



A guide to mainstreaming disaster risk reduction and climate change adaptation

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International Federation
of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world's largest volunteer-based humanitarian network, reaching 150 million people each year through our 187 member National Societies. Together, we act before, during and after disasters and health emergencies to meet the needs and improve the lives of vulnerable people. We do so with impartiality as to nationality, race, gender, religious beliefs, class and political opinions.

Guided by **Strategy 2020** - our collective plan of action to tackle the major humanitarian and development challenges of this decade - we are committed to 'saving lives and changing minds'.

Our strengths lie in our volunteer network, our community-based expertise and our independence and neutrality. We work to improve humanitarian standards, as partners in development and in response to disasters. We persuade decision-makers to act at all times in the interests of vulnerable people. The result: we enable healthy and safe communities, reduce vulnerabilities, strengthen resilience and foster a culture of peace around the world.

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Cover photo: A Philippine Red Cross staff member points to a swathe of land flooded following heavy rains brought by Typhoon Ketsana in September 2009. (Yoshi Shimizu/IFRC)

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List of acronyms

BPI	Better Programming Initiative
CBDP	Community-based disaster preparedness
CBDRM	Community-based disaster risk management
CCA	Climate change adaptation
CCM	Climate change mitigation
DP	Disaster preparedness
DRR	Disaster risk reduction
FCSR	Framework for Community Safety and Resilience
GFDRR	Global Facility for Disaster Reduction and Recovery
HFA	Hyogo Framework for Action
HIV	Human immunodeficiency virus
ICRC	International Committee of the Red Cross
IEC	Information, education and communication
IFRC	International Federation of Red Cross and Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
KAP	Knowledge, Attitudes and Practices
LDCF	Least Developed Countries Fund
MDG	Millennium Development Goals
M&E	Monitoring and evaluation
NRM	Natural resource management
PASSA	Participatory Approach for Safe Shelter Awareness
PCM	Project cycle management
PDNA	Post-Disaster Needs Assessments
PNS	Partner National Society
PPP	Project/programme planning
ONS	Operating National Society
RCRC	Red Cross and Red Crescent
SCCF	Special Climate Change Fund
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
VCA	Vulnerability and capacity assessment
WASH	Water, sanitation and hygiene

Introduction

What is the purpose of this guide?

Over the past decades, we have witnessed a steady increase in the number of disasters. Many factors have contributed to this trend: a growing population, an increased number of people living in hazard-prone areas, environmental degradation, unsustainable development patterns that often lead to higher levels of vulnerability, as well as rapid and unplanned urbanization, amongst others. Globally, risk reduction initiatives have failed to keep pace with the increase in exposure to natural hazards and higher levels of vulnerability. These trends are set to continue and will be compounded by the impact of climate change.

While the International Federation of Red Cross and Red Crescent Societies (IFRC) has been focusing on reducing risk and vulnerability - aiming to reinforce the resilience of local communities - , there is not yet an underlying comprehensive and systematic manner in practice. The focus of Strategy 2020 on 'doing more and better' therefore can only be met through scaling up our risk reduction efforts and better integrating risk reduction measures into our planning and into the different programmatic areas.

This guide has been developed to specifically support Red Cross and Red Crescent Societies and IFRC staff to more systematically integrate risk reduction measures into their planning. By describing in detail what key issues need to be considered and when, this guidance aims at ensuring that risk reduction measures are taken into account in different sectors and contexts. It also details the key elements that need to be in place to create an enabling environment.

Who is this guide for?

This guide has been designed for anyone in National Societies and the IFRC who wants to reduce risk, including climate-related risk. We hope that it will be useful to managers, decision makers and practitioners. The guide specifically focuses on the Red Cross/Red Crescent work and is not intended for broader national and international contexts. This guide is to assist with efforts to systematically mainstream the reduction of disaster and climate risk into the work of the Red Cross and Red Crescent Movement.

How is this guide structured?

Chapter 1

Describes the **scope** of DRR and CCA activities and gives **definitions** of DRR and CCA mainstreaming. It explains the **rationale, challenges and opportunities** of mainstreaming DRR and CCA.

Chapter 2

Describes how to create an **enabling environment** for mainstreaming disaster risk reduction and climate change adaptation.

Chapter 3

Details the general **approaches** to mainstreaming DRR and CCA, and provides detailed guidance on how to do this **in various contexts, sectors**, and for **different groups of people**.

1. Understanding mainstreaming of disaster risk reduction and climate change adaptation



1.1 Background: DRR and CCA

	Disaster risk reduction (DRR)
Definition	"[...] the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events." ¹

On average, 232 million people are affected by different types of disasters every year.² Disaster losses continue to rise with grave consequences for the lives, livelihoods and dignity of people, as well as for hard-won development gains.

In recent years disaster risks have been on the rise due to factors such as population growth, unplanned urbanization, environmental degradation, conflicts and competition for scarce resources, climate change, disease epidemics, poverty and pressure from development within high-risk zones. However, these disaster risks can be significantly reduced through strategies and actions that seek to decrease vulnerability and exposure to hazards within wider efforts to address poverty and inequality and through risk-informed humanitarian responses to disasters and other crises.

Recognizing the importance of DRR, in 2005 168 governments and all leading development and humanitarian actors signed the Hyogo Framework for Action (HFA)³, committing themselves to a ten-year multi-stakeholder and multi-sectoral plan to invest in DRR as a means to building disaster-resilient societies.

Noticeable progress has been achieved in introducing legislation and policies for DRR, establishing early warning systems, and increasing the level of disaster preparedness. However, these are just first steps taken in the long journey to disaster-resilient societies.

DRR is an important element of climate change adaptation (CCA). Amongst others, the impacts of climate change include an increase in the frequency and severity of the hydro-meteorological events. Some types of extreme weather and climate events have already increased in frequency or magnitude, and this trend is expected to continue over coming decades. Climate change is altering the face of disaster risk, not only through increased weather-related risks and sea-level and temperature rises, but also through increases in societal vulnerabilities - for example, from stresses on water availability, agriculture and ecosystems.

	Climate change adaptation (CCA)
Definition	"The adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities ." (Intergovernmental Panel on Climate Change, IPCC)

Efforts to reduce the impact of climate change are known as climate change adaptation. CCA, in other words, is a practice to make adjustments in natural or human systems in response to actual or expected climate stimuli or their effects,

1. See www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf

2. See CRED (2012): "Disaster Data: A Balanced Perspective" CRED CRUNCH Issue 27, Brussels, Belgium: Institute of Health and Society. www.cred.be/sites/default/files/CredCrunch27.pdf

3. See www.unisdr.org/files/8720_summaryHFP20052015.pdf

which moderates harm or exploits beneficial opportunities. Managing the additional risks brought about by climate change is a dynamic process given the uncertainty of climate change impacts and the uncertainty linked to increased variability.

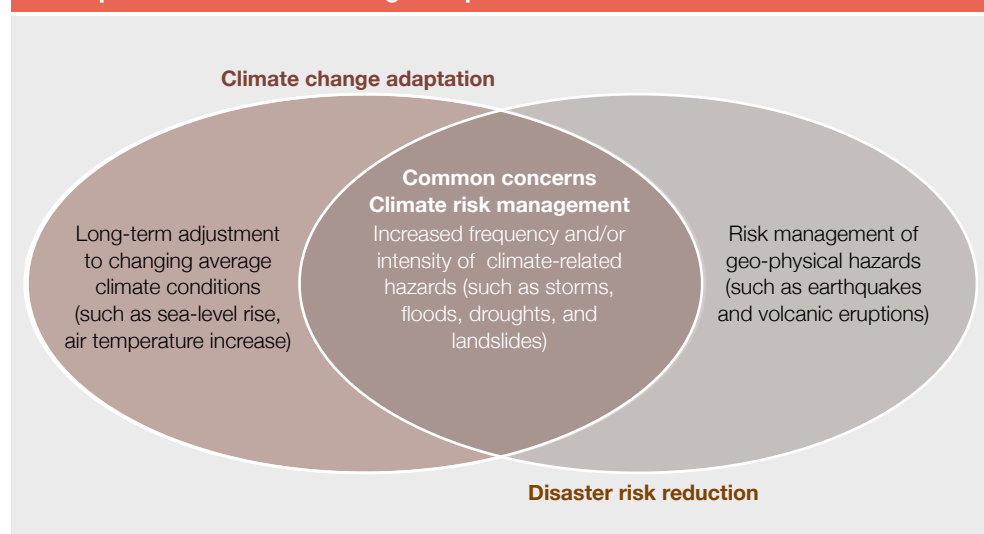
Climate change is a new factor that will act as an additional stress to increase the existing vulnerabilities of many people. As a result of global warming, climate-related hazards like floods, droughts, heat waves, and storms are expected to become more frequent and/or possibly also more intense (e.g. tropical cyclones/hurricanes may have more rainfall and stronger winds, cover more territory). This will result in increasing vulnerability as climate trends will damage livelihoods, increase poverty and damage food security. In addition, some climate-related hazards such as tropical cyclones, storms, floods, droughts, heat and cold waves will affect places that have not experienced them before.

Climate change confronts the RCRC with a whole series of challenges, since it affects every area of its work. It makes existing problems worse, and brings new risks to people and National Societies, branches or volunteers who have little or no experience of these issues. Nothing will be the same, and “business as usual” is no longer an option. The rise in frequency of climate-related disasters, food shortages and vector-borne diseases will increase the demand for RCRC assistance. In addition, the myriad and uncertain effects of changing climate oblige the RCRC Movement to possess an increased ability to analyze, assess and understand its future consequences in order to support better planning and preparedness.

Convergence and difference

In recent years there has been a growing convergence between DRR and CCA. However they do not overlap completely. Broadly speaking, DRR deals with all hazards, including hydro-meteorological and geophysical hazards, while CCA deals exclusively with climate-related hazards associated with changes in the average climate conditions. CCA also considers the long-term adjustment to changes in gradual changing climatic condition, including the opportunities that this can provide, whereas DRR is predominantly interested in extremes leading to disasters.

Overlap between Climate change adaptation and disaster risk reduction



However, DRR and CCA have common concerns in managing climate-related risks; this is the area where they converge. DRR and CCA share a common goal of reducing vulnerability and achieving sustainable development. They also share a common conceptual understanding of the components of risk and the processes of building resilience; they regard risk as the product of exposure and vulnerability to hazards or effects of climate change, or both. Both exposure and vulnerability are compounded by other societal and environmental trends, for example, urbanization, environmental degradation, and the globalization of markets. Thus, to reduce these risks, exposure needs to be minimized, vulnerability reduced, and capacities for resilience strengthened. This is a dynamic process requiring continual effort across economic, social, cultural, environmental, institutional and political spheres to move from vulnerability to resilience.

Owing to its linkages with humanitarian emergency response, DRR is often the first line of protection against weather-related disasters, and because this risk increases it is an essential part of CCA. For DRR to be efficient, it has to take into account climate-related risks or be climate-smart. Increasingly, humanitarian and development practitioners are seeing the benefits of bringing together DRR and CCA in a more holistic approach to programming, in order to maximize the effectiveness and sustainability of efforts and investments made by all stakeholders.

1.2 Mainstreaming DRR and CCA

Rationale

The prime motivation of the RCRC response to a disaster is to alleviate human suffering wherever it may be found. Therefore, it is the absolute imperative of National Societies to provide humanitarian response to a disaster and support the recovery following a disaster. However, this is not an end in itself but rather a means to reach an end. Risk-informed decisions and planning would make relief assistance and recovery activities meet the immediate needs of affected people, reduce their vulnerability at the same time, and ultimately strengthen their resilience. To this end, DRR must be an integral part of humanitarian intervention in a disaster-prone environment.

In its Strategy 2020, the IFRC has called for comprehensive community action to reduce disaster risks where possible and to reduce the occurrence and impact of disasters where primary prevention is not feasible.

Mainstreaming DRR and CCA	
Definition	<p>Considering and addressing risks associated with disasters and climate change in all processes of policy-making, planning, budgeting, implementation, and monitoring. This entails an analysis of how potential risks and vulnerability could affect the implementation of policies, programmes and projects. Concurrently, it also analyses how these, in turn, could have an impact on vulnerability to hazards. This analysis should lead on to the adoption of appropriate measures to reduce potential risks and vulnerability, where necessary, treating risk reduction and adaptation as an integral part of all programme management processes rather than as an end in itself.</p>

For RCRC risk reduction and adaptation measures to be effective and efficient and to produce desired outcomes, they need to be mainstreamed into the policies and planning of National Societies and the IFRC. DRR and CCA mainstreaming will help National Societies and IFRC ensure that their strategies, policies, programmes or projects are designed with due consideration for potential disaster and climate change risks and thus prevent them from inadvertently increasing vulnerability to disaster or climate change.

Challenges and opportunities

DRR and CCA mainstreaming, like other mainstreaming processes, encounters both foreseeable and unforeseeable barriers and challenges along the way. They include, among others, bureaucratic organizational processes, lack of capacity and knowledge, high staff turnover, ineffective procedures for retaining organizational memory and a culture of working in 'silos'.

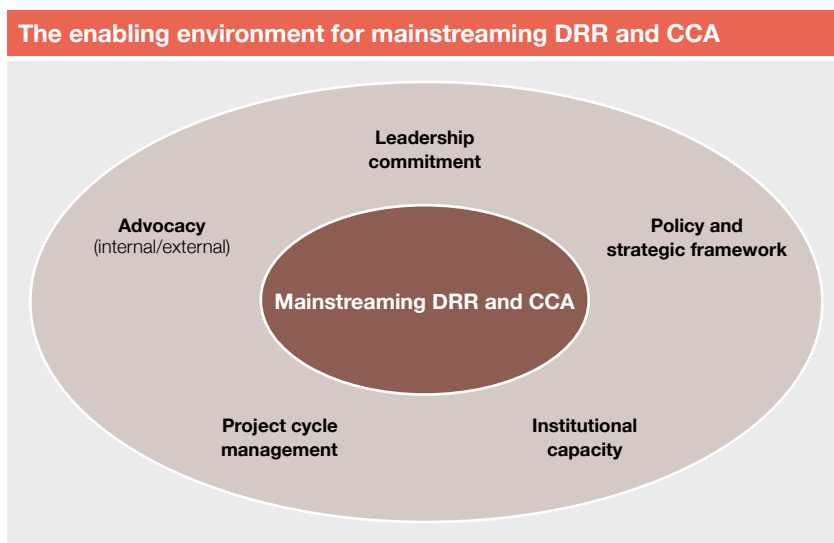
At a practical level, there are also disparate issues such as unclarity of roles and responsibilities and time constraint when it comes to DRR and CCA mainstreaming. The lack of funding for cross-cutting initiatives is another hurdle. It is also very challenging to demonstrate the results of mainstreaming to donors – something that is being increasingly called for in the current financial environment.

Donor priorities do not necessarily support initiatives of mainstreaming and tend instead to focus on “hard” solutions, whereas many DRR and CCA approaches produce “soft” results over longer-term periods. It is also challenging to overcome mainstreaming fatigue. This is often encountered, as programme staff are so busy executing the core mandate of their programmes that anything that is viewed as an addition to current workload is often perceived as negative.

These challenges and barriers can be overcome if National Societies and IFRC are well aware of the added value of DRR and CCA mainstreaming and if they pursue continuous efforts to create an enabling environment for it. In the next chapter, let us look at the key elements that underpin such an environment.

2. The enabling environment for mainstreaming DRR and CCA





National Societies intending to mainstream DRR and CCA into their work should create an enabling environment.

