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SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

DESIGN AND CONDUCT OF SIMULATION EXERCISES – SIMEX

A companion for implementing Sendai Framework Priority 4 on enhancing disaster preparedness for effective response

WORDS INTO ACTION

WORDS INTO ACTION

Engaging for resilience in support of the Sendai Framework for Disaster Risk Reduction 2015-2030

The Words into Action (WiA) guidelines series aims to ensure worldwide access to expertise, communities of practice and networks of DRR practitioners. The guidelines offer specific advice on the steps suggested to implement a feasible and people-centered approach in accordance with the Sendai Framework for Disaster Risk Reduction 2015-2030. These guidelines are not meant to be exhaustive handbooks that cover every detail, and those who need more in-depth information will find references to other sources that can provide them with it.

Using a knowledge co-production methodology, WiA work groups take a participatory approach that ensures wide and representative diversity in sources of know-how. WiA is primarily a knowledge translation product, converting a complex set of concepts and information sources into a simpler and synthesized tool for understanding risk and learning. It is also meant to be a catalyst for engaging partners and other actors.

In summary, the WiA guidelines are pragmatic roadmaps to programming an effective implementation strategy. This is facilitated by promoting a good understanding of the main issues, obstacles, solution-finding strategies, resources and aspects for efficient planning. The guidelines can be a valuable resource for national and local capacity building through workshops and training in academic and professional settings. They can also serve as a reference for policy and technical discussions.

For more information about Words into Action, please contact:

United Nations Office for Disaster Risk Reduction
9-11 Rue de Varembé
CH-1202 Geneva, Switzerland
Website: www.undrr.org

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CONTENTS

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UNDRR gratefully acknowledges the following individuals that were part of the working group working group 2016-2017, many of whom contributed to updates 2018-2019*:

CONTRIBUTORS:

Jonathan Abrahams* - Disaster Risk Management Focal Point, WHO Health Emergencies Program, World Health Organization (WHO), Geneva; Sandra Averous Monnery* – former Programme Officer, United Nations Environment Programme, Paris; Lisa Bothwell* - Program Analyst at U.S. Department of Health and Human Services (HHS) and former Regional Integration Disability Specialist for FEMA Region VII, Federal Emergency Management Agency (FEMA), USA; Massimo Ciotti - Deputy Head of Unit, Head of Country Preparedness & Support Section, European Centre for Disease Prevention and Control (ECDC), Solna, Sweden; Anthony Craig – former Chief, Emergency Preparedness and Response, World Food Programme (WFP), Rome; Beatriz Fernandez - former Consultant, United Nations Environment Programme, Paris; Rajan Gengaje* – former Head, Preparedness & Response Unit and Regional Disaster Response Adviser, United Nations Office for the Coordination of Humanitarian Affairs - Regional Office for Asia and the Pacific (OCHA), Bangkok; Alasdair Hainsworth – former Chief Disaster Risk Reduction Services Division, WMO Geneva and Executive Director of DRR Consultants Pty Ltd, Tasmania; Oliver Lacey-Hall – former Head, United Nations Office for the Coordination of Humanitarian Affairs (OCHA) - Indonesia, Jakarta; Jakob Lund –former Programme Officer UN WOMEN; Puk Ovesen – former Consultant, United Nations Entity for Gender Equality and the Empowerment of Women (UN WOMEN), Geneva; Jens Kampelmann*– Kampelmann International Consulting and former Sendai Focal Point a.i., German Federal Foreign Office (German FFO), Berlin; Masayo Kondo Rossier* - Humanitarian Affairs Officer, United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Geneva; Kate McCarthy-Barnett* - Regional Disability Integration Specialist, FEMA Region I, Federal Emergency Management Agency (FEMA), Boston, MA, USA; Marcie Roth – Executive Director and CEO at World Institute on Disability and former Senior Advisor and Director of the Office of Disability Integration and Coordination. U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA), Washington, DC; Sarah Wade-Apicella – Programme Management Officer, United Nations Office for Disaster Risk Reduction Office Global Education and Training Institute (UNDRR GETI), Incheon, ROK; Chadia Wannous – former Senior Advisor, Scientific and Technological Community, UNDRR, Geneva.

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THANKS TO ADDITIONAL CONTRIBUTORS:

Oumar Camara, Chef de la Division Reconstruction et Rehabilitation, Service National de Gestion des Catastrophes et des Urgences Environnementales (SNGCUE), Guinea; Lorenzo Guadagno*, Manager, Migrants In Countries In Crisis Capacity Building Programme, International Organisation for Migration (IOM), Geneva; Joe Leitmann, Team Leader, Resilient Recovery & Urban Resilience, Global Facility for Disaster Reduction and Recovery (GFDRR), Washington, DC; Stefanie Mey-Richters, Desk Officer, Federal Office of Civil Protection and Disaster Assistance (BBK), Bonn, Germany; Jonathan Suk*, Senior Expert, Public Health Emergency Preparedness, and Svetla Tsolova*, Senior Expert Monitoring and Evaluation, European Centre for Disease Prevention and Control (ECDC), Solna, Sweden; Mark Shapiro*, Simulation Exercise Consultant to WHO and Frederik Copper*, Simulation Exercises and After Action Reviews, Team Lead a.i., WHO Health Emergencies Program.

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FOCAL POINT FOR WORDS INTO ACTION ENHANCING DISASTER PREPAREDNESS FOR EFFECTIVE RESPONSE GUIDE:

Sarah Wade-Apicella

GRAPHIC DESIGN:

Eyetalk Communications

WORDS INTO ACTION GUIDELINES SERIES OVERALL COORDINATION:

Dave Paul Zervaas, United Nations Office for Disaster Risk Reduction

ABOUT THIS WORDS INTO ACTION

This concise guideline on design and conduct of simulation exercises (SIMEX) is part of the Words into Action Guideline series on practical implementation of the Sendai Framework for Disaster Risk Reduction Priority 4 component on enhancing disaster preparedness for effective response.

It targets emergency managers, relevant government officials and many other actors responsible for disaster preparedness planning and drills. It consists of three main sections: General Information on Simulation Exercise, or SIMEX; the Process; and Existing Guidance.

