

**risk**

# GLOSSARY

## Risk Glossary

This glossary covers frequently used terms and their definitions related to the field of disaster risk reduction. Considering that this is still an evolving field, this glossary brings together most recent and previous definitions of key terms sourced from UNDRR, IPCC, World Bank and other peer reviewed literature over the last three decades.

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# A

## Acceptable Risk

The level of potential losses that a society or community considers acceptable given the existing social, economic, political, cultural, technical and environmental conditions. (UNISDR a) Acceptable risk, or tolerable risk, is, ‘therefore’ an important subterm; the extent to which a disaster risk is deemed acceptable or tolerable depends on existing social, economic, political, cultural, technical and environmental conditions. In engineering terms, acceptable risk is also used to assess and define the structural and non-structural measures that are needed in order to reduce possible harm to people, property, services and systems to a chosen tolerated level, according to codes or “accepted practice” which are based on known probabilities of hazards and other factors. (UNDRR 2016a).

## Adaptation

In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate. (IPCC 2012a; IPCC 2012a).

The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (UNFCCC). The broader concept of adaptation also applies to non-climatic factors such as soil erosion or surface subsidence. (UNISDR 2009b).

## Adaptive Capacity

The combination of the strengths, attributes, and resources available to an individual, community, society or organisation that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm or exploit beneficial opportunities. (IPCC 2012b; IPCC 2012b).

## Affected

People who are affected, either directly or indirectly, by a hazardous event. Directly affected are those who have suffered injury, illness or other health effects, or who were evacuated, displaced, relocated or suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets. Indirectly affected are people who have suffered consequences, other than or in addition to direct

effects, over time, due to disruption or changes in economy, critical infrastructure, basic services, commerce or work, or social, health and psychological consequences. (UNDRR 2016b).

# B

## Baseline/reference

The baseline (or reference) is the state against which change is measured. It might be a ‘current baseline,’ in which case it represents observable, present-day conditions. It might also be a ‘future baseline,’ which is a projected future set of conditions excluding the driving factor of interest. Alternate interpretations of the reference conditions can give rise to multiple baselines. (IPCC 2012c).

## Build back better

The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures with restoration of physical infrastructure and societal systems and revitalisation of livelihoods, economies and the environment. (UNDRR 2016c).

## Building code

A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage. (UNDRR 2016b).

# C

## Capacity

The combination of all the strengths, attributes and resources available to an individual, community, society or organisation, which can be used to achieve established goals. (IPCC 2012d; IPCC 2012d).

A combination of all the strengths and resources available within a community, society, or organisation that can reduce the level of risk or the effects of a disaster. Capacity may include physical, institutional, social, or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.

The combination of all strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals. (Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills and collective attributes such as social relationships, leadership and management. Capacity assessment is a term for the process by which the capacity of a group is reviewed against desired goals and the capacity gaps are identified for further action.) (UNISDR 2009c).

The combination of all the strengths, attributes and resources available within an organisation, community or society to manage and reduce disaster risks and strengthen resilience. (UNDRR 2016d).

- **Coping capacity**

Coping capacity is the ability of people, organisations and systems, using available skills and resources, to manage adverse conditions, risks or disasters. The capacity to cope requires continuous awareness, resources and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks. (UNDRR 2016e).

The ability of people, organisations and systems to use available skills, resources and opportunities to address, manage and overcome adverse conditions. (De Silva and Burton 2008).

The means by which people or organisations use available resources and abilities to face adverse consequences that could lead to a disaster. In general, this involves managing resources, both in normal times as well as during crises or adverse conditions. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and human-induced hazards.

- **Capacity assessment**

Capacity assessment is the process by which the capacity of a group, organisation or society is reviewed against desired goals, where existing capacities are identified for maintenance or strengthening and capacity gaps are identified for further action. (UNDRR 2016f).

- **Capacity development**

Capacity development is the process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals. It is a concept that extends the term of capacity-building to encompass all aspects of creating and sustaining capacity growth over time. It involves learning and various types of training, but also continuous efforts to develop institutions, political awareness, financial resources, technology systems and a wider enabling environment. (UNDRR 2016i).

**Capacity building**

Efforts to develop human skills or societal infrastructures within a community or organisation needed to reduce the level of risk. In extended understanding, capacity building also includes development of institutional, financial, political and other resources such as technology at different levels and sectors of society. (De Silva and Burton 2008).

**Climate change**

A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces, persistent anthropogenic changes in the composition of the atmosphere or land use. (IPCC 2012e).

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. (UNFCCC 1992).

The climate of a place or region is changed if over an extended period (typically decades or longer) there are statistically significant changes in measurements of either the mean state or variability of the climate for that place or region. (De Silva and Burton 2008).

**Climate projection**

A projection of the response of the climate system to emissions or concentration scenarios of greenhouse gases and aerosols, or radiative forcing scenarios, often based on simulations by climate models. Climate projections are distinguished from climate predictions in order to emphasise that climate projections depend upon the emission/concentration/radiative-forcing scenario used, which are based on assumptions concerning, e.g., future socioeconomic and technological developments that may or may not be realised and are therefore subject to substantial uncertainty. (IPCC 2012f).

**Climate Scenario**

Plausible and often simplified representation of the future climate, based on an internally consistent set of climatological relationships that has been constructed for explicit use in investigating the potential consequences of anthropogenic climate change, often serving as input to impact models. Climate projections often serve as the raw material for constructing climate scenarios, but climate scenarios usually require additional information such as the observed current climate. (IPCC 2012g).

