

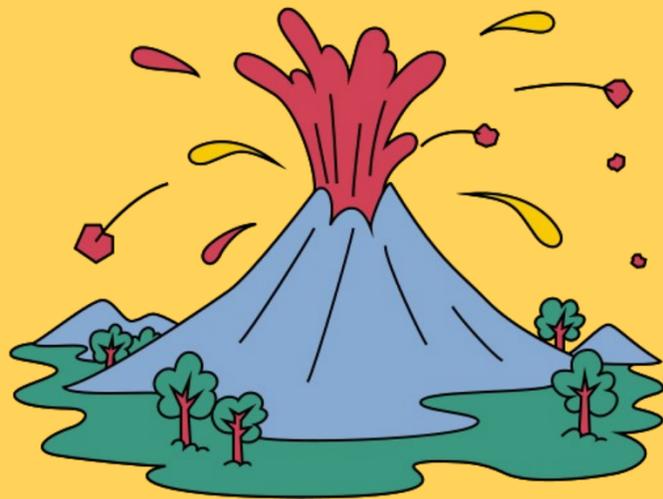
The background features a stylized illustration. On the left, a volcano with red lava flows and a large blue plume of smoke rises against a yellow sky with a few clouds. In the foreground, two people are running away from the viewer on a cracked red ground. To the right, a city street is shown with buildings that are tilted and cracked, indicating an earthquake. A yellow car is on the road, and two workers in red uniforms and yellow hard hats are seen amidst a pile of rubble on the right side.

