

AMHEWAS SIMEX Handbook & Toolkit

Applying discussion-based simulation
exercises to test and integrate AMHEWAS
products into national multi-hazard Early
Warning Systems in African Countries

October 2026

AMHEWAS SIMEX Handbook & Toolkit

Applying discussion-based simulation exercises to test and
integrate AMHEWAS products into national multi-hazard
Early Warning Systems in African Countries

AUTHORS

CIMA Research Foundation

Isabel Gomes (Author and Editor) • Fabio Violante • Rocco Masi • Marta Giambelli • Chiara Franciosi • Enrico Ponte
Rita Visigalli (Layout and Design)

African Union Commission

Viola Otieno • Lusajo Ambukenge • Teresa Pinto • Diane Aboubakr

UNDRR

Asha Sitati • Marco Massabò

An Initiative of the



In Partnership with



Ministero degli Affari Esteri
e della Cooperazione Internazionale



AGENZIA ITALIANA
PER LA COOPERAZIONE
ALLO SVILUPPO



MINISTRY OF FOREIGN AFFAIRS
OF DENMARK

Foreword



Across Africa, the frequency, intensity and complexity of disasters are increasing, driven by climate change, environmental degradation, rapid urbanization and growing economic vulnerabilities. Droughts, floods, cyclones, wildfires and other hazards increasingly generate cascading and interconnected impacts across communities, economic and national borders. In this evolving risk landscape, strengthening Africa’s ability to anticipate, prepare for and act ahead of disasters is no longer optional; it is fundamental to Africa’s sustainable development and resilience.

The African Union Commission, through the Africa multi-Hazard Early Warning and Early Action System (AMHEWAS), is working with Member States, Regional Economic Communities and partners to strengthen the continent’s end-to-end early warning and early action capabilities. Central to this effort is ensuring that early warning systems are not only technically robust, but

also operational: that risk information reaches the right institutions and decision-makers, is understood and ultimately translates into timely action.

Simulation Exercises (SIMEX) provide an important mechanism for putting these systems to the test before a disaster occurs. They offer institutions a safe and structured environment to examine how their systems, procedures and coordination arrangements would perform under realistic emergency scenarios. More importantly they test the entire early warning – early action chain: from hazard detection and risk analysis, through communication and decision-making, to the activation of preparedness, anticipatory action and response measures.

This Handbook provides practical guidance for the design and implementation of Discussion-Based Simulation Exercises (DBX) within the AMHEWAS framework. It is intended to support Member States and Regional Economic Communities in examining their institutional arrangements, testing coordination and information flows, identifying operational gaps and strengthening linkages between continental, regional and national early warning systems. The exercises should not be viewed as an end in themselves. Their value lies in the improvements they generate; stronger procedures, clearer roles and responsibilities, improved interoperability, and ultimately more timely and effective action.

The Handbook also reflects a fundamental principle underpinning AMHEWAS which is effective early warning and early action is a shared responsibility. No single institution or level of governance can deliver an end-to-end system alone. National disaster management agencies, meteorological and hydrological services, sectoral ministries, Situation rooms, Regional Climate Centers, Regional Economic Communities, humanitarian actors and communities must be able to work as an interconnected system.

I therefore encourage Member States, Regional Economic Communities and other stakeholders to use this Handbook not simply as a technical reference, but as a practical tool for institutional learning and continuous improvement. Each simulation should provide an opportunity to ask: *Does our system work as intended? Where does the chain break? What must we improve before the next emergency or disaster?*

Through systematic testing, learning and improvement, we can continue to build an AMHEWAS that is not only connected across the continent, but capable of turning Africa’s growing early warning capabilities into earlier decisions, earlier action and greater resilience.

Harsen Nyambe Nyambe
Director, Sustainable Environment and Blue Economy
African Union Commission

Table of Contents

Introduction 6
Purpose of the Handbook 6

Chapter 1 - The Africa Multi-Hazard Early Warning and Early Action System (AMHEWAS) 8
1.1. AMHEWAS Products for National Early Warning Systems 10
1.2. Challenges in the use of AMHEWAS products 12

Chapter 2 - Simulation Exercises (SIMEX): types and uses..... 13
2.1. Types of Simulation Exercises 13
2.2. SIMEX formats covered in this Handbook 15

Toolkit: AMHEWAS DBX Handbook and Toolkit at a glance 16

Chapter 3 - Planning a Discussion-Based Exercise (DBX) 18
3.1. Country-Context and EWS Profile 18
3.2. DBX Objectives and Format 19
3.3. DBX Stakeholders and Participants 21
3.4. DBX Teams 22
3.5. DBX Timeline and Budget 24
3.6. Participants’ Training Needs Assessment 25

Toolkit: DBX Planning 26

Chapter 4 - Designing a Discussion-Based Exercise (DBX) 42
4.1. DBX Scenario and Injects 42
4.2. DBX Workflow and Structure 47
4.3. DBX Evaluation Planning and Documentation 49
4.4. DBX Logistics and Communications 50

Toolkit: DBX Design 52

Chapter 5 - Implementing a Discussion-Based Exercise (DBX)..... 65
5.1. DBX Setting up 65
5.2. DBX Training and Briefing 66
5.3. DBX Facilitating and Control 69
5.4. DBX Monitoring and Evaluation 71

Toolkit: DBX Implementation 72

Chapter 6 - Debriefing and follow-up of a Discussion-Based Exercise (DBX) 78
6.1. Debriefing 78
6.2. After Action Report and Improvement Plan 80

Toolkit: DBX Debriefing and Follow-up 82

Introduction

Welcome

If you are reading this handbook, you are likely involved in strengthening early warning systems, preparedness, and disaster risk reduction in your country or institution.

This handbook is a practical, user-oriented tool to support Disaster Risk Reduction (DRR) officers in implementing simulation exercises (SIMEX) to strengthen the use and integration of the **Africa Multi-Hazard Early Warning and Early Action System (AMHEWAS)** products within national early warning and early action systems of African Union Commission (AUC) Member States.

SIMEXes are structured, scenario-based exercises designed to assess, validate and strengthen coordination mechanisms, decision-making, and operational preparedness. In the context of early warning systems, SIMEX provide a practical way to examine how information is produced, received, interpreted, shared, and used by different actors - and how it supports timely, coordinated early action.

Across Africa, the frequency and intensity of climate- and weather-related hazards are placing increasing pressure on national institutions responsible for preparedness and response. Strengthening early warning systems that are inclusive, impact-based, and actionable is therefore essential. Significant progress has been made through initiatives such as AMHEWAS, which provides timely, harmonized, and multi-hazard information across the continent. However, the effectiveness of continental and regional products depends on their systematic and operational integration into national and sub-national systems, where warnings are translated into decisions and actions that can save lives and protect livelihoods.

A common challenge raised by national authorities and partners is that, although continental and regional early warning products are available, they are not yet consistently used in national institutional workflows. Addressing this gap requires adequate capacities, a shared understanding of the products, effective coordination among actors across levels, and clarity on how information informs decisions.

Simulation exercises offer an accessible way to address these linkages. When well designed, SIMEX provide a

safe and structured environment in which institutions can practice the interpretation and operational use of risk information, reinforce coordination, and build a shared understanding - without the pressures of a real emergency.

Purpose of the handbook and how to use it

The purpose of this handbook is to support officers from the African Union Commission, UNDRR, Regional Economic Communities (RECs), the Africa Network of Centres of Excellence for DRR (NoE), and national DRR authorities in planning and implementing simulation exercises focused on the operational use of AMHEWAS products.

This document provides step-by-step guidance to support users in designing and facilitating simulation exercises in order to:

- Strengthen understanding of AMHEWAS products and their relevance for national early warning systems;
- Facilitate the operational interpretation and use of AMHEWAS early warning information for preparedness and early action;
- Support coordination and dialogue between continental, regional, national, and sectoral actors;
- Identify practical recommendations to enhance early warning integration and decision-making.

The handbook follows the SIMEX cycle and guides users through the key phases of an exercise:

- **Planning**, including context analysis, definition of objectives, and stakeholder identification;
- **Design**, including scenario development and the use of AMHEWAS products as key exercise injects;
- **Implementation**, focusing on the facilitation of simulation exercises;
- **Debriefing and Follow-up**, supporting reflection, documenting lessons learned, and identifying next actions.

Although the handbook presents the SIMEX process sequentially, simulation exercise design is often iterative. Certain phases may run in parallel or require adjustment as planning progresses. Users should therefore apply the structure as a guiding framework, while maintaining flexibility based on their objectives and operational context.

Each phase is accompanied by a dedicated toolkit that provides templates, checklists, guiding questions, and practical examples.

These materials can be used directly or adapted, depending on the country context, exercise purpose, and available resources.



UNDRR. 2020. Words into Action guidelines - Design and conduct of simulation exercises - SIMEX



Chapter 1 | The Africa Multi-Hazard Early Warning and Early Action System

The Africa Multi-Hazard Early Warning and Early Action System is a collaborative continental programme implemented by the African Union Commission in partnership with Regional Economic Communities and African Union Member States, with technical support from the United Nations Office for Disaster Risk Reduction and CIMA Research Foundation.

The objective of AMHEWAS is to strengthen the capacity of the African continent to develop, utilize, and integrate multi-hazard early warning systems as a means to reduce disaster risk and support climate adaptation and resilience. AMHEWAS provides a framework through which regional and national actors can access and interpret harmonized early warning products in a coordinated manner.

Why was AMHEWAS established?

Africa is exposed to a wide range of natural hazards, often compounded by limited coping capacities at national and local levels. Over the past two decades, the continent has experienced more than 1,400 disaster events, most of which are linked to floods, storms, and droughts. These impacts highlight the need for improved regional situational awareness, stronger early warning coordination, and mechanisms to support anticipatory action.

AMHEWAS was established in response to this need, strengthening collaboration, information sharing, and the operational use of early warning products at the continental, regional, and national levels. It also contributes to the objectives of the United Nations **Early Warnings for All (EW4All) initiative**, which aims to ensure that every person on Earth is protected by multi-hazard early warning systems by 2027 through strengthened risk knowledge, monitoring and forecasting, warning dissemination, and preparedness for response.

When was AMHEWAS launched?

The institutional and operational framework for AMHEWAS was endorsed by the 35th Ordinary Session of the Assembly of African Union Heads of State and Government in February 2022. Following this endorsement, AMHEWAS entered its implementation phase, focusing on establishing Situation Rooms and the strengthening of multi-hazard early warning capacities across the continent.

Where is AMHEWAS implemented?

AMHEWAS operates through a network of Situation Rooms established at multiple levels

- **Continental level**, at the AUC Headquarters in Addis Ababa, Ethiopia;
- **Regional level**, within Regional Economic Communities and specialized institutions;
- **National level**, through Situation Rooms hosted by Member States.

The **AMHEWAS Continental Situation Room**, located at the AUC Headquarters, serves as the central hub for monitoring and coordination, focusing on floods, storms, strong winds, heavy rainfall, and droughts. It collects and analyses real-time and forecast information from multiple sources and partners, supporting the production of early warning advisories to enable timely preparedness and early action.

AMHEWAS Situation Room Network

Situation Rooms currently include:

Continental

- Continental Situation Room (AUC), Addis Ababa-Ethiopia

Regional

- Multi-Hazard Early Warning Advisory Centre (ACMAD), Niamey - Niger
- ECOWAS Disaster Operation Centre, Abuja - Nigeria
- IGAD Disaster Operations Centre, Nairobi - Kenya
- SADC Humanitarian and Emergency Operations Centre, Nacala - Mozambique
- ECCAS Situation Room, Douala - Cameroon

National

- Emergency Operation and Communication Center Situation Room, Dodoma- Tanzania
- Early Warning Situation Room National Council for Civil Defense, Port Sudan - Sudan
- Salle de Veille, Niamey - Niger
- Sala de Situações do CENOE, Maputo - Mozambique
- National Disaster Operations Centre, Addis Ababa - Ethiopia

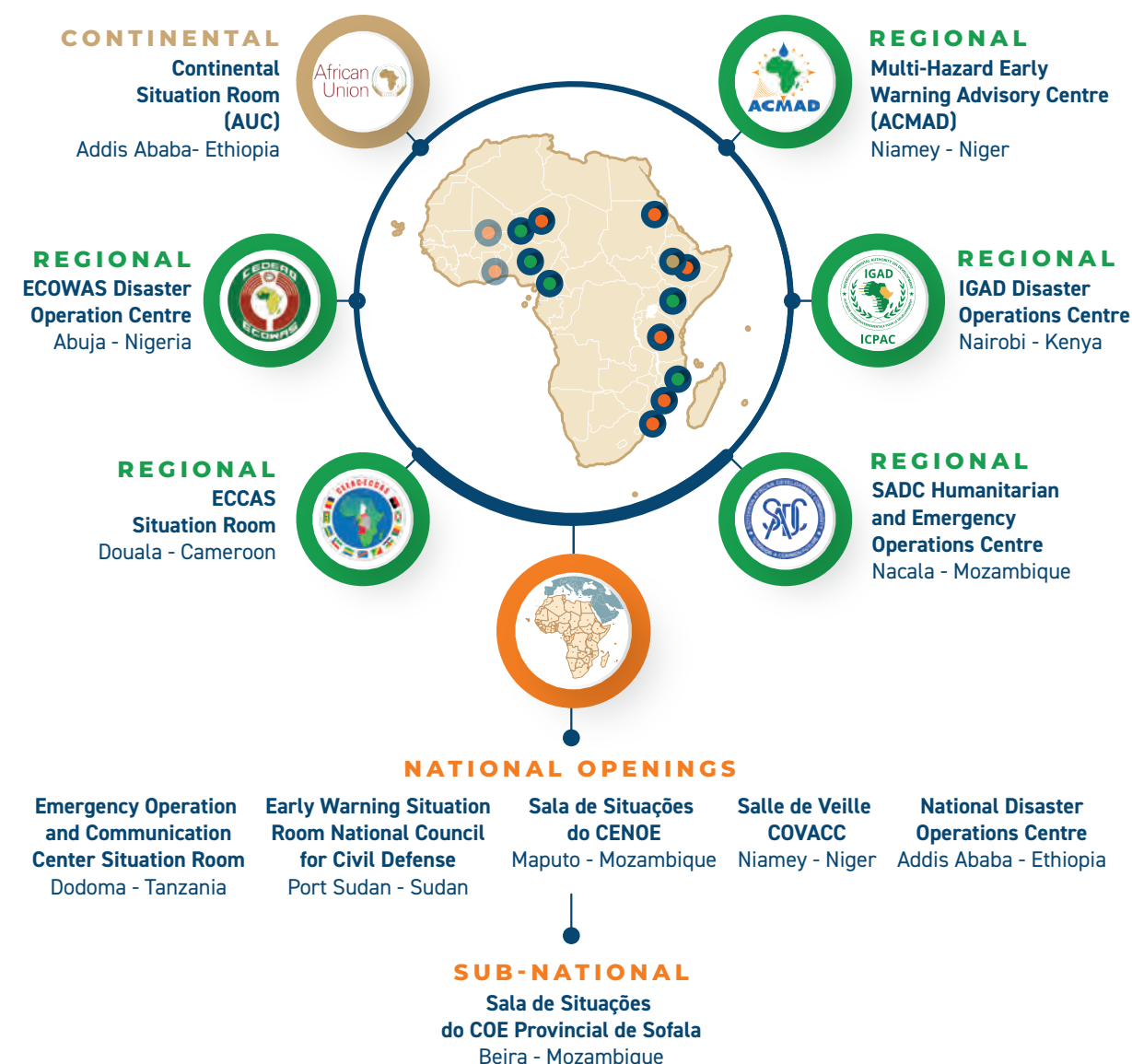
Sub-national

- Sala de Situações do COE Provincial de Sofala, Beira - Mozambique

Through this network approach, AMHEWAS strengthens vertical and horizontal coordination across levels, connecting decision-making bodies with

meteorological, hydrological, and climate centres, while ensuring clearly defined roles within the overall system.

AMHEWAS Network



For more information on AMHEWAS, please visit the link or scan the QR code:

<https://www.undp.org/africa/publications/africa-multi-hazard-early-warning-and-early-action-system>



Chapter 1 |
1.1. AMHEWAS products for
national Early Warning Systems

The AMHEWAS Continental Situation Room produces a set of early warning products, which are disseminated regularly to support situational awareness, preparedness, and coordination at the continental, regional, and national levels.

Although developed at a continental scale, they are designed to complement national early warning systems, providing perspectives that can inform national analysis, decision-making, transboundary cooperation and a shared understanding of evolving hazard conditions.

In the context of simulation exercises, AMHEWAS products can be used as key exercise injects, supporting discussion on how early warning information is interpreted and translated into action within national systems.

Continental Watch

The **Continental Watch** is the flagship product of the AMHEWAS Situation Room. It is a multi-hazard early warning bulletin providing an impact-oriented overview of emerging fast-onset weather risks across Africa.

It delivers a five-day outlook covering extreme precipitation, riverine flooding, and windstorms, using an impact-based classification ranging from Level 1 (lowest) to Level 4 (highest). This approach integrates hazard information with exposure, vulnerability, and coping capacity, highlighting potential consequences and advisories for affected countries.

The Continental Watch is issued twice per week (Tuesdays and Fridays) with technical contributions from AUC, ECCAS, SADC, ACMAD and ICPAC and technical and scientific support from UNDRR and CIMA. When a Level 4 severity is declared, an anticipatory action call may be triggered to support coordination and early action with affected member states.

Key elements

- Multi-hazard five-day outlook
- Impact-based severity levels
- Continental and regional coverage
- Predictable and regular issuance

Use within national early warning systems

- Provides an additional regional reference alongside RECs and national forecasts

- Supports preparedness and strategic coordination discussions
- Helps anticipate large-scale or transboundary hazard conditions.

Africa Drought Watch

The **Africa Drought Watch (ADW)** supports monitoring and early warning of drought conditions by providing information on rainfall deficits, vegetation stress and evolving drought patterns.

It is generated through a co-production process with AUC, RECs, RCCs, Member States and partners and is disseminated monthly. Given the slow-onset nature of drought, the ADW supports sustained monitoring and anticipatory planning over longer timeframes.

