

# FIRST REPORT OF THE ADVISORY PANEL OF THE EARLY WARNINGS FOR ALL INITIATIVE TO THE UNITED NATIONS SECRETARY-GENERAL

NOVEMBER 2023

Early  
Warnings  
to All

Photographer: Yuri Bershadskiy  
Location: Odessa, Ukraine  
WMO 2023 Calendar Competition

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ASW	Accelerated Support Window
COP	United Nations Conference of the Parties of the United Nations Framework Convention on Climate Change
CREWS	Climate Risk and Early Warning Systems
CSO	Civil Society Organisation
DRR	Disaster Risk Reduction
EWS	Early Warning System
EUR	Euro
EW4ALL	Early Warnings for All
FIF	Financial Intermediary Fund
G20	Group of Twenty
GCF	Green Climate Fund
GBON	Global Basic Observing Network
IDF	Insurance Development Forum
IFRC	International Federation of Red Cross and Red Crescent Societies
ITU	International Telecommunication Union
LDC	Least Developed Country
LLDC	Landlocked Least Developed Country
M&E	Monitoring and Evaluation
MDB	Multilateral Development Bank
MHEWS	Multi-Hazard Early Warning System
NGO	Non-Governmental Organisation
RIMES	Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
SAP	Simplified Approval Process
SIDS	Small Island Developing State
SOFF	Systematic Observations Financing Facility
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention for Climate Change
USAID	United States Agency for International Development
USD	United States Dollar
WMO	World Meteorological Organisation

# EXECUTIVE SUMMARY

In March 2022, UN Secretary-General António Guterres announced the Early Warnings for All (EW4All) initiative, a call to ensure global protection through comprehensive Early Warning Systems (EWS) for every individual on Earth by 2027. The novelty of the initiative lies in its capacity to mobilise unprecedented coordination and collaboration among diverse organisations and funding mechanisms to work collectively towards this shared objective.

Achieving global coverage has presented substantial challenges. Despite a doubling in coverage since 2015, half of the world remains without access to crucial warning mechanisms. This discrepancy is especially pronounced in vulnerable regions, where gaps in risk knowledge, preparedness and the establishment of multi-hazard EWS (MHEWS) persist. Internet and mobile connectivity issues impede alerts, and funding coordination remains hindered despite significant investments. Inefficiencies in existing systems are exacerbated by the absence of effective legal and institutional frameworks linking early warnings to early action.

Since the launch of the Executive Action Plan at COP-27, tangible progress has emerged on multiple fronts. Thirty countries have been identified to receive targeted support based on funding availability and vulnerability. Global and regional coordination, coupled with country-specific mechanisms, now underpin the entire MHEWS value chain. Building upon this, multi-stakeholder national consultations in 13 countries have been held to date, reinforcing political backing and strategic partnerships. Achievements extend beyond these countries as well, with Niger and Fiji showcasing strengthened EWS capabilities benefiting the entire population of each country. Notable strides include Bhutan's enhanced forecasting, the Democratic Republic of the Congo's climate services framework and Benin's improved communication to at-risk communities.

Major finance mechanisms including Multilateral Development Banks (MDBs), the Green Climate Fund (GCF), Climate Risk and Early Warning Systems (CREWS) and Systematic Observations Financing Facility (SOFF), have rallied behind EW4All. Nine major MDBs have committed to improved coordination and increased support. GCF has prioritised MHEWS in their 2024-2027 Strategic Plan, targeting 50-60 countries and launching a USD 157 million global programme. CREWS secured USD 106 million with USD 60 million in the pipeline, SOFF mobilised USD 73 million and new bilateral contributions, such as the Netherlands' EUR 55 million "Water at the Heart of Climate Action" project, further fuel the initiative.

Regionally, Africa has seen enhanced coordination with the launch of the EW4All Action Plan, addressing the dire need for EWS where six out of ten lack access. The Pacific has enacted political will with the 2050 Blue Pacific Strategy, championing inclusive and actionable MHEWS. At the global level, there has been heightened visibility and political endorsement, notably from the G20 and COP-28 Presidency's Action Agenda.

New collaborations in the private sector have included Microsoft, GSMA, the Insurance Development Forum (IDF) and satellite industry partners. A monitoring and evaluation framework, complete with a maturity index and open-access dashboard, ensures transparency and accountability.

Looking ahead to 2024, the initiative aims to amplify its impact by intensifying collaboration and coordination in policy, governance, stakeholder coordination, advocacy, monitoring and evaluation and finance. The focus will extend beyond the initial 30 countries, with continued collaboration with regional bodies. The realisation of commitments from MDBs and the implementation of the first GCF global EWS program will be prioritised. Efforts to secure additional funding for countries like the Maldives and the Southern African region, along with scaling up support through CREWS and SOFF, will be accelerated. The ambitious goal of mobilising USD 3.1 billion for EW4All will continue through strengthened partnerships and engagement with private sectors, especially at newly organised regional multi-stakeholder fora. Political support will be sustained through active engagement at key strategic events. The journey ahead for EW4All involves not just fulfilling immediate needs but establishing a resilient and sustainable MHEWS network.

The Advisory Panel, comprising high-level representatives from the public sector, private sector and civil society, has been crucial in providing guidance to the initiative on its progression. This spirit of collaboration and cooperation across agencies and sectors has been the driving force behind the initiative's success in the past year, and it must be sustained to deliver Early Warnings for All. This initiative stands at the forefront of a global effort to protect individuals through comprehensive Early Warning Systems, and its progress underscores the potential for collective action to address Earth's most pressing challenges. The call to action is clear: seize the opportunities, collaborate and ensure a safer, more resilient world for all.



