



■ Technical Brief

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# EARLY WARNING SYSTEMS

Rapid Assessments from Four Partner Countries: Democratic Republic of the Congo, Mali, Niger, and South Sudan

**EARLY WARNING SYSTEMS (EWS)** are vital components of disaster risk management and the resilience of health systems, providing local stakeholders—governments, service providers, and communities—with the necessary information and time to prepare for and respond quickly to disasters and other hazardous events.

## Why EWS?

Implemented effectively, EWS can enable health workers and facilities to minimize disruptions to service delivery and continue to reach vulnerable populations with essential health care and support in times of crisis.

## BACKGROUND AND OVERVIEW

MOMENTUM Integrated Health Resilience (MIHR) is a USAID-supported cooperative agreement that works to improve access to and availability of high-quality, respectful, and person-centered maternal, newborn, and child health (MNCH), voluntary family planning (FP), and reproductive health (RH) care in fragile settings. These settings are prone to acute shocks from disasters, conflict, and disease outbreaks, as well as recurrent and ongoing stresses such as political and economic instability, population displacement, and food insecurity.

To mitigate these challenges, MIHR collaborates with local organizations, governments, and humanitarian and development partners to strengthen the capacity and health resilience of individuals, families, communities, health facilities, and health systems to manage ongoing stresses and respond to shocks. The project’s focus on health resilience seeks to reduce chronic vulnerabilities, ensure continuity of service access and utilization, and promote context-responsive participatory and inclusive development practices.

As part of its efforts to build health resilience, MIHR conducted a rapid assessment of existing early warning systems (EWS) in the Democratic Republic of the Congo (DRC), Mali, Niger and South Sudan. The assessment evaluated current EWS capabilities and provided recommendations for strengthening these systems to improve MNCH/FP/RH outcomes. This work contributes to the project’s objective of understanding the dimensions of fragility and resilience and explores how programmatic approaches can address these factors that directly and indirectly impact health outcomes.

The assessment framework is based on the Multi-Hazard Early Warning Systems (MHEWS) model developed by the World Meteorological Organization (WMO) (Figure One). This brief should provide a starting point for global implementing partners to consider the vital steps in ensuring the resilience and continuity of their programming in the face of both known and unforeseen shocks and stresses.

**Figure One: Multi-Hazard Early Warning System Model**



## EARLY WARNING SYSTEMS AND HEALTH RESILIENCE

With disasters increasing in frequency and intensity, especially extreme weather events and climate-related disasters, the role of EWS in disaster risk reduction and resilience-building has become more critical.

Launched at the 27<sup>th</sup> [Conference of the Parties to the United Nations Framework Convention on Climate Change](#) (COP 27) in 2022, the [Early Warnings for All \(EW4All\) Executive Plan](#) aims to expand coverage of EWS to all countries globally by 2027. [USAID has also invested](#) in this effort. The [Multi-Hazard Early Warning Systems](#) Model (Figure 1 above) developed by WMO is an integral part of implementation and evaluation of progress toward the EW4All goal.

The model is based on four pillars (described below): 1) Disaster risk knowledge; 2) Detection, observations, monitoring, analysis, and forecasting of hazards; 3) Warning dissemination and communication; and 4) Preparedness and response capabilities. Each pillar plays a crucial role in ensuring stakeholders are informed and prepared to respond to emerging or ongoing hazards. The model adopts an integrated, people-centered approach to protect affected populations, incorporating effective governance and institutional arrangements, community involvement, and gender-sensitive strategies to protect vulnerable populations.

In fragile settings, where ongoing stresses significantly affect the ability of national health systems to maintain even the most basic level of services, establishing multi-hazard EWS is essential to ensure service continuity. The following sections outline the relevance of each pillar in building the capacity and resilience of health systems to prepare, respond to, and recover from shocks and stresses.



### PILLAR 1: DISASTER RISK KNOWLEDGE

Comprehensive risk knowledge is essential for identifying health threats like climate-related environmental risks such as floods or droughts, which can trigger disease outbreaks, food insecurity, and malnutrition. Effective EWS depends on an in-depth understanding of the risks of disasters or hazardous events, and their potential (and varying) effects on populations, especially the most vulnerable and marginalized groups. By mapping out the components and drivers of risk, health authorities can determine when and where risks are most likely to materialize, how severe they are likely to be, and their differential impacts on health services and communities. Activities to enhance public awareness and education on different hazards, their impact on health, and appropriate responses are another critical aspect of this EWS pillar. These activities include participatory risk assessments at the local level that combine community knowledge and perceptions of risks with technical and scientific knowledge, data, and assessments methods, as well as social and behavior change communication (SBCC) activities for affected individuals and groups to adopt preventive behaviors.



