Policy paper

Inclusive Disaster Risk Reduction

Technical Resources Division
2017

PP | 13

Contents

Foreword

Each year, millions of people throughout the world are affected by hazards such as droughts, floods, volcanic eruptions, mudslides, hurricanes, earthquakes, tsunamis and forest fires. The frequency of these hazards[1] is increasing and their impact is heightened by poverty, increased population density, rampant and uncontrolled urbanisation, environmental degradation and climate change. The occurrence of manmade hazards is also increasing.

These hazards, when combined with different vulnerability factors, can cause considerable damage when capacity to cope with them is poor. Among affected people, some are disproportionately impacted due to factors such as age, gender or disability.

However, experience has shown that the impact these events can have on people and property, as well as the resulting needs for humanitarian assistance, can be significantly mitigated by modest but effective prior investments in Disaster Risk Reduction (DRR).

DRR can preserve lives and increase the resilience of communities by strengthening their capacity to anticipate, absorb and recover from these shocks. DRR is also cost-effective. "On average, every euro invested in DRR activities saves between four and seven euros in the response to the consequences of natural disasters"[2].

This is the why, since 2001, Handicap International has been supporting strategies that empower communities and local institutions to prepare for, reduce the impact of, and respond to disasters and, in the long-term, increase their resilience.

Our objective and added-value is also to ensure that these strategies are inclusive, enabling the most at-risk groups, and especially people with disabilities, to become actors in risk reduction and to benefit from protection.

Lastly, the cross-cutting nature of DRR activity creates links between emergency response and development, by making investments in the field more sustainable and thereby supporting continuity of services and resilience of populations.

Gilles Delecourt
Director - Technical Resources Division
Handicap International Federation

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[1] See The global context of Disaster Risk Reduction part
[2] European Commission. ECHO FACTSHEET: Disaster Risk Reduction, 2016

PRINCIPLES AND BENCHMARKS

Definitions, relevance and global context

A. From disasters to risk reduction

Disaster

Shift from a "disaster perspective" to "reducing disaster risk" can be understood by the following definition of these concepts:

- The United Nations Office for Disaster Risk Reduction (UNISDR) defines a **disaster** as: "A serious disruption of the functioning of a community or a society involving widespread human, material, or environmental losses and impacts which exceeds the ability of the affected community to cope using only its own resources"[3].
- And UNISDR goes on to indicate: "Disasters are often described as a result of the combination of: the exposure to **a hazard**; the conditions of **vulnerability** that are present; and insufficient **capacity** or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation"[4].

Hazards, Vulnerably and Capacity

Hazard is "a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation"[5].

Recently in 2015, the scope of disaster risk reduction has been broadened significantly to focus on both natural and man-made hazards (conflict, terrorism) and related environmental, technological hazards[6].

Natural hazards are naturally occurring physical phenomena caused either by rapid or slow onset events which can be geophysical (earthquakes, landslides, tsunamis and volcanic activity),

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[3] UNISDR. Terminology on Disaster Risk Reduction. United Nations, 2009
[4] *Ibid.*
[5] *Ibid.*
[6] UNISDR. Sendai Framework for Disaster Risk Reduction 2015 - 2030. Foreword, page 5

hydrological (avalanches and floods), climatological (extreme temperatures, drought and wildfires), meteorological (cyclones and storms/wave surges) or biological (disease epidemics and insect/animal plagues).

Natural hazards can be classified in several different categories[7]

Natural Hazard	Definition	Examples[8]
Geophysical	A hazard originating from solid earth. This term is used interchangeably with the term geological hazard.	Earthquake Volcanic activity
Meteorological	A hazard caused by short-lived, micro- to meso-scale extreme weather and atmospheric conditions that last from minutes to days.	Extreme Temperature Storm
Hydrological	A hazard caused by the occurrence, movement, and distribution of surface and subsurface freshwater and saltwater.	Flood Landslide
Climatological	A hazard caused by long-lived, meso- to macro-scale atmospheric processes ranging from intra-seasonal to multi-decadal climate variability.	Drought Fire
Biological	A hazard caused by the exposure to living organisms and their toxic substances (e.g. venom, mold) or vector-borne diseases that they may carry. Examples are venomous wildlife and insects, poisonous plants, and mosquitoes carrying disease-causing agents such as parasites, bacteria, or viruses (e.g. malaria).	Epidemic Insect infestation

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[7] Centre for Research on the Epidemiology of Disasters (CRED). General classification
[8] Icons from World: Humanitarian and Country Icons 2012

Man-made hazards and **technological hazards** (complex emergencies/conflicts, industrial accidents and transport accidents) are events that are caused by humans and occur in or close to human settlements. This can include environmental degradation, pollution and accidents and have strong consequences of famine, displaced populations, etc.

In technical settings, hazards are described quantitatively by the likely frequency of occurrence of different intensities for different areas, as determined from historical data or scientific analysis. Naturals hazards and man-made often co-exist.

➔ See also **Context analysis** in the Designing and inception phase of IDRR project cycle management Part.

Vulnerability to hazards refers to "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard"[9]. These may arise from various physical, social, economic and environmental factors, that, linked with the exposure to hazards and the capacity to cope, will influence the propensity to be negatively impacted by disasters.

Working in risk reduction is also working on building capacity. **Coping capacity** is "The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters"[10].

Disaster Risk Reduction

Disaster Risk Reduction (DRR) is the concept and practice of reducing disaster risks through systematic efforts to analyze 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[11].

In other words, DRR is a systematic approach to identifying, assessing and reducing the risks and **vulnerabilities** related to **hazard** and to increasing **capacities** to deal with.

➔ See next part **Risk reduction stage**: Risk assessment / Prevention / Mitigation / Preparedness / Early warning.

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[9] UNISDR. Terminology on Disaster Risk Reduction. United Nations, 2009
[10] *Ibid.*
[11] *Ibid.*

The **disaster risk equation** shows the interaction between all the notions. The risk of disaster increases with frequent and/or severe hazards, vulnerability of a given territory and population, and limited coping capacities.

$$\text{Risk} = \frac{\text{Exposure to Hazards X Vulnerabilities}}{\text{Capacities to cope}}$$

Finally, **Risk** is the probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human induced hazards, the vulnerability conditions and the capacities of the group concerned.

B. Reducing and managing risk: The three stages

Hazards may be inevitable, but disasters can be prevented, or their negative impacts can be lessened. With reduced vulnerabilities and greater capacity of individuals, communities, environment but also greater capacities of publics and private institutions to face disasters, the impact of hazard reduces. This can be done by reducing vulnerabilities and increasing capacities of individuals and communities.

The objective of anticipating and reducing risk is called **Disaster Risk Reduction (DRR).**

The graph below illustrates how DRR can be done before, during and after a disaster, and its impact on development.

The effective disaster risk reduction diagram[12]

Recovery stage

Emergency response stage

Normal risk/ Reduction stage

Growth Pattern following Disaster **With DRR**

Normal development Growth Pattern

Growth Pattern following Disaster **Without DRR**

The effectiveness of DRR is based on improved:
- Security / Good Governance
- Social / Economic Development
- Food / Water Security
- Economic Sustainability / Adaptation to Climate Change (CCA)
- Disaster Risk Reduction Initiatives*

* DRR Initiatives include:
- Advocacy, Policies + Legislation
- DRR Funding
- Organizational Structures + Coordination Mechanisms
- Community Risk Assessment and Implementation of DRR initiatives
- DRR Plans at all levels
- Capacity Building / Training (including standards + codes of conduct)
- Early Warning Systems + Potential Evacuation
- Public Awareness + Education

Impact of major hazard/disaster No DRR

Impact of major hazard/disaster With DRR

Effective DRR initiatives will lead to a reduction in the likelihood and impact of disasters happening, and to a post-disaster recovery process with a greater possibility to "build back better". Effective DRR includes an "all-hazard approach" with key role being played both by government at all levels and by the "at-risk" communities.

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[12] Adapted from: Chris Piper/ TorqAid. The Effective Disaster Risk Reduction Diagram. 2010

Risk reduction stage

Before the disaster strikes, this process is a key-step to build the resilience of people and communities to cope with risks that are negatively impacted them. The main elements of this stage are:

- **Risk assessment:** Diagnostic process to identify the nature and extent of risks by analysing potential hazards and evaluating vulnerabilities that combined could potentially impact negatively a community and the environment they rely on. This measure fully includes the Vulnerability Capacity Assessment (VCA) methodology and tools.

- **Prevention:** It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Examples include dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake. It's also including sensitization around risks.

- **Mitigation:** Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and man-made and technological hazards. Examples of structural measures are engineering works and hazard-resistant construction, while non-structural measures include awareness-raising, risk education, knowledge development, policies on land use and resource management, and facilities' operating practices.

- **Preparedness:** Pre-disaster activities that are undertaken within the context of disaster risk reduction and are based on sound risk analysis. This includes the development/enhancement of an overall preparedness strategy, policy, institutional structure, warning and forecasting capabilities, and plans that define measures geared to helping at-risk communities and actors safeguard their lives and assets by being alert to hazards and taking appropriate action in the face of an imminent threat or an actual disaster.

- **Early warning** (part of preparedness activities): The set of capacities and adapted tools 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[13].

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[13] UNISDR. Terminology on Disaster Risk Reduction. United Nations, 2009

Emergency response stage

The provision of emergency services and public assistance during or immediately after a disaster in order to save lives reduces health impacts, ensures public safety and meets the basic subsistence needs of the people affected[14]. These two first elements can be also anticipated and prepared into risk reduction stage:

- **Search, rescue & evacuation**: Providing adequate support for mass departure of people from threatened locations and following search and rescue services to support individuals that haven't been able to evacuate and are trapped or injured within the disaster impacted area.
- **Rapid assessment**: It consists of assessing the situation and the needs in the critical stage immediately after a disaster, to determine the type of assistance required for an immediate response.
- **Immediate assistance**: Provision of assistance during or immediately after disaster.

Recovery stage

Two major elements of these phases are recovery and rehabilitation/reconstruction:

- **Recovery:** It is a multi-dimensional process, guided by development principles. It aims to generate self-sustaining nationally owned and resilient processes for post-crisis recovery. **Early recovery** encompasses the restoration of basic services, livelihoods, shelter, governance, security and the rule of law, environment and social dimensions, including the reintegration of displaced populations. It stabilizes human security and addresses underlying risks that contributed to the crisis.
- **Rehabilitation and reconstruction**[15]: The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. The recovery task of rehabilitation and reconstruction begins soon after the emergency phase has ended.

Risk reduction strategies must be unavoidably incorporated in this phase to consider a reconstruction that aims to "**Build Back Better/Safer**".

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[14] *Ibid.*
[15] *Ibid.*

Over the years there has been an appreciation that reconstruction is an opportunity to build back better. While building back better has been defined in many ways, at its core, it advocates for the restoration of communities and assets in a manner that makes them less vulnerable to disasters and strengthens their resilience[16].

As seen on the DRR illustration and 3 stages presented above, risks need to be managed, every step of the way, integrated in development and emergency programming.
Although often used interchangeably with DRR, **Disaster Risk Management (DRM)** can be thought of as the implementation of DRR[17], since it describes the actions that aim to achieve the objective of reducing risk.

Disaster Risk Management is defined by the UNISDR as "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"[18].

Risk Management can be presented as a linear diagram or as a cycle, as bellow but that it's important to remember that Disaster Management does not start with a disaster.

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[16] Reconstructing after disasters: Build back better. Concept note from UN World Conference on Disaster Risk Reduction, in Japan, 2015
[17] Prevention Web. Disaster risk reduction & disaster risk management
[18] UNISDR. Terminology on Disaster Risk Reduction. United Nations, 2009

Disaster Risk Management Cycle[19]
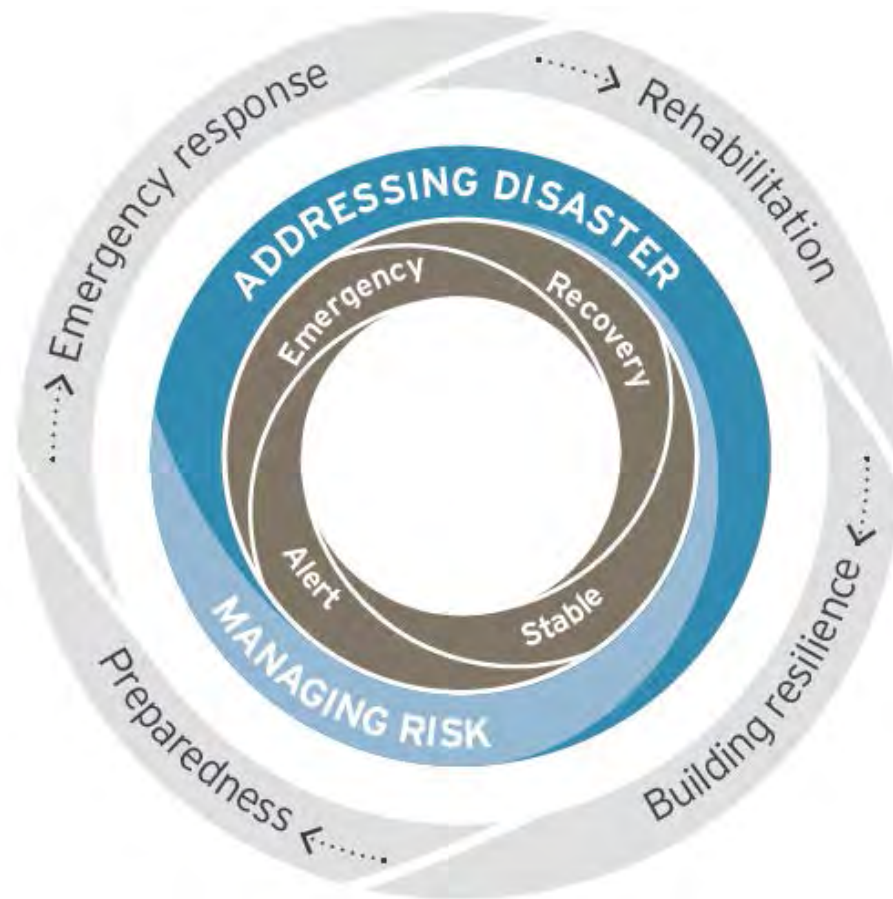
C. The global context of Disaster Risk Reduction

Increasing disaster risk

Risks are increasing, due to increased vulnerabilities and less capacities to cope.
"Human suffering from the impacts of armed conflicts and disasters has reached staggering levels. Nearly 60 million people, half of them children, have been forced from their homes due to conflict and violence. The human and economic cost of disasters caused by natural hazards is also escalating. In the last two decades, 218 million people each year were affected by disasters; at an annual cost to the global economy that now exceeds $300 billion"[20].

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[19] ACF international. Food security & livelihoods surveillance: A practical guide for field workers, 2011
[20] World Humanitarian Summit. Restoring Humanity: Global voices calling for action - Synthesis of the Consultation Process for the World Humanitarian Summit. 2016, page viii

Weather-related disasters are becoming increasingly frequent and claimed an average of 600,000 lives over twenty years, states the United Nations Office for Disaster Risk Reduction in a report made with the CRED over the period of 1995-2015[21].

Disasters are likely to become more frequent. Indeed, climate change increases the intensity and the upward trend in the numbers of weather events, and there is a population growth, especially in urban areas. Moreover, disasters are also increasing because of the rise in human vulnerabilities (urbanization, poverty, illiteracy rate, etc.). The vast majority of these deaths (89%) occurred in lower-income countries and the economic cost of these events was estimated at 1.9 billion USD (1.8 billion EUR). "Flooding alone accounted for 47% of all weather-related disasters (1995-2015), affecting 2.3 billion people, the majority of whom (95%) live in Asia. While less frequent than flooding, storms were the most deadly type of weather-related disaster, killing more than 242,000 people"[22].

Mapping of countries ranking by natural disasters [23]

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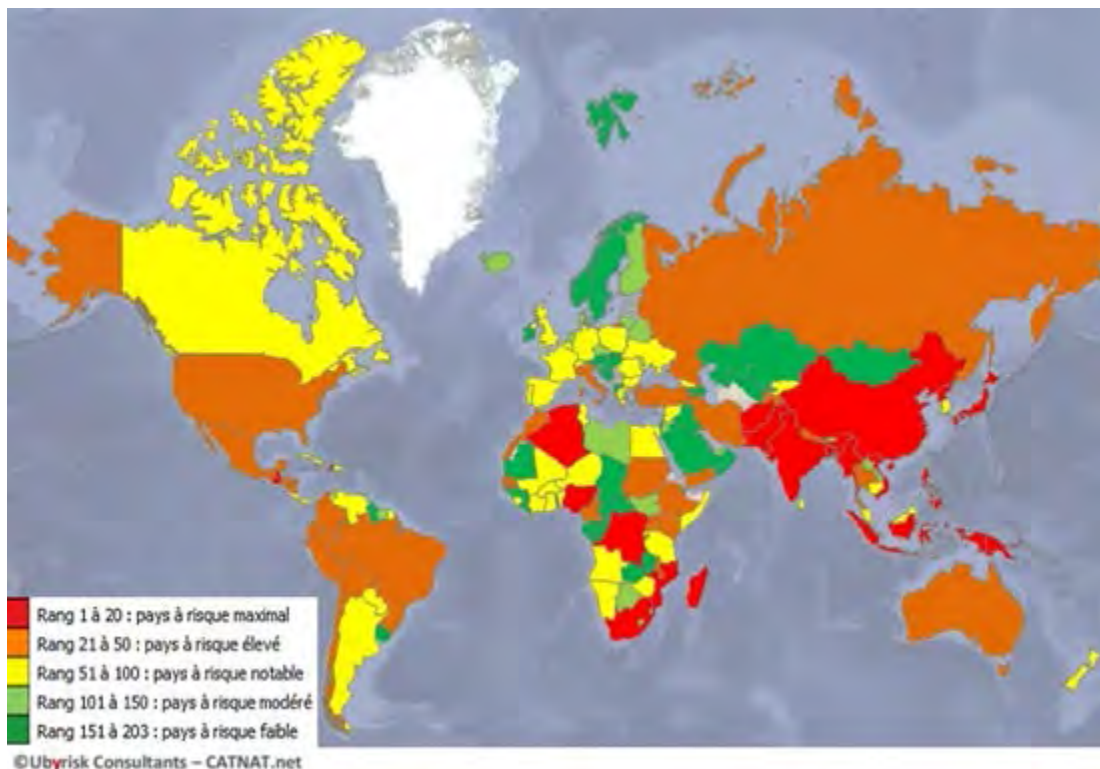
[21] CRED: Center for Research on Epidemiology of Disasters
[22] CRED. The Human Cost of Weather related disasters 1995-2015
[23] Source: Observatoire permanent des catastrophes naturelles et des risques naturels: https://www.catnat.net/
Captions : Rank 1 to 20: Maximal risk level / Rank 21 to 50: High risk level / Rank 51 to 100: Significant risk level / Rank 101 to 150: Moderate risk level / Rank 151 to 203: Low risk level

While Asia is the most affected area when we consider natural hazard, Africa is the most affected when we talk about man made, natural and man-made and biological hazards. Most of the DRR programs in HI are in countries with high level of hazard. However, all 60 countries of HI are located in "are in at risk area", that is why DRR as a transversal approach, is essential.

➜ See **IDRR as a transversal approach** in Interventions modalities Part.

Risk of humanitarian crises and disasters[24]

INFORM 2017 RISK INDEX

Sudan
Risk: 7.0
3 Yr trend: →
Hazard: 7.4
Vulnerability: 6.6
Lack of coping capacity: 7.0

Syria
Risk: 6.9
3 Yr trend: →
Hazard: 8.5
Vulnerability: 6.8
Lack of coping capacity: 5.6

Iraq
Risk: 6.9
3 Yr trend: →
Hazard: 7.7
Vulnerability: 6.0
Lack of coping capacity: 7.0

Afghanistan
Risk: 7.8
3 Yr trend: →
Hazard: 8.8
Vulnerability: 7.1
Lack of coping capacity: 7.7

Chad
Risk: 7.7
3 Yr trend: ↗
Hazard: 7.2
Vulnerability: 7.2
Lack of coping capacity: 8.9

Niger
Risk: 7.3
3 Yr trend: ↗
Hazard: 7.3
Vulnerability: 7.0
Lack of coping capacity: 7.7

Central Africa Republic
Risk: 8.4
3 Yr trend: →
Hazard: 7.9
Vulnerability: 8.6
Lack of coping capacity: 8.7

Myanmar
Risk: 6.7
3 Yr trend: →
Hazard: 7.5
Vulnerability: 6.0
Lack of coping capacity: 6.6

Congo DR
Risk: 7.0
3 Yr trend: ↘
Hazard: 6.2
Vulnerability: 7.0
Lack of coping capacity: 8.0

South Sudan
Risk: 8.8
3 Yr trend: ↗
Hazard: 8.2
Vulnerability: 9.0
Lack of coping capacity: 9.2

Somalia
Risk: 9.2
3 Yr trend: →
Hazard: 8.9
Vulnerability: 9.4
Lack of coping capacity: 9.2

Yemen
Risk: 7.6
3 Yr trend: ↗
Hazard: 8.2
Vulnerability: 6.9
Lack of coping capacity: 7.8

KEY: 0 — 2.0 — 3.5 — 5.0 — 6.5 — 10.0
Very low / Low / Medium / High / Very high / Not included in INFORM

↗ Increasing risk → Stable ↘ Decreasing risk

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[24] INFORM, 2017: http://www.inform-index.org/Results/Global

This map shows details for the 12 countries with the highest overall risk and trends over the last 3 years. The overall INFORM risk index identifies countries at risk from humanitarian crises and disasters that could overwhelm national response capacity. It is made up of three dimensions: hazards and exposure, vulnerability and lack of coping capacity.

Climate change

>•<
Global warming

The current global average temperature is 0.85 °C higher than it was in the late 19th century. Each of the past three decades has been warmer than any preceding decade since records began in 1850.
The world's leading climate scientists think human activities are almost certainly the main cause of the warming observed since the middle of the 20th century.
An increase of 2°C compared to the temperature in pre-industrial times is seen by scientists as the threshold beyond which there is a much higher risk that dangerous and possibly catastrophic changes in the global environment will occur. For this reason, the international community has recognized the need to keep warming below 2°C[25].
For more information: http://www.unep.org/climatechange/

90% of recorded major disasters caused by natural hazards from 1995 to 2015 were linked to climate and weather including floods, storms, heatwaves and droughts[26].

