EW4All initiative

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WORLD METEOROLOGICAL ORGANIZATION

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Early Warnings for All

Introduction

Early warning systems can make all the difference in protecting lives and property head of hazardous weather events

Yet **less than half of all countries have sufficient multi-hazard early warning systems** that let people know that dangerous weather is headed their way

To address this challenge, the United Nations is spearheading the Early Warnings for All (EW4All) initiative to ensure everyone on the planet is protected by early warning systems by the end of 2027

EW4All is **co-led by WMO and UNDRR**, with the support of other agencies

National **meteorological and hydrological services play a key role as they** are the official providers of early warnings for hydrometeorological hazards and **key to the success of EW4All.**

The **effectiveness of these EWS relies on the very good access** and coverage of communication services

Pillars of EWS

Disaster risk knowledge

Systematically collect data and undertake risk assessments

- Are the hazards and the vulnerabilities well known by the communities?
- What are the patterns and trends in these factors?
- Are risk maps and data widely available?

Detection, observations, monitoring, analysis and forecasting of hazards

Develop hazard monitoring and early warning services

- Are the right parameters being monitored?
- Is there a sound scientific basis for making forecasts?
- Can accurate and timely warnings be generated?

Preparedness and response capabilities

Build national and community response capabilities

- Are response plans up to date and tested?
- Are local capacities and knowledge made use of?
- Are people preapred and ready to react to warnings?

Warning dissemination and communication

Communicate risk information and early warnings

- Do warnings reach all of those at risk?
- Are the risks and warnings understood?
- Is the warning information clear and usable?

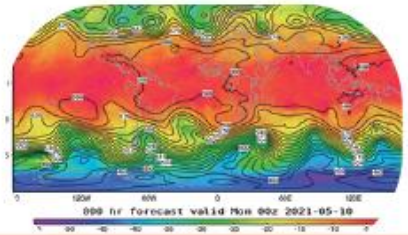
WMO IMO-WMO

WMO IFRC FICR ITU UNDRR UN Office for Disaster Risk Reduction

Role of Meteorological/Hydrological Community

Observations from the entire globe

International exchange of observations



Global Numerical Weather Prediction

Weather and climate-related infrastructure - **must be designed and managed globally**

Last-mile activities undertaken **primarily at regional, national and local level**

Effective decision-making and action

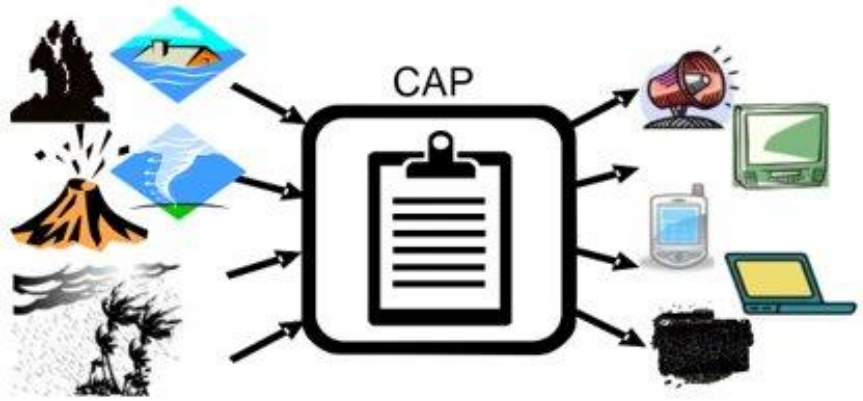
Delivery of weather and climate services

