

Local Disaster Risk Reduction for Preparedness and Recovery

Enhancing Communities' Resilience in Northwest Syria

Table of Contents

Definitions	2
I. Introduction:	3
II. Context (Syria: Idlib and Aleppo):	3
III. Project Overview: Enhancing the Resilience of Earthquake-Affected Communities in Northwest Syria through Improved Disaster Risk Management	4
Factors Contributing to Increased Disaster Risks in Communities:	5
Disaster Risk Management at the Local Level:	6
IV. Disaster Risk Management Approaches in Northwest Syria: A guideline for Community Based Disaster Risk Reduction (CBDRR)	8
Stage One: Selecting the targeted local community:	8
Stage Two: Building partnership and Understanding the Local Community:	9
Stage Three: Participatory Risk Assessment - community Risk and Vulnerability Assessments:	10
Stage Four: Community-based disaster risk management planning	11
PAGEREF _Toc206857034 \h Phase Five: 5, Implementing initiatives for disaster risk management at the community and schools' levels	12
Phase Six: Monitoring and Evaluation of Community-Level Disaster Risk Management	14
V. Local Disaster Risk Response plan in Northwest Syria: Communication Plan	16
1.Early Warning Systems for Natural Disasters – Audible Warning System:	16
2.School Evacuation Plans:	18
VI.Recommendations:	23

Definitions

Hazard: A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.¹

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.²

Disaster Risk: The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.³

The United Nations Disaster Risk Reduction defines a disaster as a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts⁴

Disaster impact is the total effect, including negative effects (e.g., economic losses) and positive effects (e.g., economic gains), of a hazardous event or a disaster. The term includes economic, human and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being.

^{1 -} United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. «Hazard». Accessed 28 August 2025. https://www.undrr.org/terminology/hazard.

²⁻ United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. «Vulnerability». Accessed 28 August 2025. https://www.undrr.org/terminology/vulnerability.

³⁻ United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. «Disaster risk». Accessed 28 August 2025. https://www.undrr.org/terminology/disaster-risk.

⁴⁻ United Nations Office for Disaster Risk Reduction (UNDRR). 2017. The Sendai Framework Terminology on Disaster Risk Reduction. «Disaster». Accessed 21 August 2025. https://www.undrr.org/terminology/disaster.

Introduction:

Syria has gone through prolonged conflict and disasters. In early 2023, a devastating earthquake struck northern Syria, exacerbating the vulnerability, instability, and displacement of local communities. The disaster caused widespread destruction to homes, schools, and infrastructure, leaving thousands vulnerable and in dire need of support. In response to this crisis, part of the project «Enhancing the Resilience of Earthquake-Affected Communities in Northwest Syria through Improved Disaster Risk Management, » implemented by World Vision International. The project aims to strengthen the capacity of local communities to respond effectively to disasters and reduce vulnerability to the impacts of climate change. This manual provides practical and flexible steps to guide Local Disaster Risk Management Committees (LDRMCs) in the targeted communities and schools in case of any disaster. The manual also includes information on how to respond, the early warning system, and evacuation plans.

The project "Enhancing the Resilience of Earthquake-Affected Communities in Northwest Syria through Improved Disaster Risk Management" worked with six local communities in Aleppo and Idlib—Kafr Houm, Abu Talha,

Al-Tuloul, Bzabour, Al-Jinah, and Ebin Samaan—to strengthen their ability to prepare for, respond to, and adapt to multiple disasters. Efforts included forming inclusive Local Disaster Risk Management Committees (LDRMCs), developing local preparedness and response plans, and installing early

warning systems. To promote safety and improve living conditions, the project

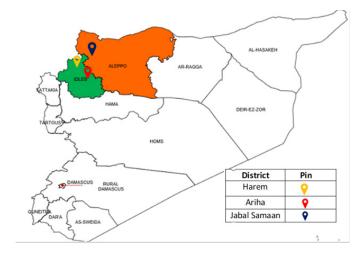
implemented initiatives such as installing street lighting and lightning rods, rehabilitating a water dam to reduce flood risks, repairing sewer systems, planting trees, and upgrading sidewalks. Schools were supported through rehabilitated facilities and the establishment of Climate Action Clubs, where students learned about climate change and social innovation. Communities also took part in awareness sessions on disaster risk management and climate adaptation, while youth played a central role in sustaining these efforts. Together, these activities improved public safety, strengthened community participation, enhanced environmental conditions, and fostered a greater sense of stability, resilience, and self-reliance across the targeted areas

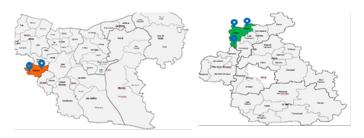
Context (Syria: Idlib and Aleppo):

Syria is located in the middle east, bordered by Turkiye, Jordan, Lebanon, and the occupied territories of Palestine. The northwest areas of Syria, especially the governorates of Idlib and Aleppo, have been experiencing a complex humanitarian situation marked by ongoing deterioration due to years of armed conflict, mass displacement, the collapse of infrastructure and basic services, and exposure to earthquakes in some areas. Syria now faces widespread humanitarian needs and chronic vulnerability. The collapse of national systems healthcare, education, water, sanitation, and civil protection has

severely weakened the country's ability to respond to emergencies and protect its population from both natural and manmade hazards. Climate change has further compounded these challenges, with Syria experiencing more frequent and intense droughts, floods, and temperature extremes.

