LEARNING FROM FIELD BASED DRR EXPERIENCE

DISASTER RISK REDUCTION FOR SCHOOLS AND COMMUNITY RESILIENCE

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Date: October 24, 2023

Acknowledgments

Working with CARE International Pakistan has been an enriching and insightful experience. However, the manual in hand would not have seen the light of day, unless several individuals had done their best. Right at the first stroke, Ejaz Ahmad Khan (Senior Project Manager), and Kashif Iqbal (WASH Specialist, CARE International Pakistan) deserve my heartfelt appreciation for the facilitation & coordination throughout the manual development. In the same vein, Ejaz Ahmad Khan, Akri Haseena, Saiqa Akbar Babar, Sharqa Altaf and Marise Sagna also deserve special thanks and tremendous appreciation for sharing their comments and extending their input and insight to improve the manual.

At the same time, it is also pertinent to mention the Alternate's own team, particularly Asad Khan and Amjad Mehdi for their meticulous work and genuine support in developing and finalizing the manual. Precisely, the Alternate is grateful to the whole team for their professionalism, dedication and, commitment in timely and efficiently producing this manual.

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Acronyms

CCA	Climate Change Adaptation
CIP	CARE International Pakistan
CSSF	Comprehensive School Safety Framework
DDMA	District Disaster Management Authority
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EIA	Environmental Impact Assessment
GADRRRES	Disaster Risk Reduction and Resilience in the Education Sector
GLOF	Glacial Lake Outburst Flood
IPCC	Inter-governmental Panel on Climate Change
INEE	Inter-agency Network for Education in Emergencies
KP	Khyber Pakhtunkhwa
NDMA	National Disaster Management Authority
NGO	Non-Governmental Organization
PDMA	Provincial Disaster Management Authority
PDRA	Participatory Disaster Risk Assessment
PMD	Pakistan Meteorological Department
SDM	School Disaster Management
SFDRR	Sendai Framework for Disaster Risk Reduction
TOT	Training of Trainers
UNDP	United Nations Development Programme
UNDRR	United Nations Disaster Risk Reduction
UNISDR	United Nations International Strategy for Disaster Reduction
WMO	World Meteorological Organization

Table of Contents

Introduction to the Manual

This user friendly DRR and CCA training manual is designed to help teachers, students, communities, school councils, partner staff and CARE International, Pakistan (CIP's) project staff to conduct training of trainers (ToTs) on Climate Change Adaptability (CCA), Disaster Risk Reduction (DRR) and School Disaster Risk Management (SDRM).

CIP is seeking to implement a multiyear project to enroll out of school children (of the Afghan and host community) in three districts i.e Mansehra, Bannu and Kohat districts of Khyber Pakhtunkhwa Province, and two districts Chaghi and Loralai of Balochistan.

The purpose is to understand the impacts of climate change on the most vulnerable groups of the corresponding areas and identify tools and strategies that could be used to address impacts of climate change, and prevent or, minimized, disaster risks.

The state of vulnerability may vary in the target areas but generally women, children, elderly, persons with disabilities, and poorest of the poor are the most vulnerable at the individual level. Similarly, socially and politically, the most vulnerable groups are those living in remote areas and fragile environments i.e. those living closer to catchment areas, hills or channels of flash floods and those having poor infrastructure and poor public services. These groups are the fundamental concern of this manual, with a key focus on children and school safety in the wake of a disaster.

The manual, in hand, systematically presents the fundamental concepts as well as means and strategies to prevent and/or reduce a range of risks. The practical insights in the manual, in hand, are meant to empower educators, students, activists and communities not only in skillfully adjusting to the changing climate conditions but also in effectively reducing multiple threats of disasters.

Purpose

The purpose of this manual is to equip teachers, CIP and IP project staff with the knowledge and skills they need to:

- Explain the concepts of climate change, CCA, DRR and School Safety.
- Develop understanding of climate change impacts and mitigation measures through risk education and risk reduction measures.
- Assess the climate risk and vulnerability of girls, women, children, Afghan Refugees and people with disabilities.
- Develop risk reduction plans for vulnerable groups i.e. girls, women, children, Afghan Refugees and persons with disabilities.

Target audience

The target audience for this manual is teachers, CARE International, Pakistan and Implementing Partner's project staff in KP and Baluchistan.

Expected outcomes

It is expected that as a result of this training, the users of the module will be able to;

- Explain the concepts of climate change, as well as CCA, and DRR.
- Assess the climate risk and vulnerability of target groups.
- Implement strategies for adapting to climate change and reducing disaster risk.
- Understand gender dynamics of disasters when they hit schools and corresponding communities.
- Develop risk reduction plans for vulnerable communities and schools.

Structure

The manual is divided into six modules as outline here under:

i). **Module 1:** Introduction to Climate Change and DRR
ii). **Module 2:** Impacts of Climate Change on KP and Baluchistan Provinces
iii). **Module 3**: Strategies and Measures for Adapting to Climate Change and Reducing Disaster Risk.
iv). **Module 4**: Resilience Education: Safer School Plan
v). **Module 5**: Gender Responsive Risk Reduction Measures
vi). **Module 6:** Enhancing Community & Schools Resilience: Tools and resources for implementing DRR

Each module of the manual includes a variety of activities to help participants learn the relevant concepts, engage in group discussions, do some role-playing exercises, look into certain case studies, and delve in various other activities.

How to use this manual?

i). **As self-study guide:** The manual, in hand, can help school teachers in the schools, implementing partner's project staff, host communities and Afghan refugee, officials of the education department, activists and relevant NGO workers as a self-study guide.
ii). **As ToT workshop guide:** The "ToT workshop", means that NGO workers (specifically partners of CIP) hailing from the far and wide of the two provinces i.e. KP and Baluchistan will join this learning event convened by the said organization. Participants of the workshop may or may not know each other but their primary purpose should be to come together and learn from the Resource Person as well as from one another.
iii). **As learning guide for teachers and project staff:** The overarching purpose of the training is to educate teachers and project staff to effectively contribute to community as well as school safety as a team. The manual, therefore, stands as a guide to assist teachers, project staff of the CIP and

representatives of education departments to learn and work together. Another eminent objective of this manual is to help them to be more and more successful in their efforts to reduce risks of potential disasters that may hit in the respective areas.

iv). Flexibility and adaptability are also the key characteristics of this manual to help ToT participants.

Use of Activities: The activities in the manual are designed to help participants learn the material through fun in an interactive manner. They are also designed to help participants the corresponding learning in their own work within their own geosocial context.

In this section, main focus has been placed on those methods that prove effective for learning and action. Nevertheless, this list is not exhaustive. It should be noted that, where relevant and where possible certain methods can be combined with certain other methods to render them more effective. Key methods employed are listed here under:

- Very short and simple lecture
- Brainstorming
- Demonstration
- Case study
- Short exercises
- Group work
- Role plays
- Question and answer sessions

Here are the key materials used:

- Multimedia
- Markers
- White board and/or flip charts
- Masking tape
- Color cards and play cards

Sub-Topics/Contents: Certain dimensions indicated here are critical to the success of ToT Workshop:

- Objectives setting
- Introducing a learning trajectory i.e. how participants are going to learn through.
- Appropriate analysis of the participants/trainees
- Time allocation
- Overview of ToT methods
- Conducting ToT i.e. how can they transmit this learning to other teachers
- Facilitation tips and techniques
- Evaluation of the training by the end

Analyzing Participants/Trainees: In a ToT, information and understanding about the participants counts a lot. s. While drawing an analysis certain considerations are enlisted here under:

- Educational background of the participants.

- Their age, gender, previous knowledge/and experience of CAA, DRR and School Safety.
- Number of the participants.
- Women's participation.
- Ethnic, religious and national (Afghan Refugee or local) background as well as social and cultural considerations.

Brainstorming: To motivate and engage participants the Resource Person should ask simple questions in an exercise while randomly throwing ideas about different aspects and dimensions of the subject they are going to learn. In this manner, the participants are motivated to come up with their own understanding of the various concepts (howsoever crude) on a given issue that the Resource Person builds upon and formalizes during the course of discussion. The participants may come up come up with ideas or opinions on an issue individually or in a group and enlist them. The Resource Person should keep discussions on track and motivate the participants to share more and more relevant ideas for further discussion, and where needed may complicate and/or relate to the situation on ground.

This small but interesting exercise stimulates interest of the participants and helps them remain mentally active and present. This technique, also activates participants to keenly learn the subject (in this case the impact of climate change and DRR in schools, refuges and host communities). The discussion, thus generated, also helps them to learn from one another and have further clarities through the course of the workshop. However, the Resource Person needs to be artful enough in handling the situation so that the participants are not de-tracked and if the number of participants is larger, s/he must be calculated for effective time management.

Pre-and-Post Training Assessment: Before the workshop formally begins the Resource Person is advised to distribute a Performa to assess the participants pre-training understanding, apprehensions and preferences. It helps him/her to give training a tilt to the training according to the participants' interests and preferences to learn. Also, by the end of the ToT, a standard post-training assessment form should be provided to the participants to gauge the level of their learning. Similarly, by the end of each module or session, the Resource Person may seek participants' opinion on whether or not the objectives stated in the start have been served? Encouraging participants to mark their reactions to different aspects or modules of the learning process helps both the Resource Person and the participants to enrich learning.

Choice of a ToT Method: Choosing a ToT method is important because participants' learning depends a lot on the choice of the technique. The Resource Person should be conscious of achieving set objectives by the end of each session. No harm, even if different Resource Persons are selected for different modules. Time, techniques and the type of participants and their background are also interconnected and affect the ethos of the training. Better choice of the method ensures achieving the objectives better. Inappropriate methods fail to achieve objectives better

Time Allocation: Taking into account the number of participants and types of activities to be conducted, the Resource Person should allocate time for each session and the entire training. Generally, it should be reasonably short to maintain the interests of the participants. Time for different sessions within the

training can be negotiated with the participants in such a way that all aspects of a particular session are satisfactorily covered.

