Disaster Risk Reduction and Risk Preparedness
At the end of the session, trainees:

✓ Will acknowledge the **key concepts** of hazard, vulnerability, exposure, disaster, disaster risk, resilience, prevention, mitigation and preparedness for response

✓ Will acknowledge the **role of heritage** in **strengthening resilience** and **actions** to be taken in the different phases of the disaster risk management cycle

✓ Will be aware of how to integrate **Disaster Reduction Management (DRM)** into the site management
Module outline

I. Disaster statistics

II. Key definitions and concepts

III. Threats facing heritage

IV. Disaster Risk Management (DRM)
   1. The Disaster Risk Management Cycle
   2. The disconnect between DRM and heritage sectors
   3. Misperceptions
   4. Linking DRM and heritage sectors
   5. Integrating DRM within site management plans and systems

V. The role of heritage in strengthening resilience and fostering sustainability

VI. Attacks on Culture

VII. A growing recognition and accelerated action for the protection of Culture from disasters and conflicts
   • Overview of UNESCO activities in DRM for Cultural and Heritage
I. Disaster statistics

Figure 1
Number of weather-related disasters reported per country (1995-2015)

Number of hydro-climato-meteorological disasters
- 1-25
- 26-69
- 70-163
- 164 or more

DISASTER IMPACTS / 2000-2012

$1.7 TRILLION DAMAGE (USD)
2.9 BILLION AFFECTED
1.2 MILLION KILLED
I. Disaster statistics

Source: Breakdown of frequency and losses per disaster type worldwide in 2020, 2020 Global Natural Disaster Assessment Report (2020) page 4

Source: Increase in Natural Disasters on a Global Scale by Ten Times, Vision of Humanity (2022)
II. Key definitions and concepts

- **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.

- **Disaster Risk**: The potential loss of life, injury, or damaged assets which could occur to a system, society or a community in a specific period of time, as a function of hazard, exposure and vulnerability (Disaster Risk = H x E x V).

- **Disaster Risk Reduction (DRR)**: Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk.

- **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.

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

- **Prevention**: Activities and measures to avoid existing and new disaster risks (e.g. land-use regulations that do not permit any settlement in high-risk zones).

- **Mitigation**: The lessening or minimizing of the adverse impacts of a hazardous event (e.g. improved public awareness; hazard-resistant infrastructure).

- **Preparedness response**: The knowledge and capacities to effectively respond to and recover from the impacts of likely, imminent or current disasters (e.g. evacuation; development of arrangements for coordination).
II. Key definitions and concepts

- **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. Hazards may be natural, anthropogenic or socionatural in origin.

- **Multi-Hazard**: It could both be the selection of multiple major hazards that the country faces and the specific contexts where hazardous events may occur simultaneously, one after another or cumulatively over time, and taking into account the potential interrelated effects.

![Hazard Diagram](image-url)
II. Key definitions and concepts
Risks and Disaster Risks: how are they different?

- In disaster situations, different actors come into play, which have their own plans and procedures.

- Disaster risks are often neglected in general management strategies, so it is good to consider them specifically.

- Emergency response procedures, in particular, are very specific and rarely implemented, but are essential.

- Disaster Risk Management requires a multidisciplinary approach.
III. Threats facing heritage

**Natural Causes**
- Immediate Drastic Effects (Rapid Onset):
  - Earthquake, volcanic eruption, landslide, flood, tsunami, typhoon, hurricane, lightning, hailstorm, extreme rainfall, etc.

- Slow and/or Cumulative Effects (Slow Onset):
  - Climate, erosion, settlement moisture, corrosion, pollution, salt dissolution, micro-organisms, vegetation, animals (insects, birds, rodents), dust, etc.

**Human Causes**
- Immediate Drastic Effects (Rapid Onset):
  - War, fires, restoration works, illegal excavation, illegal trade, urban development, vandalism, theft, fanatism, etc.