**Climate threshold**

A critical limit within the climate system that includes a non-linear response to a given forcing. (IPCC 2012h).

**Collective Leadership**

Collective leadership is a form of leadership where leadership skills and responsibilities are distributed within a team or among a set of people or agencies. According to certain studies, it is likely to become a more appropriate model for operational humanitarian leadership. (Buchanan-Smith and Scriven 2011).

**Community-Driven Development**

Community-driven development is a development approach that transfers control over resources and decision-making from central agencies to communities. The approach focuses on improving people's livelihoods through improved delivery of public goods and services and more sustainable community assets. It also emphasises transparency and accountability in local decision-making to create more responsive government (particularly local government) and empower the citizenry, as lack of empowerment is another form of poverty. (De Silva and Burton 2008).

**Contingency planning**

A management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses. (UNDRR 2016j).

A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations. (Contingency planning results in organised and coordinated courses of action with clearly identified institutional roles and resources, information processes and operational arrangements for specific actors in times of need. Based on scenarios of possible emergency conditions or disaster events, it allows key actors to envision, anticipate and solve problems that can arise during crises. Contingency planning is an important part of overall preparedness) (UNISDR 2009d).

**Coping**

The use of available skills, resources and opportunities to address, manage and overcome adverse conditions with the aim of achieving basic functioning in the short to medium term. (IPCC 2012i; Glossary of terms 2012i).

**Critical infrastructure**

The physical structures, facilities, networks and other assets which provide services that are essential to the social and economic functioning of a community or society. (UNDRR 2016k).

**D****Disaster**

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. (UNDRR 2016l).

Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support or recovery. (IPCC 2012j; Glossary of terms 2012j).

A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk. (De Silva and Burton 2008).

Disasters are often described as a result of the combination of: the exposure to a hazard, 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. (UNISDR 2009e).

The crucial point about understanding why disasters happen is that it is not only natural events that cause them. They are also the product of social, political and economic environments (as distinct from the natural environment), because of the way they structure the lives of different groups of people. [...] For many people, a disaster is not a single discrete event. All over the world, but especially in LDCs, vulnerable people often suffer repeated, multiple, mutually reinforcing and sometimes simultaneous shocks to their families, their settlements and their livelihoods. These repeated shocks erode whatever attempts have been made to accumulate resources and savings. Disasters are a break on economic and human development at a household level. [...] In other words, to understand disasters, we must not only know about the types of hazards that might affect people, but also the different levels of vulnerability of different groups of people. This vulnerability is determined by social systems of power, not by natural forces. (Wisner, Blaikie, Cannon and Davis 2003).

- **Emergency**  
Emergency is sometimes used interchangeably with the term disaster, for example, in the context of biological and technological hazards or health emergencies, which, however, can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society. (UNDRR 2016m).
- **Disaster damage**  
Disaster damage occurs during and immediately after the disaster. This is usually measured in physical units (e.g. square metres of housing, kilometres of roads etc.), and describes the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area. (UNDRR 2016n).
- **Disaster impact**  
Disaster impact is the total effect, including negative effects (e.g., economic losses) and positive effects (e.g. economic gains) of a hazardous event or a disaster. The term includes economic, human and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being. (UNDRR 2016o).
- **Small-scale disaster**  
A type of disaster only affecting local communities which require assistance beyond the affected community. (UNDRR 2016p).
- **Large-scale disaster**  
A type of disaster affecting a society which requires national or international assistance. (UNDRR 2016q).
- **Frequent and infrequent disasters**  
Depend on the probability of occurrence and the return period of a given hazard and its impacts. The impact of frequent disasters could be cumulative or become chronic for a community or a society. (UNDRR 2016r).

- **A slow-onset disaster**  
Is defined as one that emerges gradually over time. Slow-onset disasters could be associated with e.g. drought, desertification, sea-level rise, epidemic disease. (UNDRR 2016s).
- **A sudden-onset disaster**  
Is one triggered by a hazardous event that emerges quickly or unexpectedly. Sudden-onset disasters could be associated with e.g. earthquakes, volcanic eruptions, flash floods, chemical explosions, critical infrastructure failures, transport accidents. (UNDRR 2016t).

#### **Disaster loss database**

A set of systematically collected records about disaster occurrence, damages, losses and impacts, compliant with the Sendai Framework for Disaster Risk Reduction 2015-2030 monitoring minimum requirements. (UNDRR 2016u).

#### **Disaster management**

The organisation, planning and application of measures preparing for, responding to and recovering from disasters. Emergency management is also used, sometimes interchangeably, with the term disaster management, particularly in the context of biological and technological hazards and for health emergencies. While there is a large degree of overlap, an emergency can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society. (UNDRR 2016v).

Social processes for designing, implementing and evaluating strategies, policies and measures that promote and improve disaster preparedness, response and recovery practices at different organisational and societal levels. (IPCC 2012k). Disaster management refers to all aspects of planning for and responding to disasters, including both pre- and post-disaster activities. (De Silva and Burton 2008).

