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German Red Cross

Guideline for Climate Risk Analysis

Action Plan of the Federal Foreign Office for Humanitarian Adaptation to Climate Change

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Action Plan of the Federal Foreign Office for Humanitarian Adaptation to Climate Change

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Introduction

Conceptual Basis

There are compelling reasons why Disaster Risk Reduction is increasingly important for countries threatened by climate change. Climate change is one of the most important underlying disaster risk factors and connected to the increase in disasters worldwide. Natural hazards such as drought, desertification, storms or flooding and contextual hazards including environmental degradation such as deforestation, erosion and loss of biodiversity are all aggravated by climate change and have far-reaching consequences in terms of food and water security. DRR is therefore directly linked to poverty alleviation and sustainable development. But since sustainable development is a long-term process and cannot be achieved by short-term DRR alone, it is essential to link foresighted Climate Change Adaptation measures and DRR efforts. The Post-2015 Framework for Disaster Risk Reduction (the Sendai Framework for DRR 2015-2030) emphasizes this integration of CCA and DRR, with the following four priority areas:

1. Understanding disaster risk;
2. Strengthening Disaster Risk Governance to manage disaster risk;
3. Investing in Disaster Risk Reduction for resilience;
4. Enhancing Disaster Preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

Although DRR and CCA have conceptual and operational differences, the underlying objective is the same: To reduce people’s vulnerability to changes and hazards affiliated with the climate and build their capacity to adapt. Yet until now these two concepts have worked more or less in isolation from each other, divided by institutional arrangements. This discrepancy is one of the areas the Federal Foreign Office Action Plan for Humanitarian Adaptation to Climate Change aims to address to improve the Preparedness for Response of vulnerable people. With increased and sustained efforts more effective and efficient Disaster Response in the future is envisioned, during which Disaster Preparedness is a key priority for the Federal Foreign Office.

Climate Risk Analysis in the Humanitarian Context

In order to understand disaster risk it is necessary to assess the effects of climate change. This includes not only the type of hazard (for instance a tropical cyclone, rise in sea levels, etc.) but also the probability and expected frequency and the forecasted extent of the hazard. In combination with a vulnerable group this climate-related hazard is then described as a climate risk, with the potential impact of damage or loss to people, infrastructure and natural resources. So in the case of a severe tropical cyclone making landfall in a vulnerable

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area a disaster is the immediate product, resulting in a need for humanitarian assistance and funding. As a consequence a Climate Risk Analysis is a necessary first step of implementing the Federal Foreign Office Action Plan.

Figure 1: Definition of Risk

By conducting risk analyses and developing as well as establishing several early warning systems a step towards improved Preparedness for Response is taken. A vital part for this purpose is conducting multi-stakeholder dialogues to combine knowledge, raise awareness, link relevant stakeholders and in this way establish a basis for a planning guide for further measures. This also serves as a foundation for a new financing mechanism for an anticipatory humanitarian system, introduced as the concept of “Forecast-Based Financing”.

Objective of this Guideline for Climate Risk Analysis

Climate information provided by hydrological and meteorological institutes is crucial to improve Disaster Preparedness planning. As the Intergovernmental Panel on Climate Change advises, “investing in strengthening climate services – such as climate monitoring and national meteorological agencies – is, therefore, money well spent” [IPCC 2014]. National and international climate experts with research on climate risk analyses need to be linked to policy makers and project planners in DRR. When scientific knowledge about climate hazards and forecasts about their impacts is incorporated into risk reduction and preparedness strategies as well as funding mechanisms, humanitarian assistance can allocate goods and services more effectively and efficiently.

Hence the main objective of this guideline is to provide humanitarian actors with a step-by-step procedure for a Climate Risk Analysis with a focus on the humanitarian consequences of climate change and to raise awareness of climate change in the humanitarian context. This Climate Risk Analysis guideline is based on the climate proofing tool of Welthungerhilfe (WHH) and will be conducted in cooperation with WHH in specific pilot countries that are related to the Federal Foreign Office Action Plan for Humanitarian Adaptation to Climate Change.

Introduction

Glossary of CCA/DRR Terms and Definitions

Capacity:
Availability of resources of individuals, households and communities to cope with a threat or resist the impact of a hazard.

Climate:
The average pattern of variation in temperature, humidity, atmospheric pressure, wind, precipitation and other meteorological variables in a given region over long periods of time (at least 30 years).