This includes devising a policy framework, ensuring the commitment of leadership and management, reinforcing necessary institutional capacity, integrating DRR and CCA considerations into project cycle management, as well as internal and external advocacy.

In this chapter we take a brief look at each of these steps.

2.1 Policy and strategic framework

A policy is a "statement of intent" or a "commitment" of a National Society or the IFRC. As such, it provides a principle or rule to guide its decisions and achieve rational outcomes. Its staff and volunteers take part in policy development and are held accountable for implementation of the policies which are usually adopted by the general assembly or governing board of a National Society or the IFRC.

Thus, for DRR and CCA to be properly mainstreamed, it should be supported by a relevant policy. Such a policy needs to set out a broad goal and objectives for mainstreaming DRR and CCA within the organisation and provide a framework for addressing mainstreaming issues through an enabling policy framework. General policy statements are important because they give a mandate to managers and planners within the organisation.

2.2 Leadership and management commitment and support

The commitment and support from the leadership of a National Society or IFRC is important to ensure mainstreaming. Without such a commitment and support, the issue will struggle to gain profile in the short term. In the long term, it may be difficult to achieve coordination, monitoring of progress across the organisation and engagement in strategic processes in order to mainstream the issue into normal business.

Equally important is the commitment and support of line managers of relevant departments who are, in the long run, in the best position to facilitate the engagement and ownership of their staff and volunteers. The lack of such a commitment and support from line managers sends a clear signal to their staff and volunteers that they do not need to apply themselves, even if there is a formal mainstreaming policy they are part of. Moreover, for a staff member or volunteer keen to mainstream DRR and CCA, the lack of interest by the line manager can be a major disincentive. Therefore, National Societies and IFRC must give due consideration to guaranteeing the commitment and support of their leadership and management before they advocate for DRR and CCA mainstreaming.

2.3 Institutional arrangement and capacity

As the mainstreaming process goes far beyond the adoption of official documents and project planning, it is important to make appropriate institutional arrangements and build the necessary capacity to make mainstreaming happen.

As DRR and CCA are crosscutting issues, the mainstreaming process needs to be owned by all departments, staff and volunteers rather than by a single department or an individual. It is important to anticipate potential barriers to ownership and consider how to address them to ensure that mainstreaming can be considered as an institutional asset rather than a liability. As building the ownership of DRR and CCA mainstreaming is a process that will take time, it is helpful for a National Society or IFRC to understand more generally how change can be achieved, and how to manage change.


Although mainstreaming should be owned by all, it is necessary to designate an overarching body in order to develop strategies or initiatives, define responsibilities at different levels of the organization, coordinate this multi-sector, multi-tiered engagement, and monitor and evaluate progress. DRR and CCA focal points should be appointed in technical departments to direct and coordinate sectoral DRR and CCA initiatives, including the mainstreaming of DRR and CCA into broader programmes, to identify and draw on existing DRR and CCA expertise within the department and to provide sector-specific technical support.

Appropriate institutional capacity should be put in place to support the mainstreaming process. Building the necessary skills and knowledge is crucial to increasing staff's understanding and ultimately, ownership of the mainstreaming process. Policies and best practices must be understood, implemented and maintained by all staff and volunteers. Skills, knowledge and understanding can be developed through senior management briefings, reference materials, training for staff and volunteers, and regular communication between themselves including joint travel and joint participation in lessons learnt exercises following major disasters. The assessment of the capacity to understand and address the DRR and CCA mainstreaming issues should be followed by institutional measures to strengthen it and supported by regular monitoring and evaluation.

Some of the finance required to support the mainstreaming process could be raised through the allocation of a certain percentage of programme budgets or through active advocacy vis-à-vis different stakeholders.

2.4 Project cycle management (PCM)

Programmes and projects are designed and managed through a sequence of inter-related phases of a project cycle management (PCM). For DRR and CCA to be mainstreamed, it is necessary for project/programme managers to make it as a rule to consider and address disaster and climate change risks in their sectoral PCM phases, including analysis, design, implementation, monitoring, and evaluation. Using a DRR and CCA lens in the project cycle is an effective way of designing risk-informed and climate-smart projects and programmes. The IFRC guides on project/programme design and monitoring and evaluation (M&E) will be useful in managing the PCM phases and establishing a M&E system.

 **For further guidance on PCM and M&E, please see:**

- IFRC (2010): Project/ programme planning guidance manual. <http://www.ifrc.org/Global/Publications/monitoring/PPP-Guidance-Manual-English.pdf>
- IFRC (2011): Project/ programme monitoring and evaluation (M&E) guide. <http://www.ifrc.org/Global/Publications/monitoring/IFRC-ME-Guide-8-2011.pdf>

2.5 Advocacy

Advocacy is about persuading people to make changes, whether in policy, practice, systems or structures; it is about speaking for others, working with others and supporting others to speak for themselves. For the Red Cross Red Crescent, advocacy goes hand-in-hand with awareness-raising and education as three cross-cutting components to strengthen its interventions. Awareness-raising and education can empower communities to change and to have safer, healthier lives, while advocacy can create the conditions in which they are actually able to do so. Advocacy and raising public awareness through the media also contribute to humanitarian diplomacy – one of the “enabling actions” of Strategy 2020: to “prevent and reduce vulnerability in a globalized world.”

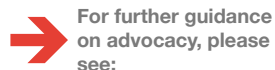
We may want to change how our colleagues, managers and governance think of DRR and CCA, and the way they deal with these issues in policies, strategies or programming. We may want to change the way a government, organization or business thinks, behaves or strategizes in terms of DRR and CCA. We may want to change public attitudes, remove discrimination, nurture care or understanding, or inspire community action. All of this calls for advocacy, whether external or internal.

Internal advocacy plays an important part in creating the conditions for mainstreaming DRR and CCA within National Societies or IFRC by helping staff, volunteers, managers and governance have a better understanding of disaster and climate-related risks and address them when making decisions in different areas.

The role of National Societies as auxiliaries to governments in the humanitarian field gives them a privileged seat in decision-making forums, and the space to raise DRR and CCA issues. Through **external** advocacy National Societies and IFRC will be able to:

- Represent, promote and give visibility at the international and regional level to their work for DRR and CCA;
- Influence the humanitarian agenda by identifying critical DRR and CCA issues whilst developing and advocating for solutions including institutional, policy, legal and regulatory frameworks;
- Position the RCRC as the leading humanitarian network, thus creating the basis for more effective partnerships and for more extensive and sustained resource mobilization.

Advocacy takes place in many ways and at many levels, through various approaches and methods. However, the basic steps are common to all advocacy whether it is at the national, district or local level. For DRR and CCA advocacy, you normally have to go through the following stages:



For further guidance on advocacy, please see:

- IFRC (2009): Humanitarian diplomacy policy. http://www.ifrc.org/Global/Governance/Policies/Humanitarian_Diplomacy_Policy.pdf
- IFRC (2012): Disaster risk reduction: a global advocacy guide. http://www.ifrc.org/Global/Publications/disasters/reducing_risks/DRR-advocacy-guide.pdf

The advocacy process



3. Practical guidance for mainstreaming DRR and CCA





For further guidance on climate change adaptation, see:

- Red Cross/Red Crescent Climate Centre (2007): Red Cross/Red Crescent Climate Guide. http://www.climatecentre.org/downloads/File/reports/RCRC_climateguide.pdf

Described below are the general steps to be taken to mainstream DRR and CCA, as well as the key mainstreaming issues in different contexts and sectors. For climate change-specific guidance and practical experience, please refer to the “Red Cross/Red Crescent Climate Guide”.

3.1 General steps for mainstreaming DRR and CCA

Mainstreaming requires some steps to be followed. Described below are the general steps to be undertaken to mainstream DRR and CCA into strategies, policies, programmes and projects:

DRR and CCA screening

The first step is to screen a strategy, policy, programme or project in question, with a DRR and CCA lens.

Aim: To check whether a strategy, policy, programme or project (referred to hereafter as activity) has considered and addressed the existing or future risks associated with disasters and climate change. It is meant to be done in a rather generic and quick way without having specific knowledge on disasters and climate change and without having access to detailed risk or climate data. This rapid and rough screening of risks and opportunities is intended to make a decision whether to proceed with a detailed assessment (see 3.1.2) or not.

When to do: The screening should be done at the beginning of the planning process of a new activity or during the review of a running activity.

How to do: The screening should be done by way of answering the key questions for DRR and CCA screening (see table below). It is recommended to go for a detailed assessment if the screening results show the high risks and the limited capacities to cope with them.

Question	Answer (yes/no)	Explanation
Are there any estimated risks associated with the planned activity?		
Are these risks high or low?		
Has the planned activity considered these risks?		
Has the activity included actions to address these risks?		
Do these actions reduce vulnerability to disaster and climate change risks?		
Are there any additional actions or opportunities to reduce risks and vulnerability?		
Do you have sufficient capacity to deal with the estimated risks?		
Is there a need for a detailed assessment?		

By whom: The screening can be done by a programme/project officer in charge of the activity as he or she is familiar with its context and focus. It can also be done by a group of appointed people, especially when it comes to a strategy or policy. At this stage, there is no need to conduct data research or to have broader stakeholder consultation to complete this first quick screening. The decision to undertake a detailed assessment should be taken by a senior manager (eg. Secretary General or Head of Department) or a person appointed by him or her.

Detailed assessment and adjustment

The detailed assessment should be done when the initial screening indicates the need for it. Adjustment should be made to the planned activity if the results of the detailed assessment show that disaster and climate change risks have not been duly considered or addressed. For the sake of ownership and sustainability of the planned activity, it is crucial to involve all stakeholders concerned in this process.

Aim: To assess whether a planned activity has considered and addressed disaster and climate change risks and to make necessary adjustment to make it risk-informed and climate-smart.

When to do: The detailed assessment and adjustment should be done when planning for a new activity or the review of an existing activity.

How to do:

- **Assess** the disaster and climate change risks associated with the planned activity.
 - ▶ Collect available data on climate change, hazards and socio-economic condition that impact or might impact on current and future vulnerabilities (i.e. deforestation, migration towards urban areas, demography, access to resources and markets, etc);
 - ▶ Identify the most relevant hazards and climate change impact at present and in the future;
 - ▶ Identify the elements most at risk;
 - ▶ Identify the factors influencing the current and future vulnerability and adaptive capacities;
 - ▶ Make an overall analysis of current and future risks and opportunities for the planned activity.
- **Identify** possible risk reduction and adaptation options through participatory approaches. Various tools and guides developed by the IFRC may be useful in this process, which include, for instance, the SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, VCA (vulnerability and capacity assessment), RCRC Climate Guide and Entry Points for Considering Climate Change in National Society Programmes.
 - ▶ Brainstorm among assessment team members the possible risk reduction and adaptation options without worrying about their feasibility, costs or other limiting factors;
 - ▶ Identify only new or adjustment options which are not yet included in the planned activity.
- **Select** the most appropriate among the identified risk reduction and adaptation options.
 - ▶ Agree on selection criteria and rating options (eg. low, medium, high). Selection criteria may include effectiveness, cost, feasibility and sustainability, with each having related questions. Please refer to the sample questions given in Table 2 below.
 - ▶ Facilitate the participation of all stakeholders concerned, especially community people when it comes to a community project, in the selection process.
 - ▶ Answer the questions in respective area of selection criteria and give an overall rating per each area. This can be done individually or collectively.
 - ▶ Agree on the most appropriate risk reduction and adaptation options for the planned activity by using the selection criteria.



For further guidance on VCA and entry points, see:

- VCA guides: <http://www.ifrc.org/en/what-we-do/disaster-management/preparing-for-disaster/disaster-preparedness-tools1/>
- Entry points: <http://www.climatecentre.org/downloads/File/VCA%20guidance/Six%20Entry%20Points.pdf>

Selection criteria and related questions

Effectiveness	Cost	Feasibility	Sustainability
<ul style="list-style-type: none"> Does the option reduce vulnerability and help to reinforce resilience? Does the option provide co-benefits for other sectors? Is the option flexible? Can it be adjusted in response to changing conditions? How big the the group of target people? 	<ul style="list-style-type: none"> Is this option more expensive or cheaper than others? Are the initial costs of implementation high or low? Are the long-term costs high or low? (maintenance, administration, staffing, etc.) Can the costs be covered by the planned activity? 	<ul style="list-style-type: none"> Are there necessary human, legal, technical, financial, material and administrative resources? Are there sufficient skills, knowledge, and capacities to take this option? Is there a need to adjust other policies to accommodate the risk reduction and adaptation option? Is this option acceptable to stakeholders (institutionally, socially and culturally)? 	<ul style="list-style-type: none"> Is this option socially, economically and environmentally sustainable? Is the option sustainable in the long term without external financial and technical support?

- **Adjust** the planned activity by incorporating the selected risk reduction and adaptation options. This means adjusting or amending its objectives as well as its main actions accordingly.

By whom: Detailed assessment and adjustment should be done by a multi-disciplinary team appointed by the leadership or management of a National Society or IFRC, with the involvement of stakeholders concerned of the planned activity.

Developing a monitoring and evaluation (M&E) framework

Mainstreaming DRR and CCA can be ensured only when the process is regularly monitored and evaluated. To this end, it is necessary to set up an appropriate M&E framework.

Aim: To define the indicators to measure the mainstreaming progress and to establish a necessary M&E system. Although the evaluation of DRR and CCA options is a highly challenging task, an appropriate M&E framework will help evaluate whether an action is justified and whether it is bringing about the intended benefits and ultimately contributing to building resilience.

When to do: An M&E framework needs to be defined as soon as risk reduction and adaptation measures have been selected and incorporated into a planned activity.

How to do:

- Define realistic and measurable output and outcome indicators;
- Develop a logical framework by using a logframe table and/or M&E plan table;
- Describe how to monitor and evaluate the mainstreaming of risk reduction and adaptation measures.

By whom: A M&E framework should be developed by a team that has done the detailed assessment and adjustment.

Quick guide: how to mainstream DRR and CCA

Learn.

→ pages 3-6

- ✓ What is **disaster risk reduction** (DRR)?
- ✓ What is **climate change adaptation** (CCA)?
- ✓ What is understood by **mainstreaming**?
- ✓ **Why** DRR and CCA should be mainstreamed?

Enable.

→ pages 8-10

- ✓ Ensure that the **leadership** and management of your Society committed to mainstreaming
- ✓ Create/adapt a strategic **framework** for DRR/CCA mainstreaming
- ✓ Ensure that your Society has adequate institutional **capacity** for mainstreaming
- ✓ **Advocate** within your Society and amongst partners for DRR/CCA mainstreaming
- ✓ Integrate DRR/CCA into **project cycle management** (PCM)

Screen.

→ page 12

- ✓ Look at current and planned projects with a **DRR/CCA lens**
- ✓ Go through the **screening checklist** (see page 12)
- ✓ Based on the results, **decide** whether a detailed assessment is required

Assess.

→ pages 13-14

- ✓ **Collect data** on climate change, hazards and socio-economic conditions
- ✓ Identify the most relevant present and future **hazards** and climate change impact
- ✓ Identify the elements most at **risk**
- ✓ Identify the factors influencing the present and future **vulnerability**
- ✓ Make an overall analysis of current and future **risks and opportunities** for the planned activity

Adjust.

→ pages 13-14, 16-52

- ✓ **Identify** possible risk reduction and adaptation solutions
- ✓ **Select** the most appropriate options
- ✓ **Adjust** programming accordingly.
- ✓ **Consider** additional information concerning the context (see part 3.2), sector (3.3) and gender (3.4)

Monitor.