#### **Disaster Risk**

The potential loss of life, injury or destroyed or damaged assets which could occur to a system, society or community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity. (UNDRR 2016w)  
The likelihood over a specified time period of severe alterations in the normal functioning of a community

or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery. (IPCC 2012l; Glossary of terms 2012l)

- **Acceptable Risk**

Acceptable risk, or tolerable risk, is an important subterm; the extent to which a disaster risk is deemed acceptable or tolerable depends on existing social, economic, political, cultural, technical and environmental conditions. In engineering terms, acceptable risk is also used to assess and define the structural and non-structural measures that are needed in order to reduce possible harm to people, property, services and systems to a chosen tolerated level, according to codes or “accepted practice” which are based on known probabilities of hazards and other factors. (UNDRR 2016)

#### **Residual Risk**

The disaster risk that remains in unmanaged form, even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained. (UNDRR 2016)

#### **Disaster risk assessment**

A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend. (UNDRR 2016).

#### **Disaster risk governance**

The system of institutions, mechanisms, policy and legal frameworks and other arrangements to guide, coordinate and oversee disaster risk reduction and related areas of policy. (UNDRR 2016).

**Disaster risk information**

Comprehensive information on all dimensions of disaster risk including hazards, exposure, vulnerability and capacity, related to persons, communities, organisations and countries and their assets. (UNDRR 2016).

**Disaster Risk Management**

Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses. (UNDRR 2016).

Processes for designing, implementing and evaluating strategies, policies and measures to improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life and sustainable development. (IPCC 2012m).

DRM refers to the systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This covers all forms of activities including structural and non-structural measures to avoid (prevention) or to limit (mitigation, preparedness and response) adverse effects of hazards. (De Silva and Burton 2008).

- **Prospective disaster risk management**  
Prospective disaster risk management activities address and seek to avoid the development of new or increased disaster risks. They focus on addressing disaster risks that may develop in future if disaster risk reduction policies are not put in place. Examples are better land-use planning or disaster-resistant water supply systems. (UNDRR 2016).
- **Corrective disaster risk management**  
Corrective disaster risk management activities address and seek to remove or reduce disaster risks which are already present and need to be managed and reduced now. Examples are the retrofitting of critical infrastructure or the relocation of exposed populations or assets. (UNDRR 2016).
- **Compensatory disaster risk management**  
Compensatory disaster risk management activities strengthen the social and economic resilience of individuals and societies in the face of residual risk that cannot be effectively reduced. They include preparedness, response and recovery activities, but also a mix of different financing instruments, such as national contingency funds, contingent credit, insurance and reinsurance and social safety nets. (UNDRR 2016).
- **Community-based disaster risk management**  
Community-based disaster risk management promotes the involvement of potentially affected communities in disaster risk management at the local level. This includes community assessments of hazards, vulnerabilities and capacities, and their involvement in planning, implementation, monitoring and evaluation of local action for disaster risk reduction. (UNDRR 2016) Local and Indigenous peoples' approach to disaster risk management.
- **Local and indigenous peoples' approach to disaster risk management**  
Local and Indigenous peoples' approach to disaster risk management is the recognition and use of traditional, Indigenous and local knowledge and practices to complement scientific knowledge in disaster risk assessments and for the planning and implementation of local disaster risk management. (UNDRR 2016).



**Disaster risk reduction**

Disaster risk reduction is aimed at preventing new, reducing existing disaster risk, and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. (UNDRR 2016).

Denotes both a policy goal or objective and the strategic and instrumental measures employed for anticipating future disaster risk; reducing existing exposure, hazard or vulnerability; and improving resilience. (IPCC 2012n).

The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development. (De Silva and Burton 2008).

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including thorough reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment and improved preparedness for adverse events. (UNISDR 2009f).

- **Disaster risk reduction strategies and policies**

Disaster risk reduction strategies and policies define goals and objectives across different timescales and with concrete targets, indicators and time frames. In line with the Sendai Framework for Disaster Risk Reduction 2015-2030, these should be aimed at preventing the creation of disaster risk, the reduction of existing risk and strengthening economic, social, health and environmental resilience.

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organisations threatened by a hazard to prepare and act appropriately and in sufficient time to reduce the possibility of harm or loss. (IPCC 2012o; Glossary of terms 2012o).

This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centred early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression “end-to-end warning system” is also used to emphasise that warning systems need to span all steps from hazard detection to community response. (UNISDR 2009g). The provision of timely and effective information through identified institutions that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response. Early warning systems include a chain of concerns, which is understanding and mapping the hazard, monitoring and forecasting impending events, processing and disseminating understandable warnings to political authorities and the population and undertaking appropriate and timely actions in response to warnings. (Bank 2008).

- **Multi-hazard early warning system**

Multi-hazard early warning systems address several hazards and/or impacts of similar or different types of contexts where hazardous events may occur alone, simultaneously, cascadingly or cumulatively over time, considering the potential interrelated effects. A multi-hazard early warning system with the ability to warn of one or more hazards increases the efficiency and consistency of warnings through coordinated and compatible mechanisms and capacities, by involving multiple disciplines for updated and accurate hazards identification and monitoring for multiple hazards. (UNDRR 2016)

**Economic loss**

Total economic impact that consists of direct economic loss and indirect economic loss. (UNDRR 2016).

**E Early warning system**

An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events. (UNDRR 2016).

- **Direct economic loss**  
Direct economic loss: the monetary value of total or partial destruction of physical assets existing in the affected area. Direct economic loss is nearly equivalent to physical damage. (UNDRR 2016).
- **Indirect economic loss**  
Indirect economic loss: a decline in economic value added as a consequence of direct economic loss and/or human and environmental impacts. (UNDRR 2016).