DISASTER PREPAREDNESS & MANAGEMENT IN LIBRARIES

BEST PRACTICES

DR. GITAU NJOROGE

OUTLINE



- DEFINITIONS
- THEORETICAL FOUNDATIONS



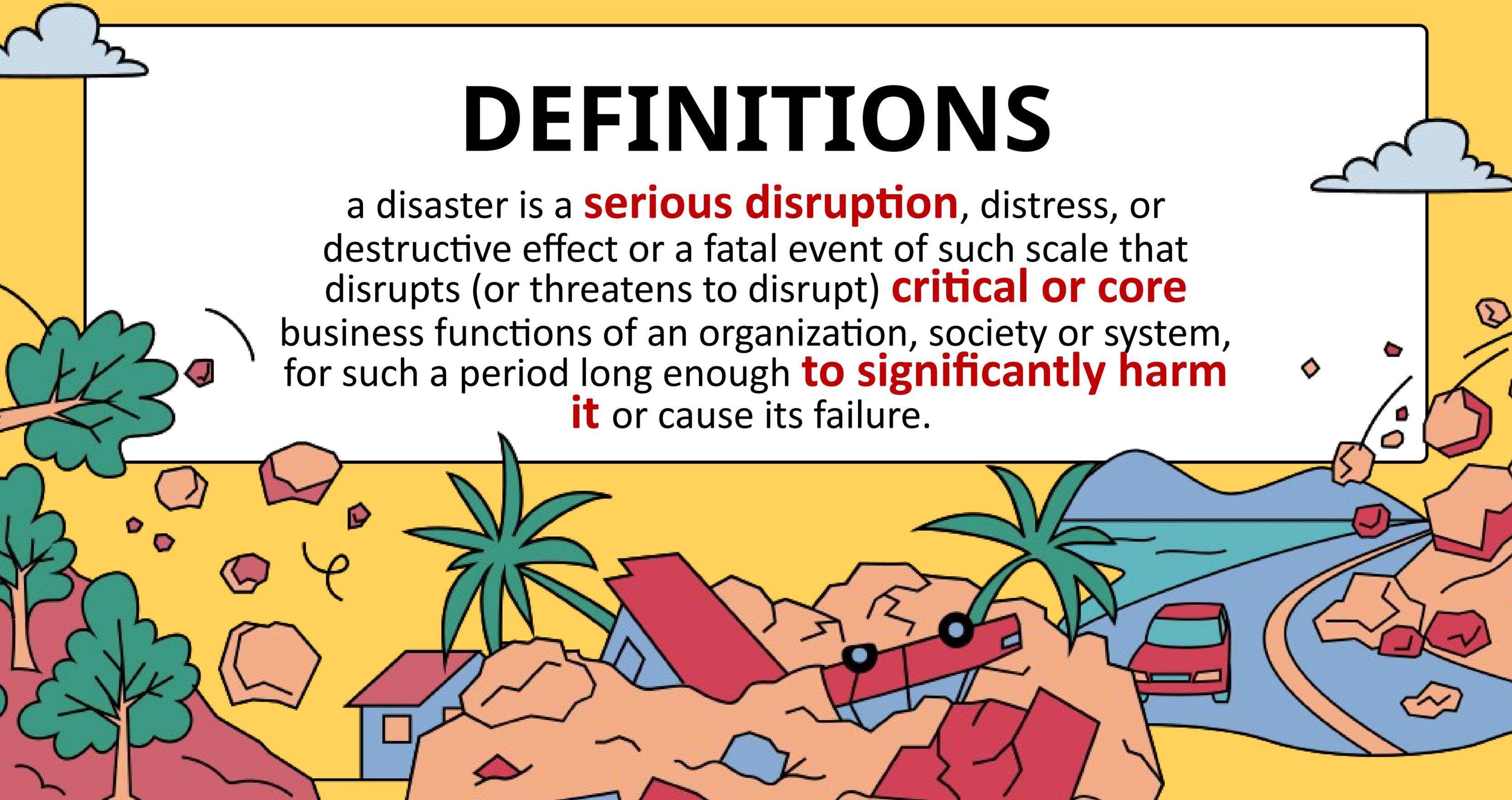
- TYPES OF DISASTERS
- DISASTER PREPAREDNESS AND MANAGEMENT



- PRESERVATION AND CONSERVATION
- CASE STUDIES
- LESSONS LEARNT

DEFINITIONS

a disaster is a **serious disruption**, distress, or destructive effect or a fatal event of such scale that disrupts (or threatens to disrupt) **critical or core** business functions of an organization, society or system, for such a period long enough **to significantly harm it** or cause its failure.



NOTE

It is the **consequences** of a disastrous event and the **inability** of its victims to **cope** with them that constitute a disaster, not the event itself.