Communities in these areas suffer from multiple forms of vulnerability, making them more exposed to disaster risks whether natural, man-made, or climate-related. The context includes six local communities. The context is designed to target three key districts in northwest Syria: Ariha, Jabal Samaan, and Harim. Within these districts, six communities have been selected for intervention—Kafr Houm, Abu Talha, Al-Tuloul, Bzabour, Al-Jinah, and Ebin Samaan.





Project Overview: Enhancing the Resilience of Earthquake-Affected Communities in Northwest Syria through Improved Disaster Risk Management.

The project encompasses several activities to strengthen the resilience of local communities in Aleppo and Idlib to prepare, respond, and adapt face and respond to multiple disasters. It targets six local communities in six districts: Kafr Houm, Abu Talha, Al-Tuloul, Bzabour, Al-Jinah, and Ebin Samaan. The main activities carried out by the project to enhance the preparedness of local communities include the following:

- Establishing and activating LDRMCs, which included setting criteria and conditions for their formation, defining their roles, and selecting diverse members, with consideration for gender equality, disability, and social inclusion.
- Developing and implementing disaster mitigation and preparedness plans, including risk and capacity assessments, setting up early warning systems, and creating local disaster response plans.
- Establishing Climate Action Clubs in schools, aiming to raise students' awareness about climate change issues, promote environmental awareness, and train youth in social innovation and climate action initiatives.
- Implementing a range of community initiatives in the six targeted areas, through close cooperation and effective partnerships between communitybased LDRMCs, local partners, and relevant governmental entities. These

initiatives aimed to meet the real needs of the people and enhance their ability to adapt to growing environmental and service-related challenges, contributing to improved service levels and overall quality of life.

- Improving public safety in key areas, including the installation of streets lighting poles and lightning rods to reduce accidents at night and protect people and assets from lightning strikes, especially during storm seasons. Additionally, agricultural lands and homes were protected from flood risks through a water dam rehabilitation initiative in Al-Tuloul area, which helped control water flow and prevent land submersion, thereby reducing economic and environmental damage.
- Rehabilitating damaged sewer system networks to reduce the spread of insects, epidemics, and any environmental consequences. Efforts also focused on environmental improvement and beautification through a tree-planting and street-greening initiative, along with sidewalk repairs, aiming to purify the air, enhance the visual appearance of residential neighborhoods, and promote a sense of comfort and belonging among residents.
- Rehabilitating facilities in multiple public schools, including toilets, courtyards, fencing to ensure safe and inclusive learning environment for students and teachers.
- Improving early warning system, including devices within the targeted communities, enabling residents to respond quickly in case of actual or anticipated natural or environmental disasters.

 Conducting awareness sessions on disaster risk management and climate change to raise community awareness of disaster risk management concepts, prevention methods, and effective response strategies. These sessions also focused on the impacts of climate change and ways to adapt, with active participation from all community groups especially youth, who play a central role in sustaining community efforts.

These initiatives contributed to enhancing the sense of safety and stability within six local communities across four sub-districts in Aleppo and Idlib, targeting six schools. They helped raise community awareness about disaster risks and prevention methods, improved the level of basic services and the surrounding environment, and increased residents' readiness to respond to emergencies.

The efforts to establish and activate disaster risk management committees also empowered communities by providing effective tools for planning and response, strengthening their self-resilience in the face of crises. Additionally, the initiatives raised youth awareness on environmental and climate change issues and helped foster a culture of community participation and collaborative action.

Factors Contributing to Increased Disaster Risks in Communities:

The likelihood and severity of disasters on communities are influenced by several interrelated factors that can either exacerbate the damage or hinder the ability to respond and recover. Below are the key contributing factors:

Geographical Location: plays a crucial role in determining a community's exposure to natural disasters. Areas near coastlines are more vulnerable to hurricanes, sea storms, and rising water levels, while regions close to geological fault lines are prone to earthquakes and landslides.

Land use patterns also significantly contribute to disaster risks. For example, building in floodplain makes infrastructure more vulnerable to flooding, while deforestation increases the likelihood of landslides and flash floods due to the absence of vegetation that helps stabilize the soil.

Social and Economic Factors: Social and economic conditions directly affect the ability of individuals and communities to cope with and respond to disasters. Communities suffering from poverty, unemployment, and inequality are at greater risk. Marginalized groups often lack access to basic resources such as clean water, healthcare, and safe shelter, making them unable to withstand or recover from disasters. Living in informal or unplanned settlements or in buildings that do not meet safety standards increases vulnerability during disasters due to weak infrastructure and the absence of social safety networks.