Tataua teaches women in Funafala Island how to use an emergency satellite phone, Tuvalu  
Photographer: Giora Dan  
Credit: IFRC



Photographer: Muhammad Amdad Hossain  
Location: Kurrigram, Bangladesh  
WMO 2024 Calendar Competition

# PART 1: WHERE WE STOOD

## STATUS OF MHEWS GLOBALLY: BASELINE FOR 2022

This section provides a glimpse into the global advancements in multi-hazard early warning systems (MHEWS) from 2015 through October 2022, as documented by the Sendai Framework Monitor. It shares progress of coverage, evaluation and the four key pillars.

As of October 2022, a total of 95 countries reported on the existence of MHEWS to the Sendai Framework Monitor, marking a two-fold increase since 2015<sup>1</sup>. However, this covered less than half of the world's countries. Regional disparities were evident, with Africa, Americas and the Caribbean and Arab States having shown lower MHEWS coverage. Notably, Small Island Developing States (SIDS) and Least Developed Countries (LDCs) had significantly lower rates of adoption, with less than half of LDCs and only 40% of SIDS having reported the existence of MHEWS<sup>2</sup>.

Less than half of MHEWS countries report practical disaster risk information. Progress in risk knowledge is notably low, with around 30% of countries having

conducted studies on the social and economic benefits of weather services in the past decade. 56% of countries have multi-hazard monitoring, but only 42% can capture simultaneous hazards. Impact-based services are reported by 46% of countries yet fail to adequately address cascading impacts. Regions, especially SIDS and LDCs, lack real-time surface-based observation exchange. 77% of MHEWS countries boast good national dissemination, leveraging mobile tech and mass media. However, persistent connectivity gaps, notably in Africa and LDCs, hinder electronic communication effectiveness. Standardised warning messages, implemented by only 48% through the Common Alerting Protocol, remain an issue<sup>3</sup>. Only 18% of WMO members have conducted socio-economic benefit assessments in the last decade<sup>4</sup>. 46% of countries with MHEWS have local government plans, while anticipatory action gains traction, which uses risk information for proactive response. Pre-emptive evacuations have been increasing, with 166 million people evacuated annually across 85 countries. Systematic evaluation and improvement are lacking; only about a third of WMO member states report evaluating their MHEWS performance<sup>5</sup>.

<sup>1</sup> UNDRR, Sendai Framework Monitor. Available at <https://sendaimonitor.undrr.org/> (accessed on 31 October 2022).

<sup>2</sup> UNDRR and WMO (2022) "Global status of multi-hazard early warning systems: Target G", UNDRR.

<sup>3</sup> Ibid.

<sup>4</sup> Victoria Alexeeva, Senior Economic and Societal Impact Officer of the Cabinet Office of the Secretary-General of the WMO, in a statement made on 08 June 2023 to the inaugural meeting of the WMO Panel on Socioeconomic Benefits.

<sup>5</sup> UNDRR and WMO (2022) "Global status of multi-hazard early warning systems: Target G", UNDRR.



Photographer: Badre Bahaji  
Location: Malawi, 2020  
Credit: WFP

## FINANCING OF MHEWS: BASELINE FOR 2022

MHEWS rely on diverse funding sources for their development, maintenance and improvement. As a public good, national budget allocations play a crucial role in supporting the government institutions responsible for operating effective MHEWS. In addition to national budgets, various financial flows have been contributing to the enhancement of MHEWS, including bilateral contributions, multilateral development bank financing and climate funding mechanisms. The allocation of these investments can be complex, both within and outside the United Nations Framework Convention on Climate Change (UNFCCC) Financial Mechanisms.

MDBs and Climate Funds play a significant role in implementing projects that support MHEWS. They use various financial streams including loans, concessional financing and grants, often co-financing with other sources. The funding from MDBs and climate finance mechanisms are integrated into projects directly focused on MHEWS development or as components of larger initiatives. The annual flow of funding into MHEWS is

substantial and increasing, with expectations that the already considerable allocations of adaptation portfolios from sources such as the Green Climate Fund, the Adaptation Fund and the Global Environment Facility will continue to grow. Based on an analysis by UNDRR and WMO, significant financial resources have been allocated to MHEWS over the last decade, encompassing projects where MHEWS served as the primary component and those in which it played a supplementary role<sup>6</sup>.

In 2015, the Climate Risk and Early Warning Systems (CREWS) initiative established a dedicated Financial Intermediary Fund (FIF) managed by the World Bank, aiming to address the MHEWS capacity gap in LDCs and SIDS. The countries contributing to the initiative trust fund mobilised USD 100 million in technical assistance and capacity-building efforts by 2022<sup>7</sup>. The Systematic Observations Financing Facility (SOFF) became operational in July 2022 with the aim of addressing the critical data gap in basic weather and climate observations in countries experiencing severe deficiencies in observations.

<sup>6</sup> Early Warnings for All Advisory Panel internal document on financial tracking, not yet published.

<sup>7</sup> Climate Risk and Early Warning Systems (CREWS) Trust Fund Financial Report Prepared by the Trustee. 31 December 2022. The World Bank Group Financial Intermediary Funds.

The facility places a priority on LDCs and SIDS. By the end of 2022, SOFF initiated 26 countries into its first batch of programming for subsequent long-term technical assistance<sup>8</sup>.

