, rural populations that do not relocate, and host populations.
Operational constraints	Access, security, logistics, and communication issues that will confront humanitarian actors.

The development of the full scenarios is best done in a second workshop, where some of the participants from the first workshop are joined by new participants with expertise in how crises affect communities, how communities respond, and how to identify humanitarian consequences.

STEP 8: Consolidate and compare triggers and quantify probabilities

During Step 8, estimate the **impact and probability of the scenarios**. The objective is to give the reader a guide on the relevance of each scenario. Scenarios with a medium or high probability (i.e. above 33%) are of interest, but so will be those with a lower probability but higher impact:

- Estimate the **impact of each scenario** by comparing the outcome of the scenario to the current humanitarian situation. Please note that the definition of 'significant decrease or increase' depends on the context. For some settings or audiences, an additional 10,000 people in need could already be identified as significant. The estimated impact should be determined to ensure that the scenario is sufficiently interesting and as probable as possible. In most cases, the greater the impact, the lower the probability.

Impact scale

Major improvement	A significant decrease in the number of those affected OR a large decrease in the severity of needs
Slight improvement	A decrease in the number of those affected OR a slight decrease in the severity of needs
Static	The number of those affected AND the severity of needs remain the same
Slight deterioration	An increase in the number of those affected OR a slight increase in the severity of needs
Major deterioration	A significant increase in the number of those affected OR a large increase in the severity of needs

Afterwards, **estimate the probability** of the scenario materialising. The process of defining probability starts with considering the identified trigger events, i.e. developments that need to occur before a scenario can materialise. The mapping of relationships between variables (Step 3) will help with the identification of the causal chain(s) (the chain of plausibility) and triggers.

Example:

Scenario: a successful peace agreement results in large-scale returns to previously unsafe areas.

Triggers: relevant parties agree to initiate peace talks, which happens before the deadline. The peace agreement terms are successfully implemented. IDPs are able and willing to return to their place of origin.

Scenario: a significant increase in rice prices results in decreased food consumption, decreased household spending on education and healthcare, and displacement in search of livelihood opportunities.

Triggers: the quantity of the national rice harvest significantly decreases. Rice imports come too late or are of insufficient quantity or quality. Households are unable to find alternative sources of food (such as through their own production).

- Estimate the **probability of the different triggers** and the **significance** each trigger is expected to have given the scenario. Based on these estimates, **decide the overall probability**. There is no accurate way to do this, but all we need is to place each scenario within one of the five probability ranges: negligible, low, medium, high, and very high. In reality, most will fall in the negligible, low, or medium ranges. Anything with a high or very high probability will almost certainly happen and becomes a prediction.

- **Remember** that you are creating each scenario. The more extreme you make the scenario (i.e. the more severe the impact on people and the greater the number of people affected), the less probable it becomes. That said, there can be a tendency to create scenarios that differ very little from the current situation, which are of very little use. **The art is to choose a future that is both significantly different to the current situation while also being plausible** (so that those who read the scenarios will not dismiss it out of hand as being 'impossible'). Most useful scenarios do not have a high probability of materialising.

- The probability of each scenario should be adjusted by making a series of **direct comparisons** with other scenarios. Ask the question: "How much more likely is scenario A to occur than scenario B? And C than D? And D than A?" And so on.

- If the scenarios are mutually exclusive, the combined probabilities cannot exceed 1 (100%).

- **Fine-tune the probability by establishing how your scenarios will interact.** Some scenarios are largely independent and can occur in parallel (e.g. flooding and an increase in election violence) or at different moments in time depending on the time frame of your scenarios (e.g. a drought during the summer followed by flooding during the rainy season). That said, several scenarios will be mutually exclusive. If the baseline scenario assumes that there is no major change in the variables, it cannot occur at the same time as a cholera outbreak, as that would constitute a major deviation from the status quo. Note that the position of scenarios relative to other scenarios (e.g. this scenario is more likely to occur than that) is more important and useful than defining their exact mathematical probability (e.g. there is a 25% chance of this scenario occurring).