Environmental Factors: Environmental changes whether caused by human activities or natural processes can multiply the risks associated with disasters. Deforestation, land degradation, and soil erosion weaken ecosystems, making them less capable of absorbing natural shocks like heavy rain or strong winds.

Climate change also leads to more frequent and intense extreme weather events such as droughts, floods, and wildfires. In addition, environmental pollution causes slow-onset disasters that affect human health and the environment, such as water, air, and soil contamination.

Demographic Factors: Rapid population growth increases pressure on natural resources and public services such as water, sanitation, and electricity, which lowers the quality of life and makes communities more vulnerable to crises. Internal or external migration especially when unplanned can lead to overcrowding in areas lacking proper infrastructure or adequate services.

Furthermore, vulnerable population groups, such as the elderly, children, and people with physical or mental disabilities, require special attention during disasters in terms of planning, evacuation, and care, as they may find it difficult to respond quickly or endure harsh conditions.

Disaster Risk Management at the Local Level:



Northwest Syria have previously witnessed multiple, disasters include those caused by earthquakes, floods, fires, epidemics, and the deterioration of infrastructure due to prolonged conflict The region lies near seismic fault lines, making communities vulnerable to strong earthquakes, as witnessed in 2023 earthquake. In addition, heavy rainfall and poor sewage systems increase the risk of flooding, especially in low-lying areas. The spread of diseases such as cholera and COVID19- reflect the weakness of the healthcare system, as well as the spread of insects due to damaged sewage systems. Wildfire incidents are also rising due to climate change and insufficient mitigation efforts.5 These disasters are linked to environmental. and social factors such as rapid population growth, informal housing, and weak public services and infrastructure. This situation calls for effective local risk management that includes prevention, preparedness, response, and recovery.

Before the Disaster:Prevention and Preparedness Phase:

In this phase, efforts are made to reduce the likelihood of disasters or decrease their impact once occurred. It includes two main components:

Prevention: Actions taken in advance to reduce the risk of a disaster occurring or to lessen its effects. Examples include:

- Strengthening infrastructure to be disasterresistant (e.g., reinforcing buildings against earthquakes).
- Regulating land use and preventing construction in high-risk areas such as floodplains or water channels.

 Protecting the environment and reducing desertification and deforestation, which increase disaster risks.



Preparedness: Preparing the community to respond in an organized and effective way when a disaster occurs. This includes:

- Developing community emergency plans.
- Training community response teams.
- Conducting awareness campaigns to educate people on what to do during a disaster.
- Preparing shelters and storing emergency supplies like food and medicine.

During the Disaster: Response Phase:

This phase involves immediate actions taken as soon as the disaster strikes, with the aim of saving lives and minimizing direct damage. These actions include:

- Search and rescue operations.
- Providing first aid and health services.
- Securing temporary shelters and distributing essential aid.
- Coordinating efforts between local authorities and humanitarian organizations.

Post-disaster: Recovery Phase:

This phase aims to restore basic services, daily socio-economic activities, and rebuild infrastructure, and restoring the social fabric. Key actions include:

- Rebuilding homes and public facilities.
- Providing psychological and economic support to those affected.
- Assessing damage and reflecting on the lessons learnt to improve future responses.
- Strengthening livelihoods and building long-term resilience.

Disaster Risk Management Approaches in Northwest Syria: A guideline for Community Based Disaster Risk Reduction (CBDRR)

Local Level Disaster Risk Reduction



Stage One: Selecting the targeted local community:

Selecting the appropriate local community is the first and most critical step in implementing a community-level Disaster Risk Reduction (DRR) program. This process must be strategic and evidence-based, ensuring that interventions are directed toward areas with the greatest need and potential for impact. To guide this process, a set of key criteria should be applied during the assessment and prioritization of communities:

Vulnerability Assessment

Communities should be evaluated for their levels of social, economic, and environmental vulnerability. Indicators such as poverty rates, inadequate infrastructure, environmental degradation, and past disaster experiences help identify areas most at risk.

Population Impact

Priority should be given to communities where a larger number of individuals stand to benefit from the intervention. Estimating the scale and reach of the program ensures that efforts are both inclusive and impactful.

Hazard Exposure

Areas frequently exposed to natural, technological, or environmental hazards—such as floods, landslides, wildfires, epidemics, or industrial accidents—should be prioritized. Understanding the nature and frequency of these threats is essential for effective risk mitigation.

Community Engagement Readiness

A community's willingness and capacity to participate actively in planning and implementation is a vital factor. Signs of existing leadership structures, active community groups, and openness to collaboration indicate a higher likelihood of successful engagement.

Accessibility and Logistics

The feasibility of reaching and working within the community must be considered. This includes evaluating transportation routes, security conditions, and logistical support. Ensuring accessibility is key to maintaining consistent engagement and follow-up throughout the program lifecycle.