### PILLAR 2: DETECTION, OBSERVATIONS, MONITORING, ANALYSIS, AND FORECASTING OF HAZARDS

Regular observation, monitoring, and analysis of health information underpin the early detection and response to emerging hazards and health threats. By continuously monitoring health indicators (such as disease surveillance data), environmental conditions (such as hydrometeorological and geological data), or conflict outbreaks and population movements, authorities can identify early warning signs of potential health crises, issue timely warnings, and enable health services to prepare and respond to the health needs of affected populations.



### PILLAR 3: WARNING DISSEMINATION AND COMMUNICATION

Effective communication and dissemination of warnings and information are critical to ensuring that communities receive timely and accurate guidance to protect their health. Clear and accessible messaging helps raise awareness about the immediate risk and how to respond to and promote preventive actions and behaviors. Messages must be delivered using a range of strategies to include diverse information needs and varying levels of access to communication platforms. It is particularly important to develop tailored messages and to identify suitable communication mechanisms to reach individuals at risk, especially marginalized groups at the last (or first) mile. Community-based EWS committees also play a vital role in providing timely and appropriate alerts. Implementation of risk communication and community engagement (RCCE) is also an important strategy to ensure that information is transmitted, perceived, understood, and applied correctly, and disinformation is addressed quickly.



### PILLAR 4: PREPAREDNESS AND RESPONSE CAPABILITIES

Within the health sector, response capabilities encompass preparedness measures such as training personnel, prepositioning medical supplies, establishing emergency response protocols and service continuity plans, identifying surge capacity, and coordinating multi-agency collaboration to ensure a swift response. Strengthening response capabilities enhances the resilience of health systems to withstand and recover from shocks, ultimately reducing the health impacts of crises. This is particularly important at the local level, where primary healthcare facilities and communities are first responders. Enhancing task-sharing/task-shifting between facility staff and community health workers (CHWs) is vital to address basic and emerging health needs during a crisis.

## METHODOLOGY

The assessment was conducted through a combination of literature review, key informant interviews, and workshops with stakeholders engaged in EWS in the local health systems in the partner countries that identified EWS as a priority and had the available resources: Mali, DRC, Niger and South Sudan. The assessment focused on identifying strengths and weaknesses of existing EWS against the four pillars of MHEWS in target sub-national geographies where MIHR operates. Primary data collection through both interviews and workshops was conducted in Mali and DRC, while the assessment was based on secondary data and a workshop in South Sudan, and secondary data in Niger, due to accessibility and security issues during the consultancy timeframe (July/August 2023).

**Table 1: Study Participants**

	Mali	DRC	South Sudan	Niger
Key informant interviews	6	16	0	0
Workshops	1	1	1	0
Workshop Participants	28	39	20	0



# ASSESSMENT FINDINGS

## OVERALL RISK LANDSCAPE

Populations in DRC, Mali, Niger, and South Sudan are exposed to a variety of risks, including armed conflicts, insecurity, displacement, disease outbreaks, and natural hazards. For MIHR, key considerations include disruptions to MNCH/FP/RH care and services linked with insecurity and displacement; gendered sexual and maternal health risks, including low uptake of FP; and the impacts of floods and droughts on the health needs of target populations and the capacities of health facilities to deliver essential services.

## COUNTRY FINDINGS

### MALI

In Mali, health risk monitoring is managed at national, regional, and community levels through inter-ministerial committees, village-level surveillance groups, *Centres de Santé Communautaire* (CSCoM) (community health centers) which serve a multitude of villages, and the *Associations de Santé Communautaire* (health center associations), which manage the CSCoMs. The system uses event-based and indicator-based surveillance are used to collect and analyze data, identify potential risks to public health, and issue alerts.



However, coordination gaps between the different levels of committees weaken the systems' overall effectiveness. Public engagement in risk assessments is also limited, with communities rarely involved in developing risk plans. Additionally, environmental risk monitoring is restricted—the ground observation network in northern Mali is not operational, and no hydrological modelling is used to forecast floods nationally. This impedes the forecasting and warning of hydrometeorological hazards and response to related health risks, such as climate-sensitive disease outbreaks. Health alerts are issued via mobile phones, television, radio, and social media.