> **Example**: in a country embroiled in conflict, where there is a risk of floods and cholera, the scenarios 'peace agreement', 'cholera outbreak', and 'floods' could occur at the same time. Their probabilities are not related. These developments are also very different from a 'status quo' scenario. The probability of 'status quo' and the maximum of the other scenarios (in this case, a 'peace agreement') cannot exceed 100%. The country will either experience a status quo scenario OR one or more other scenarios:

MUTUALLY EXCLUSIVE

	Peace agreement (40%)	
Status quo (60%) ✚	**Cholera outbreak** (15%)	≤100%
	Floods (35%)	
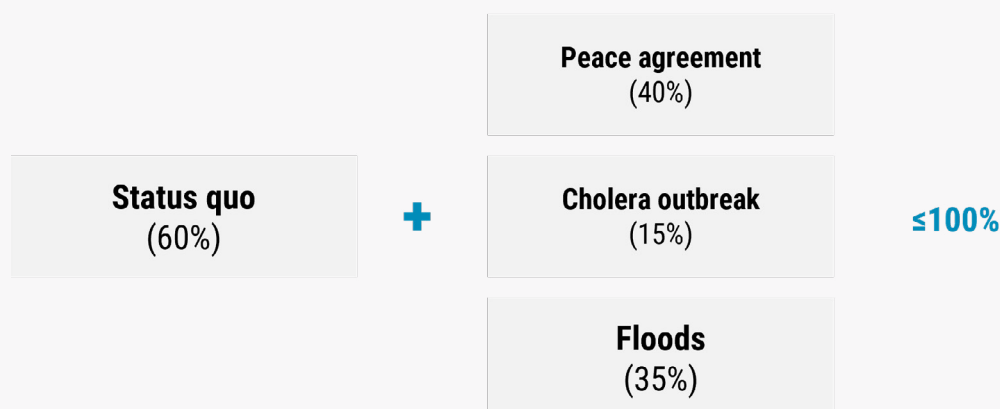
- Defining the probability of scenarios is one of the most subjective and difficult parts of scenario-building. A regular review of your scenarios (Step 10) can improve accuracy over time.

- Visualising the probabilities and impacts of different scenarios by plotting them on the following matrix can be useful.
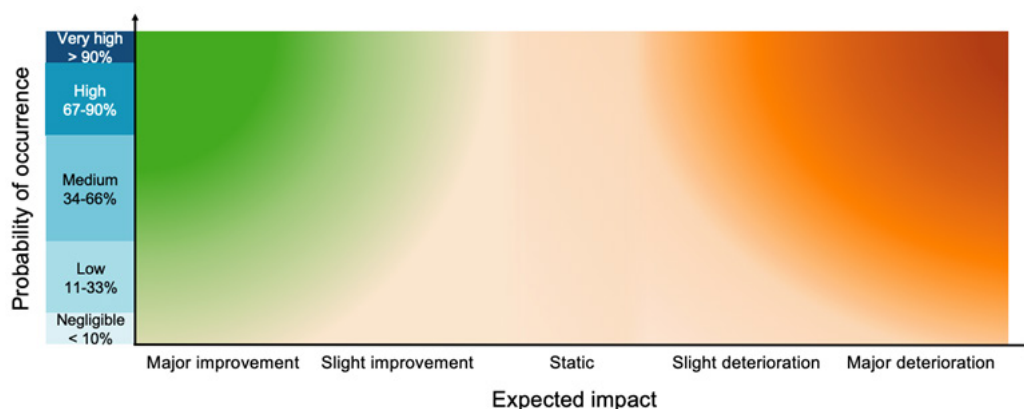
- Consider selecting scenarios with a low impact or probability if they are of specific interest to your user. For instance, in mid-2013, an ACAPS scenario-building exercise on the crisis in Syria considered the scenario 'Meaningful negotiations begin and conflict greatly reduces'. This was judged to be very unlikely. Regardless, the possible implications of the peace talks planned at that time for the end of 2013 (later postponed to January 2014) dominated the discussions on humanitarian response planning in Syria, and the probability and consequences of successful talks were included.