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LIST OF ACRONYMS

DRR	Disaster Risk Reduction
SIMEX	Simulation Exercise
SOP	Standard Operating Procedure
TTX	Table Top Exercise
UN	United Nations

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01

INTRODUCTION

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1.1 Introduction

Simulation Exercises (SIMEX) are used by emergency managers to take proactive measures in preparing for effective response. Systems, emergency procedures, contingency plans, response mechanisms, and equipment are tested in these exercises. They contribute to team building and evaluating response skills. Improvements are made in an organization's preparedness capacities based on the SIMEX results.

Consequently, **simulation exercises play an important role in promoting a culture of disaster risk reduction including enhanced preparedness for effective response**, *as called for by the Sendai Framework for Disaster Risk Reduction. The simulations help prepare communities and allow for stress testing plans and systems. Challenges faced during a crisis, ranging from coordination and security to administrative and technical difficulties, can be reduced by regular exercises. The focus of most exercises is in the practical learning in a safe environment with a strong emphasis on the after-action review or exercise debrief. The debriefing should capture all the lessons learnt and make specific and actionable recommendations to improve readiness.*

This guide will provide the readers with:

1. *An overview of SIMEX to clarify the purpose and explain different types of SIMEX.*

2. *Step-by-step guidance on SIMEX design and conduct based on existing guidance materials.*

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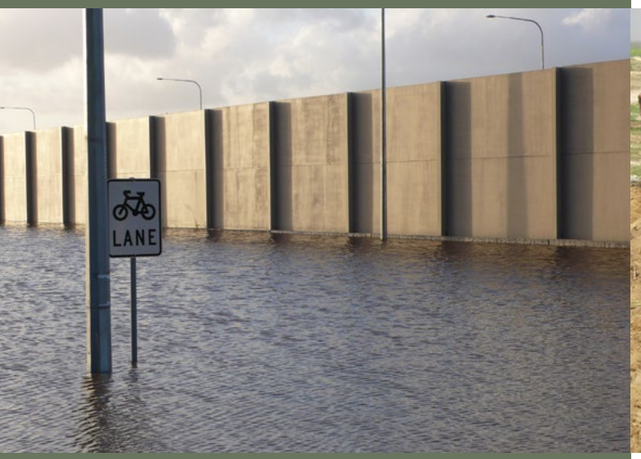
1.2 Sendai Framework Priority 4 actions related to SIMEX



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The Sendai Framework for Disaster Risk Reduction adopted by UN Member States in 2015 calls for the substantive reduction of disaster risk and loss by 2030. Among its four priorities for action, the Priority 4 component on enhancing disaster preparedness for effective response highlights the following important actions, among which SIMEX can support.

At national and local levels:

a.

To promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training and the establishment of area-based support systems, with a view to ensuring rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate to local needs

b.

To strengthen the capacity of local authorities to evacuate persons living in disaster-prone areas;

At global and regional levels:

c.

To support regional cooperation to deal with disaster preparedness, including through common exercises and drills.

Priority 4 also calls for empowering women and persons with disabilities to publicly lead and promote gender equitable and universally accessible response. Designing and implementing risk-informed preparedness plans and actions – including SIMEX – should consider the participation and contributions of women and girls, men and boys, people with disabilities, people with different barriers (cultural, linguistic, legal), older persons, indigenous peoples, migrants or others with access and functional needs and vital capacities, their organizations and networks.

02

GENERAL INFORMATION ON SIMULATION EXERCISES

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2.1. What is a Simulation Exercise?

Before choosing a type of exercise, designing and conducting it, it is important to understand what SIMEX is. A simulation exercise is an imitation of operations in a real-world process or system during a specific time. It is "an event that replicates selected aspects of a real emergency to provide an opportunity for testing procedures in place and raising awareness of preparedness and response requirements and actions" (WFP EPRP Simulation Guide, 2013).

Looking at the Disaster Risk Management (DRM) Cycle, SIMEX can be placed in the middle of the preparedness element, after the creation of preparedness structures and plans and before the response preparedness phase (see Figure 1).

FIGURE 1

SIMEX position in the DRM Cycle

2.2. Why conduct Simulation Exercises?

The value of simulations for preparedness and response is that a simulation allows an organization to use operational tools, procedures, and forms to evaluate their systems and performance. It also provides for training and for practicing tasks that require decision making and coordination. The process of evaluating the results of a simulation helps to identify critical areas of management and aspects that need to be strengthened.

Advantages to using simulations for disaster preparedness and response are:

- They test or evaluate preparedness or emergency plans
- They allow for training and updating knowledge
- They evaluate the decision-making process and coordination mechanisms
- They help to strengthen coordination within an organization and with other sectors and institutions
- They validate the instruments and processes used to collect and organize information
- They evaluate how participants react in specific situations[1]

1 Guidelines for Developing Emergency Simulations and Drills, PAHO. 2011. https://www.paho.org/disasters/index.php?option=com_content&view=article&id=1637:guidelines-for-developing-emergency-simulations-and-drills&Itemid=807&lang=en