→ page 14

- ✓ Establish a realistic **M&E Framework**
- ✓ Regularly (at least annually) **monitor risks**
- ✓ Review and **evaluate** whether activities remain appropriate
- ✓ **Re-adjust** if necessary

3.2 Key contexts for mainstreaming DRR and CCA

RCRC activities to prevent and alleviate human suffering are carried out in various contexts, which require National Societies and the IFRC to develop and apply different risk reduction and adaptation concepts and good practices. Described below are six specific programming contexts, each of which is accompanied by specific as key principles of DRR and CCA mainstreaming as well as good practice checklists.

Aside from this context context-specific guidance, there two general principles that apply to all contexts: First, a National Society needs to ensure that its has **adequate capacity at relevant levels** to mainstream DRR and CCA - if capacity gaps are identified, these need to be filled through training, support from headquarters or through linkages with external partners such as research institutes.

Second, it is worth stressing that given altering risk patterns, **risk should be regularly monitored** (at least once per year). If changes in circumstances and risk are identified, programming choices and activities may need to be adapted to these changes.

3.2.1

Conflict contexts



For further guidance on conflict settings, please refer to:

- IFRC (2003): Aid: supporting or undermining recovery. Lessons from the Better Programming Initiative (BPI) <http://www.ifrc.org/Global/bpi.pdf>

Conflict settings are those in which different sectors of society disagree about how power and/or resources are being used, and take action to prevent each other from pursuing their interests. They can be at any level, from local to national, across national borders, or involve multiple nations and global institutions. They can involve different levels of hostility between the groups “in conflict”, ranging from tense posturing, to physical, psychological and armed violence. Some conflicts develop rapidly, and are resolved rapidly; others are protracted, latent or recurrent.

Yet despite the wide spectrum of conflict settings, most share the following characteristics:

- The issues being disputed have their roots in structural inequities related to the distribution of power and resources in a society;
- They tend to occur in situations of poor or fragile governance;
- They are volatile, and conflict may worsen if interventions are insensitive to their dynamics;
- They offer opportunities to generate profound structural change;
- They negatively affect the rights of the affected population through deprivation and by constraining development;
- They generate insecurity for the affected population and other stakeholders present.

Conflict settings are not immune to multiple disasters. In fact, conflicts often coexist with disaster risks. The root causes of conflict - structural inequities in the distribution of power and resources among the population of a country or region - are also causes of vulnerability and exposure to natural hazards. By extension, the conditions of vulnerability that make certain social groups more likely to experience conflict and disaster, such as economic poverty and social marginalization, are also similar.

Violent conflict can exacerbate and perpetuate disaster risks. When people lose their lives, homes and livelihoods in acts of violence, or due to the threat of violence; their physical and economic vulnerability to other hazards increases. Also, the demands that conflict places on a government's resources can reduce its capacity or willingness to engage in other issues, such as reducing risks that may appear less urgent than those related to current violence. Conversely, hazards can trigger or fuel conflict, particularly over limited natural resources. For example, a drought that reduces the availability of fertile land and water can lead to disagreements about ownership and customary rights, and potentially to acts of aggression to obtain them.

It is likely that climate change risk will coincide with conflict risk. Global climate change is expected to exacerbate some existing conflicts and contribute to new ones, through gradual changes to the natural resource base on which people's livelihoods depend and because of its effects on existing hazards. Climate-related migration is also expected to lead to conflict over land, jobs and other resources in regions and cities that are unprepared for rapid population growth.

Strategies and programmes for people living in conflict settings, therefore, need to consider disaster and climate change risks and their linkages with conflicts and address them through different activities.

Similarly, DRR and CCA in conflict settings should be undertaken in a way that is sensitive to the dynamics of the conflict so that they may not inadvertently create additional or compound risks for the affected population. DRR and CCA activities may also contribute to reducing conflict by bringing together key participants and groups to seek consensus on priorities for improving their lives, livelihoods and wellbeing – thereby building capacities for peace.

Mainstreaming DRR and CCA in conflict settings means considering and addressing disaster and climate change risks in programmes or projects for affected people living in conflict settings.

Conflict settings: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the disaster and climate change risks of people living in conflict areas; analyze causes, consequences and responsibilities; and identify linkages between conflict and disaster and climate change risks. • Use VCA to generate analysis of exposure and vulnerabilities and capacities in relation to conflict and peace, as well as in relation to disaster and climate change risks.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Use disaster and climate change risk discussion as an opportunity to bring together different conflict groups and build peace among them. • Ensure the participation of all stakeholders in programme design, resource allocation and decision making. • Support multi-sectoral programmes that address risks holistically. • Support the development of early warning signs of conflict, and contingency planning, in order to adapt DRR and CCA programming accordingly. • Undertake periodic analysis with at-risk populations and other stakeholders of changes in the climate and their impact on conflict dynamics, and identify ways to address emerging problems.
C. Do no harm	<ul style="list-style-type: none"> • Train programme staff in conflict-sensitive approaches. • Analyze the conflict context before and during programming, and monitor any changes that may indicate that programmes are contributing to conflict. • Work in partnership with community-based organizations and networks that have experience and have gained trust in the conflict area.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Undertake active public awareness and public education activities to facilitate a peace building process. • Advocate for development and enforcement of legislation on issues that generate conflict and contribute to disaster and climate change risk. • Build working relationship and close coordination with those engaged in peace-building initiatives, so that they take into account disaster and climate change risk.

Conflict settings: good practice checklist

- ✓ **Analyze** the conflict context and identify linkages between conflict and disaster and climate change risk.
- ✓ **Encourage** at-risk and affected populations to look for win-win measures where similar risk factors are identified.
- ✓ **Make available** material, financial and technical support to governmental institutions that demonstrate political will to build disaster and climate resilience since stronger governance capacities may also reduce the risk of conflicts.
- ✓ Use disaster and climate change risk discussion as a reason to **bring together** representatives of different social, economic and indigenous groups. Learning to interpret information and exchange ideas is an important tool for peace building as well as for building disaster and climate resilience.
- ✓ **Work with at-risk populations** to identify preparedness measures for known hazards that are unlikely to exacerbate or trigger conflict; where possible, encourage dialogue and agreement between different interest groups on temporary contingency arrangements, such as evacuation and migration routes, shelters, and access to water points.
- ✓ **Include** institutional-strengthening components in interventions where relevant, to contribute to the development of accountable governance systems.
- ✓ **Encourage** representatives of national and regional governance bodies to visit initiatives that are building disaster and climate resilience in conflict settings.
- ✓ **Document learning** from programmes, to fill gaps in sector-wide understanding of the interface between disaster and climate change risk, and conflict.
- ✓ **Identify and strengthen** customary ways of negotiation and conflict resolution that could be effective for decisions on DRR and CCA.
- ✓ **Advocate** for reconstruction and reintegration programmes to take into account the long-term viability of land, natural resources and employment opportunities, in peace-agreement processes and post-conflict settings.
- ✓ **Refrain from** making unilateral decision on allocating resources or defining projects without consulting all stakeholders (including opposing groups).

Urban contexts

3.2.2



Today more than half of the world's population lives in cities, with an additional two billion urban residents expected in the next twenty years.⁴ Much of the population growth is expected in small and medium-sized cities in developing countries, yet 1.2 billion urban residents already live in slums - this figure too is expected to grow.

For historical and strategic reasons, many of the world's major cities are located in areas exposed to major geological and meteorological hazards, for example, on the coast, on floodplains, or in tectonically active areas. In many cases, urban peripheries are exposed to additional sources of low-level hazards as a consequence of inappropriate land use or poor natural resource management. Urban areas concentrate disaster risk due to the aggregation of people, infrastructure and assets, urban expansion and inadequate management and, therefore, suffer greater fatalities and economic losses than rural areas.

The settling of communities in high-risk areas is often the result of rapid and uncontrolled urbanization accompanied by increased competition for land, decreased vegetation cover, changes in land use and greater climate variability.

The urban poor living in peri-urban areas and informal settlements are particularly vulnerable due to their tendency of residing in high risk areas and faulty shelters, having limited access to basic and emergency services, and a general lack of economic resilience. These drivers alter population distribution, relative wealth or impoverishment, and disaster risk over a short time horizon.

➔ For further guidance on urban contexts, please refer to:

- IFRC (2011): No time for doubt: Tackling urban risk. A glance at urban interventions by Red Cross Societies in Latin America and the Caribbean. <http://www.alnap.org/pool/files/tackling-urban-risk.pdf>
 - IFRC (2012): Programmatic directions for the Red Cross and Red Crescent in building urban community resilience in the Asia Pacific region. <http://www.alnap.org/pool/files/emi-ifrc-study-final-version-april-30-2012.pdf>
4. World Bank (2009): "Systems of Cities: Harnessing the Potential of Urbanization for Growth and Poverty Alleviation".

When combined with inadequate urban management, this will continue to exacerbate existing risks to hazards. Given these trends, without major changes in the management of disaster risks and urbanization processes, risk to city residents will increase as populations grow.

Climate change is aggravating the impact of climate-related hazards, particularly those related to temperature and precipitation changes, which, in turn, bring forth environmental health risks. The impacts of climate change should be cause for grave concern in urban regions as they multiply existing exposures and vulnerabilities. These include exposure to sea-level rise, and intensification of the heat island effect. The impacts of climate change and disaster risk in rural areas influence migration patterns, which characteristically contribute to the growth of low-income urban settlements. It is estimated that 20-30 million of the world's poorest people move each year from rural to urban areas.

Features of the urban context generate urban-specific vulnerabilities, such as:

- High-density built areas in locations that are exposed to hazards;
- Poorly constructed buildings often built with inferior materials and with variable levels of building-code enforcement, and the inadequate provision of risk-reducing infrastructure for the size and complexity of the urban system;
- Low ground infiltration rates and the difficulty of making structural alterations to the “hard” urban frame to reduce or manage sources of environmental risk, for example watershed management;
- Dependency on public utilities, such as piped water and electricity, which may be deficient, be disrupted following a hazard, or be affected by climatic variability and/or water availability;
- Dependency on rural agriculture and imports for food security, which are susceptible to climatic variability as well as local-to-global trade conditions;
- Lack of awareness of local hazards among new arrivals to urban areas.

Urban populations and governance systems also tend to have inherent capacities for reducing disaster and climate change risk, such as:

- Diverse and innovative livelihood strategies that spread risk and adapt to change;
- Availability of human capital (including professionals and skilled labourers) for designing and implementing resilience measures;
- Presence of multiple governmental institutions, urban development legislation, policies, and resources;
- Economies of scale that make protection of large numbers of people and economic activities easier and more cost-effective.

DRR and CCA in urban context is a long-term, low-visibility process, with little guarantee of immediate and tangible rewards. However, inaction is not an option and the RCRC is well-placed to make a measurable and positive impact on building resilient urban communities.

Mainstreaming DRR and CCA in urban contexts means considering and addressing disaster and climate change risks in programmes or projects for people living in urban areas.

Urban settings: principles for DRR and CCA mainstreaming

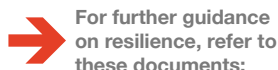
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> Assess the disaster and climate change risks of people living in urban areas and analyze causes, consequences and responsibilities. Use VCA to generate analysis of exposure, vulnerabilities and capacities. Define a RCRC role in DRR and CCA in an urban context.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> Engage a wide range of stakeholders in city-wide and area-specific forums for urban risk management. Adopt approaches promoting resilience through risk reduction and adaptation and focusing location, structure, operational aspects, and risk financing and transfer options. Support communities and broader society to absorb disturbances, to self-organize or adjust to existing and new stresses, and to build and increase their capacity for learning and adaptation. Develop multi-sectoral programmes that address risks holistically, as well as multi-sectoral contingency planning for hazards events. Promote environmentally sustainable, hazard- and climate-resilient choices in construction techniques, materials, and land-use planning. Support the development of multi-hazard and multi-effect forecasting and early warning systems. Use the best available information on climate change to develop long-term strategies for environmental health, safe housing and employment generation.
C. Do no harm	<ul style="list-style-type: none"> Work in partnership with neighbourhood associations and civil society networks that have close knowledge of target populations and areas, and are well-placed to identify unintended impacts. Advocate for post-disaster reconstruction and rehabilitation projects in urban areas to integrate DRR and CCA.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> Undertake active public awareness and public education activities to raise awareness and engage people in urban risk reduction and adaptation activities. Advocate for development of national policies and legislation that create an enabling environment for urban resilience-building. Establish strategic partnerships with local authorities, professional organisations, private sector, academia, and other local urban actors.

Urban settings: good practice checklist for practitioners

<ul style="list-style-type: none"> ✓ Build institutional capacity on risk profiling and risk mapping to link risk parameters to the conditions of the slum communities and the most vulnerable. ✓ Use participatory risk assessment processes to generate greater social cohesion in heterogeneous urban populations. ✓ Develop and overlap maps of hazards and other effects of climate change on urban areas at different scales (regional, city-wide, and of specific neighbourhoods or sectors) to build a comprehensive understanding of the context for any intervention. ✓ Integrate analysis of hazards and effects of climate change with other sources of urban risk, such as technological hazards and social violence, because the complexity of the urban environment requires resilience building strategies that seek to address multiple sources of risk. ✓ Consider potential effects of population growth, migration trends and unemployment/ informal employment on exposure, vulnerability and capacities for resilience. ✓ Focus on illegal and spontaneous settlements where vulnerability and exposure are likely to be higher. ✓ Engage professionals (engineers, city planners and social workers) to provide expert analysis where necessary, for example, of construction, land use and social conflict. 	<ul style="list-style-type: none"> ✓ Focus efforts to understand funding streams that could be accessed at national to local levels for urban risk reduction and adaptation programmes. ✓ Link urban risk reduction and adaptation activities with the UNISDR's Making Cities Resilient Campaign. ✓ Support school-based awareness-raising and emergency preparedness drills. ✓ Focus on advocacy programmes that promote access to safe urban spaces for the poor, women, and people with disabilities. ✓ Support water and sanitation projects that improve access to safe water and hygiene for slum dwellers. ✓ Raise public awareness of rights and responsibilities for basic services, such as water supply, sanitation and waste management, which have a major impact on vulnerability in urban environments. ✓ Advocate for the creation/updating and implementation of legislation that strengthens accountability for disaster risk reduction of public and private sector actors. ✓ Support representatives of neighbourhood associations and civil society groups to participate in forums on urban planning and development, and to raise issues of risk and resilience.
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3.2.3

Reducing vulnerability, strengthening resilience



For further guidance on resilience, refer to these documents:

- IFRC (2008): A framework for community safety and resilience. <http://www.ifrc.org/Global/Case%20studies/Disasters/cs-framework-community-en.pdf>
- IFRC (2012): The road to resilience. Bridging relief and development for a more sustainable future. [http://www.ifrc.org/PageFiles/96178/1224500-Road%20to%20resilience-EN-LowRes%20\(2\).pdf](http://www.ifrc.org/PageFiles/96178/1224500-Road%20to%20resilience-EN-LowRes%20(2).pdf)

Vulnerability refers to the characteristics and circumstances of households, communities, systems or assets that make them susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management and planning. Vulnerability becomes chronic when it is persistent and long-lasting.

There are causal factors that influence vulnerability, which include, among others:

- Uncertainty in climate;
- Disrupted supply and demand system;
- Heavy dependence on natural resources and inadequate/inappropriate investment in increasing production in line with demand;
- Depletion of asset base and dependence on unsustainable coping strategies;
- Dismal access to services;
- Restricted markets;
- Land-tenure systems, and insecurity of access;
- Lack of investment in protecting common property;
- Lack of economic alternatives;
- Undiversified income;
- Lack of investment in education and health;
- Weak governance;
- Overexposure to inequitable markets;
- Inadequate infrastructure.