Introducing a Topic: In some of the cases, workshop participants already know each other. In that situation the Resource Person is advised to use a topic lead-in to generate interests in the themes of a ToT, a meeting or a workshop; helps the Resource Person and participants to identify individual learning needs and goals; encourages sharing of information and resources and activates participants' a-prior knowledge and information about the subject.

While generating debate, the lead-in questions can be answered collectively or individually. Topic lead-ins can be used liberally and can also be appropriated in different situations, different subjects and to different sessions within the same subject. Individual lead-in questions are developed to pin-point individual learning needs, and they encourage sharing of surface-resistance, information and resources sharing. Participants should be encouraged to volunteer responses while respecting other participants to have equal opportunity to deliberate. By allowing participants to speak randomly, the Resource Person should be mindful that the purpose of the activity is to encourage everyone to speak so everyone in a group must be encouraged to share his or her mind.

Here are some of the suggestions of topic lead-ins:

i). Individually or collectively develop operational definition of the subject of concern; for instance, what is a hazard, or disaster or disaster risk reduction?

ii). Throw a couple of "burning questions" for the participants to answer, say why temperature in their area is increasing?

iii). To encourage free flow of conversation, do advise participants to listen to one another carefully but reserve his/her own comments or opinion for discussion later in the session.

Module 1: Introduction to Climate Change and Disaster Risk Reduction

Topic		Time
Topic 1	Understanding Climate Change and DRR	120 minutes

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- Understand the concept of Climate Change.
- Understand the basic terminologies related to disasters.
- To have an idea of Disaster Risk Reduction.
- Differentiate between DRR and DRM.

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The Resource Person begins this Module by encouraging participants to understand and explain the concept of climate change and DRR and take a note of various responses on the white board or flip chart. It will help him or her to further communicate these ideas to the participants. Having heard participants and collecting various ideas, the Resource Person will deliver an interactive session on Climate change and DRR.

Topic 1	Understanding Climate Change and DRR
Objective	To understand the concepts and phenomena of climate change and DRR, comprehend various allied, have an idea of basic response to climate induced disasters.
Time	120 Minutes
Description	This activity is divided into two parts. In **Part A**, the participants will work in 3-4 small groups to discuss the phenomenon of climate change and various concepts related to DRR. In **Part B**, the participants will share the results of their discussions with all the participants. In **Part C**, the Resource Person will share and discuss multimedia presentation at the end.
40 Minutes	**Part A: Small Group Discussion**
	Participants will form a small group and discuss disasters for this activity. The Resource Person divides participants into 3-4 small groups according to the target audiences of their training. The participants will be asked to have a discussion on floods 2022 in Pakistan, their impact and adaptation strategies.
20 Minutes	**Part B: Group Presentation**
	Each group in turn discusses the small tasks assigned to them.
60 Minutes	**Part C: Multimedia Presentation**
	The Resource Person begins by making a short multimedia presentation highlighting the key concepts related to climate change and DRR principles of local government. ***See: Key Concepts***. S/he then leads a discussion on the ideas presented by the participants.

1.1. Key concepts

- **Hazard:** A natural phenomenon or event that may cause physical damage or economic loss or may threaten human life and wellbeing if it occurs in an area of human settlement. A hazard can cause catastrophic events in places where there is no human settlement, such as when a forest fire destroys a national park.

- **Disaster:** When hazard multiplies with human vulnerability it becomes a disaster.

- **Risk:** The potential loss of life, injury, or physical destruction or damage to 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.[i]

  Disaster Risk = f (Hazard, Exposure, Vulnerability, Capacity).

  Where 'f' is a 'function'.

- **Vulnerability:** The degree to which a system is susceptible to, or unable to cope with, adverse effects of hazards. The many types of vulnerabilities include physical or material vulnerability (i.e. of housing, infrastructure), social and organizational (i.e. of social inequality, and institutional capabilities), and emotional (i.e. of personality and behavioural)

- **Geological Hazard:** Geological hazard refers to a potential or apparent risk to persons or property because of geological or soil instability either existing at the time of construction or which would result from construction.

- **Biological Hazards:** Also known as biohazards, stands for biological substances that pose a threat to the health of living organisms, primarily that of humans. It may include medical waste or the loss of certain microorganism, viruses, or toxins (from a biological source) that can affect human health.[ii]

- **Technological Hazards:** These are industrial (pollution), nuclear (nuclear leak), or structural (dam collapse), while environmental degradation hazards include events that disrupt the environment, ecosystem, or natural resources (i.e., deforestation, forest fires, change in climate). For example, a chemical plant's explosion due to extreme weather.

- **Socio-Natural Hazards:** This term refers to individuals or institutions causing some dangers more likely to occur. The possibility of increased occurrence of certain geophysical or hydro meteorological hazard events, such as avalanches, landslides, flooding land-erosion and drought arising from the interaction of natural hazards with overexploited or degraded land and environmental resources.

- **Hydro Meteorological Hazard**: Process or phenomenon of atmospheric, hydrological, or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. For example frequent and severe hurricanes or cyclones.[iii]

- **Resilience:** Resilience refers the ability of a system or persons to adapt to, or recover from, a hazard event. Simply, it is the ability to bounce back from a shock i.e natural hazard. Resilience can be enhanced through a variety of measures, such as reducing exposure to hazards, building social and economic resilience, and improving disaster preparedness and response plans.

- **Emergency:** The phases of the disaster during which lives and/or livelihood are at risk and if action is not taken, lives will be lost.

- **Ecosystem Services**: Outputs, conditions, or processes of natural systems that directly or indirectly benefit humans or enhance social welfare. Ecosystem services can benefit people in many ways, either directly or as inputs into the production of other goods and services. For example, the pollination of crops provided by bees and other organisms contributes to food production and is thus considered an ecosystem service[iv].

- **Emergency Services:** Emergency services are specialized organizations and resources that respond to climate-related emergencies and disasters, including fire departments, law enforcement, medical teams, search and rescue, and disaster response agencies.

- **Emergency Management:** Emergency management is the managerial function charged with creating the framework within which communities reduce vulnerability to threats/hazards and cope with disasters. It involves the organization and oversight of tasks and resources related to addressing and being ready for emergencies. This encompasses the collection, control, and interpretation of extensive data to incorporate data-driven strategies throughout the emergency management process[v].

- **Environmental Degradation**: Environmental degradation is a process through which the natural environment is compromised in some way, reducing biological diversity and the general health of the environment.

  This phenomenon can be purely natural or expedited by human actions. Numerous global organizations identify environmental deterioration as a significant threat to our planet. With only one Earth at our disposal, irreversible harm to the environment could jeopardize human survival.[vi]

- **Extensive Risk:** the broad range of risks and challenges associated with climate change impacts that affect various aspects of society, the environment, and the economy. These risks may encompass issues like extreme weather events, sea-level rise, food and water security, health impacts, and disruptions to infrastructure and ecosystems.

- **A Climate Forecast:** A climate prediction is an attempt to estimate how the weather will change in the future, whether in the short term or long term. These predictions often include some level of uncertainty because the climate is affected by various factors.

- **Greenhouse Gas:** Any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect. Carbon dioxide, methane, and water vapor are the most important greenhouse gases.[vii]

- **Environmental Impact Assessment (EIA):** It is a tool used to assess the significant effects of a project or development proposal on the environment.

  Environmental impact assessments (EIAs) help ensure that people making decisions about projects consider how they might harm the environment as soon as possible. The goal is to prevent, lessen, or compensate for these harms. This process makes sure that project ideas are thoroughly reviewed before final decisions are taken.[viii]

- **Contingency Planning** for climate change considers both current and future risks related to the changing climate, and both gradual changes and extreme events. These plans aim to reduce risk by enabling a rapid, organized response. Contingency plans are advance strategies outlining how land managers, businesses, or organizations intend to address real and possible dangers to the forest and the environment.[ix]

- **Critical Facilities:** They include existing transport systems, renewable and non-renewable energy generation plants, industry, water supply networks, and education and health infrastructures.

  These facilities are crucial for public safety, health, and the functioning of communities and may include power plants, hospitals, emergency response centers, water treatment plants, and transportation hubs.[x]

- **Structural and Non-Structural Measures:** Structural measures are any physical construction to reduce or avoid possible impacts of hazards, or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Non-structural measures are measures not involving physical construction which use knowledge, practice, or agreement to reduce disaster risks and impacts, in particular through policies and laws, public awareness raising, training and education.[xi]

- **Climate Preparedness:** Climate preparedness involves having the right policies, infrastructure, connections, and practices to get ready for and bounce back from climate effects. It also means individuals taking action in their homes and communities.

- **Prevention:** Prevention involves taking proactive measures to reduce or avoid the causes and consequences of negative environmental impacts.

- **Recovery**: Recovery concept involves aligning economic recovery measures with the achievement of long-term climate change and sustainability goals, thereby achieving a drive towards a socio-economic model that is more sustainable for the planet, more resilient to future shocks and more inclusive. It is the process of restoring and returning to normal conditions after a disruptive event, such as a natural disaster or environmental degradation.[xii]

- **Residual Risks:** Residual risks are those climate risks that remain after risks have been reduced through mitigation and adaptation. These are the risks that are difficult to eliminate entirely and require ongoing attention and preparedness.

- **Retrofitting:** Retrofitting refers to any improvement work on an existing building to improve its energy efficiency, making it easier to heat, able to retain that heat for longer, and replacing fossil fuels with renewable energy.[xiii]

- **Risk Assessment:** Risk assessment is an approach that evaluates the likelihood that adverse ecological effects may occur, or are occurring, because of exposure of organisms and communities to one or more chemical compounds. It is a methodical process to evaluate and control the risks to human health and the environment arising from events in the natural world.