### Emergency management

The organisation and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps. (A crisis or emergency is a threatening condition that requires urgent action. Effective emergency action can avoid the escalation of an event into a disaster. Emergency management involves plans and institutional arrangements to engage and guide the efforts of government, non-government, voluntary and private agencies in comprehensive and coordinated ways to respond to the entire spectrum of emergency needs.) (UNISDR 2009h).

### Evacuation

Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them. (UNDRR 2016).

### Exposure

The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas. (UNDRR 2016). The presence of people, livelihoods, environmental services and resources, infrastructure or economic, social or cultural assets in places that could be adversely affected. (IPCC 2012p; Glossary of terms 2012p).

People, property, systems or other elements present in hazard zones that are thereby subject to potential losses. Measures of exposure can include the number of people or types of assets in an area. These can be combined with the specific vulnerability of the exposed elements to any particular hazard to estimate the quantitative risks associated with that hazard in the area of interest. (UNISDR 2009i)

### Extensive disaster risk

The risk of low-severity, high-frequency hazardous events and disasters, mainly but not exclusively associated with highly localised hazards. (UNDRR 2016)

### Governance

G

The way government is understood has changed in response to social, economic and technological changes over recent decades. There is a corresponding shift from government defined strictly by the nation-state to a more inclusive concept of governance, recognising the contributions of various levels of government and the goals of the private sector, non-governmental actors and of civil society. (IPCC 2012q; Glossary of terms 2012q)

H

### Hazard

A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. (UNDRR 2016).

The potential occurrence of a natural or human-induced physical event that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision and environmental resources. (IPCC 2012r). A potentially damaging physical event, phenomenon or human activity that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation. (De Silva and Burton 2008).

- **Multi-hazard**

Multi-hazard means (1) the selection of multiple major hazards that the country faces, and (2) the specific contexts where hazardous events may occur simultaneously, cascadingly or cumulatively over time, and taking into account the potential interrelated effects. (UNDRR 2016).

- Biological hazards**  
Biological hazards are of organic origin or conveyed by biological vectors including pathogenic microorganisms, toxins and bioactive substances. Examples are bacteria, viruses or parasites, as well as venomous wildlife and insects, poisonous plants and mosquitoes carrying disease-causing agents. (UNDRR 2016).
- Environmental hazards**  
Environmental hazards may include chemical, natural and biological hazards. They can be created by environmental degradation or physical or chemical pollution in the air, water and soil. However, many of the processes and phenomena that fall into this category may be termed drivers of hazard and risk rather than hazards in themselves, such as soil degradation, deforestation, loss of biodiversity, salinisation and sea-level rise. (UNDRR 2016).
- Geological or geophysical hazards**  
Geological or geophysical hazards originate from internal earth processes. Examples are earthquakes, volcanic activity and emissions, and related geophysical processes such as mass movements, landslides, rockslides, surface collapses and debris or mud flows. Hydrometeorological factors are important contributors to some of these processes. Tsunamis are difficult to categorise; Although they are triggered by undersea earthquakes and other geological events, they essentially become an oceanic process that is manifested as a coastal water-related hazard. (UNDRR 2016).
- Hydro-meteorological hazards**  
Hydrometeorological hazards are of atmospheric, hydrological or oceanographic origin. Examples are tropical cyclones (also known as typhoons and hurricanes), floods, including flash floods, drought, heatwaves and cold spells and coastal storm surges.  
Hydrometeorological conditions may also be a factor in other hazards such as landslides, wildland fires, locust plagues, epidemics and in the transport and dispersal of toxic substances and volcanic eruption material. (UNDRR 2016).

- Technological hazard**  
A hazard originating from technological or industrial conditions including accidents, dangerous procedures, infrastructure failures or specific human activities, which may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. (UNDRR 2016).

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### Hazardous event

The manifestation of a hazard in a particular place during a particular period of time. (UNDRR 2016).

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### Impacts

Effects on natural and human systems. In this report, the term ‘impacts’ is used to refer to the effects of physical events of disasters and climate change on natural and human systems. (IPCC 2012s).

### Intensive disaster risk

The risk of high severity, mid- to low-frequency disasters, mainly associated with major hazards. (UNDRR 2016).

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## M

### Mitigation

The lessening or minimising of the adverse impacts of a hazardous event. (UNDRR 2016).

The lessening of potential adverse impacts of physical hazards (including those that are human-induced) through actions that reduce hazard, exposure and vulnerability. (IPCC 2012t).

Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards. (Bank 2008).

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**N National platform for disaster risk reduction**

A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multisectoral and interdisciplinary in nature, with public, private and civil society participation involving all concerned entities within a country. (UNDRR 2016).

**P Preparedness**

The knowledge and capacities developed by governments, response and recovery organisations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters. (UNDRR 2016).

Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations. (De Silva and Burton 2008).

The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. Preparedness action is carried out within the context of disaster risk management and aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response to sustained recovery. Preparedness is based on a sound analysis of disaster risks and good linkages with early warning systems and includes activities such as contingency planning, stockpiling of equipment and supplies, development of arrangements for coordination, evacuation and public information, and associated training and field exercises. These must be supported by formal institutional, legal and budgetary capacities. The related term “readiness” describes the ability to quickly and appropriately respond when required. (UNISDR 2009j).

**Prevention**

Activities and measures to avoid existing and new disaster risks. (UNDRR 2016).

Activities to provide outright avoidance of the adverse impact hazards and means to minimise related environmental, technological and biological disasters. (De Silva and Burton 2008).

