



Mainstreaming Disaster Risk Management in Government Institutions

Session 1.1: Important Terms and Concepts in Mainstreaming Disaster Risk Management (DRM)

Session Objectives

At the end of the session, you should be able to:

- Explain selected terminologies for DRM following UNDRR definitions given

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.



Annotations: Hazards may be **natural**, **anthropogenic** or **socio-natural** in origin. **Natural hazards** are predominantly associated with natural processes and phenomena. **Anthropogenic hazards**, or human-induced hazards, are induced entirely or predominantly by human activities and choices. This term does not include the occurrence or risk of armed conflicts and other situations of social instability or tension which are subject to international humanitarian law and national legislation. Several hazards are **socio-natural**, in that they are associated with a combination of natural and anthropogenic factors, including environmental degradation and climate change

Types of Hazard

1. **Hydro-Meteorological** (*e.g. typhoons and hurricanes; floods, including flash floods; drought; heatwaves and cold spells*)
2. **Biological** (*e.g. bacteria, viruses or parasites, as well as venomous wildlife and insects, poisonous plants and mosquitoes carrying disease-causing agents*)
3. **Environmental** (*e.g. soil degradation, deforestation, loss of biodiversity, salinization and sea-level rise*)
4. **Geological or geophysical** (*e.g. earthquakes, volcanic activity and emissions, mass movements, landslides, rockslides, surface collapses and debris or mud flows*)
5. **Technological** (*e.g. industrial pollution, nuclear radiation, toxic wastes, dam failures, transport accidents, factory explosions, fires and chemical spills*)

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.



Annotations: The effect of the disaster can be immediate and localized, but is often widespread and could last for a long period of time. The effect may test or exceed the capacity of a community or society to cope using its own resources, and therefore may require assistance from external sources, which could include neighboring jurisdictions, or those at the national or international levels.

Exposure

The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.



*Annotation: Measures of exposure can include the number of people or types of assets in an area. These can be combined with the **specific vulnerability and capacity of the exposed elements** to any particular hazard to estimate the quantitative risks associated with that hazard in the area of interest.*

Vulnerability

The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

Annotation: For positive factors which increase the ability of people to cope with hazards, see also the definitions of “Capacity” and “Coping capacity”.



Capacity

The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

Annotation: Capacity may include infrastructure, institutions, human knowledge and skills, and collective attributes such as social relationships, leadership and management.



Disaster Risk



The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

Annotation: The definition of disaster risk reflects the concept of hazardous events and 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 socioeconomic development, disaster risks can be assessed and mapped, in broad terms at least.

It is important to consider the social and economic contexts in which disaster risks occur and that people do not necessarily share the same perceptions of risk and their underlying risk factors.

Disaster Risk Components

Disaster Risk = Hazard x Exposure x Vulnerability

Capacity

The opposite of vulnerability is capacity. Therefore, if we want to decrease vulnerability, we need to increase capacity.

Preparedness

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

*Annotation: 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.***



Prevention

Activities and measures to avoid existing and new disaster risks.



*Annotations: While certain disaster risks cannot be eliminated, **prevention aims at reducing vulnerability and exposure in such contexts where, as a result, the risk of disaster is removed.** Examples include dams or embankments that eliminate flood risks, land use regulations that do not permit any settlement in high -risk zones, seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake and immunization against vaccine - preventable diseases. Prevention measures can also be taken during or after a hazardous event or disaster to prevent secondary hazards or their consequences, such as measures to prevent the contamination of water.*

Disaster Mitigation

The lessening or limitation of the adverse impacts of hazards and related disasters.

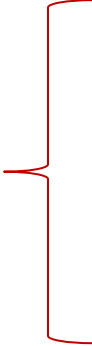
Annotation: The adverse impacts of hazards, in particular natural hazards, often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures include engineering techniques and hazard -resistant construction as well as improved environmental and social policies and public awareness. It should be noted that, in climate change policy, “mitigation” is defined differently, and is the term used for the reduction of greenhouse gas emissions that are the source of climate change.



Disaster Risk Reduction

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

Annotation: Disaster risk reduction is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans.

A large red bracket on the left side of the three terms, grouping them together.

Preparedness

Prevention

Mitigation

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.