Broadly, there are three approaches to vulnerability reduction that have evolved in recent years in development and disaster risk management sectors. The **first** is the livelihood framework evolved in bilateral development aid context; the **second** is the community-based disaster risk management (CBDRM) developed in disaster risk management sector; and the **third** is the risk transfer and finance initiated by multilateral development finance institutions.

The **livelihood framework** captures the dynamic, complex nature of people's vulnerability. It not only describes the different aspects of people's vulnerability but also points to human, natural and physical assets as well as social, political and economic structures and processes that may reduce vulnerability and enable sustainable livelihoods for the poor. **CBDRM** aims at reducing vulnerability and strengthening people's capacity to cope with hazards through community participation and involvement in vulnerability and capacity assessment (VCA) and disaster risk management activities. **Risk transfer and finance** comprises various insurance and financial schemes such as risk management strategies of poor households; support-led interventions for vulnerability reduction and mitigation; financial resources for mitigation and investment; and natural disaster insurance.

Resilience	
Definition	The ability of individuals, communities, organisations, or countries exposed to disasters and crises and underlying vulnerabilities to anticipate, reduce the impact of, cope with, and recover from the effects of adversity without compromising their long term prospects. <i>[IFRC]</i>

Resilience is a concept that allows multiple risks and their impacts on vulnerable people to be considered and addressed together. A resilience approach integrates many of the insights and approaches of development work with a humanitarian approach. This approach takes a comprehensive and integrated approach to reducing risks and strengthening capacity.⁵ It understands that the level of vulnerability to disasters and climate change is often determined less by the scale of a disaster or a shock and more by the underlying vulnerability, caused by a set of inter-related risks. Resilience programming seeks to address vulnerability to threats through sustained engagement that is explicitly participatory, inclusive and accountable.

Mainstreaming DRR and CCA in the context of reducing vulnerability and strengthening resilience means considering and addressing disaster and climate change risks in programmes or projects for vulnerability reduction and resilience building. These programmes or projects usually have longer time frames and comprise the intervention of different sectors.

- Whereas this guide focuses on mainstreaming DRR and CCA into the existing work of the RCRC Movement, Turnbull et al (2013) provide guidance for an integrated approach. See Turnbull, M. et al (2013): Toward Resilience. A guide to disaster risk reduction and climate change adaptation. <http://reliefweb.int/sites/reliefweb.int/files/resources/ECB-toward-resilience-Disaster-risk-reduction-Climate-Change-Adaptation-guide-english.pdf>

Case study Solomon Islands: Climate change adaptation activities

Since 2007, the Solomon Islands Red Cross (SIRC) has been considering the issue of climate change amongst its programmes. Increased cyclone intensity, rising sea levels and food insecurity are of particular concern in the Solomon Islands. Here are examples of what SIRC has been working on.

Partnerships: SIRC has been assisting the Solomon Islands government's environment office to implement its National Adaptation Programme of Action by assisting with vulnerability assessments in communities and contributing to the capacity-building component. This component included assisting the college of higher education to develop its course in environmental studies, which incorporated climate change and disaster management modules.

Community-based risk reduction: SIRC has been working with particularly vulnerable communities, who are threatened by hazards such as increased coastal erosion and rising sea levels.

It has assisted with the building of traditional sea walls in Temotu Province in the far east of the country.

Integrating with training and strategies: SIRC has integrated climate change adaptation within its strategy – it is not dealt with separately. Climate change is a part of the volunteer dissemination week, the 'Together for healthy communities' and the "Together becoming resilient" project.

Communications: The climate change and disaster risk reduction officer has been speaking on radio, and works with colleagues to carry out awareness-raising in schools.

Advocacy: SIRC has provided a link between community voices and the development of national climate change adaptation plans, and is contributing to government submissions to the United Nations Framework Convention on Climate Change (UNFCCC).

Reducing vulnerability, strengthening resilience: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the past, present and future disaster and climate change risks in the region or beyond, as well as the exposure, vulnerability and capacity of the people or communities concerned. • Define a RCRC role, especially with regard to DRR and CCA.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Take comprehensive and integrated approaches to vulnerability reduction and resilience building by combining livelihood, community-based disaster risk management and risk transfer strategies. • Address the underlying causes of vulnerability and build resilience to disasters and climate change impact throughout the overlapping phases of disaster risk management, while linking it closely to developmental programming. • Strengthen local capacity to resist and recover from the effects of a disaster and climate change and variability on their lives.
C. Do no harm	<ul style="list-style-type: none"> • Provide assistance to existing institutional structures and social support networks. • Within preparedness processes, consider the potential impacts of interventions on local markets and social dynamics (such as the impact of food distributions on local food prices, and the impact of cash programming on intra- and inter-household support systems) and give preference to the interventions that effectively meet current needs and build longer term resilience.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Undertake public awareness and public education activities and promote effective information sharing to bring about a positive change in people's risk-informed and climate-smart behaviour and thinking. • Build working relationships and close coordination with the relevant authorities and actors at different levels.

Reducing vulnerability, strengthening resilience: good practice checklist

- ✓ **Gather information** on disaster risks, climate variability and climate change;
- ✓ **Make detailed assessments** of vulnerability and capacity through VCA;
- ✓ **Develop a vulnerability profile** of a community, region or country with a list of hazards to which it is exposed or it may be made susceptible, existing vulnerabilities of the people and communities that are most likely to be affected by the disaster, and their capabilities to deal with them;
- ✓ **Develop programmes/projects with long-term interventions** for vulnerability reduction and resilience building, based on VCA findings;
- ✓ **Conduct the DRR and CCA check before, during and after the programme/project** implementation and take additional DRR and CCA measures, if needed, to make the programme/project risk-informed and climate-smart;
- ✓ **Raise awareness and change perceptions** about vulnerability factors by engaging individuals and groups in assessing hazard, risk and vulnerability;
- ✓ **Apply various DRR tools developed by the RCRC** (PHAST, PASSA, CBHFA, CBDRR, etc) wherever relevant and based on the priorities, risks and needs identified;
- ✓ **Develop effective information-sharing mechanisms among vulnerable people** so that they can make risk-informed and climate-proof decisions when they consider their vulnerability reduction and resilience building options;
- ✓ **Encourage beneficiary communication** to ensure effective reach-out and wide dissemination of DRR messages and scale up dialogue with communities;
- ✓ **Refrain from opting for a quick fix** for chronic vulnerability reduction and resilience building.

Disaster preparedness

3.2.4



Disaster preparedness (DP) is central to the RCRC work. DP activities within the RCRC are usually carried out in two distinct, yet inter-related areas – community preparedness and institutional preparedness. Community preparedness involves reducing the vulnerability of individuals, households and communities in disaster-prone areas and improving their ability to cope with the effects of disasters. Institutional preparedness includes strengthening the capacities of the IFRC and National Societies' in DP and post-disaster response, determining a RCRC role and mandate in national disaster plans, and establishing regional and global networks of National Societies that will strengthen the IFRC's collective impact in DP and any subsequent response.

At the community level, National Societies are involved in community-based disaster preparedness (CBDP) programmes consisting of public education/mobilization, training and community-based approaches or activities that build local efforts to reduce risks and enhance the local capacity to prepare local response mechanisms to cope with disaster situations. DP also raises awareness of the hazards through early warning alerts and access to related knowledge to support preventative and preparedness actions at community level before a disaster strikes. This may include setting up community response teams and emergency communications channels.

At the institutional level, DP aims to build institutional readiness that is complementary but does not replace the government's responsibilities. It sets up measures to improve the efficiency, effectiveness and impact of disaster response mechanisms at local, national, regional and global levels. These measures should also lead to improved rehabilitation and recovery. This may include the development and testing of early warning systems and evacuation plans, training of staff, volunteers (national disaster response teams), and the establishment of disaster response plans with clear roles and responsibilities in any National Response Plan or

legislation. As a Cluster Lead for Emergency Shelter, the IFRC also has a mandate to coordinate and influence habitat-related policies and ensure the mainstreaming of DRR into them. DP is one of the main components of DRR; it is also key to successful CCA as it helps deal with the uncertainty that climate change encompasses.

Mainstreaming DRR and CCA in DP means considering and addressing the disaster and climate change risks in the overall DP programming. In other words, it is about changing the mindset of people for risk-informed and climate-smart behaviour and thinking in DP activities.

Case study Philippines: **Communities prepared for disaster response**



To address risks specific to the Philippines and to reduce the impact of disasters on vulnerable people, the Philippine National Red Cross (PNRC), the IFRC and other partners have over past 15 years together designed and implemented innovative models for community-based disaster risk management (CBDRM) - using integrated, multi-sectoral and multi-hazard community disaster preparedness approaches.

PNRC's initial foray into CBDRM programmes in 1994 was intended to help the organization move from a largely response-oriented approach to disaster management towards a more pro-active focus on enhancing the preparedness of vulnerable communities and mitigating the impacts of recurring disasters.

The initial programme sought to lessen the damage to health, homes or livelihoods caused by natural hazard events by addressing the numerous 'small' risks faced in local communities.

Throughout its evolution, the programme has included activities such as:

- creating and training local disaster preparedness and response teams, called Barangay Disaster Action Teams (BDATs),
- training and equipping Barangay Health Workers or Barangay Health and Welfare Assistants,
- conducting hazard assessments using the hazard Vulnerability and Capacity Assessment (VCA) methodology,
- preparing local hazard maps,
- producing Barangay Disaster Action Plans,
- engaging youth and school teachers through disaster preparedness and first aid training.

The BDATs were also provided with basic equipment such as rubber boots, rain jackets, flashlights, and megaphones. In some Barangays, geophysical mapping activities were implemented through partnerships with private sector companies.

Disaster preparedness: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess whether a DP programme or project has considered the past, present and future disaster and climate-related risks, as well as the exposure, vulnerability and capacity of the people or communities concerned.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Engage communities in planning DRR and CCA measures and formulating a local DP and response plan involving different timescales. • Ensure that DRR and CCA measures in DP programmes or projects address the underlying causes of hazards and reducing people's vulnerability to them. • Strengthen communities' DP through NS's programmes for communities or through direct support to their activities. • Strengthen community-based approaches and activities that build the capacities of people and communities to cope with and minimise the effects of a disaster on their lives, taking into account the increased variability and magnitude of hazard events. • Improve the contingency planning at institutional and community levels through the involvement of all stakeholders to be prepared for both known and unknown risks. • Use DP programming as an essential link between relief, rehabilitation and development that build the capacities at the community and NS's levels to better cope with future disasters and reduce vulnerability.
C. Do no harm	<ul style="list-style-type: none"> • Provide assistance in ways that build local capacity and strengthen traditional coping mechanisms. • Consider the potential impacts of interventions on local communities' increased dependence on external support.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Undertake public awareness and public education activities and promote effective information sharing to bring about a positive change in people's risk-informed and climate-smart behaviour and thinking. • Build working relationships and close coordination with the relevant authorities and actors at different levels. • Advocate for longer-term disaster preparedness, risk reduction and adaptation planning and for resilience building.

Disaster preparedness: good practice checklist

- ✓ **Make the DRR and CCA check** before, during and after the programme or project implementation and take additional DRR and CCA measures if needed, to make the programme or project risk-informed and climate-smart;
- ✓ **Develop a risk profile** for a community, region or country with a list of past, present and future disaster and climate change risks and identify the most likely hazards, possible risks that may be caused by them, existing vulnerabilities of the people and communities that are the most likely to be affected by the disaster, and the capabilities for disaster response;
- ✓ **Raise awareness and change perceptions about potential risks** by engaging individuals and groups in assessing hazard, risk and vulnerability and producing local community hazard, risk and capacity mapping;
- ✓ **Develop and regularly test early warning systems**, evacuation plans or other measures to be taken during a disaster alert period to minimise potential loss of life and physical damage;
- ✓ **Advocate to the authorities**, and partner with them, for development and annual testing and revision of contingency plans for relevant hazards;
- ✓ **Organize training for staff, volunteers and the population at risk** to improve their skills;
- ✓ **Establish emergency response policies**, standards, organisational arrangements and operational plans to be followed after a disaster;
- ✓ **Carry out an assessment of NS capacity** (eg. by using the Well-Prepared National Society self-assessment questionnaire) and identify the areas to enhance the NS' institutional preparedness capacity;
- ✓ Develop activities that are useful for **both addressing everyday risks** faced by communities and **disaster situations**, like health, first aid or social welfare programmes that have components useful for disaster reduction and response;
- ✓ **Regularly review and improve** disaster response mechanisms, strategies and DP plans;
- ✓ **Become familiar with how local people engage in DP** and disaster response and design ways to support their efforts through participatory approach;
- ✓ **Refrain from opting for a short-term intervention or a sectoral stand-alone preparedness measure** as it may fail to build the local capacity or prove less effective in improving the overall level of preparedness.

3.2.5

Disaster response



Disaster response is the provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration. It is characterised by the speed at which it is delivered. In many cases it aims for a general provision to everyone in need rather than a targeted provision to those with least resilience. This is often done in the immediate days after a disaster and can continue for several months afterwards until other provisions can replace relief or there is a transition to permanent services and institutions. Relief assistance usually comprises the support in the form of health care, water and sanitation, psychosocial services and the distribution of food and non-food items and emergency shelter solutions.

Disasters present a “window of opportunity” for promoting and implementing risk reduction and adaptation measures, because the consequences of failing to act are so strongly implanted in the minds of those affected by disasters, as well as the public policy-makers who have to manage their effects. However, this window of opportunity does not automatically lead to positive changes unless it is seized in time and used effectively. As auxiliaries to their national governments, NS's are well placed to advocate for adoption and implementation of disaster response, recovery and development policies that take into account all risk factors.

Humanitarian response following a disaster is the absolute imperative of the IFRC and NS's. However, this is not an end in itself but a means to an end, with increased safety and resilience and decreased vulnerability as a consequence, implying a diminishing need to respond to disasters in the future. The IFRC policy on integrating relief, rehabilitation and development stipulates that “relief should lay the foundation to rehabilitate livelihoods in such a way that they emerge more resistant to shocks in the future”.

Disaster response aimed at providing relief assistance to affected people and meeting their immediate needs should be undertaken in a way that works towards meeting the longer-term risk reduction and adaptation objectives. In helping disaster victims to survive, relief programmes must look to the future and ensure that people are not left more vulnerable to the future disasters and climate change impact. Wherever possible, relief programmes should attempt to build upon the capacities of those being assisted, involve them in the management and implementation of the programmes and act with a sense of accountability towards the beneficiaries. In this way disaster response can be risk-informed and climate-smart.

Mainstreaming DRR and CCA in disaster response means considering and addressing the disaster and climate change risks in disaster response programming. In other words, it is about making risk-informed and climate-smart planning and decisions during disaster response.