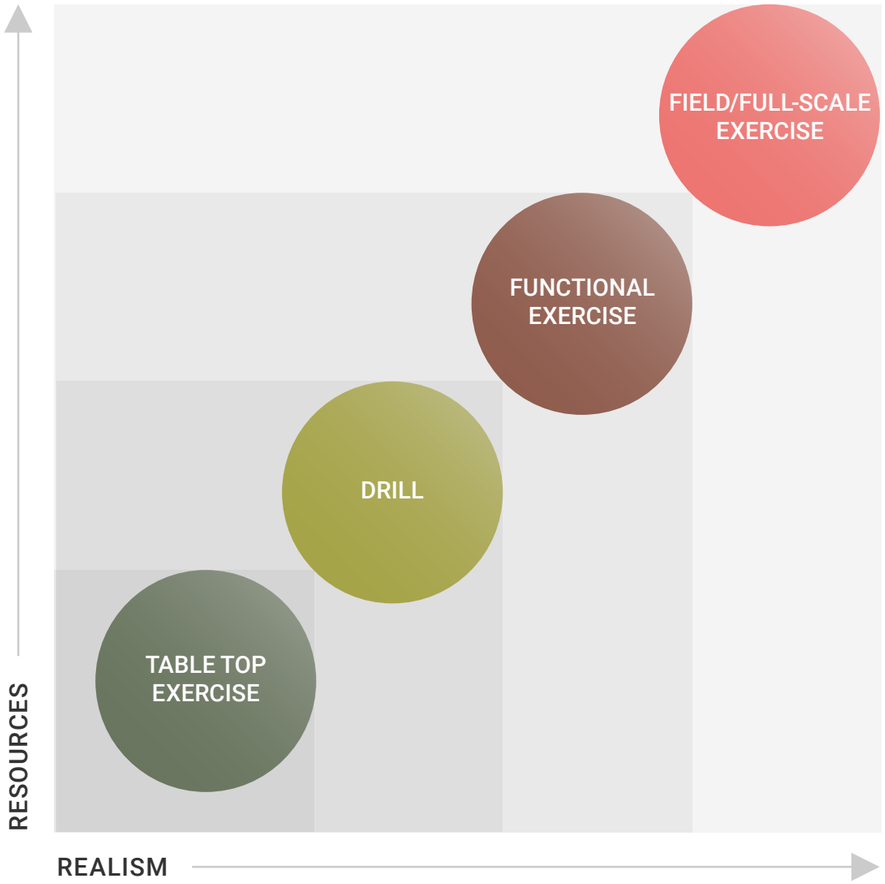
2.3. Different Types of Simulation Exercises

To select the most suitable type of simulation, the goals of the SIMEX should be determined. Consultations with emergency managers and other local authorities on the intended outcomes should be considered before selecting the type of simulation.

Note: Terms relating to simulation exercises, such as drill, table top - or simulation exercise, are often used interchangeably and without clear goals. However, the types of simulation differ in the resources needed for planning and conducting the exercise, as well as in their degree of realism. Figure 2 (based on WHO, 2017) displays general differences of the four different SIMEX types as follows:

FIGURE 2

General differences of the four different SIMEX types



1. **Table top exercises (TTX)** are facilitated discussions, generally in an informal, low-stress environment. An emergency situation is discussed in a constructive manner **with the goal of identifying and resolving problems, refining existing operational plans and better understanding each other's responsibilities, resources and operational procedures.** This is the only type of simulation that does not require an existing response plan in place. It usually takes a few hours, depending on the participation. The preparation time for TTX will take as much as one month (ECDC, 2014; WHO, 2017).

2. **A drill** is a facilitated and supervised activity, in which single specific operations, functions or systems are tested in a repeated fashion. **Its goal is to review and improve a part of the overall emergency plan** and should be as realistic as possible, employing any equipment or apparatus for the specific function. Unlike the TTX, drills require actual mobilization and use of resources. A drill can take an hour or a full day, depending on the systems tested. The preparation will take about one month (PAHO, 2011; WHO, 2017).

3. **A functional exercise** is a fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event. The exercise tests multiple functions of the organization's operational plan, such the coordination, integration, and interaction of an organization's policies, procedures, roles and responsibilities before, during, or after the simulated event. The simulated emergency should be as close to the reality as possible, so that plans can be tested under the corresponding real-life stress level and time-pressure. **The goal is to identify gaps in the participants' familiarity with the plans as well as to look for any mistakes in the plan itself.** This type of SIMEX covers various functions in the organization. Therefore, essentially, hierarchies, responsibilities and a chain of commands will be tested. Functional SIMEXs can run several hours or days, and will require 6-18 months of preparation (ECDC, 2014; WHO, 2017).

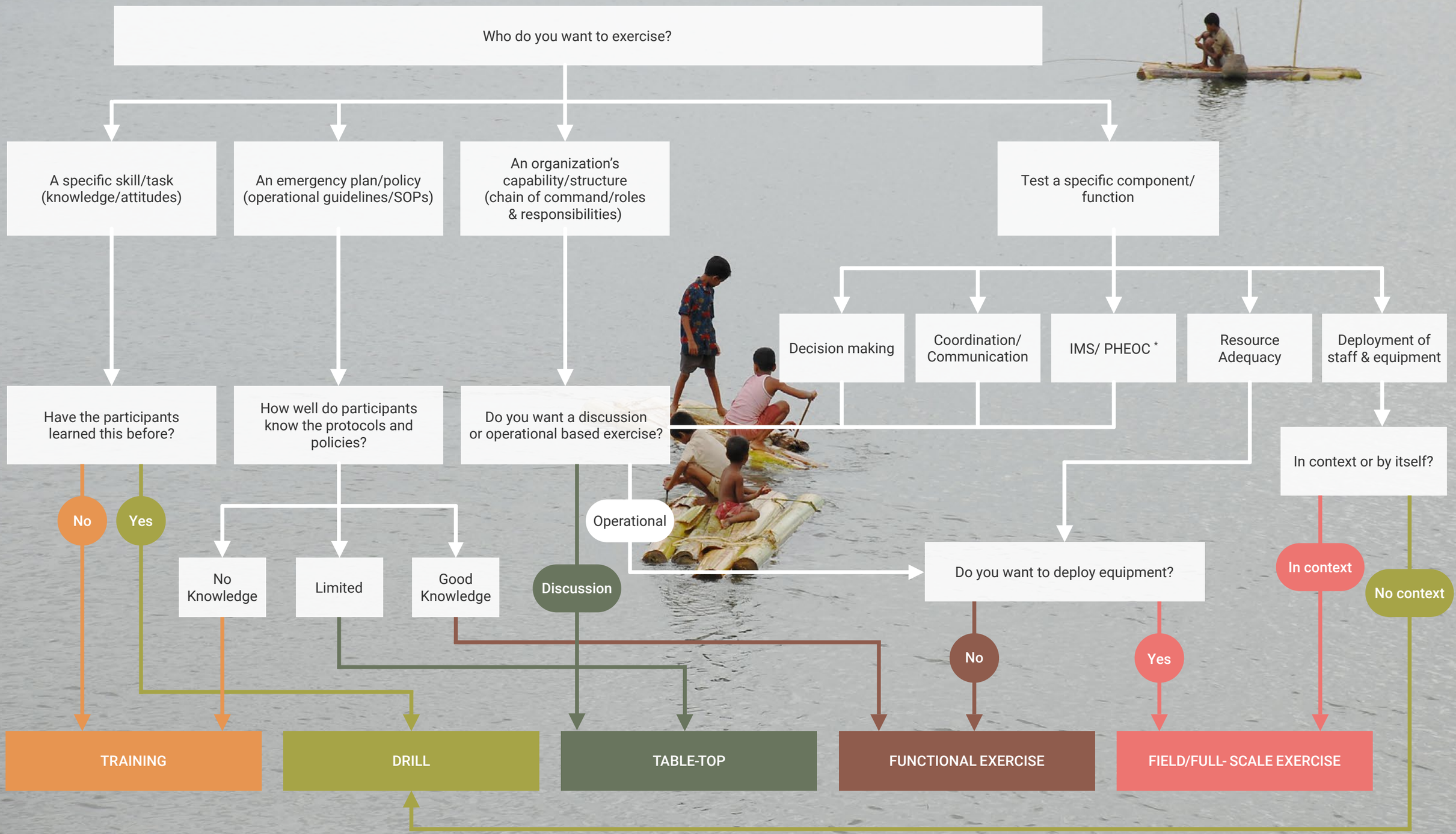
4. **A field exercise** is a smaller version of a full-scale exercise. It focuses on more specific capacities or series of capacities, such as procedures for Rapid Response Teams (RRT), laboratory analysis or other sample collection and transport. **A full-scale exercise** simulates a real event as closely as possible and **is designed to evaluate the operational capability of emergency management systems in a highly stressful environment, simulating actual response conditions**. This includes the mobilization and movement of emergency personnel, equipment and resources. Ideally, the full-scale exercise should test and evaluate most functions of the emergency management plan or operational plan. Differing from the Functional Exercise, a full-scale exercise typically involves multiple agencies and participants physically deployed in an exercise field location. The full-scale SIMEX requires a large amount of resources and coordination in all phases of the SIMEX process. It can take a few hours or several days, and its preparation requires a year or longer. The evaluation of the outcomes can significantly improve the system. (ECDC, 2014; WHO, 2017).