Local data processing, forecast, warning and advisory products

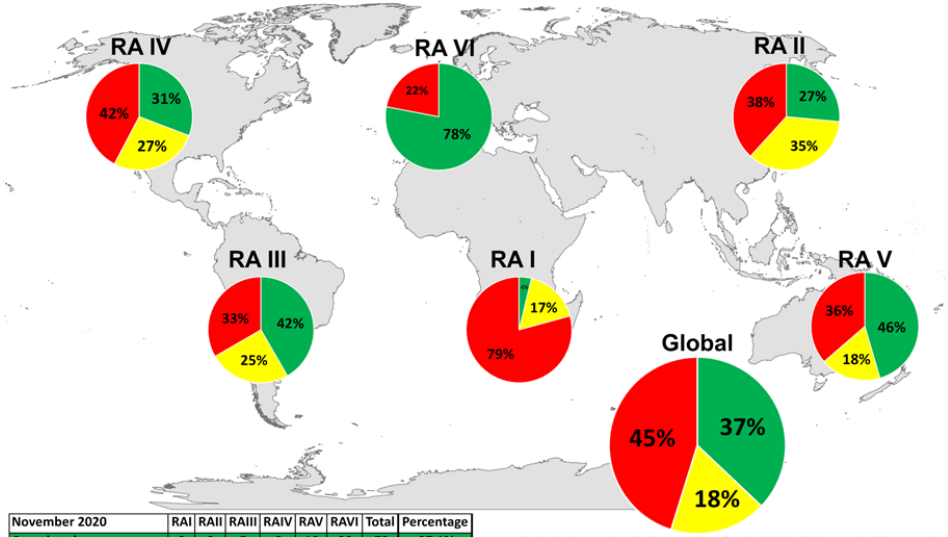
The WMO’s EW4All initiative’s hinges on several key outcomes, including:

- **closing observation gaps;**
- improving global, regional, and **national data management systems;**
- ensuring accurate **impact-based forecasting** for priority hazards;
- efficient **warning production and dissemination**;
- implementation **of relevant policies,**
- institutional mechanisms,
- **stakeholder engagement processes** to support the multi-hazard early warning systems environment.
- **Interpillar linkages are pursued** to ensure alignment with the other pillars