Climate Change:
The change in the state of the climate that can be identified by changes in the mean and/or variability of its properties and that persists for an extended period, typically decades or longer.

Climate Change Adaptation:
The process of adjustment to actual or expected climate and its effects. In human systems, it seeks to moderate or avoid harm or exploit beneficial opportunities.

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 Mitigation:
Actions meant to minimize the adverse impacts of hazards and related disasters.

Disaster 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.

Disaster Prevention:
“Actions taken in advance to completely avoid potential losses and damages.” Very often, the complete avoidance of losses and damages is not feasible and the task transforms to that of mitigation. Partly for this reason, the terms “prevention” and “mitigation” are sometimes used interchangeably in casual use.

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Disaster Response:
The sum total of actions taken by people and institutions during and after a disaster to ensure that its effects are minimized and that people affected are given immediate relief and support.

Disaster Risk Governance:
The way in which the authorities, public servants, media, private sector, and civil society coordinate in communities and on regional and national levels in order to manage and reduce disaster and climate related risks.

Disaster Risk Management:
The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster Risk Reduction:
The framework of elements concerned with the possibilities to minimize vulnerabilities and disaster risks. It is the overall term for actions related to the understanding of disaster risks, the strengthening of Disaster Risk Governance, the investment for resilience and the enhancement of Disaster Preparedness for effective response and „building back better“.

Natural Hazard:
The “natural” physical event itself – earthquake, flood, volcanic eruption, cyclone etc. – that can potentially trigger a disaster.

Vulnerability:
The (physical, social, economic and environmental) characteristics and circumstances of a person, community or asset that make it susceptible to the damaging effects of a hazard.

Vulnerability and Capacity Assessment (VCA):
The collection and analysis of information on a community’s vulnerability to hazards. This information is then used to diagnose the vulnerabilities and the existing coping capacities of the community (e.g. risk mapping).

Steps of a Climate Risk Analysis

Analysing Risk in a Changing Climate

Under the Action Plan of the Federal Foreign Office for Humanitarian Adaptation to Climate Change

STAKEHOLDERS

The climate risk analysis should be organized as a workshop, between the civil society actors, governmental representatives and climate experts to ensure that climate change will be taken into consideration when it comes to future disaster management.

National climate experts could be meteorological offices or scientists with a focus on extreme weather events.

A. ASSESSING CLIMATE RISK

Identification of potential climate related hazards, the population most at risk and their vulnerability factors and the resulting specific risk in the project country.

B. OPTIONS FOR ACTION

Identification of options for action, e.g. Disaster Risk Reduction activities, early-warning systems, basic health care and general coping mechanisms.

C. PRIORITISATION OF ACTION

Evaluation of action measures according to impact, feasibility and sustainability, as well as coherence with initiatives of other actors and national disaster management

INFORMATION

The scientific basis for the working groups include the National Adaptation Programmes of Action (NAPA's) and the National Communications to the United Nations Framework Convention on Climate Change.

Priority Sectors:

- Disaster Risk Management
- Agriculture and Food Security
- Health
- Water Resources
- Education and Capacity Building
- Infrastructure
- Ecosystems (terrestrial and coastal)
- Energy
- Tourism
- Insurance

By combining the available expertise and scientific research on climate changewith meteorological data contributed by experts a framework for the identification of adaptation and preparedness for response measures is created.

D. EARLY WARNING / EARLY ACTION EXERCISE

Attributing action measures to different preparatory stages, depending on the timescale of the forecasts.

Catalogue of Measures for Preparedness

Basis for Forecast-Based Financing

Figure 2: Overview of Climate Risk Analysis Process

Steps of a Climate Risk Analysis

Climate Risk Analysis as a Joint Process

The aim of this analysis is to bring together partners working in the field of climate risk and to provide a unified methodology for identification and characterization of prevalent climate risks and vulnerabilities in a specific country or region, as well as for the development of strategic measures for DRR and DP. These options for action are prioritised regarding their impact and can be used as the basis for prospective project financing.

Having thereby identified the country-specific priority areas including possible measures, projects can be realised more risk informed and more efficiently and effectively. These steps can be seen in Figure 2: Overview of Climate Risk Analysis.

Stakeholders

A Climate Risk Analysis should be organized as a workshop together with the National RC/RC Society and in cooperation with governmental representatives and agencies, civil society stakeholders such as humanitarian organizations as well as national climate experts. The aim is to identify the potential climate risks in the country and to ensure that climate change will be taken into consideration when it comes to future project planning. National climate experts such as meteorological offices, scientific institutions with a focus on weather related disasters, university departments for geography, hydrology or meteorology, governmental institutions and other scientific experts can help build an understanding of climate risks in the country or region and expected vulnerabilities.