> **Black swan events:** once the most plausible scenarios have been identified and developed, and if there are remaining resources, it is worth revisiting Steps 5 and 6 to see if there are black swan events that should be considered. A black swan event is extremely unlikely to occur but has a major humanitarian impact. These scenarios will probably not inform current preparedness measures because they are regarded as too improbable, but the identification and monitoring (Step 8) of unlikely developments is useful in generating a full understanding of the situation.

STEP 9: Finalise and disseminate scenarios

- Once each scenario has been developed in full and the relative impacts and probabilities have been estimated, the scenarios can be finalised into a report.

- Ensure that all participants in the process have an opportunity to comment on the final scenarios (they will probably significantly differ from those discussed during the workshops).

- Draft a summary page that enables readers to see the essence of all scenarios at the same time. This process helps communicate the scope of possible futures. (Remember that the actual future will very possibly fall somewhere between your chosen scenarios.) Include:

- **titles** for each scenario that easily distinguish them from each other

- the **probability** of each scenario and its expected **impact** on the affected population

- a brief **narrative** describing the main points of the scenario, including the main triggers, main impact, humanitarian consequences, and the most affected areas.

- The final report should contain:

- a summary page with the details of all scenarios

- a visualisation that enables the comparison of the main elements of each scenario

- an introduction explaining the purpose and background of the scenarios

- the details of each scenario

- a summary of the current situation, which can be an annex

- a comparison table of the triggers for all scenarios as an annex

- a brief explanation of the methodology and how it was applied.

STEP 10: Monitor and evaluate scenarios

During Step 7, several triggers for each scenario were identified. Turn these triggers into indicators that can be monitored and define thresholds: the 'tipping points' after which it becomes more likely that a certain scenario materialises.

EXAMPLES OF CONTRIBUTING FACTORS AND THRESHOLDS		
CONTRIBUTING FACTOR	INDICATOR	THRESHOLD
Food becomes so expensive that people start to demonstrate.	Price of rice by kg	>50% increase in rice prices in market A (the baseline price is X by kg)
Armed groups increase their influence.	km² held by an armed group	>10% increase in the percentage of territory held by an armed group (the baseline territory is estimated at X km²) OR the provincial capital is taken by an armed group
It becomes very difficult for humanitarian organisations to reach the population in need.	The number of people in inaccessible areas	>25% increase in the number of people that reside in hard-to-reach/inaccessible areas (the baseline number of people is estimated at X)

- Monitor how the situation evolves compared to indicators. Once the situation has surpassed a set threshold, indicating that a scenario is more likely to occur, this information should be shared with relevant stakeholders.

- Once the set time frame for the scenarios has passed, undertake a review of the scenarios to see to what extent the identified scenarios materialised.

ANNEX A – HOW TO RUN A SCENARIO-BUILDING PROCESS

The key to a successful scenario-building exercise is participation: involving participants with the appropriate expertise and knowledge at the correct juncture and providing an enabling environment for discussion and creativity. Writing the scenarios in a way that communicates the important elements of the imagined future plausibly and logically is also important so that the reader is challenged to consider each scenario seriously. This process is not as simple as it sounds. This note offers guidance on how to run a successful scenario-building process.

Four elements are essential to the process, whether it is a small internal exercise or a wider one involving actors across the humanitarian community:

- driving and facilitating the process
- selecting participants
- enabling discussion, capturing input, and ensuring buy-in
- drafting and communicating the scenarios.

Driving and facilitating the process

As with all collaborative processes, planning is key. Having a core group of three to six people who 'own' the process and share responsibility for driving it also helps. Within the core group, having the following skills and experience is necessary:

- a good knowledge of the purpose of scenarios and the methodology to be used
- an end user of the scenarios (i.e. the person(s) who initiated the exercise)
- a good understanding of the context and the current humanitarian situation
- someone with good contacts within the humanitarian community.

The core group should meet early to agree on:

- the purpose, time frame, and timeline
- the responsibilities of each core group member
- the research question and the scope of the scenarios
- the participants.