Common Alert Protocol for dissemination

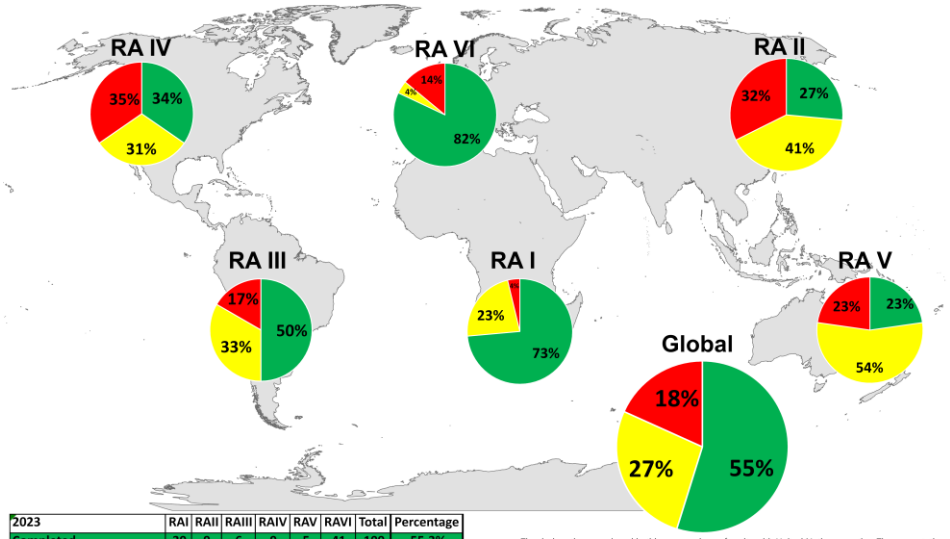


Global CAP implementation in RA I-VI: 2020



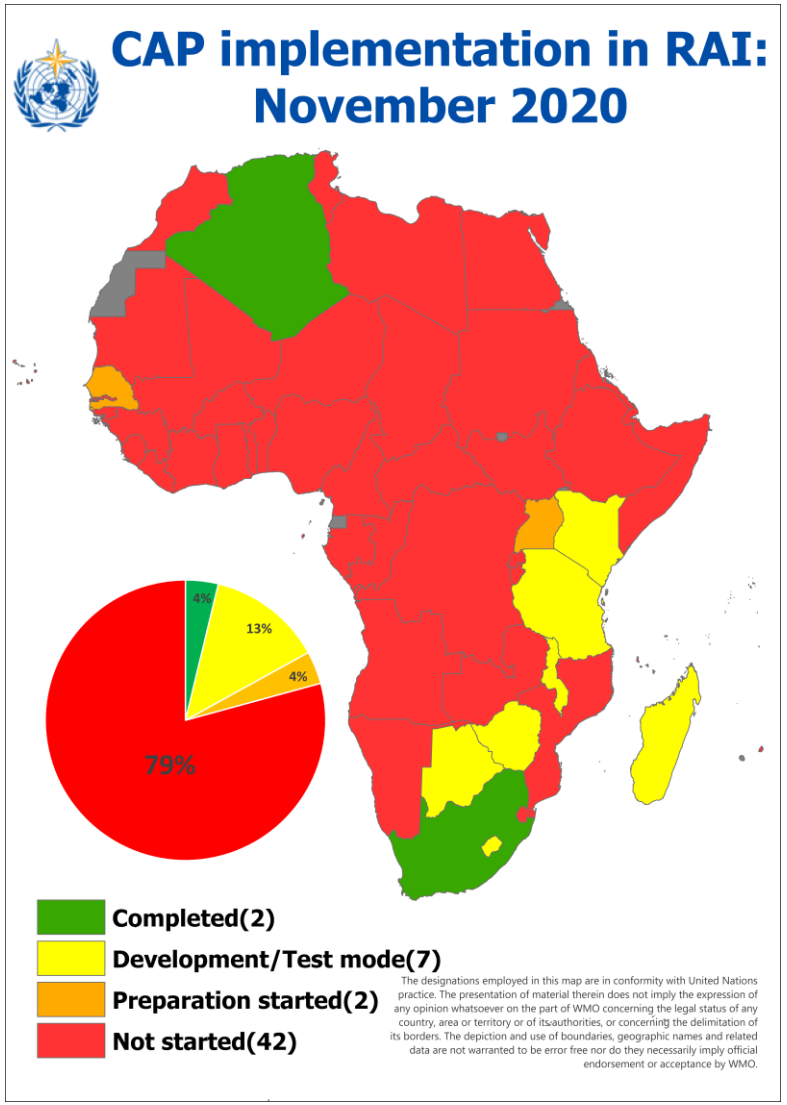
November 2020	RAI	RAII	RAIII	RAIV	RAV	RAVI	Total	Percentage
Completed	2	9	5	8	10	39	73	37.1%
Development/Test mode	9	12	3	7	4	0	35	17.8%
Not started	42	13	4	11	8	11	89	45.2%
Total	53	34	12	26	22	50	197	

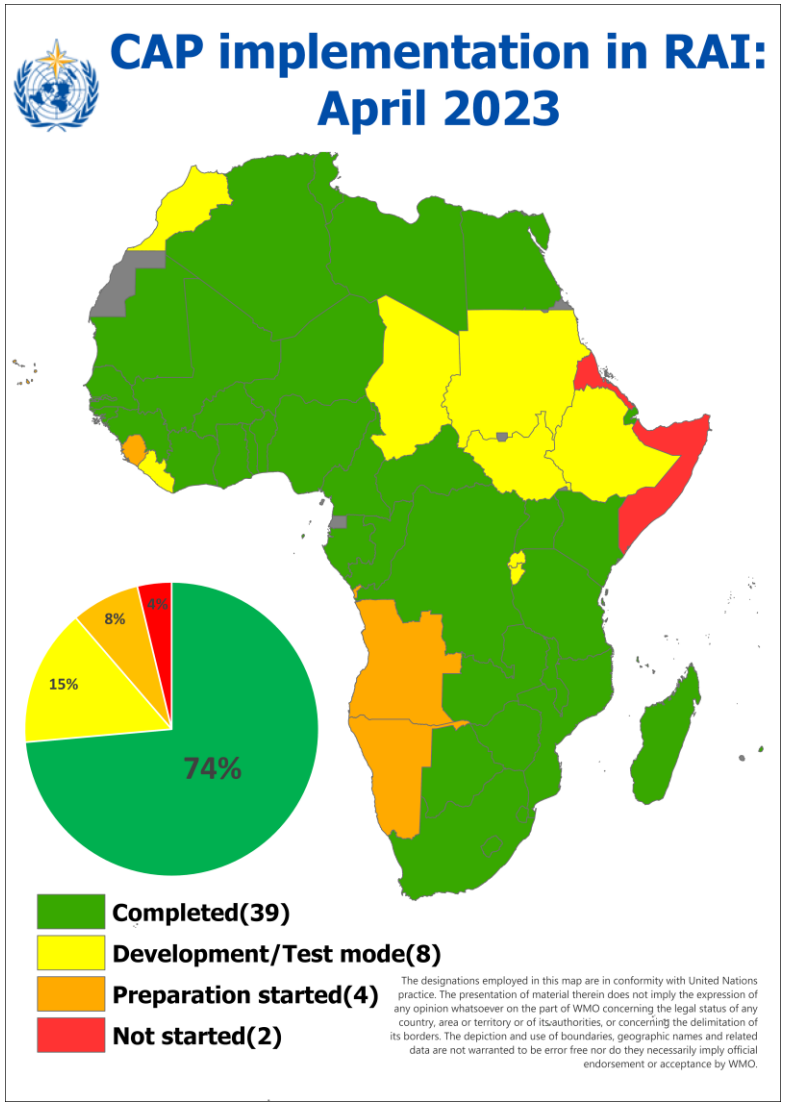
Global CAP implementation in RA I-VI: 2023