Climate change is linked to the greenhouse effect (greenhouse gases), and its main consequences observed in recent years will increase disaster risks with: increased sea levels, coastal erosion, increase of average temperatures, longer periods of heavy rain and drought, but also consequences on populations' vulnerabilities, etc. These consequences must be taken into account in DRM.

Climate Change is defined as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods"[27].

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[25] Last COP 21, Paris, December 2015
[26] CRED. The Human Cost of Weather related disasters 1995-2015
[27] United Nations Framework Convention on Climate Change. 1992, page 7

There are two important concepts related to Climate Change: **Climate Mitigation[28] and Climate Change Adaptation**.

The International Panel on Climate Change (IPCC[29]) defines **mitigation** as: "An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases". In other words, **Climate mitigation** refers to any action taken to permanently eliminate or reduce the long-term risks and hazards of climate change to human life and property.

The IPCC defines **climate change adaptation** as "the adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation". In others words, Climate adaptation refers to the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damage, to take advantage of opportunities, or to cope with the consequences.

To examine how climate change does and does not influence disaster risk, both **hazard** and **vulnerability** need to be considered. Indeed, 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, ecosystems, urban growth, and environment and ecosystems degradation.

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[28] Please note that mitigation here does not mean the same as mitigation in DRR sector.
[29] The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.

Overlap between climate change adaptation and disaster risk reduction[30]
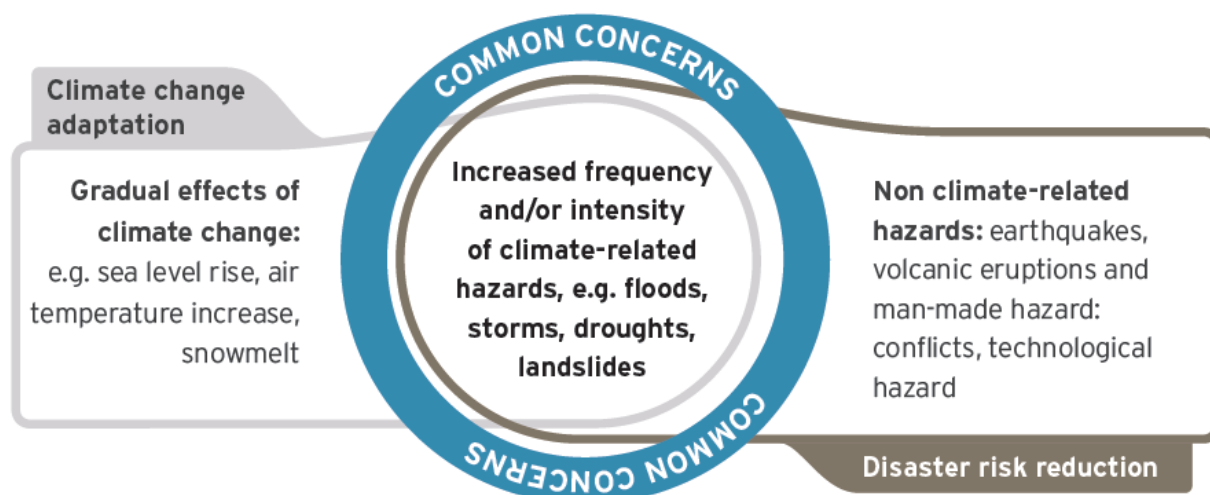
As shown in the graph, DRR and CCA share a common space of concern:

- Both are development issues and share the same ultimate objective: building sustainable resilient societies, communities, households
- Face similar complexities & challenges, rely on same type of measures and policies
- Concern all types of sectors
- Two-way needs: Disaster reduction is a no-regret option for adapting to climate change and a tool to select adaptation strategies can bring quick wins to hasten adaptation and reduce its costs
- Mitigation of climate change contributes greatly to reducing risk and vulnerability to natural and technological disasters.

The international community is moving towards an integrated approach of DRR and CCA.
At practical level, DRR and Climate Change Adaptation can both be interconnected in a multisectorial approach.

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[30] Adapted from: IFRC. **A guide to mainstreaming Disaster Risk Reduction and Climate Change Adaptation**. 2013, p. 4.

> **▶•◀   Sectorial examples for a better integration of DRR and CCA practices**
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> - **Water**: Construction of rainwater harvesting and water conveyance systems that take the risks of droughts and floods into account.
> - **Food security/Livelihood**: Training populations and allowing them to diversify their crops and source of incomes to ensure access to food in case of disaster.
> - **Agriculture:** Promotion of agro-ecological practices which mitigate climate change and contribute to people's adaptation.
> - **Climate information:** Set up of hydrometeorological, epidemiological and food production warning systems.
> - **Disaster preparedness:** Creation of risk management committees, support to contingency plans and implementation of emergency drills.
> - **Health:** Training health workers to perform epidemiological monitoring in a context of increased sanitary risks (malaria, dengue, diarrhea, cholera, etc.).
> - **Education:** Supporting the integration of DRR and CCA in school curricula.
> - **Environment:** Reforesting and planting mangroves to prevent floods and landslides and to enable carbon storage.
> - **Energy:** Promotion of improved cooking stoves to prevent overexploitation of forest resources.
> - **Urban communities:** Promoting the development of cyclone resistant buildings, Urban Planning and regulations.

D. International references

Sendai Framework for Action 2015 – 2030

Knowing the fact that hazards and impacts of extreme events are becoming more frequent and intense, with devastating consequences for people and communities, the International Community agreed firstly on a text in 1994 at the **Yokohama Conference** and in 2005 on an international plan to make the world safer from natural hazards: **The Hyogo Framework for Action 2005-2015**[31]**.**

This framework tried to involve every individual and community in moving towards the goals of reducing the loss of lives, socio-economic setbacks and environmental damage caused by natural hazards.

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[31] HFA. The Hyogo Framework for Action 2005-2015

The Hyogo Framework for Action (HFA) which was adopted by 168 countries set the objective of "building the resilience of nations and communities to disasters" over 10 years. It has supported work towards more systematic approaches to manage the risk of disasters, strengthening national strategies for disaster management in many countries and reinforcing early warning system.

However, the UNISDR evaluation of its implementation is in line with the ones of civil society organizations and highlighted important weaknesses in this framework.

One area of least progress during these last 10 years was about creating real change at local level and including the "most-at-risk groups" into DRR policies and practices. Another major weakness in implementing the HFA was the failure to mainstream DRR within the development sector and create ownership of this policy framework out of the humanitarian sector.

Today, the **Sendai Framework for Disaster Risk Reduction**[32] is following up Hyogo and goes beyond it. Namely, Sendai focuses less on post-event disaster management and more on the link between DRR, long-term development planning and addressing underlying risks (which was acknowledged as one of the major weakness of HFA).
Sendai Framework for DRR ended up with 4 priorities for action and agreed on 7 targets.

The document, thanks to the advocacy role of HI and other disability stakeholders, strongly identifies people with disabilities and DPOs as stakeholders of DRR. The Sendai Framework mentions 8 times people with disabilities, inclusion and accessibility[33].

By including people with disabilities, Sendai legitimizes the DRR programs and actions made at country level by Handicap international and officially recognizes the importance building a more inclusive world in order to save human lives.
Universal design, accessibility, free and accessible information are recognized as DRR key components: This language is welcomed because it makes the framework inclusive and gives us the opportunity to encourage ours DRR partners and all practitioners to work closely with people with disabilities and their representatives.

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[32] UNISDR. Sendai Framework for Disaster Risk Reduction 2015 - 2030
[33] See IDRR Toolbox: Brief Sendai Framework

2016 World Humanitarian Summit

United Nations Secretary-General Ban Ki-moon has called for the first-ever World Humanitarian Summit, which took place in Istanbul, Turkey, on 23-24 May 2016. The Summit was a critical moment to set a new vision on how to meet the needs of the millions of people affected by conflicts and disasters[34].

The commitments made will also have a critical role in fulfilling the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction, the Addis Ababa Action Agenda[35] and the Paris Agreement on Climate Change for the most vulnerable people including people with disabilities".

Part of the commitment should encourage strongly DRR objectives to be achieved, such as:

- **The Global Preparedness Partnership[36]**, launched by the Vulnerable 20 Group of Finance Ministers, the UN and the World Bank to help an initial set of 20 of the most at-risk countries achieve a minimum level of readiness to future shocks by 2020.
- **The One Billion Coalition for Resilience[37]** will be driven forward to strengthen the safety, health and well-being of vulnerable people everywhere by mobilizing 1 billion people to better support community resilience over the next 10 years. A number of countries also called for increased attention to the security dimensions of climate change and several proposed a special representative be appointed to take this forward.
- **Member States** committed to improve practices around data collection, analysis and early warning, including the establishment of a global risk platform. The Secretary-General committed to making all United Nations plans and programmes risk informed.
- **The Connecting Business Initiative[38]** was launched to better link private sector skills and resources before, during and after emergencies, and bringing together 11 national private sector networks representing hundreds of companies worldwide with broad multi-stakeholder support. Satellite and mobile industries launched charters that will drastically increase connectivity for affected people.
- **Donors and humanitarian partners** announced agreement on a Grand Bargain that will help get more means into the hands of people in need by saving incrementally up to $1 billion in efficiency savings to humanitarian action over the next five years.
- The Summit achieved significant commitments to **transcend the humanitarian-development divide** while reinforcing the importance of respecting humanitarian

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[34] UN. 2016 World Humanitarian Summit.
[35] Third International Conference on Financing for Development, Addis Ababa, 2015
[36] V20: Vulnerable Twenty Group of Ministers of Finance. Global Preparedness Partnership
[37] IFRC. The One Billion Coalition for Resilience
[38] CBI. The Connecting Business Initiative

principles and space. In recognizing the need to change, a breakthrough Commitment to Action on collaborating in a New Way of Working was signed by the UN Secretary-General and eight United Nations agencies and endorsed by the World Bank and the International Organization for Migration.

Part of the big achievement also for HI mandate, is the strong affirmation of **"leaving no one behind, including most at risk groups and people with disabilities".**

Those commitments will lead to strengthening the United Nations ability to meet needs, reduce vulnerabilities and manage risk better by working together towards collective outcomes over multi-year time frames and based on comparative advantage in each context.

2030 agenda for Sustainable Development Goals

Advocacy has been done to ensure coherence and mutual reinforcement between disaster risk reduction and the **2030 agenda for sustainable development**[39]. Coherence and complementarity can be found in several ways including political recognition of the Sendai Framework and the importance of disaster risk reduction in international agreements and instruments; common indicators and reporting mechanisms; specific mentions to inclusion and disability, and finally in initiatives and partnerships (e.g. early warning systems, insurance measures, and ecosystem management) that can cover implementation of the goals and targets of the post-2015 Development Agenda[40].

UN Framework on Climate Change

At international policies level, links are established between Disaster Risk reduction and Climate Change Adaptation, even though they are separate international conventions. The international political response to climate change began at the Rio Earth Summit in 1992, where the 'Rio Convention' included the adoption of the **UN Framework on Climate Change** (UNFCCC). This convention set out a framework for action aimed at stabilizing atmospheric concentrations of greenhouse gases (GHGs) to avoid "dangerous anthropogenic interference with the climate system".

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[39] United Nations Sustainable Development Knowledge Platform and The Global goals for Sustainable Development
[40] About Integrated research on Disaster Risk, see: IRDR & ICSU. Issue Brief: Disaster Risk Reduction and Sustainable Development. 2014

The UNFCCC which entered into force on 21 March 1994 now has a near-universal membership of 195 parties. The last agreement adopted in **Paris COP 21** a clear reference in the preamble on the link between international 2015 agendas: "Transforming our world: the 2030 Agenda for Sustainable Development", in particular its goal 13 "Take urgent action to combat climate change and its impacts", and the adoption of the Addis Ababa Action Agenda of the third International Conference on Financing for Development and the adoption of the Sendai Framework for Disaster Risk Reduction"[41].

At practical level, DRR and Climate change adaptation can both be interconnected in a multi-sectorial approach. Investments in DRR can play an important role in supporting communities to adapt to climate change. As the impacts of climate change are increasingly felt, more financial and technical resources will be needed to support vulnerable people to adapt to the negative impacts.

United Nations Convention on Rights of Persons with Disabilities and DRR

This Convention[42] promotes, protects and ensures the full and equal enjoyment of all human rights by persons with disabilities. It covers a number of key areas including certain areas of DRR in the Article 11 and 32[43].

The recent Adoption of the Dhaka Declaration on Disability and Disaster Risk Management[44], in December 2015, also acknowledges: "the importance of linking disability inclusive Disaster Risk Management (DRM) with the Sustainable Development Goals (SDGs) on the understanding that inclusion builds the resilience of the whole of society, safeguards development gains and minimizes disaster losses".

Convention on the Rights of the Child and DRR

The United Nations Convention on the Rights of the Child[45] is a human rights treaty which sets out the civil, political, economic, social, health and cultural rights of children. The Convention defines a child as any human being under the age of eighteen, unless the age of majority is attained earlier under national legislation.

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[41] United Nations. Framework Convention on Climate Change. Paris Agreement, 2015
[42] The UN Convention on Rights of Persons with Disabilities
[43] See IDRR Toolbox: The detailed CRPD article
[44] United Nations. Dhaka Conference: Disability and Disaster Risk Management
[45] The UN Convention on the Rights of the Child

Nations that ratify this convention are bound to it by international law. Compliance is monitored by the UN Committee on the Rights of the Child, which is composed of members from countries around the world.

Especially Article 6 is linked to DRR and how to protect children to disasters: "Life, survival and development. Every child has the inherent right to life, and the State has an obligation to ensure the child's survival and development".

Charter 14 Older people and DRR

This charter focuses on the adoption of three key principles of an inclusive approach to Disaster Risk Reduction (DRR). It calls for stronger commitment from governments, donors and organizations to act on the shortcomings in DRR policies, strategies and practices that often insufficiently respond to older people's disaster risks. They must acknowledge and fulfil older people's rights and engage older people's capacities and contributions. This charter has been developed through consultations with governments, NGOs, DRR and ageing experts as well as older men and women[46].

CEDAW and DRR and climate change

The Committee on the Elimination of Discrimination against Women (CEDAW)[47] is currently elaborating a **General Recommendation** on Gender-Related Dimensions of Disaster Risk Reduction in a Changing Climate. Indeed, it is largely recognized that across numerous instances of disasters, they are disproportionately affecting women.

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[46] UNISDR. Charter 14 for Older People in Disaster Risk Reduction
[47] The Committee on the Elimination of Discrimination against Women

Why does HI intervene in DRR?

The first level of response has to be looked into **HI's mission**[48], and then linked with the global goal of DRR ("Building sustainable resilient societies, communities, households"). In other words, in the DRR sector, HI is tackling both poverty and disaster situations (before, during and after the hazard occurs). HI is also contributing to improving living conditions on the long-term, and promoting basic human rights and specific inclusion issues (non-discrimination). Finally, the principles of DRR interventions perfectly fit with HI mission and principles of intervention.

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Historical background of Handicap International interventions in Inclusive DRR

Handicap International has been active in DRR for **15 years**. Its interventions started in Nicaragua in 2001, expanded and further developed in the mid-2000's in Asia and are now deployed also in Africa, Latin America and the Caribbean. Over the years, HI learned from its experiences, using different modalities, all of which contributed to strengthening our approach of inclusive DRR:

- At the beginning, a focus was put on mainstreaming disability in DRR, for which **HI supported inclusive DRR through training and coaching of DRR stakeholders**, mainly international NGOs. Through trainings and punctual support for physical accessibility (houses, shelters, etc.) and rehabilitation mobile camps (distribution of mobility aids, etc.), the organisation gradually strengthened its understanding of impacts of natural disasters on people with disabilities, and their access to DRR processes.
- A shift was made later on, with **HI becoming an inclusive DRR practitioner**, directly implementing inclusive DRR projects and building DRR actors capacities in inclusive DRR.
  - Starting with inclusive community-based DRR projects; HI went all the way up to national and regional levels.
  - Specific sectoral DRR projects supporting resilience in health, livelihood and education sectors were also developed.
  - The target group also varied depending on the context, from disability-inclusive DRR, to inclusive DRR, working with a variety of ''most-at-risk'' groups based on gender- age and disability.

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[48] "Handicap International is an independent and impartial aid organisation working in situations of poverty and exclusion, conflict and disaster. We work alongside people with disabilities and vulnerable populations, taking action and bearing witness in order to respond to their essential needs, improve their living conditions and promote respect for their dignity and fundamental rights", Handicap International mission statement, approved by the Federal Board of Trustees in November 2009.

- HI is developing its experience in different context, including rapid and slow-onset hazards, urban as well as in rural areas, etc.
  - Hi is also developing its expertise at linking resilience - DRR - CCA.
- On top of advocacy performed at local, national and later on regional level, **HI became part of international advocacy around inclusive DRR**. In 2012/2013, HI co-founded the Disability Inclusive Disaster Risk Reduction Network (DIDRRN)[49]. The organisation also participated in the HFA reviews and the development of the new DRR Sendai framework. HI is also part of French DRR NGO network to advocate at French level and Voice DRR Network to advocate at European level.
- DRR is increasingly recognized as a key element in HI country programmes' resilience. Even though all programmes in disaster-prone areas are not implementing dedicated DRR projects, they are developing **emergency preparedness plan**, and increasingly integrating **DRR as a component within development and humanitarian projects**.

Handicap International is now recognized as a leading expert on disability issues. It has proved to be an experienced actor to provide inclusive support to other DRR stakeholders as well as a direct actor in applying inclusive DRR. Handicap International aim is to emphasize the need for various actors to make DRR activities more inclusive to at risk groups including people with disabilities. Moreover to ensure their needs are fully integrated and heard from community level to national level but also within the networks of organizations providing disaster risk reduction supports.

A. HI facilitating a continuum between Emergency and Development

Disaster impact on HI beneficiaries and HI interventions countries

Disasters have strong negative consequences on the growth of development in HI intervention countries. Natural and human-made disasters spiral into human catastrophes when they entrench the poverty that already exists and pull more people down into poverty as their assets vanish, together with their means to generate an income.

Families lose homes, livelihoods and loved ones, communities lose businesses, jobs and services, children and particularly girls miss school and are at risk of early marriage – the list of impacts goes on. Disasters can cancel progress on poverty reduction.

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[49] See part: Inclusive DRR system and stakeholders

The drive for economic growth can expose countries to more risk – cities can be engines of growth, but unplanned urbanization exposes many people to risk. For example, flood destruction in parts of Asia and Central America has been significantly exacerbated by major development – new hotels, roads, and dams – in fragile ecological systems.

In this way, disasters can reveal the boundaries and limits of the development. DRR is a central issue for **sustainable development in HI intervention countries**, because DRR can support the development to be less affected by disasters. Investing in DRR can also **reduce resources needed to respond to emergencies**. "Every dollar spent on preparing for disasters saves around seven dollars in economic losses"[50].

At least, build-back-better[51]
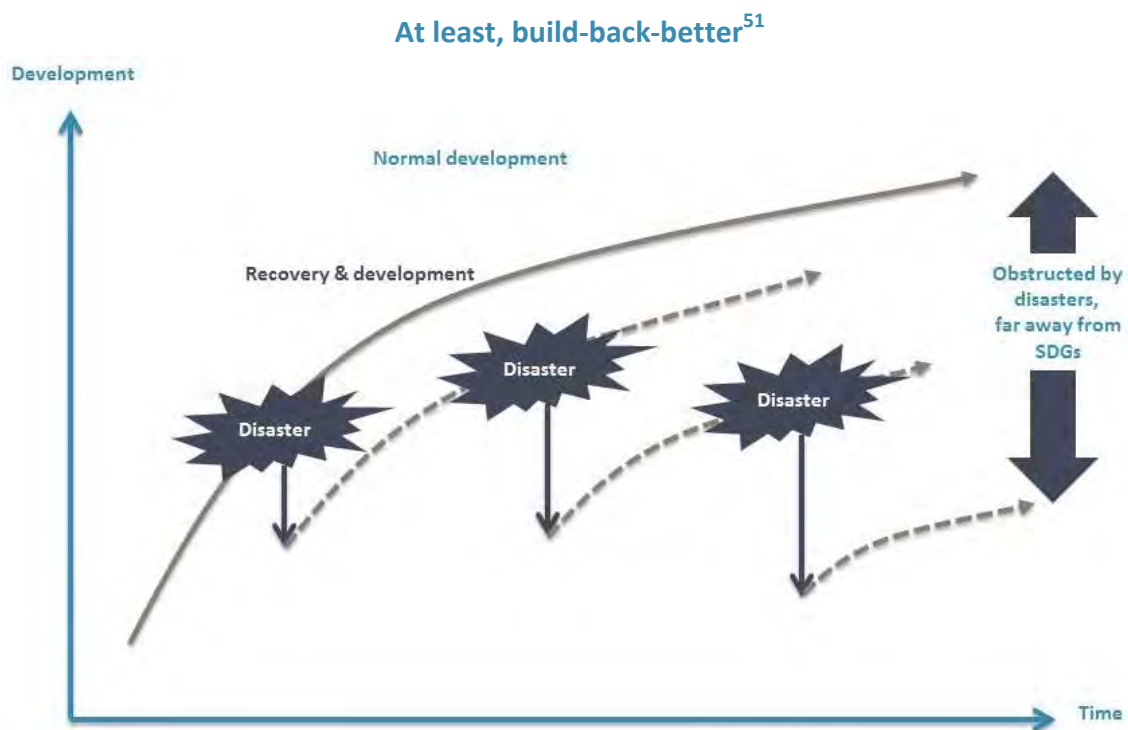
DRR incorporated into the three stages (pre-disaster, emergency, post-disaster) can contribute to overcome the gap between **humanitarian aid and development phases** and build some concrete possibility to link relief, rehabilitation and longer term development perspective (LRRD[52]) as well as lessen the impacts of climate change and contributes to the sustainability of development (SDGs)[53].