- **Adaptation**: Adjustments in natural or human systems in response to actual or expected climate change, to moderate harm or exploit beneficial opportunities. Adaptation can be undertaken at a variety of scales, from individual households to national governments.

- **Mitigation:** Mitigation refers to the actions to reduce greenhouse gas emissions and enhance sinks of greenhouse gases in order to limit climate change. Mitigation can be undertaken at a variety of scales, from individual households to national governments.

1.2. What is global warming?

Global warming is the phenomenon of increasing average air temperatures near the surface of earth as has been observed in the past one to two centuries.[xiv] The problem has been caused by the greenhouse gaseous effects, which is the accumulation of heat by gases such as carbon dioxide, methane, and water vapours in the air. Experts and scientists have now come to the conclusion that these gases are generated by human activities mainly by burning of fossil fuels, deforestation, and livestock raising. Global warming affects the climate, which is the long-term pattern of weather in a region. Some of the effects of global warming are melting ice caps and glaciers, rising sea levels, more extreme weather events, droughts, floods, wildfires, and loss of biodiversity.

Without exception, the annual mean surface temperatures in Pakistan have been constantly rising over the past century as a result of global warming. The southern half of the country, comprising the project's

Baluchistan area, has experienced an increase in solar radiation of 0.5 to 0.7% and a rise in mean temperature of 0.6 to 1°C. While the northern parts – several areas of Khyber Pakhtunkhwa including the project areas and the districts at large - have been facing heavy rains, flooding, landslides, land erosion, avalanches, glacial lake outburst flooding, and number of other disastrous acts and events.

Role-Playing Exercise: The resource person will divide the participants into two or more groups and ask them to prepare a role-play for a community that is
Group 1: Earthquake
Group 2: Flood
Group 3: Drought

Activity 1: Role-playing exercise

1.3. What is climate change?

Proven that climate change is occurring due to global warming, which involves long-term shifts in temperature and periodical weather patterns in a given location. Climate is demonstrably changing at a drastic rate due to various natural and anthropogenic reasons and it is affecting disproportionally. The country is one of the top ten most affected countries though its' contribution in the global warming is believed to be less than 1 percent.

Human activities i.e. burning fossil fuels (coal, gas and petrol) that release greenhouse gases into the air, are the major cause behind global warming. These gases trap heat, consequently, earth's temperature increases. As per UN, the average temperature of the earth's surface is now 1.1°C warmer than it was in the late 1800s, in other words, before the industrial revolution in Europe and warmer than at any time in the last 100,000 years.[xv]The world is already feeling the impact across the globe with a range of disastrous consequences. Higher sea levels, extreme and erratic weather incidences, and shifting cropping patterns. Despite low contribution in GHG emissions, as indicated earlier, Pakistan is not an exception. During the last century, its average annual temperature increased by 0.57°C compared to 0.75°C for South Asia, and average annual precipitation increased by 25%. The warming is mainly due to increase in winter temperature.[xvi]

Brainstorming: The resource person will ask the participants whether they have noticed changes in the cropping patterns in their area.

Activity 2: Brainstorming

1.4. What is DRR?

Disaster Risk Reduction (DRR) is a term used to refer to the efforts that are made to reduce the probable effects of disasters and their drastic impacts – major, moderate or minor. DRR is meant to build individuals' as well as communities' capacities exposed to hazards such as earthquakes, floods, typhoons, cyclones, landslides, droughts, or contagious diseases.[xvii] DRR is essential prerequisite to protect citizens and communities (including vulnerable groups and individuals) from the adversarial impacts of climate change.

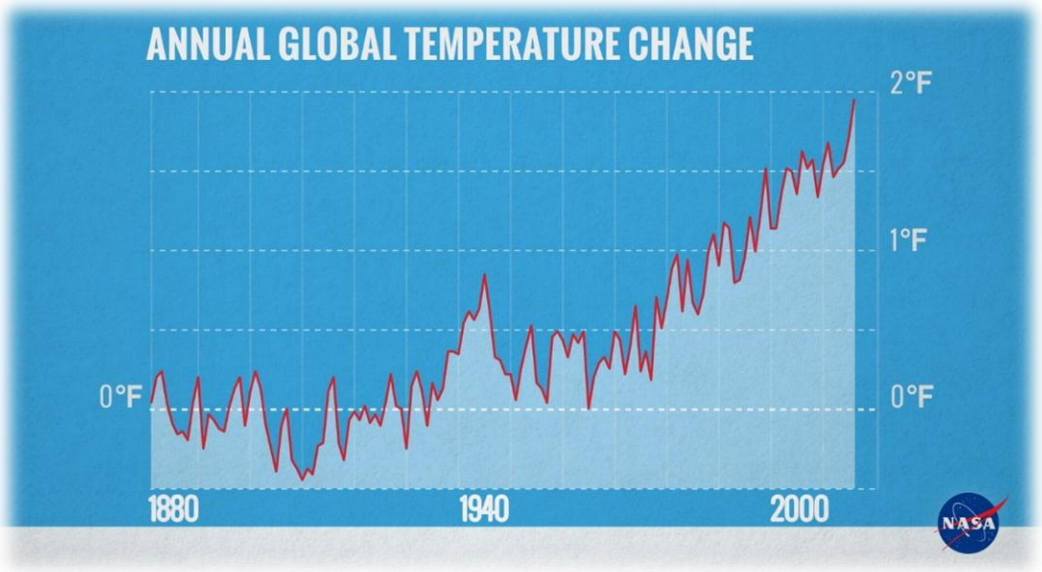

Figure 1: Graph of change in annual global temperatures, compared to the average of global annual temperatures from 1880-1899. Credit: NASA's Goddard Space Flight Center

1.5. What is DRM?

According to United Nations Disaster Risk Reduction (UNDRR) the Disaster Risk Management is Disaster (DRM) is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.[xviii]

The ultimate goal of DRM is to prevent new disaster risks, decrease current risks, and manage residual risks, thereby enhancing resilience and reducing losses. There are three categories of disaster risk reduction measures, namely prospective, corrective, and compensating (also known as residual risk reduction).

In DRM practice, the priorities of actions as set in Sendai Framework for Disaster Risk Reduction (SFDRR) can be a guide. Following are its four priority areas.[xix]

i). **Priority 1:** Understanding disaster risk.

ii). **Priority 2:** Strengthening disaster risk governance to manage disaster risk.

iii). **Priority 3:** Investing in disaster risk reduction for resilience.

iv). **Priority 4:** Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.

1.6. Link between Climate Change and DRR

The risk of disasters is being increased as more extreme weather events happen due to climate change. Extreme weather events like unprecedented floods, droughts, and storms have become regular happenings. These events cause huge damage to infrastructure, agriculture, livestock, and loss of life.

DRR is an essential part of the global effort to adapt to climate change. DRR can help to reduce the impacts of climate change by making communities more resilient to disasters. This includes activities such as:

- Educating people about disaster risks
- Developing early warning systems that can help people to evacuate before a disaster strikes.
- Building capacities (both mental and physical) of communities faced with disasters
- Preparing for and responding to disasters
- Building infrastructure that can withstand extreme weather events

DRR strategies vary according to the context of disasters. However, it is a preferable way to climate change adaptation.

Module 2: Impacts of Climate Change in Baluchistan and KP

Topic		Time
Topic 2	Understanding impacts of Climate Change	120 minutes

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- Understand the impact of climate change.
- Understand the impact of climate change in Pakistan.
- Identify the specific impact of climate change on Afghan Refugees and host communities in KP and Baluchistan.

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The ToT Resource Person goes through the session by delivering an interactive session on the impacts of climate change. Participants should be given the opportunity to give input during the session particularly on how they observed any climate induced changes in their areas.

Topic 2	Understanding impacts of Climate Change
Objective	To develop a common understanding of the impacts of climate change in the areas where Afghan Refugees dwell with the host communities in Khyber Pakhtunkhwa and Baluchistan provinces.
Time	150 Minutes
Description	**Introduction** It is important for us to be able to grasp what impacts do climate change poses on Pakistani peripheries and how floods, droughts and other climatic disasters are connected to bigger problem of climate change. **Instructions** This activity is divided into 4 parts. In **Part A,** the Resource Person should work in 3-4 small groups to develop his/her ideas on roles and responsibilities in local government. In **Part B** the Resource Person will share the results of his/her small group discussion with all the participants. In **Part C**, Presentations are made and discussion encouraged. In **Part D**, Role Play will be played.
60 Minutes	**Part A: Our Understanding – Small Group Work** The Resource Person should divide participants into the district wise groups and assign each group the task of identifying climate changes in their respective areas and make a presentation to generate discussion around climate change, adaptability, preparedness and mitigation. i). How changing climate is impacting the people and their settlements both of the refugees and the host communities; along with the risk? …… How climate change is affecting the geo-environmental state of the respective areas? ii). What is the impact of climate change on the agriculture and livelihood of the refugees and host communities? ……
60 Minutes	**Part C: Presentations and Discussion** The Resource Person leads a discussion by addressing the questions below. • Impacts of Climate Change in General. • Impact of Climate Change on Pakistan level. • Specific impacts of climate change locally.

2.1. Key concepts

2.1.1. Understanding the impacts of climate change

Climate change impacts are the visible as well as invisible, now rapidly occurring on the planet earth and its inhabitants, along with the flora and fauna. These impacts encompass a wide range of changes in ecosystems, weather patterns, and socio-economic systems.