*Annotation: Disaster response is predominantly focused on immediate and short term needs and is sometimes called disaster relief. **Effective, efficient and timely response relies on disaster risk - informed preparedness measures**, including the development of the response capacities of individuals, communities, organizations, countries and the international community.*



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.



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.



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.

Annotation: Disaster risk management actions can be distinguished between prospective disaster risk management, corrective disaster risk management and compensatory disaster risk management, also called residual risk management.

Climate Change



Change in the pattern of weather, and related changes in oceans, land surfaces and ice sheets, occurring over time scales of decades or longer

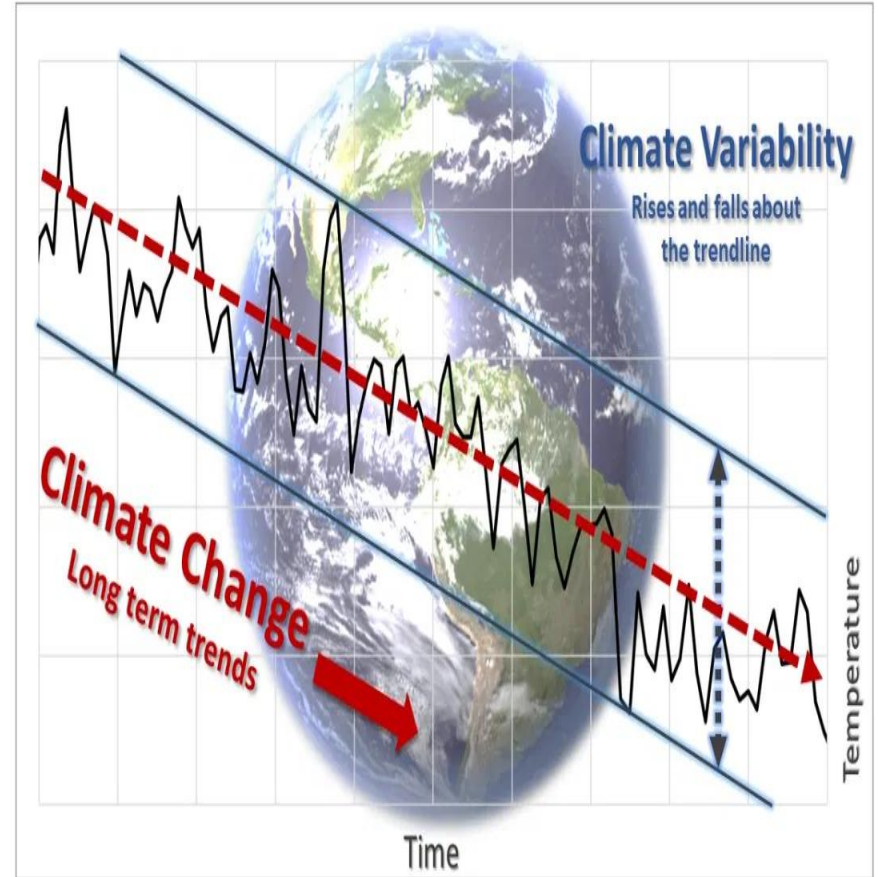
Source: Australian Academy of Science

“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”

Source: United Nations Framework for Climate Change (UNFCC)

Climate Variability

Natural changes in climate, which fall within the normal range for that particular region.



Climate Change Mitigation

The implementation of policies to reduce greenhouse gas emissions and enhance sinks (human or natural processes or activities which remove greenhouse gases from the atmosphere)

Source: United Nations Framework for Climate Change (UNFCC)

The reduction of greenhouse gas emissions that are the source of climate change.

Climate Change Adaptation



The initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects.

Mainstreaming

To bring something into the ideas, attitudes, or activities that are shared by most people and regarded as normal or conventional; to bring the dominant trend in opinion

It is a 'process'... to make it a '**normal process**' It is not an one-off exercise... but rather **continuous** from short to long term. It is not an end in itself... rather a **strategic approach**

Session Takeaways:

1. At the very least, conceptual understanding are important because what is operationalized often starts from a concept e.g. Preparedness, resilience, mainstreaming, etc.
2. You will continue to encounter most of the terms in the succeeding sessions. This will provide you with a stronger understanding to the concepts presented.
3. Since DRM is the one that will be mainstreamed in the sectors and development processes, it is important to have conceptual handles of DRM and mainstreaming at the onset.



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