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[50] UNDP. # Act Now - Save Later
[51] From Japan International Cooperation Agency, TAKEYA Kimio, 2013
[52]"LRRD is to link short-term life-saving measures with long-term development efforts in order to make use of positive synergies and to avoid counterproductive outcomes", in Strengthening the link between relief, rehabilitation and development in the EU's Financing instruments for development and humanitarian aid under the MFF 2014-2020. European Parliament, 2012
[53] UNISDR. Global Assessment Report On Disaster Risk Reduction

HI working in DRR: From reactive to proactive perspective

Understanding the key value of DRR within development marks the important paradigm that happened towards the end of the 20th century, **from being reactive to disasters, to being proactive.** Indeed historically, dealing with disasters focused on **emergency response**, but it was increasingly recognized that further efforts in mitigation and prevention reduce the negative impact disasters had on development, and the resources needed for emergency response, recovery and reconstruction. The strong separation between 'emergency' and 'development' worlds is not relevant anymore under DRR perspective (as highlighted, among others, in the WHS "Chair's Summary").

HI Internal capacity to build emergency preparedness process is also a major shift to be more proactive.

➔ See in Intervention modalities Part **Taking risk into account: Key elements for resilient country programming in hazard-prone areas**.

From a reactive emergency response to a proactive risk management
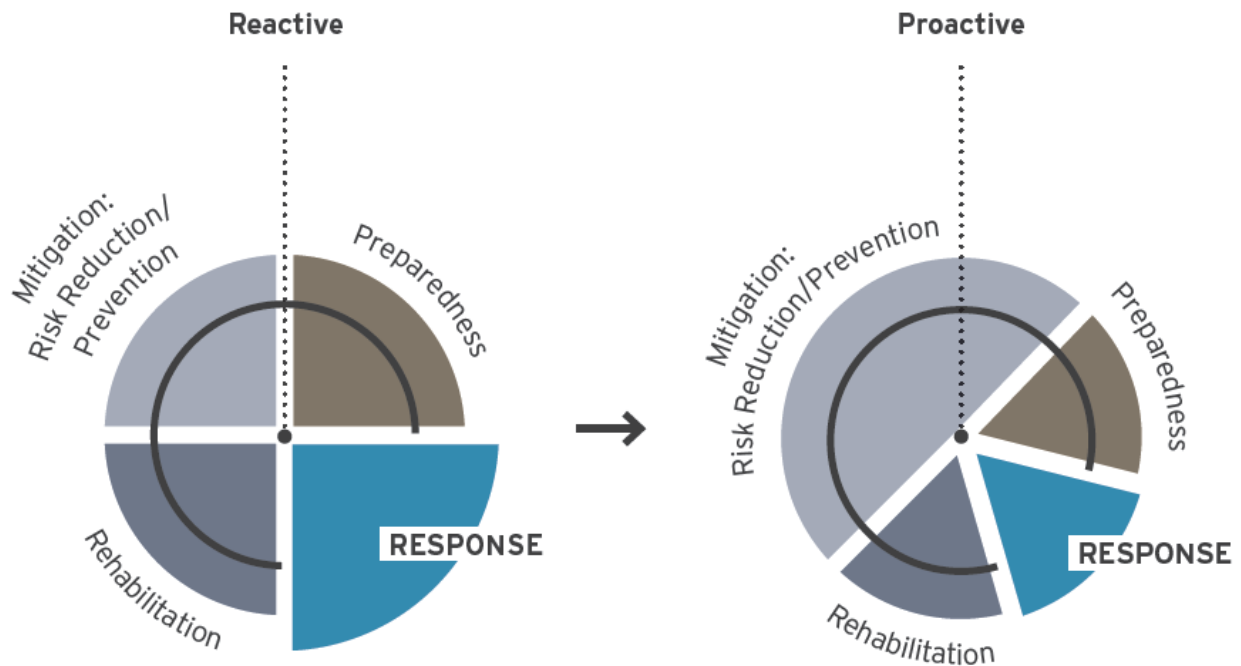
HI building resilience

Resilience and building resilience are the final goal of DRR, as well as an integral part of HI DRR activities. Literature proposes many definitions, from a physical perspective to a psychological perspective. In DRR, resilience is linked to the notion of **risk management**.

UNISDR definition on resilience is: "The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions"[54].

Resilience means the ability to "spring back from" a shock with also the concept of "adaptation" to a changing environment. Resilience can be built at various levels, from individual level to household, community, country or a region. For example, the resilience of communities to future disasters can be boosted through programs that assist the poorest and more at risk households before a crisis, such as a poor harvest, by providing a safety net, for example with cash transfers and other livelihoods activities during the period of the year when their reserves of money and food are lowest. Another example at community level would be to prepare the entire community to build their inclusive early warning system in order to make sure that all population, including at-risk groups, will be reached and will receive the information needed.

DRR programming In HI contributes to build resilience also at the individual level, providing skills in security, resistance, planning and decision-making and self-awareness to deal with the risks. DRR has a goal to strengthen the resilience of states, communities and people by building and expanding local, national and global capacities to deal with and recover from disasters. This way one can minimize the loss of life, limit loss of means and provide an answer to a variety of crises.

B. Why making DRR more Inclusive?

Disasters have a stronger impact on HI beneficiaries, vulnerable groups including people with disabilities. And DRR practices are consider being not enough "Inclusive" to make sure at risk groups including people with disabilities are fully engaged in DRR practices and would be less affected by disasters. HI, as a leading actor promoting and ensuring inclusion is then intervening in DRR.

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[54] UNISDR. Terminology on Disaster Risk Reduction. United Nations, 2009

Disasters and "Most at risk" groups

The disaster causes damage, casualties and disruption. It occurs as a result from the combination of hazard, vulnerability and capacity. Vulnerability is therefore a key concept in DRR, which goes beyond exposure to a hazard, to include physical, social, economic and environmental factors. Worldwide, some countries tend to be disproportionately impacted by disasters, and the same applies at regional and community level. Indeed, facing the same hazard, some individuals will face more losses, injuries or death. They will have less capacity to anticipate, cope with, resist and recover from the impact. They will be more ''vulnerable'', presenting greater disaster risk. They are known as the "most-at-risk groups".

The concept of **differential vulnerability** means that different populations face different levels of risk and vulnerability. The sources of vulnerability are multiple and quite diverse, they can include characteristics such as socioeconomic status, gender, age, physical and mental health status, disability, ethnicity, religion, etc.

Among the various causes of vulnerability, Handicap International pays particular attention on 9 factors leading to inequalities, because of specific perceptions and believes: the aptitudes (degree of capacity or incapacity), age, gender, sexual orientation, socio-economic status, geographic location, ethnic origins, religion and political opinions. These determinants interact with one another, contributing to the emergence of discriminations and social exclusions[55].

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Age, gender, disability and disasters: A few statistics

Children, young people and elderly make up a large proportion of those affected[56]:
- Nepal Floods 1993: Preschool age girls were five times more likely to die that adult man.
- Great East Japan earthquake 2011: the 65 year-old and over were 56 % of those who died and 89 % of postdisaster-related deaths corresponded to people aged 65 and over.
- Post-tsunami Sri Lanka: mortality among children living in evacuation camps was 3-4 times greater than among young adults; mortality of children under five was double that for adults over 50; and mortality for female of all ages was double than for males.
- Disasters also prevent children from going to school: following Haiti earthquake in 2010, 4,992 schools (23%° of the total) in affected areas were destroyed or badly damaged. Of these, 3,978 (80%) were closed after the quake.

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[55] Source: HI Theory of change
[56] More information: ADCAP, HI, et al. Minimum standards for age and disability inclusion in humanitarian action, 2016

Disasters usually mean higher mortality for women than for men:
Examples of the % of women among those who were killed:

- 59% Bangladesh cyclone in 1991.
- 55% India earthquake in 1993.
- 57% Japan earthquake in 1995.
- 77% north Aceh, Indonesia tsunami in 2004.
- 61% Myanmar cyclone Nargis 2008.

People with disabilities are more likely to suffer the effects of disasters:

- A Handicap International study finds that **75%** of people with disabilities believe they are excluded from humanitarian responses to emergencies like natural disasters and conflict[57].
- Hurricane, Katrina, 2004, between **21.3% and 27.1%** of the affected population had a disability.
- During the 2011 Japan earthquake and tsunami[58], research indicates that the fatality rate among people with disabilities (registered with the government) **was twice than for the rest of the population**.
- A 2013 global survey[59] amongst 5,450 respondents with disabilities from 126 countries illustrates why rates of people with disabilities who are injured or lose their lives are disproportionately high during disaster:
  - In the event of a sudden disaster, **only 20% of respondents could evacuate immediately without difficulty**, while the majority would have some level of difficulty or not be able to evacuate at all. If sufficient time was given to evacuate, 38% say they could evacuate without difficulty - still a minority of all respondents.
  - **71%** of respondents have **no personal preparedness plan**.
  - Only 31% have always someone to help them evacuate, while 13% never have anyone to help them.
  - Just **17%** of respondents were aware of a disaster management plan in their community, out of which a mere 14% had been consulted on these plans.
  - **50%** say that they wish to participate in Disaster Risk Reduction (DRR) efforts.

By the time of disasters:

- People with disabilities **tend to be invisible** in emergency registration systems.
- Lack of **awareness** is one of the major factors for people with disabilities not to comprehend disaster and its consequences.

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[57] Source: Handicap International. Disability in humanitarian context: Views from affected people and field organisations, 2015
[58] United Nations. Panel discussion on Disaster resilience and disability: Ensuring equality and inclusion, 2013
[59] UNISDR. UN global survey explains why so many people living with disabilities die in disasters, 2013

- People with disabilities are often **excluded** from disaster response efforts and particularly affected by changes in terrain resulting from disasters.
- Because of **inadequate physical accessibility**, or loss or lack of mobility aids or appropriate assistance, people with disabilities are often **deprived from rescue** and evacuation services, relief access, safe location/adequate shelter, water and sanitation and other services.
- **Emotional distress and trauma** caused by a crisis situation often has long term consequences and especially on people with disabilities.
- **Misinterpretation** of the situation and **communication difficulties** (What happened? What do I do? Where is my family? etc.) make people with disabilities more vulnerable in disaster situations.

Making DRR inclusive

As shown previously, "individuals and communities are differently impacted by disasters due to gender, disability, age, culture, socio-economic factors, geographical locations, levels of governance, a lack of awareness and lack of communication within society (from youth to older people, women to men, children to adult and *vice versa*)"[60]. The equal participation of all groups in DRR decisions and addressing the root causes of disasters will therefore help to address their underlying vulnerability, increase capacities to cope with the effects of natural hazards and facilitate empowerment.

Inclusive DRR is responding to:
- Marginalized groups being more likely to suffer from disasters.
- Disasters exacerbating vulnerabilities and social inequalities.
- Vulnerable groups being excluded from DRR decision-making, thus making them even more vulnerable to the impact of disasters.

Considering that particularly excluded groups (based on age- gender and disability) are at higher risk to disasters, Inclusive DRR is "an effort to reduce vulnerabilities of the most excluded ones and to increase their capacities to reduce the risks". Inclusive DRR is also the recognition of the right of these groups to benefit from and participate in Disaster Risk Reduction strategy.

Still, people at risk because of their age, gender and disability, have capacities that DRR planners should recognize:
- Young people act as key informants.

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[60] United Nations. Dhaka Conference: Disability and Disaster Risk Management

- Older people contribute to household security and accumulated knowledge around disasters, traditional knowledge of natural resources and provision of childcare.
- People with disabilities are best placed to assess their own need before, during and after disasters.
- Vulnerable groups should be included in DRR as active agents of change to effectively and equitably build resilience.

The concrete way of developing Inclusive DRR projects is developed in **Intervention modalities** Part of this policy paper.

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Social exclusion

Social exclusion is a key concept to understand why individuals and groups are more vulnerable, looking at their exclusion from income, exclusion from participation, and/or exclusion from services. Because of this, most-at-risk groups tend to be excluded from DRR decision-making and practices, thus making them even more vulnerable to the impacts of disaster, more likely to need support before, during and after the disaster, and less likely to cope with it. Also, disasters exacerbate vulnerabilities and social exclusion.

Dimensions and drivers of social exclusion, ODI, 2012[61]

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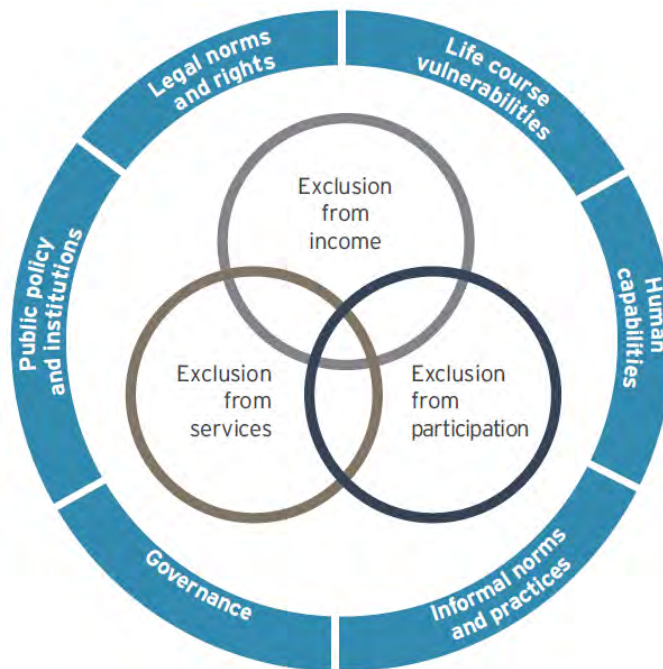
[61] Adapted from: ODI. Social protection and social exclusion: An analytical framework to assess the links. 2012, p. 3

The degree of social exclusion, based on the **human development model,** will be influenced by the interaction between personal factors (intrinsically) and environmental factors (extrinsically). External factors can include poor living conditions, inadequate infrastructure, lack of income diversification and limited access to basic services, especially education and information, discrimination and negatives attitudes, etc. Personal factors can include self-confidence of the person, health condition, mobility perspective and communication limitation to understand and communicate, etc. Social exclusion then needs to be tackled looking both at the individual and environmental level, and remembering that while DRR aims to reduce vulnerabilities and increase capacities, it shouldn't be forgotten that most-at-risk groups do have capacities, potential and can highly contribute to DRR efforts.

The 4 dimensions of inclusion in DRR

Inclusive DRR is a broad concept. When addressed in depth it is hard to pin down, as many aspects speak to the quality of inclusion. The **four dimensions** outlined below, when working together, have been found to strengthen Inclusive DRR projects and activities and DRR actors. These four dimensions[62] allow both to analyze and assess inclusion at any given time, and to assess change throughout longer term evolutions:

- Ensuring the full and meaningful **participation in decision making** of all at risk groups (based on age- gender and disabilities) and individuals in identifying and reducing risk.
- Promoting **diversity (of people, risks barriers, sectors and level of intervention).**
- Appreciating and encouraging **tailored approaches** in link with "do not harm" ethics and "leaving no one behind".
- Contributing **to resilience** for everyone by **removing barriers** that keep excluded people out.

Despite the diversity of situations, Handicap International observed, during more than 30 years and across more than 60 countries, eight principal access barriers for vulnerable people to services:

- **Inadequate policies:** Policies are not adapted to their specific needs, not implemented, not funded and/or their implementation and impacts are not monitored.
- **Lack of capacities of the services**: Services are insufficient or nonexistent. Professional or service providers' capacities do not seem adapted.
- **Insufficient participative approach:** People living with disabilities and vulnerable people are neither consulted, nor represented, and they do not participate to the decision making processes.

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[62] See IDRR Toolbox: More information on 4 dimensions

- **Negative attitude**: Communities, societies, and even institutions and governments stigmatize in some instances people with disabilities and vulnerable people. They adopt, in many cases, negative stance.
- **Insufficient and/or inadequate funds:** Funding, including international cooperation grants (on which depend thousands of vulnerable people and people with disabilities), are neither sufficient, nor adapted, to the needs and priorities of the most at risks groups.
- **Lack of data**: There are insufficient data to assess the situation of vulnerable people and people living with disabilities. This situation limits the capacity of public services and/or privates actors to advocate their specific needs.
- **Not enough individual opportunities:** People with disabilities and vulnerable people lack access to individual opportunities to develop competencies and self-confidence they need to be actively involved in their own empowerment.
- **Extreme environment disruptions** following a humanitarian crisis, massive displacements, political instabilities, destruction of infrastructures, etc.

This approach can be used to assess DRR projects, activities, partners and support to address Action Plan to become more Inclusive.

How to use these four dimensions?

According to the project / structure / service, it should identify indicators for each of these dimensions. These indicators dimension help to establish a score: "not really inclusive" to "very inclusive" (0-5 or A to E) and then a picture of strengths and weaknesses.

Once this work is done for each dimension, these results together reveal whether a service is inclusive, and at what level. This image to a time T of the service serves to highlight the activities necessary to improve its "inclusion" and therefore develop an action plan follow during a specific period of time.

Scale of inclusion level[63]

Really low	Low	Medium	High	Very high

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[63] INCRISD South Asia Inclusive Resilience: http://www.incrisd.org/

C. HI common considerations with IDRR

HI should also intervene in DRR because there are many common considerations with others sectorial interventions in the field.

HI Focus on the most at risk groups

Vulnerability is a central concept for HI overall programming, as it is also a key factor defining disaster risks. HI's action is focused on situations of poverty and exclusion, conflict and disaster. Its vision and mission put people with disabilities and vulnerable populations at the center of interventions, which aim at responding to essential needs, protecting and improving living conditions, as well as promoting respect for dignity and fundamental rights[64]. HI's target groups are understood by the DRR community as the "most-at-risk groups" in times of disasters, due to various factors including poverty, social exclusion, poor access to services and lack of adaptive capacities. HI's programming, focused on such challenges, can therefore highly contribute to reducing vulnerability and disaster risks. At the same time, ignoring vulnerability to disasters can limit the impact of HI's programmes.

Community based interventions in HI DRR project

As shown earlier, disaster risks have significant economic, social, health, cultural and environmental impacts on a country, especially on local and community levels. At the same time, local communities are at the forefront when a disaster strikes, filling the gap before resources from outside arrive, protecting themselves and their belongings, evacuating their house and finding shelter, searching for missing people, treating the injured, etc. A community empowered with knowledge, skills and resources necessary to cope with the situation is much more likely to get through the disaster with minimal impact[65]. The Sendai Declaration points out that "[while] the drivers of disaster risk may be local, national, regional or global in scope, disaster risks have local and specific characteristics that must be understood for the determination of measures to reduce disaster risk"; localized information, downscaled vulnerability and risk mapping, are therefore essential.

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[64] Handicap International. The Board Letter, June 2015, Strategy 2016-2025 special edition
[65] Handicap International. Disability Inclusive Community Based Disaster Risk Management: A toolkit for practice in South Asia. 2012

HI has extensive knowledge working at community level, addressing disability and vulnerability in a cross-cutting manner through inclusive local development, access to quality services, etc. While working with local communities, service providers and local authorities in various sectors on local development, initial needs assessments and initiatives' design and implementation could integrate and/or participate to existing VCAs, measuring disaster risks, reducing vulnerabilities and increasing capacities.

Proximity work with individuals, families and communities

Disasters have impacts on individual lives and livelihoods (loss of savings, house and other belongings, psychosocial impacts, etc.). They also create social disruption, separating families, neighbors and communities. Social workers can play a key role in reducing disasters around the world. Margareta Wahlström, Special Representative of the UN Secretary-General for Disaster Risk Reduction, stated in 2015 that "[the] role of social workers in disaster risk reduction is about far more than simply helping communities cope with the impacts of events such as floods or earthquakes. They are well-placed to identify and try to tackle what it is that makes people vulnerable in the first place, whether it is poverty, poor health and housing, environmental challenges or, as all too often, a combination of such factors"[66]. The Sendai Declaration also emphasized the need to see individual risks as part of a whole, and calls for an inclusive, participatory approach to DRR, and for an "[enhanced] collaboration among people at the local level […] through the involvement of community-based organisations and nongovernmental organizations"[67].

Within its various projects, HI works closely with individuals and groups (formal and informal), through social workers and develops an understanding of a community and its processes. Through its proximity social work with individuals, its work with vulnerable groups' representatives and other social networks, HI disposes of various entry points to introduce natural hazards and related risks and can play a key role in building resilience of those most-at-risk of disasters and strengthen relationships, social networks and mutual support mechanisms.

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[66] UNISDR. Social workers key players in DRR. 2015
[67] UNISDR. Sendai Declaration. 2015

Working especially with local partners

HI develops its projects and actions alongside communities. Partnerships form an important part of our interventions, with authorities, services providers, associations, formal and informal social networks, for collaboration to design and implement strategies, and sometimes through support and capacity building to develop or strengthen initiatives. As DRR is everyone's business and responsibility, it is important to HI development and humanitarian programming, through partnership development, to systematically take stake of the potential impact of disasters on partners and of the role they play, or could play, in disaster risk management and disaster response.

HI culture of risk reduction

DRR policies and practices reflect the major shift from the traditional emphasis on disaster response to disaster reduction, and seek to promote a "culture of risk reduction", focusing on risk factors to prevent the onset and limit the impact of disasters. Programming in DRR therefore puts forward identifying and managing risk factors, increasing capacities and reducing vulnerabilities resulting in exposure to hazards.

HI has developed knowledge and experience of risk reduction, with its focus on preventing impairments and disabling situations. The risk reduction approach is seen for instance in projects of **road safety, mine risk education, maternal and child health, mental health, protection against violence and abuse…**

The overall mission of HI also entails such approach, through its contribution to the prevention of disabling situations. Several DRR tools can therefore be shared for risks assessments and mapping, risk education, awareness raising, etc. While assessing risk factors with individuals, development and humanitarian programming can play a role in disaster-related risk factor identification and information. With regards to specific sectors (road safety, etc.), the impact of disaster-related risk factors on other risk factors (eliminate, reduce, change, exacerbate, etc.) should be questioned. Finally, as education and awareness raising is a common key activity to prevention programming, whenever possible and relevant, such programs could contribute to reducing disaster risks.

How does HI intervene in DRR? Principles and scope of intervention

A. A federal strategy taking risk into account

Together with two directly-related mentions in the external context analysis[68], there are different opportunities that address DRR as a main focus of interest within HI strategy for 2016-2025.

In the first Priority actions[69]:
- **Inclusion of people with disabilities and vulnerable populations**: "One of the main objectives of our 2016-2025 strategy is to improve access to mainstream services, access to specific services, and **to improve the social participation of people with disabilities,** to ensure they are offered equal opportunities. (…) It can be implemented in emergency, post-emergency and development contexts. Based on this analysis, Handicap International proposes a diverse range of responses, including the implementation of specific services such as orthopedic fitting, access to education, economic and social inclusion, social welfare, **disaster preparedness**, etc. The organization's 2016-2025 strategy aims to ensure this approach is adopted by the largest number of funding bodies and operational partners possible".