Some of the most common climate change impacts include:

i). **Rising sea levels:** Sea levels are rising due to the melting of glaciers and ice sheets. This is causing coastal flooding, erosion, and saltwater intrusion.

ii). **More extreme weather events:** Climate change is causing more and more extreme weather events such as heat waves, heavy rains, droughts, floods, avalanches, land erosions, landslides, and wildfires. These events can cause widespread damage to property, habitats, peoples' livelihood and infrastructure, and can also cause a heavy toll as recently observed during floods of 2022 in Pakistan.

iii). **Changes in precipitation patterns:** Simultaneously, climate change is causing changes in the precipitation patterns, so far unobserved and unnoticed across the world. Some areas are becoming drier; others are too wet. This can disrupt agricultural production and water availability.

iv). **Loss of biodiversity:** Given the severe effects, climate change is causing the loss of biodiversity and impacting cereals and staple foods. Species are being forced to move to new areas as their habitats become too hot or too dry. Some species may not be able to adapt and will go extinct in the near future.

v). **Impacts on human health:** Climate change is having multiple impacts on human health - include heat stress, respiratory problems, vector-borne diseases, and mental health problems.

vi). **Impacts on education:** Extreme weather events and disasters destroy school infrastructures reducing access to education. Climate change increases the frequency and intensity of natural disasters, such as floods, droughts, landslides, and heat waves that can damage or destroy school buildings, furniture, equipment, and materials.

Brainstorming: The Resource Person may start the concepts with an invitation to brainstorming on this question: Have you ever heard that sea levels are rising in coastal areas? If yes, what do you think is the reason?

Activity 3: Brainstorming

The adverse and negative impacts of climate change are already being felt around the world, and they are expected to become even worse in the future. Some parts of world are more vulnerable to the impacts of climate change than others even if they are not contributing much in terms of GHGs. For instance, Pakistan is geologically located in a region (Latitude - 30.3753° N, with 69.3451° longitude E) where the effects of climate change are being felt fairly strongly.[xx]

2.2. Impact of climate change on Pakistan

Climate change, without doubt, is having a significant impact on Pakistan. According to various studies and experts assessments, it is one of the top 10 countries in the world that is being seriously affected by the ensuing climate change.[xxi] Due to climate change, the frequency of days with a heat wave has nearly doubled in the past 30 years. Although there has always been a lot of variation in annual precipitation, there has been a slight increase in the past 50 years. Finally, the sea level along the coast of Karachi has risen by approximately 10 millimeters over the past century. These changes are impacting every walk of life and diverse groups of people. Extreme weather events like heat waves (2015), floods (2022) and droughts have become recurrent occurring in peripheries (Baluchistan and KP included) and central parts of Pakistan. The overall impact of shifts and transformations under the effects of changing climate are specified here below:

Activity: The resource person will ask the participants (teachers and Care International, Pakistan staff) to gather examples from any sources of dysfunctional school buildings and tell everyone of the reasons of infrastructural damage to that school(s).

Activity 4: Activity

i). **Rising temperatures:** Pakistan is one of the countries', most vulnerable to the impacts of climate change. According to World Data dot info, the average annual temperature of the country was about 24.6 °C in the years after 1980 and about 25.6 °C in the last years before 2022. So, in less than 43 years, it has increased by about 1.0 °C.[xxii] Rising temperatures are already having a significant impact on Pakistan, causing more frequent and intense heat waves, melting glaciers, and changes in precipitation patterns.

ii). **Changes in precipitation patterns:** Referring to the same context, changes in precipitation patterns are also casting a major impact on Pakistan. At the same time, the country is facing both droughts as well as floods, with both events becoming more frequent and intense. Naturally, these changes are affecting agricultural production and cropping patterns, water resources (availability and capacity), and human health.

iii). **Sea level rise**: Rising sea level is another major threat faced by Pakistan. The country's coastline is already experiencing erosion, and sea level rise with the rising temperature is expected to worsen this problem. If the situation persists, this is quite likely to displace millions of people and damage infrastructure.

iv). **Glacier melts down:** Rapid melting of glaciers is also a major concern in the country. Interestingly, the country maintains over 7000[xxiii] glaciers and most of them are melting at an alarming speed, due to the soaring temperatures. This is reducing water availability for drinking, irrigation, hydroelectricity generation as well as causing floods.

v). **Extreme weather events:** As mentioned earlier, extreme weather events, such as floods, droughts, and heat waves, are becoming more frequent and intense in Pakistan. These events are causing widespread damage, of multiple form and nature, and the loss of life too.

2.2.1. Sector-wise impact of climate change in Pakistan

The impacts of climate change are already being felt in the country, and they are expected to worsen and cause more damage in the future. The Government of Pakistan is taking some initial steps to address climate change, but more needs to be done to mitigate the impacts of this global problem. Here are some of the specific impacts of climate change in Pakistan:

i). **Agriculture**: Pakistan's largest economic sector is agriculture, which employs 44.7% of the country's workforce and provides food, fiber and 60% of total exports[xxiv]. Over the past 50 years, the country's agriculture has experienced fluctuations in growth. Because climate change has influenced agricultural productivity, with factors such as the lengthening and shortening of growing seasons affecting it. Take for instance the loss in agriculture sector due to floods in 2022. According to a report, floods loss in minor crops valued at $3.04 billion, giving an aggregate value of loss in agriculture of approximately $5 billion.[xxv]

ii). **Water resources**: Pakistan's major water resource is Indus Rivers System which relies on precipitation, glaciers, snow melt in the north. It serves agriculture, industries, domestic, and infrastructure purposes. However, the water sector is sensitive to climate changes. Because of glacial melts, river flows are highly variable, with high flows during summers causing floods and ultimately loss of water. It is expected that climate change will significantly impact the Indus basin due to melted water discharges. Western Himalayan glaciers are expected to retreat, increasing flows initially but decreasing by up to 40% over the next 50 years.[xxvi]

iii). **Human health**: Climate change is also affecting human health. Soaring temperature is making it difficult to stay cool, and changes in precipitation patterns are making it harder to access clean water. This is leading to heat exhaustion, malnutrition, vector-borne diseases, and waterborne diseases, affecting livelihoods. Refugees, internally displaced persons, and religious and gender minorities are particularly vulnerable due to marginalization and financial barriers. Climate change may also increase child marriages, premature births, and domestic violence, making women and children more vulnerable to malnourishment and malnutrition.[xxvii] Apart from this, according to an estimate heat-related death due to rising temperature are expected to reach 63 deaths per 100,000 until the year 2080.[xxviii]

iv). **Infrastructure:** Climate change is also affecting infrastructure in the country. Extreme weather events are damaging roads, bridges, and other infrastructure. While floods in 2022 left thousands homeless, more than 8,000 miles (13,000 kilometers) of roads and 410 bridges were also damaged. Infrastructural damages of climate change are making it difficult to get around and access essential services including urban drainage and water supply

v). **Ecosystems:** Climate change is affecting ecosystems too. Glacial melt down is disrupting water flows, and changes in precipitation patterns are altering vegetation variety and patterns, and certain for of vegetation is simply disappearing. Part of it is leading to habitat loss and extinctions.

The impacts of climate change are a major challenge for Pakistan. The government is taking steps to address climate change, but more needs to be done to mitigate the impacts of this global problem.

2.2.2. Impact of climate change on education in Pakistan

During floods of 2022, according to initial statistics at least 25,993[1] schools were damaged or destroyed in the region of Sindh, Balochistan, Punjab and KP due to the floods. Similarly, in the refugee villages, 61 schools (26 in KPK & 35 in Balochistan) have been affected and learning process of 27,148 (58.7% girls) children has been affected[xxix].

Source: Relief Web

Similarly, the earthquake in 2005 damaged nearly 3000 schools limiting thousands of children's access to education. Several other disasters hit education severely in Pakistan.

2.2.3. Impact of climate change in Baluchistan and KP

Balochistan province is most vulnerable to the impacts of climate change. Some of its parts are among the hottest regions of the world. The World Meteorological Organization (WMO) recorded temperature record extreme of 54.0 °C in Turbat, Balochistan on May 28, 2017.[xxx] Along with rising temperature,

[1] Source: Relief Web.

Balochistan is also exposed to droughts and floods. A 2019 study by the government revealed that twenty out of the 33 districts in the province were drought-stricken, affecting around 109,000 families[xxxi]. In 2022, flash floods damaged various small dams wreaking havoc for the people of Baluchistan.

KP province has diverse geographic conditions, in the northern mountainous regions land sliding, heavy rains and earthquake cause havoc. Most of the disasters there are associated with melting of ice in the north because of global warming. The eastern region and most southern districts adjacent to Bannu i.e Dera Ismail Khan and Tank are especially prone to flooding. Additionally, Upper and Lower Dir, Mansehra, Shangla, and Malakand are at risk of flash floods due to the absence of proper mitigation methods in Swat. As a result of the unexpected flash floods and weak mitigation efforts in Swat, 240,000 households were affected by flooding in August of 2021. Southern areas in KP adjacent to the Suleman mountain bordering Baluchistan are also exposed to droughts apart from floods. In 2022, several villages in Dera Ismail Khan and Tank were completely wiped out in the flash floods.[xxxii]

Module 3: Gender Responsive Risk Reduction Measures

Topic		Time
Topic 3	Gender Responsive Risk Reduction Measures	120 minutes

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- Understand the gender dynamics of disasters and DRR.
- Understand key challenges of women, girls, children, and persons with disabilities during disasters.
- Get to know gender responsive risk reduction measures.

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Gender analysis
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The Resource Person conducts the session by giving an interactive lecture on the key issues and challenges related to mobility, adaptation and special needs of the most vulnerable populations i.e women children, persons with disabilities and minorities in disaster-prone areas. Participants particularly women, persons with disabilities (if any) should be given the opportunity to give their input during the session.