Self-funded private sector entities are integral components of the MHEWS architecture. Telecommunications companies, for example, provide the necessary infrastructure and services to reach more people over digital networks. Mobile Network Operators have a particularly impactful role in disseminating alerts to populations at risk, as 95% of the world's population is covered by a mobile network and there are 5.4 billion unique mobile subscribers globally<sup>9</sup>. This involvement highlights the significance of public-private partnerships in funding and maintaining MHEWS.

International collaborations and partnerships serve as additional sources of investment, involving organisations such as the United Nations, the International Federation of Red Cross and Red Crescent Societies (IFRC), civil society groups and non-state actors.

These collaborations support both financial contributions and efforts to build human capacity through training and awareness initiatives aimed at reaching the "last mile" in end-to-end MHEWS.

The diverse array of funding sources for MHEWS offers valuable financial support, but also leads to a fragmented and siloed investment landscape. This fragmentation occurs as funding streams often pass through various channels. And despite the considerable investments already made in MHEWS, additional financing is essential to achieve comprehensive coverage goals. Many countries and regions still face funding gaps, hindering their ability to establish or enhance MHEWS for all relevant hazards. These financial shortfalls necessitate concerted efforts to mobilise resources, promote coordination among funding sources and ensure that investments are strategically directed to address the existing gaps.

<sup>8</sup> The Systematic Observations Financing Facility. Decision 3.4: Adoption of First Batch of SOFF Programming Countries, 02 November 2022.

<sup>9</sup> Kenechi Okeleke, Harry Fernando Aquije Ballon, James Joiner (2023). "The Mobile Economy 2023", GSMA Intelligence.





Photographer: Paulo Pampolin  
Location: Sooretama, Brazil  
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# PART 2: A YEAR OF PROGRESS

## COUNTRY IMPLEMENTATION STATUS

As EW4All transitioned from its conceptual stage to the implementation phase, the shift was from planning and coordination among the four pillar leads and the pillar implementing organisations to practical on-the-ground execution. 30 focus countries were identified for fast-track coordinated and targeted<sup>10</sup>. These countries were chosen based on factors including existing programming, available funding, susceptibility to natural hazards and high-risk status such as LDCs, SIDS or LLDCs (Landlocked LDCs). These criteria were selected to strike a balance between assisting the most vulnerable countries in need of MHEWS and the practicality of building national capacity in regions with limited existing resources. The strategy also aimed to build upon ongoing efforts without duplicating existing work by UN agencies and partners. Implementation in one of the countries, Sudan, has been paused due to national instability.

Within the 30 initial countries, designated governmental focal points were appointed to act as intermediaries connecting global and regional initiatives with national efforts. At the global level, an interpillar technical coordination group was established comprising representatives from the four-pillar agency leads and other implementing partners. Their primary role was to collaboratively develop tools and offer guidance for country rollout activities. The EW4All Rollout toolkit features practical tools to assist countries in conducting gap analysis and stakeholder mapping, developing, or strengthening national early warning system roadmaps and preparing terms of reference for stakeholder coordination and UN focal point as well as materials to facilitate national consultation workshops. These resources enable countries to foster inter-agency collaboration and capacity building, adaptable to the unique needs and stages of MHEWS development in each nation.

<sup>10</sup>These countries are Bangladesh, Maldives, Nepal, Lao (People's Democratic Republic), Cambodia, Kiribati, Samoa, Solomon Islands, Fiji, Tonga, Djibouti, Somalia, Sudan, Chad, Comoros, Ethiopia, Liberia, Madagascar, Mauritius, Mozambique, Niger, South Sudan, Uganda, Guyana, Haiti, Barbados, Antigua and Barbuda, Guatemala, Ecuador and Tajikistan.

The outcomes of these national consultation workshops collectively serve to advance the political buy-in and advance the capacity for MHEWS in each country. Participants conduct gap analyses to assess the current state of MHEWS in their countries, align ongoing initiatives to avoid duplication and establish a National Stakeholder Coordination Mechanism for effective collaboration. This mechanism, with nominated focal points, facilitates multi-stakeholder engagement to scale up MHEWS. Priority areas for immediate action are identified based on informed assessments, addressing barriers to early warning issuance, communication, and response. Workshops focus on creating a national roadmap, leveraging existing strategies or developing a multi-year, multi-stakeholder action plan, to enhance MHEWS capabilities and contribute to the EW4All initiative.

As of 1st December 2023, thirteen national consultation workshops have taken place including that of the Maldives (see *Advancing EW4All in the Maldives*). The other twelve, those in Tajikistan,

Ethiopia, Madagascar, Laos, Nepal, Cambodia, Barbados, Somalia, Uganda, Mozambique, South Sudan and Haiti, took place between August and November 2023. These national workshops have facilitated active engagement and collaboration from a diverse range of participants across multiple regions. In the Tajikistan workshop, the Deputy Prime Minister's participation highlighted significant political involvement, underscoring the importance of the initiative. The workshop in Ethiopia was characterised by successful engagement between government representatives, UN agencies, the IFRC network, NGOs and private sector stakeholders. In Madagascar, 93 representatives from government, local authorities, UN agencies, the IFRC network, NGOs and the private sector showed commitment to a National Action Plan for EW4All. In Cambodia, an equally diverse range of participants were involved in discussions on stakeholder mapping and preliminary gap analysis.