The lack of standardized risk data further limits authorities' ability to accurately predict and respond to hazards. For example, hydrometeorological hazards, which pose a significant threat to public health, remain difficult to track due to gaps in data collection and analysis.

### *Additional Challenges/Issues*

- The assessment found gaps in accessibility and inclusion of messaging, and alerts are not shared with the public in real time, leading to lags in response. At the institutional level, alerts are disseminated through coordination and steering meetings. At the community level, the main channels for communicating about risks and dangers are town criers, calls to the mosque, the work of CHWs, and information provided to community health centers by patients. New information communication technologies (NICTs) are also used to disseminate alerts; however, their effectiveness in providing timely information is limited by uneven access to communication technologies such as smartphones, radios, and television, and by limited electricity network coverage, particularly in rural areas.
- Response to alerts is further limited by:

- a lack of inclusion and participation of community groups, such as Community Action Units and health committees, within the wider system;
- the exclusion of marginalized groups within communities, specifically women and persons with disabilities;
- a lack of contingency and evacuation plans; and
- a lack of training for community stakeholders on EWS components, institutional structure, and tools.

## DRC

In eastern DRC, civil protection and humanitarian affairs agencies monitor environmental risks alongside the Goma Volcano Observatory, while health risk monitoring is conducted at the national level by the *Institute National de Recherche Biomédicale*, the *Centre d'Opérations d'Urgence de Santé Publique*, the *Bureau de Surveillance National*, the *Direction des Surveillance Epidémiologiques*, and the *Programme National de Gestion des Urgences Sanitaires*. At the provincial level, the Integrated Disease Surveillance and Response System (IDSR) conducts surveillance of diseases with epidemic potential, and, at the community level, community-based disease surveillance is conducted by CHWs (*relais communautaires*) who share data through the health structure for provincial and national analysis.

While the IDSR regularly collects disease surveillance data, resource constraints delay the analysis and dissemination of warnings. In addition, disinformation—particularly in conflict-affected areas—undermines trust in official warnings and hampers effective risk communication.

### *Additional Challenges/Issues*

- A lack of resources undermines the effectiveness of the system processes.
- Knowledge about EWS and resilience at the community level is limited, structured committees are few, and risk assessments are absent.
- Monitoring is hampered by the scarcity, incompleteness, low quality, and/or untimeliness of data, and the lack of integration of community stakeholders and organizations in the wider EWS.
- Disinformation is a key challenge for communication and dissemination of risk and warning information.
- Inaccessibility of warnings in many remote locations and for specific marginalized groups, insufficient needs-based and tailored warnings, and lack of timeliness are all important gaps.
- The exclusion of marginalized groups and a lack of systemic, multi-hazard contingency planning at all levels makes warning response difficult.

## NIGER

A national EWS is operational in Niger, which monitors multiple environmental, health, and social hazards (e.g., drought, floods, epidemics, and conflicts) at community, sub-national, and national levels. National institutions include the National Disaster and Food Crisis Prevention and Management System, Water Office, National Meteorology Directorate, Civil Protection Directorate, Ministry of Humanitarian Affairs and Disaster Management, National Statistics Institute, and the University of Niamey. Community-based early warning structures (*Système Communautaire d'Alerte Précoce et de Réponse aux Urgences* or SCAP-RU) collect data at sentinel sites. However many of these structures are non-functional or heavily dependent on external financial support, which severely limits their effectiveness. Stakeholders across the system have different roles including the collection, collation, processing, analysis, and dissemination of data and information about key risks, identifying areas at risk and actions to be taken, and coordinating and monitoring humanitarian response.



At local levels, the community-based EWS committees (SCAP RUs) and Vulnerability Monitoring Observatories (*Observatoires de Suivi de la Vulnérabilité*) are officially recognized as the groups in charge of collecting data and reporting up the chain of information. For health-related hazards, CHWs have a key role in the EWS as they are responsible for reporting potential risks and cases. The community-based EWS committees, when functioning, are also in charge of leading the response in their villages.

In addition to the challenges with these structures, the gendered digital divide restricts women’s access to early warnings, as they often have less access to mobile phones and other communication resources. This further exacerbates their vulnerability in times of crisis.

### Additional Challenges/Issues

- A lack of coordination exists across the large number of actors involved, as outlined above.
- A very low percentage of community-based EWS committees actually function and report timely data (due to high dependence on external/international technical and financial support).
- Only low levels of gender and social inclusion were found in response strategies.