For most exercises, the core group will comprise people from two or more organisations, in which case drafting simple terms of reference can be helpful.

The main tasks for the core group include:

- ensuring appropriate participation and buy-in to the process
- hosting and facilitating the workshops
- drafting the report and encouraging feedback prior to publication
- publishing and disseminating the report
- keeping the process on track.

The preparation for the workshops takes a minimum of four weeks to ensure good participation, but the draft report can be prepared and shared with participants within a week of the workshops. Publishing should happen as soon as possible to avoid elements of the report getting out of date.

Selecting participants

Ideally, around 20 people will participate in each workshop, and at least one third will attend both (so the total number of participants may be 30, with ten attending only workshop 1, another ten attending only workshop 2, and then ten attending both). Experience shows that a larger number of participants does not usually improve the process. Sometimes, it can even reduce the effectiveness of discussions, especially when everyone wants to speak but the discussions do not dig deep enough into the topic.

The importance of the 'right' people

As workshop time is limited, having a few of the 'right' people is better than having many of the 'wrong' people. As a convener of a scenario-building exercise, you should identify collaborators with a good understanding of the issues and who are willing to think, together with others, about a few possible ways the future may unfold. Getting the right people together for a sufficient length of time to work through the process is arguably the biggest challenge and the key to a successful exercise. Try to invite participants that meet the criteria outlined in the participant selection section below and ensure that those you invite do not send someone else less appropriate. One challenge is that people new to the context often want to attend to learn about it and rarely make any contribution, but we do not want this. We need people who know something and can actively contribute.

Expertise required/participant selection

When we refer to 'experts', we mean people with 'expert knowledge' of a reasonable part of the situation with which the exercise is concerned.

During **workshop 1**, we consider the current situation, seek to identify the main drivers of change, and create a number of different potential futures. To do this, we need **experts in the context: people with knowledge of the social fabric of society (such as politics, history, and ethnic and religious relationships) and the economy, as well as specific crisis-related expertise (e.g. meteorologists, volcanologists, conflict dynamics and peace-process experts)**.

During **workshop 2**, we consider the impact of the scenario on the population and humanitarian consequences. For this, we need **experts who understand how people are affected, how they behave, and how needs change**. Ideally, we would have representation from the UN, NGOs, donors, relevant analysis organisations and think tanks, and, where possible, the local authorities/government.

Titles, posts, and seniority should be secondary. What matters is that participants are willing to equally engage with the group for the duration of the workshop. As the workshop process is as useful as the final scenario document, it is recommended that most participants in workshop 2 be decision makers (or be direct influences to decision makers) within their area of expertise.

There are two additional ways to involve people in the process:

- Key informant interviews with experts prior to the workshops can ensure that their knowledge and views are included if they cannot attend the workshops.
- The draft scenarios can be presented a few days after the second workshop to workshop participants and other interested persons, with discussion encouraged. This activity serves two purposes: to ensure the report accurately reflects workshop participants' input and allow people who did not attend the workshops to contribute.

By participating, colleagues have the chance to provide input to the scenarios, deepen their understanding of the crisis by participating in analysis discussions, and familiarise themselves with the scenario-building methodology.

Enabling discussion, capturing input, and ensuring buy-in

The success of workshops depends on creating a space where experts can efficiently discuss how events may change and consider the likely humanitarian impact of such changes. This process is more challenging when the exercise is held virtually, especially when internet connections are insufficient for the use of cameras, but even the success of in-person workshops requires careful thought. Enabling the voice of nationals of the country in question to be heard also requires some thought. Sometimes, the presence of certain people will prevent others from speaking out. Some people can also dominate discussions. Ideally, participants will be sufficiently confident and at ease that they will share their thoughts but also be good at listening to the views of others and entertaining less obvious ideas.

It is recommended that all the core group view themselves as co-facilitators to support by taking notes, assisting in encouraging participants to engage, managing dominant participants, and keeping discussions on point. A balance needs to be struck between enabling free-flowing and wide-ranging discussion and achieving the task in the time allotted.