Bangladesh Red Crescent volunteers use a megaphone and a motorcycle to issue warnings for cyclone among the villagers, Sonagazi, Bangladesh  
Photographer: Yoshi Shimizu  
Credit: IFRC

## ADVANCING EW4ALL IN THE MALDIVES

In July 2023, a national consultation was held in the Maldives to bolster political support, enhance national partnerships and advance the EW4All Action Plan's objectives by 2027. While acknowledging previous progress and investments, participants emphasised the necessity of further reinforcing MHEWS as part of broader national initiatives to increase investments in disaster risk reduction and climate change adaptation, with a particular focus on safeguarding the most vulnerable populations and critical economic sectors like tourism and fisheries. The workshop encompassed activities aligned with the following five overarching objectives.

**Convening technical expertise:** Four national organisations<sup>11</sup> were confirmed as the focal points to lead the articulation of priorities and gaps to be addressed across each of the four MHEWS pillars, with each organisation to be supported by the overall EW4All pillar lead organisations.

**Fostering multi-stakeholder collaboration:** The need for better coordination of existing or planned MHEWS initiatives was recognised alongside the importance of approaching MHEWS from a variety of agencies and sectors.

**Assessing gaps and opportunities:** A preliminary analysis of gaps and opportunities was undertaken in relation to each pillar, including completion of the EW4All Minimum Core Capability Checklist.

**Setting a common agenda for MHEWS:** Based on the outcomes of the country-led gap analysis, the EW4All Common Agenda for the Maldives summarises national ambitions relating to MHEWS. It includes outcomes, milestones and resource requirements. Thus, it will guide multi-year and predictable investment, as well as requests for technical and financial support, all aligned to national priorities to protect people, services, infrastructure, and vital economic sectors in the Maldives.

**Seizing immediate opportunities:** Several opportunities were recognised for advancing MHEWS in the Maldives, including funding from the Green Climate Fund, the Systematic Observations Financing Facility (SOFF), Climate Risk and Early Warning Systems (CREWS) and support from the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES).

The EW4All initiative can serve as a pivotal catalyst for increasing national efforts in the Maldives to address climate change vulnerability by improving MHEWS and bolstering resilience. The Maldives also stands to gain broader advantages from its engagement in EW4All, emphasising the significance of expanding collaboration and knowledge exchange among various stakeholders encompassing government agencies, international organisations, research institutions and local communities. Sharing best practises, learning from past experiences and drawing insights from countries encountering comparable challenges can empower the Maldives to fortify its early warning systems and embrace innovative strategies.

<sup>11</sup> The National Disaster Management Authority, the Maldives Meteorological Service, the National Centre for Information Technology and the Maldives Red Crescent representing each of the four pillars.





Gap analyses and roadmap development have been completed or further advanced in several countries. In Tajikistan, the gap analysis was formally concluded using the Minimum Core Capability Tool and other materials, paving the way for effective implementation. A national coordination mechanism and a detailed multi-year and multi-stakeholder national roadmap were also produced. In Ethiopia, where a gap analysis had already been performed, the finalisation of the national MHEWS roadmap developed through consultation with governmental institutions, the United Nations Country Team and financial partners including the World Bank and African Development Bank marked a crucial next step. Madagascar's workshop saw the endorsement of a National Action Plan for the 2023-2027 period and identified key areas of support, emphasising inclusivity and risk communication. In Laos, the validation of a gap analysis and proposal of a dedicated National Coordination Mechanism for EW4All stressed effective planning. Nepal's workshop called for the coordination of stakeholder and gap analysis, laying the foundation for a roadmap towards MHEWS engaging the whole of society.

Collaboration with the private sector, bilateral partners and regional institutions has been fostered. Microsoft previously declared an increase of investments to better understand the populations most susceptible to extreme weather events and other threats, frequently linked to climate change. In Ethiopia, this took shape as an announcement for future partnership with UNDRR to identify communities vulnerable to disaster impacts. At the same workshop, USAID issued a call for proposals with a focus on anticipatory action.

The Water at the Heart of Climate Action project, an initiative led by the IFRC network addressing water-related risks and disasters while enhancing the resilience of vulnerable communities in four Nile basin countries, was launched in collaboration with and supported by financing from the Kingdom of the Netherlands. In Mozambique, the country's president has been promoting MHEWS among the African Union and the Southern African Development Community with support from the EW4All pillar leads. This has led to political will for the *Maputo Declaration on Bridging the Gap Between Early Warning and Early Action*.

Efforts have been made to facilitate regional-level implementation. The EW4All Action Plan for Africa, unveiled during the 2023 Africa Climate Summit, integrates the goals of EW4All within existing African initiatives such as the African Union's Agenda 2063: The Africa We Want and contributes to the implementation of the Africa Multi-Hazard Early Warning and Early Action System and the *Climate Change and Resilient Development Strategy and Action Plan (2022-2032)*. In the Pacific, strong political support for more inclusive and actionable MHEWS has been recognised at the Pacific Ministerial Conference on Disaster Risk Reduction (DRR), the Pacific Meteorological Council and Ministerial Meeting and the 2050 Blue Pacific Strategy. The Weather Ready Pacific initiative serves as the key strategy in further strengthening MHEWS in the region, with close collaboration between EW4All partners, regional stakeholders, and Pacific governments.

## COUNTRY IMPLEMENTATION: CREWS AND SOFF

Clear progress has been made in the development of MHEWS within and beyond the initial 30 countries, augmented by the coordinated efforts of multiple partner organisations. Several countries, including Niger, Burkina Faso, Fiji, Kiribati, Tuvalu and Papua New Guinea, established or strengthened MHEWS through support from UNDRR, the World Bank and WMO, financed by CREWS. Niger strengthened its forecasting and warning capabilities, benefiting all 27 million people. In Burkina Faso, new MHEWS positively impacted 167,000 small-scale farmers, leading to increased agricultural yields. Fiji's flash flood EWS now protects most of the population at 915,000 people, and Kiribati and Tuvalu developed a coastal inundation system with wave buoys. Papua New Guinea established its first-ever drought advisory system, issuing six drought bulletins accessible globally through WMO's global agrometeorological information service, benefiting 9.5 million people across 22 provinces. Cambodia and Lao PDR validated comprehensive assessments of their EWS with CREWS support.