2023	RAI	RAII	RAIII	RAIV	RAV	RAVI	Total	Percentage
Completed	39	9	6	9	5	41	109	55.3%
Development/Test mode	12	14	4	8	12	2	52	26.4%
Not started	2	11	2	9	5	7	36	18.3%
Total	53	34	12	26	22	50	197	

Common Alert Protocol





INITIAL IMPLEMENTATION of the EW4ALL

Implementation needs to be:

- **consistent and compliant** with regulations, standards and guidance.
- supported by **improved supportive frameworks**
- coordinated across all pillars so it really benefits people in the end

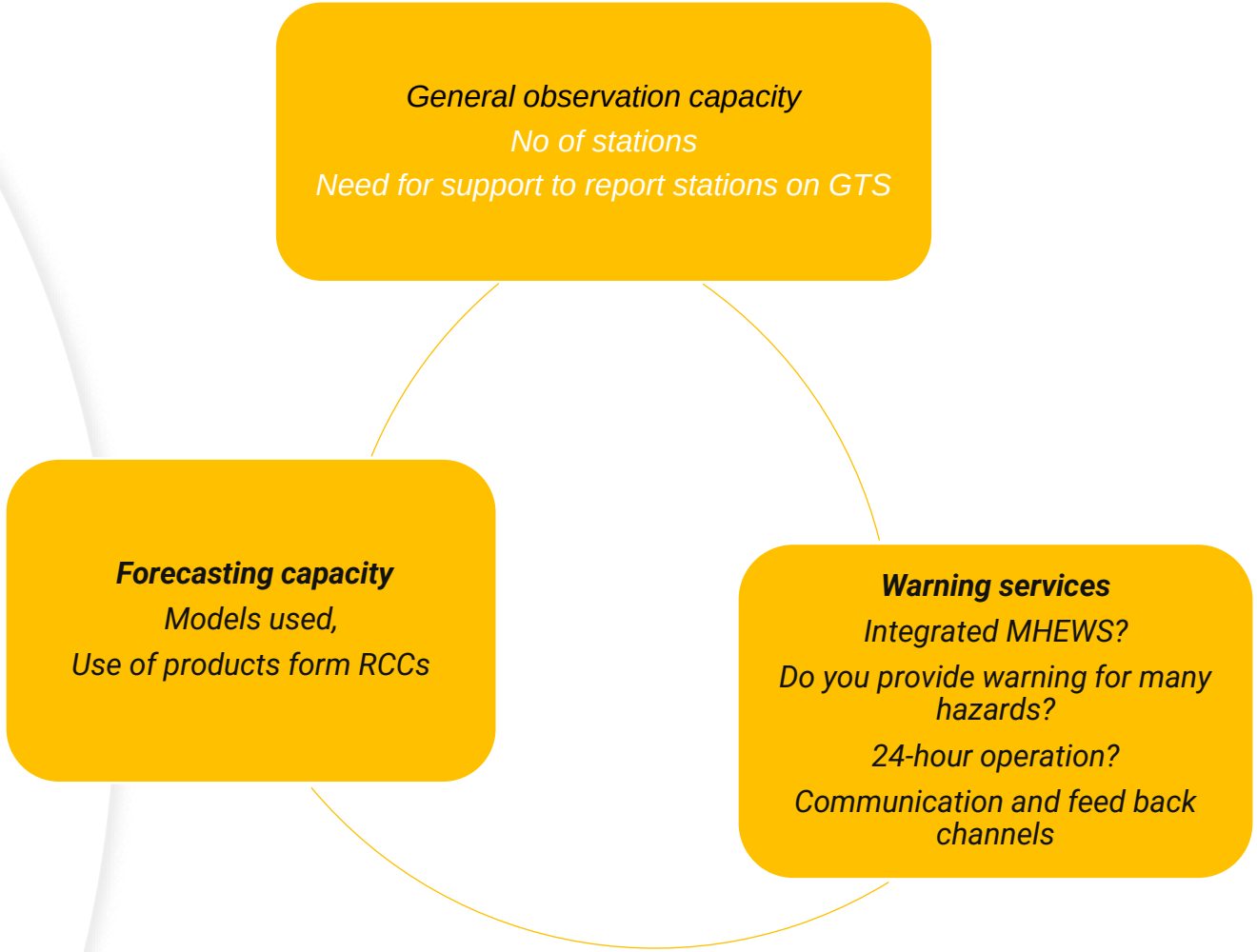
- Implementation at national level will require **Countries engagement and support by development partners**