Stage Two: Building partnership and Understanding the Local Community:

This stage lays the foundation for effective community-level disaster risk management by fostering trust, understanding local dynamics, and forming representative committees to lead DRR efforts from within.

Before initiating any field activities, it is essential to build mutual trust with the community. This is achieved by conducting open meetings, engaging in daily community life, and showing respect for local customs and values. These interactions help establish credibility and long-term cooperation while allowing teams to gather baseline data through direct observation, interviews, and secondary sources.

Understanding the local context is equally critical. This involves analyzing key dimensions that influence disaster resilience, including the composition of social groups such as men, women, displaced persons, and minorities; cultural norms that shape decision-making and relationships; economic activities and their vulnerability to disasters; the spatial layout of population clusters, infrastructure, and road access; and identifying vulnerable groups such as women, children, the elderly, persons with disabilities, and low-income families.

To operationalize DRR at the community level, Local Disaster Risk Management Committees (LDRMCs) are formed. These committees serve as the community's executive arm for planning and implementing disaster risk reduction activities. The member selection process begins with mobilization meetings and the distribution of project brochures. Nominations are opened using appropriate tools, and applicants are evaluated based on clear criteria: they must be at least 18 years old, residents of the targeted community, familiar with local geography and customs, possess teamwork and decision-making skills, and hold a good reputation within the community. For administrative roles, basic computer literacy is preferred. A questionnaire is used to assess applicants' capacities, and selections are made to ensure gender balance, inclusion of persons with disabilities, and diverse educational backgrounds. Final lists are shared with relevant authorities for review and endorsement, ensuring transparency and institutional support for the committees.



Stage Three: Participatory Risk Assessment - community Risk and Vulnerability Assessments:

This stage provides a comprehensive understanding of the risks facing the community, its vulnerabilities and capacities, and the population's awareness of these threats. It serves as a critical foundation for all subsequent disaster risk reduction activities, ensuring that interventions are grounded in the realities of the local context.

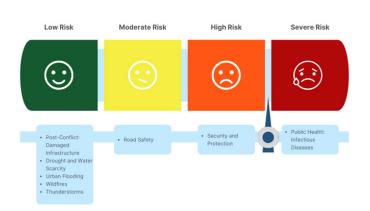
The assessment process includes four interconnected components. First is the community risk assessment, which involves identifying the types of natural or human-made hazards that may affect the area—such as earthquakes, floods, storms, landslides, armed conflicts, displacement, fires, and epidemics. These hazards are analyzed in terms of their frequency, intensity, and geographic distribution to understand their potential impact.

Second is the vulnerability assessment, which examines the factors that increase the community's exposure to disaster impacts. These include weak infrastructure, poverty, poor living conditions, limited awareness, inadequate early warning systems, and insufficient health and education services. Special attention is given to the most affected groups, including children, women, the elderly, and persons with disabilities.

The third component is the capacity assessment, which identifies the resources available within the community to respond to disasters. These include human resources such as volunteers, medical staff, and local experts; natural resources like water

and agricultural land; local institutions including schools, mosques, and community organizations; and infrastructure that can be repurposed for emergency use, such as schools serving as shelters.

Finally, the assessment explores people's perception of risk. This involves understanding how community members perceive hazards, their past experiences with disasters, their sources of information, their awareness of response plans, and their willingness to participate in risk reduction activities. This insight helps tailor interventions to local attitudes and strengthens community



Stage Four: Community-based

disaster risk management planning

The planning phase serves as the bridge between assessment and action, transforming identified risks into practical, community-driven initiatives aimed at reducing vulnerability and enhancing resilience. Grounded in principles of participation and inclusiveness, planning should engage all segments of society especially vulnerable groups and address the full spectrum of disaster management: prevention, preparedness, response, and recovery.

The process begins by analyzing assessment results and converting key issues into clear, actionable goals. For each goal, specific and feasible activities are proposed, ensuring they are measurable and time-bound. Given resource constraints, activities are then prioritized based on risk severity, potential impact, and implementation feasibility.

Finally, a comprehensive action plan is developed, detailing objectives, activities, responsible parties, timelines, required resources, and monitoring indicators. This plan not only strengthens community ownership but also serves as a strategic roadmap for coordination with partners and donors.



Example from the Field: Community-Based Disaster Risk Management (CBDRM) in Northwest Syria

Targeted communities in Idleb and Aleppo were carefully selected including multiple criterion, including: level of vulnerability, number of potential beneficiaries, exposure to the hazard, Community readiness to participate, accessibility to the community, Moreover, additional factors contribute to the communities selection, such as proximity to main roads or city center, remote communities that are harder to reach and more vulnerable, prolonged internal conflicts, presence of multiple stakeholder, and staff safety.

The Local Disaster Risk Management Committee (LDRMC) Full readiness to actively participate in disaster risk reduction activities.

- The applicant must be at least 18 years old.
- Being a resident of the targeted community, familiar with its customs and geography.
- Possessing the necessary skills and experience for teamwork and decisionmaking.
- Having a good reputation and respected status in the community.