Which type is the right one for you? An exercise decision tree, such as displayed in the WHO Exercise Manual 2017, can facilitate the choice of exercise type.

(See Figure 3)

FIGURE 3

WHO exercise decision tree



WHO Simulation Exercise Manual, 2017, page 15 (https://bit.ly/2JjouA4)

* Incident Management System (IMS) / Public Health Emergency Operations Centre (PHEOC)

03

SIMULATION EXERCISE PROCESS

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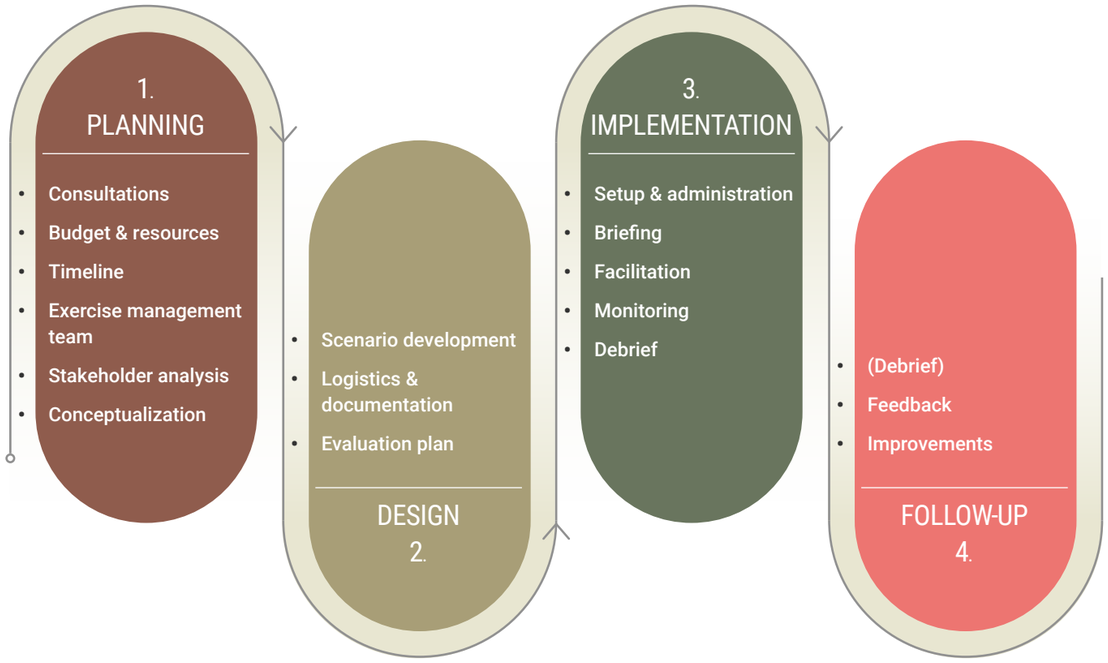
Overview of the exercise process

After selecting a type of SIMEX that serves the intended goals best, the complete process includes various phases. Every organization designs the necessary steps and phases differently in their guidance and practice, according to their own needs. Regardless, it is essential that no step is left out.

FIGURE 4



One possibility of organizing the SIMEX process steps into phases is displayed in the figure above (based on the existing guidelines by WHO, 2009, IASC, 2012, and ECDC, 2014). Irrespective of the fact that no phase should be left out, it should be emphasized that the debrief is essential to reach effective outcomes from the SIMEX. Therefore, some might suggest to include the debriefing in the implementation phase to ensure more resources, planning and emphasis are given.

In any case, do not leave it out!

The steps displayed in figure 4 are steps for a functional exercise. Most of these steps apply to all types of exercises, but specific guidance material on each type's process should be consulted. See Section 4: Guidance Materials.

PHASE 1: PLANNING

STEP 1.1 CONSULTATIONS

The consultation process in the beginning includes the steps mentioned above, when choosing the goals and type of exercises. Several other aspects are related to this:

1. Define the goal(s) of the SIMEX

- Which plans, procedures, resources or skills shall be tested?
- What are the risks and vulnerabilities of the community and on which of these should the training focus be set?
- What should be gained from the SIMEX? for example: improved coordination or testing of response knowledge

2. Choose the corresponding type of SIMEX (Refer to Section 2)

- Which type of SIMEX is most suitable for the goal(s) defined before?