Implementation phase of the EW4All initiative has already begun, focusing **initially on 30 highly vulnerable countries**, and conducting complementary activities in other nations.

Africa has 13 countries; *(Djibouti, Somalia, Sudan, Chad, Comoros, Ethiopia, Liberia, Madagascar, Mauritius, Mozambique, Niger, South Sudan, Uganda)*

- **Appointment of a national coordinator** to oversee the initiative,
- hosting of **multi-stakeholder workshops** to in planning and implementation processes,
- as well **as provision of technical support** based on national priorities to ensure that a **minimum core capability** is achieved across all pillars.

Rapid Assessment and review of some countries' capacities



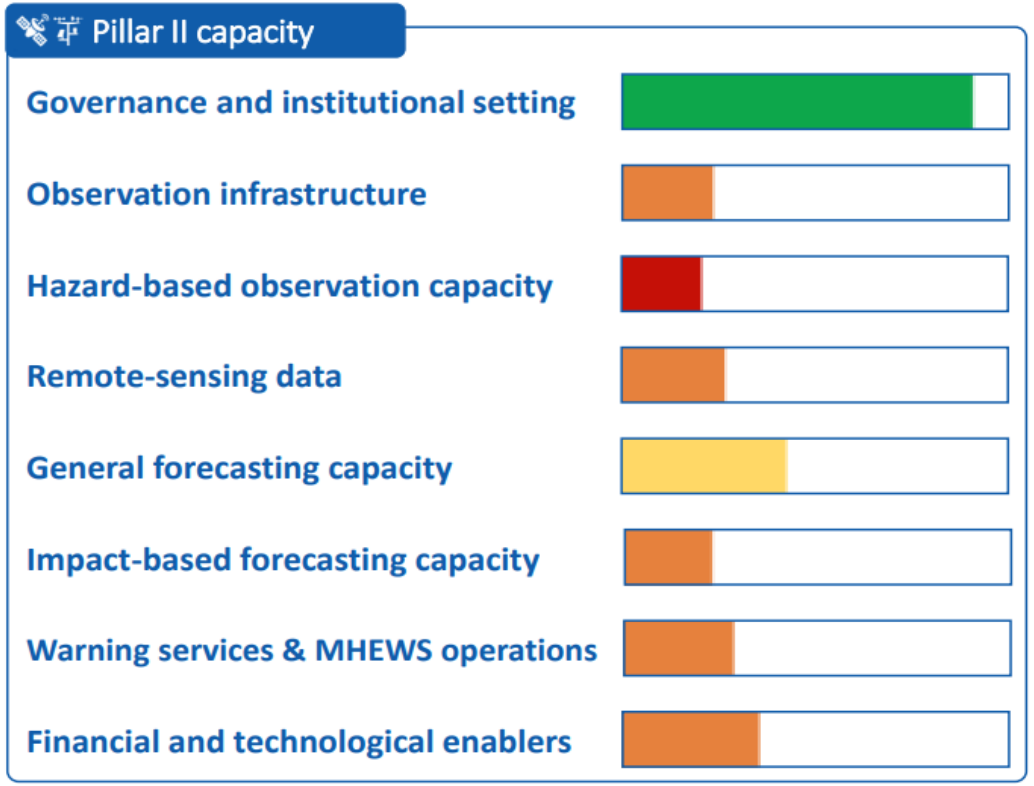
Country basic infrastructure information
Basic services information
Key staff competencies
Budgets
Legislation status etc

MAURITIUS 2

Despite a moderate amount of synoptic station, observations are limited by a lack of capacity to perform maintenance, QC and calibration, as well as to transfer data in (near)real-time. Forecasting capacity is impaired by a lack of training, incl. on remote sensing data. Cooperation with the national DRR agency is limited, and no risk and vulnerability data is available for IBF. Little financial resources are available for service improvements.