CATEGORIES

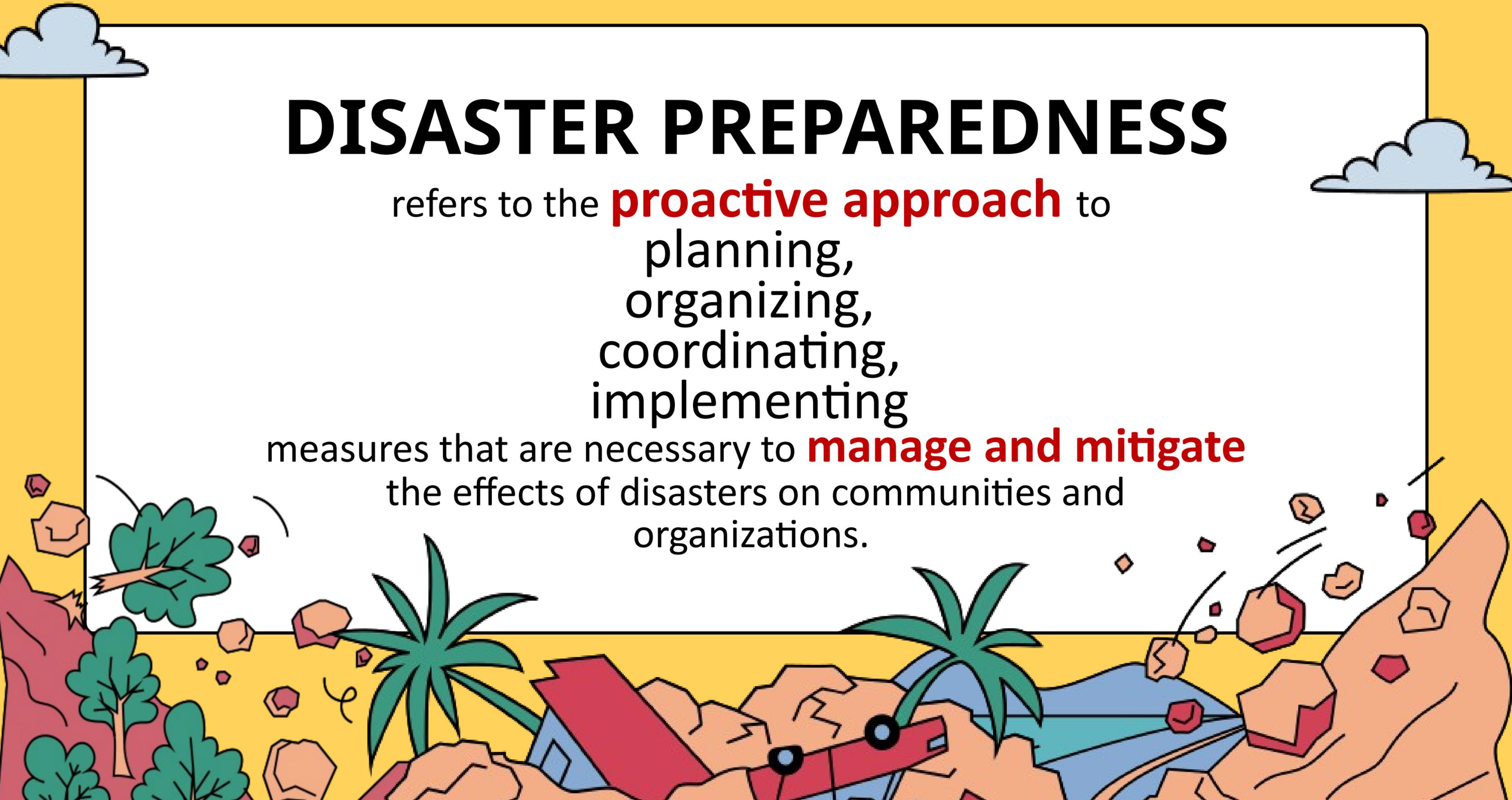
Natural

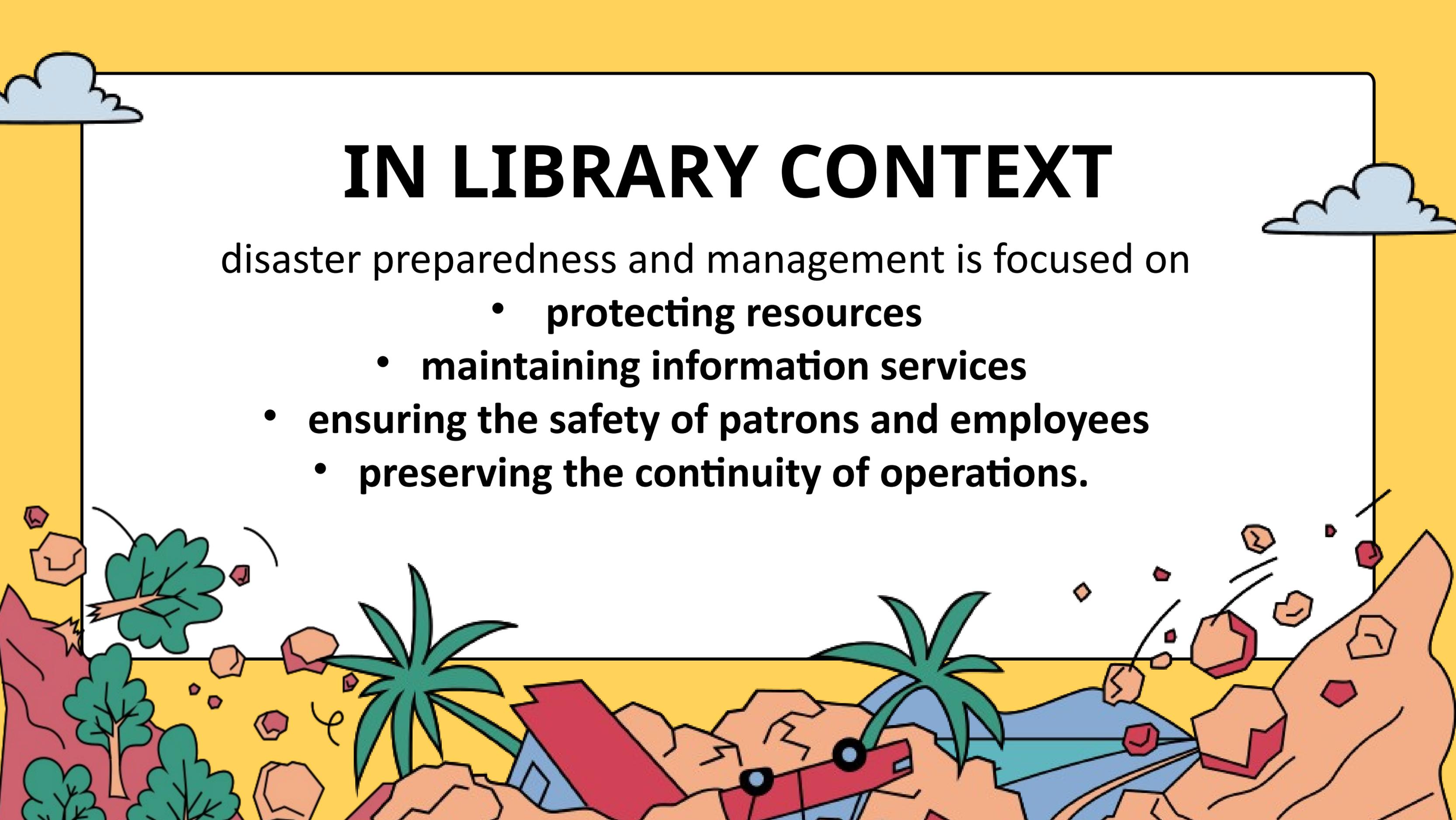
Man-made

- **Man-made disasters are always far worse than natural disasters.**

DISASTER PREPAREDNESS

refers to the **proactive approach** to planning, organizing, coordinating, implementing measures that are necessary to **manage and mitigate** the effects of disasters on communities and organizations.