3. Define the audience of the SIMEX

- Who is supposed to be tested on the ability to perform the plans and procedures?
- Are people with disabilities and others with access and functional needs included in the exercise planning process, and considered concerning programmatic access, physical access, and effective communication?

See for example ECDC's Handbook on Simulation Exercises, 2014, for these different steps.

STEP 1.2 BUDGET & RESOURCES

Based on other steps, especially the choice of SIMEX type and the timeline, a list of available and required resources in addition to a budget should be created.

1. Identify resources

- Which resources are required for the SIMEX?
- Which resources are available?
- Which resources are missing?
- How can these resources be obtained?

2. Formulate a cost plan

- How much w d available? If yes, how can the problem be solved?

One example on cost planning can be found in the New Zealand Government's Disaster Simulation Exercises, 2014.

STEP 1.3 TIMELINE

A detailed timeline should be drawn up, based on the questions below. Project management tools, such as a GANTT charts, are useful for this process.

Formulate a detailed timeline for the whole SIMEX process:

- How long will the planning process take (Phase 1)?
- How much time will the exercise take (Phase 2 & 3)?
- How much time will the follow-up take (Phase 4)?

See WHO Emergency Exercise Development Guide, 2009, or PAHO's Guidelines for Developing Emergency Simulations and Drills, 2011.

STEP 1.4 FACILITATION TEAM

The setup of a facilitation team with experienced SIMEX experts is essential before engaging in phase 2.

Set up a facilitation team

- Who can be the lead facilitator and control the simulation?
- Who can be the technical focal point?
- Who can be the event coordinator responsible for logistic requirements?
- Who can be the assistant facilitators?
- Are role players needed?

For more details on different roles, see the IASC Government Emergency Simulation (GES) Facilitator Guide, 2012.

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STEP 1.5

STAKEHOLDER ANALYSIS

The identification of participants needed for the SIMEX is related to the scenario writing process, as it becomes clear which stakeholders (agencies, organization, public,) need to be included in the exercises. This also relates to the audience identification in step 1.1.3.

It is important to note that some stakeholders may not have the time and resources to participate in the planned SIMEX, e.g. the fire department for a school fire alarm drill. Therefore, not only timely requests of participation but also well-organized SIMEX can expect wider engagement. It is also important to get the right people as participants in the exercise. It is best to have the actual decision-makers responsible in the real-life emergency than an assistant or representative sent to the SIMEX, in order to focus the learning on those required to take actions under pressure.

Analyze relevant stakeholders

- Who is supposed to be tested in the plan?
- Who has a relevant role in testing the plan?
- Who is supposed to be covered by the plans (people exposed to the risk)?
- Are the selected participants diverse, in terms of gender, age, disability, and all vulnerable groups to participate in/ be tested?

See WHO Emergency Exercise Development Guide, 2009, For details on stakeholders, participation levels, see IASC GES Facilitator Guide, 2012.

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STEP 1.6

CONCEPTUALIZATION

In the concept note, the goal and expected outcomes of the SIMEX, required resources and the timeline should be listed. It is to serve as an introductory document for all stakeholders that will take part in the SIMEX as initial information and can evolve to become the Memorandum of Understanding of all stakeholders.

Write a concept note

For a concept note and other relevant documents, see the Annex of the IASC GES Facilitator Guide, 2012.

STEP 1.7

INVITATIONS

Phase 1 includes the invitation of all stakeholders, particularly the facilitation team, who are involved in phase 2. Include a point of contact for any reasonable accommodation requests for participants with disabilities and others with access and functional needs. Sharing the concept note and other relevant material to the invited team members is essential.

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PHASE 2: DESIGN

STEP 2.1 SCENARIO DEVELOPMENT

The master scenario should be developed by the facilitation team, based on the identified risks of the target group/ organization and the plans that are meant to be tested. All SIMEX, also the smaller TTX and drills, need a scenario, as it is the script that sets the stage for the exercise. The focus should be set on how to test the exercise objectives in the best way. This link between the objectives and the scenario is essential to reach good outcomes and is too often not considered.

The scenario contains a sequence of events to lead the participants through the SIMEX. Each event is separated into several incidents and these incidents are communicated to the participants by specific injects, such as phone calls, emails and reports. The master scenario gives the guideline for the facilitation team, but depending on how the simulation develops, flexibility in the prepared injects are necessary. Injects are usually prepared in an inject matrix with corresponding organizational information on when to hand injects out to whom.

The facilitation team needs to consider the following when creating the master scenario:

Writing the master scenario

- Which events need to be simulated to reach the goal of the SIMEX?
- Which incidents need to be simulated for the event to be realistically simulated?
- Which injects will trigger a reaction of the participants? To whom do they need to be given, in which form, and at which stage of the scenario?
- What alternative injects are needed?

For further details on scenario development, see ECDC's Handbook on Simulation Exercises, 2014.

STEP 2.2 LOGISTICS & DOCUMENTATION

With reference to logistics and documentation, everything needed for the SIMEX (including the enabling environment) needs to be prepared well. This also includes considerations of safety for the participants, scheduling, locations, tools and equipment. If not the same team, a SIMEX logistics team and a coordination team should provide the facilitation team with all required materials. Below are important considerations for logistics and documentation.

Arrange logistics and documentation

- What is the location of the SIMEX and which facilities are needed? Are they accessible for all stakeholders?
- Is the venue of SIMEX adequate in space to allow testing of various aspects and processes?
- Is the location secure enough to ensure the participants safety?
- Which supplies are needed for the exercise (e.g. pen, paper)?
- Which types of communication (e.g. translation, interpretation) and equipment are needed? What types of accessible communication equipment may be requested (e.g. CART)?
- Which technical devices are needed? Are there alternatives in case a device does not work?
- Which essential documents are needed (e.g. master scenario, inject matrix, exercise plan)? Are they available in alternative formats?
- Which logistical arrangements are necessary for participants to join the exercise?