Use within national early warning systems

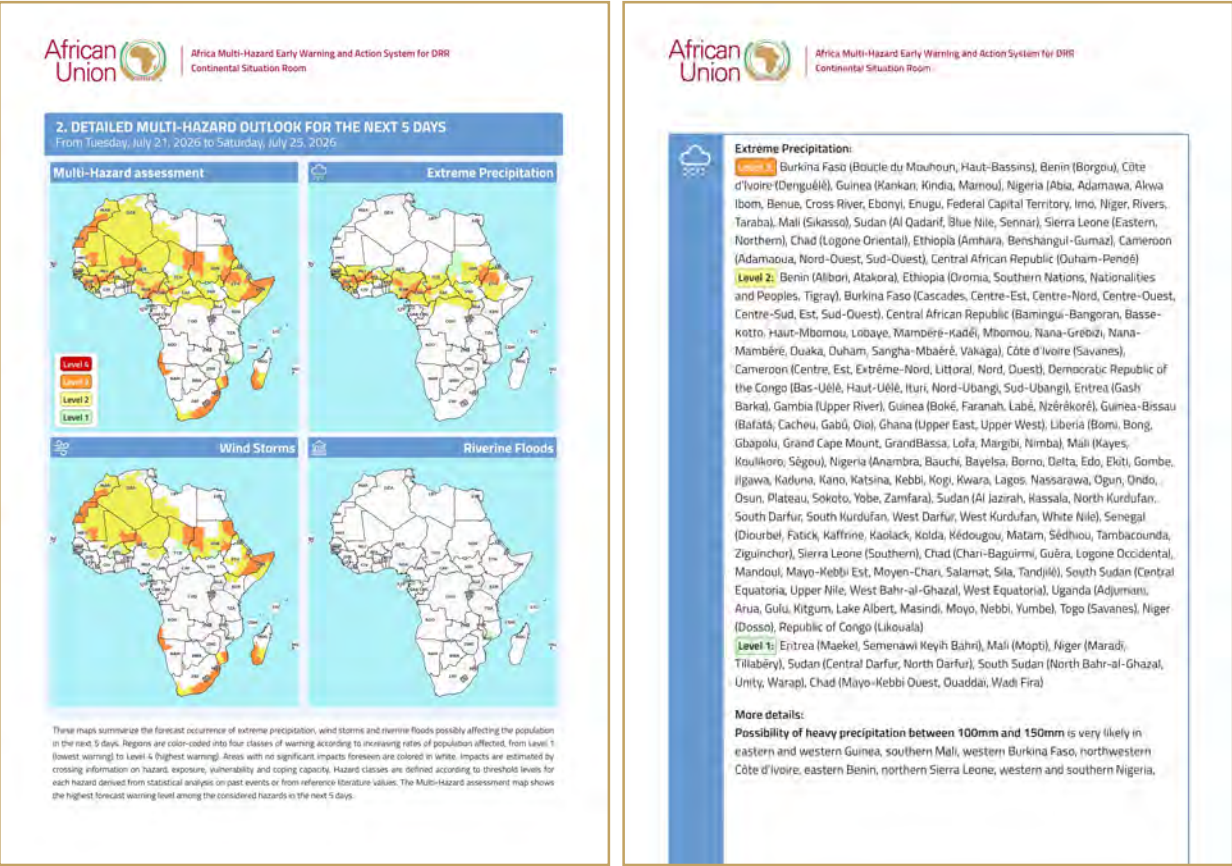
- Monitor medium and long-term drought trends alongside national indicators
- Informs preparedness across drought-sensitive sectors and contingency planning discussions

Disaster Situation Reports

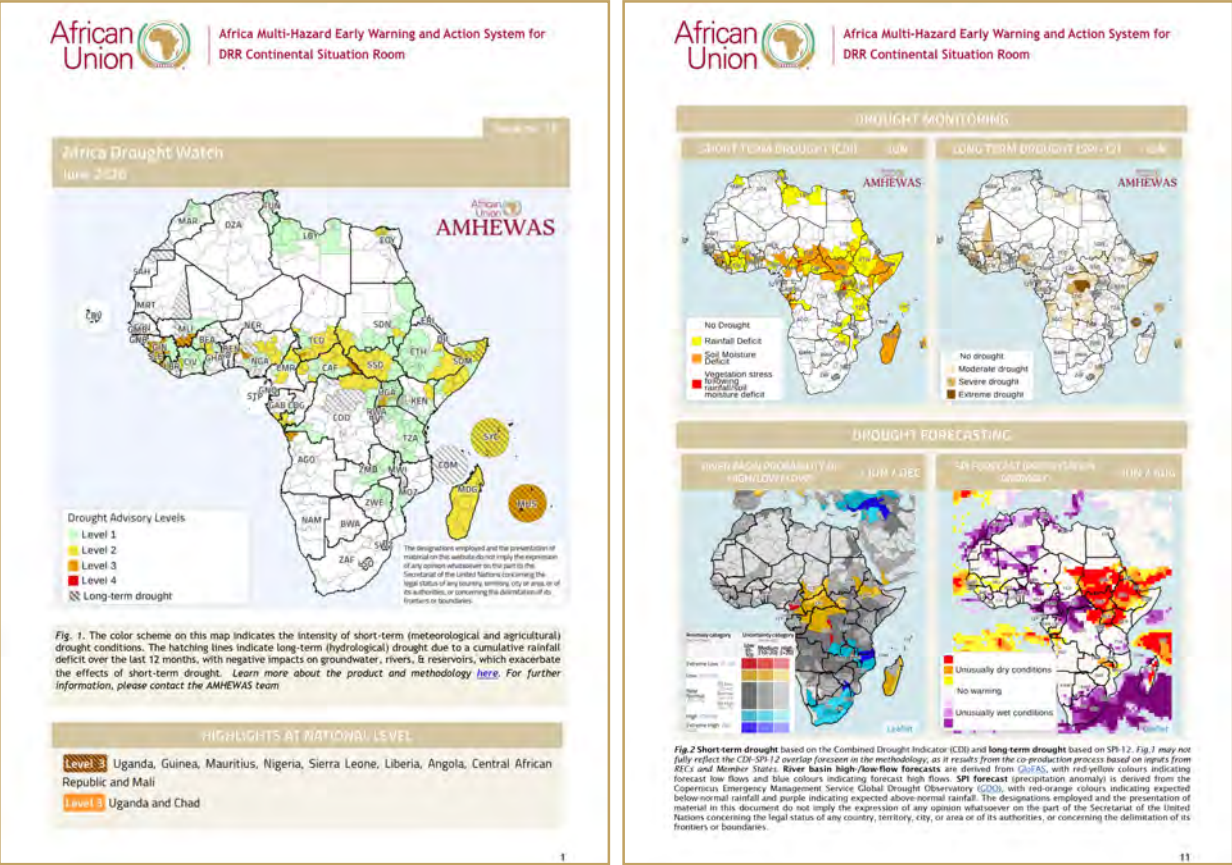
Disaster Situation Reports (SitReps) provide concise summaries of observed disaster events and their impacts. They describe the event, impacts, actions underway and expected evolution of the situation. SitReps are issued shortly after the onset or when significant changes occur, and may be updated during prolonged crises.

Use within national early warning systems

- Maintains a shared picture of observed impacts
- Supports coordination between early warning and response actors
- Informs prioritisation and resource mobilisation decisions



Two sample pages from the Continental Watch



Two sample pages from the Africa Drought Watch

Chapter 1 |

1.2. Challenges in the use of AMHEWAS products

The effective use of AMHEWAS products depends on broader efforts to strengthen early warning and early action systems. The availability of continental information alone does not guarantee its consistent operational integration at the national level.

Common challenges include:

- Limited awareness or familiarity with AMHEWAS products in some institutions;
- Inconsistent sharing of products across sectors;
- Lack of clear roles, procedures, and coordination mechanisms for their use in decision-making;
- Uneven technical and operational capacities across institutions and levels, which may affect the ability to systematically interpret and apply early warning information.

Addressing these challenges requires strengthening national ownership, enhancing institutional capacity,

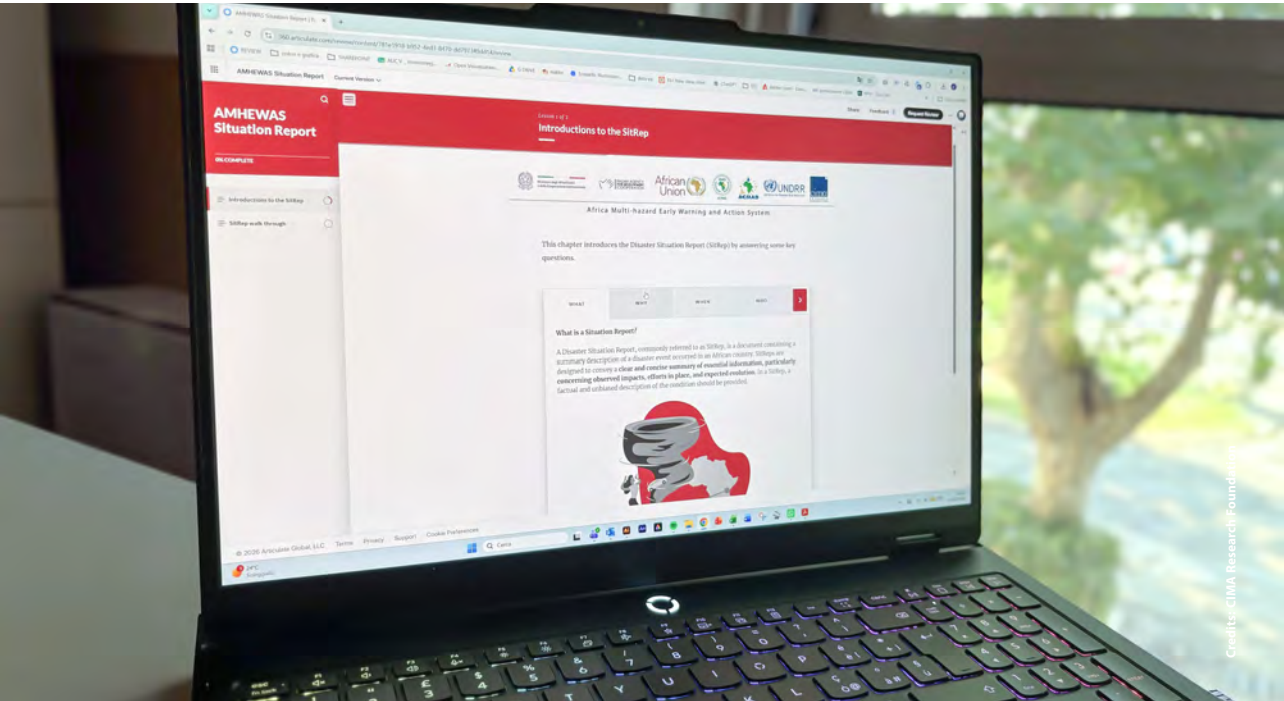
and establishing clear modalities for integrating AMHEWAS products into national workflows. Simulation exercises provide a practical mechanism to support this process. By using AMHEWAS continental early warning products in realistic, discussion-based scenarios, SIMEX allow institutions to:

- Practice interpreting continental early warning information in a national decision-making context;
- Clarify roles and responsibilities among early warning and early action actors at different levels;
- Test communication and information-sharing pathways across sectors;
- Identify operational gaps and agree on concrete improvements before real emergencies occur.

In this way, SIMEX contributes to strengthening coordinated preparedness and ensuring that AMHEWAS products effectively support timely early action.



For further information on AMHEWAS products, please visit the link or scan the QR code:
E-learning Course Introduction to AMHEWAS | E-learning Course Advanced AMHEWAS
<https://edu.cimafoundation.org/>



Chapter 2 | Simulation Exercises:

types and uses

Simulation exercises are structured learning and testing activities that allow institutions to explore how they would operate in hypothetical risk or emergency scenarios. They are widely used in disaster risk reduction, preparedness, and early warning to strengthen shared understanding, coordination, and decision-making - without the pressures and consequences of a real event.

In the context of early warning systems, simulation exercises provide a practical way to examine how risk information is produced, received, interpreted, shared, and used by different actors, and how it supports timely and coordinated decision-making and early action. Simulation exercises vary in their level of realism and in the resources required to plan and conduct them.

The selection of an appropriate exercise type should be guided primarily by the exercise objectives and informed by the local context and existing capacities (WHO, 2017). WHO recommends a building-block approach, whereby institutions begin with simpler formats and progressively move towards more complex exercises as familiarity, coordination, and capacity increase over time. For example, institutions may begin with simplified scenario-based workshops to build awareness, then move to tabletop exercises to test coordination and decision-making, and eventually to functional or full-scale exercises to assess operational readiness.

Chapter 2 |

2.1. Types of Simulation Exercises

Simulation exercises are commonly grouped into two broad categories: discussion-based exercises and operations-based exercises (Homeland Security, 2020; UCPM, 2024):

Discussion-Based Exercises

Discussion-based exercises (DBX) are structured, facilitated discussions in which participants work through a hypothetical or simplified scenario - or focus on a specific issue - to explore roles and responsibilities, coordination arrangements, and decision-making processes. Common DBX formats include:

- Seminars
- Scenario-based workshops
- Table-top exercises (TTX)
- Scenario-based games

Seminar

Purpose: To orient participants and provide an overview of relevant plans, policies, procedures, or key concepts and products.

Approach: Primarily based on presentations and guided discussion, seminars are often used to

build baseline awareness before moving into more interactive exercise formats.

Workshop

Purpose: To develop or improve the use of a specific process or product (e.g., AMHEWAS products, draft SOP, coordination process)

Approach: More hands-on than a seminar, workshops bring participants together to collaborate, refine ideas, and produce practical outputs through structured group work.

Table-top Exercise (TTX)

Purpose: To assess and discuss how existing plans and procedures would function during a hypothetical hazard scenario.

Approach: A facilitated discussion based on a scripted scenario and guiding questions, designed to surface strengths, gaps, and key decision points. Participants respond as they would in their institutional roles, discussing how they would:

- interpret and use early warning information;
- share information across sectors;
- coordinate with other actors;

- support decision-making as the scenario evolves
- Although still discussion-based, table-top place greater emphasis on sequencing and timing, allowing participants to examine how decisions may change as new information becomes available.

Scenario-based games

Purpose: To explore decision-making, coordination, and problem-solving in a simulated environment through interactive and often role-based participation.

Approach: Scenario-based games are discussion-based exercises that use structured rules, simulated inputs, and participant interaction to examine how individuals and institutions may respond to evolving hazard situations. They are typically designed to encourage engagement, creativity, and experimentation, allowing participants to test strategies, explore alternative courses of action, and better understand the implications of decisions in a low-risk setting.

Games may be used to complement tabletop exercises by increasing participant involvement and reinforcing learning objectives in an accessible, interactive manner.

Operations-Based Exercises

Operation-based exercises (OBX) are more complex and resource-intensive formats that simulate real-time operational activities and emergency response actions. They are used to test the practical implementation of plans, procedures, and coordination mechanisms under realistic conditions. Common OBX formats include:

- **Drills**
- **Functional Exercises (including CPX)**
- **Full-Scale Exercises**

Drill

Purpose: To test a specific operational function or procedure, such as communications protocols, evacuation processes, or the issuance of alerts.

Approach: Drills are typically short, focused activities designed to practise and validate a single task or capability, often involving a limited number of participants or institutions.

Functional Exercise

(including Command Post Exercise - CPX)

Purpose: To test command-and-control structures, multi-agency coordination, and information management during a simulated emergency.

Approach: CPX are conducted from command or coordination centres and focuses on strategic and operational decision-making, often involving multiple institutions working together under realistic time pressures.

Full-Scale Exercise

Purpose: To evaluate overall operational readiness and the integrated response capacity of multiple actors under near-realistic conditions.

Approach: Full-scale exercises involve deploying personnel and resources in the field and simulating an emergency as closely as possible. They require significant planning, logistics, and coordination, and are used to validate systems, agreements, and procedures at scale.

SIMEX - SIMULATION EXERCISES



DBX

DISCUSSION-BASED EXERCISES

- **Drills**
- **Functional Exercises** (including Command-post exercises - CPX)
- **Full-scale exercises**



OBX

OPERATIONAL-BASED EXERCISES

- **Seminars**
- **Scenario-based workshops**
- **Table-top exercises (TTX)**
- **Scenario-based Games**

Chapter 2 | 2.2. SIMEX formats covered in this Handbook

For the purposes of this handbook, the focus is placed on scenario-based workshops and tabletop exercises, as these formats are well-suited to strengthening the interpretation and operational use of AMHEWAS products.

Discussion-based exercises are generally more feasible to organise than full-scale operational simulations and require fewer logistical and financial resources. They can therefore be implemented effectively across a wide range of national contexts, including where institutional capacities and prior experience with exercises may vary.

Importantly, they offer a structured and supportive environment in which relevant institutions can examine the use of early warning information, clarify roles and coordination arrangements, and identify areas for improvement, without the pressures and constraints associated with real-time emergencies.

The following chapters provide step-by-step guidance on planning, designing, implementing, and following up on simulation exercises, with dedicated toolkits to support each phase.

DBX DISCUSSION-BASED EXERCISES

SCENARIO-BASED WORKSHOPS

Purpose

Build familiarity with AMHEWAS products and identify entry points for national integration.

Experience level

Most suitable when AMHEWAS products are new or not yet systematically used.

Timing and sequencing

No strict sequencing or time pressure; emphasis on shared reflection.

Discussion focus

Understanding, interpretation, roles clarification, and coordination entry points.

Roles

Participants discuss general institutional roles and integration opportunities.

Facilitation

Light facilitation requirements and limited Inject management.

Outputs

Shared understanding, priority integration actions, and coordination recommendations.

TABLE-TOP EXERCISES (TTX)

Purpose

Examine how AMHEWAS information supports structured decision-making and coordination as a situation evolves.

Experience level

Appropriate when AMHEWAS products are already known or partially embedded in national systems.

Timing and sequencing

Scenario unfolds through multiple phases over simulated time. Progressive inject delivery with realistic sequencing and evolving decision points.

Discussion focus

Operational coordination dialogue, escalation pathways, and timing of early action decisions.

Roles

Participants respond according to their formal roles and responsibilities within the ON-EA system.

Facilitation

More structured facilitation, often supported by METJML tools and EXCON functions.

Outputs

Identification of decision points, coordination gaps, and system improvements under realistic scenario progression.

AMHEWAS SIMEX Handbook & Toolkit

Handbook and Toolkit at a glance

This handbook and toolkit support the African Union Commission (AUC), the United Nations Office for Disaster Risk Reduction (UNDRR), Regional Economic Communities (RECs), the Africa Network of Centres of Excellence for DRR (NoE), and national Disaster Risk Reduction (DRR) authorities to plan and implement discussion-based exercises (DBX) to strengthen the use and integration of AMHEWAS products within national early warning systems (EWS). The approaches suggested in this handbook promote gender-responsive and disability-inclusive practices in line with inclusive DRR principles.

AMHEWAS products covered

This handbook focuses on three key AMHEWAS products that can complement national monitoring and decision-making processes:

- Continental Watch
- Drought Watch
- Disaster Situation Reports (SitReps)

These products provide regional early warning and situational awareness information that can support anticipatory action and promote a shared understanding of risk across institutions and levels.

What is a SIMEX?

Simulation exercises (SIMEX) are structured learning and testing activities that allow institutions to explore how they would operate in hypothetical risk or emergency scenarios. They are widely used in disaster risk reduction, preparedness, and early warning systems to strengthen shared understanding, coordination, and decision-making - without the pressure and consequences of a real event. In the context of early warning systems, SIMEX provides a practical way to examine how warning information is produced and received, interpreted, shared, and used by different actors, and how that information supports timely and coordinated decisions and early action.

SIMEX formats used in this handbook

SIMEX can be grouped into two broad categories:

Discussion-Based Exercises (DBX): structured, facilitated discussions that help participants explore roles, coordination arrangements, and decision-making using a hypothetical scenario or focused topic. DBX formats include: seminars, scenario-based workshops, table-top exercises (TTX), and games.

Operations-Based Exercises (OBX): real-time response simulations (e.g., drills, functional and full-scale exercises, used to test operational procedures and resource deployment.

For the purposes of this handbook, and to support the integration of AMHEWAS products into national early warning systems (EWS), the focus is on discussion-based exercises, specifically:

- Scenario-based workshops
- Table-top Exercises (TTX)

How to use the Handbook

The handbook follows the discussion-based exercise (DBX) cycle and provides step-by-step guidance across four phases:

1. **Planning:** define context, objectives, stakeholders, teams, timeline, and readiness
2. **Design:** develop the scenario and injects using AMHEWAS products
3. **Implementation:** facilitate the exercise and document key discussion points
4. **Debrief and follow-up:** consolidate recommendations, develop an After Action Report, and agree on improvement actions

What the toolkit provides

Each phase of the DBX cycle is supported by practical tools that enable planners and facilitators to apply the handbook guidance consistently and operationally.

The toolkit includes templates, checklists, and structured worksheets that can be used directly or adapted to different national contexts, hazard profiles, institutional arrangements, and resource levels.