Background Information

Relevant (national) research in the field of climate change projections and studies focusing on impacts, vulnerabilities and options for action should be presented and discussed. A key issue is the availability of climate information, trends and projections in general, whether long-term changes in the climate system can be expected and how this information can be operationalized for humanitarian decision making.

In this regard the United Nations Framework Convention on Climate Change (UNFCCC) **National Adaptation Programmes of Action (NAPAs)** provide an in-detail list of ranked priority adaptation activities and projects, as well as short profiles of case studies from the UNFCCC **Database on Local Coping Strategies**. In combination with the **UNFCCC's National Communication Reports** the NAPA's can be used as an extensive foundation for the Climate Risk Analysis process. Also useful is the 2012 IPCC Special Report "Managing

Steps of a Climate Risk Analysis

the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)" and the Working Group II Report „Climate Change 2014: Impacts, Adaptation, and Vulnerability", a part of the IPCC's Fifth Assessment Report.

Additional (scientific) materials useful in this process are mid- and short-term (seasonal) forecasts on climate change, results of vulnerability and capacity assessments (VCA's), accumulated local experience and politico-strategic approaches as well as existing initiatives and programmes. The most important instruments are workshops and presentations, as well as working groups and discussions, or participative analyses supplemented by dialogue with scientists, government representatives and humanitarian actors.

Step A: Assessing Climate Risks

The first step in analysing climate risks in a country or region is the **identification of potential climate related hazards and the affected population.**

Potential Climate Hazards (according to IPCC Special Report 2014)

Changes in weather and climate variables:

- Decrease in frequency and magnitude of unusually cold days and nights;
- Increase in frequency and magnitude of unusually warm days and nights;
- Increase in length, frequency and intensity of heat waves;
- Increase in frequency of heavy precipitation events and total rainfall.

Changes in weather or climate related phenomena:

- Increase in mean maximum wind speed and heavy rainfall associated with tropical storms;
- Shift in the mid-latitude storm tracks.

Physical environment:

- Increase in duration and intensity of droughts;
- Changes in flood magnitude and frequency;
- Earlier spring-break flows in snowmelt- and glacier-fed rivers;
- Rise in mean sea level with upward trend in extreme coastal high water levels;
- Increasing of current coastal erosion;
- Changes in high mountain phenomena due to heat waves, glacial retreat and/or permafrost degradation leading to slope instabilities, mass movements and glacial lake outbursts;
- Increasing danger of landslides due to increasing number of heavy precipitation events.

The potential climate change related hazards differ from country to country and from region to region. Therefore it is fundamentally important to contextualize the climate hazards with support from national climate scientists during the Climate Risk Analysis.

Since climate change might also have potentially beneficial effects on some regions, opportunities arising from changes in weather patterns are included in Annex 3: Template for Results of Climate Risk Analysis. They can be used to offset negative effects; an example could be an increase in the range of agricultural production due to a change in the precipitation patterns which balances the decrease of certain crops or vegetables.

Vulnerable Groups, Vulnerability Factors and Capacities

After the identification of potential climate hazards, the population most likely to be affected by them and their prospective vulnerability factors need to be identified (cf. Annex 4: Template

for Results of Climate Risk Analysis). These vulnerability factors are a combination of their exposure to hazards and the lack of capacities and resources in dealing with climate hazards.

Population Group	Important Vulnerability Factors
Poverty is a fundamental vulnerability factor: lack of resources for risk reduction and nutrition, lack of access to education, health, decision making processes	
Poor households managed by women	• Income mostly depending on weather related labour (like agriculture) • Limited access to education and information • Dependency on at least one adult worker
Children, elderly people, people with disabilities	• Weak physical conditions and high vulnerability to natural hazards • Depending on external support
Small-scale farmers depending on subsistence agriculture	• No alternative income source • Lack of knowledge regarding cultivation methods that consume less water • Lack of knowledge of soil protecting cultivation methods • Lack of access to drought resistant seeds • Lack of information regarding risk reduction activities
Poor population in storm and flood prone areas and in other zones highly at risk of natural hazards	• Lack of Disaster Risk Reduction (lack of knowledge, risk assessments, prevention and preparedness like early warning) • Often degradation of natural resources in coastal areas • Inadequate settlements and infrastructure

Table 1: Example of Affected Population and Vulnerability Factors

At the same time vulnerable groups very often already possess - to some extent - self-help capacities and have developed coping strategies to reduce their vulnerability to different stresses and shocks. As pointed out in the table of Annex 4 these existing capacities should be identified as well, especially those capacities dealing with climate hazards (e.g. usage of a variety of crops, different income sources and traditional knowledge about dealing with extreme weather).