Disaster response: principles for DRR and CCA mainstreaming	
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the current and future disaster and climate change risks faced by the target population, as well as their vulnerability and capacity. • Analyse the underlying causes of risks and vulnerability.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Base disaster response activities on appropriate DP programming and planning. • Use relief as an opportunity to enhance the capacity of local communities by building upon their coping mechanisms, utilizing local material and resources and taking measures that regenerate livelihoods and local economies. • Adapt relief programming to the socio-economic, cultural and environmental context and base interventions on local technologies and locally available resources as far as possible through active engagement of community people. • In post-conflict situations, design relief programmes that contribute to co-operation and reconciliation by building upon shared needs and common beliefs. • Focus on what is achievable – communities already hit by a disaster have many urgent problems to attend to, and they will not respond if they believe the proposed mitigation measures are beyond their reach. • Take the opportunity to induce positive socio-economic change and not merely a return to the status quo. • Allocate adequate resources for longer-term disaster preparedness and DRR (eg. IFRC's 2011 General Assembly Decision No. 11/45).⁶ • Put in place care and maintenance plans for physical infrastructure and educate people in how to sustain the rehabilitated facilities.
C. Do no harm	<ul style="list-style-type: none"> • Provide relief assistance in a way that helps meet the immediate needs of affected people and, at the same time, build their longer-term resilience to future disasters. • Within preparedness processes, consider the potential impacts of relief interventions on communities, local markets and social dynamics.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Combine relief assistance with public awareness and public education activities to improve affected communities' preparedness for response to future disasters. • Promote systematic coordination, improved working methods for joint assessments and planning and the exchange of data and information between all disaster response agencies. • Advocate for solutions to reduce the underlying causes of disasters and ensure better linkages between relief, rehabilitation and development. • Promote the IFRC's role as a Shelter Cluster Convener to ensure the mainstreaming of DRR and CCA into response and recovery actions.

6. IFRC 2011 GA Decision No. 11/45; "welcomes the September 2011 decision of the Governing Board that every appeal for international disaster response should include, as far as possible, a provision of at least 10 percent for longer term disaster preparedness and risk reduction work.

Disaster response: good practice checklist

- ✓ **Consider the long-term effect** of the planned disaster response on the resilience building of affected people and communities and their development opportunities;
- ✓ Design disaster response in a way to not only **meet the immediate needs** of affected people but also **reduce their vulnerability to future disasters** and the impact of climate change and variability;
- ✓ Combine the disaster response operation with **capacity-building** of National Societies at various levels and of vulnerable communities;
- ✓ **Start the recovery alongside relief** to restore the affected people's lives to pre-disaster conditions and make them less vulnerable to future disasters and climate change and continue it until a more normal environment is achieved;
- ✓ **Combine relief distribution with different livelihood security projects/programmes** for food security and income generation;
- ✓ **Consider food- and cash-for-work initiatives** for public works to improve resilience to future shocks by building mitigation infrastructure such as irrigation channels, dams and other water harvesting structures, embankments, flood shelters, and measures to stabilise hillsides (terraces, gabions and afforestation);
- ✓ **Plan a smooth phase-out** of the relief operation;
- ✓ **Set the clear objectives and targeting of cash- and food-for-work programmes** and ensure the good management and community participation for their success;
- ✓ **Consider and address the psychological impact** of disasters;
- ✓ **Take participatory approaches based on local skills** and appropriate technologies to offer the best chances of long-lasting success;
- ✓ Ensure that care and maintenance plans for rehabilitated community facilities are discussed and agreed upon by all stakeholders;
- ✓ **Treat disaster response and DRR/CCA as interrelated activities**;
- ✓ **Take into account the causal factors** of disasters in disaster response planning;
- ✓ **Refrain from undermining local markets** and income generating opportunities by influxes of relief goods and outside labour;
- ✓ **Refrain from letting relief inadvertently reinforce tension** or conflict within or between communities.

3.2.6

Recovery



Recovery aims to restore and improve people's lives to pre-disaster conditions, making them less at risk to future disasters and climate change impact. Recovery from the DRR and CCA perspective is a process that results in people's lives returning to normal but in such a way that they will have more resilience to future disasters and climate change impact.

IFRC's recovery is broken down into two concepts - early recovery and recovery. **Early recovery** involves providing assistance to people in the earliest stages of disaster response, alongside the provision of relief, improving the effects of the relief and providing the basis for longer term recovery. It enables people to engage more readily in longer term recovery activities. **Recovery** as a term is used in various ways but in IFRC specifically refers to activities that start in the first year and may take several years to complete.

Following a disaster, life-saving assistance is the most urgent need. However, even at this stage, relief must be conducted with a thought to the affected community's longer-term benefit. As people begin to get back on their feet and rebuild their lives, they should be supported to strengthen their resilience to future hazards. Just restoring the pre-disaster status quo may inadvertently perpetuate vulnerability. The concept of "building back better" is generally accepted as critical to this process, to ensure that future development is risk-sensitive, hazard-resilient, and climate change-adaptive.

DRR and CCA are key to effective programming in this context because the affected population's recovery needs to be sustainable in the long term in a hazard-prone environment that may also suffer additional or magnified stresses due to climate change. The recovery context presents both opportunities and challenges for DRR and CCA.

Following a disaster, affected people tend to be very receptive to interventions that aim to reduce their vulnerability to similar hazards. At the same, many of the organisations responding to the emergency are also committed to implementing humanitarian programmes in ways that reduce future vulnerability, and have resources available to do so. The government of a country that has recently experienced a major disaster is often able to obtain additional resources which, if managed wisely, can be directed to addressing underlying risk factors. However, the recovery context also presents various challenges in that all actors are under pressure to meet urgent needs on a massive scale. Longer-term goals may be considered of secondary importance and outside the scope of emergency funding.

Mainstreaming DRR and CCA in recovery means considering both current and future disaster and climate change risks and including various measures to address them, in recovery programming.

Recovery: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Use post-disaster assessment methods that identify exposure, vulnerabilities and capacities to build resilience in addition to humanitarian needs. • Conduct rapid and detailed assessments of disaster risk and potential future climate change impacts, and use the results to inform or re-orient the recovery programme design. • Consult local government pre-disaster risk maps, contingency plans and disaster risk management plans for information that will enable programmes to target vulnerable groups and build upon traditional coping mechanisms and local capacities.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Design recovery programmes in line with the National Society's or IFRC's longer-term strategic plans and capacities and with due consideration of the needs to be met through its short-term recovery operations and through its longer-term core programmes. • Provide adequate information about risk and risk reduction options to the affected population to enable them to make choices in their recovery process that increase their resilience. • Strengthen local and national capacity and build resilience to future disasters.
C. Do no harm	<ul style="list-style-type: none"> • Ensure that recovery programming does no harm either socially, economically or environmentally. • Analyse proposed interventions in terms of their potential impact on disaster and climate change risk (current and future) and to make the results available to affected and at-risk populations.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Leverage the heightened awareness of risk following the recent disaster to initiate or update mapping of all relevant hazards and effects of climate change (using projections at the lowest available scale). • Raise awareness of the need for recovery and reconstruction programmes to be based on a sound assessment of current and future risk. • Advocate for recovery and reconstruction plans to address conditions and causes of vulnerability, including structural issues of land tenure, poverty and exclusion. • Work with all stakeholders for better understanding of the need for longer-term strategies and for close coordination in recovery.

Recovery: good practice checklist

<ul style="list-style-type: none"> ✓ Collect available information on the impacts of climate change on that specific region/state and listen to people about what kind of assistance they want and when they want it; ✓ Support colleagues in all sectors to use an appropriate assessment method that identifies vulnerabilities to hazards and the effects of climate change; ✓ Encourage colleagues to include recovery measures in all sectoral responses and in different contexts or complex situations such as urban risk reduction, chronic slow-onset crises or compound emergencies; ✓ Include "safety net" measures such as unconditional cash grants and community kitchens to reduce the need for disaster-affected people to resort to negative coping mechanisms (such as selling their assets) which would increase their future vulnerability; ✓ Undertake continuous risk analysis during the implementation of recovery programmes since risk profiles may change over time as the post-disaster situation unfolds; ✓ Advocate for the involvement of local leaders, representatives and community-based organizations in post-disaster assessment processes and decisions about relief and recovery, and support them to identify and communicate the needs of their communities; ✓ Work with the media to build public awareness of the need for response, recovery and reconstruction strategies to reduce exposure and vulnerabilities and build capacities for resilience; 	<ul style="list-style-type: none"> ✓ Raise awareness among all stakeholders of relevant national laws (on disaster risk management, DRR, CCA, land tenure and land-use planning, building codes, and others), and advocate for new/revised legislation where necessary; ✓ Promote hazard and climate-resilient choices in construction techniques, materials, and land-use planning; ✓ Build upon increased interest in resilience to future disasters by establishing/ strengthening multi-stakeholder platforms (at all levels) to monitor disaster and climate change risk; ✓ Leverage interest in the current crisis to obtain multiyear funding for longer-term disaster and climate resilience-building interventions in addition to short-term relief projects; ✓ Participate in the Recovery Cluster, if one is set up; ✓ Refrain from implementing or supporting activities that encourage deforestation, water contamination or other forms of environmental degradation. ✓ Refrain from putting off thinking about recovery until you feel that emergency needs are met. Although priority should be given to meeting the immediate basic needs of affected people, recovery programming needs to go along with it to reduce their vulnerability to hazards, build their adaptive capacity and leverage their interest in DRR and CCA.
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3.3 Key sectors for mainstreaming DRR and CCA

Having presented the different contexts for mainstreaming DRR and CCA, let us turn to different sectors that are relevant to DRR and CCA, and where mainstreaming DRR and CCA can make a difference.

Health and care

3.3.1



People's health status is among the first casualties of disasters. Some hazards, such as earthquakes and storms, directly cause mortality and disability; others such as droughts and flooding undermine the health of individuals and communities over longer periods, even years, by causing an accumulation of stresses and diseases that in turn make them more susceptible to other types of infections and health hazards.

Disasters frequently cause the destruction of health facilities and the paralysis of health services through physical damage to buildings and equipment, the direct loss of health staff, and lack of awareness of procedures and resources to maintain operations in different circumstances, in which demand for healthcare is greater and more urgent. Secondary disasters can occur when people's health is negatively affected by overcrowding in temporary shelters, inadequate post-disaster responses in sanitation, water supply and quality, and solid waste disposal.

Climate change is increasing the number and intensity of extreme weather events, leading to more frequent destructive impacts such as those described above, as well as heat stress and pneumonia in unprecedented hot and cold spells. Changes in climate also act as a multiplier of existing health risks caused by climate-sensitive diseases. Water-borne diseases such as bacterial and parasitic infections are more likely as a result of more extensive and longer periods of flooding and drought.

Vector-borne and rodent-borne diseases such as malaria and dengue will increase in warmer, wetter conditions, and will affect new areas as global temperatures rise.

There will be increased morbidity and mortality among vulnerable populations where health services are non-existent or unable to respond to the changing patterns of disease and demand for appropriate healthcare. Climate change also causes various psychological impacts like acute or traumatic effects of extreme weather events; threats to emotional well-being; and chronic social and community effects of heat, drought, migrations, and climate-related conflicts.

An additional threat to people's health comes from decisions taken by other sectors to adapt - or mal-adapt - to climate change. Modifications to agricultural development strategies and budgets, new enterprises and industries, and changes to NRM policies all have the potential to directly affect people's health, and indirectly to affect their income and ability to pay for health care if due care is not taken when assessing their range of impacts.

Mainstreaming DRR and CCA in health and care means considering disaster and climate change risks and including various measures to address them, in health and care programming.

Health and care: principles for DRR and CCA mainstreaming	
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the likely epidemiological impacts of disaster risks and the projected effects of climate change in the programme location, as well as the exposure level of health facilities. • Assess the relevance of health programmes for current and future risk scenarios, and identify potential strengths, weaknesses and gaps. • Conduct health-focused Knowledge, Attitudes and Practices (KAP) surveys among at-risk populations to identify causes of vulnerability to current and predicted disease, as well as factors of resilience.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Build on, not detract from, existing effective health outreach programmes that target the most vulnerable to the impacts of hazards and climate change. • Consider health facilities as critical structures in the community that can provide both health services and restore resilience. • Ensure the hospitals maintain their functionality during emergency situations. • Build knowledge and skills at the community and household level about how to manage health risks that are exacerbated or caused by hazards and climate change. • Promote and strengthen effective early warning and early action systems for hazard events, extreme temperatures, epidemics and other events that can negatively affect people's health status.
C. Do no harm	<ul style="list-style-type: none"> • Promote good health and nutrition as the basis for resilience to all types of hazards, shocks and changes. • Promote communication and coordination between health actors working with at-risk populations. • Advocate for health providers to incorporate disaster and climate-resilience strategies into effective outreach programs where these already exist.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Raise awareness among at-risk populations of their right to health and how this is affected by disaster and climate risk. • Promote/support coordination on disaster and climate risk issues between health, housing/shelter, WASH (water, sanitation and hygiene), food security and nutrition actors at the local level. • Advocate for the engagement of health sector actors (governmental, non-governmental and private sector) in national platforms and forums for disaster risk reduction and climate change adaptation.

Health and care: good practice checklist

- ✓ **Share the results of assessments, surveys and other studies** with the health ministry and health service providers (governmental, non-governmental and private companies);
- ✓ **Work closely with food security, WASH and other sectors** to build a holistic and effective programme;
- ✓ **Support the formation of health committees within at-risk populations** and train them to carry out routine epidemiological surveillance to facilitate early detection and action.
- ✓ **Train and equip community members to carry out evacuations and give first aid** in disaster situations.
- ✓ Contribute to drawing up contingency plans to protect people's health in disaster situations.
- ✓ **Build knowledge and skills at the household level**, for measures such as oral rehydration in cases of diarrhoea, water purification, and safe food preparation and storage.
- ✓ **Identify national laws and policies relevant to health provision** and support at-risk populations to advocate for their implementation.
- ✓ **Promote multi-level contingency planning for health emergencies**, including re-deployment of health personnel, equipment and financial resources to meet increased needs.
- ✓ **Build evidence of links between changing disease patterns and hazards** over extended time periods to inform the development of appropriate DRR and CCA health strategies.
- ✓ **Analyze health surveillance records during and after previous disasters and weather extremes** to identify the main causes of morbidity and the most vulnerable groups.
- ✓ **Support at-risk populations to assess the relevance and effectiveness of traditional health practices** in relation to climate change and disaster risk, and encourage scale-up of successful ones.
- ✓ **Work with other health stakeholders to identify common indicators and "triggers"** for launching risk-reducing measures such as preventative health campaigns.
- ✓ **Support the establishment of early warning systems for health facilities** and conduct regular simulation exercises.
- ✓ **Reduce longer-term vulnerability through sustained immunization and health promotion** campaigns focused on eradicating common diseases and those likely to be exacerbated by climate change.
- ✓ **Contribute to multi-stakeholder and multi-sectoral coordination on DRR and CCA for health issues**, because they affect and are affected by actions in so many other sectors (such as water, housing, agriculture, industry) and by so many stakeholders.
- ✓ **Refrain from setting up alternative structures and systems for early warning and preparedness** that operate in parallel to government or community-based ones. Improving existing systems will usually be more sustainable in the long run.

Case study Mozambique: Reducing barriers to humanitarian assistance

With its 2,700 kilometres of coastline and numerous rivers, Mozambique is often – and increasingly – subject to major floods as well as cyclones. It has frequently benefited from international assistance to supplement its domestic responses to major disasters, such as the cyclones and floods of 2001 and 2007.

However, managing that aid has not always been easy. In 2011, the Mozambique Red Cross (CVM) began a project to support the Mozambican authorities to assess their legal preparedness for disasters in line with the

Guidelines for the domestic facilitation and regulation of international disaster relief and initial recovery assistance (which were adopted by state parties to the Geneva Conventions).

One gap that they found related to the importation of relief goods, including medication. In response to CVM's recommendations in 2011, the Government of Mozambique initiated a revision of its law on medication to include clauses on the delivery of emergency medication. Other recommendations are also being included in new DM legislation.

3.3.2

Water, sanitation and hygiene



In places where water and sanitation services have not been constructed with resilience in mind, hazards can destroy or paralyze them. Earthquakes, landslides and windstorms, for example, can damage wells, tanks, piped water distribution systems, and water towers and disrupt solid waste collection systems. Floods and volcanic eruptions can contaminate water sources and block distribution and collection networks. Droughts can cause water sources to dry up temporarily or even permanently, and prevent sewerage networks from functioning adequately.