Administrative members preferably should have knowledge of using computers, managing email, and archiving documents on cloud platform. Therefore, eighteen members were selected for each committee, totaling 108 members, and the lists were presented to municipalities for review and feedback. The project management, in cooperation with municipal councils, ensured forming a comprehensive and effective team, including members of both genders, people with disabilities, with diverse educational qualifications, and from different residential

Community-based disaster risk management requires an active participation of all members of society, including individuals, local committees, NGOs, and local authorities, to ensure effective response and build a safe and cohesive community.

Phase Five: 5, Implementing initiatives for disaster risk management at the community and schools' levels

The implementation phase is where planned initiatives are translated into concrete actions on the ground. It focuses on achieving the objectives outlined in the action plan through coordinated efforts among all stakeholders.



A key element is the establishment of a community disaster management mechanism, which involves forming specialized working groups within the community to lead activities and facilitate coordination with governmental and local entities.

Implementation includes conducting workshops, training sessions, and awareness campaigns, with active community participation to strengthen ownership and sustainability. Effective coordination is essential and involves multiple actors: the project team oversees execution and provides technical support; Local Disaster Risk Management Committees assign tasks and manage field activities; local councils offer institutional and logistical support; and local institutions and authorities ensure regulatory compliance, provide emergency services, and contribute to training and resource provision.

Together, these efforts ensure that disaster risk reduction activities are carried out efficiently, inclusively, and in alignment with community needs

Example from the Field: Resilient Communities and Schools Initiatives

World Vision has strengthened resilience in six communities and schools across Northwest Syria through integrated climate, environmental, and infrastructure interventions. Six climate action clubs were established in schools, extending outreach to informal education centers and local authorities to promote climate literacy,

youth leadership, and community awareness. Young people were further empowered through capacity-building, participatory action research, and social innovation incubators, alongside WASH innovation hubs supporting green initiatives, entrepreneurship, and sustainable livelihoods.

To enhance safety and infrastructure, 320 solar-powered lighting poles were installed near schools and public spaces, along with 13 lightning rods protecting facilities from climate-induced thunderstorms.

In Al-Tuloul, the community dam was restored and raised to better manage water resources and reduce flood risks.





Sewer systems in four communities were rehabilitated by covering open channels, repairing pipes, and adding inspection chambers, improving public health and environmental conditions. Road greening projects repaired sidewalks, improved drainage, and planted climate-resilient trees to reduce heat, absorb carbon, and enhance local environments



Schools benefited from upgraded infrastructure, sanitation, and water systems, as well as tree planting and solar energy installations to secure sustainable water and lighting services despite electricity shortages. Together, these initiatives not only protect infrastructure and improve services but also cultivate climate-smart, empowered, and resilient communities and schools.

Together, these efforts ensure that disaster risk reduction activities are carried out efficiently, inclusively, and in alignment with community needs

Phase Six: Monitoring and Evaluation of Community-Level Disaster Risk Management

Monitoring and evaluation are vital components of community-level disaster risk management, supporting performance improvement, impact assessment, and continuous learning.

This phase emphasizes active participation from community members and stakeholders to ensure transparency, accountability, and readiness for future disasters. Key elements include participatory monitoring, where communities help track progress and outcomes; participatory evaluation,

which assesses the effectiveness and sustainability of activities;

accountability mechanisms that promote responsiveness and community voice; and continuous learning through the exchange of experiences and best practices.

The LDRMCs must hold community awareness sessions. These sessions aim to raise people's understanding of disaster risk management and climate change impacts.

Participants learn to develop a local disaster response plan. This includes defining roles, distributing tasks and resources, and specifying safe evacuation points. Sessions also teaches procedures that protect lives and property. Beyond disaster response, communities are educated about prevention, early recovery, and building back better. Such sessions improve community behavior and collective response in disasters.





Climate Change:

Climate change is a significant and long-term shift in the global climate, manifested in continuous changes in temperature patterns, rainfall patterns, and the frequency of extreme weather events such as storms, floods, and droughts. These changes may occur over decades or centuries, and their effects vary from one region to another.

The source of these changes can be natural, resulting from factors such as changes in solar activity, solar cycles, major volcanic eruptions that affect the composition of the atmosphere, and changes in the Earth's rotation and axial tilt.

The Interlinkages between Climate Change and Disasters

1. Increased Frequency and Intensity:

The world is witnessing a noticeable increase in the frequency and intensity of natural disasters due to climate change. With rising temperatures and changes in weather patterns, floods have become more frequent, especially in coastal areas and regions with heavy rainfall. Periods of drought affecting agriculture and water resources have also increased, alongside hurricanes that have become stronger and more destructive. Studies show that climate change contributes to accelerating the occurrence of these disasters, making them happen faster and more destructively.