Climate Risks for Vulnerable Groups

After the initial identification of hazards, vulnerable groups, vulnerability factors and also existing capacities the specific climate change related risks for the population in the country or region need to be described. Risk is defined as the probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interaction between natural hazards and vulnerable conditions (see Figure 1).

The consequences that climate change will likely have for the individual groups and assets are, among others:

- Loss of life, loss of houses;
- Crop failure, reduced agricultural production and loss of harvest;
- Health threats and outbreak of diseases;
- Water shortage and reduced water resources;
- Destruction of livelihood, infrastructure, natural resources;
- Loss of biodiversity of flora and fauna.

Beyond those direct impacts also indirect consequences should be examined, such as:

- Loss of income due to diseases or destroyed infrastructure;
- Increasing stress migration and the destabilization of regions affected by food and water insecurity.

Annex 3 of this report can be used as a template for a table to be filled in as an outcome of this first step of the Climate Risk Analysis.

In the second step **options for action to adapt to and to reduce the identified climate risks** need to be developed, including already existing Climate Change Adaptation capacities and activities in the country. Due to the humanitarian focus on reducing the risks of climate hazards for the most vulnerable, actions with regard to local Climate Change Adaptation should be a priority.

There are different categories of measures which can be used for long-term, mid-term and short-term Climate Change Adaptation and Preparedness for Response. Generally the activities can be categorized as structural measures (i.e. setting up storm- and flood-proof buildings), non-structural measures (i.e. information on flood-tolerant crops and improved irrigation techniques) and measures to strengthen humanitarian actors (i.e. supporting the National Society's and national partner's advocacy with regard to national legislation).

The following sectors present an overview of possible actions in the context of Climate Change Adaptation and their respective purpose. The Welthungerhilfe Climate Proofing tool gives detailed examples of options for action related to the sectors "Basic Infrastructure", "Agriculture", and "Natural Resource Management".

Disaster Risk Reduction

Understanding Disaster Risk:
The dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment need to be analysed. Addressing the issue of climate change and Climate Change Adaptation in a community-based **Vulnerability and Capaacity Assessment** process at the beginning of project implementation is particularly important. Rather than looking at the disaster history and present hazards, the VCA needs to incorporate the community members' perceptions of climate change as they are experiencing it. VCAs need to take into account any changes in extreme weather and climate, which the community has already noticed and methods already used by the community to adapt to those changes. Besides the development of hazard maps with community participation, space based and scientific hazard maps are helpful to understand disaster risks due to climate change and extreme weather events.

Strengthening Disaster Risk Governance:
It is vital to the management of Disaster Risk Reduction in all sectors and to ensuring the coherence of legal and policy frameworks, that Disaster Risk Governance is firmly established at all levels. For community based Disaster Risk Management, defining roles and responsibilities and encouraging governmental and civil society actors including the private sector is necessary to promote action and address disaster risk.

Investing in Disaster Risk Reduction for resilience:
This includes **Disaster Mitigation and Prevention** measures. These are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. This can include measures such as the reinforcement of river banks, the stabilisation of hillsides, land-use regulations avoiding settlement in high risk zones or the relocation of families / communities, which are frequently affected or will be affected in the near future. Disaster Mitigation measures encompass hazard-resistant construction, improved water storage systems and improved irrigation systems to reduce the impacts caused by increasing droughts, as well as improved environmental policies and public awareness.

Enhancing Disaster Preparedness:
Effective response encompasses measures to prepare the communities most at risk to react in an appropriate way to climate change and extreme weather events with a focus on community based early warning and response capacities (especially for floods and tropical storms). Possible measures could be establishing early warning systems and emergency response teams, regular evacuation drills as well as local logistics centres to handle relief supplies.

Food and Nutrition Security / Livelihood

Changing the utilization of natural resources and soil:
Entails all activities in support of changing the use of resources (e.g. arable land), through for instance a more sustainable cultivation system (e.g. diversification of produce and cultivation methods, more resistant seeds or reforesting land no longer used). The aim is to ensure that future generations can also use nature as an income or livelihood source.