- Slow and/or Cumulative Effects (Slow Onset):
  - Heavy traffic, abrasion, tourism, graffiti, abandonment, ignorance, lack of legislation, inadequate attention, etc.
The Disaster Risk Management cycle

The three phases of Disaster Reduction are:

• Readiness (before)
• Response (during)
• Recovery (after)
IV. Disaster Risk Management

The Disaster Risk Management cycle

Disaster risk management involves:

- Identifying hazards, required expertise, and stakeholders
- Understanding the risks, including by developing complex scenarios of possible events based on likely chain of multiple causes and effects (primary, secondary and tertiary)
- Planning and acting for preparedness, emergency response and recovery, within the larger Disaster Risk Management framework
- Building awareness and capacity, conducting regular drills (tests), and monitoring exercises
IV. Disaster Risk Management
The disconnect between Disaster Risk Management and heritage sectors

- The global Disaster Risk Reduction sector is not sufficiently concerned with heritage, with heritage losses not accounted for in global statistics/databases on disasters
- The Heritage sector does not know the ‘language’ of Disaster Risk Management

Misperceptions:
- Cultural attitude (e.g. fanatism, superstition, reluctance to raise issues with superiors, etc.) and priority given to pressing issues that can be ‘seen’
- Misunderstanding and overestimation of nature and costs of mitigation strategies
- Lack of awareness of potential positive role of culture in Disaster Risk Management
IV. Disaster Risk Management
Linking Disaster Risk Management and heritage sectors

Heritage concerns should be integrated into disaster management policies

Disaster Risk Management Systems should be introduced into cultural heritage sites
IV. Disaster Risk Management

Integrating Disaster Risk Management within sites management plans and systems

Disaster Management System for Region/District/City

Disaster Risk Management Plan for Heritage

Site Management System
IV. Disaster Risk Management
Most world heritage properties are not prepared for disasters

The destruction in a fire of the a 600-year-old monument, the Sungnye Gate or the South Gate of Seoul (Republic Of Korea), in 2008

The remnants of the Cathedral of Our Lady of the Assumption in Port-au-Prince (Haiti), destroyed by the 2010 earthquake
IV. Disaster Risk Management

Disaster Effects, our dimensions:

- Total or partial destruction of physical assets existing in the affected area
- Service delivery and access to goods and services
- Governance and decision-making processes
- New risks and vulnerabilities as a result of the disaster

Culture Sector, five main component:

- Built Heritage and cultural/natural properties
- Moveable Properties and Collections
- Intangible Cultural Heritage
- Repositories of Heritage
- Cultural and Creative Industries

Main challenge: obtaining reliable baseline data
Disaster Effects: Culture

- Total or partial destruction of monuments, sites, cultural repositories, etc.
- Lack of access to Cultural Heritage, disruption of production of cultural goods and services, inability to practice one’s culture
- Effects on ability of Agencies in charge of culture to implement, coordinate response, their human resources, information, equipment, etc.
- New risks due to fragility of structures, possible looting, or from insensitive reconstruction plans, etc.

Value of Disaster Effects: Culture

- Damage:
  - Cost of reconstruction of physical assets, including equipment and infrastructure (or alternative solutions)
- Losses:
  - Diminished revenues and/or additional costs from temporary closure of cultural assets/cancellation of cultural events;
  - Costs for emergency measures to prevent further damage
  - Costs for disruption of production of goods
  - Costs to ensure continuity of cultural services
  - Costs for reducing new risks, etc.
IV. Disaster Risk Management

Recovery strategy for culture: typical needs

- First aid measures
- Restoration/reconstruction of assets and infrastructure
- Restore essential cultural services and intangible heritage practices
- Resume production of cultural goods
- Restore basic revenues for affected people employed in culture sector
- Delivering training
- Restore administrative functionality of sector
- Strengthen Disaster Risk Reduction of affected cultural resources while reconstructing
- Build awareness
- Etc.
5.14. Use of policies and strategies agreed by the World Heritage Committee or the World Heritage General Assembly to set national policies or strategies for the protection of the cultural and natural heritage

Is your State Party using policies and strategies agreed by the World Heritage Committee or the World Heritage General Assembly to set national policies or strategies for the protection of the cultural and natural heritage?

<table>
<thead>
<tr>
<th>UNESCO World Heritage Policy or Strategy</th>
<th>No</th>
<th>Yes</th>
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<tbody>
<tr>
<td>5.14.1.2 Strategy for Reducing Risks from Disasters at World Heritage Properties</td>
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<td>5.14.1.3 World Heritage Capacity Building Strategy</td>
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<td>5.14.1.4 World Heritage Sustainable Development Policy</td>
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## Has any use been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties at the property?