DRR is also mentioned in the second priority actions, as part of the LLRRD continuum:
- **Inclusive emergency responses adapted to the needs of the population.**
- **The emergency response as part of a continuum: planning - taking action - preparing the future.**

"The multiplication of chronic crises, the increasing number and frequency of natural disasters, and the entrenchment of high or low intensity conflicts often mean drawing strict distinctions between emergency response work and development work is irrelevant. The key challenge for Handicap International, beyond the life-saving phase of an emergency, **is to ensure that authorities and populations living in high-risk zones are better prepared for disasters.** We will

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[68] "The increased pace of climate change, first and foremost impacts the most vulnerable populations, and also challenges our ability to cope with its consequences." and "The increasing intensity, both of new conflicts or resurging historical conflicts, exacerbates the vulnerability of civilian populations and complicates the work of humanitarian organisations", in Handicap International Strategy 2016-2025: For more solidarity and inclusion in the world

[69] Handicap International Strategy 2016-2025: For more solidarity and inclusion in the world

work with them on their response capacity, crisis exit strategy, and transition phases. The expertise of our Development Division teams and their complementarity with those responsible for our emergency responses, are one of our key assets. This joint implementation allows us to propose a coherent response, to rapidly integrate local responses, and to put into place inclusive transition programs, adapted to the context, in partnership with the government ministries concerned (health, education, rural development, etc.). The organization is reinforcing these complementary skills, **notably by implementing disaster preparedness/risk management activities** in all our programs".

In the second priority action:
- Volume of activity doubled trough external growth and alliances.
- Position ourselves as the strategic "disability-age-gender" partner of choice for major emergency response actors.

DRR positioning in "disability-age-gender" can support HI intervention in response and strengthen the global approach around risk: From risk reduction stage to emergency and recovery.

In the third priority action:
- Solutions adapted to each context and facilitating the linkages between emergency and development.
- Develop reference approaches which ensure the relevance and impact of our projects on the whole emergency-development cycle.

DRR is a common approach to reduce risk and build resilience in all context of HI intervention.

B. Twin Track Approach to inclusive DRR

To ensure the full and equal participation of at risk groups in DRR, Handicap International uses a twin track approach in its DRR projects.

Twin track approach for inclusive Disaster Risk Reduction
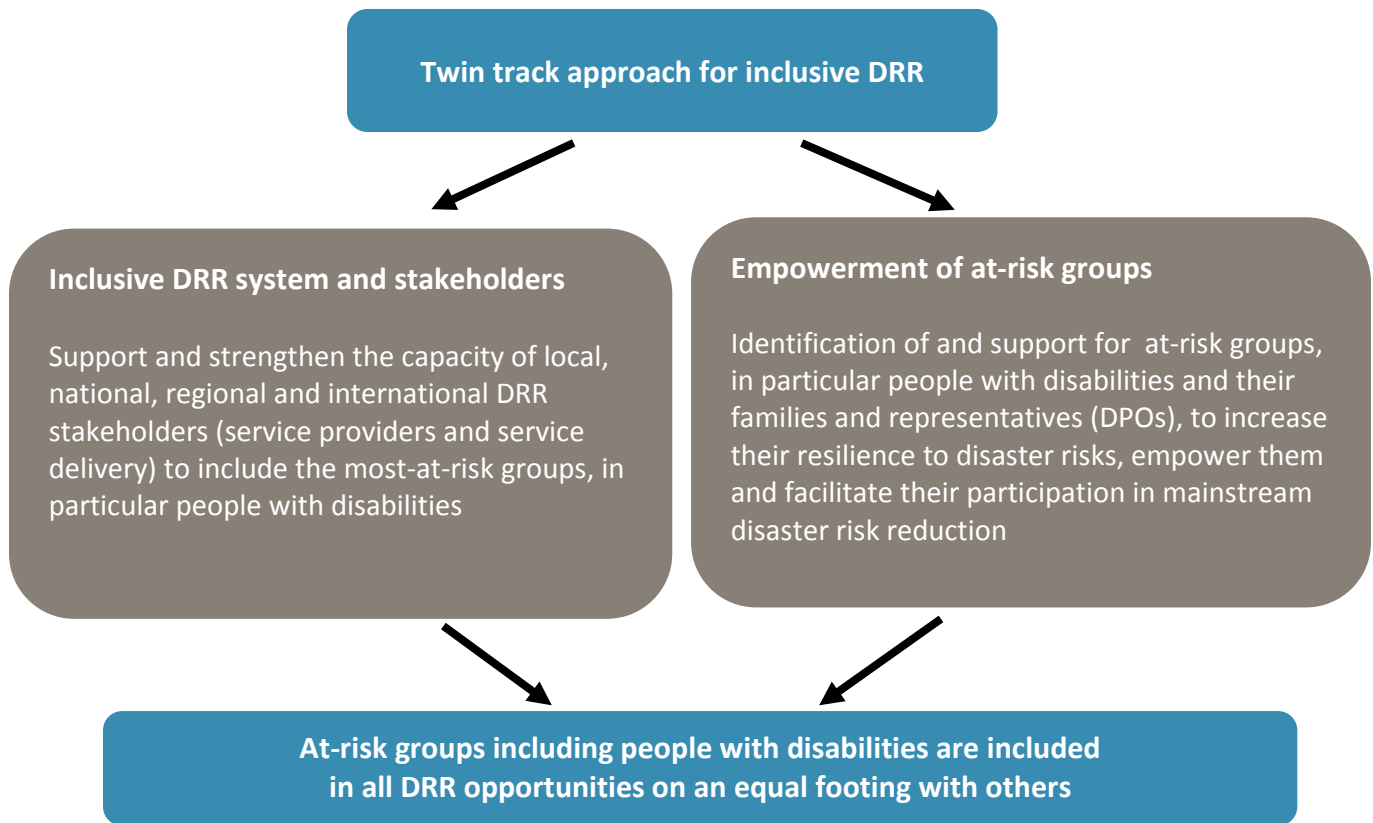
Inclusive DRR system and stakeholders

The objective is to build capacities of local, national and international DRR stakeholders to integrate the most at risk groups including people with disabilities in their mitigation, prevention, preparedness and relief programming. This is done through assessing the level of inclusion in their DRR practices and supporting them through awareness, information sharing, training, collection and dissemination of good practices, advocacy, and coaching of DRR practitioners**.**

The AIATAC approach (**A**ssessing, **I**nforming, **A**wareness-raising, **T**raining, **A**dvocacy, **C**oaching)[70] highlights 6 activities used to mainstream inclusion of a DRR service provider and his services delivery within a policies, structure, projects. This aims to overcome the barriers faced in inclusive service provision.

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[70] A methodological guide is currently being drafted, and is expected to be published by the end of 2017. Meanwhile, to know more on the approach:
https://hinside.handicap-international.org/intranet/jcms/prod_2021755/fr/brief-aiatac-eng

Empowerment of at-risk groups

The objective is to assess the level of risk and then increases capacities of at risk groups including people with disabilities and reducing their resilience, thus reducing their vulnerabilities to disasters.

Handicap International uses for this a **personalized approach,** providing individual and family social support, promoting access to information on risks so people can apply it to their daily living and livelihoods, developing individual and household vulnerability and capacity assessment and contingency planning, and building adaptive capacities to specific need, etc.

The process promotes empowerment as people feel confident to actively participate in "mainstream" DRR actions on a personal basis or as a representative of an organization such as a Disabled People's Organization (DPO).The objective is to promote specific services like specific evacuations support to people with disabilities in case of emergency to be able to join "mainstream" DRR initiatives, such as an accessible shelter.

C. Access to services and IDDR

Access to services for people with disabilities[71] and vulnerable people is central in the HI's theory of changes. This is a systemic analytical framework, developed to ensure the effective involvement of everyone in their respective community, and especially people with disabilities and vulnerable people who are oftenly excluded from services, **including risk reduction and management services.**

By developing a theory of changes, Handicap International identifies several objectives linked to its priority missions 'purposes and the necessary steps for improving its results. The IDRR is well tailored to contribute to this approach by reinforcing the access for the vulnerable people to the priority services.

Access to services is based on a stakeholder's analysis (eventual functional weakness, disruptions) and inclusive decisions from political makers, services providers and users. The IDRR sector usually draws attention on 3 main actors to improve the services' access:

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[71] Handicap International. Access to services for persons with disabilities. Lyon: Handicap International, 2010

- **DRR and governance**: at the national level, governments have to define their strategical orientations and measures leading to a better access to services. It appears necessary to assess the priority needs of the users, ensure and support the service delivery. Regarding the DRR sector, despite relatively low financial support, HI work closely with institutional deciders to reinforce their skills and competencies in reducing disaster risks by developing more inclusive policies and practices.
- **DRR and services providers:** all service providers have to ensure the conformity of their services to the specific needs of the entire society and improve their methodology in case of breach. The IDRR sector aims to improve resilience of societies by developing inclusive disaster risk reduction policies and practices within education, health, livelihood, agriculture, etc.
- **DRR and civil society:** citizens and service users should be organized to express and formulate collectively their requests and priorities regarding public services. They should even be able to assess the quality of these services. Civil society, disabled people organizations, elderly people/young people associations, women groups and other vulnerable populations organize themselves to take part in the disaster risk reduction processes.

Handicap International ensures the participation of the most at risk groups all along the decision-making processes at both local and national levels. HI advocates to political, services providers and disaster risk management stakeholders, in view of their support to the vulnerable people DRR related initiatives.

These linkages between TOC and IDRR will be strengthening in 2017 with a next specific brief.

INTERVENTION MODALITIES

There are two main entry points to work on Inclusive DRR in a HI program:

1. **IDRR targeted Project – direct or in consortium**: Direct intervention sector as IDRR actor and expert in consortium

2. **IDRR as transversal approach**

   - Take into consideration risks in the analysis of the context in the **Operational Strategies for HI's Programmes or Missions** in order to have an overview of the disasters' impacts on our beneficiaries. But also considering IDRR sector directly in link with HI Internal emergency preparedness process to natural or human-made disaster1 and as a direct link within our development and emergency interventions (Using the risk analysis for emergency preparedness and Operational Strategies).
   - Take into consideration risk reduction in the **project cycle management** phases.
   - Take into consideration risk reduction to ensure the **continuum** in others HI sectors.

Inclusive DRR targeted projects

A. Designing and inception phase of IDRR project cycle management

Context analysis

Before starting any Inclusive DRR project in HI, after the key phase of documentation, information and analysis[72], the level and nature (field/extent/content) of the intervention need to be defined.

From household to community, national, regional and international levels: whatever the chosen level, to ensure synergy will be essential. Indeed, if the ethos of DRR is to strengthen the capacity of local stakeholders to improve the way they anticipate, deal with, and recover from minor, medium and major-intensity crises, all DRR intervention levels must be interconnected.

If we take the implementation of an inclusive alert system as an example, if this system is derived from a risk analysis at regional level, it has to be possible to transmit the alert to national level, and then on to the communities and people most at risk.

A further example which demonstrates that interconnection between the different levels of intervention is indispensable for efficient risk management, is the importance of anticipating emergency response scenarios from an individual, family and community point of view, and from a national and even international point of view when the crisis and its impact are on a large scale.

Data analysis can also be used to determine the types of hazard upon which the intervention will focus: natural, man-made, technological.
  ➔ See the hazards defined in the **Hazards, Vulnerably and Capacity** section, of Principles and Benchmarks part.

The choice can be driven by several factors: the recurrence of the hazard, its probability, and the intensity of its impact.

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[72] See IDRR Toolbox: Exploratory mission analysis in Inclusive DRR

It is possible to work towards reducing the risk of a hazard which has a low probability of occurring but whose potential impact is deemed to be very high. Example: high seismic risk in Cuba, high risk of volcanic eruption in the Andes and Colombia, but more unpredictable than the hurricane season in Haiti.

HI's interventions can focus **on a single risk or on a so-called "multi-hazard" approach.** This is the case for regions which can be affected by several risks (hurricane, tsunami, earthquake, flooding, drought, etc.), where conflict and climate-change factors can pose an aggravating risk, and where all the risk-management mechanisms must be strengthened because the DRM capacity is weak.

Where natural hazards are concerned, interventions can also involve 'rapid onset' or 'slow onset' hazards.

"Slow onset" is the term used by humanitarian aid and development professionals to describe a disaster which does not result from a single and distinct hazard, but which emerges gradually (over several weeks, months or even years) from a combination of complex and inter-dependent circumstances.

The widespread food insecurity and famine in the Horn of Africa in 2011 is an example of a slow-onset disaster. Drought conditions caused by successive periods of rainfall deficit, combined with chronic poverty and malnutrition, high food and fuel prices, unfavourable terms of trade for livestock, and sustained and intense violence in some regions, led to a disaster which affected over 13 million people. This happened despite early signs, many months in advance, of an imminent humanitarian emergency.

Slow-onset disasters tend to be:
- **Recurrent** because of the risks associated with, and the conditions generated by multi-year phenomena, e.g. El Niño.
- **Widespread,** affecting people in vast regions, if not several countries.
- **Detrimental** to health and livelihoods. Even though the number of victims generally tends to be lower than that in rapid-onset disasters, other effects increase in number as the situation deteriorates.
- **Difficult to measure** in terms of economic loss – the loss of assets can subsequently lead to years of loss of revenue and opportunity.
- **Predictable** – slow-onset disasters are generally accompanied by warning signs which can be monitored to allow the appropriate responses to be planned and implemented in good time.

Examples of slow-onset risks and conditions

- **Drought** – long periods characterised by a reduction in average rainfall, often leading to severe water shortages.
- **Environmental degradation** – toxic pollution, deforestation, ecosystem degradation, erosion, desertification, etc.
- **Rising sea levels** – leading to the intrusion of seawater into coastal farmland, and the destruction of homes and livelihoods.
- **Ocean acidification** – leading to the loss of coral-reef habitat which provides shelter for many fish breeding grounds.
- **Increase risk of outbreaks of disease or epidemics** – causing sickness and even death, e.g. cholera or outbreaks of diarrhoeal diseases after flooding.

At the moment, HI has more experience in projects aimed at reducing the risk of rapid-onset risks (hurricane, flooding, tsunami, earthquake), but not exclusively so.

So-called 'man-made' hazards, particularly conflict situations, are not immune to multiple disasters. This is because conflicts often co-exist with the risk of disaster. The root causes of conflict – structural inequality in the distribution of power and resources within the population of a country or region – are also the causes of vulnerability and exposure to natural hazards. By extension, the conditions of vulnerability which make certain social groups more susceptible to conflict and disaster, such as economic poverty and social marginalisation, are also similar.

Violent conflict can aggravate and perpetuate the risk of disaster. When people lose their security their homes and their livelihoods in acts of violence or because of the threat of violence, physical and economic vulnerability to other risks increases. Furthermore, the pressure brought to bear on a government's resources by conflict can reduce the capacity or will of that government to deal with other problems, such as reducing risks that can seem less urgent than those associated with the current conflict.

Conversely, natural disaster hazards can trigger or fuel conflict, especially where limited natural resources are concerned; for example, a drought which has reduced the availability of fertile land and water can lead to disagreement about property and customary rights, and potentially to acts of aggression to acquire them.

It is probable that the risk of climate change will coincide with the risk of conflict. Global climate change is likely to exacerbate existing conflicts and foster new ones because of gradual changes in the natural resource base upon which livelihoods depend, and because of its effects on existing risks. **Climate-related migration** is also likely to lead to conflict based around land,

employment and other resources in regions and towns which are not prepared for a rapid growth in population.

Strategies and programmes for people living in conflict situations must therefore take the risks associated with disasters and climate change and their links with conflict into account, and adopt different activities to overcome them. Similarly, in situations of conflict, DRR mechanism must be implemented in a manner sensitive to the dynamics of the conflict so as to avoid the 'inadvertent' creation of additional risks or the aggravation of existing risks for the population concerned.

Note that HI still has very little experience in DRR projects in conflict areas, but this kind of setup will certainly be a trend for the future[73].

Risk characteristics in urban areas

Over half the world's population currently lives in towns, and a further two billion people are expected to be living in towns over the next twenty years. A large proportion of this population growth is forecast for small and medium-sized towns in developing countries. 1.2 billion people already live in shanty towns, and this figure is also likely to increase[74].

For historical and strategic reasons, many of the world's larger towns and cities are located in areas exposed to major geological and meteorological risks, e.g. on the coast, on floodplains or in tectonically active areas. The outskirts of towns are frequently exposed to other sources of risk resulting from inappropriate land-use or the poor management of natural resources. Urban areas concentrate the risk of disaster because of the convergence of people, infrastructure and assets, urban expansion and poor management, and are therefore more affected by death and economic loss than rural areas (cf. the earthquake that struck the Kathmandu valley in Nepal in April 2015).

The urban poor living in peri-urban areas and informal settlements are particularly vulnerable as they tend to live in high-risk zones and sub-standard shelters, with limited access to basic and emergency services and a general lack of economic resilience. These factors modify population distribution, relative wealth or impoverishment and the risk of disaster in the short term.

HI has developed some expertise in urban areas (notably in Nepal and Haiti) which can be developed and adapted to fit other contexts[75].

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[73] IFRC. A guide to mainstreaming disaster risk reduction and climate change adaptation. 2013. See 'Conflict settings' chapter
[74] *Ibid.*
[75] Ibid. See 'Urban contexts' chapter

Risk characteristics of rural areas

The challenges in rural areas are considerable, and even though the nature of the risks is different, the DRR strategies can be the same.

Community approaches and dynamics are often used (**CBDRR and CMDRR**[76]**)** as they can be considered easier to implement.

→ See for further details of these approaches, see **Three intervention modalities in HI IDRR-targeted projects**.

Nonetheless, in rural areas the challenges can be considerable in some remote situations where communication and living conditions are very precarious; and the challenges involved with preparing populations and reducing their vulnerability are sizeable.

Stakeholders and partnership

In the initial round of data collection, all state and non-governmental stakeholders, civil society organisations and disabled people's organisations (as stakeholders in disaster risk management) must be identified so as to build the most relevant partnerships.

HI position and the partnerships must be analysed and decisions taken based on HI's experience in this field in the country concerned and on the partners' experience. The more our expertise is recognised over time, the more we shall see a transformation: from stakeholder focused solely on inclusion, to recognised stakeholder in inclusive DRR (as is currently the case in many intervention contexts).

HI is positioning itself as a fully-fledged stakeholder in inclusive DRR, either alone or alongside other NGOs in a consortium, by introducing this 'inclusive' added value into our DRR practices.

Target group

The target group of at-risk beneficiaries must be also defined in the choice of intervention.

We currently see two types of setup in terms of target in HI's DRR interventions:
- Either, HI positions itself as an 'all-inclusive' stakeholder regarding all at-risk beneficiaries, with particular consideration for the triple focus of **"age - gender - disability"**.

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[76] To read more about CMDRR and CBDRR: Rustico "Rusty" Binas. Understanding Community Managed Disaster Risk Reduction (CMDRR). Cordaid, 2010

- Or, HI concentrates on the target group of people with disabilities, mostly because other at-risk groups are already covered by other stakeholders' interventions.

HI's strength in inclusive DRR lies in the fact that it has developed practices and methods for both positions, and that it is able to adapt to the context.

Inception phase

Making DRR inclusive, reducing risk and adapting to climate change are slow and qualitative processes, with long-term results that are sometimes difficult to measure.

As the funding period is often too short (given that funds sometimes come from emergency donors [12-18 months]), the objectives for HI's interventions in this sector, budgets and indicators must be realistic and SMART.

Furthermore, strengthening the resilience for all concerned is achieved through project funding but also by appropriate DRR mainstream action.

Monitoring and evaluating IDRR projects

Evaluating DRR activities is a delicate task because, after all, the success of a project is only measurable as a whole when a disaster occurs. At times we may be working with an unpredictable risk over time (e.g. the risk of an earthquake in Cuba), which makes it difficult to evaluate the impact of our projects.

Projects can and must be evaluated when a disaster occurs in a region where we were previously present in DRR. This was the case with our inclusive DRR action in the Kathmandu valley in Nepal for example, which we were able to evaluate after the earthquake[77].

Moreover, it is essential to include evaluations and knowledge capitalisation in DRR projects and even after a project ends, so as to measure improvements in the resilience of the population, the reduction in vulnerability in the medium/long term, and capacity building.

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[77] See IDRR Toolbox: Exploratory mission analysis in Inclusive DRR

Evaluation during emergency on the impact of DRR actions made before disasters can give new orientation both for future DRR actions and to emergencies actions.

HI quality referral must be used to evaluate and monitor HI IDRR project with his 12 components[78].

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A few tools for monitoring and evaluating IDRR projects and assess IDRR changes

- **KAP survey:** To measure changes in Knowledges, Attitudes and Practices in IDRR.
- **4 dimensions of Inclusion:** To assess the level of inclusion of a DRR actors, build an action plan and measure the progress.
- **The Economic Resilience index:** Tool developed by Handicap International to assist project teams to evaluate and measure the various aspects of economic resilience of vulnerable households in disaster prone areas.
- **ScoPeO:** When DRR is a component in a project building resilience with others components (social/livelihood, etc.) the global quality of life can be measure though the ScoPeO tools.

➔ **Please find those tools in the IDRR Toolbox.**

B. Three intervention modalities in HI IDRR-targeted projects

Note: Three different intervention modalities were identified with HI DRR team. However, all projects should consider expected results, indicators and activities among those three. One modality does not correspond to one project. One project can easily have objective and results in those 3 main results.

Those two mains modalities are following the twin track approach for IDRR (see Principles and Benchmarks part: **How does HI intervene in DRR: Principles and scope of intervention**) and the third one have been define to highlight the important of knowledge in IDRR (following priority one of the Sendai framework).

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[78] To know more: Handicap International. *Project Planning, Monitoring and Evaluation Policy*. 2015

Strengthen inclusive DRR system and services

The first modality refers to the priority two of the Sendai framework: **Strengthening disaster risk governance to manage disaster risk** which means that "Disaster risk governance at the national, regional and global levels is very important for prevention, mitigation, preparedness, response, recovery, and rehabilitation. It fosters collaboration and partnership".

Its refers also to priority 4: **Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.**

For HI, it refers to one side of the **twin track approach**.