Topic 3	Gender Responsive Risk Reduction Measures
Objective	Understand key challenges of women, girls, children, and persons with disabilities during disasters and get to know gender responsive risk reduction measures
Time	120 Minutes
Description	**Introduction** The Resource Person should communicate the some of the key issues, and challenges to women, girls, children, and persons with disabilities during disasters. **Instructions** This activity is divided into 3 parts. In Part A, The Resource Person should work in 3-4 small groups to develop his/her ideas on the Key issues and challenges to women, girls, children, and persons with disabilities during disasters. In Part B, the Resource Person should share the results of his/her small group discussion with all the participants. In Part C, Presentation and discussion.
20 Minutes	**Part A: Our Understanding – Small Group Work**
	The Resource Person divides participants into 3 groups and has each group assigned. Together with the members of his/her group, discuss and draw out the points that they feel contribute to identification of key issues, and challenges women, girls, children, and persons with disabilities face during disasters.
40 Minutes	**Part B: Understanding Issues, Gaps and Challenges**
	The Resource Person reviews the outcome of his/her small group discussions from Part A with the all the participants. Drawing on this information, as a group, agree on and formulate a common understanding of issues and challenges.
60 Minutes	**Part C: Presentations and Discussion**
	The Resource Person leads a discussion by addressing the questions below. • Understand the gender dynamics of disasters and DRR • Understand key challenges of women, girls, children, and persons with disabilities during disasters • Get to know gender responsive risk reduction measures

3.1. A disaster is NOT gender neutral

Disasters hit people differently according to their vulnerability level. For instant children and persons with disabilities both find difficulty in mobility to a safer space when a disaster hits. Similarly, in a patriarchal and tribal society where CARE International, Pakistan is implementing the project in hand, women and girls are already underprivileged and exposed to unjust practices like honor killing, domestic violence and early marriages. When a disaster hits such communities, women not only have to save themselves as men do but they must save the 'honor' of the families too. This pushes women in a twofold oppression.

Additionally, "women typically have lower levels of resilience and capacity to withstand disasters and recover than men. Unequal and restricted access to economic, social, and political resources—such as decision-making power within families and governing bodies—influences their life expectancy and access to post-disaster assistance, compensation, and recovery. Amid the fallout of disasters, women and girls also face heightened risk of sexual and gender-based violence."[xxxiii]

Therefore, it is important first to recognize the gendered nature of disasters and secondly to assess the specific needs of women, girls, children and persons with disabilities exposed to disasters and finally to devise and implement gender responsive risk reduction measures.[xxxiv]

Case Study: In Bangladesh, a program has helped to reduce the risk of natural disasters by involving women in decision-making and by providing them with training on disaster preparedness. This has led to increased awareness of disaster risks among women, and to improved disaster response and recovery efforts.

Apart from this, Cyclone Preparedness Program CPP in the same country involves women volunteers for early warning drills for cyclones and relevant relief operations. Studies suggest that such programs ensure gender responsive risk reduction measures.

Figure 2: Case Study

3.2. Guidelines for gender responsive risk reduction measures

Here are some guidelines for developing a gender-responsive risk reduction plan for natural disasters:

a). **Identify the gender-differentiated risks and vulnerabilities.** Women and girls are often disproportionately affected by natural disasters, due to a number of factors, including:

i). Gender roles and responsibilities: Women and girls are often responsible for caregiving and household tasks, which can make it difficult for them to evacuate or access assistance during a disaster.
ii). **Economic inequality**. Women and girls are more likely to live in poverty and to have limited access to resources and services, which can make them more vulnerable to the impacts of disasters.
iii). **Social and cultural norms.** Social and cultural norms can also make women and girls more vulnerable to disasters. For example, in cultures where *pardah* is a predominant like in the project areas, women and girls may be expected to remain in the home during a disaster, even if it is not safe.

b). **Ensure that women and girls are meaningfully involved in all aspects of the risk reduction planning process.** This includes:
i). Consulting with women and girls to understand their needs and perspectives.
ii). Ensuring that women and girls are represented on decision-making bodies.
iii). Providing opportunities for women and girls to lead and participate in risk reduction activities.

c). **Develop risk reduction strategies that specifically address the needs of women and girls.** This may include:
i). Providing women and girls with access to information and training on disaster preparedness and response.
ii). Ensuring that evacuation plans and shelters are accessible to women and girls.
iii). Providing support to women and girls who are heads of households or who are caring for dependents.
iv). Addressing the specific needs of marginalized groups of women and girls, such as those with disabilities or those living in poverty.

3.3. Gender-responsive risk reduction measures

Gender-responsive risk reduction measures are actions that considered different ways that men and women are affected by risk. They are designed to reduce the risk of harm to women, men, and the most vulnerable populations and to ensure that everyone has the same opportunity to benefit from risk reduction efforts.

Following are some measures that can be considered during risk reduction efforts:

i). **Involving women and girls in decision-making about risk reduction**. This ensures that their perspectives are considered and that their gender specific needs are met.

ii). **Providing gender-specific training and resources to help women and girls cope with risk**. This can include training on self-defense, first aid, and disaster preparedness. This also include training to young girls on defense against harassment.

iii). **Challenging gender stereotypes that put women and girls at risk.** This can help to change attitudes and behaviors that contribute to violence and discrimination.

iv). **Ensuring that women and girls have equal access to resources and services.** This includes access to education, healthcare, and financial services.

Activists, organizations, and professionals working in disaster prone areas should be sensitized on gender issues. Their training should incorporate gender-based risk reductions measures. In this way, we can facilitate girls, women, children and akin vulnerable groups during and after the events of disasters.

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Module 4: Resilience Education: Safer School Plan

Topic		Time
Topic 4	Resilience Education: Safe School Plan	120 minutes

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- Understand the importance of DRR in schools.
- Understand DRR and resilient education.
- Understand key challenges of school age girls and boys during the disasters.
- Make school-centered climate action and safer school plans for concerned schools.

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The Resource Person conducts the session by giving an interactive but very small lecture on the key issues and challenges to the school children during and after an event of disaster. The session should be interactive, and the teachers and district education administration present in the training should be given the opportunity to give their input.

Topic 4	Resilience Education: Safer School Plan
Objective	Understand vulnerability of the schools and school children as well as teachers (along with their parents) in disaster prone areas and make safe school plans.
Time	120 Minutes
Description	**Introduction** The Resource Person needs to communicate a range of challenges of school age girls, boys, teachers and school administration, along with PTSMCs before, during and after disasters the disasters. **Instructions** This activity is divided into 3 parts. In Part A, The Resource Person should work in 3-4 small groups to develop his/her ideas on the Key issues and challenges to girls, children, and persons with disabilities during disasters. In Part B, the Resource Person should share the results of his/her small group discussion with all the participants. In Part C, Presentation and discussion.
20 Minutes	**Part A: Our Understanding – Small Group Work**
	The Resource Person divides participants into 3 groups and has each group assigned. Together with the members of his/her group, discuss and draw out the points that they feel contribute to identification of key issues, and challenges girls, children, and students with disabilities face during disasters.
40 Minutes	**Part B: Making School Climate Action Plan**
	The Resource Person reviews the outcome of his/her small group discussions from Part A with all the participants. Drawing on this information, the same groups, formulate a safer school plan/school climate action plan for their respective schools.
60 Minutes	**Part C: Presentations and Discussion**
	The Resource Person leads a discussion by addressing the questions below. • Understand impacts of disasters inside schools • Understand key challenges of school age girls, boys, and students with disabilities during disasters. • Get to know how to present a school climate plan.

4.1. Climate change adaptation in schools

Schools can play a key role in educating the young generation, which is likely to be more affected by the negative impacts of climate change, on the issues of climate. However, schools are also vulnerable to the impacts of climate change, including those facilitated by CIP's project in hand. In this section the Resource Person ought to engage the participants on the climate change adaptation strategies that can ensure school safety.

Following are some strategies and measures for adapting to climate change and reducing disaster risk for teachers and schools:

i). **Incorporate climate change education into the curriculum.** This can be done by teaching students about the science of climate change, its impacts, and how to mitigate and adapt to its effects. National and provincial textbook boards/curriculum committees can ensure introducing climate sensitive textbooks taught in public and private schools. Teachers should also be trained to deliver practical lessons on climate change, adaptation, preparedness and DRR to the students particularly in the disaster-prone areas. This can ensure resilience education in those areas.

ii). **Create a school climate action plan.** This plan should outline the school's goals for reducing greenhouse gas emissions and adapting to climate change. It should also include specific actions that the school will take to achieve these goals.

iii). **Make the school infrastructure more resilient to climate change.** This can be done by things like installing solar panels, rainwater harvesting systems, and flood barriers.

iv). **Develop emergency plans for climate-related disasters.** These plans should include procedures for evacuating students and staff, as well as for providing food, water, and shelter when a disaster hits.

v). **Educate students about disaster preparedness**. This can be done by teaching them about the different types of disasters that their community is vulnerable to, as well as how to stay safe in the event of a disaster.

vi). **Create a culture of sustainability at the school.** This can be done by encouraging students, staff, and parents to reduce their environmental impact. It can also be done by promoting the use of renewable energy and sustainable transportation.

4.2. Pakistan school safety framework (PSSF)[2]

National Disaster Management Authority (NDMA) has prepared a school safety framework following the global Comprehensive School Safety Framework (CSSF) given by The United Nations International Strategy for Disaster Reduction (UNISDR) and the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES). PSSF gives a comprehensive approach and guidelines for school safety and resilience education in Pakistan.

Exercise: The resource person will divide the participants (teachers) into groups. Each group should represent their concerned school. Each group will be instructed to make a school climate action plan for their school. Teachers will take help from the project staff in this exercise.