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<th>Q</th>
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<tr>
<td>5.3.9.1</td>
<td>No use has been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties</td>
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<tr>
<td>5.3.9.2</td>
<td>Some use has been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties</td>
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<tr>
<td>5.3.9.3</td>
<td>The risk management policy is <strong>fully based</strong> on the agreed Strategy for Reducing Risks from Disasters at World Heritage Properties</td>
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V. The role of heritage in strengthening resilience and fostering sustainability

- **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.

- Cultural heritage is **not merely a passive resource** liable to be affected and damaged by disasters.

- It has a **proactive role** to play in **strengthening resilience and fostering sustainability**.
Culture as a security imperative and a humanitarian issue:

- Growing recognition of the role of culture for resilience in disasters
- Growing number of intra-State conflicts among groups defined by ethnicity or religion
- Link between conflicts and disasters
- Non-integration of culture in humanitarian/security strategies
- Limitations of UNESCO’s traditional approach

The protection of culture and the promotion of cultural pluralism also contributes to:

- Protecting human rights
- Preventing conflicts and building peace
- Upholding international humanitarian law and security
V. The role of heritage in strengthening resilience and fostering sustainability

Heritage reflects **cultural** and **natural diversity**

Heritage is **connected to** and **owned by the people**
V. The role of heritage in strengthening resilience and fostering sustainability

It mitigates risks through goods and services

*Florida’s Mangroves Ecosystem*
V. The role of heritage in strengthening resilience and fostering sustainability

It is a resource for **sustainable socio-economic development**

It may be a powerful tool to **communicate risks**
V. The role of heritage in strengthening resilience and fostering sustainability

Priority 1: understanding disaster risk to culture

- Identify, assess and monitor risks to culture from disasters and conflicts, through a broad participatory process
- Consolidate guidance and promote new research on the actual and potential contribution of culture and heritage in building resilience

Priority 2: strengthening disaster risk governance of the culture sector to manage disaster risk

- Strengthen inter-institutional coordination and communication among Cultural Heritage authorities and emergency response and Disaster Risk Management actors by establishing permanent consultation mechanisms and protocols for emergency preparedness and response
- Create dedicated cultural heritage units within CP agencies (interdisciplinary teams)
- Strengthen the policy/legal frameworks for Disaster Risk Management/Cultural Heritage by emphasizing the necessity to include the Cultural Heritage sector in all segments of Disaster Risk Management and at all emergency management levels
V. The role of heritage in strengthening resilience and fostering sustainability

Priority 3: investing in Disaster Risk Reduction for culture
- Develop **Disaster Risk Management systems** through inclusive and consultative processes ensuring the participation of all main actors, and integrate them within the broader Cultural Heritage site management plans
- Participate in **training programmes on Disaster Risk Management** for Cultural Heritage to build capacity of professionals e.g. First Aid for Cultural Heritage
- Promote **awareness-raising** for all stakeholders dealing with Disaster Risk Management at various levels, and for the general population

Priority 4: enhancing disaster preparedness for effective response and to “build back better” in the recovery, rehabilitation and reconstruction of culture
- Conduct regular reviews of **Disaster Risk Management plans** at various levels, and regular drills involving concerned communities
- Ensuring the **integration of Culture in Post-Disaster Needs Assessments (PDNA), and Recovery and Peace-Building Assessments (RPBA)**, if one takes place in your country
- Undertake research to **reduce vulnerability** of Cultural Heritage in recovery processes
V. The role of heritage in strengthening resilience and fostering sustainability

What is the Joint Declaration on Post-Crisis Assessments and Recovery Planning (PDNA)?

• A joint protocol for action established in 2008 by the UN, the European Union and the World Bank

• A framework to help coordinate recovery efforts across different sectors and with a risk reduction focus

• Methodology that coordinates consistent and predictable assistance to Governments in assessing disaster’s socio-economic consequences
VI. Attacks on Culture

This video is available on the UNESCO website [here](https://www.unesco.org/).
VI. Attacks on Culture

Destruction of the Ancient City of Aleppo

21 November 2010

22 October 2014

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VI. Attacks on Culture

Al-Askari shrine, Samarra (Iraq), 2006, 2007

Radical Religious Ideology: Destruction of 14 Mausoleums Timbuktu (Mali), 2012
VI. Attacks on Culture

VI. Attacks on Culture

Culture and religion-based persecution:

Christian homes marked with the letter « noun »