For an overview of different exercise documents, see WHO Emergency Exercise Development guide, 2009.

STEP 2.3 EVALUATION PLAN

The evaluation is the principal element that makes the whole SIMEX process a valuable learning experience. Thus, it is important that the facilitation and control team know upfront how the exercise is monitored and evaluated during its process. The evaluators (observers during the exercise) have an evaluation plan as a guidance with aims to be achieved in the scenario. When developing the plan, it is important to address the intended objectives of the exercise, expected outcomes, and space to evaluate, if these were reached (if not, which results were reached?). Certain key events are included on purpose to put pressure on the parts of the plan to be tested, which should be carefully monitored.

For an evaluation, see the Handbook: Evaluation of Exercises by the Swedish Civil Contingency Agency (MSB), 2011.

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PHASE 3: IMPLEMENTATION

Phase 3 is when the SIMEX actually takes place and the previous planning and design of the organization fall into place.

STEP 3.1 SETUP & ADMINISTRATION

A good setup of the SIMEX is essential. Equipment needs to be checked for functionality, all material needs to be available in sufficient copies, locations need to be secure and administrative aspects, for instance a necessary online access for participants, should be checked.

Prepare SIMEX Setup and administration

- Is all equipment/ material available in right amount and functional?
- Is the location prepared and secure, including the exercise venue and control room set up?
- Are all administrative aspects arranged?

See the WHO Exercise Manual, 2017, for more information.

STEP 3.2 BRIEFING

It is essential that the participants are adequately informed before the SIMEX starts. However, this depends on the exercise objectives. For example, testing the deployment of a rapid response team should be done without any previous information.

In the briefing, the facilitation team should communicate clearly, the aims and objectives of the SIMEX, the value that can come out of it, the functions of the facilitation team members, the process and setup, the communication, the rules and other logistical aspects. It should be clear to the participants that the learning environment is in a secure location but also that if mistakes are made, these will help to improve the future emergency response, which is also why participants should take the scenario and exercise seriously.

For tips on briefing participants, see the New Zealand Government's Disaster Simulation Exercises, 2014.

STEP 3.3 FACILITATION & EXERCISE CONTROL

Following the facilitation steps of welcoming and briefing, the facilitation team runs the SIMEX. The lead facilitator manages the facilitation team and keeps an overview of the exercise. For example, if it is necessary to give more or less injects in a faster or slower pace to keep the scenario active. The assistant facilitators deliver injects to the participants, receive the reactions of the participants and analyze them in order to adjust following injects, and role-play important stakeholders that are not present.

It should be noted that the facilitation team only supports the exercise, and it does not dominate the testing of the plan. It is important that the lead facilitator is experienced in the functions and does not run a SIMEX for the first time.

For further advice on facilitation, see the IASC GES Facilitator Guide, 2012.

STEP 3.4 MONITORING

The monitoring of the SIMEX relates to step 2.3. Evaluation Plan. In addition to the overall monitoring, the team members responsible for monitoring and evaluating should carefully check how participants respond to key events. It is important to remember that this is not about testing individual performance, but about monitoring how individual responses relate to the expected outcomes and if the objectives are met.

Monitoring the participant responses

- What are the participant responses to key event injects?
- Are participants finding creative response solutions that were not part of the plan yet? Are they working well?

For further advice on what and how to monitor and observe, see MSB's Handbook: Evaluation of Exercises, 2011.

PHASE 4: DEBRIEFING

The final phase 4 is essential to turn the SIMEX in a valuable learning experience and should not be omitted. As stated before, the debriefing could also be part of phase 3 to ensure it is adequately resourced and fully implemented.

STEP 4.1
DEBRIEFING & FEEDBACK

The debriefing with all participants after the SIMEX is about sharing the experiences of participants and facilitators during the simulations, as participants may have different perceptions of the same situation. Various questions should be asked, for example:

- Have the goals been achieved?
- Which problems became evident?
- Where are the gaps in the plans/procedures or in the use of them?

Different debriefing techniques exist to make this essential step as valuable as possible. In general, it is good to start with discussions in smaller groups and increase the size up to the plenary round by round. Sensitive topics should be discussed one by one with the involved participants.

A specific debriefing technique may be to ask small groups to find three positive aspects and three improvement aspects. (Groups can also be previously divided per topic, e.g. communication, usage of material) Another technique may be to place a flipchart in each corner of a room, and ask participants to write down answers to questions, such as: What went well? What can be improved? What did I learn? How will I improve my work?

At the end of the debriefing or shortly thereafter, draw a list of actions to improve the tested plans and procedures. Advice on debriefing can be found in the WHO Exercise Manual, 2017.

STEP 4.2
ACTION PLAN

The final step is to formulate a plan of action or another type of document, in which the key challenges and gaps identified during the SIMEX are listed and possible solutions are suggested. Such a table should also include the problem resolution timeframe (short, medium and long- term), and the responsible entities.

For more information on the complete debriefing and follow-up, see the IASC GES Facilitator Guide, 2012.

For further advice on facilitation, see the IASC GES Facilitator Guide, 2012.