2. Exacerbation of the hazard

In addition to increased frequency and intensity, climate change directly worsens the damage caused by disasters. Prolonged seasonal periods, such as extended droughts or prolonged floods, lead to deteriorating local conditions. For example, long-lasting drought sharply reduces water resources, affecting agricultural production and leading to food shortages. Likewise, prolonged floods destroy infrastructure, increasing the economic costs for the affected area.

3. Multiple and Interlinked Effects:

The impacts of climate change are not limited to the climatic event itself but extend to multiple complex interactions between weather and environmental conditions. For example, rising temperatures increase the atmosphere's capacity to hold moisture, which contributes to heavier rainfall in some areas, while causing severe drought in others. These interactions make disaster prediction and management complex, as it is difficult to isolate each effect independently.

For example, continuous drought may lead to soil degradation, which increases the risk of floods if heavy sudden rainfall occurs, making the catastrophic impact greater.

Therefore, climate change not only increases the number of disasters but also complicates communities' responses to these disasters, making adaptation to these changes critically important in future coping strategies.

Local Disaster Risk Response plan in Northwest Syria: Communication Plan

Early Warning Systems for Natural Disasters – Audible Warning

System

After developing the preparedness and response plan in the targeted communities within the DRR project, and after reviewing available warning systems, the need arose for a system to alert individuals and communities of potential or imminent disasters.

The audible warning system is a fundamental tool designed to alert individuals and communities about potential or imminent disasters. These systems use audible alerts such as sirens, pre-recorded messages, and live announcements to provide immediate warnings, enabling people to take appropriate safety measures.

Below is a detailed explanation of the purpose of the audible warning system, its installation locations, operation, and components. The table below shows the targeted communities within the DRR project:

	Governorate	District	Subdistrict	Community	#of Families	#of Individuals
1	ldlib	Harim	Harim	Kafrhoum	575	1744
2	ldlib	Harim	Harim	Abu Talha	439	1700
3	ldlib	Harim	Harim	Al Tuloul	510	2550
4	ldlib	Ariha	Ariha	Bazabor	506	2220
5	Aleppo	Jabal Semaan	Atareb	Alijah	2201	12540
6	Aleppo	Jabal Semaan	Atareb	Ebin Semaan	4670	14657

The main purpose of the early warning system is to immediately notify people of an emergency or a disaster. The disaster include natural events such as earthquakes, floods, hurricanes, tornadoes, tsunamis, and wildfires, in addition to human-made threats such as chemical spills, terrorist attacks, and industrial accidents.

The primary objectives include:

Risk reduction: Minimizing damage by giving people sufficient time to evacuate or take necessary precautions.

Mass communication: Reaching a large number of individuals in a short period, even in areas where mobile networks or other communication means might be disrupted.

Dissemination of important instructions:

Providing clear and concise guidance, such as evacuation routes, shelter locations, or safety measures to ensure protection.

The effectiveness of the early warning system heavily depends on its location to achieve maximum coverage and clarity. Strategic locations include:

- High population density areas, such as city centers, schools, hospitals, residential neighborhoods, and commercial zones.
- Areas prone to natural disasters, such as floodplains, coastal zones, earthquakeprone regions, or near industrial facilities.
- Critical infrastructure, such as airports, train stations, power plants, dams, and ports, where large groups of people or vital operations are concentrated.

- Rural communities or remote areas where other communication channels may be limited.
- Public gathering places, such as parks, stadiums, markets, and event halls where large crowds regularly assemble.
- The location must ensure that audible signals effectively reach both indoor and outdoor areas.

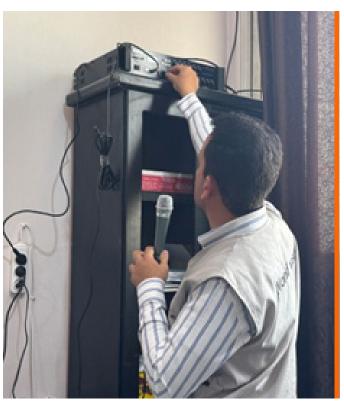


The table and maps below illustrate audible warning systems locations in the targeted communities:

	Community	Number of Systems Installed in Local Councils	Number of Systems Installed in Schools	
1	Kafrhoum	1	0	
2	Abu Talha	1	1	
3	Al Tuloul	1	1	
4	Bazabor	1	0	
5	Al Jinah	1	1	
6	Ebin	1	1	

Activation of the early warning system

The audio alarm system operates using advanced technologies and procedures to ensure reliable and effective communication. The operation process includes the following: members of the LDRMCs activate the system and deliver warning messages related to natural and man-made hazards through direct speech. This system can be further developed and connected to online weather systems and civil defense systems to receive automatic updates. Additionally, the system requires no operational costs, as it is equipped with a solar power system that ensures its continuous operation.