Activity 5: An Exercise

According to the above mentioned frameworks, following are three pillars of school safety.[xxxv]

I. **Safe learning facilities.** The first pillar aims to create safer and more environmentally friendly installations for both new and existing school buildings. To ensure safety from physical, biological, chemical, and social risks, this pillar focuses on site selection, design, and construction for new facilities. It also identifies and prioritizes facilities for repair, retrofit, replacement, or relocation for existing facilities to maintain the physical learning environment.

   To enhance school safety and resilience, the following key strategies should be employed:

   i). Select safe school sites and employ disaster-resilient design and construction practices.
   ii). Prioritize retrofitting and replacement, including relocation if needed.
   iii). Minimize structural and non-structural risks for survival and evacuation during disasters.
   iv). Ensure accessibility and safety for individuals with disabilities in school design.
   v). Plan for schools to function as temporary community shelters and provide alternate facilities for uninterrupted education.
   vi). Engage communities in school construction and retrofitting.
   vii). Ensure safe routes for children's access to schools.
   viii). Adapt water and sanitation facilities to reduce potential risks.
   ix). Implement climate-smart solutions for water, energy, and food security.
   x). Establish continuous monitoring, financing, and maintenance oversight.
   xi). Prevent and respond to attacks on education, especially during armed conflicts.

II. **School safety and educational continuity management.** The second pillar covers planning for children's health, safety, and well-being to ensure educational continuity in the face of dangers and threats to students and personnel in the educational sector. The central goal is to cultivate

[2] Source: NDMA, Pakistan School Safety Framework, October 2017

preparedness, adaptability, and transformative capabilities to enhance resilience, driven by active engagement and accountability to the individuals and communities affected by these challenges.

This can also include school disaster management (SDM). SDM entails the collaborative effort of national and sub-national educational authorities, in conjunction with local school communities, including students and parents. This collaboration is aimed at ensuring the safety of educational facilities and devising plans for the uninterrupted continuity of learning in the face of potential disasters.

III. **Risk reduction and resilience education.** Risk reduction and resilience education aims to equip children, teachers, and the school community, including parents, with the necessary skills to be more resilient when faced with challenges. This encompasses various aspects such as disaster management, knowledge of climate change, promotion of good health, dealing with pandemics, ensuring child safety, prevention of violence and conflicts, and improving mental and emotional well-being.

Here are the key points to consider for the third pillar of school safety.

i). Develop consensus-driven key messages for reducing vulnerabilities in households, schools, and communities as the foundation for formal and non-formal education.
ii). Engage students and staff in practical school and community disaster management activities, including mock drills, risk assessments, and potential student involvement in disaster management committees.
iii). Establish a structured approach for teaching critical thinking skills across various hazards, with a focus on curriculum development and progression through age levels.
iv). Integrate risk reduction concepts into the entire curriculum and provide guidelines for seamless integration into core subjects.
v). Develop high-quality teaching materials covering all aspects of climate-smart disaster risk reduction education.
vi). Provide teacher training on child-centered disaster risk reduction curriculum materials, learning goals, and methodologies.
vii). Develop strategies to increase teacher involvement in integrating disaster risk topics into formal curriculum and informal learning, collaborating with local communities.

4.3. INEE minimum standards for education: preparedness, response, recovery

The Inter-agency Network for Education in Emergencies, a global network of policy makers and practitioners advocating the right to education, has given a comprehensive 19 minimum standards[3] for

[3] INEE Minimum Standards Handbook, 2010

education in emergencies. Here, we will briefly give an overview of a few minimum standards. In the light of these standards, a safer school plan can be devised for schools in the select districts of the project in hand.

i). Standard 1: Education in emergencies

This standard informs how education programs in emergencies are designed and implemented. It is to ensure the safety and well-being of learners, teachers, and other education personnel. To serve this purpose, we need to ensure that schools are safe and accessible for all children and youth, even in the event of a disaster. This includes having secure walls, adequate ventilation, and fire safety features. Additionally, according to this standard, the responsible authorities have to provide alternative learning opportunities for students who are unable to attend school due to a disaster. For this purpose, temporary learning spaces or distance learning opportunities could be arranged.

Following are some more guidelines inspired from the INEE standard 1;

- Education programs in emergencies are implemented in such a way that minimizes the risk of disasters to students, teachers, and other education staff.
- These are designed in consultation with all the relevant stakeholders i.e students, teachers, and other education staff, and with the communities they serve.

ii). Standard 2: Education in fragile contexts

Education programs in fragile contexts, i.e. disaster prone areas like the CARE project area, are designed and implemented to build resilience to climate change and other hazards. Education facilities over there should be aligned with the dynamics of local climate, sustainable and environmentally friendly. For example, school infrastructure in an area like Baluchistan should reflect the indigenous architecture practices which are supposed to be fit for the high temperature zones.

Similarly, SPHERE handbook[4] also gives guidelines for education in emergencies. For instance, "Schools have access to appropriate water and sanitation facilities, and measures are in place to ensure that these facilities are secure, functional, and well-maintained."[xxxvi]

4.4. Safer school plan

Based on established frameworks on school safety, safer school plans can be designed for schools in CIP project area. To further envision a safer school plan, following key elements can be considered.

a). **Physical safety:** As mentioned in INEE standard on education in emergencies the most important element of safer school plan for a refugee and host community school in KP/ Baluchistan should be physical safety of schools. The school infrastructure should be resilient to disasters

[4] For more details, read *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, fourth edition, Geneva, Switzerland, 2018.* www.spherestandards.org/handbook

particularly earthquakes and floods. A school should have disaster-resistant boundary walls, proper ventilation systems, ramps, WASH facilities, and emergency exists among others.

b). **Incorporating DRR in curricular, extracurricular and co-curricular activities:** School staff and children should be aware of the possible disasters through curriculum. They should be sensitized as well educated on climate change, disasters and DRR practically through curricular, extra-curricular and co-curricular activities.

c). **Alignment with national and sub national disaster preparedness, prevention and mitigation plans:** The Safe School Plan should be aligned with national and provincial climate action plans. This requires a good coordination with National Disaster Management Authority (NDMA), Provincial Disaster Management Authorities PDMAs) and District Disaster Management Authorities (DMAs) in Pakistan.

d). **Safe school and role of teachers:** A safe school provides social, physical, and psychological safety to all of its children.

i). A safe school is prepared for any natural & manmade disaster.
ii). Trained teachers can save their schools as well as their families & Communities.
iii). Safe School ensures safety kit & relevant material.
iv). It keeps observing the school's building & environment.
v). Remains equipped with training, equipment & required material.
vi). Teachers & head teachers are trained.
vii). It has got its preparatory plan.

Module 5: Strategies and Measures for Adapting to Climate Change and Reducing Disaster Risk

Topic		Time
Topic 5	Strategies and measures for adapting to climate change and reducing disaster risk	120 minutes

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- Understands the concept of CCA.
- Strategies and measures for adapting to climate change and reducing disaster risk

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The ToT Resource Person carries out the session by giving an interactive session on the Strategies and measures for adapting to climate change and reducing disaster risk. Participants should be given the opportunity to make input during the session.

Topic 5	Strategies and measures for adapting to climate change and reducing disaster risk
Objective	To develop a common understanding of Strategies and measures for adapting to climate change and reducing disaster risk.
Time	120 Minutes
Description	**Introduction** It is important to know the Strategies and measures for adapting to climate change and reducing disaster risk. **Instructions** This activity is divided into 3 parts. In **Part A**, the Resource Person should work in 3-4 small groups to develop his/her ideas on the concepts of Climate Change Adaptation. In **Part B**, the Resource Person should share the results of his/her small group discussion with all the participants. In **Part C**, Presentation and discussion.
20 Minutes	**Part A: Our Understanding – Small Group Work**
	The Resource Person divides participants into 3 groups assigns a task to each group. Together with the members of his/her group, all groups discuss and draw out the strategies that they feel contribute to Climate Change Adaptation. i). What is the concept of Climate Change Adaptation? …… ii). What are some methods you think contribute to CCA? ……
40 Minutes	**Part B: Identifying methods of CCA**
	The Resource Person reviews the outcomes of his/her small group discussions from Part A and shares with all the participants. Drawing on this information, the participants agree on and formulate a common understanding of the concept of CAA and some methods of adopting to climate change.
60 Minutes	**Part C: Presentations and Discussion**
	The Resource Person leads a discussion by addressing the ideas described here under: • Understanding the concept of CCA. • Exploring strategies and measures for adapting to climate change and reducing disaster risk.

5.1. What is climate change adaptation (CCA)?

Climate change adaptation (CAA) is the process of adjusting to actual or expected climate change and its effects. In simple terms, it is about making changes to our way of life to cope with the impacts of climate change.

Climate change is already having a significant impact on our planet, and these impacts are only going to get worse in the future. Sea levels are rising, extreme weather events are becoming more common, and agricultural yields are declining. These impacts are already causing widespread damage and displacement, and they are only going to get worse if we do not take action.

Climate change adaptation is important because it can help us to reduce the negative impacts of climate change and protect our communities, our economies, and our environment. There are several different ways to adapt to climate change, and the best approach varies depending on the specific circumstances in a particular area. Some common adaptation measures include:

Brainstorming: The resource person will ask all the participants to think of an adaptation strategy, like those in the above case studies, for their village keeping in mind a particular disaster which is likely to happen in their area (could be hypothetical).

Activity 6: Brainstorming

i). Building seawalls and levees to protect coastal communities from flooding.
ii). Building flood protection walls around flood-prone localities
iii). Developing drought-resistant crops to cope with water scarcity.
iv). Relocating communities that are at risk of climate-related disasters.
v). Increasing energy efficiency to reduce our reliance on fossil fuels.
vi). Investing in renewable energy sources.