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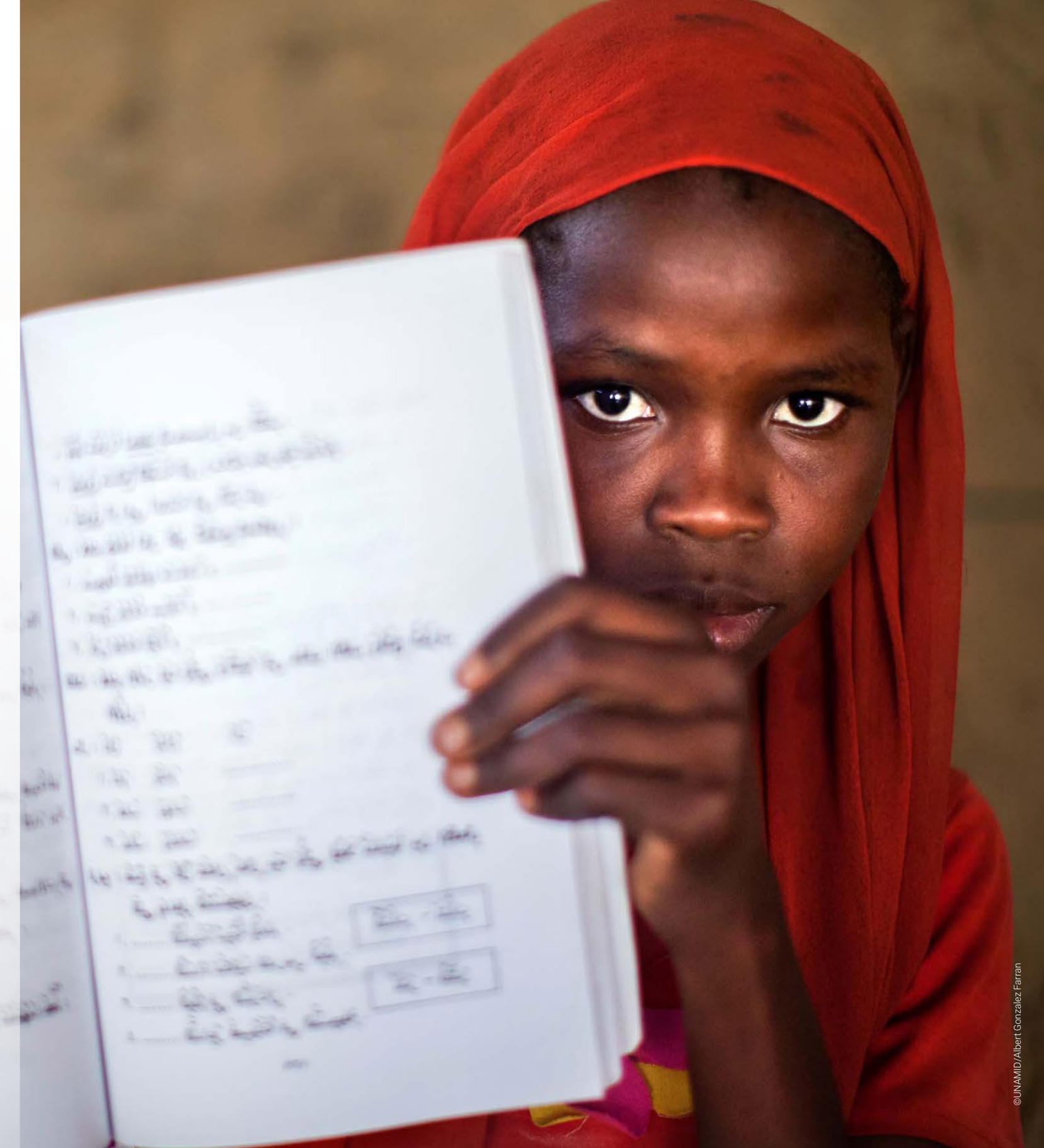
04

GUIDANCE MATERIALS

This concise guideline presents guidance materials and their usage for designing and implementing a SIMEX. However, it is recommended that SIMEX planners bring experienced SIMEX facilitators on board early, and consult with various comprehensive SIMEX guidelines. A considerable amount of guidance material on preparedness for disaster response is available including on emergency preparedness simulation exercises, many from various regions and sectors.



4.1 List of selected guidance materials on SIMEX

ONLINE COLLECTION AT:

https://www.preventionweb.net/collections/simulation-exercises

HANDBOOK ON SIMULATION EXERCISES IN EU PUBLIC HEALTH SETTINGS – ECDC (2014)

The purpose of this simulation exercise handbook is to support organisations in the public health sector in strengthening their response to events involving communicable diseases, based on effective simulation exercises as a part of preparedness.

This handbook is meant to serve as a guide on how to guarantee strategic-level support to decision-makers in order to set an exercise programme within the preparedness plans of the organisation; and how to take all the necessary steps in conceptualising, designing, planning, coordinating, conducting and evaluating simulation exercises.

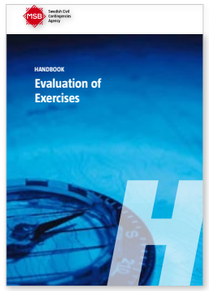
https://www.preventionweb.net/go/53505

GOVERNMENT'S EMERGENCY SIMULATIONS: FACILITATOR'S GUIDE – INTER-AGENCY STANDING COMMITTEE (IASC) / SUB-WORKING GROUP ON PREPAREDNESS (2012)

This document is a tool for national governments who wish to conduct simple, inexpensive table top and functional exercises to test systems and procedures contained within their national disaster management plans. It is intended for governments to take a proactive tack at preparing for potential emergencies and improve their response mechanisms as a result of testing, which leads to recommended actions on improving preparedness and also prevention mechanisms. It provides the instructions and documentation needed to support the design and delivery of the Integrated Approach to Emergency Simulation or "GES", an emergency preparedness and response simulation exercise and follow-up debriefing workshop.

http://www.preventionweb.net/go/33487

HANDBOOK: EVALUATION OF EXERCISES – MSB SWEDISH CIVIL CONTINGENCIES AGENCY (2011)



This handbook was produced as a tool for the evaluation of the Barents Rescue exercise in Sweden in September 2011. It asserts that training and exercise is done in order to develop the ability to handle emergencies and crises, of both individual organisations and public authorities. Qualitative methods of evaluation increase opportunities for identifying and utilising the lessons learned in exercises. It is important to see evaluation as an integral part of an exercise. Well-conducted, effective evaluation provides better conditions for the participating organisation to develop. Therefore, evaluation planning and feedback must be a part of the exercise planning process right from the beginning.