TOOLKIT

CHAPTER 3 Planning a DBX

- Factsheet 3.1 - Country Context Profile and AMHEWAS Baseline Assessment
- Factsheet 3.2 - DBX Objectives and Format
- Factsheet 3.3 - DBX Stakeholders and Participants
- Factsheet 3.4 - DBX Teams
- Factsheet 3.5 - DBX Timeline Template
- Factsheet 3.6 - DBX Budget Template

TO DOWNLOAD THE
PDF VERSION
YOU CAN SCAN
THIS QR CODE



TO DOWNLOAD THE
EDITABLE VERSION
YOU CAN SCAN
THIS QR CODE



CHAPTER 4 Designing a DBX

- Factsheet 4.1 - DBX Scenario and Injects
- Factsheet 4.2 - DBX Workflow and Structure
- Factsheet 4.3 - DBX Evaluation Planning and Documentation
- Factsheet 4.4 - DBX Logistics and Communications

TO DOWNLOAD THE
PDF VERSION
YOU CAN SCAN
THIS QR CODE



TO DOWNLOAD THE
EDITABLE VERSION
YOU CAN SCAN
THIS QR CODE



CHAPTER 5 Implementing a DBX

- Factsheet 5.1 - DBX Setting up
- Factsheet 5.2 - DBX Training and Briefing
- Factsheet 5.3 - DBX Facilitating and Control
- Factsheet 5.4 - DBX Monitoring and Evaluation

TO DOWNLOAD THE
PDF VERSION
YOU CAN SCAN
THIS QR CODE



TO DOWNLOAD THE
EDITABLE VERSION
YOU CAN SCAN
THIS QR CODE



CHAPTER 6 DBX Debriefing and Follow-up

- Factsheet 6.1 - Debriefing
- Factsheet 6.2 - After Action Report and Improvement Plan

TO DOWNLOAD THE
PDF VERSION
YOU CAN SCAN
THIS QR CODE



TO DOWNLOAD THE
EDITABLE VERSION
YOU CAN SCAN
THIS QR CODE



Chapter 3 | Planning a Discussion-Based Exercise

As highlighted in the preceding sections, discussion-based simulation exercises represent an effective and accessible approach for strengthening preparedness, coordination, and decision-making within early warning-early action systems. In the context of AMHEWAS, these exercises provide a structured and low-risk environment in which national institutions can examine how continental early warning products are interpreted, communicated, and applied alongside national information to support timely early action.

In line with the SIMEX cycle outlined earlier, discussion-based exercises typically progress through four interlinked stages - **planning, design, implementation, and debriefing and follow-up** - which together frame the development, delivery, and consolidation of learning from the exercise.

Any simulation exercise cycle begins with careful planning. This initial phase is essential to ensure that the exercise is context-appropriate, institutionally grounded, and aligned with national priorities and capacities.

The following chapter therefore, outlines the key planning steps required to prepare a meaningful and effective discussion-based exercise, before moving into the design and implementation phases. Key planning steps include:

- Analysis of the country context and early warning system profile
- Definition of DBX objectives and selection of an appropriate format
- Identification of relevant stakeholders and exercise participants
- Establishment of the DBX planning and facilitation teams
- Development of the exercise timeline and preliminary budget
- Assessment of participant training needs

Each step is supported by a dedicated toolkit, including practical templates, checklists, and guiding questions to help facilitators prepare exercises that are feasible, context-appropriate, and aligned with national priorities.

National early warning and early action system (EW-EA) structure
A summary of how early warning information is produced, coordinated, communicated and acted upon, including the key institutions involved (e.g. DRM authority, meteorological and hydrological services).

Institutional and coordination arrangement
An overview of relevant legal frameworks, mandates, and coordination mechanisms that clarify roles, responsibilities, and decision-making processes.

Stakeholder mapping and information flow
Identification of the main actors, roles, and responsibilities across early warning, preparedness, and early action, including coordination pathways and key sectors requiring engagement. This should also capture how warning information is produced, validated, and disseminated, how it reaches different audiences through appropriate, inclusive and accessible channels, and whether feedback mechanisms exist to confirm receipt and understanding, particularly among at-risk and underserved groups.

Existing plans, procedures, and products
Key national contingency plans, SOPs, coordination protocols, and examples of warning products. Previous after-action reviews or evaluations may also highlight areas for improvement.

Current access to and use of AMHEWAS products
A practical mapping of whether and how AMHEWAS products are received, interpreted, shared, and applied nationally, including varying levels of familiarity and capacity. This can be assessed through short interviews or focus group discussions with relevant institutions.

Discussion-based exercise and facilitation experience
An overview of prior exercise experience, including familiarity with discussion-based formats, facilitation capacity, and any constraints related to participation, language, time, or logistics.

Once completed, the country-context profile should guide the selection of an appropriate DBX approach and inform subsequent planning and design steps.

See Toolkit Factsheet 3.1 for a practical template and guiding questions.

Chapter 3 | 3.1. Country-context and EWS profile

A strong discussion-based exercise (DBX) begins with a clear understanding of the national context in which it will be conducted. Country contexts differ in hazard profiles, early warning maturity, institutional arrangements, and coordination mechanisms. The first step in planning a DBX is therefore to develop a concise country-context profile that supports the design of a realistic and relevant exercise.

This profile is not intended to be a comprehensive assessment of national disaster risk management capacity. Rather, it is a practical planning tool to ensure that the DBX is aligned with national realities and that the integration of AMHEWAS products can be meaningfully explored within early warning and governance systems.

A country-context profile provides the foundation for decisions on:

- The hazard(s) and time horizon to be used in the exercise;
- The AMHEWAS products most relevant to the scenario and their current level of national use;
- The institutions and functions that should be engaged;
- The most appropriate DBX format (scenario-based workshop or table-top exercise);
- The intended objectives and expected outputs of the exercise.

Key elements to capture
The country-context profile should include the following core elements:

Hazard and risk context
A brief overview of recurrent or high-impact hazards, including recent events, seasonal patterns, and geographic hotspots.

Chapter 3 | 3.2. DBX Objectives and Format

Defining clear and realistic objectives is a critical step in DBX planning. Objectives guide all subsequent decisions, including which AMHEWAS products to include, which institutions should participate, how the scenario should unfold, and what outputs should be produced.

In line with the focus of this handbook, DBX objectives should concentrate on strengthening the operational use and integration of AMHEWAS products within national early warning systems, rather than on testing technical performance or validating forecasts. Objectives should be practical, aligned with national priorities, and achievable within available time and resources.

3.2.1. Defining the DBX objectives
DBX objectives should describe what the exercise is expected to achieve, in terms of learning and improvement. Well-formulated objectives are:

- **Specific:** focused on one clear aspect of integration (access, interpretation, sharing, or use for decision-making);
- **Relevant:** linked to national coordination and early warning processes;
- **Realistic:** appropriate to the country context and the selected format;
- **Actionable:** likely to generate practical recommendations and follow-up actions.

In many cases, it is useful to define one overall objective, supported by two to four supporting objectives.

Examples of DBX objectives include:

- Assess how information from the Continental Watch/Drought Watch is interpreted alongside national forecasts, including the use of impact-based thresholds (where available) and/or hazard-based thresholds.
- Clarify how AMHEWAS information is communicated and applied within national systems to support early warning messaging and early action decision-making, including key responsibilities and decision points.
- Strengthen coordination and information exchange between continental, regional and national actors
- Examine how AMHEWAS products fit into existing national workflows and timelines;
- Identify institutional or regulatory factors that may enable or limit the formal uptake and systematic integration of AMHEWAS products within national early warning systems.

3.2.2. Choosing the DBX format

Selecting the most appropriate DBX format is an important step in planning. The format should be guided by the national context and, in particular, the level of familiarity with AMHEWAS products and the type of coordination and decision-making processes that the exercise aims to explore.

Format selection should take into account:

- The agreed exercise objectives;
- The current stage of AMHEWAS product familiarity and use;
- The complexity of coordination and decision-making processes to be examined;
- The time available, facilitation capacity, and resources.

Key questions to guide format selection (adapted from UNDRR, 2020) include:

- **Exercise objectives:** What is the DBX expected to achieve?
- **Scope of integration:** Which AMHEWAS products will be explored (e.g., Continental Watch, Drought Watch, SitReps) and which national use pathways will be examined?
- **Hazard focus:** Which hazard(s) and risk context will be used to structure the scenario (e.g., floods, drought, extreme rainfall, wind storms, multi-hazard)?
- **Expected outputs:** What practical outputs should

result from the DBX (e.g., agreed integration entry points, coordination improvements, follow-up actions)?

Two common planning contexts are often observed:

A. Limited familiarity with AMHEWAS products

In contexts where AMHEWAS products are new or not yet in use, the primary goal is to build shared understanding of continental early warning information and clarify how these products can support national early warning functions. Typical objectives may include:

- Strengthening awareness and basic understanding of AMHEWAS products;
- Clarifying roles and responsibilities related to receiving and sharing AMHEWAS products at the national level;
- Exploring linkages between AMHEWAS products and existing national early warning arrangements;
- Identifying initial opportunities and priority entry points for integration.

Recommended format: Scenario-based workshop

B. Existing familiarity and use of AMHEWAS products

In contexts where AMHEWAS products are already known and used to some extent, the primary goal is to strengthen routine and consistent use across institutions and improve coordination and decision-making as a situation evolves. Typical objectives may include:

- Assessing how AMHEWAS information is interpreted and considered alongside national forecasts and monitoring data;
- Examining how AMHEWAS products inform national early warning messaging and early action decision points;
- Strengthening coordination mechanisms and information exchange across institutions and levels;
- Identifying practical improvements for workflow integration under realistic constraints (e.g., timing, latency, capacity).

Recommended format: Table-top Exercise (TTX)

In practice, a phased approach may be applied, starting with discussion-based workshops and progressively moving towards tabletop exercises as familiarity and confidence increase.

Common SIMEX objective	Recommended DBX
Introduce AMHEWAS products to key national institutions	Scenario-based workshop
Build a shared understanding of AMHEWAS content and purpose	Scenario-based workshop
Explore how AMHEWAS products complement national early warning products	Scenario-based workshop or TTX
Strengthen interpretation and information flow across institutions	TTX
Examine coordinated use of AMHEWAS products for early warning decision-making over time	TTX
Identify actionable improvements for integration into national workflows	Scenario-based workshop or TTX

See Toolkit Factsheet 3.2 for a practical template and guiding questions.

Chapter 3 | 3.3. DBX Stakeholders and Participants

The identification of participants is a critical step in ensuring that the discussion-based exercise is realistic, representative, inclusive, and capable of generating practical recommendations. Early warning and early action require coordination across multiple institutions and sectors. For this reason, the effectiveness of a DBX depends largely on engaging the most relevant actors throughout the planning, implementation, and follow-up phases.

Participant identification should build on the country-context profile developed in step 3.1, as well as on the DBX objectives and the selected format. The focus is not on involving as many institutions as possible, but on ensuring that participation reflects the key functions required to interpret and share early warning information, support decision-making, and enable coordinated action.

Participants should be selected based on their role within the national early warning and early action cycle and their relevance to the exercise objectives. In most contexts, the following principles apply:

- **Relevance to exercise objectives:** Include institutions that contribute directly to the receipt, interpretation, sharing, and use of AMHEWAS products.
- **Representation of key functions:** Ensure participation reflects core functions, including hazard monitoring, coordination, sectoral preparedness, and decision support.
- **Multi-sector engagement:** Include sectoral institutions based on the selected hazard(s) and expected impacts (e.g., agriculture, water, health, transport, social protection).
- **Linkages across levels:** Where feasible, include national-sub-national actors, particularly those responsible for coordination and implementation at provincial, regional, or district level.
- **Inclusiveness and feasibility:** Keep participation manageable for the selected format, ensuring an appropriate balance between technical and decision-making roles, while promoting gender-responsive and disability-inclusive participation.

Institutional levels within the AMHEWAS Framework

Depending on the scope and objectives, a DBX may involve institutions operating at different levels, including:

- **Continental level:** Representatives of the AMHEWAS Continental Situation Room with expertise on AMHEWAS products;
- **Regional level:** Representatives of the relevant REC Situation rooms, regional climate centres and technical partners;
- **National level:** key institutions identified through national stakeholder mapping, including the national DRR focal point and relevant early warning coordination mechanisms.

Functional categories of participants

For planning purposes, it is often helpful to group participants into three broad functional categories:

See Toolkit Factsheet 3.3 for a practical template and guiding questions.

- **Early warning actors:** Institutions responsible for monitoring hazards and issuing warnings (e.g., meteorological and hydrological services, climate centres, and technical units within DRM institutions). This group supports discussion on how AMHEWAS products complement national warning information.
- **Decision-making actors:** Institutions responsible for analysing information and triggering coordination, preparedness, or early action decisions (e.g., DRM authorities, coordination bodies, decision support units).
- **Early action actors:** Institutions and partners responsible for implementing actions based on early warnings, including line ministries, emergency services, humanitarian and civil society partners - including women-led orgs (WLOs) and organizations of persons with disability (OPDs) - and other operational actors relevant to the selected hazard(s).

Chapter 3 |

3.4. DBX Teams

The organisation of a discussion-based exercise requires a clear assignment of roles and responsibilities. Not all institutions and individuals participate in the same way throughout the DBX cycle. Defining roles supports effective preparation, facilitation, documentation, and follow-up.

- **Planning roles:** Actors involved in defining objectives, validating the hazard focus, and supporting key design decisions;
- **Player roles:** Participants who engage in the scenario discussion and contribute from their institutional perspective during the exercise;
- **Exercise Control (EXCON) roles** (primarily for table-top exercises): Individuals responsible for managing the overall flow of the exercise, including sequencing scenario phases and injects, time management, and coordination with facilitators;

- **Facilitation and subject-matter expertise:** Individuals who guide the discussion and provide technical clarification to support realistic framing;
- **Evaluation and documentation:** Individuals responsible for capturing key discussion points, decisions, lessons identified, and practical recommendations.

For AMHEWAS-focused DBX, a small number of core teams are typically required to plan, deliver, and document the exercise. The size and composition of these teams should be adapted to the selected format and available resources. In smaller exercises, responsibilities may be combined across individuals; however, roles should remain clearly defined.

Across all formats, subject-matter expertise should be available to support accurate interpretation of AMHEWAS products and strengthen the relevance of the discussion.

Planning Team

The Planning Team is responsible for preparing and organising the DBX. This includes defining the exercise scope and structure, developing background materials, and ensuring that technical inputs and logistical arrangements are in place.

As a general principle, members of the planning team should not take on “player” roles during table-top exercises to preserve neutrality and support smooth facilitation. For scenario-based workshops, this separation may be applied more flexibly.

Exercise Control Function (EXCON) (primarily for TTX)

The Exercise Control (EXCON) function refers to the team responsible for managing the overall flow of the exercise during implementation. In a table-top exercise, this includes sequencing scenario phases and injects, managing time, coordinating with facilitators, and ensuring alignment with the agreed scope and objectives.

EXCON should include relevant subject-matter expertise (e.g., meteorology, hydrology, climate services, early warning communication, anticipatory action), drawing on continental, regional, and national capacities as appropriate.

Facilitation Team

The Facilitation Team guides the discussion during the exercise and supports effective participation across institutions. Facilitators help maintain focus on the exercise objectives, manage group dynamics, and ensure that key issues are explored within the available time.

In tabletop exercises, facilitators work closely with the EXCON, and responsibilities may partially overlap depending on the scale of the exercise.

Evaluation and Documentation Team

The Evaluation and Documentation Team captures key discussion points, decisions, coordination issues, and practical recommendations emerging during the exercise. This may include using structured observation forms aligned with the exercise objectives.

For seminars and workshops, documentation may focus on consolidating key messages, agreed actions, and follow-up priorities. Evaluators and rapporteurs may include national, regional, and continental representatives, as well as technical partners, depending on the scope of the exercise.

See Toolkit Factsheet 3.4 for a practical template and guiding questions.



Chapter 3 |

3.5. DBX Timeline and Budget

3.5.1. Develop the DBX timeline

DBX planning typically follows a sequence of milestones, from initial consultations to exercise delivery and follow-up. While the overall duration will depend on the country context and the selected format, a structured timeline helps ensure that critical tasks are not rushed and that exercise quality is maintained.

When developing a timeline, planners should consider the following factors (*adapted from CIMA, 2026*):

- **Exercise format and scope:** A table-top exercise generally requires more preparation than a scenario-based workshop. Delivery time may range from a few hours to a full day.
- **Participants' familiarity with discussion-based exercises:** Where institutions have prior experience, planning can progress more efficiently. Where experience is limited, additional time may be required to clarify the approach and build ownership.
- **Participants' familiarity with AMHEWAS products:** If familiarity is limited, additional time may be needed for orientation on relevant products, such as a short seminar or prior to the exercise.
- **Availability of key participants:** The timeline should reflect institutional readiness and availability for consultations, planning meetings, and preparatory work.
- **Seasonality and operational constraints:** Exercise timing should consider seasonal hazard patterns and periods when institutions may already be managing real events (e.g., peak rainy season). Where possible, DBX should support preparedness, ahead of high-risk periods.
- **Time for analysis and follow-up:** Adequate time should be allocated after implementation to consolidate findings, develop recommendations, and validate follow-up actions with stakeholders.

The DBX timeline should be reviewed regularly and adjusted as necessary throughout the planning and design process.

3.5.2. Plan the DBX Budget

Discussion-based exercises can often be implemented with limited resources; however, planners should still assess budget requirements to ensure that essential costs are anticipated and covered. A clear budget supports transparency, strengthens coordination among partners, and enables realistic decisions on the scope and scale of the exercise. Budget planning should consider costs across all phases of the DBX cycle. Typical categories may include:

- **Personnel and human resources**
 - » Staff time for planning, facilitation, documentation, and follow-up;
 - » Fees or costs for external experts, facilitators, or evaluators, where applicable.
- **Services and operational support**
 - » Meeting venue costs;
 - » Catering for in-person sessions;
 - » Interpretation and translation services
 - » Online meeting platforms and technical support.
- **Supplies and materials**
 - » Printing of participant packs and exercise materials;
 - » Basic communication materials (e.g., badges, name tags).
- **Travel and subsistence**
 - » Travel and per diem for facilitators, experts, or observers;
 - » Participant travel support, where applicable

Where possible, resources already available within participating institutions (e.g., meeting rooms, basic equipment, and staff time) should be leveraged to minimise costs and support national ownership.

See Toolkit Factsheet 3.5 for a practical template and guiding questions.

Chapter 3 |

3.6. Participants' Training Needs Assessment

An effective discussion-based exercise depends not only on good planning and design, but also on participants' ability to engage meaningfully with the exercise content. For exercises focused on strengthening the use and integration of AMHEWAS products within national early warning systems, it is important to confirm whether participants have a sufficient baseline understanding of:

- **AMHEWAS products**, including what they provide, how they are accessed, and how they complement national early warning information; and
- **DBX methodology**, including how the exercise is conducted, what is expected of participants, and how outputs will be captured.

This readiness assessment helps ensure that the exercise is appropriately paced, that technical content across institutions is consistent, and that the selected format supports inclusive participation. Differences in awareness, technical familiarity, and institutional responsibilities may affect how AMHEWAS products are interpreted and applied. Likewise, participants may have varying levels of experience with simulation exercises, which can influence the quality of discussion and engagement. A preparatory assessment supports planners to:

- Identify gaps in awareness and understanding of AMHEWAS products across institutions;
- Confirm whether participants require orientation on exercise roles and process;
- Determine whether short pre-briefings are needed prior to the exercise;
- Adjust facilitation approaches, terminology, and materials to match participant needs;
- Ensure that the exercise produces practical, usable outcomes.

Readiness screening should focus on practical capabilities linked to the exercise objectives. Key areas commonly include:

- **Familiarity with AMHEWAS products**
Awareness of the Continental Watch, Africa Drought Watch, and SitReps, including product content, timing, and confidence in interpreting key elements (e.g., severity levels, advisories).
- **Understanding of national early warning workflows**
Clarity on how warning information is received, interpreted, disseminated, and used nationally, including decision points and coordination arrangements relevant to early action.
- **Experience with discussion-based exercise formats**
Previous involvement in workshops or tabletop exercises, familiarity with exercise roles, and confidence in scenario-based discussion.
- **Facilitation and documentation capacity**
Availability of facilitators able to guide structured discussion, and capacity to capture key outputs, recommendations, and follow-up actions.