Examples of expected results, indicators & activities			
	Local	**National**	**Regional/Global**
Expected results	DRR governance at local level is strengthened though a DRR committee with active participation of at risk groups	DRR Governance from national to local level are strengthened though Inclusive DRR policies DRR is mainstreamed in other development sectors and in development planning	Governance at the regional level is more Inclusive in disaster risk reduction and most-at-risk groups are actively participating (example with SAARC, ASEAN)
Indicators	X% of most-at-risk people are part and active in the local DRR committees X communities have adopt and reinforce their Inclusive DRR laws, plans and strategies X% of budget available for Inclusive DRR work by government and Human resources available	X advocacy events organized by representatives of most-at-risk groups conducted in DRR exchanges/ platform Inclusion is mention in at least national policy for DRR X% of Budget available for Inclusive DRR work by government and Human resources available	X advocacy events organized by representatives of most-at-risk groups conducted in DRR exchanges X regional commitment Inclusive early warning system in place for all major hazards and disseminate to all main affected areas

Inclusive early warning system in place for all major hazards in X communities X DRR stakeholders received awareness raising and/or training and/or coaching X DRR stakeholders have modified their standard operating procedures and adapted for most-at-risk groups X% of local contingency and response plans are strengthen and take into account the specific needs of most-at-risk populations X% of developed contingency plans are tested with full participation of most-at-risk groups Simulation exercise done in X communities show better capacities after than before the project	Inclusive early warning system in place for all major hazards and disseminate to all main affected areas X DRR stakeholders received awareness raising and/or training and/or coaching X% of national contingency and response plans are strengthen and take into account the specific needs of most-at-risk populations	Monitoring system is in place to follow each country achievement related to IDRR from regional to national level
Set of activities	**Inclusive Household and Communities' preparedness capacities are built up:** • Support the development of individual/household contingency plans • Promotion of most-at-risk individuals/households role model in DRR practices • Set up a DRR community task force including most-at-risk groups at local level	

- Coach local DRR task force to include at risk groups in their processes and tools
- Inclusive **Community based Disaster Risk Reduction** is implemented step by step from local level to national level[79]
- Inclusive **School based DRR** is implemented step by step from local level to national level To assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks, and undertake comprehensive public and community consultations during the development of such laws (most at risk groups including people with disabilities and their representative) and regulations to support their implementation
- To prepare or review and periodically update inclusive disaster preparedness and contingency policies, plans and programs with the active participation of most at risk groups
- To invest in, develop, maintain and strengthen people-centred multi-hazard, multisector forecasting and inclusive early warning systems tailor them to the needs of users, including the need of people with disability
- To promote the further development of and investment in effective, national, regional inclusive multi-hazard early warning mechanisms
- Raise awareness / organize trainings / advocate / coach DRR stakeholders for improved and inclusive preparedness strategies, plans and practices
- Organization of regular mock drill

DRR linkages and coordination at all level are strengthen:
- Support to districts, provincial, national, regional, international to review Inclusive DRR laws and regulations and identification of gaps
- To adopt and implement local, national, regional inclusive disaster risk reduction strategies and plans
- To establish and strengthen government coordination forums composed of relevant stakeholders at the national and local levels, such as national and local platforms for disaster risk reduction, and integrate official representation of most at risk groups including people with disabilities and their representative's

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[79] See more information on Inclusive CBDRR model in the IDRR Toolbox

- Create/review disaster management structure at different level, with the active representation and participation of most-at-risk groups
- Forge partnerships and strong collaboration between DRR stakeholders and representatives of most-at-risk groups
- Organize, coordinate, facilitate networking among DRR and most-at-risk targeted partners (DPO, CBO, etc.)
- Establish collaboration between national DRR authorities and national coordination body of most-at-risk groups' rights

Investing in DRR for emergency and recovery:
- To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain accessible, safe, effective and operational during and after disasters in order to provide live-saving and essential services
- To contribute to strengthen the capacity of local authorities to evacuate people living in disaster-prone areas with a priority to most at risk groups
- To train about shelter management and the needs of at risk groups
- To train the existing workforce and voluntary workers in inclusive disaster response
- Emergency kits distributions (first aid, search & rescue, shelters, etc.) including need of most at risk groups
- To establish community centers for the promotion of public awareness and the stockpiling of necessary materials to implement rescue and relief activities (including stock tailored to the specific needs of at risk groups)
- To promote the further development and dissemination of instruments, such as standards, codes, operational guides and other guidance instruments, to support coordinated action in inclusive disaster preparedness and response and facilitate information sharing on lessons learned and best practices for policy practice and post-disaster reconstruction programmes
- To promote the incorporation of risk reduction into post-disaster recovery and rehabilitation processes, facilitate the link between relief, rehabilitation and development, use opportunities during the recovery phase to develop capacities that reduce disaster risk in the short, medium and long term, including measures such as land-use planning, structural standards improvement, etc.

	• Integrate post-disaster reconstruction into the economic and social sustainable development of affected areas • To develop guidance for inclusive disaster reconstruction and build back better	

Empower most-at-risk groups and people for active participation in DRR initiatives

This result is directly linked with the twin track approach from HI, addressing the need of at risk groups and people in DRR to ensure they can participate more in DRR policies and practices.

Examples of expected results, indicators & activities		
	Local	**National**	**Regional/Global**
Expected results	Most-at-risk individuals & households increased their awareness and management of disaster risk Most at risk groups (including DPOS for example) at communities increase their awareness and management of disaster risk		
Indicators	X most-at-risk households have a contingency plan X most-at-risk people have increased their access to services X most-at-risk households benefited from a personalized approach	X at risk groups have increased their knowledge, aptitude and practice of at risk groups	

Activities	• Important to identify 'why' individuals/households are considered 'most-at-risk' and act on those underlying vulnerability factors (Exposure? Social inclusion? Negative attitude/stigma? Poverty? Access to services? Other?)
	• Identification, information, referral of vulnerable households (personalized approach)
	• Development of most-at-risk households' contingency plans
	• Specific support (material/financial/architectural) to mitigate risks of most-at-risk individuals and households (mobility aids, home modification, etc.)
	• Tailored awareness raising/training on disaster risk reduction
	• Exposure to meet directly at risk groups and listen to their needs
	• Provision of mobility aids/assistive devices: important to determine the objective/use (first aid kits, search & rescue material, social inclusion/daily mobility, stockpiling, etc.)
	• Develop income generation strategies that address barriers and meet the needs of at risk groups (especially when basic need are not covered)

Understand disaster risk, disseminate and advocate

This third modality refers to the priority one of the Sendai framework: **Understanding disaster risk** that refers to "Disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of people and assets, hazard characteristics and the environment. Such knowledge can be used for risk assessment, prevention, mitigation, preparedness and response"[80].

HI DRR teams consider this priority essential for the implementation of HI projects. Indeed our interventions should contribute to increase the level of understanding and knowledge around disaster risk to make sure that aptitudes and practices will be more efficient.

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[80] UNISDR. Sendai Framework for Disaster Risk Reduction 2015 - 2030

Examples of expected results, indicators & activities			
	Local	**National**	**Regional/Global**
Expected results	Information on disaster risks and disaggregated datas on disasters' impacts on most-at-risk groups is identified, collected, analyzed and disseminated by the local actors to improve Knowledge, Aptitude and Practices	Information on disaster risks and disasters' impacts on most-at-risk groups is disseminated by the local actors towards national actors to improve knowledge and influence Inclusive DRR policies and practices	Lessons learned are shared to improve knowledge and influence Inclusive DRR policies and practices Early warning system are improve and better disseminate to inform most at risk territories and populations
Indicators	Knowledge, Attitude and Practices on disaster risks are better before and after the project A support decision making for Inclusive DRR exists	Number of national policies and Sendai framework action plan promoting inclusion in DRR policies Number of at risk groups participating in advocacy at national level in DRR platforms	Number of regional policies promoting inclusion in DRR policies Number of at risk groups participating in advocacy at regional level in DRR platforms
Set of activities	**Collecting Data's and Knowledge around risk:** • Conduct Inclusive Vulnerability and Capacity Assessment (at households, communities, institutions, etc.) with the active participation of most at risk groups and diffuse it to decision makers to influence decision making • Publication of Inclusive VCA results in various and accessible formats • Collecting disaggregated data's on age, gender and disability and disseminate it • Collecting data's on hazards, using mapping and GIS • Accessibility audits and mobility mapping • Encourage active participation to collect inclusive local DRR practices • Post-disaster reviews and lessons learned **Dissemination and risk education:** • Promote awareness at community level of inclusive disaster risk • Production of accessible IEC material to all members of a community		

- Participation and diffusion to scientific studies on the impact of disasters on most at risk groups including people with disability
- To enhance collaboration among people at the local level to disseminate disaster risk information through the involvement of community-based organizations (most at risk groups including people with disabilities and their representative)
- To build the Inclusive DRR knowledge of government officials at all levels, civil society, communities and volunteers, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning
- To promote the incorporation of inclusive disaster risk knowledge, in education, health, livelihood, urbanization sectors, etc.
- Production and broadcasting of accessible radio public service announcement
- Inclusive and accessible awareness raising/social campaign on disaster risk
- Identification and Dissemination on inclusive DRR good practices
- Publication of Inclusive DRR lessons learned and disseminate with decision makers
- Participation to Global campaign on awareness on inclusive disaster risk reduction
- Contribute and advocate in regional platform for inclusive DRR governance such as AMCDRR (Asian Ministerial Conference on DRR)
- To actively engage in the Global Platform for Disaster Risk Reduction, the regional and sub-regional platforms for disaster risk reduction the most at risk groups to advocate for the implementation of the Inclusive Sendai Framework
- To enhance access to and support for innovation and technology, as well as in long-term, multi-hazard and solution-driven research and development in the field of inclusive disaster risk reduction

IDRR as a transversal approach

Hazard-related risks should be considered both in general **development and humanitarian programming**, beyond DRR targeted projects. Vulnerability to natural hazards is complex and multi-faceted and needs to be addressed in an integrated manner. Also, the negative impact of disasters calls for greater responsibility of all and accountability for disaster-related losses. Moreover, development and humanitarian programming in disaster-prone countries don't always reduce vulnerability to natural hazards and sometimes even create new forms or exacerbate existing factors of vulnerability.

The lessons from the past Hyogo Framework for Action showed that **disasters continue to undermine efforts to achieve sustainable development.** In 2012, the United Nations Conference on Sustainable Development "called for disaster risk reduction and the building of resilience to disasters to be addressed [...] in the context of sustainable development and poverty eradication and [...] integrated at all levels"[81]. The Sendai Declaration underlines the opportunity brought by the intergovernmental negotiations on the post 2015 development agenda, climate change and DRR to enhance coherence across policies and practices, **for DRR to be understood as a crosscutting issue**, an integral part of the development process.

Risk-sensitive programming is essential to secure development efforts, to contribute to risk reduction and to minimize the negative impact of predictable hazards, and to avoid the creation of new risks.

HI can work on mainstreaming DRR either "internally" (mainstreaming IDRR in other HI sectors/projects), or externally (mainstreaming IDRR into other stakeholders' projects/activities).

A. Taking risk into account: Key elements for resilient country programming in hazard-prone areas

Considering hazards and related risks in the very early stages of country programming and project design is essential in hazard-prone areas. It ensures the effectiveness of the program, securing the pursued objectives against potential shocks, and is also important, in the event of a disaster, to facilitate the rapid implementation of a humanitarian response when needed.

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[81] UNISDR. Sendai Declaration. 2015. Preambule.

Country programming also provides an important opportunity to assess and address disaster risk in a strategic and coordinated manner.

HI develops on the one hand country sheets which are updated at least once a year and which serve different purposes (project design, internal and external communication, etc.). Then Operational Strategies for HI's Programmes or Missions[82] are developed at country or regional levels, through which problems, needs, actors and interests are analyzed and sectoral and thematic areas of focus are identified and translated into a strategic plan to be implemented for a period of 3 to 5 years. And finally, Country sheets and STRATOPs (Operational strategies) are completed by internal project documents on the most relevant sectors of intervention chosen within the programming strategy. Regarding internal projects, either IDDR-targeted or other projects mainstreaming IDDR, different considerations and intervention modalities have been explained before (See Modalities interventions Part: **Inclusive DRR targeted projects**) and will be presented below (See **DRR as a support to encourage continuum** part about DRR and sectoral planning).

Looking at the Country sheets and at the different steps to build an Operational Strategy[83], integrating risk reduction could translate into**:**

Collecting data and analysing information

Collecting data and analysing information are essential both for Country sheets and the Operational Strategy. This section provides a first screening which will help determine if a disaster risk intervention is necessary/pertinent in a given context.

For this, we need to consider data on the general context:

<p align="center">Significant human-made hazard and/or natural hazard?</p>
<p align="center">NO: No further need to consider disaster risk intervention</p>
<p align="center">YES: Consider disaster risk in other background analyses</p>
<p align="center">and include appropriate disaster expertise</p>
<p align="center">in the programming team an internal advisory board</p>

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[82] Process revised in 2016 and available in SkillWeb
[83] Handicap International. Guide to producing Operational Strategies for Handicap International's Programmes/ Missions. 2016 (internal only)

Global disaster risk data can be found, highlighting **the level of hazard** exposure, the past disasters that struck a country or region and their impact, the **level of vulnerability** and also the **level of capacities** as well as **risk scenarios** exploring impacts of potential future events. Further information can be gathered to complete a first brief disaster risk profile, looking at governmental policies and practices to disaster risk management (legislation for land use and building codes, social protection, capacity to mitigate, prepare for and respond to disasters, etc.), civil society disaster-related activities, other development organizations' DRR activities, impact of disasters on development projects, etc.

Such disaster risk data and statistics can be found:
- UNISDR: http://www.unisdr.org/we/inform/disaster-statistics
- Preventionweb: http://www.preventionweb.net/english/professional/statistics/
- Inform: http://www.inform-index.org/
- HI Risk analysis per country and area (See **IDRR Toolbox**)

This section aims to gather the broadest contextual information and produce a summarized analysis. Hazards and related vulnerabilities can be a major development challenge, therefore it is important to ensure a DRR sectoral analysis, deepening the screening initially done above, looking at existing DRR policies and practices, stakeholders, etc.

Key areas to look at:
- **Geopolitical context:** Political situation; Human rights situation; Political organization of the country (national; regional and local); DRR Strategies; representation of the vulnerable groups in the decision-making bodies, etc.
- **Socio anthropologic information:** Ethnic groups, religions, leaders, country active associations, resources, educational systems, sanitation system, etc.
- **Type of natural and manmade hazard** frequencies**:** Impacts at the national, regional and local levels; vulnerabilities (For this criteria, it could be interesting to map the previous disasters in order to analyse and clearly identify the different vulnerabilities such as roads, infrastructures…); capacities; trends/changes over time (historical profile), etc.
- **Identification of the DRR Key actors:** NGO, National Institutions; Regional Institutions; International Institutions.
- **General organization of the DRM system:** Who's in charge of the DRM system? What has been done since Sendai? Is there any laws/regulations related to DRR? What are they? What is the national/regional/local strategy? Where do the funds come? Are there any national contingency plans? If yes, who created them? What are the vulnerabilities of the system? The capacities? Etc.

- **Disability data available and data n others at risk groups (gender and age):** Percentage of the population; cultural understanding of disability; legislation and policy frameworks; studies and information in relation with the situation of people with disabilities or other sat risk groups.

However, if the initial screening has shown a need to mainstream DRR within the strategy, this analysis should not only be seen separately. Indeed, disaster risks can also exacerbate other major challenges, such as poor governance, poverty, social exclusion, etc. The data collecting on disaster risk therefore should also be tailored to better highlight the implication of disaster risks on HI's overall mission and scope of intervention. The data collecting will go further than the initial screening, and enable a tailored analysis of DRR as a **cross-cutting issue**, looking at the target population and sectors of activities pre-identified as part of HI's operational strategy in the country/region (health, education, rehabilitation, etc.)

Then, if disaster risk is significant in the country or region, it will be important to question the existence of an Internal Emergency Preparedness Process, whose objectives are to identify, reinforce and organize resources and capacities at HI programmes level to allow a timely and effective response in case of hazardous events or emerging disaster situations. Based on scenarios of possible disaster events, internal preparedness implies clearly-identified institutional roles and resources, information and decision making processes, and operational arrangements. Preparedness planning at the organization level can look at protecting lives and assets, securing activities' achievements, and it can also look at potential response capacities.

In order to help HI programmes strengthen their internal emergency preparedness, an Emergency Preparedness and Response (EPR) Plan template has been developed. The plan is supposed to complement the info contained in the country strategy. It enables the programme identify clear and actionable emergency preparedness measures by department and define the programme emergency response mechanism based on selected disaster scenarios. This is done taking into account the national gaps, the programme strengths, weaknesses as well as its capacity and strategic positioning in the country.

Emergency Preparedness Response Process: Implementation Steps
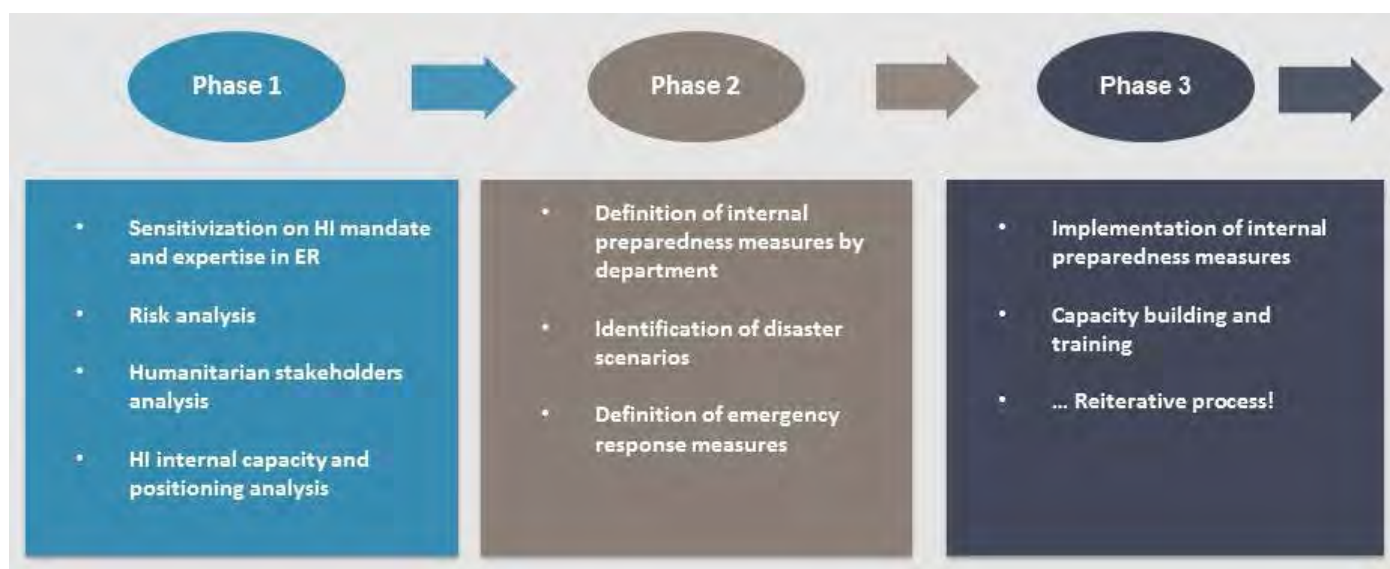
For more information on Internal Emergency Preparedness Process, please contact: **E-PANDA unit.**

Situation analysis and evaluation

Disasters and related risks can impact other development challenges which can hinder the achievement of country programme strategic objectives. The internal and external review of the previous programme period, to assess major lessons learned, should also question the impact of recent disasters and the level of attention paid to disaster risk. The background review of the programme should include natural disasters that have occurred, their impact on the programme (financial, material and human resources, projects' partners and activities, etc.) but should also question if and how the programme considered disaster risks (securing development efforts, contributing to risk reduction, avoiding the creation of new risks).

Programmatic perspective

Based on its contextual analysis and review of previous programme periods, HI develops its programme's perspective, with operational choices and the resources needed to implement them. DRR can be integrated a **specific pillar** under DRM divided into two main stages:

- Targeted Inclusive DRR activities and projects in order to improve preparedness prevention and mitigation of at risk population.
- Emergency and recovery phases.

The STRATOP can also be adapted in order to be **risk-sensitive**. As a first step, the strategy will need to be screened with a ''DRR lens'':

- What is the relative importance of disaster risk in our context?
- How have or could disasters impact our strategic goals, target population and area?
- Are our intervention pillars risk-informed, ie how do they take risks in consideration to maintain objectives in the event of a shock?
- Do they exacerbate or create new risks, and if so, how?
- How could our strategy contribute to reduce risks in a given area?

If the screening indicates a need for DRR mainstreaming, a further assessment of risks will be needed for a potential adjustment of the strategy. This can translate in the review of strategic intervention pillar to become risk-sensitive. It can also include the development of a Programme emergency preparedness plan (internal and external).

🔍

Example of Pakistan Operational Strategy articulating IDRM strategies (June 2016- June 2021)

Pillar 3 - Inclusive Disaster Risk Management (DRM): Improve vulnerable people's life condition and resilience to natural and men made disasters

Sub axis 3.1: Inclusive DRR Strengthen the capacities of at risk communities and service providers to foster their resilience.

Result 1: DRR authorities from local level up to national and others DRR actions increase their capacities to provide more appropriate inclusive preparedness, prevention and mitigation support to all at risk communities regarding potential natural and man-made hazards.

Result 2: At risk communities and individuals, including people with disabilities and their representatives (DPOs), have reduced their vulnerabilities to hazards.

Result 3: Implemented in high prone disaster area has one component / activity to reduce risk to natural hazards.

Sub axis 3.2: Emergency preparedness: Ensure Handicap International's capacity to respond to small, medium and large scale emergencies in Pakistan.

Result: Handicap International emergency preparedness plan is adapted to Pakistan context.

Sub axis 3.3: Small and medium scale emergency response and early recovery: Address the immediate and early recovery needs of vulnerable people.

Result 1: Immediate response: implement timely responses to small and medium scale emergencies in situations of natural (floods, landslides, earthquakes) and man-made disasters.

Result 2: Early recovery: improve resilience capacities of disaster affected vulnerable people, with a focus on people with disabilities and older people.