## SOUTH SUDAN

Knowledge about environmental and health risks in South Sudan is concentrated at national and county levels, with limited knowledge at the community level. Ongoing attempts are being made to develop an EWS for localized, intercommunal conflicts. The humanitarian system plays a critical role in risk monitoring, particularly the World Health Organization (WHO) for health-related risks, which has developed the Early Warning, Alert, and Response System “[EWARS in a box](#),”<sup>1</sup> a device and mobile application that support the monitoring and alerting of disease outbreaks. Warnings are generally communicated via broadcast radio messages. Preparedness for epidemics is in place. Medical supplies for malaria, cholera, measles, and meningitis are pre-positioned, and some health workers have been trained in emergency preparedness and response.

However, the national capacity to monitor floods and drought risks remains limited, and responses are often reactive. Further, many communities are reluctant to evacuate during floods due to fears of losing their land and property, which heightens their exposure to hazards. While health workers are trained and epidemic supplies are pre-positioned, many health facilities lack the necessary resources to fully implement preparedness protocols.

### Additional Challenges/Issues

- Most health facilities do not have smartphones, tablets, or computers to implement EWARS.
- County health department team members have limited proficiency in the reporting process.
- Few people have access to a radio to hear warnings.
- No established system is in place for monitoring floods and droughts.
- Preparedness measures are heavily dependent on international aid.

<sup>1</sup> See also [https://cdn.who.int/media/docs/default-source/documents/emergencies/ewars-presentation.pdf?sfvrsn=9bf14b42\\_4](https://cdn.who.int/media/docs/default-source/documents/emergencies/ewars-presentation.pdf?sfvrsn=9bf14b42_4).

- There is a lack of community engagement in response planning, and only low levels of gender and social inclusion.

## RECOMMENDATIONS

The assessment revealed similar gaps and limitations in the existing EWS in the four study countries, indicating that many of the recommendations to strengthen these systems are broadly applicable. These recommendations are categorized by the pillars of the MHEWS model, with additional cross cutting recommendations to ensure inclusivity and effectiveness at all levels. Table 2 offers country-specific recommendations proposed by key informants and participants from the workshops.



### PILLAR 1: DISASTER RISK KNOWLEDGE

- 1.1 **Conduct participatory multi-hazard risk assessments and mapping** at the community level to improve the understanding of local risks. This process should involve CHWs, local committees, and vulnerable groups to ensure comprehensive risk identification. **Undertake vulnerability analyses** to identify key drivers of risk and vulnerability to environmental and health hazards, and differential EWS priorities and needs for specific population groups, such as women, children, elderly, persons with disabilities, and prioritize actions accordingly.
- 1.2 **Support health facilities in co-developing, regularly updating, and disseminating multi-hazard risk profiles** of their health zones at district levels. These profiles should incorporate input from multiple stakeholders to ensure a full understanding of risks and vulnerabilities.

*Summary:* To address the low levels of community risk knowledge found in all four countries, it is critical to engage local communities in participatory, multi-hazard risk assessments. These assessments, mapping activities, and vulnerability analyses are recommended to identify EWS priorities and needs for different communities and population groups. These assessments should focus on multiple hazards (e.g., climate related hazards; epidemics) and involve existing local groups, facility management committees, and community committees (such as health, water, sanitation, and hygiene) as key entry points for the assessments and risk communication. Focus on inclusivity, involving vulnerable and marginalized groups, and ensure that CHWs are actively engaged. Incorporating both traditional and scientific knowledge will enhance the relevance and acceptance of risk information within communities. Additionally, health facilities should be supported in developing and disseminating multi-hazard risk profiles at the district level, using a multi-stakeholder approach to improve understanding of vulnerabilities and exposures.



### PILLAR 2: DETECTION, OBSERVATIONS, MONITORING, ANALYSIS, AND FORECASTING OF HAZARDS

- 2.1 **Engage and train community-level stakeholders**, particularly CHWs and youth and women leaders, to monitor environmental and health-related risks. Their involvement ensures that locally observed hazards are promptly detected and reported.
- 2.2 **Establish links between EWS stakeholders** at community, district, regional, and national levels to facilitate the regular flow of multi-hazard risk data and improve coordination.
- 2.3 **Develop and maintain databases of multi-hazard risk data**, including validation processes, to enhance research and modeling capacity, enabling more accurate hazard forecasting.