With CREWS assistance, countries enacted early warning laws and strategic plans. The Democratic Republic of the Congo adopted a national framework for climate services, and Togo upgraded its Meteorological Service to an agency. Mozambique defined data exchanges and delineated flood and cyclone warning responsibilities, streamlining coordination. Pacific and Caribbean countries collectively validated national strategic plans and frameworks.

Four countries utilised the CREWS Accelerated Support Window, delivering new services. Tonga developed a community based MHEWS mobile application, Benin improved communication procedures to reach at-risk communities and Sierra Leone optimized high-impact weather risk information flow in Freetown. The demand for just-in-time financing through the Accelerated Support Window has grown in 2023, emphasizing its vital supporting role.

SOFF supports these countries, along with all 30 initial EW4All countries, with grants and technical assistance to collect basic weather and climate data and share it internationally. It has emphasised the adoption of the Global Basic Observing Network (GBON) to set an international standard for the collection and sharing of surface-based observations of the most essential weather and climate variables necessary to predict natural hazards. For example, UNEP-led GCF and SOFF initiatives are collaboratively supporting the Marshall Islands, Palau, Timor-Leste and Tuvalu. SOFF finances GBON compliance while GCF investments enhance the hydrometeorological value chain, linking upstream improvements in observations to downstream efforts for better weather forecasts, early warnings and early action.

With SOFF assistance, Bhutan is enhancing its national forecasting by becoming GBON-compliant, with technical support from the Finnish Meteorological Institute. The Bhutanese National Centre for Hydrology and Meteorology collaborates with UNEP and the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) to strengthen observational capacity, ensuring timely and accurate weather information for effective decision-making. Kiribati is also receiving SOFF assistance to become GBON-compliant, with technical support from the Australian Bureau of Meteorology as a peer advisor and UNEP as an implementing entity. Similar projects are anticipated to emerge in different countries as project pipelines rapidly progress.



Early warning drill in Chila village, Bangladesh  
April 2022  
Credit: CREWS



Photographer: Iyanuoluwa Omogbadegun  
Location: Ikoridho, Nigeria  
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## RESOURCE MOBILISATION AND ALIGNMENT

Significant progress has been made in financing EW4All over the past year, with a focus on resource mobilisation and collaboration across various funding channels. Throughout the mobilisation process, the initiative has adhered to its commitment of not creating new funding mechanisms but to build upon existing ones.

In terms of bilateral direct support, the "Water at the Heart of Climate Action" project received a generous EUR 55 million contribution from the Netherlands, to address water-based climate challenges in four Nile basin countries. Japan has also extended invitations for EW4All proposals within their supplementary budget, with contributions from different pillars and alignment with their Ministry of Information and Communication Technologies. Several countries, including Germany, Italy, the United States, Czech Republic, and Sweden have made contributions or are actively engaged in discussions to directly support the initiative. Many other partners continue to generously support MHEWS through unearmarked and unearmarked contributions using both bilateral and multilateral funding channels.

Multilateral funds have committed substantial funding for new projects in support of EW4All.

The CREWS initiative saw an increase in its contributors for EW4All. Twelve countries and the European Commission collectively pledged USD 106 million, with an additional commitment of USD 60 million in the pipeline. In 2023, the CREWS board approved a USD 7 million, four-year project for East Africa, benefiting the countries of Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. A new fund of USD 20 million was also allocated that year for the Caribbean region, Niger, Djibouti, and a global accelerator project supporting the four pillar organisations to help launch EW4All.

The SOFF mechanism, created in partnership between WMO, UNDP and UNEP, has mobilised USD 73 million from various contributors to date. It is swiftly extending its assistance to multiple countries, with 59 nations presently in the readiness stage and six in the investment phase including all 30 of the initial EW4All countries. Collaboration with MDBs has been strengthened through the collective commitment of nine major MDBs<sup>12</sup> to support EW4All. At the Climate Ambition Summit in September 2023, these MDBs committed to a collaborative effort to support the initiative, focusing on improving coordination, efficiency and scaling up activities.

<sup>12</sup> These are the World Bank, the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, the Islamic Development Bank, the Caribbean Development Bank, the European Investment Bank, the Council of European Development Bank and the European Bank for Reconstruction and Development.



The engagement with GCF has emerged as a significant source of financing for the EW4All initiative. Notably, their 2024-2027 Strategic Plan has identified the enhancement of MHEWS as a top priority in which 50 to 60 developing countries particularly vulnerable to the adverse effects of climate change are to be protected by new or improved MHEWS. So far, this has led to the development of the EW4All Multi-Country Project through UNDP, which aims to directly invest in seven countries<sup>13</sup> and establish a pipeline in at least 10 more. A USD 1.5 million grant has been approved from the GCF Project Preparation Facility to prepare a full proposal for this project with an aim to secure USD 157 million. Projects in the Southern African region led by UNDP and seeking finance from GCF are currently under development, aligning closely with the EW4All pillar approach. Similarly, UNEP is supporting the development of GCF proposals for Azerbaijan, Lebanon, the Maldives (see *Advancing EW4All in the Maldives*) and select countries in the Atlantic and Central America, which will facilitate holistic investment across the four pillars.