All types of hazards can negatively affect hygiene practices that are dependent on a predictable supply of water and functioning sanitation services. In particular, in disaster situations when people are displaced from their homes and congregate in shelters or informal camps, the health risks are exacerbated if they do not have adequate water and sanitation for domestic and personal hygiene purposes.

Climate change is already causing, and will continue to cause, massive changes to the global water cycle. These include: changing precipitation patterns resulting in longer and more widespread droughts; melting glaciers and increased flooding; sea-level rise and salinisation of groundwater; greater intensity and frequency of extreme events; less predictability in water availability, quality and security, etc. These changes increase the likelihood of damage and disruption to drinking water and sanitation infrastructure and systems. Traditional hygiene practices may lose relevance or not be practical anymore in changing climatic conditions and with unpredictable water availability, for example. Climate-induced water stress is also expected to cause competition and tension between different types of water users (e.g., pastoralists, agriculturalists, industry), potentially leading to migration, conflict and displacement.

Mainstreaming DRR and CCA in WASH means considering disaster and climate change risks and including various measures to address them, in WASH programming.

Water, sanitation and hygiene: principles for DRR and CCA mainstreaming	
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Analyze the hazard profile of the programme location using the best available information on how hydro meteorological hazards are likely to be affected by climate change. • Assess the extent to which current WASH systems in the programme location are exposed to hazards and the projected impacts of climate change on surface and groundwater sources. • Assess access to water and sanitation services of the target population, its impact on their health and nutritional status, and how it creates vulnerability to hazards and the effects of climate change.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Base WASH interventions on assessments of current hazards and future scenarios that consider climate change observations, projections and uncertainties. • Take into account trends that affect water availability and demand for water and sanitation services, such as population increase, environmental degradation and high water-consuming industries such as mining. • Take an integrated water management approach that balances and regulates various needs, to reduce competition among different groups of water users. • Use sustainable technologies that are appropriate to disaster and climate risks, social and cultural needs and the resources available for their maintenance, such as raised hand-pumps, dry latrines, etc. • Ensure flexibility in new and upgraded systems for multiple scenarios. • Incorporate risk monitoring, contingency planning and early warning to respond to changing conditions and ensure that WASH services and facilities continue to be appropriate and relevant. • Meet urgent needs, particularly in post-disaster situations, and “build back better”. • Include capacity-building among users and suppliers to detect problems and generate ways to address them, and to modify hygiene practices in response to changing conditions.
C. Do no harm	<ul style="list-style-type: none"> • Undertake an environmental impact assessment prior to any intervention. • Systematically monitor groundwater quality and potability, to prevent consumption of contaminated water. • Promote communication and coordination between different water user groups whose access to water is likely to be affected by climate change. • Promote the development of WASH systems that are climate and hazard-resilient, and sustainable in terms of the resources and expertise available locally to maintain them.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Raise awareness among at-risk populations of their rights to water and sanitation and how these are affected by disaster and climate change risk. • Advocate for the engagement of WASH actors (governmental, non-governmental and private sector) in national platforms/forums for DRR and CCA. • Advocate to at-risk populations for implementation of national laws and policies relevant to WASH issues and climate and disaster risk. • Promote coordination between all water users and authorities within river basin catchments and aquifer recharge zones.

Water, sanitation and hygiene: good practice checklist

- ✓ **Carry out an assessment** of the hazard and climate change resilience of all the WASH systems you are working on, **and share the results** of assessments, surveys and other studies with government ministries (water, health, environment, and others) as duty-bearers for WASH, and other relevant stakeholders such as private companies contracted to supply WASH services;
- ✓ **Conduct hygiene-focused Knowledge, Attitudes and Practices (KAP) surveys** among at-risk populations to identify causes of vulnerability and capacities for resilience;
- ✓ Reduce exposure to hazard and climate risk by **carefully choosing the appropriate location for WASH structures**;
- ✓ **Develop the capacity of local health personnel and representatives of at-risk populations** to provide information on measures to take before, during and after common hazards;
- ✓ **Support the formation of WASH committees** within at-risk populations, train them to monitor and maintain WASH systems and to negotiate with external service providers;
- ✓ **Support the use of traditional water and sanitation practices, where still appropriate**, such as water harvesting and storage methods in drought-prone areas;
- ✓ Share examples of hazard- and climate-resilient WASH systems in other locations, to **encourage replication, where appropriate**;
- ✓ **Design/retrofit WASH systems to be functional in a range of predicted climate scenarios** (e.g. drought and flooding);
- ✓ **Promote systematic monitoring** of WASH installations following hazards and in different climatic conditions, and undertake/advocate for improvements where necessary;
- ✓ **Support users and service providers to identify early warning indicators** for hazards that may affect WASH systems, and to develop contingency plans;
- ✓ **Reduce longer-term vulnerability and exposure** by combining emergency measures and the development of sustainable, resilient systems in post-disaster WASH interventions;
- ✓ **Ask women about their WASH needs** – they are a key source of knowledge about WASH capacities and vulnerabilities in their communities, and may have different needs and concerns than men;
- ✓ **Implement modified sanitation systems that use lower volumes of water** and are less prone to blockages if water flows are unreliable;
- ✓ **Separate storm water from wastewater** to make sanitation systems less likely to be damaged in periods of flooding;
- ✓ Ensure that sanitation facilities and systems are at a safe distance from water sources, to **prevent contamination during flooding**;
- ✓ Include **water and sanitation as an integral part of shelter provision**;
- ✓ Take measures that will **reduce wastage of water** (thereby minimizing consumption);
- ✓ Encourage communities and service providers to **carry out maintenance on systems and structures prior to rainy/dry/storm seasons**;
- ✓ Refrain from letting ill-prepared budgets or poor operational planning force you to opt for unsuitable technologies or materials but **negotiate funding and time to research and implement sustainable options**;
- ✓ **Refrain from creating systems that are entirely dependent on one water source** or function only within a narrow range of climatic conditions because they will lose relevance in the context of climate change;
- ✓ In emergencies, give priority to ensuring minimum standards for water quantity and quality in emergencies - as soon as the situation stabilises, work towards reducing future vulnerability;
- ✓ **Consult relevant experts**, such as hydrologists, hydro-geologists, and water and sanitation engineers.

Migration

3.3.3



Migrants are those who leave or flee their home to go to a new place – usually abroad – to seek better and safer surroundings. Migration can be voluntary or forced, but generally a combination of choices and constraints are involved, as well as the intent to live abroad for an extended period. At present migrants make up three per cent of the global population. This means that approximately every 1 in 35 people in the world is a migrant.



For further guidance related to migration, please refer to:

• <http://www.ifrc.org/en/what-we-do/migration/additional-resources/>

While migration and displacement are interlinked, they should be distinguished. Displaced populations usually require relief operations combined with efforts aimed at achieving collective and lasting solutions. Our work with migrants, on the other hand, usually involves more individual social assistance, legal protection and personal support.

Many migrants succeed in establishing themselves in their new communities, but others – those at the centre of our attention – face difficulties. They may lose the links with their families and communities. Outside their traditional support systems, they often are unable to access health and social services that respect their basic needs and dignity. They may be subject to human trafficking, sexual or labour exploitation. They may be deprived of their liberty and detained, as part of the migration process. Some risk persecution if they return to their countries of origin. Migrants are often forced into slum areas or high-risk areas prone to flooding and landslides; they also face cultural and language barriers, discrimination and exclusion, or even violence. Particularly vulnerable are women and children, especially unaccompanied and separated minors, traumatised persons, people with physical and mental disabilities, and elderly persons.

Working with and for vulnerable migrants is one of the long-standing traditions of the RCRC Movement. It is rooted in its Fundamental Principles and universal character as well as in its volunteer and community basis. Mainstreaming DRR and CCA in migration means considering disaster and climate change risks and including various measures to address them, in migration programming.

Migration: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the past, present and future disaster and climate risks of the migrants, as well as their needs, vulnerability and capacity. • Define a RCRC role to work with and for all migrants, without discrimination and irrespective of their legal status.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Include action to reduce disaster and climate risks through an integrated and impartial approach, combining immediate action for migrants in urgent need with longer-term assistance and empowerment. • Make sustained efforts to guarantee impartiality and non-discrimination, taking into account the humanitarian needs of both the migrants and the host population. • Incorporate risk monitoring, contingency planning and early warning to respond to changing conditions. • Engage with communities from which migrants originate as they have a thorough understanding of migratory pressures on them. • Work together with the National Societies in countries of origin, transit and destination to ensure that the needs of migrants, and the risks they are exposed to, are properly identified and taken into account, and that potential migrants receive correct and up-to-date information. • Minimize forced displacement by consistently investing resources in food security, livelihoods, health, shelter, DRR, CCA and the like to increase the resilience of affected communities. • Support disaster preparedness and resilience building at community level to alleviate pressures that can induce people to migrate against their will and desire.
C. Do no harm	<ul style="list-style-type: none"> • Undertake no action without the agreement of the migrants concerned. • Ensure that the information provided to potential migrants is comprehensive and includes possible risks of migration to urban centres where climate change is progressively increasing risks, as well as relevant conditions in countries of transit and destination, their rights and obligations, and how to access humanitarian services. • Monitor any changes that may indicate that programmes are contributing to tension or conflict between migrants and host communities.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Raise awareness among migrants of their rights to assistance and protection. • Link assistance, protection and humanitarian advocacy for migrants. • Build partnership and close coordination with all actors working for migrants.

Migration: good practice checklist

<ul style="list-style-type: none"> ✓ Carry out VCAs and to respond to the needs identified by combining immediate action for migrants in urgent need with longer-term assistance and empowerment; ✓ Give due consideration to migrants' skills, experience, and resilience and support their social inclusion, integration, and their aspirations; ✓ Work together along the migratory trails to optimise the humanitarian action, including the restoration of family links, and focus on risks to which migrants all along their journey are especially susceptible; ✓ Raise community awareness about the need for up-to-date and comprehensive information and realistic decision making on migration choices, disseminate information about the experiences of migrants and support community level exchange and discussion on migration choices and alternatives; ✓ Strengthen the resilience of people through community-based actions for food security, income generation, health, education, or humanitarian relief when social and economic distress, and lack of services and prospects for development, are major causes of migration; 	<ul style="list-style-type: none"> ✓ Support community-based actions for DRR and CCA when environmental degradation and socio-economic pressures make living conditions increasingly precarious or livelihoods are increasingly eroded as a result of increased climate variability; ✓ Engage with the community on ways and means to reduce tensions and cooperate with the ICRC in support of its mandate under international humanitarian law, when migratory pressures are caused by the spread of violence or by armed conflict; ✓ Take action to reduce the risks of migration by enabling potential migrants and their families to make informed decisions about whether to migrate or not, and under which conditions, based on comprehensive and up-to-date information. ✓ Alleviate migratory pressures on communities of origin by supporting DP and resilience building at community level; ✓ Refrain from deciding what solution is the best for migrants while counselling or informing migrants about their options; ✓ Refrain from being associated with, nor being perceived to be part of, the enforcement of a state's decision to forcibly remove a migrant.
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Shelter and settlement

3.3.4




Shelter is considered as one of the four basic human needs, next to food, water and health. Shelter safety is a key factor determining a person's health, wellbeing, and prospects in life. Shelter safety can be understood in relation to risk, which is commonly defined by the relationship of hazard, vulnerability and capacity. When considering shelter safety, important hazards include earthquakes, strong winds, floods, fire, etc.

In terms of shelter safety, vulnerability describes the features of a settlement or of individual shelters that make them more likely to be damaged when a hazard occurs. Vulnerability of shelters is often specific to a certain type of hazard. For example, buildings with thatched roofs are particularly vulnerable to fire, but thatched roofs are less vulnerable than concrete roofs to damage by earthquakes.

Other features may increase vulnerability to a range of hazards. For instance, weak connections between walls and foundations or to the ground increase vulnerability to damage by earthquakes, strong winds and floods. Shelter safety is concerned with the physical capacity of homes and communities to resist hazards as well as the social and economic capacity of communities, families and individuals.

For many people living along riverbanks or the sea, on mountain slopes or in poorly built neighbourhoods, the risk of flooding, earthquakes, strong winds and other hazards constantly threaten their lives. In most communities it will not be possible to prevent hazards significantly but it will be possible to reduce shelter vulnerability and improve preparedness for hazards in case they occur.

 **For further guidance on shelter and settlement, see:**

- IFRC (2011): PASSA. Participatory Approach for Safe Shelter Awareness. <http://www.ifrc.org/PageFiles/95526/publications/305400-PASSA%20manual-EN-LR.pdf>

Risks and vulnerability in shelter and settlements may be reduced by some strategies:

- Preventing or lessening the likelihood of hazards – e.g. locating settlements away from coastal areas where tidal surges occur;
- Reducing shelter vulnerability and strengthening capacity – e.g., by reinforcing the walls of houses in earthquake zones;
- Building and maintaining preparedness – e.g., by building a cyclone shelter and having sandbags ready to protect houses from flooding caused by cyclones.

Mainstreaming DRR and CCA in shelter and settlements means that all shelter and settlement related interventions have considered the effect of current natural hazards and their future risks magnified by climate change, including the emergence of unexpected risks, and of the impact of those interventions on vulnerability to natural hazards, and accordingly have adopted risk reduction measures. This would require understanding the existing vulnerabilities to hazards, analyse how they interact with the current processes of development of the sector and understanding of the actors involved in each of the processes.

Shelter and settlements: principles for DRR and CCA mainstreaming	
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the hazard profiles and vulnerability factors when building new shelters, improving existing shelters or maintaining, repairing and modifying them.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Support people to make informed choices about their shelter. • Pay due attention to the safety aspects of shelter and settlements including the location and layout of the settlement as a whole, sitting and orientation of individual shelters, the design of shelters (size, height and shape), the choice of construction materials, the quality of construction, and the way the materials are put together and impact on the natural environment. • Adopt the best land use options for shelter and settlement and apply risk-based and climate-smart land use planning to manage disaster risks and climate change impact and protect development gains. • Support local capacity building by improving the skills of community people and ensuring the quality and incorporation of disaster and climate resistant design through relevant trainings. • Design infrastructure systems to withstand hazard impacts and also ensure that infrastructure facilities support evacuation and emergency response functions. • Encourage the use of PASSA (Participatory Approach for Safe Shelter Awareness) methodology when VCA has highlighted specific concerns and risks of the built environment.
C. Do no harm	<ul style="list-style-type: none"> • Analyze the potential impact of the shelter and settlement programming on local markets and artisans and on the environment. • Ensure the relocation of people to places close to their livelihoods and social networks. • Ensure that shelters are built, improved or repaired to withstand future disasters.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Raise safe shelter awareness as an integral component of construction programmes through multi-media reach-out strategies (eg. SMS, radio, posters, public awareness campaigns, call centres, etc). • Advocate for construction and workplace safety standards to be put in place and adhered to. • Promote the IFRC's role as a convener of the Shelter Cluster. • Build partnership and close coordination with all actors working in shelter and settlements.