Yezidi refugees, Iraq
VI. Attacks on Culture

Looting and illicit trafficking
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

New policies:

• Strategy for the Reinforcement of UNESCO’s Actions for the Protection of Culture and the Promotion of Cultural Pluralism in the Event of Armed Conflict (November 2015)
• United Nations Security Council Resolution 2347 on the protection of cultural heritage (March 2017)
• Addendum to the Strategy on Natural Disasters (November 2017)

* Key feature of the Addendum on Natural Disasters *
aligned with the four priorities for action of the Sendai Framework for Disaster Risk Reduction 2015-2030
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

Sendai Framework for Disaster Risk Reduction: 2015-2030

- Endorsed by the United Nations General Assembly following the Third United Nations World Conference on Disaster Risk Reduction (WCDRR) in March 2015

- Aims for the “the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.”

- The Framework calls for the following priorities for action that are specifically linked to cultural heritage:
  - “Systematically evaluate, record, share and publicly account for disaster losses and understand the... cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information.”
  - “Protect or support the protection of cultural and collecting institutions and other sites of historical, cultural heritage and religious interest.”
Overview of UNESCO’s activities in Disaster Risk Management for cultural heritage:

- Providing technical backstopping (development of Disaster Risk Management plans; conducting PDNAs for culture)
- Providing financial assistance for emergency preparedness and response activities through the Heritage Emergency Fund
- Developing capacity-building tools and training programmes
- Advocacy and support in policy formulation
UNESCO’s emergency preparedness and response Unit:

• Established in 2014
• Purpose: to strengthen UNESCO’s ability to assist Member States in preventing, mitigating and recovering from emergencies affecting their cultural sector, while drawing on the power of culture to support resilience, cohesion and stability
• Covers all emergencies (disasters and conflicts)

New partnerships and tools:

• Heritage Emergency Fund established in 2015
• Action Plan adopted in 2017
• Culture in Post-Disaster Needs Assessments (PDNA), Recovery and Peace-Building Assessments (RPBA), etc.
• Rapid response mechanism, including the establishment of a roster of experts
• New international funding mechanisms (CPF, ALIPH etc.)
• Cooperation agreements with ICRC, ICC, ICCROM, UNOSAT, the Italian Task Force, DAI, Hermitage, etc.

VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

Advocacy and facilitation

The UNESCO Director-General meeting the President of Iraq to discuss the reconstruction of Mosul (Iraq) in 2019:
• Statements by Director-General
• Diplomatic initiatives
• High-level meetings and thematic conferences
• Implementation of strong projects, such as ‘Revive the spirit of Mosul’ (link here)

Technical assistance and capacity-building

• Support to emergency stabilisation
• Rehabilitation
• Technical coordination meetings
• First aid training
• Training of military and peacekeepers
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

Assessments, data collection and monitoring

Impact craters in the immediate vicinity of the Old City of Baraqlash

Severely damaged buildings in the immediate vicinity of the Old City of Baraqlash

Legend:
- Destroyed
- Severe Damage
- Moderate Damage
- Possible Damage
- Impact Crater (Damage to Road)
- Impact Crater (Damage to Field)

Image analysis: UNITAR-UNOSAT
Image copyright: DigitalGlobe, Inc.
Periodic Reporting – Disaster Risk Reduction

VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

**Fight against illicit trafficking**

- Coordination with INTERPOL, WCO, UNODC, UNIDROIT, ICOM and heritage experts to track and identify illicitly traded cultural artefacts
- Advocacy with museums, the art market, the public in general on need for due diligence
- Mediation on return of properties illicitly exported
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

Education and communication

World Heritage explained - animated short video about the UNESCO World Heritage Convention
VII. A growing recognition and accelerated action for the protection of culture from disasters and conflicts

What are we ultimately wanting to achieve?

- Renewed focus on disaster preparedness, instead of only focusing on disaster response and recovery
- Better communication and integrated processes and mechanisms across concerned sectors (cultural heritage; Disaster Risk Management; development; humanitarian; and security)
- New and innovative knowledge, tools, approaches and best practices that enable a balance between the protection of the property/site’s heritage attributes (and their associated values) on the one hand, with the safety of the local population/visitors, on the other
- Recognition of the potential role of culture and heritage to contribute to Disaster Risk Reduction, and its harnessing in Disaster Risk Reduction strategies and plans