*Summary:* The assessment highlights the need to engage community members in monitoring risk. This includes providing training and strengthening platforms such as EWS committees to incorporate local knowledge and observations about environmental and health conditions into the wider system. Concerted



efforts will be required to facilitate agreements for information flow and decision-making regarding condition monitoring and issuing warnings. Clear lines of communication need to be established between EWS stakeholders, from local to national levels, to report and share data and develop, maintain, and improve databases of observational data, as well as data validation to strengthen research and modeling capacity. Additionally, a validation process for community-level stakeholders is needed to report on the accuracy and effectiveness of warnings (in terms of geography, timeframe, and impact).



### PILLAR 3: WARNING COMMUNICATION AND DISSEMINATION

3.1 **Facilitate linkages between producers and users of early warning messages** to identify and understand information needs and co-develop warning content that reflects community needs and available data.

3.2 **Develop communication strategies that can use multiple platforms** (e.g., mobile phones, radio, community leaders) to reach the most vulnerable populations, including those in remote areas. **Promote and scale up risk communications and community engagement (RCCE) interventions** to counter misinformation and build trust in official warnings, ensuring timely and appropriate responses.

*Summary:* In fragile settings, effective communication about potential dangers is essential to build an in-depth understanding of risks. This ensures that warnings are trusted, understood, and acted upon by all, including the most marginalized groups. EWS information must be delivered through trusted and accessible channels and tailored to the specific needs of different community members—especially vulnerable groups such as pregnant and lactating women, persons with disabilities, the elderly, and those with chronic conditions—to ensure that no one is left behind.



### PILLAR 4: PREPAREDNESS AND RESPONSE CAPABILITIES

4.1 **Strengthen and support community-level committees** to monitor and respond to multi-hazard risks, ensuring that they are equipped with the necessary resources and training.

4.2 **Develop standard operating procedures (SOPs) for health facilities and institutions** to link multi-hazard risk forecasts with concrete response actions, including service continuity and surge capacity plans.

*Summary:* Preparedness must be integrated into both community and institutional levels, with clearly defined roles and regular training. These should highlight practical skills for risk assessments and developing contingency/community action plans for health preparedness, with a strong focus on continuity of care. To gain community ownership, involvement, and leadership, assign specific roles and responsibilities to community stakeholders. These include updating and sharing community action plans within institutional planners. At institutional levels, SOPs or other preparedness and response plans will need to link risk forecasts with response actions, such as continuity of service, response to surge in health needs, and infection prevention and control measures. Simulation drills for community and institutional stakeholders will be invaluable to test and improve system performance and will reduce the health impacts of crises.

## CROSS-CUTTING RECOMMENDATIONS

- **Expand the reach of EWS to ensure broader coverage** and greater inclusion of marginalized groups, including women, youth, people with disabilities, pregnant and lactating women, and the elderly.
- **Ensure decision-making processes for EWS reflect the needs of all community members.** This includes incorporating feedback loops between communities and institutions to improve trust and performance.

- **Conduct after-action reviews or other participatory assessments** to evaluate the effectiveness of warnings for multiple hazards (e.g., environmental, health, social) and adjust strategies accordingly.

*Government health agencies*—particularly ministries of health at the national and local levels—play a crucial role in enabling improvements by setting standards and targets in policy and funding allocation for the scaling and standardization EWS across national regions.

*Health facilities* are critical institutional stakeholders in EWS, with dual roles as providers and users of information. For health risks, data on reportable diseases are critical for effective monitoring, while broader information about trends and patterns in health-related vulnerabilities to environmental risks can also support the determination of warning levels (i.e., the level of risk based on how a hazard will impact a population).

Additionally, *local community groups*, particularly those representing vulnerable populations, must be actively engaged in providing feedback on the accuracy, relevance, and effectiveness of early warnings and the performance of the system. Municipal authorities should have a key role in connecting that feedback to the wider EWS and to projects like MIHR, which may have the opportunity to facilitate the development of these connections.

## COUNTRY-SPECIFIC RECOMMENDATIONS

In addition to the broader recommendations discussed above, Table 2 lists specific recommendations identified by key informants and participants from the four participating countries.