Where gaps are identified, planners may include short preparatory activities to strengthen readiness. These should remain proportionate and focused, and may include:

- A brief orientation on AMHEWAS products (purpose, content, timing, national use pathways);
- An exercise briefing explaining the format, roles, and expected outputs;
- Targeted preparation for facilitation and documentation teams.

See Toolkit Factsheet 3.6 for a practical template and guiding questions.

CHAPTER 3 - Planning a DBX

Factsheet 3.1. - Country Context Profile and AMHEWAS Baseline Assessment

How to use

Complete this factsheet during the DBX planning phase, through an initial desk review and a brief consultation with key national stakeholders (e.g. DRM authority, hydrometeorological services, relevant sector institutions). Where information is already well known, the consultation can be used to validate and update key details and to confirm priority gaps related to the use and integration of AMHEWAS products within the national early warning system.

Country: _____
 DBX Lead Institution: _____
 Hazard Focus: _____
 Focal Point / Contact: _____
 Date (DD/MM/YYYY): _____

A. National context and hazard focus

Field	Information
Main country hazard(s) ☐ Floods ☐ Storms/Wind ☐ Extreme rainfall ☐ Drought ☐ Other: _____	
Seasonal timing/ peak risk period(s)	
Most affected areas (regions/districts)	
Most exposed/ vulnerable groups (consider children, women and PWD)	
Recent major events 1) 2) 3)	Year: Year: Year:
Notes:	

B. National EW-EA System and institutional landscape

Field	Information
Lead National Disaster Risk Management Authority (Operational lead)	
Reporting line (Ministry/Office)	
Technical institutions (met/hydro/climate)	
National coordination mechanism(s) (e.g., EOC, Platform, Committee)	
Regional and continental mechanism(s) (REC, Climate Centres, AUC/AMHEWAS)	
Early Warning - Early Action link (Triggers: alert level, impact threshold, forecast, directive)	
Early Warning - Early Action link (Follow-up actions: briefing convened, EOC activation, sector actions, warning dissemination)	
Notes:	

C. Key stakeholders and Coordination

Stakeholder category	Institutions and roles
Core institutions	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
Sectoral institutions	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
Other relevant partners	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
	Institution: _____
	Role: _____
Notes:	_____

D. Warning information and communication flow

Summary
How are warnings produced and validated <i>(who does what and to whom)</i> _____ How is warning information shared across institutions _____ How do warnings reach sub-national levels /communities _____ Main gaps / bottlenecks observed _____ Notes: _____

E. Plans, procedures and national early warning products

Field	Information
Key plans /SOPs/protocols available	☐ National contingency plan ☐ SOPs ☐ Early warning protocol ☐ Other: _____
Examples of national warning products/bulletins collected	☐ Yes ☐ No
Main gaps identified <i>(including accessibility gaps for excluded groups)</i> _____ Notes: _____	

AMHEWAS knowledge and use baseline assessment

AMHEWAS products known/received:

☐ Continental Watch ☐ Drought Watch ☐ SitReps

National recipients receiving them (list main institutions/units):

How are AMHEWAS products received:

☐ Email ☐ Platform ☐ WhatsApp ☐ Other: _____

How are AMHEWAS products disseminated at national level (channels and recipients)?

Current use level of AMHEWAS products on the national Early Warning System

- ☐ **No use** (received but not used)
☐ **Partial use** (used occasionally / limited)
☐ **Routine use** (used consistently within national EWS processes)

In the national context, AMHEWAS products support decision-making through:

- ☐ National situation room / EOC coordination
☐ DRM authority internal briefing/preparedness meeting
☐ Hydromet technical analysis and interpretation
☐ Inter-ministerial coordination mechanism/platform
☐ Sectoral information (agriculture, water, health, etc.)
☐ Humanitarian coordination/partner briefings
☐ Other: _____

Main gaps observed:

- ☐ Products not received consistently/not reaching the right actors
☐ Limited awareness of products or unclear purpose
☐ Unclear roles for interpretation and onward dissemination
☐ Limited coordination between institutions around early warning information
☐ Information not presented in a decision-friendly way for national processes
☐ Competing sources/uncertainty on which information to prioritise
☐ Language, accessibility, or technical capacity barriers
☐ Other: _____

CHAPTER 3 – Planning a DBX

Factsheet 3.2. - DBX Objectives and Format

How to use:

Complete this factsheet after developing the country context profile (Factsheet 3.1). Use it to define clear and realistic DBX objectives and to select the most appropriate discussion-based exercise format (scenario-based workshop or tabletop exercise), based on national context, familiarity with AMHEWAS products and available time and resources. The objectives defined here will guide all subsequent design, facilitation, and evaluation decisions.

Hazard Focus:

Previous country experience with SIMEX: ☐ None ☐ Limited ☐ Moderate ☐ Strong

Exercise type(s) previously conducted: ☐ OBX ☐ DBX, specify (seminar, workshop, TTX, game): _____

Facilitation capacity available: ☐ Yes ☐ Partial ☐ No

Documentation/rapporteur capacity available: ☐ Yes ☐ Partial ☐ No

Key constraints: ☐ Time ☐ Budget ☐ Participation ☐ Logistics ☐ Language
☐ Other: _____

DBX Objectives

- _____
- _____

Expected outputs from the DBX

- ☐ Shared understanding of AMHEWAS products and national use pathways
☐ Practical recommendations to strengthen integration into national EWS
☐ Actions to improve information flow and coordination among institutions
☐ Agreed follow-up steps for national ownership and implementation
☐ Other: _____
☐ Other: _____
☐ Other: _____

Recommended DBX format

- ☐ **Scenario-Based Workshop** (roadmap for integration of AMHEWAS products/roles and decision-making)
☐ **Table-top Exercise (TTX)** (structured discussion across scenario phases)

Rationale

- ☐ AMHEWAS products are new /not systematically used nationally
☐ Familiarity is partial or uneven across institutions
☐ AMHEWAS products are already used; focus is on structured decision-making
☐ Need to explore sequencing, timing, and coordination over scenario phases
☐ Time/resources available favour this format
☐ Other: _____

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 3 – Planning a DBX

Factsheet 3.3. - DBX Stakeholders and Participants

How to use:
Complete this factsheet once DBX objectives and format have been confirmed. Use it to identify relevant institutions and participants, assign participation roles (e.g. planning, player, facilitator, observer), and ensure appropriate representation across early warning, decision-making, and early action functions. Participation should remain focused and manageable, reflecting the exercise objectives.

A. Stakeholders and Participants Plan

- Use the following categories to assign participation roles:
- **Planning:** supports objectives, validates scenario focus, contributes to design decisions
 - **Exercise Control (EXCON) - only for TTX:** responsible for managing the overall flow of the exercise (injects) during implementation
 - **Player:** participates in scenario discussion and decision-making during the exercise
 - **Facilitator/Subject Matter Expert (SME):** supports structured discussion and provides technical clarification
 - **Observer/Evaluator:** captures key points, lessons, decisions, and recommendations

Stakeholders and Participants plan

Institution / Stakeholder	Role in SIMEX	Representation level	Notes (name, language, etc)
National DRM authority / civil protection	☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national	
National Meteorological Service	☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national	
Hydrological service/water authority	☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national	
	☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national	
	☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national	

☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national
☐ Planning ☐ EXCON ☐ Player ☐ Facilitator/SME ☐ Observer/Evaluator	☐ Regional ☐ National ☐ Sub-national

Notes:

Minimum participation check

Confirm that the DBX includes:

- ☐ Lead national DRM authority/coordination mechanism
- ☐ Hydromet service (*met + hydro*)
- ☐ At least two key sector ministries
- ☐ AMHEWAS subject matter expert/focal point
- ☐ Decision-making representation (*coordination*)
- ☐ At least one person who receives AMHEWAS products from the AUC situation room (TTX)

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 3 – Planning a DBX

Factsheet 3.4. - DBX Teams

How to use:

Complete this factsheet during the planning phase, after confirming key stakeholders and participants. Use it to assign clear roles and responsibilities for planning, facilitation, exercise control (for TTX), technical support, documentation, and evaluation. In smaller exercises, one individual may cover multiple functions, but roles should remain clearly defined to support effective delivery and follow-up.

Team assignments

Function / Team role	Name	Institution	Contact	Responsibilities (short)
Exercise Lead				Overall coordination, approvals, final decisions
Planning and Design Lead				Scenario, injects, agenda coordination
Co-planners(s) and designer(s)				Support planning and design
EXCON (TTX only)				Controls the exercise, provides injects
Logistics and Communications				Venue/online, invitations, materials, comms
Lead Facilitator				Guides discussions, timekeeping, flow
Co-Facilitator(s)				Supports group work and facilitation
AMHEWAS Focal Point				Ensures correct use of CW/DW/SitReps
Technical SME (<i>met/hydro/climate</i>)				Technical clarification during exercise
Decision-making/early action SME				Supports decision-focused discussions
Documentation/Rapporteur				Captures key points, outputs, recommendations
Evaluation/AAR Lead				Leads debriefing and AAR drafting
Other (specify):				

Notes:

Coordination arrangements

- **Primary coordination channel** (email / WhatsApp / Teams): _____
- **Frequency of coordination meetings:** ☐ Weekly ☐ Biweekly ☐ As needed
- **Decision-making/approval authority:** _____
- **Document sharing platform:** _____

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 3 – Planning a DBX

Factsheet 3.5. - DBX Timeline and Budget

How to use:
Complete this factsheet during the planning meeting, once DBX objectives, format, and key stakeholders have been confirmed. Use the timeline to map key milestones across planning, design, implementation, and follow-up. Use the budget section to link anticipated costs to specific activities and milestones, and adjust estimates based on whether the DBX will be conducted in person, online, or in a hybrid format.

Timeline Template

Phase	Key task/milestone	Responsible	Deadline	Status/notes
Preparation	Confirm DBX objectives and format (Workshop/TTX)			
	Finalise hazard focus and AMHEWAS products to include			
	Confirm stakeholder list and participant roles			
	Establish DBX team and assign responsibilities			
Design	Draft scenario outline and exercise structure			
	Prepare draft injects (AMHEWAS + national information)			
	Prepare facilitation guide and session agenda			
	Confirm evaluation approach and documentation format			
Logistics	Confirm date, format, and venue/platform			
	Send invitations and confirm participation			
	Prepare participant materials (briefing pack, agenda, injects)			
	Technical checks (IT, connectivity, printing/projection)			
Implementation	Conduct briefing with facilitators and exercise team			
	Deliver DBX			

Debrief and Follow-up	Conduct hot debrief (immediately after exercise)
	Consolidate recommendations and improvement actions
	Draft After Action Report (AAR) and improvement plan
	Validation meeting and dissemination of outputs

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

DBX Budget template

DBX format: ☐ Scenario-based workshop ☐ TTX

Delivery modality: ☐ In-person ☐ Online ☐ Hybrid

Planned duration: ☐ Half-day ☐ 1 day ☐ 2 days

☐ Other: _____

Number of expected participants: _____

Number of locations: ☐ One venue ☐ Multiple venues / hubs

Languages / interpretation needed: ☐ No ☐ Yes, specify: _____

Budget table

Budget category	Description	Unit cost	Quantity	Sub-total	Notes
Venue and meeting costs	Room rental/meeting space				
	Catering (coffee/lunch)				
	Security /access /badges				
Travel and accommodation	Participant travel (domestic/regional)				
	Per diem/DSA				
	Accommodation				
Facilitation and technical support	Facilitator fees				
	Subject Matter Expert/ technical support				
	Rapporteur/documentation support				

Translation and interpretation	Interpretation (simultaneous/consecutive)
	Translation of materials
Materials and printing	Participant packs/printing
	Stationery/flipcharts
ICT equipment	Projector/screen/sound system
	Online platform subscription/data
	Technical support (IT)
Communications	Invitations/communications
	Media/visibility
Debrief and follow-up	AAR drafting workshop/session
	Editing /layout /design
Contingency funds	5-10% of total

Estimated total budget: _____

Funding source(s): _____

Budget approved by: _____

Approval date (DD/MM/YYYY): _____

C. Resource checklist

- ☐ Venue/online platform confirmed
- ☐ Participant invitations sent and confirmed
- ☐ Facilitator(s) confirmed
- ☐ AMHEWAS focal point/SME support confirmed
- ☐ Interpretation/translation arranged
- ☐ Printing/materials prepared
- ☐ ICT/AV requirements confirmed
- ☐ Documentation/rapporteur assigned
- ☐ Debriefing and follow-up resources planned

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 3 – Planning a DBX

Factsheet 3.6. - Participants Training Needs Assessment

Purpose:
To rapidly assess whether participants and institutions have the minimum level of familiarity required to engage effectively in a DBX focused on integrating AMHEWAS products into national early warning systems, or whether preparatory training is needed.

How to use:
Complete this checklist through a short call, interview, or planning meeting with key institutions. Use the results to identify gaps in familiarity with AMHEWAS products or DBX methodology and to determine whether brief orientations or preparatory sessions are required before the exercise.

Familiarity with AMHEWAS products

	Status	Notes/action needed
Key institutions are aware of AMHEWAS and its purpose	☐ Yes ☐ Partial ☐ No	
Participants recognise the Continental Watch	☐ Yes ☐ Partial ☐ No	
Participants recognise the Drought Watch	☐ Yes ☐ Partial ☐ No	
Participants recognise SitReps	☐ Yes ☐ Partial ☐ No	
Participants understand what each product contains (hazard/impacts/advisories)	☐ Yes ☐ Partial ☐ No	
Participants know where/how products are received nationally	☐ Yes ☐ Partial ☐ No	
Institutions know who interprets AMHEWAS information first	☐ Yes ☐ Partial ☐ No	
Institutions have a clear internal sharing practice	☐ Yes ☐ Partial ☐ No	

Understanding of national EW - EA workflows

	Status	Notes/action needed
Key decision points for early action are understood	☐ Yes ☐ Partial ☐ No	
Coordination mechanism(s) are known to participants	☐ Yes ☐ Partial ☐ No	
Communication flow among institutions is understood	☐ Yes ☐ Partial ☐ No	
Participants understand how AMHEWAS complements national information	☐ Yes ☐ Partial ☐ No	

SIMEX readiness and experience

	Status	Notes / action needed
Participants have participated in SIMEX before	☐ Yes ☐ Partial ☐ No	

Participants are familiar with Scenario-based workshops/TTX formats
 ☐ Yes ☐ Partial ☐ No

Participants understand what is expected of “players”
 ☐ Yes ☐ Partial ☐ No

Facilitators are available and capable to guide discussion
 ☐ Yes ☐ Partial ☐ No

Documentation capacity is available (rapporteur/note-taker)
 ☐ Yes ☐ Partial ☐ No

Summary: Priority training actions (top 3)

1. _____

2. _____

3. _____

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

Chapter 4 | Designing a Discussion-Based Exercise

Building on the foundations established during the planning phase, the next stage of the discussion-based exercise cycle focuses on design. The design phase translates planning elements into a coherent exercise concept. This includes developing a realistic scenario, preparing exercise injects and discussion guidance, establishing an evaluation approach and finalising the materials and arrangements required to support implementation.

In the context of AMHEWAS integration, the design phase is particularly important to ensure that continental early warning products are meaningfully incorporated into the exercise as key inputs. Well-designed scenarios and injects enable participants to examine how AMHEWAS information is interpreted, communicated, and used alongside national early warning products to support coordinated early action.

This chapter provides practical guidance on developing the core components of a DBX, ensuring that the exercise is structured, context-appropriated, and aligned with national systems and capacities. By the end of this chapter, readers will have the tools and materials necessary to deliver a well-designed exercise and to capture actionable outcomes. The design phase includes the following key steps:

- **Development of the DBX Scenario and Injects**
- **Preparation of the DBX Workflow and Structure**
- **Planning the DBX Evaluation Process and Documentation**
- **Arranging the DBX Logistics and Communications**

Each step is accompanied by a practical toolkit with dedicated planning tools, including templates and checklists, to support facilitators in preparing exercises that are feasible, context-appropriate, and aligned with national priorities.

Chapter 4 | 4.1. DBX Scenario and Injects

A well-designed discussion-based exercise is built around a realistic scenario and carefully prepared exercise inputs. Depending on national familiarity with AMHEWAS products, this handbook focuses on two main formats: scenario-based workshops and tabletop exercises (TTX). While both rely on structured discussion, tabletop exercises involve greater sequencing and role-based interaction.

In the context of AMHEWAS integration, scenario and inject design is essential to ensure that continental early warning products are meaningfully incorporated into the exercise as key inputs. Well-designed scenarios and injects enable participants to examine how AMHEWAS information is interpreted, communicated, and used alongside national early warning products to support coordinated early action. The expected output of the scenario and inject design step is:

- A documented scenario narrative describing the hazard context, coordination environment, and hazard evolution;
- Clearly identified decision points aligned with DBX objectives;
- A structured inject plan linked to scenario phases;
- Identification of relevant AMHEWAS products to be used as exercise inputs.

Scenario and inject design are complete when planners can clearly explain:

- What hazard situation is being simulated;
- Which institutions are involved and why;
- At what moments key information and decisions occur;
- How the scenario supports the defined DBX objectives.

KEY DEFINITIONS

Scenario	Injects
A scenario is a structured, time-sequenced representation of a realistic hazard situation used to drive a simulation exercise. It defines the hazard context (e.g., floods, storms, droughts), its evolution over time, and the operational conditions under which institutions are required to act, enabling participants to test roles, coordination mechanisms, decision-making processes, and response arrangements against the exercise objectives. Scenarios are constructed using relevant historical experience, technical and scientific data, early warning information, and operational response-related information exchanged among the operational actors of a national disaster risk management system.	Injects are structured pieces of information introduced at specific points during a simulation exercise to drive discussion and prompt participant decision-making. They reflect the types of information institutions would receive during an evolving hazard event, such as early warning bulletins, situation updates, and advisories. In the context of this handbook, they may take the form of excerpts from AMHEWAS products (e.g. Continental Watch, Africa Drought Watch, SitReps). Injects support the exploration of coordination processes, information flow, and early action decisions in line with the exercise objectives.

4.1.1. Designing the scenario

Scenario design is a structured, step-by-step process that translates the DBX objectives into a realistic hazard situation and coordination environment through which participants interact with AMHEWAS products. The purpose of the scenario is to create a credible hazard and coordination context that triggers the interpretation and use of early warning products and coordination mechanisms during the exercise.

Step 1: Define the scenario intent

The first step is to clearly define the specific function the scenario must serve within the DBX, based on the objectives established in the planning phase. In the context of this handbook, the scenario should explore and examine the use and integration of AMHEWAS products within Member States' early warning systems. In particular, the scenario should:

- Reflect the activation of coordination mechanisms between the AMHEWAS Continental Situation Room, relevant REC/RCC Situation Room (where applicable), and national early warning and coordination structures.
- Include differentiated information that enables the simulation of how early warning messages and situational updates are received, interpreted and used within the national early warning system.

Scenario construction involves four steps:

- Selecting the reference hazard;
- Identifying coordination and decision-making conditions;
- Developing the hazard evolution and decision points based on past events
- Compiling and documenting the scenario narrative.

Step 2: Select the reference hazard event

A past hazard event or a plausible hazard scenario relevant to the DBX objectives should be selected as the reference for scenario development.

The selected hazard provides the contextual anchor for the scenario and determines the scale, severity and type of coordination required during the exercise. Where appropriate, the reference event should be sufficiently severe to trigger coordination across multiple levels (continental, regional, and national), such as a Level 4 situation under the Continental Watch classification. The selected hazard event should:

- Be relevant to the national risk profile (as identified in the planning phase)
- Align with institutional arrangements and the decision-making process intended to be explored during the exercise.