Shelter and settlements: good practice checklist

- ✓ **Consider the likely hazards** and include the possible DRR and CCA measures when building new shelters, improving existing shelters or maintaining, repairing and modifying them;
- ✓ **Abide by the building safety codes** set by the authorities and design the shelters in a way that they provide easy access to evacuation from all rooms;
- ✓ **Increase shelter safety** by improving existing shelters either as a specific measure or at a time when major repairs or modifications are being carried out;
- ✓ **Regularly inspect and repair the shelters** if needed so that their safety is maintained;
- ✓ **Set up an early warning system** at community level to alert householders and disaster response teams;
- ✓ **Consider providing water points at strategic places**, get fire fighting equipment ready at household and community level and practise its use regularly;
- ✓ **Raise awareness** among community people about how to react and respond to potential disasters like floods and earthquakes and make them familiar with evacuation procedures through regular evacuation drills;
- ✓ Encourage household owners to **remove or tie down loose materials** that may be carried by strong winds and cause damage;
- ✓ **Make communal evacuation centres or shelters accessible** and have adequate supplies;
- ✓ Encourage households to **keep essential survival items in a safe place**;
- ✓ Use local artisans and **support the rebuilding of local markets and livelihoods**;
- ✓ **Adopt or improve local construction technologies that have proven to resist the disaster** reasonably well, as these are well known and needless capacity-building;
- ✓ **Provide adequate technical support** to ensure quality is good (so that houses and services are of better quality than before and able to resist future disasters);
- ✓ **Consider the environment in rebuilding**, because it is often a contributory factor in the disaster or the severity of its impact (eg. encouraging the re-use of salvaged materials and debris or making people aware of harmful waste);
- ✓ **Link the shelter provision to water and sanitation** and consider such issues as solid and water waste management, land use, responsible resettlement, and care and maintenance of houses and community infrastructure;
- ✓ **Help people prepare for future disasters** through awareness-raising, and involving everyone in preparing and planning for the future;
- ✓ **Use the Shelter Cluster mandate to raise awareness** on shelter risk reduction tools and sustainable reconstruction methods among other aid agencies and key government stakeholders;
- ✓ **Pay attention to local markets** and artisans, as well as the way people build and improve their homes progressively and the importance of enhancing their awareness of safety measures they can take over time;
- ✓ **Refrain from relocating people permanently** to places far from their livelihoods and social networks unless there are critical safety risks;
- ✓ **Pay attention to the most vulnerable groups** whose circumstances may be complicated, such as squatters, tenants, those who have lost family members, or are disabled;
- ✓ **Rebuild in ways which help people strengthen their resilience** to future disasters;
- ✓ **Protect the environment** in the rebuilding process, carefully choose construction materials and define reconstruction practices.

3.3.5

Livelihood and food security



➔ For further guidance on livelihood and food security, see:

- IFRC (2003): Food security and nutrition policy. <http://www.ifrc.org/Global/Governance/Policies/foodsecurity-policy-en.pdf>
- ICRC/IFRC (2007) International Red Cross and Red Crescent Movement Guidelines for cash transfer programming. <http://www.ifrc.org/Global/Publications/disasters/finance/cash-guidelines-en.pdf>
- IFRC (2007): Global food security assessment guidelines. A step-by-step guide for National Societies. (available on Fednet)
- IFRC (2010): IFRC guidelines for livelihoods programming. (available on Fednet)

Disasters and food insecurity are directly interconnected. Floods, hurricanes, tsunamis and other hazards destroy agricultural, livestock and fishing infrastructure, assets, inputs and production capacity. They interrupt market access, trade and food supply, reduce income, deplete savings and erode livelihoods. Economic crises reduce real income, force the poor to sell their assets, decrease food consumption and reduce their dietary diversity. Disasters create poverty traps that increase the prevalence of food insecurity and malnutrition.

Climate change has profound and far-reaching effects on the environment, ecosystems, natural resources, economy and human life. Climate change is magnifying existing patterns of disaster risk and present scenarios that exceed the capacity of the humanitarian and development communities.

The most severe consequences of climate change are likely to be on the food security and livelihoods of agriculture-dependent populations in vulnerable countries. Long-term changes in the patterns of temperature and precipitation include shifting production seasons, increasing the supply variability and risks in the fishing sector, and the emergence of new animal and plant diseases.

The multiple threats to food and nutritional security and the clear link between shocks and hunger reveal the fragility of current food production systems and their vulnerability to disruptions. In order to break this cycle, it is necessary to protect livelihoods from shocks, and to make food production systems more resilient and more capable of absorbing the impact of, and recovering from, disruptive events and to secure sustainable development gains.

Sustainable livelihoods programmes typically assess the barriers that people face in improving their livelihoods, and design programme interventions to overcome these. For example, when rising temperatures increase crop water demand and weather is ever more unpredictable, farmers struggle to know when to cultivate the land, sow, and harvest. Likewise, when violent conflict forces people to migrate, they do not have access to the resources they are normally used to.

Migration may also increase competition for natural resources such as water and pasture between migrants and host communities. Urban populations, especially vulnerable households, often face food access problems. While these types of impact are almost universal, strategies for implementing possible solutions need to be rooted in an understanding of how people sustain their livelihoods, and implemented alongside those that aim to overcome the barriers that prevent people from improving their livelihoods.

In relation to livelihoods and food and nutrition security, mainstreaming DRR and CCA means considering disaster and climate change risks and including measures to address these risks, in programming for livelihoods and food and nutrition security.

Case study Mali | **Supporting communities to develop food security**

Sprawled between the vast expanses of the Sahara and the Sahelian plains, Mali is one of the world's poorest countries. Only half the population has access to clean drinking water, and infant and maternal mortality rates are 120 per 1,000 and 580 per 100,000 live births, respectively. In the north of the country, the Goundam Circle in the region of Timbuktu is one of the country's poorest areas, with a hot, dry climate and a sparse population spread over 92,000 km². Once it was Mali's granary, blessed by the many lakes fed by the flooding Niger River.

However, in the past three decades severe droughts and scant rainfall have changed all that. Water shortages and desertification have ruined the farming and put an end to many livelihoods dependent on raising animals. A conflict worsened the situation further. Increasingly during the lean period (every May–September) cereal stocks dwindle, and households have to cope with a lack of watering points, poor medical infrastructure and unaffordable healthcare.

In 2005, when a combination of seasonal and structural factors, aggravated by a locust invasion and a pronounced lack of rainfall, triggered an unprecedented crisis throughout the country. As part of its efforts to combat food insecurity, the government assigned Mali Red Cross (MRC) four especially vulnerable communities on the shores of the now almost-dry Lake Faguibine. For four months, backed by the Swiss Red Cross, the National Society provided food assistance to 43,000 people.

However, the Mali Red Cross decided that this was not enough. With a view to linking emergency and development, and reducing vulnerability to food insecurity, it brought stakeholders together in a strategic planning workshop. The aim was to bring about a lasting improvement in the living conditions of the four communities. Through a participatory approach based on VCA, the workshop identified the people's priority needs:

- to improve community health by raising awareness;
- to improve access to water;
- to replenish food stocks and establish cereal banks and village cooperatives that buy, store and sell food grains.



The priorities were developed into project activities for 40 most vulnerable villages, focusing on pregnant women, children between the ages of six months and five years, female heads of households, people living with HIV and AIDS, and older persons.

The communities identified and recruited village volunteers to raise awareness of health and hygiene issues, including HIV and AIDS. Trained by the Red Cross and the state technical services, they learned how to inform and educate, make people aware of best practice, and bring about change of behaviour. MRC developed awareness-building tools specially designed for them.

The projects improved water sources by rehabilitating existing wells and drilling new ones, providing supplies for human consumption, for animals, and for small-scale agriculture. To replenish food supplies, the Red Cross focused on establishing women's market gardening groups and cereal banks. As well as contributing to food and nutritional security, the gardens produce income that boosts support for the household while also helping to empower women.

The intervention has not been without difficulties, but overcoming them has increased Red Cross knowledge. Ultimately, by improving the availability, accessibility and consumption of their own produce, the inhabitants of Goundam have substantially strengthened their food security. Today, the National Society is advocating for the project to be duplicated elsewhere.

Livelihood and food security: principles for DRR and CCA mainstreaming	
A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess the past, present and projected impacts of disasters, climate variability and change on livelihoods, food and nutrition security of the target population. • Conduct VCAs to identify the exposure, vulnerability, needs and capacity of the target population and determine how these might be addressed to build resilience. • Assess the existing and new interventions against new and changing risks since climate change may mean they are less suitable or unsustainable given changing over the medium to long term future.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Strengthen community organisation and voice. By building understanding, confidence, skills and motivation, communities can become empowered to work together to ensure they are better prepared for potential threats and trends and can respond effectively when they occur. • Support access to, and management of, natural resources. Secure access to productive resources is important for communities and households to be able to plan for their futures and use their resources effectively and sustainably. NRM is also necessary for the effective functioning of ecosystems from which people derive their livelihoods. • Promote access to locally appropriate technologies that can help vulnerable producers to overcome the physical and environmental constraints of hazard prone areas, improve productivity and incomes, and can help them adapt to climate changes. • Improve access to markets and employment. With good access to output markets and employment, producers can diversify their livelihoods and gain cash income. • Ensure safe living conditions to provide people with physical comfort and security, which are important contributors to wellbeing, and also contribute to human health and the ability to work effectively. • Support men and women producers to assess the risks and benefits associated with traditional and new techniques/technology options that may help to reduce disaster risk and build resilience to climate change and variability. • Provide financial support and technical advice to at-risk populations to diversify their income sources as a means of managing risk.
C. Do no harm	<ul style="list-style-type: none"> • Analyze the potential impact on prices for local producers and local markets when providing food or non-food items during emergency responses. • Consider the use of cash transfers to prevent stress sales of livelihoods assets and other negative coping mechanisms. • Consider cash-for-work and cash transfer programming as a means to protect food insecure populations while also supporting local food producers and suppliers. • Consider gender and youth implications of livelihoods interventions.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Raise the profile of disaster and climate change risks for livelihoods, food security and nutrition through public awareness campaigns. • Advocate for food security, health, economic and agricultural development policies to be based on analysis of disaster and climate change risk, and for investment in infrastructure and technology to support the development of resilient livelihoods, food security and nutrition. • Advocate for the realization of women's and marginalized people's rights to critical livelihood and food security resources such as land and water through public awareness campaigns, legislative reform and direct support to civil society and community-based organizations working on these issues. • Promote partnership and close coordination between all actors working on food security, livelihoods, health and WASH to generate holistic, longer-term strategies for disaster and climate change resilience.

Livelihood and food security: good practice checklist

- ✓ **Undertake a sound analysis of potential hazards, stresses and risks**, and actions to reduce their impacts when developing projects or programmes, as these are critical in ensuring livelihoods and food and nutrition security. For chronic crises, support research or study on the root causes;
- ✓ **Take into consideration possible future scenarios when planning livelihoods options**. This includes considering the possible outcomes of future trends such as climate change, globalisation, population growth, migration and environmental degradation. Being able to prepare and adapt is a key factor in effectively responding to dynamic change over the long term;
- ✓ Support the development of climate and disaster **risk profile maps and actions plans** at local, district and provincial levels;
- ✓ Support households and communities to innovate to **ensure sufficient access to, and provision of food throughout the year, income for regular needs, and some savings for times of emergency**;
- ✓ **Establish food and nutrition groups in at-risk communities** and provide training on household-level strategies for improving and safeguarding nutrition in a changing climate and as disaster preparedness measures;
- ✓ **Raise public awareness on how to maintain sustainable livelihoods** and food and nutrition security and include it in disaster preparedness programming;
- ✓ **Use participatory methods to identify suitable early warning signals for livelihoods**, food and nutrition security among different community groups, and build them into the design of related projects/programs;
- ✓ **Encourage at-risk people to share their knowledge and experiences** of climate variability and disaster occurrence, to enable communities to identify trends;
- ✓ **Encourage older people in communities to share traditional livelihoods, food and nutrition strategies** for managing climate variability and recurrent disasters; and support communities to assess how they may be relevant for, or adapted to, future climate scenarios;
- ✓ **Provide training and peer-to-peer education to farmers** on conservation agriculture practices, restoration of degraded soils and agricultural biodiversity within communities;
- ✓ **Engage all relevant government departments/ ministries with a role in livelihoods, food and nutrition security** in national platforms and forums for DRR and CCA;
- ✓ **Engage scientific institutions to work in partnership with at-risk communities** to develop/adapt technologies for farming, fishing, forestry and other rural livelihoods and document pilot projects for potential scale-up and replication;
- ✓ Work with different levels of government to **develop contingency food reserves and funds for early action** in situations of growing food insecurity due to hazard events or climate-related stresses;
- ✓ **Support the development of and access to financial services such as savings schemes and insurance to buffer shocks**; provide training to potential users to ensure they understand how they work;
- ✓ Support the development of systems that **improve food producers' access to climate information** on a range of timescales, from days (weather), months (seasonal outlooks) to decades (climate change scenarios);
- ✓ **Encourage at-risk populations to identify traditional food security practices** such as seed and grain banks, conservation, savings schemes, migration and seasonal labour, and assess how they may be relevant for, or adapted to, future climate scenarios;
- ✓ **Advocate for investment in effective social protection systems** that can be scaled up in anticipation of increased food insecurity and in response to crises; where appropriate, support pilot projects to trial measures such as cash transfers, food vouchers and guaranteed labour schemes;
- ✓ **Organize local to national platforms** for food producers, livelihoods/food security specialists and disaster and climate change experts, to generate shared understanding of the challenges and collaboration in generating solutions;
- ✓ **Support households and communities to take preparedness measures** such as food and fodder storage, animal vaccine campaigns, savings and micro insurance;
- ✓ **Incorporate contingency funding** into livelihoods and food and nutrition security programming in areas of disaster and climate risks, to facilitate early action in response to early warning signals;
- ✓ **Support the development of and access to financial services such as savings and credit schemes and insurance to buffer shocks**; provide training to potential users to ensure they understand how they work.

3.3.6

Natural resource management



Natural resource management (NRM) refers to the management of natural resources such as land, water, soil, plants and animals, with a focus on how management affects the quality of life of both present and future generations. It brings together land use planning, water management, biodiversity conservation, and the sustainability of industries like agriculture, tourism, fisheries and forestry.

Protecting and conserving natural resources is not just important for the maintenance of the world's ecosystems, or for the environment in general; sustainable NRM is vital to support the human development of every man, woman and child on the planet. Without a healthy planet, the resources people need to satisfy their basic needs (such as water, food and shelter) and to achieve a better quality of life would not be possible.

Due to the increasing stressors of climate change effects, protecting and restoring the world's common natural resources is now more critical than ever. Disasters and NRM have a complicated relationship, as disasters can both exacerbate and be intensified by existing environmental degradation. Deforestation, for instance, directly affects the environment by reducing the amount of pure air or oxygen to breathe and destroying the natural habitat for wild animals and birds; it also increases floods, drought and climate change and cause soil erosion because trees help in binding soil with their roots. Not only can NRM support adaptation to climate change and buffer communities from some of the worst impacts of climate-related disasters, it can also offer significant opportunities to reduce carbon emissions.

The Red Cross Red Crescent is engaged in various NRM programmes (see case study) or projects as part of its efforts to support the growth of hazard-resilient and adaptive ecosystems and to reduce the negative impacts of disasters and climate change on natural resources. Mainstreaming DRR and CCA in NRM means considering disaster and climate risks and including risk reduction measures in NRM programming.

Case study Viet Nam: **Breaking the waves**



Mangrove forests provide essential functions and services to coastal communities in Viet Nam. These include acting as carbon sinks, thereby mitigating the effects of climate change, providing nutrients for marine life and enhancing protection to coastal communities from storm surges and erosion (by capturing soil during periods of heavy precipitation and thus stabilising shoreline sediments). Additionally, mangroves serve as a nursery and breeding ground for many reef organisms, while they have also been sustainably used for food production, medicines, fuel wood and construction materials. In an attempt to mitigate the impact of disasters, restoration and rehabilitation of mangrove forests have been a central focus of both governmental and non-governmental actors in the region.