Change of locations:
Cultivation areas can be relocated and individual families or whole villages resettled. Can be very effective, but it is generally difficult to implement.

Health / Water, Sanitation and Hygiene

Health and Sanitation:
Setting up health stations where disasters are likely to increase; choice of location, construction and equipment need to take into account flooding scenarios etc. Also, training the population in first-aid responsiveness and running awareness campaigns on health and hygiene to prevent diseases, developing primary health services and providing training for health workers.

Drinking water: Provision of chlorine tablets or filters, development of (disaster resistant) water supply and sanitation systems.

Step B: Options for Action

Education and Capacity Building

Support of behavioural changes:
Activities that focus on awareness regarding climate change and its future impact, such as community awareness sessions and school based activities like teacher training, etc.

Research:
Scientific research that focuses on an improvement of climate information and climate projections, the development of drought resistant seeds, etc.

Share losses (risk transfer):
Activities to ensure that the damage is not solely borne by those affected but by a larger group of the society (community based solidarity groups, insurances, government reconstruction etc.).

Again the results of this second step should be added to a table such as provided in Annex 3.

Step C: Prioritisation of Action

The third step of this Climate Risk Analysis is the **prioritisation of the options for action, with a focus on the following criteria:**

- Impact for the reduction of existing and future risks for the beneficiaries;
- Feasibility (technical, financial, socio-economic and cultural);
- Sustainability of investments after project end (community responsibility, ownership);
- Coherence with initiatives of other non-state actors and national politics.

The valuation of criteria will be different from project to project. Anyway, all criteria and the relevance of the possible actions should be discussed as part of the Climate Risk Analysis.

For the prioritisation of the different options for action a ranking might be helpful (max. 5 points per criteria).

Step D: Early Warning / Early Action Exercise

The resulting overview of climate hazards, vulnerabilities and arising risks with their respective measures to reduce the impacts can serve as a starting point for the development of standard operating procedures (SOP's) for projects triggered by threshold values based on scientific forecasts.

When working on these SOP's it is important to keep in mind the different time scales of different types of forecasts, since they vary from years to hours: We know for instance that certain countries will be exposed to an increasing risk of extreme precipitations because of climate change in the long term, but at this stage we still lack the precise information on when and where exactly heavy rains and flooding might occur. On the other hand classic short term weather forecasts can provide detailed information on where people have to expect flooding over the coming days or hours.

The different stakeholders involved in humanitarian action, Disaster Risk Reduction and Climate Change Adaptation need to make full use of these different forms of information on all timescales and take action that is appropriate for the respective forecast horizon.

Based on these different degrees of detail available at different points in time, the measures identified above should be attributed to different preparatory stages, depending on the information at hand.

The main idea of the Early Warning / Early Action Exercise is to identify the different forecast warnings that are available on different timescales (years, months, weeks, days and hours) and to attribute the different measures to their respective forecasting horizons. Furthermore the Early Warning Early / Action Exercise also allows for reflection upon the identified options for action and to define additional measures that are still missing after the Climate Risk Analysis steps above.

Table 2 gives an overview of this exercise based on the example of tropical storms (cyclone, typhoon or hurricane) and Annex 5 provides the templates for this exercise in the context of floods and epidemics.

Step D: Early Warning / Early Action Exercise

Cyclone/ Hurricane/ Typhoon	Example of Early Warning	Example of Early Action
Years	• Increased risk of cyclone intensity • Unpredictability of cyclone season and cyclone belt	• Continually update risk maps • Promote and build cyclone shelters • Advocate for strict building codes • Raise awareness on cyclone risk • Organize and train communities in Preparedness for Response • Strengthening Early Warning Systems and forecasting tools
Months (seasonal	• Forecast of above-average cyclone activity for the coming season	• Revisit contingency plans • Replenish emergency stocks • Communicate enhanced risk and test contingency plans with simulations and drills • Coordination meetings with relevant stakeholders
Weeks	• Forecast of likely development of cyclones in a particular stretch of the ocean	• Alert National Society • Pay extra close attention to potential storm warnings • Coordination meetings with relevant stakeholders
Days	• Forecast of cyclone that is likely to hit a stretch of coast (but not yet certain where exactly it will make landfall)	• Prepare evacuation • Get warning and instructions out to communities • Mobilize volunteers and community action teams • Storm proofing of houses • Check emergency kits etc.
Hours	• Cyclone warning: cyclone is about to hit a specific stretch of coast / coastal city	• Evacuate to storm shelters