Monitoring and evaluation of Operational Strategies for HI's Programmes or Missions

Monitoring and evaluating disaster risks can be challenging and therefore tends to be focused rather on reduced vulnerability than on reduced actual losses. Monitoring and evaluating a Operational Strategy posing DRR as a cross-cotting issue will imply a look at how disaster risk was addressed within the confines of the programme; was the initial analysis sufficient, was DRR addressed appropriately and cost-efficiently? It should also look at if and how disasters occurring over the course of the strategy affected its outcomes and effectiveness, and if its sustainability is threatened by future disasters.

## B. Integrating DRR within the Project Cycle Management

Disasters can affect a project area and target populations. Development and humanitarian projects can also increase or reduce the risk of natural disasters, through their impact on social and environmental resilience. Understanding and anticipating future hazard events, communities, authorities and NGOs can be responsible and accountable of disaster risks reduction, minimize the risk disasters pose to socio-economic development and ensure sustainability of development gains.

DRR can be integrated throughout the project cycle management (PCM), so that hazard-related concerns are taken into account from the initial phases of project design and planning, through implementation and then all along the monitoring and evaluation phase. DRR should be an integral part of PCM in hazard-prone areas, to identify and reduce hazard-related risks that have the potential of affecting project performance but also the beneficiary groups.

The **initial situation and needs assessment** can incorporate DRR looking at significant hazards affecting a given area and further analyzing vulnerabilities and capacities of its population. Hazard-vulnerable groups should be identified and included in needs assessments. VCA can be used to better understand the impact of natural hazards and making choices about development interventions. The **project design** should not only acknowledge the existence of risks. It should include explicit measures to manage these risks and to ensure that the project's success is achieved even if they materialize. It should also not only consider disaster-related concerns in the assessment of risks and assumptions for potential impact of natural hazards on a project, but also question the potential disaster risk-related consequences of the project. **Monitoring and evaluation** done throughout the PCM, can be based in part on targets and indicators set on DRR components, the impact of disaster events, changes invulnerability to natural hazards, etc. The project **inception phase** offers a great opportunity to make any

appropriate adjustments regarding risk indicators, reviewing direct or indirect impacts of potential hazards on the project (activities, teams, partners, etc.), assessing changes in the form and nature of vulnerability to hazards and proposing adjustments prior to project implementation.

Project management cycle, Handicap International[84]

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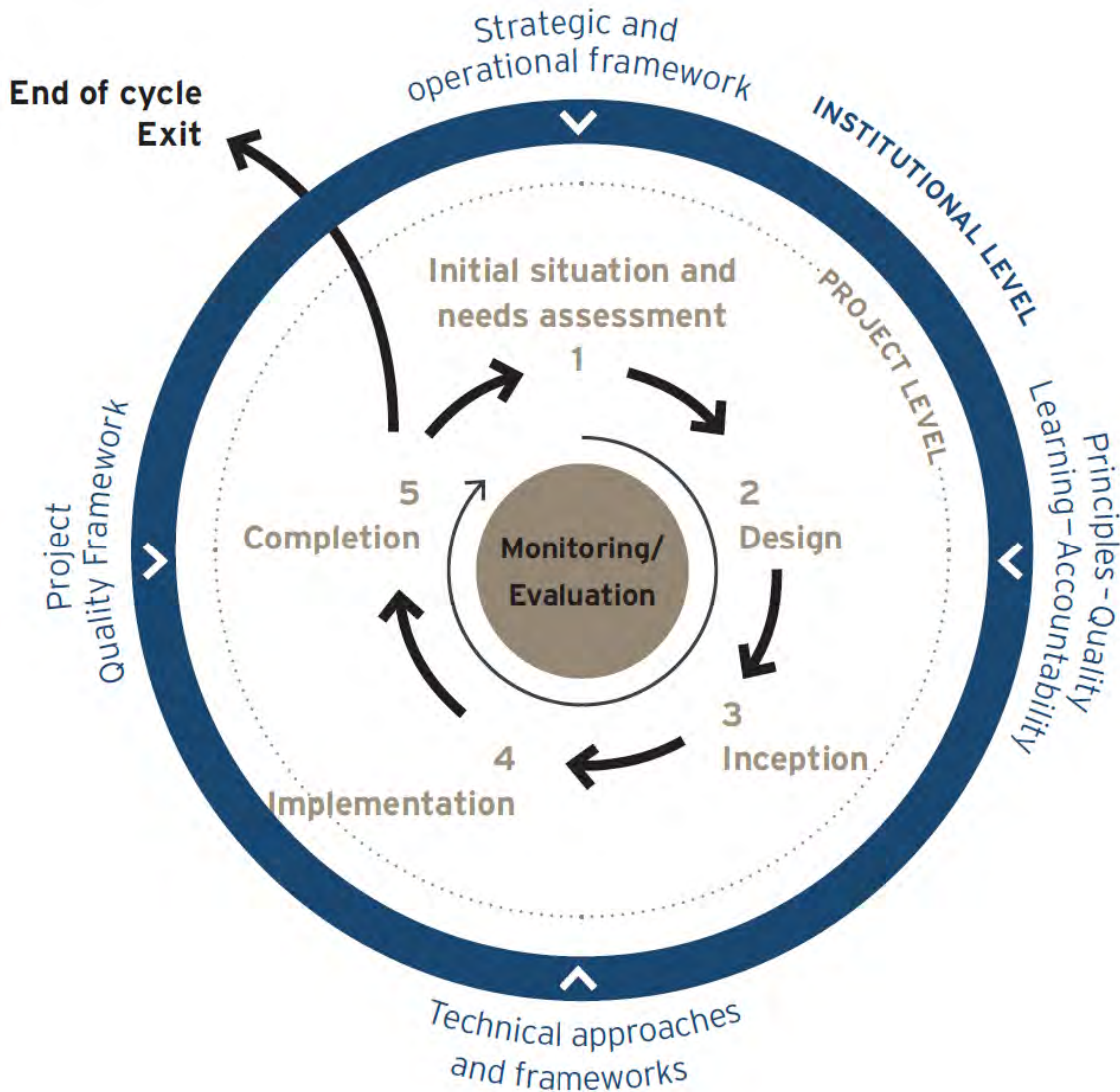
[84] Handicap International. Project Planning, Monitoring and Evaluation Policy. 2015
Handicap International. Project planning, monitoring and evaluation: Improving the quality, learning and accountability of Handicap International's interventions. 2017

C. DRR as a support to encourage continuum

The following section provides guidance on how to mainstream DRR in others HI sectors of intervention. The most relevant HI sectors will be addressed, looking at what the linkages are with DRR and how integrated programming can be ensured. It's also providing a list of examples of activities that could be done, from HI and others stakeholders to ensure the continuum by sector and to build resilience of populations. This list is not supposed to be exhaustive but should contribute to build HI "culture of risk" in development and emergency.

Physical and functional rehabilitation

Why linking physical rehabilitation and DRR?

Natural disasters can have a severe impact on physical health, leading to newly created temporary or permanent physical and functional impairments, or worsened pre-existing ones. Not only can natural disasters create a decrease in function for a person, its effect on physical health can also lead to loss of life. Indeed people with disabilities are injured or lose their lives at disproportionately high rates during disasters; the presence of pre-existing impairment amplifies the impacts of the disaster on a person's life and reduces the range of strategies to cope with them.

➔ See in **Disasters and "Most at risk" groups** part, the box on Age, gender, disability and disasters: A few statistics.

People with disabilities have bigger challenges to face in order to cope and survive during a disaster. Physical impairments and inadequate physical accessibility can prevent a person from evacuating their house, from getting to and using a shelter and water and sanitation facilities, and in general accessing emergency response activities. The environment in which a person learned to function can be disrupted and threaten their ability to cope. Indeed a person can lose a mobility aid, a prosthetic limb, can see a breakdown of its support systems with the loss of a caregiver or the disruption of CBR services, and see his/her living conditions deteriorate (such as living in camps), all impacting greatly their situation, affecting their security and autonomy and increasing the risk of critical secondary complications (i.e. bedsores).

Shortly after the disaster, both people with pre-existing disabilities and injured people are likely to face additional challenges when accessing essential services (i.e. distribution points with long

queue and/or in remote areas), requiring more support and also sometimes specific response (i.e. adapted solutions for hygiene: bedpan if the person cannot move to the latrines), while most of the time, the humanitarian response is not taking those challenges into account, therefore indirectly excluding those people from the response and/or increasing their health risks.

The health and rehabilitation systems are also greatly impacted by disasters. Their lack of preparedness, including their difficulty to rapidly deploy rehabilitation professionals, the lack of rehabilitation protocols and the capacity to follow them, impacting functional outcomes for both newly injured and people with pre-existing disabilities. During an emergency, patients tend to be rapidly discharged from overcrowded hospitals after a consult or surgery, without receiving sufficient rehabilitation services and post-surgical follow-up before going back to their community, or to displaced camps. This not only increases the risk of complications but also limits their recovery potential. Insufficient rehabilitation and post-surgical follow-up can result in the incapacity to fit with prosthesis someone who had an amputation, or can result in permanent impairments for someone with injury (i.e. permanent joint stiffness for someone with a complex fracture, not followed-up properly), all those limiting a person's capacity to restore their quality of life post-disaster. Regardless the severity of impairment and injuries, early and continuous rehabilitation interventions-that includes mobility devices- ensure a quicker return to function and activities. Physical and functional rehabilitation services are key before, during and after a natural disaster strikes, physical rehabilitation programming should take disaster risks into account.

How to ensure integrated rehabilitation and risk reduction programming?

To prevent/mitigate long-term disabilities and promote functional recovery, physical and functional rehabilitation services need to be taken into account in disaster risks programs. They can increase capacities of people with disabilities to anticipate, react and evacuate during disasters, they can also increase capacities of key health and community actors to identify people in needs of rehabilitation care and to provide basic rehabilitation care, they can ensure that DRR efforts take into account the specific needs of people with disabilities and injured people, and they can actively participate to relief and recovery efforts.

Here are a few activities that can be considered in rehabilitation programming before, during and after a crisis:

Risk Reduction Stage

- When working with individuals/families in disaster-prone areas, take into account the risk of disasters and assess a person's capacity to participate to DRR initiatives and, in the event of a disaster, to leave their house, get to a safe location/shelter, and perform daily living activities outside of their usual environment.

- Regarding evacuation, ensure people that need assistance are pre-identified, have a detailed evacuation plan (including the assistance required).

- People in charge of the evacuation are well trained to identify people in need of assistance and are trained to safely move people with new injuries (such as people with spinal cord injuries) and disabilities in order to prevent further critical impairments.

- Pre-positioning of essential assistive devices in pre-identified temporary shelters and train search & rescue and evacuation task force and shelter management committees on the safe and appropriate use of assistive devices.

- Enhance rehabilitation response readiness capacity of health system/rehabilitation centers/CBR workers in the event of a natural disaster:

  o Integrate rehabilitation interventions into disaster response plans at different level and mass casualty management plans, define the role of rehabilitation professionals[85] in such plans and carry out mock drills where emergency health teams include rehabilitation professionals.

  o Raise awareness at government level (especially in health and social minister) on early rehabilitation care; (+ standard data system?).

  o Integrate rehabilitation professional into roasters for early deployment of health staff (pre-identify potential resources, identify networks able to mobilize qualified rehabilitation staff in case of disaster, identify focal points and define concrete plan in case of disaster (who to mobilize; how to launch the "call"...).

  o Agree on a minimum set of data on disability and injury, both at community level (i.e. in camps or in temporary shelters) and at health facilities level; and identify focal points (CBR networks, DPOs) responsible for the data collection at each structure: this will allow rapid compilation of data.

  o Define injured referral pathway (with specific pathways for amputees, SCI, burn patients and traumatic brain injured): including development of safe discharge procedures from hospitals and referral and back-referral systems to identified specialized or community-based rehabilitation services to ensure continuum of care.

  o Have an up to date mapping of rehabilitation services from community based services to specialized services at tertiary health facilities: including available

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[85] World Confederation for Physical Therapy (WCPT). The role of physical therapists in disaster management. March 2016.

equipment (including assistive devices, raw material for orthosis and prosthesis, rehabilitation equipment), number and competencies of rehabilitation staff, criteria of admission, service capacity (especially for prosthesis services, to define pre-disaster capacity of production) and identify key contact person in each structure (to be contacted in case of disaster).

- o Develop protocols for trauma management and rehabilitation and standardized patient education leaflets on basic rehabilitation principles.
- o Deliver multi-disciplinary trainings on trauma management (including early rehabilitation care and psychosocial support), at all level from big health facilities with emergency surgery to community-based staff, including rehabilitation professionals as well as medical staff (adapting the training content to the level of care provided).
- o Involve communities in identification of rehabilitation needs, referral and follow up: identify key community actors/members and train them on identification of rehabilitation needs.
- o Mapping of assistive devices and rehabilitation equipment suppliers (if not in-country, what are the alternatives): availability, quality, prices, procedures.
- o Pre-position emergency relief equipment in health facilities and rehabilitation centers: stretches, wheelchairs, splints, walkers and crutches; + identify key staff responsible for the stock and the provision of the items; train those staff on the identification of people in need of assistive devices, on the basic advices on adjustment, use and maintenance of each of those devices.
- o Pre-position patient education leaflets and identify key staff responsible for their provision and train those staff on their provision.
- o Assessment and retrofitting of rehabilitation centers to be disaster resilient.

Emergency Response Stage[86]
- Assessment of rehabilitation needs: including update on the rehabilitation services mapping (with update on level of functioning of the service, available HR,..) and injured referral pathways; compilation of data on newly injured people, as well as on people with pre-existing disabilities identified in camps or temporary shelters (in the health system, collect data through direct contacts with health facilities and observation. In communities, involve CBR networks, DPOs); availability of assistive devices in-country; existing barriers to access rehabilitation services (including attitudinal barriers).

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[86] WHO, ICRC, Handicap International, CBM. Minimum technical standards and recommendations for rehabilitation: Emergency Medical Teams. 2016.

- Coordination and collaboration: participate to health cluster meetings or promote coordination with organizations involved in health and rehabilitation response to contribute to disseminate agreed standardized data set, agreed multi-disciplinary trauma management protocols and education leaflets, need assessment; avoid duplication, increase efficiency and advocate for comprehensive interventions (including early rehabilitation care). In disasters resulting in a significant number of traumatic injuries, a dedicated rehabilitation coordination group may need to be established.

- Delivery of physical and functional rehabilitation services at community level and health facility level: provide early rehabilitation services including provision of functional exercises, provision of education on basic rehabilitation principles, provision of assistive devices (including mobility aids, pre-fabricated orthoses and other specific items such as anti-bedsore mattresses), temporary prosthesis (if the existing services are not in capacity to cope with the influx of amputees patients), all in close link with psycho-social support services; through continuum of rehabilitation care, this will ensure optimal functional recovery and mitigating of risk of complications; the modalities of delivery (fixed points, outreach teams, strengthening of existing services, mobile "camps") will be adapted to the capacity of available services and the needs (such as main types of conditions, as well as physical/geographical access of people in needs). Identification of people in needs of rehabilitation: mobilize key health and community resources to identify people in needs of rehabilitation; and maximize provision of accessible information (including use of IEC material) to injured people, people with disabilities and care-givers in their communities or health facilities on benefits of rehabilitation care, existing rehabilitation services available and follow up procedures.

- Provide short trainings on trauma care when needed to health and rehabilitation staff; as well as to staff in charge of transportation of injured people and people with disabilities.

- Identify "step down facilities" which are safe structures with nursing capacities able to host people in need of intensive nursing care, such as injured people after hospital discharge as well as people with disabilities in critical health situation; link those facilities with camps and health facilities, as well as with transportation system, overall to promote the referral pathway.

- Participate to cluster meetings in other sectors to increase coordination and efficient responses to the specific needs of injured people and people with disabilities within the emergency response: promoting their identification and referral to specific services (i.e. rehabilitation care, psychosocial support), as well as response to their specific needs within the basic needs response (i.e. donation of specific items such as anti-bedsore mattresses, in complement to a non-food items (NFI) distribution in a camp setting or in temporary shelters).

Recovery Stage

- Ensure referral protocols and systems are in place for a continuum of services by linking community and the health system to manage longer-term impairments.
- Closely support follow up of people who received rehabilitation interventions in the emergency phase and implement strategies to address gaps as required: strengthen CBR mechanisms, extend outreach capacities.
- Ensure that infrastructure and staff are more resilient to future disasters: develop or revise contingency plans using lessons learned; building human resources capacities.
- Assess emergency response and identify gaps in the rehabilitation system: capacity to respond to the needs (both coverage and types of rehabilitation services and supplies); quality of interventions; remaining needs.
- Identify good practice and disseminate lessons learned internally and with stakeholders.
- Contribute to policy revision both on preparedness and regular health sector planning taking into account lessons learned from the response; as well taking the opportunity to develop the rehabilitation sector ("build back better", improving the access to quality rehabilitation services) as stated in the WCPT document.

Health

Why link health and DRR?

Natural disasters put the health of vulnerable populations at risk, in particular people with disabilities, pregnant women, children and people affected by various diseases. Health risks related to natural disasters (critical multiple injuries, outbreaks and epidemics, malnutrition, etc.) will vary according to the hazard exposure and the vulnerabilities and capacities of a given community. Certain individuals present specific health risks that should be taken into account while working in disaster-prone areas. Sexually transmitted infections may spread more rapidly during emergency situations due to more negative coping mechanisms (prostitution), reduced access to HIV prevention and treatment services and disrupted communities. Child mortality and malnutrition can be increased in part due to communicable diseases such as diarrhea, malaria and measles which can result from flooding, overcrowding following population displacements, etc. Women and newborns face increased morbidity and mortality risks due to loss of support, trauma, diseases or malnutrition. Supplies of medication and treatment on which depend individuals living with non-communicable diseases can be lost during a disaster. In this context, immediate response can save lives.

Natural disasters can directly induce health problems, creating injuries, disabilities, diseases and even loss of lives. Natural disasters can also disrupt health systems, facilities and services, preventing access to basic and essential services. Not only can this exacerbate pre-existing health conditions, but it hinders immediate emergency response, prevents the provision of emergency care which can lead to increased health problems and loss of lives. Health services play an important role in reducing casualties and loss of lives because of natural disasters. It is therefore essential that health programming in disaster-prone areas takes disaster risks into account. Health risks can be identified and integrated in multi-sectoral DRM policies and practices. Resilience of health systems, facilities and services needs to be developed. Primary Health Care can decrease health risks of individuals and families through prevention and service delivery. Hospitals and health infrastructure can be strengthened to ensure they remain safe and operational in emergencies, coping with large numbers of patients and specific disciplines (trauma care, epidemic, etc.).

How to ensure integrated health and DRR programming?

To limit the impact of natural disasters on health and avoid setting back hard earned development gains, natural disaster related health risks need to be managed.

Here are a few activities that can be considered in health programming before, during and after a crisis:

Risk Reduction Stage
- Reducing underlying vulnerability through increased access to health care and prevention of illnesses.
- Identification of natural-disasters-related health risks and high-risk groups for integration in both public health and DRM policies and practices.
- Preparing health systems, facilities and services, for emergency response:
  o Build capacities of Hospitals and health centers, develop emergency preparedness plans at community and national level, including plans to make hospitals, primary health care centers or other health facilities safer and operational in the event of a disaster.
  o Training adequate numbers of health workers to manage the health issues of most-at-risk groups during and after a disaster.
  o Training on mass causality plan of doctors/nurse, injury and triage.
  o Training on trauma management and early rehabilitation interventions (see **Physical and functional rehabilitation** sector activities).
  o Develop disease surveillance and early warning systems.

- Protect in safe places health workers equipment, medicine and supplies and plan for prepositioning contingency stocks of drugs and other supplies needed (within health facilities or individual/family emergency kits).
    - Roster prepared and deployment plan for response done (with secondary hospitals).
- Mitigation activities to rehabilitate and advocate for buildings safe and resilient hospitals.
- Promote research on health impact on people with disabilities in slow onset disasters.

Emergency Response Stage
- Participate to search and rescue efforts provide first aid and basic life support, support mass casualty management including trauma and surgical care (not done by HI in emergency but others stakeholders).
- Provide essential PHC services with a focus on most-at-risk groups if require.
- Ensure a community-based surveillance and early warning of diseases of epidemic potential (not done by HI in emergency but others stakeholders).
- Participate in Health cluster.

Recovery Stage
- Help re-establish and strengthen pre-existing health services or newly established facility-based rehabilitation services for injury management.
- Assess the short and long term effects of emergency response on most-at-risk groups to learn from experience and improve policies and practices in health risk management related to natural disasters.

Mental health and psychosocial support

Why linking mental health, psychosocial support and DRR?

Disaster-affected populations frequently experience important mental and psychosocial suffering. Indeed the experience of a crisis can impact the psychological and social wellbeing of individuals who face the loss of or separation from family members and friends, deterioration in their living conditions and health status, lack of access to services, etc. Such conditions as grief, stress and anxiety can be induced by the emergency situation itself, and also they can result from the way communities are responding to it, creating distress due to lack of information, of access to basic needs, of overcrowding in temporary shelters, etc. Also, for some affected

populations, disasters can trigger psychological symptoms or exacerbate existing mental health conditions. Whether pre-existing or induced by the emergency situation, psychological factors play a key role in determining physical health and survival, and the ability to prepare, recover and reconstruct. Indeed, without recognition of the importance of mental well-being for individual and community resilience, and the need for mental health services and psychosocial support during emergencies, psychological distress experienced by people at the onset of an emergency can have long-term impact on mental health and well-being of individuals, families and communities and affect recovery and reconstruction.

Building on lessons learned in DRR programming worldwide, the Sendai Framework considers mental wellbeing as a key consideration and states the importance to ''enhance recovery schemes to provide psychosocial support and mental health services for all people in need''. It is therefore important that mental health programming increases psychosocial preparedness in community and institutional settings. Indeed, mental health systems should be reinforced in order to provide disaster mental health services. Disasters should also be considered as potential sources of stress and trauma, and therefore taken in consideration while working with individuals and communities in disaster-prone areas. Coping capacities of individuals should go beyond the ability to physically survive disaster situations, and include also the stress regulation and management capacities to deal with threats. Psychological coping capacities to overcome risks can be developed with individuals to build a mental resilience, to avoid or limit the psychological distress experienced because of disaster risks (whether they materialize or not).

How to ensure integrated mental health, psychosocial and DRR programming?