Workshop 1 is creative. The initial presentation and discussion on the current situation should break the ice, as most experts are happy to share their opinions. Mapping the variables can be very interactive; participants can write each variable on a piece of paper and then stick them on a wall. This map can also be a good visual reference as the scenarios are developed.

Having agreed upon the essence of the current situation and shared ideas on the drivers of change and relationships between them, participants are then asked to create some potential futures, usually in small groups. This step requires free thinking and brainstorming. To keep the process on track, a member of the core group should facilitate each group, ensuring they use the assigned assumptions. At this stage, the facilitator sometimes needs to remind people not to worry about the probability of the future they are considering. The criteria for an initial scenario idea involves asking: "Is this future plausible (not necessarily probable)?" This question means asking whether one or more logical chains of events could take us from the current situation to the scenario situation.

The final stage of the first workshop is comparing all the mini scenarios, selecting the most interesting, and developing them in more detail. Someone from each breakout group should present each of their mini scenarios briefly. Afterwards, the participants can finalise in a plenary discussion which scenario is the most interesting and ensure that all key information is included in the description. At this stage, it is useful to name the scenarios using the theme that differentiates them.

Workshop 2 requires participants to take the given scenarios and consider their impact on people, humanitarian needs, and the operational environment in general. This activity is again best done in breakout groups, with each group considering one or two scenarios. A plenary discussion can follow to allow the participants to provide their input into other groups' scenarios. During this discussion, the participants can also identify other compounding factors that may arise but are not considered in any scenario.

Following the workshops, additional input can be sought from experts unable to attend either workshop.

For online workshops, using a virtual whiteboard such as Miro can help direct discussions and capture points made, but it does not negate the need for dedicated note takers.

Drafting and communicating the scenarios

Tips for drafting the scenarios:

- Use the present tense (e.g. Widespread conflict causes large-scale displacement, especially across the border into X).

- Keep the scenarios as brief as possible – one page per scenario and a one-page comparison of all scenarios are ideal. Most people will not read more.

- Ensure that the similarities and differences between the scenarios are clear. Choose short titles that differentiate the scenarios, and use the same structure and language in the description, triggers, impacts, and consequences.

- Compare all triggers (and assumptions) to ensure they are included in all relevant scenarios (e.g. if trigger 1 for scenario A could also be a trigger for scenario B, include it for that scenario, too).

Once the scenarios are published, holding in-person or virtual presentations and discussions can help many readers understand their use more fully. Facilitating a workshop aimed at enabling an organisation or working group to consider how they ought to plan in light of the scenarios may also be useful.

ANNEX B – WORKSHOP LESSONS LEARNT

Scenario-building is strongest when it includes support and reviews from key informants and national experts. Their input can come in many shapes and forms, ranging from sharing remotely drafted scenarios with in-country key informants for review to multiday scenario-building workshops. ACAPS has initiated and facilitated several such workshops, including for scenarios regarding the impact of El Niño and La Niña on the food security situation in Indonesia, the Europe refugee crisis in 2015, and the situation in Syria in 2014–2015. This annex provides an overview of the lessons learnt from these and other experiences.

Benefits

The benefits of holding scenario-building workshops should not be underestimated. The discussions between subject matter experts can greatly enhance the quality of the scenarios produced. While the final product outlining the different scenarios and their potential impact can inform a range of audiences, participants in the workshops benefit from:

- an increased understanding of the possible evolution of the crisis, as discussions among a wide variety of experts improve the collective analysis

- an increased buy-in to the scenarios, as participants understand the rationale and validity of the process

- an increased understanding of the purpose and use of scenarios

- increased collaboration between humanitarian actors, technical experts, and the government.

Preparation

- **Choosing participants:** invite individuals who have the expertise and knowledge to speak on the complexity of the crisis, including all affected sectors and geographic areas. Consider the seniority of the participants as well. If some people are too senior, brainstorming might be constrained by political agendas and institutional mandates. That said, if participants are not involved in decision-making within their organisation, there will be a limited buy-in and follow-up of the findings. It is not always possible to influence who participates in the scenario-building workshops. Follow-up meetings might be required to ensure all relevant perspectives are captured. It is also useful to include technical experts, such as meteorologists (in weather-related crises) and conflict and economic analysts.