GCF and CREWS have collaborated to create the GCF-SAP CREWS Scaling Up Framework for Early Warning. This initiative focuses on mobilising climate finance for MHEWS in LDCs and SIDS. Countries successfully funded by CREWS can use the framework to access GCF Simplified Approval Process funds, providing up to USD 25 million. This step aligns with GCF's 2024-2027 strategic plan, streamlining and expediting funding access. In 2023, the Scaling Up Framework rollout began in the Caribbean, with initial programming in Belize, Guyana, Haiti and Trinidad and Tobago, facilitated by the Caribbean Development Bank.

Plans are underway to extend the framework's reach to Africa, Asia and the Pacific in 2024.

The strategic partnership between ITU and the African Development Bank, in their joint submission calling for proposals under the Prevention Envelope of the Transition Support Facility, represents a significant step in the integration of MDB investments into the initiative. To streamline and enhance the alignment of MHEWS financing at the national level, a taxonomy has been developed and is currently in the consultation phase.

In addition to securing financing, EW4All has expanded its systematic engagement with the private sector. Collaborative efforts are currently underway with prominent partners such as Microsoft, GSMA, the IDF and partners from the satellite industry. GSMA, representing mobile operators, is actively engaging with mobile network providers across the implementing countries, publishing research on inclusive risk communication and cell broadcast for early warnings and using its series of global events to promote the initiative. Several private sector entities have joined the work of the pillars and are participating in a sub-working group on artificial intelligence, formed to explore opportunities to transform the practice of disaster management across the MHEWS value chain. These private entities are not only actively engaged within the initiative but also serve as ambassadors for the EW4All initiative, advocating for its objectives at their own events and among their networks.

<sup>12</sup> These are the World Bank, the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, the Islamic Development Bank, the Caribbean Development Bank, the European Investment Bank, the Council of European Development Bank and the European Bank for Reconstruction and Development.

<sup>13</sup> These are Antigua and Barbuda, Cambodia, Chad, Ecuador, Ethiopia, Fiji and Somalia.

## MONITORING AND EVALUATION

A working group was established, comprised of representatives from each pillar lead and other implementing partners, to create a monitoring and evaluation (M&E) framework. As a structured approach, the M&E framework serves to assess progress and identify challenges in the implementation of the initiative to facilitate informed decision-making and alignment of goals. Drawing upon the data strengths of partner entities and United Nations best practises, the developing framework is firmly rooted in the initiative's commitment to transparency and accountability.

The M&E framework is structured around the four pillars, the enabling environment and guiding principles. It adopts a dual-track approach to ensure comprehensive monitoring. The first track is dedicated to monitoring the progress of implementation in the initial set of kick-off countries. It involves in-depth assessment of MHEWS development and deployment in specific regions to best ensure the realisation of tangible improvements. The second track focuses on global progress monitoring, providing a high-level overview of MHEWS coverage and its effectiveness beyond the country level. This perspective offers insights into how effectively the initiative is advancing its mission on a global scale.

Concurrently, work is ongoing on the development of a Maturity Index based on the pillars' "minimum core capability", which serves as a measure of success for

the initiative. It also serves as a benchmark for measuring and quantifying the various stages of maturity within MHEWS based on a standardised methodology and a shared understanding of the essential requirements. An initial approach has been developed for pillar two and applied to all 30 of the initial countries. Its results show that almost a quarter of them operate with less than basic monitoring and forecasting capacity for their priority hazards, while over half rely on basic monitoring and forecasting to support their MHEWS.

The outcomes of the M&E process are committed to public transparency. They will be regularly disseminated through an EW4All dashboard, providing up-to-date information on the initiative's progress based on agreed-upon indicators. In addition, annual Global Status Reports on MHEWS will be released at each UNFCCC Conference of Parties. These reports offer in-depth insights into the progress and impact of the initiative, providing a comprehensive overview of its advancement. The established M&E system is designed with longevity in mind, ensuring its adaptability to the ever-evolving landscape of MHEWS and disaster preparedness. This robust framework underscores the commitment to achieving the initiative's ambitious goals and promoting global resilience.



Photographer: Abbie Trayler-Smith  
Location: Orissa, India  
Credit: DFID

## GOVERNANCE AND COORDINATION

The EW4All initiative incorporates a comprehensive governance framework to ensure effective coordination throughout its progression. UNDRR and WMO were appointed in 2022 by the UN Secretary-General to globally co-lead the initiative. Emphasising comprehensive end-to-end MHEWS, the initiative was divided into four interconnected pillars. These four pillars are:

1. Risk Knowledge and Management (led by UNDRR)
2. Observations and Forecasting (led by WMO)
3. Dissemination and Communication (led by the ITU)
4. Preparedness to Respond (led by the IFRC)

These pillars consist of a wide variety of UN organisations, private sector companies and civil society organisations that focus on the implementation of the initiative at the country level. The initiative is further guided by an Advisory Panel<sup>14</sup>, composed of high-level representatives from across the engaged organisations, as well as the current and outgoing UNFCCC COP Presidencies. This panel convenes twice a year, working towards garnering political and broader support for the initiative, evaluating alignment, providing recommendations for resource mobilisation and monitoring the scientific and technical aspects of MHEWS.