Step 3: Define the coordination and decision-making context

Once the reference hazard has been selected, the coordination and decision-making environment should be identified. The process establishes who is involved, how they interact and where decisions are made as the situation develops. This includes identifying:

- The institutions involved at the continental, regional and national levels;
- Existing coordination mechanisms, information-sharing arrangements and escalation pathways;
- Key decision-making authorities relevant to the selected hazard.

Information should be gathered in consultation with disaster risk management authorities and relevant operational partners to ensure the scenario reflects real-world practice.

Step 4: Develop the hazard evolution and decision points

The scenario should then describe how the hazard situation and related conditions evolve over time. This step defines the temporal progression and the points at which participants engage with information and coordination mechanisms. Hazard evolution should be developed in consultation with meteorological and hydrological services at continental, regional, and national levels. This step should identify:

- Weather and climatic conditions preceding (4-5 days), during and following the event;
- Expected or observed impacts on people, infrastructure, and key sectors;
- Magnitude and geographic extent of the hazard;
- Key coordination and early action decision points as the situation evolves

Based on this evolution, relevant AMHEWAS products and realistic information flows can be identified. The decision points form the basis for the design and sequencing of the exercise injects.

Step 5: Compile and document the scenario

The final step is to compile the scenario into a clear and coherent narrative integrating:

- The reference hazard and its evolution
- The coordination and decision-making environment
- The points at which information and decisions occur

Where historical events are used, past AMHEWAS products may provide valuable reference material for scenario development.

The scenario should be documented in the Exercise Master Plan (ExPlan) through a concise narrative. Supporting materials (e.g. maps or simplified visuals) may be included.

The documented scenario forms the foundation for the development, timing, and delivery of exercise injects.

4.1.2. Designing injects

Injects are the primary mechanism through which information is introduced into the scenario. They operationalise the scenario by delivering information at specific points in time, prompting participants to interpret information, coordinate with others and discuss decisions consistent with their institutional roles.

Injects should be derived directly from the scenario design and aligned with the exercise objectives. Their purpose is not only to stimulate discussion but to trigger actions, coordination processes and decision-making as the hazard evolves. Effective injects are:

- Clear and concise
- Introduced at appropriate moments in the scenario
- Framed realistically (e.g., bulletin excerpts, advisories, email summaries);

To ensure realism, injects should reflect the combination of information sources that national institutions would normally receive, including AMHEWAS products, REC/RCC inputs (where applicable), and national early warning or sectoral messages.

Injects incorporating AMHEWAS products should prompt discussion on:

- How continental and regional early warning information is accessed and shared nationally;
- How it is interpreted alongside national forecasts and thresholds;

- How it informs coordination, preparedness, and early action decisions;
- What challenges affect its consistent and systematic use.

Injects are introduced by facilitators (scenario-based workshops) or by the Exercise Control function (TTX). Their timing and sequencing should align with the scenario timeline and the identified decision points.

4.1.3. Design considerations: Workshop vs Table-Top Exercise (TTX)

While both scenario-based workshops and tabletop exercises rely on structured discussion, they differ in how scenarios unfold, how roles are enacted and how closely the exercises simulate real-world coordination processes. These differences influence not only how injects are sequenced but also how the scenario itself is designed.

Element	Scenario-Based Workshop	Table-Top Exercise (TTX)
Scenario structure	Thematic narrative	Phase-based, time-sequenced
Time progression	Flexible or compressed	Simulated time (e.g. Day 1 - 5)
Level of scenario detail	Moderate detail to support discussion	Higher level of detail to support role-based interaction
Decision points	Broad discussion moments	Clearly defined, phase-specific decision points
Role enactment	Participants speak from institutional perspective, with limited role-play	Participants engage explicitly according to institutional roles
Inject delivery	Shared with all participants simultaneously	Delivered progressively, often role-specific
Purpose emphasis	Build shared understanding and identify integration gaps	Examine sequencing, coordination dynamics, and escalation pathways
Documentation needs	Thematic observations	Phase-linked, time-sensitive observations

Comparison of Scenario and Inject Design: Workshop vs TTX

Although the same reference hazard (e.g., flood risk escalation) may be used in both formats, the scenario designs are not identical. The difference is not limited to inject delivery. It also concerns:

- The level of detail included in the scenario narrative;
- The degree of time sequencing and phase structure;
- The precision of decision points;
- The extent to which institutional roles are enacted during the exercise.

In scenario-based workshops, the scenario provides a thematic context for discussion. In tabletop exercises, the scenario is more structured and phase-based, with clearly defined temporal progression and role-specific interaction.

In practice, the same hazard context may underpin both formats, but the scenario narrative and inject sequencing are structured differently depending on the selected DBX format.

Scenario-Based Workshops Example

In scenario-based workshops, the scenario narrative provides a thematic context rather than a strict phase-based timeline. This format is particularly

useful where AMHEWAS products are available but not yet systematically integrated into national early warning workflows. The objective is to build shared understanding, clarify communication pathways, and identify entry points for stronger integration. Injects are typically introduced to all participants by facilitators at the same time, and flexible timing allows for collective discussion and reflection.

Example: Flood risk warning in the context of limited AMHEWAS products integration

- » **Inject 1:** A Continental Watch bulletin indicates Severity Level 4 conditions for the country.
- Discussion may explore:
- Who usually receives AMHEWAS information (e.g. Continental Watch) nationally, and through which channels?
 - Discussion on the information provided by the Continental Watch
- » **Inject 2:** A Complementary REC/RCC advisory is shared (where applicable).
 - » **Inject 3:** National forecasts or warning messages are issued.

- Discussion may explore:
- How is continental severity information interpreted alongside regional and national forecasting thresholds?
 - What national coordination mechanisms are triggered when receiving continental and regional information, and by whom?
 - What barriers currently limit systematic integration of AMHEWAS information?

Additional prompts may include simplified impact updates or questions on sectoral preparedness actions (e.g. Inject 4: Request for an anticipatory coordination meeting involving national authorities and regional/continental partners).
In this format, the emphasis is on shared analysis rather than strict sequencing of decisions over simulated time.

Tabletop Exercise Example (sequenced, role-based format)

In contrast to workshops, tabletop exercises are deliberately structured into sequential phases over simulated time, reflecting how events and decisions progress in operational settings. This format is most appropriate where AMHEWAS products are already known or partially integrated within national institutions.
Injects are introduced by the Exercise Control function (EXCON) and delivered progressively, often only to those actors who would receive them in real settings. This reinforces role-based interaction and clearer sequencing of coordination and decision-making processes.

Example – Flood escalation in a context of partial operational use of AMHEWAS products

- Phase 1 - Continental Watch warning (Day 1–2)**
- » **Inject 1:** E-mail to the national DRR Authority: the Continental Watch signals a potential high-impact rainfall and flooding risk.
- Discussion may explore:
- Who receives the Continental Watch nationally, and how is it disseminated internally?
- » **Inject 2:** National forecasting and monitoring are issued.
- Discussion may explore:
- How is continental severity information interpreted alongside national forecasting thresholds?
 - What initial preparedness actions could be considered at this stage?

- Phase 2 - Regional coordination and advisory support (Day 2–3)**
- » **Inject 3:** The REC/RCC issues a complementary advisory and requests an information-sharing exchange.
 - » **Inject 4:** National forecasting and monitoring is shared.

- Discussion may explore:
- How does the REC support national interpretation of continental early warning information?
 - What mechanisms exist for REC-country coordination and escalation?
 - How are uncertainties or differing risk messages communicated across levels?

- Phase 3 - National confirmation and feedback to the region (Day 3–4)**
- » **Inject 5:** The national hydro-meteorological service confirms increasing flood likelihood.
 - » **Inject 6:** REC/RCC requests situational context and preparedness status

- Discussion may explore:
- How are national warnings aligned with continental and regional advisories?
 - What roles and responsibilities apply for early warning dissemination and early action triggering?
 - How does national feedback support regional situational awareness and coordination?

- Phase 4 - Escalation and anticipatory coordination (Day 4)**
- » **Inject 7:** The REC convenes a coordination call involving national authorities and, where relevant, AMHEWAS continental partners.

- Discussion may explore:
- Which coordination mechanisms are activated nationally and regionally?
 - How are early action priorities agreed across sectors (e.g., water, agriculture, health)?
 - What barriers affect timely information-sharing and decision-making?
 - To what extent would this information trigger contingency planning? (e.g. firefighters, volunteers, NGOs)?

Further inject templates, sequencing tools, and scenario development guidance are provided in Toolkit 4.1.

Chapter 4 | 4.2. DBX Workflow and Structure

The workflow refers to the overall structure and sequencing of a discussion-based exercise, including how the scenario is introduced, how injects are delivered, and how discussions are guided throughout the session. A clear workflow helps ensure that activities remain aligned with the exercise objectives and that participants are supported to engage in meaningful, structured dialogue (UNDRR, 2020).

Workflow design should be supported by appropriate facilitation arrangements and, where relevant, by planning products such as an exercise agenda, a facilitator guide, or an Exercise Master Plan. The expected output of the workflow design step is a clear and documented exercise flow that:

- Defines the sequence of exercise stages and discussion blocks;

- Phase 5 - Hazard occurrence and emerging impacts (Day 5)**
- » **Inject 8:** Heavy rainfall triggers flooding, with initial impact reports.
 - » **Inject 9:** A SitRep highlights emerging impacts and coordination needs.

- Discussion may explore:
- How is impact information communicated across national and regional actors?
 - How are response priorities shared and escalated as conditions evolve?

This phased structure allows institutions to explore how continental early warning products, regional coordination mechanisms, and national decision-making processes interact over time as new information becomes available and impacts begin to emerge.

- Clarifies when and how injects will be introduced;
- Specifies facilitation and exercise management roles;
- Allocates realistic time for discussion and reflection;
- Aligns each discussion stage with the DBX objectives.

A well-designed workflow ensures that participants understand how the exercise will unfold and that injects, discussions, and documentation are logically sequenced. Workflow design is complete when planners can clearly describe:

- How the exercise will start;
- How discussion will progress;
- When and how injects will be delivered;
- How key findings will be synthesised;
- And how the session will conclude.

Overall DBX Workflow Structure

Regardless of format (scenario-based workshop or tabletop exercise), most discussion-based exercises follow a structured progression:

1. Opening and orientation
 - » Welcome and introductions
 - » Presentation of objectives and scope
 - » Clarification of roles and expectations
 - » Agreement on discussion ground rules
2. Scenario briefing
 - » Presentation of hazard context and institutional scope
 - » Explanation of time horizon and geographic focus
 - » Introduction to relevant AMHEWAS products
3. Inject-discussion cycles
 - » Introduction of inject(s)
 - » Guided discussion aligned with DBX objectives
 - » Exploration of coordination, interpretation, and decision-making processes
4. Synthesis and reflection
 - » Identification of key discussion points
 - » Clarification of good practices and gaps
 - » Discussion of integration entry points
5. Wrap-up and next steps
 - » Summary of key messages
 - » Explanation of debriefing and follow-up process
 - » Clarification of next steps and documentation arrangements

The complexity and sequencing of these stages vary depending on whether the DBX is conducted as a scenario-based workshop or a tabletop exercise. Workflow preparation should include:

- Defining the overall agenda, including opening remarks, scenario discussion blocks, and wrap-up;
- Confirming how information inputs and injects will be introduced and discussed;
- Identifying whether plenary discussion, breakout groups, or mixed formats will be used;
- Ensuring sufficient time is allocated for reflection, coordination, dialogue, and synthesis of key findings;
- Clarifying roles and documentation responsibilities to support consistent exercise flow.

Workflow in Scenario-Based Workshops

In scenario-based workshops, workflow is usually organised around a thematic discussion supported by a limited number of injects. The emphasis is on building shared understanding, clarifying roles and

communication pathways, and identifying practical entry points for integrating AMHEWAS products into national monitoring and decision-support processes.

Workshops benefit from a clear facilitation schedule, but do not require detailed time sequencing or role-specific inject delivery. Injects are typically shared with all participants simultaneously, and facilitators manage the pace of discussion, allowing flexibility to explore issues in depth before moving to the next element of the exercise.

The expected output of a workshop workflow is a structured facilitation plan that:

- Organises inject discussions around clear thematic blocks;
- Identifies moments for synthesis and reflection;
- Ensures discussion remains aligned with DBX objectives.

Workflow in Tabletop Exercises (TTX)

In tabletop exercises, workflow requires a more structured approach, with scenario phases unfolding over simulated time. Injects are introduced progressively by the Exercise Control function and delivered to participants in line with their operational roles. Facilitators guide participants through successive decision points, coordination requirements, and escalation pathways, reflecting how the situation would evolve in a real operational setting.

For this reason, TTX formats benefit from clearly assigned exercise management roles and structured sequencing tools. Tools such as a **Master Events List (MEL)** and **Master Inject List (MIL)** provide practical support for time management, inject coordination, and the consistent delivery of exercise inputs throughout the exercise.

The expected output of a TTX workflow is a phase-based structure that:

- Sequences injects over simulated time;
- Clarifies decision points and coordination interactions;
- Aligns inject timing with evaluation and documentation needs;
- Ensures structured progression from early warning to escalation and impact.

Chapter 4 |

4.3. DBX Evaluation Planning and Documentation

Defining an evaluation focus is an essential step in designing any discussion-based exercise. While scenario-based workshops and tabletop exercises are not intended to test operational performance, they should still be structured to enable meaningful observation, reflection, and learning (UNDRR, 2020).

An evaluation plan supports the debriefing and follow-up phase by helping participating institutions identify:

- What worked well;
- Critical gaps and areas for improvement;
- Practical recommendations to strengthen early warning and early action processes.

Evaluation ensures that insights generated during the exercise translate into actionable outcomes, thereby improving the integration and use of AMHEWAS products.

- The expected output of the evaluation planning step is a documented evaluation framework that:
- Defines the evaluation approach (whole-process or exercise-only);
- Identifies the evaluation team and clarifies roles;
- Links evaluation priorities to DBX objectives, scenario phases, and injects;
- Specifies documentation tools and observation methods;
- Clarifies how findings will inform the debriefing, After-Action Report (AAR), and Improvement Plan.

Evaluation planning is complete when planners and evaluators can clearly describe:

- What will be observed during the exercise;
- How observations will be captured and structured;
- How findings will be synthesised and used for follow-up.

4.3.1 Evaluation approaches

Depending on available resources and exercise scope, two main approaches can be adopted:

• Whole-process evaluation:

Evaluators engage throughout the DBX cycle, including planning, implementation, and follow-up. This approach allows observation of institutional preparation, coordination arrangements, and integration processes beyond the exercise session itself.

• Exercise-only evaluation:

Observers focus primarily on the conduct of the simulation itself, documenting discussions and actions in relation to the exercise objectives.

In both approaches, the evaluation process should support practical outputs, including:

- Observations on current AMHEWAS use and interpretation
- Identification of integration entry points;
- Inputs for an After-Action Report and Improvement Plan.

4.3.2. Evaluation team and roles

Evaluation is carried out by members of the Evaluation Team, who typically:

- Observe and document discussions without intervening;
- Capture key coordination issues, good practices, and recommendations;
- Support post-exercise reflection and reporting.

Team composition recommendations:

- A minimum of two to three evaluators is recommended;
- Where feasible, at least one external evaluator should be included;
- Internal evaluators should have expertise in AMHEWAS products and national early warning processes.

Roles and responsibilities should be clearly defined during the planning phase to ensure consistent observation and documentation.

4.3.3 Planning the evaluation process

Evaluation planning involves three core elements (adapted from HSEEP, 2020):

- Confirm evaluation roles and team composition
 - » Clarify responsibilities;
 - » Assign observers to discussion blocks or scenario phases;
- Define the evaluation methodology and observation approach
 - » Link observations to exercise objectives;
 - » Identify key discussion points and decision moments;
 - » Determine how coordination and interpretation processes will be captured.
- Prepare documentation tools
 - » Develop observation forms or structured templates;
 - » Include guiding questions aligned with the purpose of the exercise;
 - » Ensure tools are simple and usable in real time.

Linking evaluation to objectives and scenario design

To support structured documentation, the evaluators, in collaboration with planners, should define in advance what should be captured during the exercise, such as:

- Key discussion points linked to objectives;
- How AMHEWAS products are accessed, interpreted, and understood nationally;
- How continental information complements national forecasts and monitoring data;
- How information is shared across institutions and coordination mechanisms;
- How continental and regional early warning information informs preparedness and early action decisions at national level;
- Institutional or procedural barriers affecting systematic integration.
- Emerging good practices, gaps, and recommendations.

For each objective, evaluators should identify:

- Which scenario phases allow the issue to be explored;
- Which injects will trigger relevant discussion and actions;
- Which decision points and coordination interactions should be observed.

Illustrative examples

- If an objective relates to interpreting the Continental Watch, evaluation planning should focus on how severity information is understood and discussed in relation to national thresholds and alert systems.
- If an objective relates to coordination, observation should focus on information-sharing pathways, institutional roles, activation mechanisms, and escalation processes.

4.3.5. Documentation

Structured documentation ensures that observations collected during the exercise inform the debriefing and after-action process. This includes:

- Capturing observations in standardized forms or templates;
- Linking findings directly to exercise objectives and scenario design;
- Supporting development of the After-Action Report (AAR) and Improvement Plan.

This section addresses planning for documentation.

The implementation of debriefing, reporting, and improvement planning is covered in Chapter 6. Coordinating workflow planning (Section 4.2), evaluation priorities (Section 4.3), and documentation arrangements ensures a smooth transition from exercise delivery to debriefing, reporting, and follow-up actions.

Evaluation guiding questions, examples observation prompts and documentation templates can be found in Toolkit Factsheet 4.3

Chapter 4 | 4.4. DBX Logistics and Communications

Effective delivery of a discussion-based exercise depends not only on a well-designed scenario, but also on practical preparation of the logistical and communication arrangements that support implementation.

For AMHEWAS-focused exercises, preparatory activities should remain proportionate to the selected format and national context. Scenario-based workshops generally require lighter arrangements, while tabletop exercises

may require additional support for sequencing, inject delivery, and structured documentation. In all cases, good preparation strengthens participation, supports inclusive engagement, and facilitates follow-up through an After-Action Review and improvement planning.

Preparatory work should address both logistical arrangements and communication and information management.

Logistic and communications templates can be found in Toolkit Factsheet 4.4

4.4.1. Logistical arrangements

Although discussion-based exercises do not involve operational deployment, appropriate logistical planning remains essential to support structured interaction and effective facilitation.

Key considerations include:

- Confirming the exercise modality (in-person, online, or hybrid);
- Selecting a suitable and easily accessible venue or virtual platform that supports plenary and breakout discussion;
- Ensuring appropriate room layout or breakout functionality;
- Confirming availability of basic equipment (projectors, connectivity, audio support);
- Arranging interpretation or language services where required;
- Preparing and distributing exercise materials, including relevant excerpts from AMHEWAS products.
- Arranging catering and basic participant support, where applicable.

Where possible, existing national institutional facilities and resources should be used to minimise costs and reinforce national ownership.

4.4.2. Communication and Information Management

Clear communication before, during, and after the exercise helps establish shared expectations, supports participant readiness, and strengthens continuity beyond the exercise itself. Communication arrangements should be coordinated by national early warning and preparedness institutions, in line with existing protocols.

Pre-exercise communication

Pre-exercise communication should support participant readiness and build familiarity with AMHEWAS products. Preparation should include:

- Sharing invitations, the agenda, and exercise objectives;
- Providing concise background materials and participant instructions;
- Clarifying roles, ground rules, and expectations;
- Distributing sample AMHEWAS product materials in advance, where appropriate.

Where feasible, participants may receive a short exercise information pack prior to the session, including:

- A brief overview of the exercise objectives and format;
- A high-level description of the scenario context;
- Sample AMHEWAS products;
- The agenda and session structure;
- Clarification of facilitation and documentation arrangements.