Table 2: Example of Early Warning Early Action Exercise in the context of tropical storms

Annex 1: Additional Information

IPCC Homepage – Fifth Assessment Report: https://www.ipcc.ch/report/ar5/

IPCC Homepage – Special Report Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX): http://www.ipcc-wg2.gov/SREX/

RCCC Homepage – Forecast-Based Financing / Seasonal Forecasts:
http://www.climatecentre.org/programmes-engagement/forecast-based-financing

UNFCCC Homepage – National Report:
http://unfccc.int/national_reports/items/1408.php

UNFCCC Homepage – National Adaptation Programmes for Action (NAPA's):
http://unfccc.int/national_reports/napa/items/2719.php

UNOCHA Homepage - Index for Risk Management:
http://www.unocha.org/top-stories/all-stories/new-open-source-tool-will-help-understand-risk-humanitarian-crises-and-disas

WHH Homepage – Articles on Climate and Environment: http://www.welthungerhilfe.de/en/about-us/media-centre/gefilterte-liste/material-package-climate.html

WMO Homepage – Climate: https://www.wmo.int/pages/themes/climate/index_en.php

Annex 2: Template Workshop Agenda (Example)

Preliminary Activities: Identification of Stakeholders and Project Context	
ACTOR MAPPING AND SWOT ANALYSIS • **Actor Mapping:** Determining the system of actors relevant for the project with their mutual relations. • **SWOT Analysis:** Structured planning process to evaluate the strengths, weaknesses, opportunities and threats involved in the project, based upon the specified objective of the venture and including the stakeholders identified in the actor map.	IFRC; National Society; GRC Delegates

Climate Risk Analysis Workshop

DAY 1		
Introduction		
08.30-09.00	**Opening of the Workshop & Welcome Notes**	Government; National Society; GRC/WHH
09.00-09.30	**Introduction of workshop participants and workshop agenda**	All participants
09.30-10.00	**Introduction of Climate Risk Analysis Guideline**	GRC/WHH
10.00-10.30	**Coffee Break**	
Step A: Assessing Climate Risks		
10.30-11.15	**Presentation: Global Climate Change** • Expected climate change trends on global level • Increase of extreme weather events	RC/RC Climate Centre; GRC
11.15-12.00	**Presentation: Climate Change in project country** • Climate Change Scenario for project country	National climate expert
12.00-13.00	**Lunch Break**	

Annex 2: Template Workshop Agenda (Example)

13.30-14.00	**Presentation: Climate Change studies** • Studies on climate change risks focusing on impacts, vulnerabilities and options for CCA action	Scientific experts
14.00-14.30	**Presentation: Government response** • Government response to climate change	Government
14.30-15.00	**Presentation: Civil society response** • Civil society response to climate change	Civil society (RCRC, WHH)
15.00-15.30	**Coffee Break**	
15.30-16.30	**Panel Discussion** • Reflection on the presentations • Key messages about climate change hazards • Question and Answers	Government; National climate expert; Scientific expert; Civil society
16.30-17.30	**Working Groups: Climate Change Hazards** • Recalling the input from the presentations and panel discussion • Identification of climate change hazards for project country	All participants Special input from scientific experts
17.30	***End of Day 1***	

DAY 2		
09.00-09.30	**Exchange of Experience and Learning Key points**	All participants
09.30-10.30	**Presentation: Results of Working Groups** • Presentation of identified climate change hazards in project country • Discussion	All participants
10.30-11.00	**Coffee Break**	
11.00-12.30	**Working Groups: Vulnerable groups and Vulnerability factors** • Identification of population groups most at risk because of climate change hazards • Identification of vulnerability factors / capacities	All participants
12.30-13.30	**Lunch Break**	

Annex 2: Template Workshop Agenda (Example)

13.30-14.00	**Presentation: Results of Working Groups** • Presentation of identified vulnerable groups and vulnerability factors in project country • Discussion	All participants
14.00-15.30	**Working Groups: Climate Risks und Sector** • Identification of climate risks / negative impacts for the most vulnerable and the related sector	All participants
15.30-16.00	**Coffee Break**	
16.00-16.30	**Presentation: Results of Working Groups** • Presentation of climate risks, negative impacts for the most vulnerable • Discussion	All participants
16.30	***End of Day 2***	