The following table shows the presence of LDRMCs members in the targeted communities:

	Governorate	District	Subdistrict	Community	#of LDRMCs
1	Idlib	Harem	Harim	Kafrhoum	18
2	ldlib	Harem	Salqin	Abu Talha	18
3	Idlib	Harem	Salqin	Al Tuloul	18
4	Idlib	Ariha	Ariha	Bazabour	18
5	Aleppo	Jabal Semaan	Atarib	Alijah	18
6	Aleppo	Jabal Semaan	Atarib	Ebin	18

School Evacuation Plans:

School evacuation plans aim to organize the evacuation process in a fast and safe manner to ensure the safety of all students, teachers, and staff during emergencies and to minimize injuries and damage. This is achieved by training the staff and students to respond quickly to the instructions given through the early warning system and by implementing evacuation plans.

Emergency Management Team:

- Emergency Leader: School principal oversees the overall implementation of the plan.
- Evacuation Coordinators: Teachers assigned to floors and corridors.
- Assembly Point Supervisor: teachers ensure that every student in their class has evacuated.
- First Aid Officer: A psychosocial counselor, health worker, or teacher trained in first aid.
- Communication Officer: Assistant principal or school secretary communicates with civil defense and parents.
- Alarm System Operator: A teacher trained to operate the alarm device.

2.a Types of Evacuation Plans:

First: School Evacuation Plan in Case of Bombing

Procedures Before the Bombing

- Identify the nearest safe shelters (shelters, interior rooms without windows, fortified corridors).
- Train students on organized movement to evacuation areas.
- Prepare an emergency bag containing: (a list of students' names, a flashlight, first aid tools, a communication device).
- Draw evacuation route maps and hang them in corridors and classrooms.
- Activate the early warning system (loudspeaker broadcast) for regular training by broadcasting awareness messages and instructions simulating emergency situations, which enhances the readiness of students and staff.

Procedures During the Bombing

- Issue a clear alarm using the sound alarm system (via loudspeaker), and broadcast immediate instructions through the device such as: "Stay in your place, do not run, head to the nearest safe area, keep calm." Stay in the classroom or immediately move to the nearest fortified place inside the school if exiting is dangerous.
- Take the protection position (lie down, protect the head with hands, stay away from windows).
- Prevent chaos and running to ensure safety.



Procedures After the Bombing Ends

- Use the loudspeaker to announce the end of danger and direct students and staff with phrases such as: "It has been confirmed that the bombing has stopped, please proceed orderly to the designated gathering points."
- Exit classrooms to the pre-designated gathering points
- Conduct a headcount of students and staff.
- Provide first aid if necessary.
- Communicate with civil defense or the Red Crescent to transport any injured persons if found.
- Use the sound alarm device to reassure students and parents, and provide general information about the situation after the bombing, such as: "The school is now in a safe state, and we are following usual safety procedures. We ask everyone to cooperate."

Gathering Points

- The backyard / a yard far from tall buildings.
- Preferably surrounded by a fence, with a clear entrance and exit.

Second – School Evacuation Plan in Case of Earthquake:

Procedures Before the Earthquake

- Identify safe gathering points in the yard away from buildings.
- Train students on the "Drop, Cover, Hold On" rule.
- Secure heavy cabinets and shelves to reduce risks.
- Prepare an emergency bag for each class (should contain a list of names, flashlight, first aid, etc.).
- Use the sound alarm system (loudspeaker) to spread prior awareness about earthquake protection methods and conduct drills simulating real situations, giving students quick response skills and confidence.

During the Earthquake

- Use the loudspeaker to broadcast immediate instructions if possible, such as: "Earthquake! Take cover immediately under your desk, stay away from windows, do not move until shaking stops."
- Stay in place and do not attempt to run.
- Immediately take the protection position: cover under desks, or near interior walls, protecting head and neck with hands.
- Stay away from windows, shelves, and falling objects.
- Prevent chaos and panic among students.

After the Shaking Stops:

- Wait an additional 60 seconds to ensure the danger has passed.
- Activate the sound alarm system to guide students with phrases like: "The shaking has stopped ... etc."
- Begin evacuation calmly following predesignated routes.
- Exit to the organized gathering point.
- Count the students and ensure everyone's safety.
- Do not return to the building before inspection by civil defense or engineers.

Gathering Points:

- Open areas, away from buildings, columns, and trees.
- Should be known in advance to students and staff.
- Distribute students by classes with identifying signs.

Third – School Evacuation Plan in Case of Fire:

Preparation (Before the Fire)

- Conduct a comprehensive assessment of fire risks in the school.
- Install appropriate fire alarms, smoke detectors, and fire extinguishers.
- Train staff on how to use fire extinguishers.
- Clearly identify evacuation routes and emergency exits.
- Place evacuation maps in every classroom and corridor.
- Conduct regular evacuation drills (at least twice a year).
- Use the sound alarm system (loudspeaker) to spread awareness and training messages, such as how to act when seeing smoke or smelling burning, and

the importance of leaving the building quickly and orderly.