Climate change adaptation is not just about waiting for the impacts of climate change to happen and then trying to respond to them. It is also about taking steps now to reduce our vulnerability to climate change and build resilience to its impacts. By taking action now, we can help to ensure that our communities are better prepared for the challenges of climate change in the future.

5.2. Step-by-step guide for developing a risk reduction plan for refugee communities:

Developing a risk reduction plan for a refugee community, such as Afghan refugees in KP and Baluchistan, may involves several key steps.

i). **Assess the Climate Risks:** The first step is to understand the specific climate-related risks in the region, which includes all floods, extreme temperatures, and drought in the case of KP and Baluchistan.

ii). **Assess Vulnerabilities:** Identify the most vulnerable members of the refugee community, considering factors like age, health, and access to resources. In this context, Afghan women, children, persons with disabilities, laborers are the most vulnerable.

iii). **Community Engagement**: This crucial step involves the community engagement in the planning process through meetings, workshops and focus group discussions to gather their insights and specific needs.

iv). **Prioritize Strategies**: During community engagement, participants will determine the most critical areas for intervention based on vulnerability assessments.

v). **Develop a Comprehensive Plan:** Create a risk reduction plan with clear actions, timelines, responsible parties, and budget considerations. The plan should cover infrastructure, education, healthcare, and emergency response.

vi). **Build Resilience:** Integrate measures to enhance the community's resilience, like improving housing, food security, and healthcare access.

vii). **Adaptation Strategies:** Implement location-specific adaptation measures different for those in the catchment areas and drought-stricken areas of Baluchistan. These adaptation strategies may involve altering agricultural practices or reconsidering the place and materials used for housing/camping in the refugee neighborhoods.

viii). **Forge Partnerships:** No disaster response can be done alone. So, collaborate with local authorities, NGOs, and international organizations to pool resources and expertise for a robust action.

ix). **Monitoring and Evaluation:** Establish a system to monitor plan progress, adapt strategies as needed, and evaluate results.

x). **Raise Awareness:** Educate the community about climate risks and actions they can take to protect themselves, fostering environmental awareness and sustainable practices.

xi). **Advocacy and Policy:** Advocate for policies and resources that address refugee-specific climate vulnerabilities within broader climate policies.

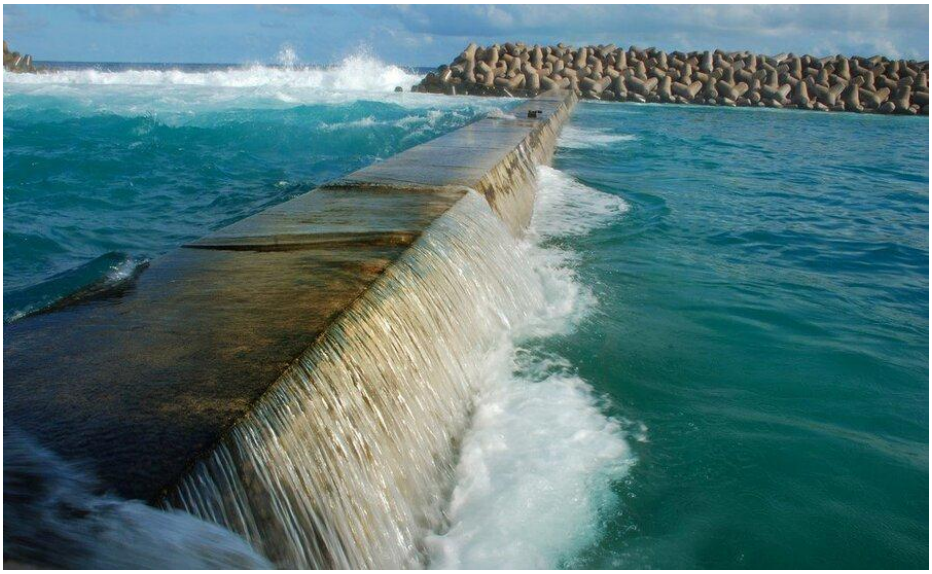
xii). **Continual Improvement:** Regularly review and adjust the plan based on feedback from the community and the results of monitoring and evaluation.

5.3. Case studies

Case studies mentioned below are depicting that of communities are trying to adapt the climate change.

5.3.1. **Maldives**

The Maldives is a country made up of low-lying islands in the Indian Ocean. The country is particularly vulnerable to sea level rise, and is already experiencing coastal erosion and flooding. The Maldives government has implemented several adaptation measures, including building seawalls and levees, and relocating communities that are at risk of climate-related disasters.



Maldives' seawall[xxxvi]

5.3.2. **Kenya**

Kenya is a country that is experiencing the impacts of climate change, including droughts, floods, and changes in rainfall patterns. The Kenyan government has implemented several f adaptation measures, including developing drought-resistant crops, building water harvesting systems, and educating farmers about climate-smart agriculture.[xxxviii]

© Thomas Mukoya / Reuters file, Kenya drought 2009

5.3.3. **Daman, KP-Punjab, Pakistan**

Daman region between Suleman mountain range and Indus River in geographical center of Pakistan is a big hit of hill torrents which cause flooding in the localities of Daman spread over two provinces i.e., KP and southern areas of Punjab. Communities in Daman make flood barriers in the form of protection walls, called Shehr Panah locally, around their villages to reduce the risk of torrential floods.

© Waqar Abbas, Locals make Shehr Panah around Darabri village in Daman region of D. I. Khan.

Declaration of Consent.docx

Module 6: Enhancing Community and Schools Resilience: Tools and resources for implementing DRR

Topic		Time
Topic 6	Tools and resources for implementing CCA and DRR	120 min

Learning Objectives

By the end of this ToT Module, the participants should be able to:

- To equip themselves with practical tools and strategies for implementing disaster risk reduction (DRR) measures in schools and communities in the target areas.
- Enable to develop contingency plans, establish early warning systems, and conduct multiphase risk assessments.
- To ensure safe and resilient school environments that can effectively respond to natural disasters.

Method Used

- Interactive and precise sessions.
- Brainstorming and energizers.
- Group exercises.
- Questions and answer sessions

Materials Used

Charts, Play Cards, Color Cards and Multimedia Projector.

Resource Person's Guidelines

The Resource Person conducts the session by giving an interactive lecture on some general tools and resources in the implementation of climate change adaptation and Disaster Risk Reduction. Participants should be given the opportunity to give their input during the session.

Topic 6	Enhancing Communities and Schools' Resilience: Tools and resources for implementing CCA and DRR
Objective	Understand the importance of using tools and resources to implement DRR in schools and communities.
Time	120 Minutes
Description	**Introduction** The Resource Person should communicate the importance of using tools and resources to implement DRR. **Instructions** This activity is divided into 3 parts. In Part A, The Resource Person should work in 3-4 small groups to develop his/her ideas on the Key issues and challenges to women, girls, children, and persons with disabilities during disasters. In Part B, the Resource Person should share the results of his/her small group discussion with all the participants. In Part C, Presentation and discussion.
50 Minutes	**Part A: Group Work**
	The Resource Person divides participants into 2 groups of refugees and host or district wise groups. The groups will be asked to develop two contingency plans one for schools and the other for Afghan refugee community.
20 Minutes	**Part B: Understanding Issues, Gaps and Challenges**
	The Resource Person reviews the outcome of his/her small group discussions from Part A with the all the participants. Drawing on this information, as a group, agree on and formulate a common understanding of issues and challenges.
50 Minutes	**Part C: Presentations and Discussion**
	The Resource Person leads a discussion by addressing the questions below. • What do we mean by tools and resources to implement CCA and DRR? • What is the importance of using tools and resources to implement CCA and DRR?

6.1. Tools and resources to implement CCA and DRR

Tools and resources for implementing CCA and DRR are the instruments that can be used to help communities adapt to climate change and reduce their risk of disasters. These tools and resources can be used to assess risk, develop early warning systems, prepare for disasters, respond to disasters, and recover from disasters.

The specific tools and resources that are needed will vary depending on the specific context with respect to geography, demography, and nature of striking disaster. For example, early warning systems may be more important in communities that are prone to floods, such as regions in Baluchistan and KP adjacent to Suleman mountain range.

It is important to note that CCA and DRR are not just about responding to disasters. They are also about taking steps to reduce the risk of disasters and to build resilience to climate change. By using the right tools and resources, communities can become more resilient to the impacts of climate change and better prepared for disasters.

In the section below we will delve into some common tools and resources to implement CCA and DRR keeping in mind schools and the select districts of KP and Balochistan i.e. Mansehra, Kohat, Bannu, Loralai and Chaghi.

Role-play: The resource person will divide the participants into groups and ask them to role play as volunteers conducting an early warning campaign for any disaster like floods in schools and adjacent villages.

Activity 7: A role-play exercise

6.2. Contingency plan

A contingency plan is a systematic, pre-defined set of strategies and tactics developed to efficiently manage and respond to disasters. It includes specific activities, responsibilities, and resources to lessen the impact of disasters and maintain community's, or institution's (School) safety and resilience.

i). **Disaster preparedness plans.** Disaster preparedness plans can help communities to prepare for disasters by identifying the steps that need to be taken before, during, and after a disaster. These plans should be made in coordination with locals and concerned government institutions and non-governmental organizations working in the particular area.

ii). **Disaster response plans.** Disaster response plans can help communities to respond to disasters by identifying the steps that need to be taken to save lives, protect property, and restore essential services after a disaster. These plans should be both short term and long term.

iii). **Disaster recovery plans.** Disaster recovery plans can help communities to recover from disasters by identifying the steps that need to be taken to rebuild homes, businesses, and infrastructure after a disaster.