- **The size of the workshop:** the most useful discussions are held in groups with five to 15 participants. If it is necessary to expand the number of participants, for instance to create additional buy-in, divide the group into smaller working groups.

- **Methodology:** it takes a lot of time and effort to ensure everyone fully understands how to apply a specific scenario-building methodology to the context at hand. Participants do not have to fully understand and implement the methodology to provide a useful contribution. Asking targeted questions such as "What could happen in the next six months that could change the humanitarian situation?" can already provide useful information. Only expose participants to the full methodology if there is sufficient time (at least two days) and the objective of the exercise is to create buy-in for the process. Regardless of the approach settings, it is essential to ensure that participants understand the aim to produce a variety of scenarios and not just predict the future.

- **Know where you want to go:** regardless of the selected set-up, ensure that you have a clear idea of the possible variables, assumptions, and mini scenarios prior to the workshop. Ideally, meet with one or two key people beforehand to 'pre-think' the entire process. This road map is essential in:

- probing participants if there is insufficient discussion

- guiding participants to what is important if there is too much discussion

- moving forward in the process if a specific step turns out to be contentious or specifically challenging

- consolidating the mini scenarios in a timely manner mid-workshop.

- **Editorial freedom:** the outcome of the scenario-building workshops is complemented with follow-up meetings, a review of secondary data, and the judgement of those developing the scenarios. Ensure that workshop participants are aware that the final output might differ from the workshop findings.

During the workshop

- **Current situation:** it is next to impossible to create a common perspective on the possible futures if there is no common understanding of the current state of play. Start every workshop with an extensive discussion on the 'baseline' situation. Clearly distinguish between what is currently known, what is assumed, and remaining information gaps. In some settings, the information gaps prevent a clear understanding of the situation. To be able to move ahead, agree on the set of assumptions that will be used to fill these gaps, especially if it relates to:

- the current number of people affected and in need

- current needs and vulnerabilities

- the current severity of the crisis.

- **Flexibility:** scenario-building is as much an art as it is a science. Although it is important to set a clear agenda and road map for the workshop (see 'Know where you want to go' above), it is just as important to be able to throw everything out and adjust to what is being discussed. Allow for adding unexpected scenarios, black swan events, and revisiting previous steps as necessary.

- **Training:** use at least two facilitators who understand and have worked with the methodology. In case of large workshops or workshops in multiple languages, train national facilitators prior to the meeting. National facilitators can capture the nuances of the discussion, capture key information, and guide working groups towards understanding the task at hand.

- **Technical terms:** ensure that the technical terms used (e.g. variable, assumption, trigger) are clearly defined at the start of the workshop. Print out the definitions with examples and provide a copy to the participants. This step is particularly important when multiple languages are used.

- **Creativity:** for many, it is difficult to conceive of a situation other than the current one. A commonly heard phrase during scenario-building workshops is: "But that will never happen!" Encourage participants to think outside of the box by highlighting that anything is possible in the universe of scenario-building. Launching some extreme scenarios can also facilitate imaginative thinking.

Post-workshop

- **Allot sufficient time for drafting:** allot at least two days for drafting the scenarios after the workshop. Access to the same key people involved in the 'pre-thinking' exercise can also help clarify any issues left unresolved at the end of the workshop.

- **Present initial findings:** it is useful to invite participants to a presentation of a summary of the final scenarios a couple of days after the workshop. This process helps ensure that the content, language used, and final structure of the scenario report is most helpful to the target audience. This step is especially relevant when the national government is among the target audience.

Reporting

- **Scenarios are just scenarios:** carefully introduce scenarios that are politically sensitive or have an extreme impact. Readers unfamiliar with the concept of scenario-building or the probability scale might not understand that there is a difference between predicting the future and highlighting plausible extreme developments.

- **Simplification**: scenario-building is always an extreme simplification of the situation. Make it clear in the report that a scenario cannot and does not intend to capture all the nuances of an often complex situation.