DAY 2		
09.00-09.30	**Exchange of Experience and Learning Key points**	All participants
Step B: Options for Action		
09.30-11.00	**Working Groups: Options for Action** • Identification of measures that are suitable for reducing the identified climate risk	All participants
11.00-12.00	**Presentation: Results of Working Groups** • Presentation of options for action in project country • Discussion	All participants
12.00-13.00	**Lunch Break**	
Step C: Prioritisation of Action		
13.00-14.00	**Plenary: Prioritisation of Action** • Prioritisation towards impact, feasibility, sustainability, coherence	All participants
14.00-14.30	**Summary of Steps A-C**	GRC/WHH

Annex 2: Template Workshop Agenda (Example)

Step D: Early Warning / Early Action Exercise		
14.30-15.00	**Presentation: Early Warning / Early Action** • Introduction to the Early Warning / Early Action Concept	RC/RC Climate Centre; GRC
15.00-15.30	**Coffee Break**	
15.30-16.30	**Working Groups: Early Waning / Early Action** Working Groups (context specific): Group 1: Floods Group 2: Cyclones, Hurricanes, Typhoons Group 3: Epidemics • Identification of early warnings on the level of years, months, weeks, days and hours • Attribution of options for action to the level of years, months, weeks, days and hours in relation to the early warning	All participants
16.30-17.30	**Presentation: Results of Working Groups** • Presentation of early warning and early action on different timescales • Discussion	All participants
17.30 -18.00	**Wrap-up: Key messages and results of workshop, outlook**	
18.00	***End of Day 3 and End of Workshop***	

Annex 3: Template for Results of Climate Risk Analysis

A: Assessing Climate Risks					B: Option for Action	C: Prioritisation of Action (5 – high, 1 – low)				
Climate Change Hazards *Which effects can be expected?*	**Population/ Assets at risk** *Are population groups in the area going to be affected by climate hazards that can be expected?* *Who? What? How?*	**Vulnerability/ Capacities** *Why will the affected population groups probably suffer damage or losses?* *Which of their capacities can help in vulnerability and impact reduction?*	**Description of Climate Risk** *Which identified negative impacts are particularly relevant?*	**Sector** *Which of the priority sectors is affected?*	**Options for Action** *What measures are suitable for reducing the climate risks rated as most important?*	**Crit. 1** *IImpact for reducing risks*	**Crit. 2** *Feasibility*	**Crit. 3** *Sustainability (community responsibility*	**Crit. 4** *Coherence*	**Total**
Increase in **storms, hurricanes, cyclones, typhoons** (occurrence and intensity), also resulting in flooding	Whole population living in or depending upon **agricultural production from** endangered regions (especially coastal regions)	**Vulnerability factors**: No storm resistant **construction of buildings, lack of** early warning and disaster reduction, lack of resilient infrastructure	Food shortages because of frequent destruction of **harvest through storms, flooding,** landslides etc.	Agriculture and food security	Digging of flood channels and building of bridges in flood-prone areas	3	2	5	4	4
					Planting mangroves for coastal protection and reinforcement of banks and slopes	2	2	5	4	3

A: Assessing Climate Risks					B: Option for Action	C: Prioritisation of Action (5 – high, 1 – low)				
		Capacities: Variety of crops and traditional skills (fishery)	Danger to life trough flooding, storm debris, etc.	Disaster Risk Management	Setting up flood-proof and storm-proof buildings (cyclone shelters)	5	3	3	4	4
					Forming, training and equipping local early warning teams (evacuation drills)	4	4	5	5	5
			Increasing poverty caused by destruction of harvest, farm animals and income, as well as belongings, through flooding or storm damages	Agriculture and food security/ Disaster risk management/ Infrastructure	Introduction of floodtolerant crops	2	4	5	5	4
					Diversification of cultivation methods and animal husbandry	2	3	5	5	4
					Setting up veterinary services	1	1	1	1	1
			Danger of diseases like cholera, typhus, malaria, etc. because of contamination of drinking water through storm damages/flooding (especially concerning sanitation system)	Health/ Water Resources	Provision of health and hygiene education (on HIV/ AIDS, cholera, malaria)	4	4	5	5	5
					Distribution of mosquito nets	5	3	3	3	4
					Distribution of water filters and chlorine tablets	5	3	3	3	4