Materials should remain concise and accessible, avoiding unnecessary technical detail. Participants should also be informed that:

- Key discussion points and recommendations will be documented;
- Findings will be consolidated into practical follow-up actions;
- Outputs will be shared after the exercise through an After-Action Review (AAR) or similar process.

Communication during the exercise

Communication arrangements during the exercise should ensure clarity and consistency in information flow. This includes:

- Confirming how injects will be delivered (e.g., printed extracts, briefing notes, slides, simulated email messages)
 - Clarifying mechanisms for reporting back from breakout groups or coordination discussions.
- Additional considerations for tabletop exercises (TTX):
- Establishing communication channels that players may use to interact during the exercise (as appropriate);
 - Identifying mechanisms to track responses to injects (e.g., logbooks or structured message monitoring);
 - Ensuring EXCON is included in relevant exercise communications to support inject coordination and flow management.

Post-exercise communication

Post-exercise communication supports continuity and follow-up beyond the exercise itself. Preparation should include:

- Scheduling debrief discussions and validation steps;
- Agreeing on timelines for sharing exercise outputs;
- Ensuring participants receive follow-up recommendations, corrective actions, and agreed improvement measures to strengthen AMHEWAS integration.

Communication materials should remain clear and adapted to participants' needs, ensuring consistent terminology without unnecessary technical complexity.

CHAPTER 4 – Designing a DBX

Factsheet 4.1. – DBX Scenario and Injects

How to use:
Complete this factsheet during the design phase of the discussion-based exercise, after defining DBX objectives and before finalising facilitation and evaluation arrangements. Use it to develop a credible scenario and structured injects that enable discussion on how AMHEWAS products are interpreted, shared, and used within national early warning and early action systems. Scenarios and injects should be designed in parallel with evaluation planning (Factsheet 4.3) to ensure that key discussion and decision points are observable and support structured learning.

A. Scenario definition

A.1 Hazard and context
☐ Primary hazard(s): ☐ Floods ☐ Storms/Wind ☐ Extreme rainfall ☐ Drought ☐ Multi-hazard
Reference hazard event: _____
☐ Seasonal context (e.g. peak rainy season, dry season)
☐ Geographic scope (national / sub-national / transboundary)

A.2 Purpose of the scenario
The scenario is designed to enable discussion on:
☐ Interpretation of AMHEWAS products
☐ Integration with national early warning information
☐ Coordination and information-sharing mechanisms
☐ Decision-making and early action entry points
☐ Other, specify: _____

A.3 Scenario time horizon
☐ Simplified/ thematic (suitable for scenario-based workshops)
☐ Sequenced over simulated time (suitable for TTX)
Indicative duration covered by the scenario:
☐ Days ☐ Weeks ☐ Months (slow-onset hazards)

A.4 Institutional scope
The scenario involves (as relevant):
☐ National DRM authority/coordination mechanism
☐ National meteorological and hydrological services
☐ Sectoral ministries (e.g. agriculture, water, health)
☐ REC / RCC partners
☐ AMHEWAS continental or regional inputs
☐ Other, specify: _____

Note: Please check compliance with the list of participants outlined in Factsheet 3.6.

B. Scenario narrative (summary)
Provide a concise description (1-2 paragraphs) covering:

- Reference hazard event
- Hazard evolution and risk context
- Why the situation requires interpretation of AMHEWAS products
- Expected coordination and decision-making challenges

Scenario summary:

Illustrative AMHEWAS scenario examples

Example 1 – Fast-onset hazard (floods)
Over the past week, northern Country X has experienced prolonged heavy rainfall due to a stalled low-pressure system, resulting in saturated soils and an increased risk of flooding. Regional and global meteorological forecasts indicate the potential for renewed intense rainfall within the next 24–48 hours, with a high-impact risk of severe riverine flooding that may also affect neighbouring countries. The Continental Watch has indicated a Severity Level 4 for heavy rainfall and riverine flooding affecting parts of Country X. Regional advisories further confirm that the expected impacts may extend across national borders. National forecasts confirm increased rainfall probability.

Example 2 – Slow-onset hazard (drought)
Rainfall deficits persist over consecutive seasons. The Africa Drought Watch shows worsening vegetation stress. National sectoral institutions are beginning to report pressure on water and agriculture, necessitating discussion of preparedness and anticipatory planning.

C. Inject design
C.1 Purpose of injects
Injects are used to:

- introduce AMHEWAS products into the scenario,
- prompt discussion and coordination, and
- support examination of decision-making processes.

☐ Injects aligned with DBX objectives
☐ Injects realistic and proportionate to the exercise format

C.2 Types of AMHEWAS-based injects

Injects may include:

- ☐ Continental Watch bulletins
- ☐ Africa Drought Watch bulletins
- ☐ Disaster Situation Reports (SitReps)
- ☐ REC / RCC advisories linked to AMHEWAS
- ☐ Requests for information or coordination

C.3 Inject delivery

- ☐ Injects introduced by facilitator (scenario-based workshop)
- ☐ Injects introduced by EXCON (TTX)
- ☐ Delivery format:
 - ☐ Slides
 - ☐ Printed extracts
 - ☐ Simulated emails/messages
 - ☐ Other _____

D. Linking injects to scenario phases

For each inject, planners have identified:

- ☐ Scenario phase when the inject is introduced
- ☐ Purpose of the inject (what discussion it should trigger)
- ☐ DBX objective(s) it supports

Illustrative AMHEWAS inject examples

Inject 1: Continental Watch (early warning)

- Product: Continental Watch
- Content: Severity Level 3 - 4 for heavy rainfall and riverine flooding + advisories
- Purpose: Trigger discussion on interpretation of severity and early actions

Inject 2: National forecast or early warning message

- Product: National forecast or early warning message
- Content: Description of meteo-hydrological forecast or a certain level of early warning severity with specific national information
- Purpose: Examine how continental and national information are interpreted in combination and used

Inject 3: Regional coordination request

- Product: REC advisory referencing the Continental Watch and an email with a request for information exchange or coordination call
- Content: REC advisory with a certain level of severity and forecasting information + request for information exchange or coordination call
- Purpose: Explore information-sharing pathways and role clarity

Inject 4: SitRep (emerging impacts)

- Product: Disaster Situation Report
- Content: Initial impacts reported in affected or neighbouring areas

- Purpose: Link early warning to escalation and early action decisions

Inject 5: Africa Drought Watch (monitoring)

- Product: Africa Drought Watch
- Content: Worsening drought indicators and a certain drought advisory level
- Purpose: Examine use of slow-onset risk information for preparedness planning

E. Adaptation to DBX format

- ☐ Scenario-based workshop
 - Scenario structured as thematic narrative
 - Limited number of injects (typically 2–4)
 - Injects shared with all participants simultaneously
 - Flexible time progression
 - Emphasis on shared understanding and integration pathways
- ☐ Tabletop exercise (TTX)
 - Scenario structured into sequential phases
 - Simulated time progression defined (e.g. Day 1–5)
 - Clearly defined phase-specific decision points
 - Injects delivered progressively (role-specific where appropriate)
 - Injects enable the engagement of all the specific players involved
 - Emphasis on timing, coordination dynamics, and escalation pathways

F. Scenario and inject readiness check

- ☐ Scenario aligned with DBX objectives
- ☐ AMHEWAS products clearly embedded
- ☐ Injects realistic and discussion-focused
- ☐ Scenario and injects appropriate to DBX format

Notes:

Validated by (name/institution): _____
 Date (DD/MM/YYYY): _____

CHAPTER 4 – Designing a DBX

Factsheet 4.2. – DBX Workflow and Structure

How to use:

Complete this factsheet after finalising the scenario and injects (Factsheet 4.1). Use it to structure how the exercise will flow, including the sequencing of discussions, inject delivery, interaction formats (plenary or breakout), and time allocation. The DBX workflow should remain structured but flexible, allowing facilitators to adapt discussions while maintaining focus on the exercise objectives.

A. DBX format and overall flow

- ☐ Scenario-based workshop
- ☐ Tabletop exercise (TTX)
- ☐ Exercise duration confirmed:
 - ☐ Half-day ☐ Full day ☐ Multi-day ☐ Workflow complexity proportionate to:
- ☐ DBX objectives
- ☐ Participant experience
- ☐ Available time and resources

B. Exercise opening and briefing

- ☐ Opening session planned
- ☐ Exercise objectives clearly presented
- ☐ Scope and limitations of the exercise explained
- ☐ Roles clarified (participants, facilitators, evaluators, EXCON if applicable)
- ☐ Ground rules for discussion agreed
- ☐ Participants informed that:
 - The exercise is learning-focused and non-judgmental
 - Discussions will be documented
 - Outputs will inform follow-up actions

C. Scenario introduction

- ☐ Scenario context introduced clearly and concisely
- ☐ Hazard, geographic scope, and time horizon explained
- ☐ Relevance of AMHEWAS products highlighted
- ☐ Level of detail appropriate to DBX format
- ☐ Scenario presented using:
 - ☐ Verbal briefing ☐ Slides ☐ Short written summary

D. Inject delivery and discussion structure

D.1 Inject delivery

- ☐ Injects introduced by facilitator (scenario-based workshop)

- ☐ Injects introduced by EXCON (TTX)
- ☐ Inject delivery format:
 - ☐ Slides ☐ Printed extracts ☐ Simulated emails/phone calls ☐ Other: _____
- ☐ Injects introduced at clearly defined moments in the workflow

D.2 Discussion format

- ☐ Plenary discussion
- ☐ Breakout group discussion
- ☐ Mixed format (plenary + breakouts)
- ☐ Discussion questions prepared for each inject
- ☐ Time allocated for reflection and exchange
- ☐ Flows of actions by players with possible time-breaks

E. Workflow by DBX format

E.1 Scenario-based workshop workflow

- ☐ Limited number of injects (typically 2 - 4)
- ☐ Injects shared with all participants simultaneously
- ☐ Discussion organised around thematic questions
- ☐ Emphasis on:
 - Shared understanding
 - Clarification of roles
 - Identification of integration entry points
- ☐ Sequencing flexible and facilitator-led

E.2 Tabletop exercise (TTX) workflow

- ☐ Scenario structured into sequential phases
- ☐ Simulated time progression defined (e.g. Day 1–5)
- ☐ Injects introduced progressively by phase

- ☐ For each phase:
 - ☐ Inject(s) introduced
 - ☐ Discussion on interpretation and coordination
 - ☐ Decision points explored
 - ☐ Workflow supported by:
 - ☐ Phase-based agenda
 - ☐ Inject list or MSEL

F. Facilitation and exercise control

- ☐ Lead facilitator identified
- ☐ Co-facilitators assigned (if required)
- ☐ For TTX:
 - ☐ Exercise Control (EXCON) function established

- ☐ EXCON roles and responsibilities defined
 ☐ Coordination between facilitators, EXCON, and evaluators planned

G. Time management and transitions

- ☐ Time allocated for each session or phase
 ☐ Mechanism for keeping discussion on track agreed
 ☐ Flexibility built in for extended discussion where needed
 ☐ Clear transitions planned between:
 ☐ Scenario introduction
 ☐ Inject discussions
 ☐ Wrap-up and synthesis

H. Documentation and observation flow

- ☐ Documentation points aligned with workflow
 ☐ Evaluators positioned to observe plenary and breakout discussions
 ☐ Mechanism for capturing key discussion points agreed
 ☐ Time allocated for exercise wrap-up and follow up actions
 ☐ Evaluation observation points aligned with scenario phases (for TTX)

I. Workflow readiness check

- ☐ Workflow aligned with DBX objectives
 ☐ Inject sequencing clear
 ☐ Roles and facilitation arrangements confirmed
 ☐ Time allocation realistic
 ☐ Documentation and evaluation integrated

Notes:

Validated by (name/institution): _____
 Date (DD/MM/YYYY): _____

CHAPTER 4 – Designing a DBX

Factsheet 4.3. – DBX Evaluation Planning and Documentation

How to use:

Complete this factsheet during the design phase of the discussion-based exercise in coordination with planners and facilitators. The purpose of this factsheet is to plan what will be evaluated and documented, and to ensure that evaluation priorities are clearly linked to the DBX objectives, scenario design, and exercise injects.

A. Evaluation approach

- ☐ Whole-process evaluation
 ☐ Exercise-only evaluation

B. Evaluation scope

- ☐ Support learning and reflection
 ☐ Identify strengths and gaps in processes
 ☐ Inform practical follow-up actions
 ☐ Other, specify: _____
 ☐ Evaluation scope aligned with DBX objectives and validated by exercise lead and facilitators

C. Evaluation focus

- ☐ Dissemination of AMHEWAS products
 ☐ Interpretation of AMHEWAS products
 ☐ Integration with national early warning information
 ☐ Information-sharing pathways
 ☐ Coordination and role clarity
 ☐ Decision-making processes and timing
 ☐ Early action entry points
 ☐ Other, specify: _____

Focus areas are:

- ☐ Aligned with the DBX objectives
 ☐ Observable during discussion
 ☐ Relevant to the scenario
 ☐ Achievable within the exercise timeframe

D. Linking evaluation to scenario design

- ☐ For workshops: evaluation themes mapped to discussion blocks
 ☐ For TTX: evaluation focus mapped to scenario phases and inject timing

For each DBX objective, planners have identified:

- ☐ Relevant scenario phase(s)
 ☐ Key inject(s) that enable observation
 ☐ Expected discussion or coordination moments

Guidance – what to plan to capture

To support structured documentation, evaluators, in collaboration with planners, should agree *in advance* on what types of discussion and interaction will be captured during the exercise. This may include:

- Key discussion points linked to DBX objectives
- How AMHEWAS products are accessed, interpreted, and understood nationally
- How continental early warning information complements national forecasts and monitoring data
- How information is shared across institutions and coordination mechanisms among continental, regional and national levels
- How continental and regional early warning information informs preparedness and early action decisions at national level
- Institutional or procedural barriers affecting systematic use and integration
- Emerging good practices, gaps, and practical recommendations

For established plans and procedures (TTX), their activation and implementation should be documented.

The focus should remain on processes, understanding, and decision-making

Illustrative examples

Example 1 - Interpretation of the Continental Watch

- **DBX objective:** Strengthen national interpretation of the Continental Watch
- **Inject /AMHEWAS product:** Continental Watch (Severity Level 3-4)

Evaluation planning should focus on:

- How severity levels are understood and discussed
- How advisories are considered
- Whether severity is interpreted alongside national thresholds or alert levels
- Whether the Continental Watch is considered actionable for preparedness or coordination

Example 2 - Integration of continental and national information

- **DBX objective:** Examine how AMHEWAS information complements national forecasts
- **Inject /AMHEWAS products:** Continental Watch or Drought Watch + national forecast or national early warning

Evaluation planning should focus on:

- How continental and national information are used in combination
- How inconsistencies or uncertainty are discussed

Example 3 - Coordination and information-sharing

- **DBX objective:** Clarify coordination mechanisms for AMHEWAS information
- **Inject /AMHEWAS products:** REC advisory linked to Continental Watch or Drought Watch, and request for coordination meetings by RECs

Evaluation planning should focus on:

- Internal dissemination
- Information-sharing pathways across institutions
- Roles and responsibilities for receiving and disseminating AMHEWAS products
- Activation of coordination mechanisms (e.g. EOC, coordination meetings)
- Information management

Example 4 – Use of AMHEWAS products for early action decisions

- **DBX objective:** Explore how early warning information supports early action
- **Inject /AMHEWAS products:** National forecast/early warning + Continental Watch + SitRep

Evaluation planning should focus on:

- How early warning information informs preparedness or early actions
- Decision points where early action is discussed or triggered
- Gaps between warning interpretation and action

Example 5 - Monitoring slow-onset risk (Africa Drought Watch)

- **DBX objective:** Assess use of drought information for preparedness planning
- **Inject /AMHEWAS product:** Africa Drought Watch

Evaluation planning should focus on:

- How drought information is interpreted over time
- Which institutions engage with the information
- Barriers to translating slow-onset risk information into preparedness actions

E. Evaluation roles

- ☐ Evaluation lead / AAR focal point
- ☐ Evaluator(s) / observer(s)
- ☐ Rapporteur / documentation support
- ☐ Number of evaluators appropriate to exercise size and format

F. Documentation tools

- ☐ Structured observation forms
- ☐ Thematic note-taking templates
- ☐ Decision and coordination logs
- ☐ Templates prepared and tested before the exercise

G. Evaluation planning checklist

- ☐ Evaluation scope and focus defined
- ☐ Linkages to objectives and scenario clear
- ☐ Roles and responsibilities assigned
- ☐ Documentation tools prepared

Notes:

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 4 – Designing a DBX

Factsheet 4.4. – DBX Logistics and Communication

How to use:

Complete this factsheet during the design phase, once the DBX format, workflow, and participation arrangements have been confirmed. Use it to prepare logistical and communication arrangements required to deliver the exercise, including venue or platform setup, materials, communication before and during the exercise, and post-exercise information sharing.

A. Exercise modality

- ☐ Exercise format confirmed
 - ☐ Scenario-based workshop
 - ☐ Tabletop exercise (TTX)
- ☐ Delivery modality confirmed
 - ☐ In-person
 - ☐ Online
 - ☐ Hybrid
- ☐ Exercise duration confirmed
 - ☐ Half-day
 - ☐ Full day
 - ☐ Multi-day (specify)

- ☐ Exercise dates validated against operational constraints (e.g. peak hazard season, ongoing emergencies, institutional availability)

B. Venue or platform

In-person exercises

- ☐ Venue confirmed and accessible to all participants
- ☐ Plenary room suitable for facilitated discussion
- ☐ Breakout rooms available (if required)
- ☐ Seating arrangement supports interaction (U-shape / round tables)
- ☐ Audio-visual equipment tested (projector, screen, sound)
- ☐ Reliable internet connectivity available

Online or hybrid exercises

- ☐ Virtual platform confirmed (e.g. Teams, Zoom)
- ☐ Breakout functionality tested
- ☐ Screen-sharing enabled for injects and AMHEWAS products
- ☐ Technical support available during the exercise

C. Materials

- ☐ Exercise agenda finalised
- ☐ Participant briefing note prepared and shared
- ☐ Scenario summary prepared (non-technical, 1–2 pages)
- ☐ AMHEWAS products prepared for use as injects
 - ☐ Continental Watch
 - ☐ Drought Watch
 - ☐ SitReps
 - ☐ All injects prepared
- ☐ Inject delivery format confirmed
 - ☐ Slides
 - ☐ Printed extracts
 - ☐ Simulated emails/phone calls/messages
 - ☐ Other
- ☐ Facilitator guide prepared
- ☐ Evaluation/observation templates prepared
- ☐ Documentation tools prepared (note-taking templates, logs)

D. Roles and coordination arrangements

Exercise roles clearly defined and communicated

- ☐ Facilitator(s)
- ☐ Exercise Control (EXCON – for TTX)
- ☐ AMHEWAS subject-matter expert
- ☐ Evaluator(s) / rapporteur(s)
- ☐ Internal coordination mechanism confirmed (e.g. email, WhatsApp, Teams)
- ☐ Inject delivery responsibility confirmed
 - ☐ Facilitator (workshops)
 - ☐ EXCON (TTX)

E. Pre-Exercise Communication

- ☐ Invitations sent to all participants
- ☐ Agenda shared in advance
- ☐ Exercise objectives clearly communicated
- ☐ Roles and expectations explained
- ☐ Ground rules for discussion clarified
- ☐ Background materials shared, as appropriate
 - ☐ Overview of AMHEWAS products
 - ☐ Sample bulletins or extracts
 - ☐ Exercise process overview

- ☐ Participants informed that:

 - The exercise is non-judgmental and learning-oriented
 - Discussions will be documented
 - Outputs will inform follow-up actions (AAR / improvement plan)

F. Communication during the exercise

- ☐ Opening briefing prepared (objectives, scope, rules)
 ☐ Mechanism for presenting injects confirmed
 ☐ Clear process for plenary and breakout reporting
 ☐ Timekeeping arrangements agreed

Additional for TTX

- ☐ Inject sequencing and timing confirmed (MEL/MIL prepared)
 ☐ Mechanism to track responses to injects agreed
 ☐ EXCON included in all relevant communications

G. Accessibility, inclusion and language

- ☐ Language(s) of the exercise confirmed
 ☐ Interpretation arranged, if required
 ☐ Materials adapted for accessibility, where feasible
 ☐ Participation arrangements support inclusive engagement (e.g. gender balance, representation of relevant actors)

H. Post-Exercise communication and follow-up

- ☐ Hot debrief session planned
 ☐ Timeline for After-Action Report agreed
 ☐ Responsibility for drafting and validating outputs assigned
 ☐ Follow-up meeting or validation process planned
 ☐ Participants informed how and when outputs will be shared

I. Final readiness check

- ☐ Logistics ready
 ☐ Communications ready
 ☐ Roles clear
 ☐ Materials complete

Notes:

Validated by (name/institution): _____
 Date (DD/MM/YYYY): _____

Chapter 5 | Implementing a Discussion-Based Exercise

Following the planning and design phases, the next stage of the DBX cycle is implementation. This phase consists of the structured delivery of the discussion-based exercise in accordance with the approved scenario, inject plan, objectives, and facilitation methodology.