**Public Awareness**

The process of informing the general population, to increase levels of consciousness about risks and how people can act to reduce their exposure to hazards. This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster. Public awareness activities foster changes in behaviour leading toward a culture of risk reduction. This involves public information, dissemination, education, radio or television broadcasts, use of printed media, as well as the establishment of information centres and networks and community and participation actions. (De Silva and Burton 2008).

The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards. Public awareness is a key factor in effective disaster risk reduction. Its development is pursued, for example, through the development and dissemination of information through media and educational channels, the establishment of information centres, networks, and community or participation actions, and advocacy by senior public officials and community leaders. (UNISDR 2009k).

**R Reconstruction**

The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community, or a society affected by a disaster, aligning with the principles of sustainable development and “build back better,” to avoid or reduce future disaster risk. (UNDRR 2016).

**Recovery**

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better,” to avoid or reduce future disaster risk. (UNDRR 2016).

Decisions and actions taken after a disaster with a view to restore or improve the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery (rehabilitation and construction) affords an opportunity to develop and apply disaster risk reduction measures. (De Silva and Burton 2008).

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 and should be based on pre-existing strategies and policies that facilitate clear institutional responsibilities for recovery action and enable public participation. Recovery programmes, coupled with the heightened public awareness and engagement after a disaster, afford a valuable opportunity to develop and implement disaster risk reduction measures and to apply the “build back better” principle. (UNISDR 2009I).

**Rehabilitation**

The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster. (UNDRR 2016).

**Relief/Response**

The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term or protracted duration. (De Silva and Burton 2008).

**Resilience**

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform 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 through risk management. (UNDRR 2016).

The ability of a system and its component parts to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a timely and efficient manner, including through the preservation, restoration or improvement of its essential basic structures and functions. (IPCC 2012t; Glossary of terms 2012u).

The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures. (De Silva and Burton 2008).

The term resilience is considered an outcome when defined as the ability to bounce back or cope with a hazardous event and is embedded within vulnerability; whereas process-related resilience is defined more in terms of involving transformation, continual learning and taking responsibility for making better decisions to improve the capacity to handle hazards. There are two approaches to understanding resilience: a capacity to recover and as a degree of preparedness. There is a shift from a focus on resilience as a measurable outcome of an ability to deal with shocks, to a more dynamic model that encompasses the notion of change and transformation. (Carvalho 2015).

Adger describes social resilience as the ability of communities to withstand environmental, social, economic or political shocks. (Carvalho 2015).

**Response**

Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. (UNDRR, 2016).

**Retrofitting**

Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards. (UNDRR 2016).

**Risk**

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 and vulnerable conditions. Beyond expressing a possibility of physical harm, it is crucial to recognise that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people, therefore, do not necessarily share the same perceptions of risk and their underlying causes. (De Silva and Burton 2008).

Disaster risk: The potential disaster losses in lives, health status, livelihoods, assets and services which should occur to a particular community or a society over some specified future time period. (The definition of disaster risk reflects the concept of disasters as the outcome of continuously present conditions of risk. Disaster risk comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socio-economic development, disaster risks can be assessed and mapped – in broad terms at least.) (UNISDR 2009m).

This definition closely follows the definition of the ISO/IEC Guide 73. The word “risk” has two distinctive connotations: in popular usage, the emphasis is usually placed on the concept of chance or possibility, such as in “the risk of an accident;” Whereas in technical settings, the emphasis is usually placed on the consequences, in terms of “potential losses” for some particular cause, place and period. It can be noted that people do not necessarily share the same perceptions of the significance and underlying causes of different risks. (UNISDR 2009n).

**Risk Perception**

To understand how risk is perceived by different actors and their agency in the situation, it is necessary to grasp the wider social context in which it is placed. (Gaillard 2008).

Individually and in a group, perceptions of risk seem to arise naturally from the social group they are associated with and the kind of life they want to lead and preserve. The ‘Social Amplification of risk’ framework suggests that certain attributes of disasters and their characterisation interact with cultural, social and psychological processes that may decrease or increase perceptions of risk and hence, shape behaviour. (Kasperson, et al., 1988).

Although disasters may be real enough, their knowledge is socially constructed and therefore people consciously choose what is at risk and how to fear it. As Oliver Smith (2012) writes, “[...] natural processes are now in interaction with social processes in the production of global and specific vulnerability, environments and problems”. (Oliver-Smith, 2012,1063).

This interaction of social and natural forces affects not only the way in which risk is perceived, but also in the way people respond to it. (Paton 2003).

**Risk transfer**

The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs in exchange for ongoing or compensatory social or financial benefits provided to that other party. (IPCC 2012u).

**S Scenario**

A plausible and often simplified description of how the future may develop based on coherent and internally consistent set of assumptions about driving forces and key relationships. Scenarios may be derived from projections but are often based on additional information from other sources, sometimes combined with a narrative storyline. (IPCC 2012w).

**Sustainable development**

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (IPCC 2012x.)

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of “needs,” in particular the essential needs of the world’s poor, to which overriding priority should be given and the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and the future needs. (De Silva and Burton 2008). This definition coined by the 1987 Brundtland Commission is very succinct, but it leaves unanswered many questions regarding the meaning of the word development and the social, economic and environmental processes involved. Disaster risk is associated with unsustainable elements of development such as environmental degradation, while conversely disaster risk reduction can contribute to the achievement of sustainable development, through reduced losses and improved development practices. (UNISDR 2009o).