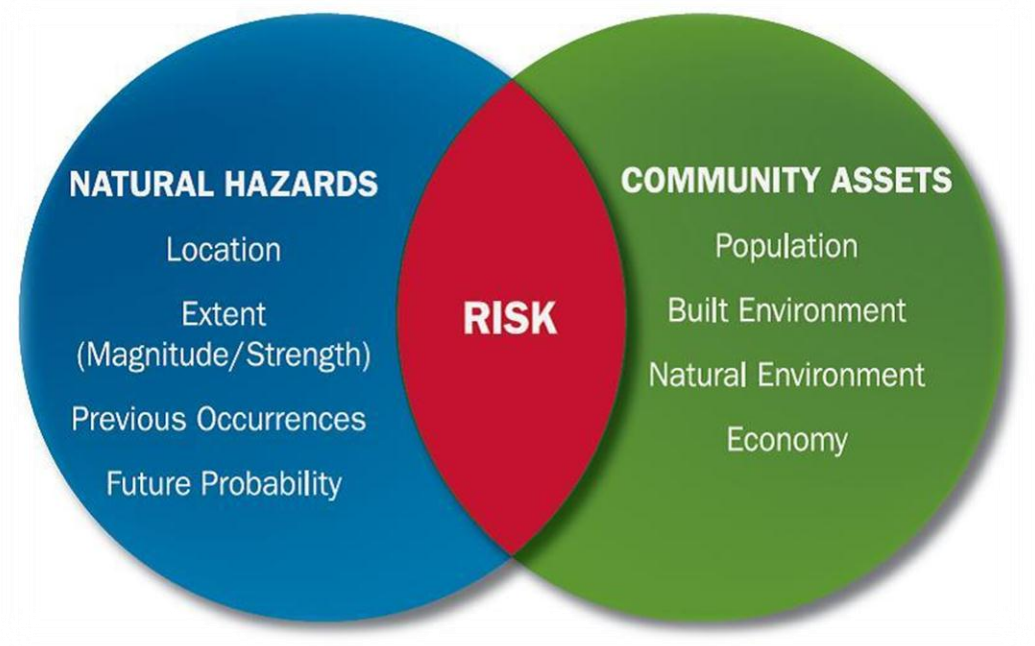
iv). **Education and awareness.** Education and awareness are essential for CCA and DRR. People need to understand the risks that they face from climate change and disasters in order to take steps to reduce risk and prepare for disasters.

v). **Financial resources.** Financial resources are essential for CCA and DRR. Communities need money to invest in early warning systems, risk assessment, disaster preparedness, disaster response, and disaster recovery.

vi). **Technology.** Technology can be a valuable tool for CCA and DRR. Technology can be used to develop early warning systems, assess risk, and respond to disasters.

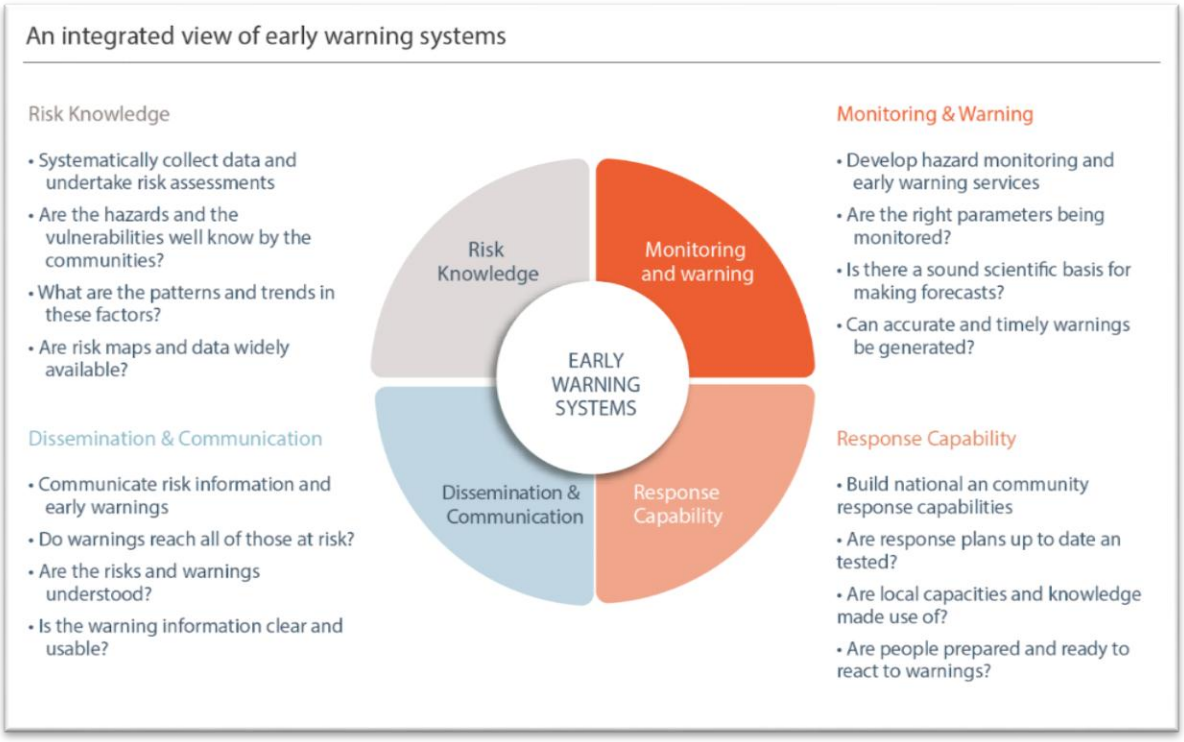
vii). **International cooperation.** International cooperation is essential for CCA and DRR. Countries need to work together to share knowledge and resources, and to build capacity for CCA and DRR.

viii). **Risk assessment.** Risk assessment can help to identify the risks that a community faces from climate change and disasters. This information can be used to develop strategies for reducing risk. There can be multiple ways of accessing risk. FEMA uses this Venn diagram to illustrate the concept of risk as the relationship, or overlap, between hazards and community assets[xxxix]



Source - FEMA, Local Hazard Mitigation Handbook (2013)

ix). **Early warning systems.** Early warning systems can help people to prepare for and respond to disasters by providing information about impending disasters, such as floods, droughts, and storms.



Integrated Early Warning System (Source: ITU)

6.2.1. Contingency plan phases

There are multiples phases in the making of contingency plan.

Phase 1: Preparedness and risk assessment:

a). During the first phase of contingency planning, the focus should be on identifying potential risks faced by the school or a refugee camp for instance we are intervening in KP and Baluchistan. This involves thoroughly examining all the possible dangers that may affect our target, ranging from natural disasters to migration and health emergencies faced by Afghan and host communities and their school going children.

b). Once we have identified these risks, the next step is to assess their impact and likelihood. We will need to evaluate not only the potential consequences of each risk but also the likelihood of it occurring. This assessment is essential as it helps prioritize planning efforts and allocate resources effectively to address the most pressing issues.

c). As a part of the contingency planning process, a specialized Contingency Planning Team should be created in the community or school. This team will be responsible for developing, implementing, and managing the contingency plan. To ensure a coordinated and efficient response to unforeseen events and emergencies, each team member's role and responsibilities should be clearly defined.

Phase 2: Emergency response procedures and resources:

a). In the second phase of contingency planning, Emergency Response Procedures and Resources should be addressed. A comprehensive plan should be created to deal with various types of emergencies, which includes developing detailed response procedures for a wide range of scenarios, such as evacuation, communication, medical response, and resource allocation.

b). A Resource Inventory is also created to ensure preparedness. This inventory includes critical resources such as supplies, equipment, and personnel that are required for an effective emergency response.

c). Furthermore, a Resource Allocation Plan is developed that specifies how resources will be deployed during an emergency. This plan includes resource procurement strategies, especially in times of scarcity, for instance, of food supplies during an earthquake.

d). Effective communication during an emergency is also very crucial. Therefore, as part of contingency plan a communication Strategy should be designed to address this.

e). Coordination with Local Authorities is crucial in the making of a contingency plan. It needs establishment of communication channels with local authorities, including emergency services and disaster management agencies like PDMAs, DDMAs, and rescue 1122 in K P and Baluchistan.

f). Finally, there is a need to schedule regular training and drills for the contingency team and stakeholders, which are essential for preparing everyone for emergency situations. These sessions provide team members with the knowledge and skills they need to respond effectively when a disaster hits.

Phase 3: Plan maintenance, review, and documentation:

i). The third and final phase is Plan Maintenance and Review. We need to understand that risks and circumstances are constantly changing, so it's essential to keep the contingency plan up to date. Regular plan reviews and revisions are crucial to maintain readiness and adapt to emerging threats. Testing and Evaluation are addressed concurrently, as it's a critical component of our contingency planning. We need to define procedures for testing the plan through drills and exercises, which allow us to assess readiness and effectiveness. Finally comes the documentation of the contingency plan.

ii). We also encourage feedback from participants, as it provides valuable insights for continuous improvement and fine-tuning of our contingency plan. Comprehensive execution of these three phases will ensure a school's and community's resilience and preparedness in the face of disasters and emergencies.

6.3. Case Study: tools and resources used by Pakistan government to reduce risks of floods

Government of Pakistan's National Disaster Management Authority (NDMA) is preparing early warning systems for floods in the country in a project called Glacial Lake Outburst Flood (GLOF-II) Project. Through this project, the NDMA focuses on warning locals regarding floods, creating community-based disaster risk management centers, and safe areas, conduct awareness sessions for locals, and creation and maintenance of gabion walls and irrigation channels to mitigate the flood damages.[xl] The NDMA has developed a number of disaster recovery plans for Pakistan. These plans include information on how to rebuild lives and livelihoods after disasters. The plans have been distributed to communities across Pakistan to reduce the risk of floods.

Source: NDMA

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