Implementation requires disciplined execution rather than improvisation. It ensures that facilitation, inject management, participant engagement, and monitoring are conducted in a controlled, objective manner. It requires:

- Clear role separation between facilitators, exercise control (EXCON - when applicable), participants and evaluators;
- Consistent and traceable delivery of the scenario progression and injects;
- Active management of time and discussion flow;
- Structured capture of observations linked to the exercise objectives.

A well-implemented DBX remains faithful to the design developed in Chapter 4 while allowing sufficient flexibility to adapt to participant dynamics without compromising control.

The implementation phase includes four key steps:

1. DBX Set-up
2. DBX Training and Briefing
3. DBX Facilitation and Control
4. DBX Monitoring and Evaluation

At the conclusion of this phase:

- The exercise has been delivered in accordance with the approved design documentation;
- Participants have engaged in structured, objective-based discussion;
- Coordination, interpretation, and decision-making processes have been explored;
- Observations required for debriefing and reporting have been systematically captured;
- The exercise has formally transitioned to the debrief and after-action phase.

Chapter 5 | 5.1. DBX Set-Up

The DBX setup phase ensures that all logistical, organisational, and coordination conditions are in place before simulation play begins. Its purpose is to create a controlled environment that enables smooth delivery of exercise and prevents unnecessary disruptions.

All set-up activities should be completed and verified prior to participant arrival. Responsibility for verification rests with the EXCON Lead (*when applicable*) in coordination with the facilitation team.

1. Logistical and technical aspects

The venue and technical arrangements must correspond to the requirements defined during the design phase. The implementation team should confirm:

- Adequate room size and seating configuration aligned with planned participant grouping;
- Functioning audio-visual equipment (projector, microphones, speakers);

- Reliable power supply and internet connectivity;
- Access procedures and security arrangements.

For virtual or hybrid formats, the videoconferencing platform must be tested in advance. This includes verification of:

- Breakout room configuration;
- Screen sharing functionality;
- Interpretation channels (if applicable);
- Recording settings (if used).

All exercise materials must be prepared and available, including presentations, agendas, inject packages, evaluation templates, and identification materials (e.g. sign-in sheets, badges, certificates).

If interpretation services are required, interpreters must be briefed on the exercise format and provided with materials beforehand. Technical equipment (headsets, microphones, booths, interpretation channels) must

be tested. Catering and participant services (e.g. daily allowances) should be reconfirmed against the agreed arrangements.

2. Participant organisation and communication

Participant grouping must reflect either the real coordination structure or the objectives defined in the exercise design. Groups may be organised by sector, function, or territorial level. Room layout should facilitate the intended interaction and decision-making dynamics.

In TTX formats, where activation of specific functions or operational centers may form part of the objectives as the scenario unfolds, the layout should allow for flexibility if groups need to be reorganised during play (e.g. dedicated or thematic tables for each function).

Clear communication channels must be established before the TTX begins.

This includes:

- Defining how injects will be distributed;
- Identifying group contact points;
- Confirming communication tools (dedicated or existing email accounts, messaging systems, cell numbers, or other platforms).

Chapter 5 | 5.2. DBX Training and Briefing

Training should be regarded as a core preparatory component before implementing any DBX format. It should include a structured recap of the key elements of the early warning-early action system relevant to the exercise objectives.

The training needs assessment (see Section 3.6) should inform the scope and focus of preparatory activities. Where specific gaps are identified - particularly in relation to the AMHEWAS products or familiarity with discussion-based exercise formats - targeted

All exercise-related communications must include standardised wording indicating that they refer to a simulation (e.g. “SIMULATION EXERCISE”) to prevent external misunderstanding.

3. Staff coordination

Effective coordination among EXCON (*when applicable*), facilitators, observers, and evaluators is essential to maintain scenario control. Particularly for TTX formats, a dedicated internal communication channel for exercise staff must be established and tested before play begins. This channel must remain separate from participant communication systems.

Before the simulation begins, a final coordination meeting should be conducted involving EXCON (*when applicable*), facilitators, and evaluators. This meeting should:

- Reconfirm exercise objectives and key evaluation points;
- Review scenario flow and inject sequencing;
- Clarify individual roles and decision authority;
- Confirm participant attendance and group allocation;
- Address any last-minute logistical or technical issues.

This meeting constitutes the final readiness check before initiating the simulation.

preparatory sessions should be organised in advance of the DBX to ensure understanding and effective participation.

5.2.1 Preparatory training

Preparatory training aims to ensure that participants share a common understanding of the relevant frameworks, tools, and procedures before the exercise begins. It establishes a shared knowledge base and terminology, thereby supporting structured, objective-driven participation in the DBX.

The scope and structure of the training should be determined based on the training needs assessment. Tailored sessions may therefore be developed to address identified gaps or to strengthen specific operational components. Training may be delivered in-person, online, or in a hybrid format, and organised into distinct modules depending on the national context and exercise objectives. While DBX participants are generally invited to attend the preparatory training, specific modules may be targeted to particular stakeholder groups.

Preparatory training should aim to ensure that participants share:

- A common understanding of AMHEWAS products and their operational application;
- Awareness of relevant national and regional coordination mechanisms;
- Shared terminology related to early warning and early action processes.

Where appropriate, training may be structured into two or three modules aligned with identified needs.

Module 1 - AMHEWAS Framework and Products

This introductory module provides a general overview of:

- The AMHEWAS framework and institutional architecture;
- Core AMHEWAS products (e.g. Continental Watch, Daily Watch, Situation Reports);
- Operational use of AMHEWAS products.

The depth and technical detail of this module should be adjusted according to the results of the training needs assessment.

Module 2 - National Integration and Operational Procedures

The content of this module depends on the national context. Where procedures for integrating AMHEWAS products into national systems already exist, the module should focus on:

- Roles and responsibilities of relevant institutions;
- Hazard monitoring, forecasting, and modelling approaches;
- Integration of AMHEWAS products into national Early Warning System (EWS) Standard Operating Procedures (SOPs);
- Dissemination and communication processes;
- Preparedness measures and early action activation.

Where integration procedures are not yet formalised, the module should instead emphasise:

- Existing national EWS workflows;
- Institutional coordination mechanisms;
- Communication and dissemination channels;
- Early action activation processes.

Module 3 - DBX Methodology and National Experience

This module focuses on:

- Overview of SIMEX/DBX formats (e.g. TTX, scenario-based workshops);
- National experience in exercise implementation, where applicable;
- Expected participant roles during the upcoming DBX.

Modules may be delivered through lecture-based or participatory approaches, depending on objectives and available time.

Target audience

Preparatory training should involve stakeholders relevant to the exercise objectives, including:

- **Early Warning actors:** National meteorological and hydrological services, relevant national authorities, and Regional Economic Communities, as identified in the institutional analysis (see Section 2.1);
- **Disaster Risk Management authorities:** National and sub-national civil protection or disaster management institutions;
- **Early Action actors:** Line ministries, emergency services, local authorities, NGOs, volunteer organisations, and other operational stakeholders involved in preparedness and response.

Where necessary, external experts or specialised civil protection actors may contribute to specific training modules.

5.2.2 Exercise Briefing

The exercise briefing is a mandatory step conducted immediately prior to the start of simulation play. Its purpose is to set the tone and pace of the exercise and formally transition into the simulation environment, ensuring that all participants clearly understand the objectives, format, rules, and operational procedures of the DBX.

Chapter 5 |

5.3. DBX Facilitation and Control

To maximise the value of the exercise experience, participants should receive a structured preparatory briefing before simulation activities begin.

While the briefing may be conducted on the same day as the exercise, it is preferable, where feasible, to organise it some days or weeks in advance. This allows participants to prepare adequately, unless the exercise objectives explicitly include testing rapid reaction to an unexpected scenario.

The briefing must ensure that participants:

- Understand the purpose and objectives of the exercise;
- Are aware of their specific roles and responsibilities;
- Know how injects will be delivered and how responses should be managed;
- Understand communication protocols and interaction with EXCON;
- Are familiar with logistical arrangements and available tools.

In Tabletop Exercises, the briefing is conducted by the EXCON team. In scenario-based workshops, the facilitator may lead it.

The initial briefing should include:

- Exercise format and overall purpose;
- Specific objectives and expected outcomes;
- Roles and responsibilities of EXCON, facilitators, participants, observers, and evaluators;
- Agenda and timing;
- Rules of conduct and exercise artificialities;
- Communication procedures and inject management;
- Monitoring and evaluation arrangements.

Where appropriate - particularly in TTX formats involving multiple communication systems or complex inject management - EXCON may organise a short technical rehearsal (often referred to as a “test run”). This rehearsal serves to verify system functionality and allow participants to familiarise themselves with the communication tools that will be used during the exercise. It may include:

- Testing communication platforms and tools to ensure full connectivity;
- Demonstrating how injects will be received, processed, and responded to;
- Clarifying coordination mechanisms between participants and Exercise Control, especially where multiple supporting control elements are involved.

DBX facilitation and control encompass the coordinated supervision and management of the simulation to ensure that it runs effectively, remains aligned with objectives, and preserves methodological integrity. As outlined:

- In a Tabletop Exercise, both facilitation and control (Exercise Control - EXCON) functions are required.
- In a scenario-based workshop, facilitation is required, while a formal control structure may not be necessary.

5.3.1. Facilitation

In both DBX formats, the facilitators are responsible for guiding the discussion, following the flow of actions, maintaining focus on the exercise objectives, and ensuring constructive, solution-oriented engagement. Facilitators do not provide answers or direct decisions. Their role is to enable participants to analyse, reflect, and identify options autonomously.

Core facilitation responsibilities include:

- Drawing on participants’ expertise and experience;
- Promoting shared understanding of objectives;
- Encouraging balanced participation;
- Supporting constructive dialogue without taking a position;
- Maintaining a safe and inclusive discussion environment;
- Ensuring effective time management.

The intensity of facilitation may vary depending on the exercise format. In a TTX, intervention should generally remain minimal to preserve realism and participant ownership. In a scenario-based workshop, facilitation may be more structured and directive.

Where appropriate, involving national stakeholders on the facilitation team can enhance effectiveness, given their familiarity with institutional dynamics and procedures.

Facilitation Process

1. Opening the simulation exercise

The facilitator formally announces the start of the exercise, clearly indicating the simulated date, time, and initial context. This marks the transition into simulation mode.

The scenario introduction may take different forms depending on the exercise format:

- In a TTX, the opening may involve assigning an AMHEWAS product to a designated participant, issuing a situational inject through EXCON, or presenting simulated hazard information (e.g. bulletin, alert, or news format).

- In a scenario-based workshop, the facilitator typically presents the first scenario segment in plenary, outlining the context and reflection questions.

A structured opening ensures participants understand the simulated environment and their roles within it.

2. Managing exercise play

During exercise play, facilitators maintain focus on objectives while allowing participants to explore coordination processes and decision-making pathways.

Facilitators are encouraged to use primarily open-ended questions (e.g. how, why, what) to stimulate analysis and reflection, while using closed questions selectively to clarify specific points. They monitor discussion quality, regulate time, and intervene when necessary to:

- Clarify misunderstandings;
- Re-align discussion with objectives;
- Encourage participation from less vocal stakeholders;
- Manage dominance or drift.

Facilitation must strike an appropriate balance between guidance and participant ownership. The level and nature of intervention vary depending on the exercise format.

Format-Specific Considerations

Scenario-Based Workshop

Facilitators guide discussion through predefined scenario segments aligned with the exercise objectives. Injects may be delivered through handouts, slides, or verbal presentations, typically in plenary sessions. Discussions may occur in plenary or in working groups. When group work is used, facilitators should ensure that key conclusions are summarised and shared in plenary to maximise collective learning.

Facilitators manage the allocated reflection time for each scenario segment and may explore alternative decision pathways or coordination approaches defined during the design phase. The emphasis is on analytical exploration rather than operational simulation.



To support monitoring and evaluation, facilitators help maintain focus on objectives, capabilities, capability targets, and critical tasks. Visual tools (e.g. boards, flipcharts, post-it notes) may be used to structure discussion and capture key points.

Flexibility and adaptability remain essential throughout the workshop, as facilitators may need to adjust the discussion flow depending on participant engagement and emerging insights.

Tabletop Exercise (TTX)

Facilitators work in close collaboration with EXCON, which manages simulation and inject delivery. While facilitators follow the flow of actions and participants' engagement, with guidance offered where appropriate, overall scenario governance in a TTX remains the responsibility of EXCON.

At the beginning of the exercise, the facilitator formally announces the start of the simulation, clearly stating the simulated date and time. The initial inject may involve assigning an AMHEWAS product to a designated participant for dissemination, issuing a general situational announcement, or presenting simulated hazard information (e.g. bulletin or news format). This structured launch enables participants to engage fully in their roles from the outset.

During exercise play, facilitators may:

- Intervene minimally to preserve realism and participant ownership of simulated actions;
- Regulate the flow of discussion without directing decisions;
- Coordinate with EXCON regarding inject pacing and sequencing;
- Support interpretation of injects and operational implications;
- Request time-outs or clarification where necessary.

Facilitators may also provide real-time feedback to EXCON regarding participant engagement, understanding of injects, or the need for additional or adjusted injects.

3. Closing the simulation

The simulation must be formally concluded in all DBX formats.

The facilitator - in coordination with EXCON, where applicable - clearly announces the end of simulation play.

- In a TTX, closure may occur through a final inject issued by EXCON indicating stabilisation or resolution of the simulated event.
- In a scenario-based workshop, the facilitator formally concludes the final scenario segment and announces the end of simulation activities.

A clear closure is essential to:

- Signal the transition from simulation mode to reflection;
- Prevent continued in-character discussion;
- Prepare participants for the immediate feedback phase.

Immediately following closure, a brief "hot debrief" may be conducted to capture initial impressions before moving to structured monitoring and evaluation (see Section 5.4).

5.3.2. Control (TTX only)

In a TTX, Exercise Control (EXCON) is responsible for overall simulation governance.

- Oversees exercise conduct in accordance with the approved design;
- Manages the Master Scenario Events List / Master Inject List (MSEL/MIL);
- Controls inject timing and sequencing;
- Regulates the pace of play;
- Is the only authority authorised to provide official exercise information to participants.

Players simulate operational responses to injects rather than merely discussing them. Injects are delivered through established communication channels as defined in the exercise design.

Based on real-time observation and feedback, and in coordination with facilitators and evaluators, EXCON may:

- Adjust inject timing or sequencing;
- Introduce supplementary injects to stimulate engagement;
- Slow the pace to allow clarification;
- Adapt and/or repeat injects where necessary to ensure objectives are achieved.

Any adjustments must remain consistent with the approved exercise framework and preserve scenario credibility.

Chapter 5 |

5.4. DBX Monitoring and Evaluation During Implementation

Monitoring and evaluation are integral components of DBX implementation. They ensure that exercise activities are systematically observed, documented, and analysed in relation to the established objectives. Monitoring during implementation underpins the credibility of the debriefing and reporting phases and provides the evidence base for identifying strengths, gaps, and areas for improvement.

Evaluators must be briefed prior to the exercise and fully familiar with:

- The exercise objectives;
- The evaluation criteria and capability targets;
- The observation methodology and templates prepared during the design phase;
- Their specific roles and responsibilities.

Monitoring focuses on capturing relevant behaviours, coordination processes, decision-making dynamics, and application of procedures. Evaluation builds on this monitoring by analysing collected information against predefined objectives.

5.4.1 Monitoring in a Scenario-Based Workshop

In a scenario-based workshop, monitoring primarily concentrates on documenting:

- Key discussion points;
- Decisions and proposed actions;
- Identified strengths and weaknesses;
- Recommendations emerging from group reflection.

Evaluators should maintain a structured record of discussions, ideally organised chronologically, and aligned with exercise objectives. Summarising the outcomes of each discussion segment can support clarity and facilitate consensus before moving to the next scenario component.

The collected information should be reviewed after the exercise to distinguish between strengths, gaps and opportunities for system improvement, in terms of coordination, procedures and operational clarity.

5.4.2. Monitoring in a Tabletop Exercise

In a TTX, monitoring extends beyond capturing discussions to include observing simulated actions and information flows.

In addition to structured observation templates developed during the design phase, evaluators should collect and review documentation generated during the exercise, such as:

- Logbooks or action tracking sheets;
- Emails or electronic communications used within the simulation;
- Situation reports and meeting summaries;
- Any formal outputs produced by participants.

These materials provide objective evidence of decision-making processes, information accuracy, coordination effectiveness, and adherence to procedures.

Monitoring in a TTX should focus not only on what participants say, but also on:

- How they interpret injects;
- How information is shared and validated;
- Whether roles and responsibilities are applied as intended;
- The timing and coherence of simulated actions.

5.4.3. From Monitoring to Evaluation

Following the exercise, all collected observations and supporting materials should be systematically reviewed and analysed in relation to the exercise objectives. This analysis should:

- Identify demonstrated strengths;
- Highlight areas requiring improvement;
- Distinguish between systemic gaps and contextual constraints;
- Provide evidence-based inputs for the After-Action Report.

For the purpose of evaluation:

Systemic gaps - refer to structural weaknesses in policies, procedures, institutional mandates, coordination mechanisms, or resource allocation that affect the functioning of the early warning-early action system and require institutional, procedural, or regulatory adjustment.

Contextual constraints - refer to temporary or external factors that may influence performance but do not reflect structural deficiencies in the early warning-early action system. These may arise either from the artificial conditions of the exercise (e.g. time compression or simulated communication limitations) or from real-world circumstances (e.g. temporary staffing shortages, ongoing revision of procedures, concurrent crises, or short-term resource limitations).

Accurately distinguishing between these categories ensures that findings are proportionate, realistic, and appropriately targeted, thereby strengthening the credibility and usefulness of the evaluation process.

CHAPTER 5 – Implementing a DBX

Factsheet 5.1 - DBX Implementation Readiness Checklist

How to use

Complete this checklist 24–48 hours before the exercise and reconfirm critical elements immediately prior to exercise delivery.