**Structural and non-structural measures**

Structural measures are any physical construction to reduce or avoid possible impacts of hazards or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Non-structural measures are measures not involving physical construction which use knowledge, practice or agreement to reduce disaster risks and impacts, in particular through policies and laws, public awareness raising, training and education. (UNDRR 2016).

**U** **Uncertainty**

An expression of the degree to which a value or relationship is unknown. Uncertainty can result from lack of information or from disagreement about what is known or even knowable. Uncertainty may originate from many sources, such as quantifiable errors in the data, ambiguously defined concepts or terminology or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures, for example, a range of values calculated by various models, or by qualitative statements, for example, reflecting the judgment of a team of experts. (IPCC 2012y).

**Underlying disaster risk drivers**

Processes or conditions, often development-related, that influence the level of disaster risk by increasing levels of exposure and vulnerability or reducing capacity. (UNDRR 2016).

**V****Vulnerability**

The propensity or predisposition to be adversely affected. (IPCC 2012z).

The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. (De Silva and Burton 2008).

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management. Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset) which is independent of its exposure. However, in common use, the word is often used more broadly to include the element’s exposure. (UNISDR 2009p).

Vulnerability is understood as the ability of a person or certain group to generate an ability to anticipate, overcome, resist and recover from an impact. In this sense, three components of vulnerability are distinguished: exposure, susceptibility and resilience/response (see, eg, Kuhlicke, Kabisch, Krellenberg & Steinführer, 2012; Romero-Lankao, 2010; Wisner et al., 2004 McCarthy, Canziani, Leary, Dokken & White, 2001). (Welz and Krellenberg 2016).

## General Terms

### A

#### **Authentic Leadership**

According to Harter, authenticity can be defined as “owning one’s personal experiences, be their thoughts, emotions, needs, beliefs, processes captured by the injunction to know oneself” and behaving in accordance with one’s true self. Authentic leadership is defined as a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information and relational transparency on the part of leaders working with followers, fostering positive self-development. (Biplab Datta 2015).

Authentic leadership can be defined as a pattern of transparent and ethical leader behaviour that encourages openness in sharing information needed to make decisions while accepting followers’ inputs. (Gil, Alcover, Rico and Sánchez-Manzanares, 2011).

- **Servant leadership and Spiritual leadership**

Dimensions of authentic leadership:  
 balanced processing - objective analysis of relevant data for decision making;  
 internalised moral perspective - be guided by internal moral standards, used to self-regulate one’s own behaviour; relational transparency - present his/her authentic self, sharing information openly and expressing feelings appropriate to the situation; self-awareness - understand one’s own strengths and weaknesses and how others view us. (Gil, Alcover, Rico and Sánchez-Manzanares, 2011).

well as restrictions, opportunities and environmental risks. (Gil, Alcover, Rico and Manzanares 2011).

#### **Complexity Leadership**

The concept of complexity leadership emerges when considering that traditional models do not reflect the dynamic, multilevel, distributed and contextual character in the true practice of leadership. It means applying the theory of complexity to the study of leadership. Instead of addressing limited characteristics or relationships, leadership is conceived as an adaptive and complex system of dynamic and unpredictable agents that interact in complex mutually reinforcing networks. It is not the acts of one or various individuals that are interesting to investigate in order to understand leadership, but the interaction of numerous forces that act in a particular context. (This focus applied to leadership identifies three complexity axes: cognitive, social and behavioural, so that the leader must be capable of addressing events from distinct perspectives, perform distinct roles and execute distinct behaviours in function of the demands of the situation) (Gil, Alcover, Rico and Sánchez-Manzanares 2011).

#### **Conversational Leadership**

Conversational leadership emphasises keen attention, self-discipline and a certain kind of artistry in engaging and communicating with others. Conversational leadership does not mean indulging in endless talking but rather identifying and engaging with the crucial and often courageous exchanges that facilitate meaningful change. It begins with a leader understanding that one of their critical functions in shaping and evolving an organisation is to consciously address the essential conversations which form how people think and act. (INVITAS 2019).

### C

#### **Charismatic Leadership**

Charismatic and transformational leadership theories have been the principal research focus since the eighties. In essence, these theories posit that leaders motivate their followers to act beyond their own work expectations and help them to achieve high performance levels, inspiring high levels of group involvement through an articulated vision by the leader. With regard to charismatic leadership, certain processes have been described such as articulating an integrated innovative vision, showing non-conventional behaviours, adopting personal risks and taking into consideration collaborators’ demands, as

### D

#### **Directive Leadership**

Directive leadership is based on the authority to compel subordinates to accomplish specific tasks. Much of the literature on leadership tends to have an underlying but unstated assumption: that the leader is actually the person with the authority to make critical decisions – one of the key characteristics of directive leadership. Unilateral, directive leadership is seldom successful when dealing with autonomous departments and agencies. Instead, the emergency manager must foster agreement on common goals and objectives. (Canton 2013).



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## E Ethical Leadership

Ethical leadership has been described in a variety of ways. Kanungo (2001) noted that ethical leaders engage in acts and behaviours that benefit others, and at the same time, they refrain from behaviours that can cause any harm to others. Brown, Trevino and Harrison (2005) suggested that the combination of integrity, ethical standards and fair treatment of employees are the cornerstones of ethical leadership. Trevino and Brown (2004) proposed that ethical leadership, in its true sense, promotes ethical conduct by practising as well as managing ethics and holding everyone accountable by it. Khuntia and Suar (2004) suggested that ethical leaders incorporate moral principles in their beliefs, values and behaviours. It is obvious that ethical leadership behaviour overlaps to some extent with relations-oriented behaviour constructs in the leadership literature (Gary Yukl 2013).