During the Fire

- Immediately activate the fire alarm using the loudspeaker with alert phrases such as: "Attention! There is a fire in the building, evacuate the school immediately toward the designated gathering points."
- Stay away from the source of fire and smoke.
- Do not use elevators.
- Close doors and windows when exiting if possible.
- Use designated routes toward gathering points.
- Use the loudspeaker to give instructions during movement

After Evacuation

- Proceed to the designated gathering points in the schoolyard or outside.
- Conduct a headcount to ensure all students and staff have exited.
- Provide first aid to emergency cases.
- Use the loudspeaker outside to direct the crowd, such as: "Please stay in your places, do not return to the building until authorized by civil defense."

Gathering Points requirements:

- Should be far from buildings and free of obstacles.
- Should be known and assigned by classes.
- Presence of signs guiding classes to their locations.
- Should be shaded or suitable for waiting.

Fourth – School Evacuation Plan in Case of Floods:

Preparation

- Assess the school's location regarding flood risk.
- Identify low areas prone to water accumulation.
- Develop an evacuation plan including elevated and safe routes.
- Secure documents and electronic equipment in high places.
- Train students and staff on evacuation steps in case of flooding.
- Prepare an emergency bag containing flashlights, water, first aid supplies, and whistles.
- Use the sound alarm system during awareness activities to spread educational messages about contaminated water risks, dangers of walking in strong currents, and safe evacuation steps.

During the Flood

- Monitor weather warnings and civil defense alerts.
- Immediately activate the emergency alarm using the loudspeaker with clear instructions such as: "Please evacuate classrooms immediately toward the upper floor or designated high point. Avoid areas submerged in water."
- Evacuate the building from lower floors to upper floors or to a safe area outside the school.
- Guide students using designated routes while avoiding flooded areas.
- Avoid touching wires or electrical equipment.

After Evacuation

- Proceed to safe gathering points away from water, preferably elevated.
- Use the loudspeaker to coordinate and communicate with field teams.
- Conduct an accurate headcount to ensure no one is missing.
- Provide first aid if necessary.
- Prevent returning to the building until authorized by the relevant authorities declaring the danger over.

Assembly Points requirements

- Should be elevated and not exposed to flood risk.
- Should be known to students and teachers.
- Safe and direct routes must be available to reach them.

Fifth – School Evacuation Plan in Case of Thunderstorms and Lightning:

Preparation

- Provide weather news via the radio and loudspeaker during storm seasons.
- Maintain electrical installations in the school.
- Train teachers and students on actions to take during a storm.
- Introduce students to "shelter points" inside the school.
- Avoid holding outdoor activities during periods of possible storms.

During the Storm

 Activate an internal audible alert using the loudspeaker as soon as the storm approaches or begins, with immediate instructions such as: "A thunderstorm is approaching; all students and teachers

- are requested to stay in their places and not go out to the yard."
- Prevent students from going to yards or balconies.
- Immediately stop all outdoor and sports activities

Actions to consider:

- Stay away from windows and metal doors.
- Avoid using electrical devices or phones connected to electricity.
- Sit away from exposed walls or metal columns.

If lightning intensifies or poles/trees fall:

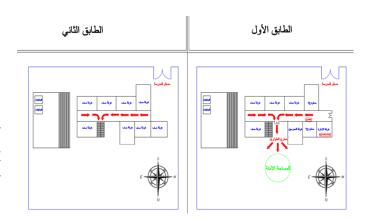
- Immediately move students to a safer indoor location (an interior room without windows such as an activity room or internal corridor).
- Evacuate rooms with metal roofs if any exist.

After the Storm

- Wait for an official announcement via radio and loudspeaker before allowing students to leave classrooms, to ensure the storm has completely ended.
- Verify the building's safety before permitting exit.
- Inspect wires and electrical equipment by specialists.
- Conduct a headcount and check for any injuries.
- Provide first aid if necessary.
- Communicate with parents as needed.

Actions to consider: Safety Tips for Students

- Do not touch any exposed cable or wire.
- Do not run in the corridors during the storm.
- Do not stand under trees or electrical poles during storms.
- Do not use a phone connected by an electric wire.



Sample Evacuation Plan:

Recommendations:

- Activate the early warning system (loudspeaker) before, during, and after any danger or disaster.
- Conduct at least one evacuation drill per semester and include the civil defense when possible.
- Evaluate performance after each training and identify weaknesses.
- Train students on coping mechanisms when danger occurs.
- Conduct full simulations including: alarm, protection, evacuation, and headcount.
- Review and update the evacuation plan based on the feedback.
- Involve students, teachers, and administrators in the training.

Awareness

- Organize awareness sessions for students about safe behaviors during danger.
- Prepare evacuation procedure signs to show evacuation steps.
- Distribute brochures or show awareness videos.
- Place evacuation signs indicating evacuation routes and assembly areas.
- Coordinate with local authorities.
- Organize workshops on risk management and mitigation.
- Broadcast educational guidance through the school radio.

World Vision

worldvisionsyriaresponse

in) World Vision Syria Response

WorldVisionSR