Early Warnings for All

Pillar II capacity



The capacity assessment level above is ranked on a scale from 1 to 5, where 5 represents advanced capacity and 1 represents no capacity. The capacity level is determined via a quantitative (weighted rating) and qualitative analysis of the EW4All Rapid Assessment Tool (RAT) submission of the Member.

The colours of the bars above express the degree of attainment of each element as quantified by the EW4All RAT, following the percentages indicated hereafter:

0-20% | 21-40% | 41-60% | 61-80% | 81-100%

Flash-floods

≈ Limited forecasting capacity

— Lack of hydrological observations
Lack of vulnerability/impact data

Rogue waves/high seas

\+ Benefit from RSMC la Réunion guidance

— Lack of observation and IBF forecasting capacity

Storm surge/coastal flood

≈ Limited forecasting capacity

— Lack of observation capacity
Lack of vulnerability/impact data

Tsunami

≈ Reliance on Regional Tsunami Service Providers

— Lack of forecasting capacity, incl. use of regional products

Rain/wet spell

≈ Limited forecasting capacity

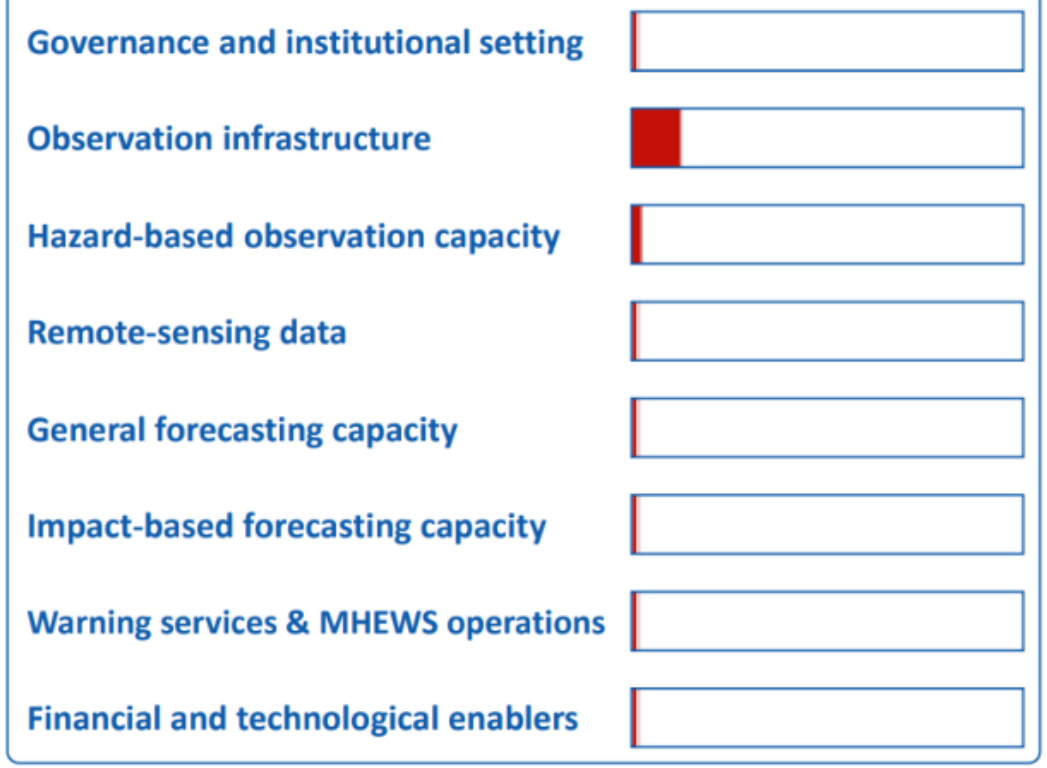
— Lack of observation and IBF forecasting capacity

SOMALIA

1

The Somalia NMHS (Somalia Meteorological and Climate Surface Authority) is being established, with a related law expected to pass by June 2023. As the NMHS is not yet a functioning national service, it lacks all human, financial, material and logistical resources. Observations stations in the country are operated by FAO and will be transferred to the NMHS: 6 met AWS, 15 hydro- and 100 agromet stations (most are not fully operational).