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## F Functional Leadership

Functional leadership theory defines leadership in terms of the needs of the system within which the leader operates. Leadership is a form of social problem solving where it is the leaders' responsibility to ensure team needs are met. Accordingly, the team leader's job is to - 1. Diagnose problems that could impede goal attainment, 2. Generate solutions, 3. Implement Solutions. Functional leadership does not specify that the formally designated leader must personally accomplish these needs, but rather that the leader is responsible for ensuring that these needs are met. (DeChurch et al. 2011, 152-169).

Rather than specifying specific behaviours constituting leadership, the functional approach views leadership as a role. The leader's role is to translate the demands and the needs of the environment, task and team members into a pattern of leader behaviour that will enable the team to be successful. (Gil, Alcover, Rico and Sánchez-Manzanares 2011, 38-47).

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## H Heroic Leadership

Heroic Leadership rests on the illusion that someone can be in control. Yet we live in a world of complex systems whose very existence means they are inherently uncontrollable... If we want to be able to get these complex systems to work better, we need to abandon our reliance on the leader as a hero and invite in the leader as a host. We need to support those leaders who know that problems are complex, who know that in order to understand the full complexity of any issue, all parts of the system need to be invited in to participate and contribute. (Buchanan-Smith and Scriven 2011).

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## I Institution

Institutions represent complex frameworks of social order established to govern the conduct and actions of certain groups of individuals and exist at different scales (family, community, cities, countries etc.). The term institution is used to represent both sets of practices defined for a social purpose and also entities that enforce these practices. (Anon 2017).

"A complex of positions, roles, norms and values lodged in particular types of social structures and organising relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals and in sustaining viable societal structures within a given environment. (Turner 1997).

Institutionalism is then - "the process whereby social practices become sufficiently regular and continuous to be described as institutions" (i.e.) "social practices that are regularly and continuously repeated, are sanctioned and maintained by social norms, and have a major significance in social structure. (Abercrombie et al., in Levy, 1997:254).

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## L Leader

A leader is the person who guides or directs a group to achieve a common goal. (Canton 2013).

### Leadership

Leadership research from political science, anthropology and public administration sectors indicate that options of good leadership have varied over time and across cultures, highlighting the complexities and differing contexts of how leadership is understood and performed. (Carvalho 2015).

Operational humanitarian leadership is the function of providing a clear vision and objectives for the humanitarian response; building a consensus that brings aid workers together around that vision and objectives and finding ways of collectively realising the vision for the benefit of the affected population, often in challenging and hostile environments. [...] One notable thinking around humanitarian thinking around leadership (at least at the policy level) has been an assumption the(se) three functions of leadership – the creation of a vision, the design of a strategy and the implementation of this strategy – will be conducted by a single individual, i.e. the leader. (Knox Clarke 2014).

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### M Multiteam Systems

“Two or more systems that interface directly and interdependently in response to environmental contingencies toward the accomplishment of collective goals.” (Mathieu, Marks & Zaccaro, 2001, p.290). MTS are tightly coupled constellations of teams offering specialised skills, capabilities and functions aimed at attaining goals too large to be performed by a single team. They are found in many settings where complex tasks require multiple teams and often diverse expertise. (DeChurch, Marks 2006).

Importantly, they describe networks of teams who work toward at least one shared goal, in addition to their individual team goals. In extreme environments such as disaster response - these systems offer a valuable level of analysis for examining the attainment of critical goals such as saving lives and property which ultimately requires the coordinated effort of multiple distinct teams. Furthermore, MTS tasks often require the coordinated efforts of multiple previously unacquainted teams by demanding new skill sets and areas of expertise residing across boundaries of individual teams to be brought together in new ways to tackle novel challenges. (DeChurch et al. 2011, 152-169).

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### P Participation

Public participation is a term used to describe the overall practice of involving the public in policy-setting decisions of organisations or institutions. (However, when used in this context, the term fails to acknowledge the range of communication practised between organisations and public during engagement events and the many different ways or levels that public may be involved. [...] Participatory approaches to risk reduction bring with them issues of power dynamics, inclusion and exclusion that must be addressed if participation is to actively engage people, encouraging voice but also encouraging listening. (Buchanan-Smith and Scriven 2011).

### Persuasive Leadership

Persuasive leadership is based on the credibility of the leader and his or her ability to guide colleagues toward action, even if the leader has no direct authority over them. Persuasive leadership is particularly important in the emergency management program where the emergency manager has limited authority over the participants in the program. (Canton 2013).

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### R Remote Leadership

Remote leadership refers to so-called virtual work teams whose members interact in different ways through technology and are frequently geographically dispersed. Traditional leadership models based on face-to-face leader-member relationships are insufficient to efficiently manage virtual teams. This type of leadership is also called distance or e-leadership. Empirical evidence indicates that shared leadership better predicts virtual team performance than vertical leadership. (Gil, Alcover, Rico and Sánchez-Manzanares 2011).