To ensure transparent communication and dissemination of progress, quarterly briefings chaired by the UN Special Representative of the Secretary-General for DRR and the WMO Secretary General

are organised in which updates on the initiative are shared with funding states. Quarterly global coordination meetings discussing progress of the initiative are also co-chaired by UNDRR and WMO, bringing together implementing agencies across the four pillars. These meetings serve as crucial platforms to inform partners about the latest developments and ensure alignment in their efforts. Monthly inter-pillar meetings, chaired by a rotating pillar lead, are held to brief implementing partners on developments and provide updates on the country-level roll-out. Intra-pillar meetings are conducted biweekly to monthly, depending on the needs of each implementing agency. Weekly inter-pillar meetings focus on matters related to technical coordination including the timely implementation of joint implementation plans, development of joint donor proposals and monitoring of roll-out tasks. Additionally, working groups on Monitoring and Evaluation, Communication and Outreach and Fundraising have been established, which meet at a need-based interval.

These structured and regular coordination mechanisms embedded within the governance of the initiative underscore the significant value of a coordinated approach and information-sharing. They also provide a platform for pillar leads and implementing partners to exchange feedback and insights. This dynamic contributes to the overall success of the initiative by fostering collaboration, ensuring alignment and maintaining transparency in its implementation.

<sup>14</sup> See Annex I – Advisory Panel Members.

## COMMUNICATION, OUTREACH AND ADVOCACY

All communication, outreach and advocacy activities are directed by three overarching objectives:

1. Leverage political support for implementation.
2. Collate and promote human interest impact stories to demonstrate efficacy.
3. Increase capacity of media to report on initiative and early warning systems.

In pursuit of these objectives, initial accomplishments encompass the creation of [a landing page for the EW4All initiative](#) hosted on the UN website, serving as the first point of entry for current and potential partners and collaborators.

2023 has seen a remarkable increase in the initiative's visibility and political support, notably the recognition by the G20 and COP-28 Presidency's Action Agenda. Additionally, two high-level key events were successfully organised. The first was the introduction of EW4All as a transformative strategy to tackle challenges related to the SDGs,

particularly climate challenges, during the 2023 Sustainable Development Goals Summit. The second was the showcasing of EW4All at the Climate Ambition Summit in September in New York as a demonstration of concrete partnerships and collaborative actions to advance the UN Secretary-General's Acceleration Agenda in delivering on climate justice to those most hard-hit by the climate crisis.

Concerning traditional media coverage, EW4All has been actively engaging in joint press releases and crafting targeted media content about the initiative. Since COP-27, a total of 3,504 news articles have been dedicated to the initiative as of this report's publication.

Recognising the ambitious humanitarian objective of EW4All, the initiative's importance has been tactfully and thoughtfully promoted in the context of high-profile extreme weather events which capture significant media attention, such as the floods in Libya associated with Storm Daniel.





# PART 3: THE ROAD AHEAD

## COP-28

The EW4All initiative will be prominently featured at the COP-28. COP-28 provides an opportunity to report on the progress and demonstrate the effectiveness, efficiency and impact of coordination and collaboration efforts under the EW4All initiative. COP-28 also offers a platform for further galvanizing political support and greater commitments across key actors to support the successful delivery of EW4All. It is expected that the outcomes of the COP-28 will feature EW4All, as well as an additional focus on early action. Results and progress of the initiative in 2023 will be showcased at a COP-28 Presidency event on EW4All. Several side events hosted by partners of EW4All will also take place.

## 2024 MILESTONES

Looking ahead to 2024, it is expected that the initiative will expand in terms of countries it is working in, partners and a variety of stakeholders engaged in the initiative and financial means. At the national level, there are six key areas of interpillar collaboration and coordination:

**Policy and Governance:** Ensure relevant legislation and mandates are in place for effective early warning and early action.

As required, provide technical support for review of existing legislation, and policies, providing policy advice. Incorporate early warning systems in national, sectoral and local development strategies and investment programmes, as well as in DRR strategies, National Adaptation Plans, Nationally Determined Contributions, the United Nations Sustainable Development Cooperation Framework and other relevant frameworks.

**Stakeholder Coordination:** Support national authorities and the UN system to undertake a mapping of key stakeholders, discerning the existing coordination platforms and channels dedicated to MHEWS. Multi-stakeholder fora will be organised. Support the identification and strengthening of national MHEWS by either identifying, or fortifying the stakeholder coordination mechanisms, ensuring these are directed by the relevant authorities and linked to National Disaster Risk Management Platforms.

**Advocacy:** Promote early warning at the political agenda and align partners' approaches. Proactively champion the enhancement of early warning systems by maximising participation in pertinent regional events, forums,

and collaborative activities as well as sharing best practises such as peer to peer learning.

**Monitoring and Evaluation:** Implement monitoring mechanisms, including programmatic monitoring and reporting.

**Finance:** Provide technical support to countries to generate funding and financing proposals for sustainable early warning systems, for example, through multilateral development financing mechanisms and GCF.

**Early Warnings for Nature:** Incorporate environmental monitoring as a core part of disaster risk awareness, recognising the overlapping and compounding impacts of climate and environmental stressors. Establish EWS for global environmental resources to attract investments in restoration and protection, strengthening Earth's natural defences against climatological risks to enhance the effectiveness of MHEWS.

Regarding resource mobilisation, the EW4All Multi-Country Project aims to secure full GCF funding approval for the seven countries by the end of the year. In the Maldives, a UNEP project with an approved concept note plans to request USD 20 million from GCF in 2024. Meanwhile, a UNDP-led project in Southern Africa is preparing to submit a USD 157 million funding proposal to GCF. The CREWS FIF targets USD 250 million by 2027 to bridge capacity gaps in LDCs and SIDS, aiming to leverage USD 700 million

in climate finance. SOFF commits to supporting 100 countries with a USD 400 million funding goal to address weather and climate data gaps, with half to be mobilised by the end of 2025. Pending approval, the updated 2022-2025 SOFF Work Programme will advance nine nations to readiness and 30 to the investment phase, proposing an additional USD 55 million by June 2024.