**Table 2: Stakeholder Recommendations from Four Countries**

Country	Recommendation
Mali	<p>Develop cost-effective physical protection measures for health centers to mitigate risks from disasters and conflicts.</p> <ul style="list-style-type: none"> <li>• Conduct site-specific infrastructural risk assessments to identify gaps in physical protection measures such as: structural reinforcements (e.g., floodproofing); emergency power supplies; safe and secure facilities for water, sanitation, and storage of medical supplies; evacuation routes and shelters; perimeter security; and communication systems.</li> <li>• Map priority physical upgrades against existing national and sub-national policies, mandates, and resources</li> <li>• Analyze and implement cost-effective measures in alignment with priorities.</li> </ul>
DRC	<p>Strengthen community engagement and trust by improving risk communication and community engagement (RCCE) strategies to counter disinformation.</p> <ul style="list-style-type: none"> <li>• Develop a detailed RCCE strategy that includes regular updates, clear messaging, and engagement activities.</li> <li>• Identify and collaborate with local leaders, influencers, and community organizations to disseminate accurate information and build trust.</li> <li>• Work with local radio stations, community newspapers, and social media influencers who have credibility within the community to share messages.</li> <li>• Establish a system for verifying and correcting misinformation and ensuring that accurate information is disseminated promptly.</li> </ul>

	<ul style="list-style-type: none"> <li>• Hold regular community meetings to discuss risks, share updates, and address concerns directly with community members.</li> <li>• Continually monitor the effectiveness of communication strategies and adjust based on feedback and evolving misinformation trends.</li> </ul>
<b>Niger</b>	<p>Facilitate comprehensive participatory stakeholder mapping to clarify roles and enhance coordination among all actors involved in the early warning system.</p> <ul style="list-style-type: none"> <li>• Create and maintain a database with the contact information, roles, and responsibilities of each stakeholder.</li> <li>• Facilitate workshops and meetings with stakeholders to discuss roles, coordinate activities, and identify gaps or overlaps in responsibilities.</li> <li>• Establish clear protocols and communication channels for stakeholders to follow during both routine operations and during emergencies.</li> <li>• Develop a formal coordination plan that outlines how stakeholders will work together, share information, and manage resources during crises.</li> <li>• Conduct regular updates and simulation drills to ensure all stakeholders are familiar with their roles and the coordination mechanisms.</li> </ul>
<b>South Sudan</b>	<p>Collaborate with the Ministry of Health, WHO, and international agencies to map the coverage and functionality of EWARS, particularly in underserved areas.</p> <ul style="list-style-type: none"> <li>• Establish working groups with representatives from the Ministry of Health, WHO, and relevant international agencies to focus on EWS mapping and functionality.</li> <li>• Work with partners to enhance EWS in identified gaps, e.g., additional resources, training local staff, and improving infrastructure.</li> <li>• Set up mechanisms to regularly monitor the effectiveness of the enhanced EWS and make necessary adjustments based on performance data and feedback.</li> <li>• Provide regular updates to stakeholders on the progress of EWS enhancements and coverage improvements.</li> <li>• Address community reluctance to evacuate by engaging local leaders and influencers to raise awareness about evacuation procedures and the importance of early action to protect lives.</li> </ul>

## CONCLUSION

The effective implementation of multi-hazard EWS is essential for mitigating the impacts of health and environmental risks, particularly in fragile and conflict-affected settings. Strengthening these systems by enhancing community-level risk knowledge, ensuring inclusive and timely communication strategies, and improving health facility preparedness and response capabilities can significantly bolster the resilience of health systems. These comprehensive approaches not only enable communities and health systems to manage hazards more effectively, but they also ensure continuity of essential health services during crises, protecting the most vulnerable populations from being disproportionately affected.

The continual scale up, adaptation, and refinement of early warning systems will be required to meet evolving risks and challenges to ensure sustainable health outcomes for all supported populations in affected countries. USAID, the World Bank, and other major donors have pledged significant support for these measures, but humanitarians and development agencies should also promote EWS and integrate strategies in all types of programs at the local level.

## NEXT STEPS

In the DRC, Mali, Niger, and South Sudan, MIHR actively supports the development of multi-stakeholders risk assessments (Pillar 1), and emergency preparedness and response plans (Pillar 4) at community, health facility and district levels, while ensuring strong linkages with national EWS.

Additionally, in **Mali** and **Niger**, MIHR supports the active participation of community groups and CHWs in multi hazards EWS at the community level. This includes facilitating timely and adequate reporting and linkages between these groups and higher-level stakeholders within ministries of health and the national EWS system (Pillar 2). In **South Sudan**, MIHR is collaborating with WHO to support the rollout of early warning, alert, and response systems, while also providing training to health facility staff to ensure that they can effectively use the system for disease surveillance and crisis response (Pillars 2,3 and 4).

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### MOMENTUM

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