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### S Shared Leadership

Shared leadership, also called distributed, collective or peer leadership, acquires greater relevance the more work hierarchy is diluted, being the work members those who perform leadership activities contemporaneously or sequentially. Hence, shared leadership contrasts with more conventional, hierarchical or vertical paradigms of power, an external designation to the team and formal authority. It is defined as a dynamic, interactive influence process

among individuals in groups for which the objective is to lead one another to the achievement of group or organisational goals or both. In this regard, on being considered as a property of the system and not of a single member, it can be said that “the effectiveness of leadership becomes more a product of those connections or relationships among the parts than the result of any one part of that system (such as the leader)” and thus, shared leadership is related to the concept of complexity leadership. (Gil, Alcover, Rico and Sánchez-Manzanares 2011).

## **T** Team leadership

Traditionally, research has analysed the influence that the individual leader (generally external to the team) exerts over his/her collaborators through interpersonal relationships, obviating other forms of team-oriented leadership provided by his/her own members. Present-day situations, characterised by their complexity and ambiguity, make it difficult for an external leader to be able to successfully perform all leadership functions. Likewise, knowledge-based work requires providing professional groups with sufficient autonomy and as a result, go on to perform leadership functions. There is good knowledge about how a leader directs subordinate groups, but less knowledge about how the leader promotes team processes. (Gil, Alcover, Rico and Sánchez-Manzanares 2011).

Team leader perspective clarifies that the role of leadership in a collective is to impact the functioning of the system of relationships. Leaders in collectives create meaning in events, foster cohesion and a sense of shared identity, develop working relationships among followers and coordinate member actions. (DeChurch et al. 2011,152-169).

‘Within - involves leadership which ultimately impacts the interactions of individuals nested within component teams; leadership at this impact point serves to unite the members of a team toward their component teams’ objective. Between - involves leadership which ultimately impacts the interaction between component teams. Here leadership is serving as a linking mechanism between multiple teams who are simultaneously working towards team goals, but whose efforts are also jointly formative of a higher order goal. Across - leadership was aimed at external alignment of the system with entities that do not necessarily share common goals with MTS component teams. In complex collectives, it is likely that multiple

forms of leadership (rotated, shared, team) are in place at various positions in a multiteam system simultaneously, and must be aligned in order for the system to function effectively. (DeChurch et al. 2011,152-169). Team leadership can be understood in 2 ways: 1. As those attributes that the members bring to the team and that operate as components that influence processes and team performance; 2. As a result of team performance, facilitating team adaptation and performance throughout the different stages of its development. (Gil, Alcover, Rico and Sánchez-Manzanares 2011, 38-47).

## **Transcultural Leadership**

The need to broaden the knowledge of all cultures, derived from globalisation, beyond that obtained in investigations carried out in industrialised western contexts, has increased interest in transcultural leadership research. In the GLOBE project - Global Leadership and Organisational Behaviour Effectiveness - study, different cultural dimensions have been identified and leadership attributes as well as shared beliefs in different cultures about effective leaders. The results also reveal a series of universally accepted attributes in all the cultures analysed, such as charismatic and team-oriented leadership. Some research has attempted to determine how global leadership would be capable of efficiently leading groups of people in different cultural contexts. Other research, on the contrary, has analysed how leaders in different cultures behave, as in the case of expatriate executives, identifying the key resources and competencies in such contexts, such as global vision, experience and cultural intelligence. (Gil, Alcover, Rico and Sánchez-Manzanares 2011, 38-47).

## **Transformational Leadership**

Charismatic and transformational leadership theories have been the principal research focus since the eighties. In essence, these theories posit that leaders motivate their followers to act beyond their own work expectations and help them to achieve high performance levels, inspiring high levels of group involvement through an articulated vision by the leader. Regarding transformational leadership, four fundamental dimensions have been identified (Bass, 1985): charisma or idealised influence (leaders show their vision and serve as role models), inspirational motivation (they develop a shared vision and group spirit), intellectual stimulation (they promote problem solution and innovation) and individualised consideration (they treat members in a careful and personal manner) (Gil, Alcover, Rico and Sánchez-Manzanares 2011, 38-47).

## **Annexure**

### **Process followed:**

Identified subject dictionaries and glossaries in risk, disasters and resilience areas for compiling a glossary of terminology.

It was agreed by the team that the United Nations General Assembly's Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (65 terms) should be used as a source for building this terminology (UNDRR, 2016) and an in-house terminology compiled by the team having 61 terms was also used as an additional source.

Term lists were compiled in alphabetical order.

Multiple definitions were included in alphabetical order from both documents, including subcategories from the main category of terms.

Sorted the general terms separately to domain terms. For example, general terms are leadership, team and institutions.

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ACCEPTABLE RISK • DISASTER RISK • ACCEPTABLE RISK • RESIDUAL RISK • DISASTER RISK ASSESSMENT  
• DISASTER RISK GOVERNANCE • DISASTER RISK INFORMATION • DISASTER RISK MANAGEMENT •  
PROSPECTIVE DISASTER RISK MANAGEMENT • CORRECTIVE DISASTER RISK MANAGEMENT •  
COMPENSATORY DISASTER RISK MANAGEMENT • COMMUNITY-BASED DISASTER RISK MANAGEMENT •  
DISASTER RISK REDUCTION • DISASTER RISK REDUCTION STRATEGIES AND POLICIES • EXTENSIVE  
DISASTER RISK • INTENSIVE DISASTER RISK • RISK TRANSFER • UNDERLYING DISASTER RISK DRIVERS •  
ACCEPTABLE RISK • DISASTER RISK • ACCEPTABLE RISK • RESIDUAL RISK • DISASTER RISK ASSESSMENT  
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