Pillar II capacity



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Drought/Dry spell

— Acute lack of observation, forecasting and warning capacity

Flash-floods

— Acute lack of observation, forecasting and warning capacity

Riverine floods

— Acute lack of observation, forecasting and warning capacity

Tropical cyclones

— Acute lack of observation, forecasting and warning capacity

Thunderstorms/Squall lines

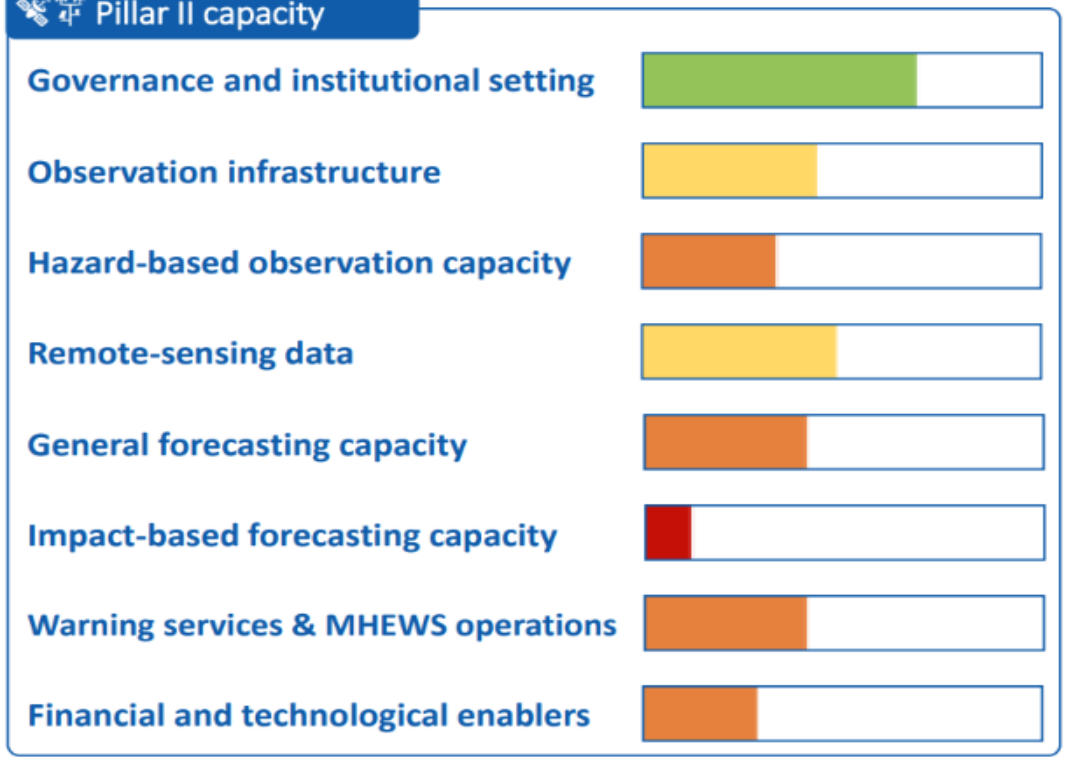
— Acute lack of observation, forecasting and warning capacity

UGANDA 2

The NMHS benefits from good institutional setting and inter-agency coordination, basic observation systems with gaps in rural/mountainous areas, and basic forecasting and operational capacity. Service delivery is constrained by insufficient staffing and financial resources for service improvement, as well as an unstable internet connection. The NMHS would further benefit from capacity building on monitoring/forecasting, incl. remote data use and IBF.