Regionally, the initiative will sustain collaboration with regional bodies to implement national MHEWS strategies. Scheduled for 2024, regional multi-stakeholder fora, aligned with the yet-to-be-defined dates and venues of the Regional Platforms for Disaster Risk Reduction, will contribute to the Global Multi-Stakeholder Forum for the EW4All initiative in Geneva in June 2025.

Globally, technical coordination will persist across the four pillars, with ongoing resource mobilisation processes as well as communications and outreach to emphasise key political events. Operationalising the taxonomy will enhance funding alignment at the national level. Financial resources will be mobilised to expand the initiative beyond the initial 30 countries, strengthening action plans and addressing gaps identified in previous national workshops. This invites substantial opportunities for collaboration with the private sector and agencies.



Photographer: Muhammad Amdad Huseain  
Location: Satkhira, Bangladesh  
WMO 2024 Calendar Competition



International Day for Disaster Risk Reduction, 2022  
Maputo Evacuation Drill, Mozambique  
Photographer: Brice Blondel

## OPPORTUNITIES MOVING FORWARD

Success in EW4All relies on robust collaboration between public and private sectors, offering numerous opportunities to reshape early warning systems. The collaboration of organisations from across sectors is a key opportunity to promote MHEWS among at the political forum and within initiatives of the private sector.

Risk knowledge is one such opportunity. Although some regions lack comprehensive risk knowledge, methodologies and technological advancements present a remedy. Collaborative efforts between public and private sectors can expedite data collection, analysis and sharing, ensuring no region is left underserved.

Technology has the potential to play a key role in enhancing MHEWS through private sector initiatives. Public and private sectors should collaborate to integrate technological innovations and explore new applications of data in early warnings. This includes innovation in artificial intelligence, which holds great potential to address key gaps in MHEWS and deliver new opportunities. A newly created subgroup on Artificial Intelligence for EW4All will identify such opportunities.

MHEWS require scalable foundations. Building strong partnerships between the

public and private sectors from the outset ensures that systems are designed for growth in geographic extent and hazard coverage. Data-sharing collaborations must be established, with a focus on standardised, quality-assured, and geographically referenced information to facilitate data use in decision-making processes. Effective implementation of MHEWS also demands knowledge sharing within communities of practise, bridging the gap between data and actionable insights. Both the public and private sectors must actively engage in these knowledge-sharing networks to foster best practises and address challenges.

A people-centred approach should be stressed. All sectors should collaborate closely with local actors, such as communities and civil society organisations to legitimise the input of local and indigenous voices in MHEWS design and implementation. Women and persons with disabilities especially need to be engaged as active stakeholders and decision-makers in MHEWS efforts and empowered to assume leadership roles in DRR. To test and refine MHEWS, simulations and exercises should be conducted in partnership among sectors to collaboratively improve preparedness and coordination.

Sustainable funding is a significant challenge for all parts of the MHEWS lifecycle, from its establishment to its maintenance beyond the initiative. Engaging funders from across sectors ensures long-term support for capital and operational expenses, as well as community leadership and engagement. Leveraging existing initiatives and best practises is needed to achieve MHEWS at scale. Public and private sectors must align resources and coordinate their efforts to maximise efficiency.

The initiative presents promising prospects for SOFF and CREWS. 37 additional countries have sought SOFF support, signifying a unique opportunity to expedite resource mobilisation in response to the escalating demand. In addressing the prevailing challenge of those countries most vulnerable lacking the capacity to initiate funding applications, the initiative is well-positioned to explore avenues for streamlining the process and offering essential support to national governments for sustaining ongoing operations. For CREWS, notable opportunities are available in the strategic utilisation of implementing partners' expertise, the expansion of the network for agile project design and the reinforcement of collaboration with GCF to amplify early warning financing. The recently established Accelerated Support Window (ASW) by GCF introduces a favorable opportunity to provide short-term, quick impact interventions to LDCs and SIDS through analyses, assessments, or advisory services to monitor or deliver MHEWS, complementing multi-year CREWS projects.

Evaluating and recording the socio-economic and environmental advantages of MHEWS is crucial, yet only the 18% of WMO members have conducted socio-economic benefit assessments. A deeper comprehension of the value of weather, water and climate services for individuals, economies and ecosystems can spur investments in MHEWS. Recognising the importance of ecosystem services in ongoing and future projects will be integral to fostering resilience against climate change and mitigating disaster risks.

While climate events are evident, the slower and less visible threats of nature and biodiversity loss, along with pollution and waste, are equally damaging. Examples include air pollution causing millions of deaths annually and land degradation affecting billions. To address this, a systematic tracking approach is needed, involving cooperation among relevant agencies and Multilateral Environmental Agreements such as the Kunming-Montreal Global Biodiversity Framework and the Global Framework on Chemicals. A sub-initiative, Early Warning for Environment, is being developed in partnership with UNEP to extend MHEWS coverage to these topics and explore the hidden cost of disasters associated with detrimental environmental impacts.

Finally, accountability is essential for sustaining momentum. The monitoring and evaluation framework will be operationalised, allowing sectors to track progress and measure success.



# ADVISORY PANEL MEMBERS



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