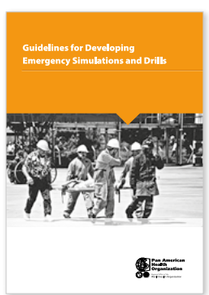
https://www.msb.se/RibData/Filer/pdf/25885.pdf

DISASTER SIMULATION EXERCISES: A HOW TO GUIDE FOR THE PACIFIC – GOVERNMENT OF NEW ZEALAND (2014)

This companion guide to the DVD 'How to Plan and Run a Simulation Exercise in the Pacific', which was filmed and produced during the planning and implementation of a series of SIMEX held in Vanuatu, Tonga and Fiji in 2013, was written to assist participants in working through the five steps of the exercise cycle: groundwork, exercise cycle, exercise implementation, evaluation, and lessons learnt. Each of the six sections of this guide provides all the necessary forms and templates you will need to complete that step. At the end of each section there is a helpful check list and links to further information and other useful resources.

https://www.preventionweb.net/publications/view/61839

GUIDELINES FOR DEVELOPING EMERGENCY SIMULATIONS AND DRILLS – PAHO (2011)

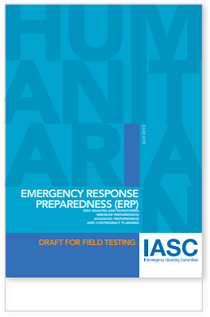


Conducting simulations and drills is the most effective way to evaluate and test disaster preparedness plans; these exercises are used widely by organizations and institutions working in development and in disaster response. Drills and simulations are also excellent tools for training, and for assessing decision making processes, teamwork, and coordination.

The Pan American Health Organization (PAHO) has worked with a group of experts from Latin America and the Caribbean to prepare this set of practical guidelines for planning and carrying out simulations and drills. The Guide describes the basic features of both types of tools, and provides a full complement of sample forms that can be adapted for the planning, execution, and evaluation phases of the exercises. The Guide is written primarily for organizations and individuals who work in the health and disaster management fields, and will assist them in reviewing and updating emergency preparedness and response procedures.

http://www.paho.org/disasters/index.php?option=com_ content&view=arti- cle&id=1637:guidelines-for-developing-emergency-simulations-and-drills&lt emid=807&lang=en

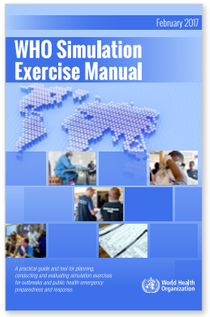
IASC EMERGENCY RESPONSE PREPAREDNESS (ERP) (2015)



The IASC Task Team on Preparedness and Resilience has developed the 'Emergency Response Preparedness' (ERP) approach to enable the international h manitarian system to apply a proactive approach to emergency preparedness. This package provides practical guidance to assist Resident/Humanitarian Coordinators and humanitarian country teams in preparing to respond to potential emergencies with appropriate humanitarian assistance and protection. These guidelines are a tool to: Develop a common understanding of risks and to develop a system to monitor those risks to ensure early action is taken when required; Establish a minimum level of multi-hazard preparedness; Take additional action, including the development of contingency plans for specific risks that can be used as the basis for initial planning reflected in Flash Appeal to meet the differentiated needs of an affected population in the first 3-4 weeks of a humanitarian emergency.

https://interagencystandingcommittee.org/iasc-transformative-agenda/ documents-public/iasc-emergency-response-preparedness-draft-field- testing

WHO EXERCISE MANUAL – WHO (2017)



This manual provides an overview of the different simulation exercise tools and guidelines developed and used by the World Health Organization (WHO). Simulation exercises have been identified as a key component in the validation of core capacities under the International Health Regulations monitoring and evaluation framework. Simulation exercises, along with After Action Reviews (AAR), represent the functional assessment of capacities and complement the self-assessments (Annual Reporting), independent reviews, and external evaluations (Joint External Evaluation (JEE)). They play a key role in identifying the strengths and gaps in the development and implementation of preparedness and response measures.

http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.10/en/

WHO Simulation Exercise Toolbox:
https://www.who.int/ihr/publications/exercise-toolbox/en/

Country implementation guidance on SIMEX Resources:

- SimEx E-Learning Course:
  https://extranet.who.int/hslp/training/enrol/index.php?id=127
- SimEx One-Stop Portal including scenario video repository
  https://extranet.who.int/sph/simulation-exercise
- SimEx Introduction Video Course
  https://openwho.org/courses?q=simex

EMERGENCY EXERCISE DEVELOPMENT GUIDE – WHO, WESTERN PACIFIC REGION (2009)

This book was prepared by the World Health Organization. It was originally designed, produced and distributed by the Federal Emergency Management Agency, Emergency Management Institute, USA. WHO added to it and reformatted many sections of this material in order for users to focus on public health emergencies.These guidelines are intended to provide a wide range of information related to public health emergency management exercise development. Users should be aware that this document is not regulatory and represents guidelines only. This course material has been designed for emergency exercise staff to acquire in-depth knowledge and skills related to the exercise development process, including management, control, simulation and evaluation. Emphasis is on the construction of exercise planning documents; staffing and training of team leaders in control, simulation and evaluation; the development of expected player actions and points of review; and exercise administration and logistics.

https://apps.who.int/bookorders/anglais/detart1.jsp?codlan=1&codcol=52&codcch=127

See also:

WHO Exercise Planning Tool at https://www.who.int/ihr/publications/Exercise-planning-tool.xlsx;

WHO Simulation Exercise Toolbox at: https://www.who.int/ihr/publications/exercise-toolbox/en;

SimEx E-Learning Course at: https://extranet.who.int/hslp/training/enrol/index.php?id=127;

SimEx One-Stop Portal including scenario video repository at https://extranet.who.int/sph/simulation-exercise;

SimEx Introduction Video Course at https://openwho.org/courses?q=simex

4.2 Next step

The Working Group hopes that this concise guideline on Simulation Exercise is helpful as a companion for implementing risk-informed preparedness for effective response, Sendai Framework Priority 4.

It is recommended that you review and use the existing guidelines (section 4) presented in this concise guideline on SIMEX and learn from the good practices within. It is also recommended to use the Words into Action Guideline: Enhancing disaster preparedness for effective response (http://www.preventionweb.net/go/53347) and other guidelines relevant to your needs and context for more detailed guidance.

UNDRR
UN Office for Disaster Risk Reduction

WORDS INTO ACTION

DESIGN AND CONDUCT OF SIMULATION EXERCISES - SIMEX

For more information about Words into Action,
please contact:

United Nations Office for Disaster Risk Reduction
9-11 Rue de Varembé
CH 1202 Geneva, Switzerland
Telephone: +41(0)22 917 89 07-8
E-mail: undrr@un.org
Website: http://www.undrr.org