Through its mental health programming, HI prevents and treats psychological distress and mental disorders, in development, crisis and post-crisis contexts, with a focus on high-risk populations. Especially for populations that are exposed to various stressors, addressing disaster risks in mental health programming is essential. Not only can it ensure the needed mental health needs are responded during and after a crisis, it can also contribute to building individual and community resilience, that can lessen the impact of disasters, since the extent of a disaster can be in part determined by the reaction of the affected population.

Here are therefore a few DRR activities that can be considered in mental health programming before, during and after a crisis:

Risk Reduction Stage
- Identification of natural disasters related psychological risks and high risk groups for integration in both public health and DRM policies and practices.
- Reducing underlying vulnerability through increased access to mental health services.

- Support individual psychosocial resilience building, both for most-at-risk individuals and disaster first responders, building psychological coping capacity promoting environmental and personal strengths.
- Develop information on how to protect and promote mental and psychosocial well-being in the event of a disaster, including measures to avoid harm during emergency responses.
- Preparing mental health systems, facilities and services, for emergencies response:
    - Assess the mental health system's ability to respond to the mental health needs of affected population and responders during and after disasters.
    - Develop emergency preparedness plans at community and national level, including plans to ensure mental health facilities/workers are safe and operational in the event of a disaster, training of adequate numbers of mental health workers to manage the psychological problems of most-at-risk groups during and after a disaster.
    - Include PFA modules in mass casualty management for health professionals, search and rescue teams.
    - Develop mental and psychosocial well-being surveillance and early warning systems.

Emergency Response Stage
- Limit psychological risks of affected populations, caregivers and emergency responders by ensuring psychological first aid, family and community psychosocial support.
- Limit psychological risks due to the emergency situation, with a mental and psychosocial well-being surveillance and early warning system.
- Map existing mental health services and assess needs and service gaps.
- Provide a service with individual and group sessions and also referring people to specialized services.
- Participate to health clusters and coordinate with local and international organizations.

Recovery Stage
- Provide primary care and mental health services including referral mechanisms.
- Address secondary stressors brought by the disaster, as well as short and long-term psychological trauma, referring people to specialized services.
- Help re-establish and strengthen pre-existing mental health services.
- Assess the short and long term effects of emergency response on most-at-risk groups (ex: evacuation effects of populations on mental well-being) to learn from experience and improve policies and practices in psychological risk management related to natural disasters.

Protection and community security

Why linking protection and DRR?

- Emergencies increase exposure to abuse and violence which can cause short and long term physical, psychological and social consequences. Such factors as disrupted social networks, loss of caregivers and family members, stress and anxiety, can increase individuals and communities' vulnerability to violations threats and reduce their capacity to protect themselves. Emergencies can also expose individuals to increased harm and protection risks, due to their social status, gender, age, disability or other. Not only are some individuals and group most-at-risk less able to protect themselves and their assets, they also can be less able to recover from the impacts of disasters. Protection risks exist pre-disaster, but disasters can modify these risks and also create new risks.
- Protection programming can play an important role in creating safer and more resilient communities by addressing protection risks related to disasters, to prevent or reduce the possible negative consequences of a natural hazard. A protection environment should be reinforced in disaster-prone areas, to ensure that members of a community reduce some of the risks posed by disasters, through mitigation and response to protection risks that may arise due to a disaster.

How to ensure integrated protection and DRR programming?

Through its protection programming, HI prevents and supports the victims of violence or threats of violence, exploitation and abuse, in emergency, early recovery and development contexts. Especially for populations living in disaster-prone areas and less able to protect themselves from the disaster and its effects, addressing disaster risk in protection programming is essential and can greatly contribute to reducing the negative consequences of a natural hazard.

Here are a few DRR activities that can be considered in protection programming before, during and after a crisis:

Risk Reduction Stage
- Identify individuals most-at-risk with increased vulnerability and less capacity to protect themselves and recover from a disaster and make sure they are included in disaster risk assessments and planning.

- Identify and monitor protection risks in relation to hazard risks to inform social, health and DRM policies so that preventive measures can be developed to mitigate these potential risks.
- Enhance capacities of individuals and communities to cope with disasters and prevent an increase in violence and abuse during and after disasters through awareness raising, life skills teaching, community-based networks reinforcement, referral mechanisms, etc.
- Ensure preparedness planning is protection sensitive:
  - Ensure emergency preparedness plans include protection mechanisms to protect and respond to the needs of the most vulnerable, including appropriate referral services, psychosocial support, safe spaces for most-at-risk individuals, etc.
  - Awareness and capacity building in DRR should contribute to preventing any form of violence and abuse during emergencies.
  - Develop a protection surveillance and early warning system.

Emergency Response Stage
- Disseminate and ensure access to information to affected populations with a focus on most-at-risk groups, for example through mobile safe spaces or DVFP.
- Monitor protection risks and provide early warning (through referral mechanisms or other).

Recovery Stage
- Assess the disaster-related protection risks and the emergency response to learn from experience and improve awareness, capacities, policies and practices to avoid similar situations in future.

Livelihood

Why linking livelihood and DRR?

Disasters have increased and climate change is increasing the level of risks. Natural disasters disrupt livelihoods, with the loss of a family member who brought in a regular salary, the interruption of business activities, the death of a livestock, loss of somebody's life savings, destruction of agricultural land, loss of productive assets, etc.

Through Disaster Risk Reduction, HI seeks to protect the most at risk groups including people with disabilities and their representative life but also their livelihoods from shocks, making food production systems more resilient and more capable of absorbing the impact of, and recovering

from, disruptive events. DRR aim to protect development investments in the agriculture, livestock, fisheries / aquaculture and forestry sectors, helping the most at risk groups to become food secure. DRR also aims to protect all means of subsistence by encouraging savings approach and insurances to build resilience in disasters prone areas.

How to ensure integrated livelihood and DRR programming?

The Livelihood sector is frequently developed in interaction with DRR with a focus on climate change adaptations (especially in drought areas).

HI may support livelihood strategies that support most at risk groups to adapt themselves to the effect of climate change:

Risk Reduction Stage
Inclusive DRR applied to livelihoods mean mobilizing DRR actors and Livelihood actors to engage their responsibility and resources to build resilience. On the other hand, identifying and preparing most at risk groups including people with disabilities and their families to take part to resilient livelihood and safety net programmes would insure meaningful participation. Some's actions identified to implement the resilient livelihood component:

- **Identification and analysis of risks to livelihoods by:**
    - Conducting Household Livelihood Security Assessments as to identify most at risk groups and mobilizing the community in addressing vulnerability situations according to collectively agreed criteria.
    - Supporting people with disabilities and their household to analyses and take measures for protecting their productive assets from disasters: safer storage and safe place for livestock of tools, seeds, materials and other inputs; relocate to safer location of work site/workshop.
    - Use the economic resilience toolkit to evaluate households' level of economic resilience and community level, as a baseline and endline, as a selection criteria tool.
- **Prevention and mitigation of risks:**
    - Provide or facilitate access to appropriate technology and skills development (for example drought-resistant crops, breed improvement, off-farm income activities, wage employment, etc.), in order to promote alternative and innovative source of livelihoods, reducing vulnerability to hazards and risk-taking behavior and increasing income (thus reducing poverty and vulnerability). Focus on capacities and technologies that can be used easily to restart after a disaster.

- o Promoting or facilitating access to micro-insurance, agricultural insurance and savings schemes through relevant micro-finance institutions, which support people to restart livelihood activities after a disaster. Access to micro-loan from MFI must include insurance against disasters (in case a person cannot pay back because of a disaster).
- o Rehabilitation of existing building with mitigation measures to reduce risk and protect livestock's and food storage.
- o Management of natural resources: improve access to land, water, storage facilities; terracing activities, post-harvest management including food processing.
- **Preparing contingency plans with the individual / family, business continuity planning, etc.:**
  - o Empower people with disabilities to develop basic household contingency planning, analyzing specific potential events according to a seasonal calendar or emerging situations that might threaten their livelihoods and establishing arrangements in advance to enable timely, effective and appropriate responses to such events and situations.
  - o Advocacy and initiatives to support local organizations/enterprises/cooperatives to promote business continuity planning: its cover a range of situations, including the death of a key executive or manager, crisis events that threaten to shut down business operations for an extended period of time. Continuity plans generally involve insurance policies.
  - o Cash preparedness: Prepare microfinance institutions to provide cash transfer in case of emergencies.

Emergency Response Stage
- Supporting vulnerable households to meet their basic needs and access essential services by contributing to restoring production equipment (via subsidies in kind or cash).
- Providing financial assistance in response to family priorities to people directly affected by the disaster.

Recovery Stage
- Working in close conjunction with the individual in order to define / redefine an employment activity based on a risk assessment; supporting them and facilitating their integration by enabling them to take part in socialization activities and referring them to existing actors for training and funding.

- Using coping strategies within the household and/or community, form work groups, ask for joint loans, etc.
- Supply of seeds and tools to farmers, renewed access to boats and nets for farmers, etc.
- Re-establish small business through cash grants.
- Train employees on "resilient" job activities.
- Business cooperatives set up, development of new business skills, vocational training, etc.

Social protection

Why linking social protection and DRR?

Natural disasters have a large impact on poverty through changes in employment, livelihoods, assets and prices and different groups are affected differently. Poor households tend to be part of the most affected, as they are particularly exposed to natural disasters and have limited access to disaster risk management practices. They also have less ability to respond to these changes and cope with disasters and therefore use coping strategies such as selling livestock, having children leave school to work, eating less, spending less on healthcare, making income generating decisions that can have long term implications, accentuating their poverty and vulnerability.
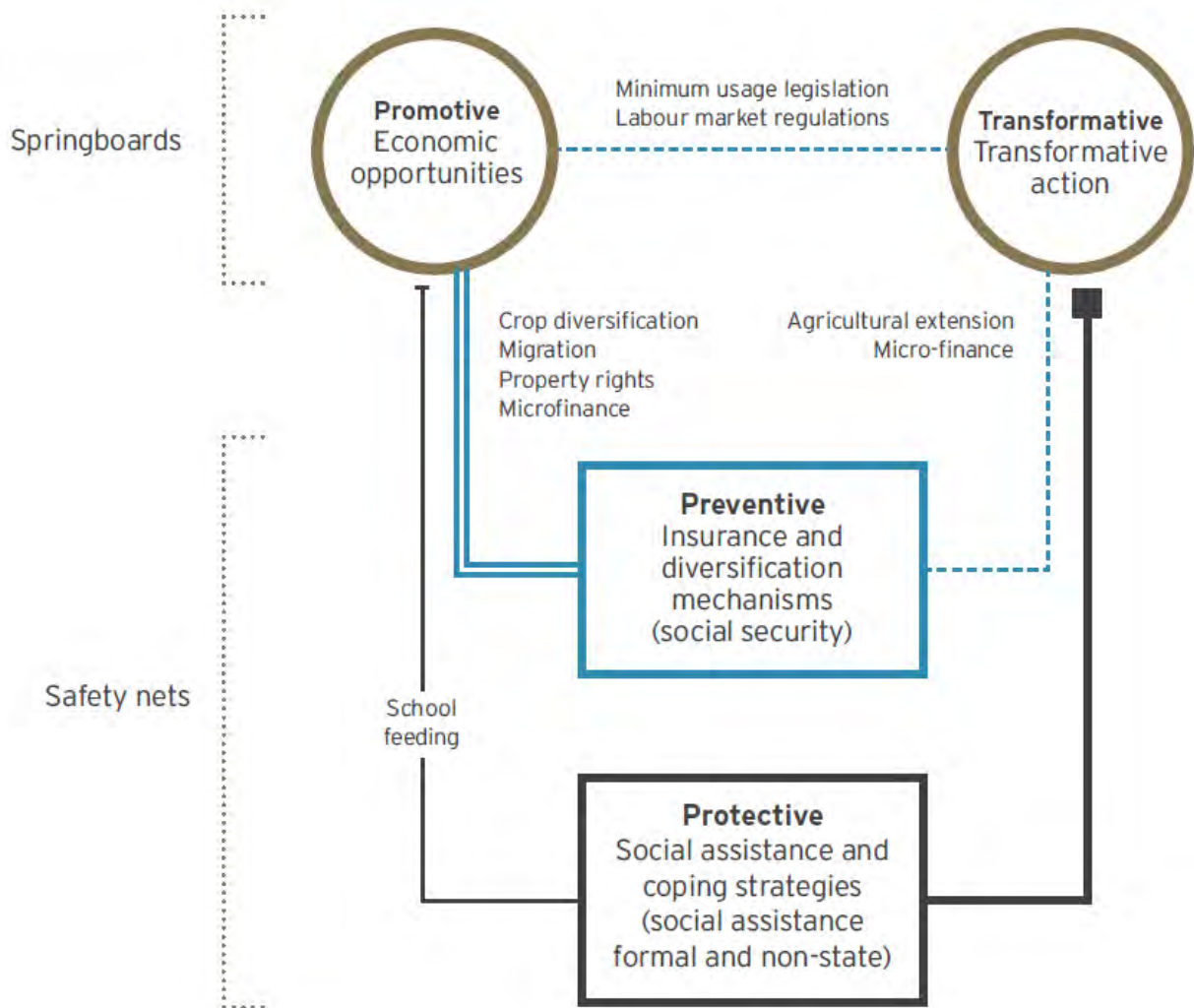
Social protection and DRR have much in common in terms of measures and broad objectives, tackling multi-sectoral approaches to prevent and mitigate risks faced by poor people and make individuals and communities more resilient to shocks and stresses. As poverty is a fundamental factor shaping vulnerability to disasters, social protection therefore has a key role to play in reducing disaster risks, by reducing economic and social vulnerability of poor and marginalized groups, and increasing capacities to adapt and cope with multiple risks. Moreover, focused on implementation of measures to manage risks faced by vulnerable groups living in poverty and exclusion, social protection policies and practices cannot ignore disaster risks. Social protection delivery may be challenged in time of crisis due to social disruptions brought about by the shock. Also, while the demand for support and emergency assistance may rapidly increase in time of disasters, available financial resources may decrease because of declines in communities and government's revenue. To ensure social protection programmes guarantee income security and access to social services, effectively support livelihoods, protect and empower the poor and excluded living in disaster-prone areas, they need to incorporate DRR approaches.

How to ensure integrated social protection and DRR programming?

To be efficient and achieve their goals, social protection policies and programmes need to take into account existing hazards and therefore disaster risks, addressing the multiple risk and vulnerabilities faced by the poor and excluded. Also, social protection, through its social and human understanding of vulnerability, can reduce disaster risks and strengthen natural disaster management systems. They can strengthen people's risk management capacities, provide support during a crisis and promote recovery after a crisis. By providing protection against shocks, social protection can stabilize income and consumption in the event of a disaster through protective, preventative, promotive and transformative measures:

- **Protective** measures such as social services provision, public works programmes, social transfers including safety nets can, in time of crisis, provide coping mechanisms and immediate relief from deprivation, protecting those most vulnerable to disaster risks with low level of adaptive and coping capacities.

- Targeting populations in disaster-prone areas, social protection initiatives can be **preventative**, through livelihood diversification, social insurance, etc. These measures can avert deprivation in time of disasters, reducing vulnerability, the use of harmful coping strategies and the dependence to emergency relief.

- Social protection programmes have an important added value in reducing underlying vulnerabilities, such as poverty, social exclusion, inequity, etc. Through **promotive** initiatives such as access to credit, asset transfers or protection, public works programmes, social protection initiatives invest in human capital and promote opportunities and resilience, leading to enhanced skills, capacities, incomes and assets.

- Finally, even though interventions linking social protection and DRR have been most focused on financial approaches, through transformative measures such as anti-discrimination campaigns and the setup of social funds, social protection can also reduce disaster risks by rebalancing unequal power relations which cause vulnerabilities, promote social equity, inclusion, empowerment and rights.

A conceptual framework for social protection

Springboards

Promotive
Economic
opportunities

Minimum usage legislation
Labour market regulations

Transformative
Transformative
action

Crop diversification
Migration
Property rights
Microfinance

Agricultural extension
Micro-finance

Preventive
Insurance and
diversification
mechanisms
(social security)

Safety nets

School
feeding

Protective
Social assistance and
coping strategies
(social assistance
formal and non-state)

———— Indicates an obvious and direct relationship

- - - - - Indicates a less obvious relationship

——— Indicates a weal relationship

——■ Indicates that many protective measures can have
the unfortunate effect of reinforcing established
power hierarchies and patterns of exclusion

88

Here are therefore a few DRR activities that can be considered in social protection programming before, during and after a crisis:

Risk Reduction Stage
- Identification of natural disasters social and economic related risks and high risk groups (few or fragile resources, poor education, lack of savings, etc.) for integration in both social protection and DRM policies and practices.
- Develop integrated disaster risk assessments and poverty assessments to strengthen and guide the design and implementation of informal and formal social protection programmes: social assistance, social insurance, labor market interventions, informal initiatives, social care and support, government or private sector subsidies, etc. (ex: social funds focused on DRR projects, safety nets for coping with natural disasters, index insurance to protect farmers from extreme weather events, asset transfers to avoid selling productive assets during a disaster, etc.).
- Reviewing existing DRM systems to identify opportunities to integrate appropriate social protection delivery, planning and shock preparedness.
- Preparing social protection systems for emergencies:
  - Assess existing social protection initiatives to ensure they can remain operational and relevant in the event of a disaster (ex: plan social funds and prepare social funds teams to actively engage during emergency response and recovery.
  - Develop specific social protection responses to be integrated in the preparedness planning processes at community and national levels (ex: plan for specific social assistance during time of disasters, such as cash or in-kind transfers.

Emergency Response Stage
- Ensure timely, rapid and adequate emergency social protection delivery.
  - Social assistance through cash and in-kind transfers can, if unconditional, provide the necessary flexibility to respond to households' different needs, and, when conditional, can also reduce the use of harmful coping strategies (child labor, etc.).
  - Activation of pre-existing social protection measures such as social insurances.
  - Use of social funds to channel devise to direct relief from donors, to rapidly fund small participative projects that facilitate effective recovery, etc.
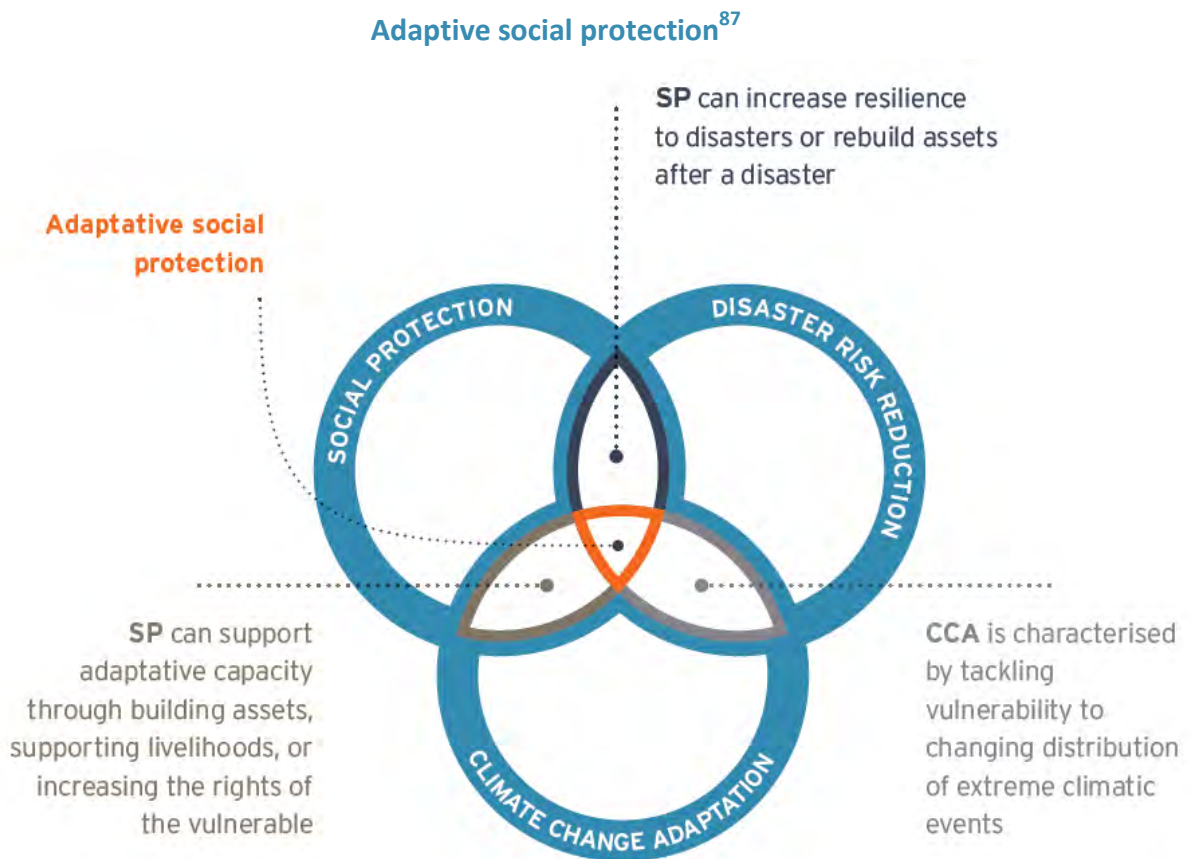
Recovery Stage
- Support households maintain a minimum level of consumption and preserve their assets base and transition towards normalcy (repair basic infrastructure and facilities).

- Social protection public programmes that can be financed through social funds can ensure a direct income transfer to households, provide employment relief when normal sources of income have been disrupted, and can be used to create and restore infrastructure and essential services.

>‹‹ Building resilient livelihoods through Adaptive Social Protection

The Institute of Development Studies (IDS) developed the Adaptive Social Protection (ASP) approach to promote the combination of social protection, DRR and climate change adaptation to reduce poverty and build resilience of lives and livelihoods to shocks and stresses.
ASP allows the promotion as well as protection of livelihoods for long-term resilience to climate change and disasters. Social protection also allows a better grasp at root causes of poverty and, through social services, a tailored support to the most vulnerable to climate and disaster risks. Social protection can also propose a framework to assess and monitor resilience-building through its protection, prevention, promotion and transformation of livelihoods risks.

Adaptive social protection[87]

SP can increase resilience to disasters or rebuild assets after a disaster

Adaptative social protection

SOCIAL PROTECTION

DISASTER RISK REDUCTION

CLIMATE CHANGE ADAPTATION

SP can support adaptative capacity through building assets, supporting livelihoods, or increasing the rights of the vulnerable

CCA is characterised by tackling vulnerability to changing distribution of extreme climatic events

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[87] IDS. Climate Change Adaptation. Disaster Risk Reduction and Social Protection. 2009, p.26

Education

Why linking education and DRR?