The Viet Nam Red Cross (VNRC) has been at the forefront of these activities since 1994, when its Thai Binh chapter launched the community-based DRR project with the support of the Danish Red Cross (DRC). By 1997, after a series of successes the project was expanded to include another seven coastal provinces in northern Viet Nam. In support of VNRC's implementation of the project, the DRC expanded its coverage to Nam Dinh province, while the Japanese Red Cross (JRC) initiated funding to six provinces (Ha Tinh, Hai Phong, Nghe An, Ninh Binh, Thanh Hoa and Quang Ninh) through the IFRC. By the early 2000s, the project's focus was broadened to include disaster preparedness training and afforestation with bamboo and casuarina trees in communes along rivers. In 2005, DRC finished its part of the project, and JRC has funded activities in all eight provinces since.

The project has had a significant impact both towards a reduction of disaster risk and an enhancement of communities' livelihoods. The overall costs for the project spanning 17 years stands at CHF 7.99 million. This investment has translated into the creation of 9,462ha of forest (8,961 of them mangroves) in

166 communes and the protection of approximately 100km of dyke lines. It is estimated that approximately 350,000 beneficiaries were reached directly by the project's intervention, while another two million were indirectly protected through the afforestation efforts.

Comparing the damage caused by similar typhoons before and after the intervention, the damages to dykes have been reduced by CHF 73,000 to CHF 270,000 – savings which represent less than the costs for mangrove planting. However, total savings due to avoided risks in the communities at large were found to be much more substantial, standing at approximately CHF 13.7 million.

Mangroves have also had a positive impact on the provision of additional income for coastal communities through an increase in per hectare yield of aqua culture products such as shells and oyster by 209-789 per cent. Direct economic benefits from aqua product collection, honeybee farming, etc., are found to be between CHF 310,000 to CHF six million in the selected communes.

The significant ecological benefits of the project should be noted – the present value of estimated minimum CO₂ emissions absorbed by the planted mangroves stands at CHF 196 million. The benefit cost ratio (BCR) calculations indicate that mangrove afforestation has been extremely efficient. A BCR greater than one is considered economically "worth it." In case of the mangrove plantation project, the BCR including ecological benefits is 55.49.

► **IFRC (2012): Breaking the waves. Impact analysis of coastal afforestation for disaster risk reduction in Viet Nam** <http://www.ifrc.org/docs/Appeals/annual11/MAAVN00111myr-Breaking-the-waves.pdf>

Natural resource management: principles for DRR and CCA mainstreaming

A. Assess risks, vulnerability and capacity	<ul style="list-style-type: none"> • Assess disaster risks and projected effects of climate change in the programme location and the wider geographical context. • Use participatory methods with at-risk populations, combined with scientific expertise, to understand the sensitivity of exposed natural resources to the projected effects of climate change. • Use historical disaster records, combined with the knowledge of at-risk populations, to understand the interaction between disaster risks and natural resources, such as the effects of a volcanic eruption on soil and water.
B. Take risk reduction and adaptation measures	<ul style="list-style-type: none"> • Apply established good practices in NRM to confront some of the new challenges posed by climate change and disasters. This includes reducing non-climatic pressures such as pollution, over-exploitation, habitat loss and invasive alien species. • Adopt adaptive management approaches. Climate and disaster impacts and NRM measures should be monitored carefully so that management actions can be appropriately adjusted in response to changing conditions. Programmes need to support adaptive management options that facilitate and accelerate learning about appropriate options for the future. • Involve local communities. Community participation is an essential element because communities know what has and has not worked historically, and it is the local communities who implement and sustain these programmes.
C. Do no harm	<ul style="list-style-type: none"> • Take steps to ensure that all programmes with a potential for causing a negative impact on the environment are properly assessed prior to implementation or, if they already exist, that they are screened for any negative environmental impacts. • Consider the environmental impacts of all post-disaster reconstruction. "Building back better" means ensuring that responses do not negatively impact the environment and natural resources upon which people depend.
D. Raise awareness, seek partnerships, and advocate	<ul style="list-style-type: none"> • Work with at-risk populations to raise awareness about the importance of natural resources in reducing hazard and climate change risk; their protection and conservation needs, by contextualizing protection, conservation and enhancement approaches already being undertaken for purposes of reducing climate change risk. • Advocate for NRM-related policies to incorporate analysis of disaster and climate change risk. • Advocate for NRM authorities to participate in the development of disaster risk reduction/management and climate change policies.

Natural resource management: good practice checklist

<ul style="list-style-type: none"> ✓ Integrate NRM initiatives with other risk management components, such as early warning systems, awareness-raising, and, in some cases, with physical infrastructural interventions through large or small-scale mitigation works; ✓ Raise awareness in rural communities about the importance of natural resources; their protection and conservation needs, and their role as managers; ✓ Support government authorities at different levels to produce and overlay maps of known hazards and the projected effects on climate change on large and small-scale maps of natural resources, to indicate current and potential exposure; and support communities to do the same, at the lowest possible scale; ✓ Use participatory methods with at-risk populations to identify how current and traditional practices in the use of natural resources affect exposure and vulnerability to hazards and the projected effects of climate change; use the same methods to identify existing practices, knowledge and skills within at-risk populations for protecting natural resources; ✓ Undertake a power analysis to understand different stakeholder interests with respect to key natural resources, particularly in the case of major development/infrastructure projects that will exploit or affect them and communities that depend on them; ✓ Strengthen/support the establishment of NRM committees at local levels to monitor and analyze local issues and to represent local interests at other levels; ✓ Undertake vulnerability monitoring as an early warning mechanism for slow onset disasters; 	<ul style="list-style-type: none"> ✓ Use participatory and culturally sensitive approaches to capture the knowledge of local and indigenous people, particularly older generations, of how natural resources have changed over time and how people have adapted to those changes; ✓ Provide training and material inputs to at-risk populations to contribute to building a resilient natural environment through protecting, maintaining, restoring and enhancing natural resources (such as mangroves, water pans, fragile soil systems, river banks); ✓ Provide legal and technical information to populations likely to be affected by projects that use or may have an effect on key natural resources; support them to access information on how such projects may affect their vulnerability and exposure to hazards and effects of climate change; ✓ Contribute to strengthening institutional linkages between government departments for NRM, climate change and disaster management by engaging representatives from each in risk-assessment processes, national platforms and forums for sharing good practices; ✓ Harness external technical expertise to conduct in-depth studies of particular natural resources, and to present potential resilience-building options; ✓ Foster innovation by providing communities and organizations that have demonstrated effective NRM with access to technical and scientific advice on adaptation, and closely monitor and document the results; ✓ Identify indicators of sustainability in natural resources and establish monitoring systems to track changes;
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3.4 Gender in DRR and CCA

The rationale for integrating a gender perspective in DRR and CCA lies in the Red Cross/Red Crescent humanitarian mandate – to prevent and alleviate human suffering without discrimination. Gender equality ensures that there is no sex-based discrimination in the allocation of resources or benefits, or in access to services. With regard to gender issues, the IFRC's goal is to ensure that all RCRC programmes benefit men and women equally, according to their different needs and with the input and equal participation of men and women at all levels within National Societies and the IFRC Secretariat.

Gender issues in DRR and CCA

Disaster and climate change risks are not gender-neutral. The nature and extent of their exposure and vulnerability is different for women, men, girls and boys because of their different roles, responsibilities, access to resources, domestic and traditional law, and legal and cultural issues. For example:

- Women may be less able to evacuate to a safe place following a hazard because they are pregnant or caring for children and less-mobile dependents. Their exposure, and that of their dependents, may be much greater than that of others who are able to leave high-risk areas;
- Women's lack of formal land ownership may prevent them from accessing credit to introduce climate-adaptive measures in their livelihoods, invest in appropriate building materials or ability to move to a safer location;
- A decline in the productivity of traditional rural livelihoods may put men under pressure to migrate in search of work, or to undertake higher-risk livelihood activities in order to continue to provide for their families;
- Boys/men may not know how to feed and care for young children if required to take on these roles if women in the household are killed or injured as a result of a disaster event.

The root causes of women's vulnerability often lie in unequal power relations within societies, which pervades all aspects of their lives and deny their basic rights, from access to education to participation in community governance. Their vulnerability may also be conditioned by cultural roles that restrict them from developing knowledge and skills that would enable them to save lives and prevent disaster losses, such as learning to swim, or participating in public meetings. This, in turn, affects other vulnerable members of their households.

In most societies, men's vulnerability is also closely associated with cultural expectations. Many men are conditioned to feel that it is their duty to meet their family's basic needs and, when they are unable to do so, they may resort to dangerous work, or migration to seek employment elsewhere, or turn to alcohol or substance abuse.

Women's and men's capacities for building disaster and climate resilience are shaped by their social, cultural, economic, and natural resource management roles. For example:

- Women often have a major influence on the behaviour of children and other members of their households, as well as of the wider community, and can therefore play a key role in reducing risk by ensuring safe food storage, adopting climate-appropriate practices for water consumption and hygiene, and preparing for adverse conditions;
- In many cultures, men spend more time outside the home and may receive public early warning messages before women and children. They can reduce risk for their families by passing on this information as quickly as possible;



For further gender guidance, refer to these documents:

- IFRC Gender policy: <http://www.ifrc.org/Global/Governance/Policies/gender-policy-en.pdf>
- IFRC (2012): A practical guide to gender-sensitive approaches for disaster management. <http://www.ifrc.org/PageFiles/96532/A%20Guide%20for%20Gender-sensitive%20approach%20to%20DM.pdf>
- IFRC (2003): Gender perspectives. A collection of case studies for training purposes. <http://www.ifrc.org/PageFiles/95749/B.c.02.%20Gender%20perspectives%20IFRC.pdf>
- French Red Cross (2012): Weaving a culture of resilience. A gender-sensitive approach to disaster risk reduction in Vanuatu and the Solomon Islands. <http://www.preventionweb.net/english/professional/publications/v.php?id=31402>

- Both mothers and fathers pass on traditional livelihoods knowledge and skills to their sons and daughters, including how to manage risk through diverse income-generating activities, and how to adapt to different weather patterns or fluctuations in market conditions;
- Women and men may have specific knowledge about the management of natural resources critical for their livelihoods, and may therefore have unique skills in adapting these in the face of climate change.

Crises and stresses also offer opportunities for women and men to challenge socially conditioned gender roles and power structures, such as community leadership roles in negotiations with local government on priorities for adaptation, or as recipients of financial assistance for disaster recovery. In such situations, building disaster and climate resilience can offer win-win outcomes in terms of risk management and gender equity.

Why does gender matter in DRR and CCA?

First of all, men and women often play different roles in DRR and CCA and accordingly they may have different needs. A gender perspective is required to ensure that men's and women's specific needs, vulnerabilities and capacities (set in the broader context of class, ethnicity, race and religion) are recognized and addressed.

Second, it is necessary for both men and women to take full part in making decisions regarding the identification of appropriate DRR and CCA activities. Very often, only men are consulted. Women do not regularly participate in decision-making processes and may not even be consulted but merely seen as the recipients of benefits and services.

Third, the perception of which roles and responsibilities should be assigned to men and women differs from one society and culture to the other. As men and women's roles and responsibilities affect how they respond to disaster and climate change risks, these should be taken into full account when planning and preparing for DRR and CCA.

Gender: good practice checklist for practitioners

- ✓ **Educate and advocate** with local government officials and community leaders to fully involve women and men, as well as marginalized groups, in disaster risk management activities and decision-making;
- ✓ Carry out a **systematic gender analysis** of the different roles, responsibilities and socio-economic status of men, women and other household members in needs assessments. Make sure that the analysis includes a focus on diversity issues, such as the situation of men and women who are poorer, ethnic minorities, elderly, disabled, etc.
- ✓ **Strengthen both male and female capacity** in activities such as risk mapping to enable gender perspectives of risks and vulnerabilities to be identified through processes such as VCA;
- ✓ **Promote proportional representation of women and men** from diverse groups in the decision-making process of community-based disaster risk reduction and preparedness activities to ensure the social, cultural and economic gender aspects of risk reduction are being addressed;
- ✓ **Work with and strengthen existing local organizations** that represent women and diverse groups in order to encourage community participation, either in the promotion, planning or implementation of the programme;
- ✓ **Ensure the full participation of men and women in participatory risk analysis** and in developing community-based early warning systems that use the local tools and knowledge of both men and women;
- ✓ **Promote the engagement of both genders in community-based early warning systems** to ensure procedures are sensitive to both female and male needs, including privacy, security and adequate protection of valuable assets like livestock, in communal shelters;
- ✓ Provide safety-net cash transfers for household food security and basic needs directly to women;
- ✓ **Support research on gendered impacts of disaster and climate change risk** and successful practices in gender-sensitive programming;
- ✓ **Facilitate access to appropriate credit facilities and training** to women and men for adapting their livelihoods to changing conditions;
- ✓ **Involve women and men in the development of land-use policies**, to generate awareness of high-risk areas and opportunities for relocation.

Appendix



Glossary

Adaptive capacity	The ability of a system (individual or community) to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.
Building Code	A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.
Capacity	The combination of all the strengths, attributes and resources available within a community, society or organisation, that can be used to achieve agreed goals.
Climate change	A change in the climate that persists for decades or longer, arising from either natural causes or human activity.
Climate change adaptation	The adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Climate-proof	A methodological approach aimed at incorporating issues of climate change into policies and programming. It enables the policies and programmes to be analysed with regard to the current and future challenges and opportunities presented by climate change.
Contingency planning	A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.
Coping capacity	The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.
Coping strategy	Constantly changing and adapting cognitive and behavioural efforts to reduce stress levels.
Disaster	A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.
Disaster preparedness	Readiness to predict and, where possible, prevent disasters, reduce their impact as well as respond to and cope with their consequences at various levels.

Disaster risk	The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.
Disaster risk reduction	The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.
Early recovery	After a disaster, early recovery is about shifting the focus from saving lives to restoring livelihoods. Early recovery interventions seek to stabilise the economic, governance, human security and social equity situation. Early recovery interventions also seek to integrate risk reduction at the very early stages of the response to a specific crisis; and to lay the foundations for longer term reconstruction.
Early warning system	The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.
Emergency management	The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.
Environmental degradation	Deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife.
Exposure	People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.
Food insecurity	A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution, or inadequate use of food at the household level. Food insecurity may be chronic, seasonal, or transitory.
Hazard	A dangerous phenomenon, substance, human activity or condition 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.
Land-use planning	The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.
Livelihoods	Livelihoods comprise the capabilities, assets and activities required for generating income and securing a means of living.
Mitigation	The lessening or limitation of the adverse impacts of hazards and related disasters.

Natural resource management	The management of natural resources in favour of development that is economically viable, socially beneficial, and ecologically sustainable.
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.
Prevention	The outright avoidance of adverse impacts of hazards and related disasters.
Public awareness	The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.
Resilience	The ability of individuals, communities, organisations, or countries exposed to disasters and crises and underlying vulnerabilities to anticipate, reduce the impact of, cope with, and recover from the effects of adversity without compromising their long term prospects.
Response	The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Risk	The combination of the probability of an event and its negative consequences.
Risk assessment	A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.
Risk management	The systematic approach and practice of managing uncertainty to minimize potential harm and loss.
Risk transfer	The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Vulnerability	The characteristics and circumstances of a community, system, or asset that make it susceptible to the damaging effects of climate change and other hazards.

The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, co-operation and lasting peace amongst all peoples.

Impartiality It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.



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