Country: _____
 DBX Lead Institution: _____
 Focal Point / Contact: _____
 Format: ☐ Scenario-Based Workshop ☐ Table-Top Exercise (TTX)

Logistical Readiness

Item	Status	Notes
Venue / platform confirmed	☐ Yes ☐ No	
Seating/group layout prepared	☐ Yes ☐ No	
Audio-visual equipment tested	☐ Yes ☐ No	
Internet connectivity tested	☐ Yes ☐ No	
Breakout rooms configured (if applicable)	☐ Yes ☐ No	
Interpretation services confirmed	☐ Yes ☐ No	
Participant list finalized	☐ Yes ☐ No	
Name badges/sign-in sheets prepared	☐ Yes ☐ No	
Catering confirmed (if applicable)	☐ Yes ☐ No	

Exercise Materials

Material	Status	Notes
Agenda printed/shared	☐ Yes ☐ No	
Scenario narrative finalised	☐ Yes ☐ No	
Injects prepared and sequenced	☐ Yes ☐ No	
AMHEWAS product excerpts prepared	☐ Yes ☐ No	
Facilitation guide printed	☐ Yes ☐ No	
Evaluation templates printed	☐ Yes ☐ No	
Participant briefing pack shared in advance	☐ Yes ☐ No	
Master Events List (MEL) and Master Inject List (MIL)- (TTX only)	☐ Yes ☐ No	

Team Coordination

Function	Confirmed	Name
Exercise Lead	☐ Yes ☐ No	
EXCON Lead (TTX)	☐ Yes ☐ No	

Lead Facilitator	☐ Yes ☐ No
Co-Facilitator(s)	☐ Yes ☐ No
AMHEWAS SME	☐ Yes ☐ No
Technical SME (Met/Hydro)	☐ Yes ☐ No
Documentation/Rapporteur	☐ Yes ☐ No
Evaluation Lead	☐ Yes ☐ No

Validated by (name/institution): _____
 Date (DD/MM/YYYY): _____

CHAPTER 5 – Implementing a DBX

Factsheet 5.2. Exercise Briefing Template

How to use

To be delivered immediately before the start of simulation play.

1. Welcome and Context

- Welcome participants
- Confirm institutional representation
- State the purpose of the exercise

“Today’s exercise aims to strengthen the operational integration of AMHEWAS products into our national early warning and early action system.”

2. Objectives

Overall Objective:

Supporting Objectives:

1.
-
2.
-
3.
-

3. Exercise Format

- ☐ Scenario-Based Workshop
- ☐ Table-Top Exercise

Explain to participants:

- How the scenario will unfold
- How injects will be introduced
- Expected level of participation

4. Roles and Responsibilities

Clarify:

- Participants (Players)
- Facilitators
- EXCON (if applicable)
- Evaluators
- Rapporteurs

5. Rules of Conduct

- This is a learning exercise, not a test.
- Speak from your institutional role (TTX).

- Respect time limits.
- All injects are part of a simulation.
- Focus on processes, not personalities.

6. Communication Procedures (TTX)

- How injects will be delivered
- How responses should be communicated
- Which channels are official for simulation

7. Monitoring & Documentation

- Discussions will be documented.
- Findings will inform an After-Action Report.
- Immediate feedback will be collected after exercise closure.

CHAPTER 5 – Implementing a DBX

Factsheet 5.3 Facilitation Guide Template

How to use:

To be used during the simulation exercise

Opening the Simulation

Simulated date/time: _____

Initial scenario summary: _____

Opening statement example: “We are now entering simulation mode. The simulated date is [X]. A Continental Watch has just been issued...”

Inject Tracking Sheet Template (one page template to be done)

Inject No.	Time Issued	To Whom	Key Discussion Points	Observed Issues	Linked objective

Facilitator Prompts (Generic)

- Who receives this information first?
- How is this interpreted?
- What coordination mechanism is activated?
- What decisions are required at this stage?
- What barriers may affect action?
- What feedback is shared upward/downward?

EXCON Control Sheet (TTX Only)

Master Inject Control Log (one page template to be done)

Phase	Inject	Scheduled Time	Delivered	Adjustments Made	Actions Observed/Notes

Real-Time Adjustment Log

If pacing requires adaptation:

- ☐ Inject delayed
☐ Inject advanced
☐ Clarification issued
☐ Additional inject introduced

Reason: _____

Validated by (name/institution): _____

Date (DD/MM/YYYY): _____

CHAPTER 5 – Implementing a DBX

Factsheet 5.4 Monitoring & Evaluation Form

How to use

To be used during the simulation exercise and finalised immediately after closure.

Objective-Based Observation Matrix (one page template to be done)

Objective	Observed Strengths	Gaps Identified	Notes

Coordination & Information Flow Observations

- How was AMHEWAS accessed?
- Was interpretation consistent?
- Were national thresholds referenced?
- Was feedback shared across levels?
- Were roles applied clearly?

Notes:

Distinguishing Findings

Systemic Gaps

Structural Issue- typically require procedural, regulatory, or institutional change

Contextual Constraints

Temporary or exercise-related conditions

Chapter 6 | Debriefing and Follow-Up of a Discussion-Based Exercise

The debriefing and follow-up phase concludes the DBX cycle and ensures that exercise activities translate into institutional learning and system strengthening. While Chapter 5 focused on structured implementation, this phase focuses on:

- Reflection and validation of observations;
- Analysis of how the exercise worked against objectives;
- Identification of strengths and gaps;
- Definition of corrective and improvement measures.

In the context of AMHEWAS-related exercises, this phase is particularly important to assess how continental and regional early warning products are interpreted, integrated, and operationalised at national and sub-national levels.

This phase consists of three complementary components:

1. Debriefing
2. After-Action Report
3. Improvement Plan

Chapter 6 | 6.1. DBX Debriefing

Debriefing is the structured reflection process that follows the exercise and ensures that lessons identified are translated into institutional learning. It is the phase of the Discussion-Based Exercise in which participants share their experiences, provide feedback on the simulation, and identify key achievements, challenges, and recommendations related to the exercise objectives.

The debrief also captures participants’ learning outcomes and provides an opportunity to assess the exercise’s design and conduct. In this context, debriefing supports organisational learning and helps distinguish between:

- Issues related to the early warning - early action (EW-EA) system;
- Challenges related to the implementation of AMHEWAS products and coordination mechanisms;
- Constraints linked to the artificial conditions of the exercise setting.

At the conclusion of this phase:

- Exercise findings have been shared and validated through structured reflection;
- Strengths and areas for improvement have been clearly documented;
- Systemic EW-EA gaps have been distinguished from contextual constraints;
- An evidence-based After-Action Report has been produced and validated;
- A time-bound Improvement Plan has been agreed and assigned;
- Responsibilities for follow-up actions have been formally acknowledged;
- The DBX has contributed to strengthening the use and integration of AMHEWAS within the national EW-EAS.

The format, duration, participants, and documentation methods for debriefing should be defined during the previous exercise planning phase to ensure adequate time allocation and full participation.

Debriefing is conducted by the facilitation team for scenario-based workshops and by the Exercise Control (EXCON) function, in coordination with facilitators, for Tabletop Exercises. Two types of debriefing are commonly applied:

- **Hot wash (hot debrief):** conducted immediately after the simulation or on the following day, focusing on immediate impressions and initial observations;
- **Structured (cold) debrief:** conducted after more systematic analysis of the exercise, allowing for deeper review and validation of findings.

In both cases, debriefing should remain constructive and forward-looking. The debriefing environment should be established as a safe space that promotes open, respectful, and solution-oriented dialogue. If sensitive institutional issues arise, facilitators may address them separately, outside the plenary discussion, to preserve trust and maintain a constructive atmosphere.

6.1.1. Hot Wash Debrief

The hot debrief takes place immediately after the simulation’s formal closure. It is typically short (1 to 2 hours) and conducted in plenary. Its purpose is to capture immediate reflections while the experience is still fresh.

Participants may be asked questions such as:

- What aspects of the exercise worked particularly well?
- What did not work well?
- What could be improved?
- Were the tools and mechanisms used to collect and transmit injects’ and responses clear, accessible, and functional?
- Was information derived from AMHEWAS products clear and understandable during the exercise?
- Were roles and responsibilities applied as expected?
- What challenges emerged?
- What should be improved before a real event occurs?
- Was the exercise designed and implemented effectively?

The hot debrief should avoid detailed technical debate. Its purpose is to capture first impressions, not to produce final conclusions.

6.1.2. Cold Debrief

A more structured debrief may be conducted after a more systematic review of the exercise dynamics, ideally within one to two weeks following the exercise. Where feasible, key debrief discussion themes may be shared with participants in advance to encourage reflective and structured contributions.

The structured debrief may be conducted in person or through virtual platforms, depending on logistical arrangements and institutional context.

This session systematically reviews the exercise against the objectives defined during the design phase. To ensure clarity and focus, the structured debrief may follow this sequence:

1. Review of exercise objectives
2. Discussion by functional processes
3. Identification of demonstrated strengths and good practices
4. Identification of systemic and contextual gaps and areas of improvement
5. Collection of recommendations for improvement
6. Agreement on priority areas for improvement

Discussions may be organized either in plenary or in smaller groups, depending on the number of participants and the institutional context. Focus areas may include:

- Interpretation and use of AMHEWAS products;
- Integration of AMHEWAS products within the national EW-EA system;
- Communication and dissemination mechanisms;
- Activation of preparedness and early action measures;
- Inter-institutional and multi-level coordination arrangements.

Building on these focus areas, Participants should jointly assess how the system operated in practice. The discussion should address decision-making criteria, timing, information understanding and management, clarity of roles and responsibilities, implementation of existing SOPs, communication channels, and coordination mechanisms.

For example, if the simulated Continental Watch bulletin indicated high flood risk:

- Was the national hydrometeorological service able to understand and use the information effectively?
- Was the information disseminated to relevant national institutions in a timely manner?
- Was the continental level coordination activated where appropriate?
- Were sub-national authorities informed?
- Were preparedness or anticipatory measures discussed or activated?
- Were existing procedures followed? (if any)
- What challenges emerged, and what good practices were identified?

A dedicated segment of the cold debriefing should focus on evaluators’ feedback. Evaluator input is most effective when provided after participants have shared their perspectives. This sequencing encourages self-assessment and allows evaluator observations to reinforce and deepen collective learning.

Structured debriefing ensures that findings are collectively shared and validated before formal reporting. Feedback should be systematically documented through structured notes, evaluation forms, rapporteur records, or visual tools (e.g. flipcharts). These materials provide essential evidence for drafting the After-Action Report (AAR).

Format-specific considerations

Scenario-Based Workshop

In a scenario-based workshop, the debriefing primarily focuses on participants’ understanding, use, and integration of AMHEWAS products within the national EW - EA system, including perceived challenges and benefits.

In this format, the hot and cold debriefs may partially overlap, as discussions initiated during the exercise often continue into the debriefing phase.

Chapter 6 |
6.2. After-Action Report
and Improvement Plan

The After-Action Report (AAR) is the formal document that records and analyses the results of the Discussion-Based Exercise. It provides a structured review of performance against the objectives defined during the design phase and ensures that lessons identified during the exercise are translated into concrete institutional recommendations.

The AAR serves two main purposes:

- 1. To document what happened during the exercise in an objective and structured manner;
- 2. To identify what needs to be strengthened in policies, procedures, coordination mechanisms, or operational practices.

The AAR should ideally be finalised within 30-60 days following the exercise and be based on documented observations, inject responses, evaluator notes, participant feedback, and validated findings from the debriefing process. It is suggested that it is validated by the MS.

The AAR should therefore:

- Summarise the exercise scope, format, and objectives;
- Briefly describe the scenario, and key injects used;
- Present the analysed findings linked to each objective;

Tabletop Exercise (TTX)

In a TTX, the debriefing typically focuses more specifically on the integration of AMHEWAS products into established national procedures and coordination mechanisms.

In this context:

- The hot wash captures participants’ immediate reflections on what worked well, what did not, and any procedural gaps identified;
- The structured debrief incorporates evaluation and observation findings to draw more detailed lessons and formulate recommendations for AMHEWAS integration and system improvement.

- Identify demonstrated strengths;
- Highlight areas requiring improvement;
- Distinguish between systemic gaps and contextual constraints;
- Provide evidence-based and realistic recommendations.

In AMHEWAS-related exercises, the AAR should explicitly assess:

- Whether AMHEWAS products were clearly understood and interpreted;
- Whether continental and REC-level information was integrated into national workflows;
- Whether communication channels functioned effectively;
- Whether early warning was linked to early action mechanisms;
- Whether institutional roles and coordination arrangements were clear and functional.

6.2.1. Distinguishing Actual Gaps from Simulation Constraints

Distinguishing between actual gaps in the EW-EAS and simulation constraints ensures that recommendations are proportionate and targeted.

Actual gaps refer to aspects of the EW-EA system – also in relation with AMHEWAS - that requires further development or alignment. These may include:

- Absence of clearly codified national early warnings;
- Lack of formal procedures for integrating AMHEWAS product information into national early-warning systems;
- Overlapping or unclear institutional mandates;
- Undefined early action or early action triggers;
- Weak coordination between national authorities (e.g. meteorological and disaster risk management authorities)
- Shortfall in the coordination with regional and continental actors.

Such gaps typically require structural, procedural, regulatory, or institutional adjustments.

Contextual constraints are exercise-related limitations that may affect performance but do not indicate structural weakness. These may include:

- Time compression is inherent in the scenario design;
- Simulated communication limitations were introduced for training purposes;
- Artificial scenario assumptions;
- Temporary resource limitations during the exercise.

Clearly distinguishing between these categories prevents misinterpreting exercise artificialities as issues related to the EW-EAS. The AAR findings form the basis of the Improvement Plan.

6.2.2. Improvement Plan

The Improvement Plan translates AAR findings into concrete institutional action. While the AAR documents and analyses exercise performance, the Improvement Plan ensures that identified areas of improvement are addressed through structured and time-bound measures.

Improvement planning should focus on strengthening systems rather than attributing individual responsibility. Each corrective measure should:

- Be clearly linked to a documented systemic gap identified in the AAR;
- Define a specific and realistic action;
- Identify the responsible institution or coordination body;

- Include a proposed implementation timeline;
- Establish a clear indicator or mechanism to monitor progress.

Improvement measures should prioritise:

- Integration of AMHEWAS products into national early warning systems;
- Clarity of roles and responsibilities;
- Communication and dissemination protocols;
- Strengthening the link between early warning information and early action;
- Inter-institutional coordination arrangements.

Measures should be prioritised according to risk exposure, feasibility, institutional capacity, and alignment with national DRR strategies. They may also be grouped or presented according to timeline (short, medium, and long-term measures), responsible institutions, or thematic areas such as early warning, communication, coordination, or early action.

The Improvement Plan should be drafted by the lead institution in coordination with participating stakeholders and formally validated by the relevant national authority or coordination mechanism to ensure institutional ownership and accountability.

6.2.3. Follow-Up and Institutionalisation

Improvement planning does not conclude with the approval of a document. Effective follow-up is essential to ensure that corrective actions are implemented and monitored over time.

Follow-up may include:

- Assigning a national focal point responsible for tracking implementation;
- Conducting periodic review of progress (e.g. quarterly or biannually);
- Integrating corrective measures into national DRR or EWS planning cycles;
- Reporting progress to relevant coordination platforms;
- Conduct follow-up exercises to test revised procedures, where appropriate.

In the context of AMHEWAS integration, follow-up efforts should aim to reinforce coherence between continental, regional, and national systems and strengthen the operational link between warning and early action.

CHAPTER 6 – Debriefing and Follow of a DBX

Factsheet 6.1 – Structured Debriefing Facilitation Template

How to Use

This template supports the structured validation of findings following a DBX. It should be used:

- Immediately after the exercise (Hot Debrief), and
- During the structured debrief session (within 1–2 weeks).

Exercise Information

Country: _____

Date of the DBX: _____

Format (Scenario-Based Workshop/TTX): _____

Lead Institution: _____

Debrief Date: _____

Participants in Debrief (Institutions represented): _____

Review of Objectives

Objective (s): ☐ Fully Met ☐ Partially Met ☐ Limited

Notes:

Functional Area Review (one page template to be done)

Functional Area	Strengths	Gaps	Priority (H/M/L)
AMHEWAS interpretation			
Hazard monitoring			
Decision-making			
Communication			
Early action activation			
Coordination			
Other, specify:			

Validation Questions

- Were AMHEWAS products clearly understood?
- Were national alert thresholds coherent with AMHEWAS information?
- Were REC advisories integrated appropriately?
- Were institutional mandates respected?
- Were early action triggers activated appropriately?
- Were information flows timely and traceable?

Preliminary Gap Classification

For each gap identified:

- ☐ Systemic Gap (structural weakness requiring institutional or procedural change)
- ☐ Contextual Constraint (temporary or exercise-related condition)

Immediate Priority Issues

List 3-5 priority issues requiring follow-up:

- _____
- _____
- _____
- _____
- _____

Factsheet 6.2 – AFTER-ACTION REPORT (AAR) TEMPLATE & Improvement Plan

How to use

The AAR documents and analyses exercise findings in a structured and objective manner. It should:

- Be finalised within 30–60 days following the exercise;
- Be based on evaluator observations, documentation, and validated debrief findings;
- Serve as the formal institutional record of the exercise

The AAR is not an audit or individual performance assessment. Its purpose is system strengthening.

1. Cover Page

- Exercise Title
- Country / Region
- Date of Exercise
- Format (Scenario-Based Workshop/TTX)
- Organising Institution(s)
- Report Date
- Prepared By

2. Executive Summary (1-2 pages)

- Exercise purpose and objectives;
- Overall assessment of EW-EA system performance;
- Key strengths identified;
- Priority systemic gaps;
- Strategic recommendations.

3. Exercise Overview

3.1 Background and Context

Brief description of:

- National early warning-early action context;
- Status of AMHEWAS integration;
- Rationale for conducting the exercise.

3.2. Exercise Objectives (one page template to be done)

Objective No.	Objective Description	Linked Capability

3.3. Methodology and Evaluation Approach

- Exercise format (Workshop / TTX);
- Scenario overview;
- Key inject types/AMHEWAS products used;
- Observation and documentation methods;
- Evaluation process and participants.

4. Analysis of Performance

For each objective:

- Summary of Observations
- Strengths Identified
- Areas for Improvement
- Gap Classification ☐ Systemic Gap ☐ Contextual Constraint - Provide justification.

5. Cross-Cutting Findings

- Integration of AMHEWAS into workflows
- Decision-making and escalation
- Communication pathways
- Early action mechanisms
- Institutional coordination

6. Overall Conclusions

- Degree to which objectives were met
- Overall readiness of the EW-EA system
- Priority institutional strengthening areas

7. Improvement Plan

Recommendation	Linked Gap	Priority (H/M/L)	Responsible Institution

8. AAR Governance:

Drafted by: _____
 Approved by: _____
 Approval Date: _____
 Distribution Level (Internal / Restricted / Public) _____

References

1. Asia-Pacific Technical Working Group on Anticipatory Action. 2025.
Anticipatory action simulation exercise: Toolkit and facilitator manual.
https://www.anticipation-hub.org/Documents/Training_and_Educational_Material/250701_FAO_AA_simulation_exercise_toolkit_and_facilitator_manual.pdf
2. CIMA Research Foundation, 2026. *Guidelines for Simulation Exercises on Early Warning Systems for weather-induced risks. Exercise processes within disaster risk management in the context of international projects».* Meninno S., Giambelli M., Masi R., Violante F., Gioia A., Morando M., Ferraris L. ISBN 978-88-906068-6-1
3. Homeland Security. 2020.
Homeland Security Exercise and Evaluation Program (HSEEP).
IFRC Guidelines (2025/2026) – Forthcoming, DTA
4. UNDRR. 2020.
Words into Action guidelines - Design and conduct of simulation exercises - SIMEX
https://www.preventionweb.net/files/53348_simulation.pdf?startDownload=true
5. UCPM. 2024.
Technical Guide for UCPM full-scale exercises
https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/ucpm/guidance/technical-guide-full-scale-exercises_ucpm_en.pdf
6. World Bank. 2025.
Guidelines for Rapid Emergency Preparedness Assessments Including Tabletop Simulation
(English). Washington, D.C.: World Bank Group.
<http://documents.worldbank.org/curated/en/099100125113539500>
7. World Health Organization. 2017.
Simulation Exercise Man