Annex 3: Template for Results of Climate Risk Analysis

A: Assessing Climate Risks					B: Option for Action	C: Prioritisation of Action (5 – high, 1 – low)				
	Small-scale farmers in regions endangered by storms	**Vulnerability factors:** Same as general population, also no alternative sources of income and reserves Capacities:-	Water scarcity caused by contamination of drinking water resources through floods/ storm damages (especially concerning sanitation system)	Water Resources/ Agriculture and food security	Disaster resistant water supply and sanitation systems	5	2	5	4	4
		Stress migration, „climate refugees“, because of increase in storms and flooding/ loss of livelihood	Infrastructure	Encouraging women to form groups to use social pressure and implement income-generating activities	Encouraging women to form groups to use social pressure and implement income-generating activities	2	5	5	5	4
[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]	[…]

Annex 4: Early Warning / Early Action templates

Example: Floods	Example of Early Warning	Example of Early Action
Years	• Increasing risk of extreme rainfall due to climate change	• Continually update risk maps and identification of changing vulnerable groups • Recruitment of additional volunteers • Working with communities to reduce risks through actions like reforestation, reinforcement of houses etc.
Months	• Forecast of strong above-average rainfall for the coming season	• Revisit contingency plans • Replenish emergency stocks • Inform communities about enhanced risk • Cleaning of drainage system
Weeks	• High ground saturation and forecast of continued rainfall leading to high probability of floods	• Alert volunteers and communities • Meet with other organisations and agencies to enable better coordination • Closely monitor rainfall forecasts
Days	• Heavy rainfall and high water levels upstream, likely to result in floods)	• Prepare evacuation • Mobilize volunteers • Get warnings and instructions out to communities at risk
Hours	• Flood water moving-down the river to affected areas	• Evacuate

Template for Early Warning / Early Action exercise on floods

Annex 4: Early Warning / Early Action templates

Example: Epidemics	Example of Early Warning	Example of Early Action
Years	• Rising risk of epidemics due to rising temperatures, changing rainfall patterns etc.	• Continually update risk maps • Build community health infrastructure • Advocate for/build surveillance mechanism • Train health workers/volunteers • Develop sustainable health campaigns • Awareness raising in communities
Months	• Forecast of enhanced risk of outbreaks of specific diseases (e.g. malaria) in particular areas	• Coordinate with government and WHO to update contingency plans • Prepare local health and care facilities • Sensitize communities about enhanced risk
Weeks	• Reports of disease outbreaks in a particular region	• Facilitate access to treatment • Continue to sensitize communities

Template for Early Warning / Early Action exercise on epidemics

Annex 5: Sources

German Red Cross (2010): Climate Risk Assessment

IFRC (2007): Red Cross/Red Crescent Climate Guide, November 2007

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UNISDR (2013): Post-2015 Framework for Disaster Risk Reduction (HFA2) Report from 2013 Global Platform Consultations, October 2013

UNISDR/WCDRR (2015): Sendai Framework for Disaster Risk Reduction 2015-2013, 18 March 2015

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Index of Abbreviations

CCA	Climate Change Adaptation
DM	Disaster Management
DP	Disaster Preparedness
DRR	Disaster Risk Reduction
GHG	Greenhouse gas
GRC	German Red Cross
IFRC	International Federation of Red Cross and Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
IRI	International Research Institute for Climate and Society
NAPA	National Adaptation Programme of Action
NS	National Society
NSA	Non-State Actors
ONS	Operating National Society
PNS	Participating National Society
RC/RC	Red Cross/Red Crescent
RCCC	Red Cross/Red Crescent Climate Centre
RD	Regional Delegation (Delegate)
SOP	Standard Operation Procedure (in Relief and Disaster)
UNOCHA	UN Office for the Coordination of Humanitarian Affairs
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction
VCA	Vulnerability and Capacity Assessment
WHH	Welthungerhilfe
WHO	World Health Organisation
WMO	World Meteorological Organisation

Imprint

Published by

Deutsches Rotes Kreuz e.V.
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Carstennstraße 58, 12205 Berlin, Germany
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www.DRK.de

Concept + Implementation

Deutsches Rotes Kreuz e.V.
GRC National Headquarters, Berlin
International Services and National Relief Division
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Layout + Typesetting

Sylva Hausburg, rx-medien.de

Images + Diagrams

Deutsches Rotes Kreuz

German Red Cross
National Headquarters

German Red Cross

DRK.de

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, cooperation and lasting peace among 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 continue 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 only be 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.