UNISDR estimates that every year over 100 million young people including children, are affected by disasters. The impacts of disasters on children vary widely depending on the situation, and can include death, injury, illness, separation from families, interruption to education leading to lower educational achievements and fewer opportunities in later life, increase in child labour and trafficking, among other child protection issues. Impacts also vary according to the gender and age of the child. Climate change is exacerbating the situation.

Children, who are among the most affected by disasters and often the least consulted, have the right to participate in disaster risk reduction. Recognizing the impact of disasters on children and their role in risk reduction, the Children's Charter for DRR which identifies children's priorities for risk reduction, was launched at the Global Platform in 2011 by Plan International, Save the Children, UNICEF and World Vision. The Charter was developed through consultations with over 600 children in 21 high-risk countries in Africa, Asia and Latin America and identifies five key priorities for child-centred DRR:
- Schools must be safe and education must not be interrupted.
- Child protection must be a priority before, during and after a disaster.
- Children have the right to participate and to access the information they need.
- Community infrastructure must be safe, and relief and reconstruction must help reduce future risk.
- DRR must reach the most vulnerable.

How to ensure there integrated Education and DRR programming?

During the phase of Education programming and project design, integrating DRR can help to prioritize the most important areas to focus on according to risk criteria (risk mapping) and to target the most risk children. Actions can be taken to reduce the risk to children and schools though targeted DRR projects or through Education projects:

Risk Reduction Stage
- Address school safety issues: safer school buildings: building codes, retrofitting, quality control.
- Implementing inclusive and accessible school-based DRR with active participation from children and scaling up.
- Develop contingency plan with the active participation of the school staff and the children and organise information sessions for the parents.

- Create and train several emergency task forces involving teachers and children with various responsibilities such as first aid, early warning systems, etc.
- Organise training and awareness raising sessions and inclusive and accessible EIC tools involving children and parents.
- Organise schools simulations and mock drills inviting all external actors that should be involved such as ambulances, Red Cross, civil protection unit, etc., create connexion between schools and communities.
- Ensuring participation of girls and children with disabilities into DRR practices.
- Taking action to integrate DRR into the curricula.
- Advocate for DRR inclusion in education sector development plan and education system (curriculum, teachers trainings, etc.).
- If schools are identified as a place for shelter: find alternative solutions if required.

Emergency Response Stage
- Involving children in first assessments is essential to identify child protection risks.
- Providing school activities with an objective of protection and well-being while others stakeholders can restore or maintain schooling in emergencies.

Recovery Stage
- Involving children in Post Disaster Needs Assessment, including children with disabilities
- Promote to "build back better" and to build safer schools.

Urban planning, housing, shelter

Why linking urban planning, housing shelter and DRR?

Shelter and settlements play an essential role in reducing vulnerability to disasters and building resilience of communities and at-risk groups, including people with disabilities.

In the early stages of an emergency, shelter is a critical determinant of survival, along with water supply, sanitation, food and healthcare. In the field of risk reduction, Handicap International supports safer construction practices and sustainable construction of human settlements before, during and after disasters.

Shelter and settlement are not just a matter of building a 'product' – but rather a 'process' whereby people can improve their own homes, and engage to create a safe and secure environment. The 'sheltering process' is a **continuum** between humanitarian action and long term development, and must include other essential facilities such as social and education services, access to market and responsible use of natural resources.

How to ensure integrated Urban planning, housing, shelter[88] and DRR programming?

Risk Reduction Stage

- Participatory Risk mapping (methodology VCA): map emergency collective shelters and facilities that have been identified as evacuation shelters in case of disasters. Assess its accessibility with key stakeholders for all groups or individual at risk including people with disabilities together. Visit shelters with groups at risk including disabled people's organizations (DPOs) to identify the barriers facing people with disabilities.
- Participatory Approach for Safe Shelter Awareness (PASSA) is a participatory method of disaster risk reduction (DRR) related to shelter safety[89].
- For evacuation shelters (including schools or hospitals) that can be made accessible, carry out necessary adaptations, for the rest, identify more suitable alternatives.
- Stockpile assistive devices at the emergency shelter, such as emergency wheelchairs, crutches, walking frames, white canes and portable toilet seats. Consult with local DPOs for selection of items.
- Review existing contingency plans and national law/ guidelines with specific mention on accessible and safe shelters and settlements.
- Awareness raising on disaster preparedness to identify disasters shelters and evacuation routes including accessibility issue for at risk groups.
- Make a plan for evacuation in link with the access to the shelter tacking into account accessible issues.
- Simulation exercise to test evacuation plans and shelters setting.
- Advocacy to make the regulatory law on construction more efficient in at risk areas but also making construction rules taking into account natural hazards.
- Consult people with disabilities about shelter and settlement.

Emergency Response Stage

Emergency shelter support is defined as "the provision of basic and immediate shelter needs necessary to ensure the survival of disaster affected people, including 'rapid response' solutions such as tents, insulation materials, other temporary emergency shelter solutions and shelter related non-food items"[90]. 'Sheltering' is a process not just a product. Meeting shelter needs after disasters should be seen as a process of 'sheltering' done by affected households with different materials, technical, financial and social assistance:

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[88] IFRC, CBM, Handicap International. All Under One Roof: Disability-inclusive shelter and settlements in emergencies. 2015
[89] IFRC. PASSA: Participatory Approach for Safe Shelter Awareness. 2011
[90] MoU between IFRC and OCHA

- Make sure emergency assessment tools and post disasters assessment tools are inclusive of people with disabilities and that data is disaggregated by age, sex and type of disability.
- Integrate disability issues on the agenda for shelter and settlements coordination meetings, and include accessible design standards and technical guidance documents. Invite groups or focal points for Inclusion/ disability coordination to participate and give inputs.
- Determine suitable options for shelter support based local construction techniques, market assessments (availability of construction materials and accessibility of markets) and emergency needs assessments.
- Organize inclusive distribution systems; consider the location of distribution sites and the identification of people who need home deliveries or transportation support with consultations with disabled people's organization's (DPOs) and people with disabilities.
- Discuss suitable household essential items (NFI) and contents of shelter kits with DPOs.
- Identify additional items and technical support required to make this type of support more accessible and useful to people with disabilities.
- In emergency collective shelter: reserve space on the ground floor for people with reduced mobility or visual impairment, with barrier-free access and separate toilets and sanitary facilities for men and women.
- Support people with disabilities by improving access to shelter and services in the existing location, or identify alternative shelter solutions (for example renting or hosting, Use cash grants to provide personalized accessible shelter, etc.).
- Provide information about shelter and settlement activities in multiple accessible formats.

Recovery Stage: Build back better, safer and in line with universal design
- Advocate for universal design in all reconstruction and recovery activities.
- Advocate for safer building codes.
- Advocate for preventive measures: interdiction of building in at risk area.
- Mobilize disabled people's organizations (DPOs) that have not been active or operational during the emergency phase.
- Revise and update shelter and settlement response strategies and technical guidance based on discussions with DPOs and monitoring and evaluation of emergency relief activities and their impact on people with disabilities.
- Establish partnerships with other sectors such as WASH, Health or Protection; make referrals when needs are identified that exceed the scope and expertise of the shelter and settlement programme.

Water, sanitation and hygiene (WASH)

Why linking Water, sanitation and hygiene and DRR?

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 salinization 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.

How to ensure Wash integrate DRR?

In HI, WASH is only implemented in emergency stage.
In DRR, HI can work along with others actors, implementing Wash actives in risk reduction/ recovery stages:

Risk reduction stages / recovery

- 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.
- Take into account trends that affect water availability and demand for water sanitation services, such as population increase, environmental degradation and high water-consuming industries such as mining.
- 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.
- 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.

Emergency response stages

- Base Inclusive WASH interventions on assessments of current hazards and future scenarios that consider climate change observations, projections and uncertainties.
- Meet urgent needs, particularly in post-disaster situations, and "build back better".
- Undertake an environmental impact assessment prior to any intervention.

Recovery stages

- Analyze why infrastructure was damaged or interrupted and investigate suitable ways to modify existent/future systems against this damage.
- Ensure that recovery efforts focus on 'building back better', including measures to prevent or mitigate future disaster risk, incorporate previous development and emergency hygiene programs, and focusing on building the resilience of communities to potential future hazards.
- Analyze why WASH-related behaviors failed and investigate suitable programs to build community resilience.
- Rehabilitees existing WASH infrastructure, work with communities through capacity building "wash committees" and also hygiene awareness participatory approach.

Armed Violence Reduction

Why linking Armed Violence Reduction (AVR) and DRR?

Handicap International defines armed violence as the "intended use of weapons, threatened or actual, to inflict injury, impairment, death or psychosocial harm, which undermines the safety, security and development of individuals and communities"[91].

AVR is composed of 2 mains elements:
- **Armed violence prevention** (AVP) to change behaviors.
- **Arms Safety Management and Disposal** (ASMD) to threat elimination.

Linkages between Armed violence prevention and DRR are interesting to build in order to contribute to the safety of individuals and communities, which are common goals of those sectors. By looking at reducing risk, DRR is looking at manmade hazard and natural hazards affected people and communities. Arms including Mines and Explosive Remnants of War, Improvised Explosive Devices and Small Arms Light Weapons can be also considered, in the risk Assessment as one of the major hazard and DRR strategies need to be implemented to reduce also those risks.

How to link Armed Violence Reduction to DRR

- Risk assessment at household and community: consider all types of risks though communities' risks mapping.
- Awareness raising on hazards and how to reduce the risks at communities, households and schools levels (in national curriculum) based on disaster ground assessments realized /done regarding Arms.
- Share common methodology and tools for community awareness.
- During natural's disasters: analyze the potential impact on conflict and use of arms.

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[91] Handicap International. Armed Violence and Disability: the Untold Story. 2012

PERSPECTIVES FOR 2016-2026

The main objectives for DRR are defined and supported by the Federation's strategy. Their aim is to:

- Strengthen and consolidate existing IDRR projects in order to improve the impact on vulnerable populations and move to bigger higher project scales through partnerships.

- Encourage the development of new projects in at risks areas; including in chronic drought areas.

- Help people adapt to a world of new challenges that increase the risk of disasters, such as climate change, population shift, and urbanisation, and to help strengthen the resilience of populations in general.

- Develop sector-based linkages between DRR and Climate Change Adaptation (CCA); and develop innovative inclusive pilot approaches.

- Encourage and strengthen DRR components in the organisation's other thematic projects in order to foster the continuum/contiguum and increase the resilience of populations.

- Help develop an internal Disaster Risk Management strategy (before, during and after the disaster) aimed at strengthening coherency between Handicap International's DRR work in the field supporting populations and local actors during the first few hours of a disaster, its emergency responses to small, medium or large-scale disasters and its activities during the reconstruction phase.

APPENDICES

A. Acronyms

AIATAC	Assessing, Informing, Awareness-raising, Training, Advocacy, Coaching
ASP	Adaptive Social Protection
AVR	Armed Violence Reduction
CBDRR	Community Based Disaster Risk Reduction
CCA	Climate Change Adaptation
CEDAW	Committee on the Elimination of Discrimination against Women
CMDRR	Community-Managed Disaster Risk Reduction
COP	Conference of the Parties
CRED	Center for Research on the Epidemiology of Disasters
DIDRRN	Disability Inclusive Disaster Risk Reduction Network
DPO	Disabled People's Organization
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
E-PANDA	Emergency-Prepardness and Alert
GHG	Greenhouse gases
HFA	Hyogo Framework for Action
IDRR	Inclusive Disaster Risk Reduction
IDS	Institute of Development Studies
IEC	Information, Education and Communication
IFRC	International Federation of Red Cross and Red Crescent Societies
INFORM	Index For Risk Management
IPCC	International Panel on Climate Change
JICA	Japanese International Cooperation Agency
KAP	Knowledge Aptitudes and Practices
LRRD	Linking Relief, Rehabilitation and Development
NFI	Non-Food Items
NGO	Non-governmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs
PASSA	Participatory Approach for Safe Shelter Awareness
PCM	Project cycle management
ScoPeO	Score of perceived Outcomes
SDG	Sustainable Development Goals
STRATOP	Operational strategies
TOC	Theory of Change
UN	United Nations

UNDP	United Nations Development Program
UNFCCC	UN Framework on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
VCA	Vulnerability and Capacity Assessment
VOICE	Voluntary Organisations in Cooperation in Emergencies
WCPT	World Confederation for Physical Therapy
WHS	World Humanitarian Summit

B. DRR: Funding and donors

DRR Finance: an investment that pays off

"The global cost of disasters far outstrips the funds spent on development assistance. […] Research also shows that investing in disaster risk reduction measures prior to disasters is far more (cost) effective than funding disaster response after a disaster. A widely-cited figure used by the World Bank states that each dollar invested in DRR saves seven dollars in disaster response and reconstruction; some studies put this ratio even higher. Investing in DRR does not only make economic sense; it is the only way to protect lives and livelihoods and ensure sustainable development. […] Following a disaster, there is a high motivation among affected populations and donors to reduce vulnerability to future disasters"[92].

"Risk reduction is critical if donors are serious about reducing the vulnerability of people and property, and about protecting economic growth. This is particularly important as the world faces the challenges of climate change. Already, the number of disasters occurring each year is steadily rising – mostly smaller-scale events in areas of high human vulnerability. Effective risk reduction serves as an important insurance strategy for development investments in these high-risk countries, and as a key mechanism for avoiding costly future emergency responses. The earthquake in Haiti set back its development by many years and destroyed significant development investments in infrastructure and human capacity. It was also expensive: USD 9.9 billion was initially pledged to support post-earthquake reconstruction – more than three times the total amount spent on Haiti's development over the past ten years"[93].

This means DRR is largely initiated and led by humanitarian actors, who are also familiar with dealing with extreme events, and most DRR funding comes from humanitarian budgets. However, when the period of disaster response and rehabilitation is over, attention for DRR is often reduced. A shift in perspective is needed; disaster risk reduction needs to be seen as a fundamental element of development. There are limits to the DRR measures that can be effectively put in place in an emergency context; a longer timeframe and a participatory process involving multiple actors and a high level of capacity building is required to bring about effective risk reduction. In addition, a strong engagement of local government, which is difficult in many emergency situations, is a prerequisite for lasting change.

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[92] NGO Voice. Funding Disaster Risk Reduction. 2013
[93] See Lesson 3: Reduce disaster risks, in OECD. Towards Better Humanitarian Donorship: Lessons from DAC Peer Reviews. 2012

Funding for DRR thus should be included in both humanitarian and development funding streams with a clear link between the two. Linking Relief Rehabilitation and Development (LRRD) approaches are essential to this. In addition, development funding instruments should recognise the need to mainstream DRR and build capacity to cope with shocks and stresses in order to safeguard development investments. […] Risk reduction is a long-term investment that needs to be mainstreamed through a country's ministries and activities"[94].

HI's main DRR donors

International Donors
- World Bank GFDRR
- Asian Development Bank
- European Commission

Bilateral Donors
- UK: DFiD
- Germany: BMZ
- Switzerland: SCD
- Belgium: DGD
- US: OFDA- USAID
- Netherlands: Buza
- Finland
- Sweden: SIDA
- Etc.

Perspectives for DRR funding

Some countries (such as Indonesia and the Philippines) **have invested heavily**, and continue to do so, in reducing their own disaster risk exposure, allocating much greater resources than those provided by international funding mechanisms.

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[94] NGO Voice. Funding Disaster Risk Reduction. 2013

A number of countries have mobilised their own DRR finance[95]
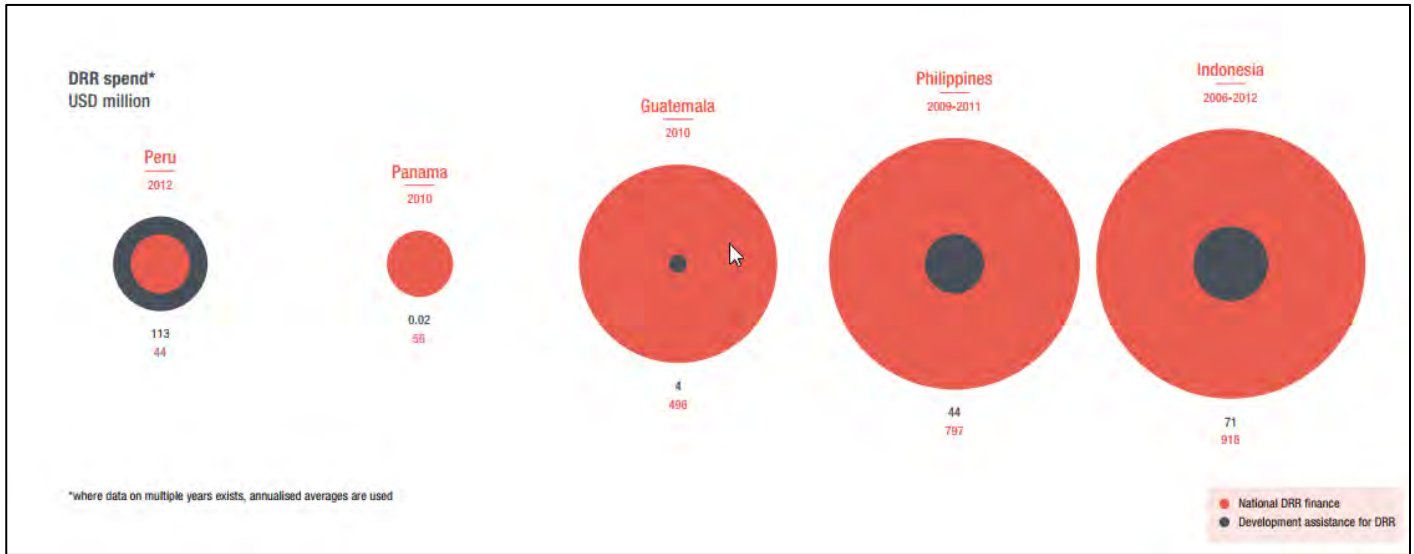
Climate finance is a new opportunity for funding DRR: Funding for climate change adaptation is being directed at building resilience to extreme climate events. Climate change funding for DRR includes funds channelled through mechanisms set up under the United Nations Framework Convention on Climate Change (UNFCCC). These include the Adaptation Fund, the Global Environment Facility's Least Developed Countries Fund and the Special Climate Change Fund, as well as those outside of the UNFCCC process, such as the Pilot Programme for Climate Resilience which is part of the World Bank's Climate Investment Funds.

Climate finance presents a new opportunity to finance DRR[96]

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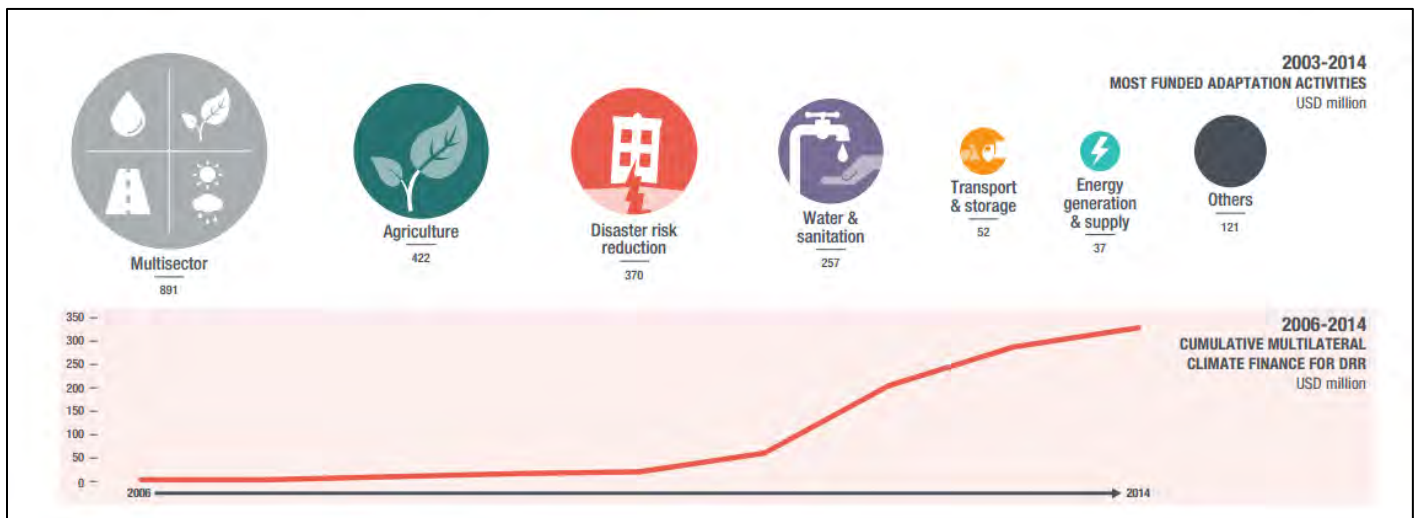
[95] ODI, UNDP. 10 things to know about finance for reducing disaster risk. 2015
[96] ODI, UNDP. 10 things to know about finance for reducing disaster risk. 2015

C. IDDR Toolbox content

This toolbox is available on **Hinside**, and will be regularly enriched with new documents.

1.1 Definitions / Concepts

1.1.1 Concepts and terminology

1.1.2 International Frameworks

1.2 Why and commentary HI intervened in DRR?

1.2.1 Why?

1.2.3 Commentary?

2.1 Intervention modalities

2.1.1 Strengthen DRR systems and Inclusive services inclusive

2.1.2 Empower most at risk groups and individuals to include them in DRR initiatives

2.1.3 Understand disaster risk, disseminate and advocate

2.1.4 Examples of IDRR Projects

2.1.5 Tools for exploratory missions and project evaluation

2.2 Transversal approach

2.2.1 Taking risks into account: key elements of resilient programming in hazard-prone areas

2.2.2 DRR as a means of promoting the continuum-contiguum

Inclusive Disaster Risk Reduction

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This policy paper applies the mandate and values of Handicap International to Inclusive Disaster Risk Reduction activities.

It sets out the benchmarks for Handicap International's actions, choices and approaches and seeks to ensure consistent practice between the organisation's programmes while taking into account the different contexts in which they operate.

It is intended as a guide for teams working in this sector of activity.

It defines the themes, explains how these activities fit into the organisation's mandate, identifies the target populations and defines modalities of intervention (standard expected outcomes, standard activities) as well as monitoring and evaluation indicators.

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