Early Warnings for All

Pillar II capacity



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The colours of the bars above express the degree of attainment of each element as quantified by the EW4All RAT, following the percentages indicated hereafter:

Riverine floods

— Insufficient hydrological observations and monitoring capacity

Flash-floods

— Limited observation, lack of soil moisture monitoring and IBF

Drought/dry spell

— Lack of remote sensing and evapotranspiration data

Landslides/mudslides

— Limited observation, lack of soil moisture monitoring and IBF

Thunderstorms/squall lines

\+ Moderate monitoring capacity

— Lack of remote sensing data and lighting sensors

Initiatives in the Continent will complement the EW4ALL initiative

Policies / Strategies

- **Africa Regional Strategy for Disaster Risk Reduction**
- Programme of Action for the implementation of Sendai Framework 2015-2030 in Africa
- Africa Climate Change and Resilient Development Strategy and Action Plan 2022-2032
- Revised Integrated Africa Strategy for Meteorology (Weather and Climate Service)
- WMO Global Multi-hazard Alert System (GMAS)

Current Initiatives
Development of Africa **Early Warning for All Action Plan for Africa (2023-2027).**

A number of projects on the continent supported by various partners and agencies **implemented in support for the EW4ALL initiative in the region**

Resource Mobilization for EW4ALL

Collaboration across scales and partiners is crucial for the success of the EW4All initiative.

SOFF
Systematic Observations Financing Facility
Weather and climate information for the global public good

CREWS CLIMATE RISK & EARLY WARNING SYSTEMS

GREEN CLIMATE FUND

Alliance for Hydromet Development

Governments and Academia

Other organizations.

Challenges of Early warning Systems in Africa

Difficulty managing disaster risk data

Data generation for disaster risk management and early warning and early action

Inadequate capacity for collecting data related to vulnerability, exposure and coping

Data quality and completeness required for decision making.

Critical information on disaster losses is generally lacking, or grossly underestimated.

Challenges related to observation and forecasting

Data gaps

Less capacities to monitor and forecast hazards

Challenges in warning and dissemination

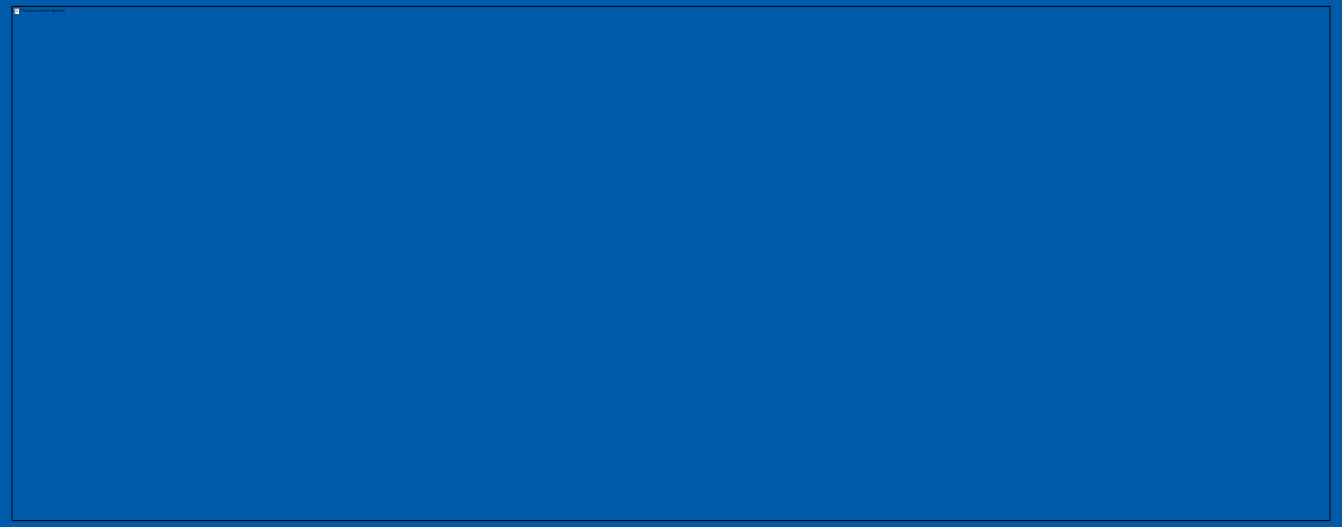
Lack of adequate communication facilities

Inadequate access and availability of timely and actionable early warning information.

Challenges in preparedness and response

- Delays in sharing early warning information.
- Delays to take anticipatory action

Thank you



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