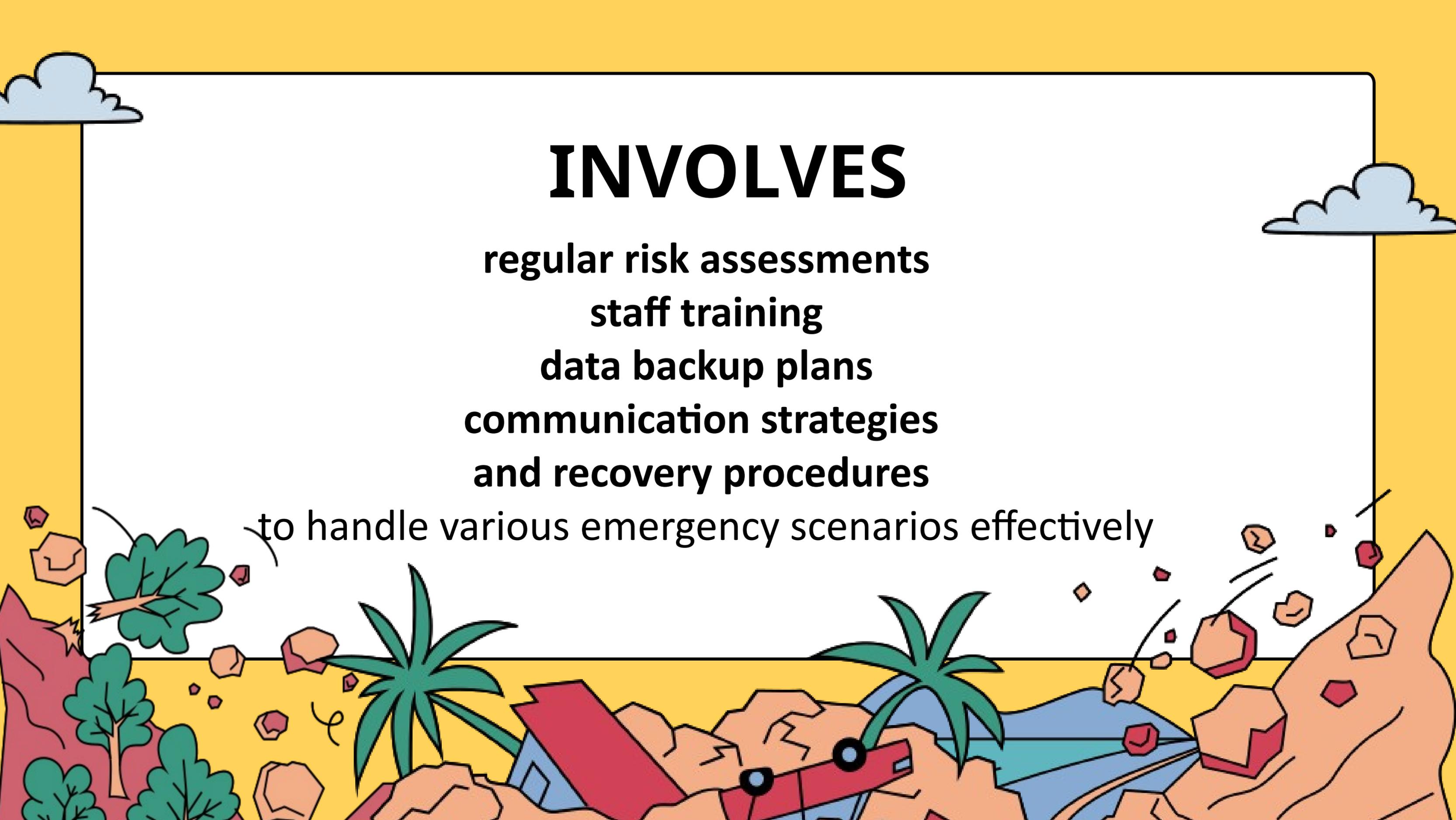




IN LIBRARY CONTEXT

disaster preparedness and management is focused on

- **protecting resources**
 - **maintaining information services**
- **ensuring the safety of patrons and employees**
 - **preserving the continuity of operations.**



INVOLVES

regular risk assessments

staff training

data backup plans

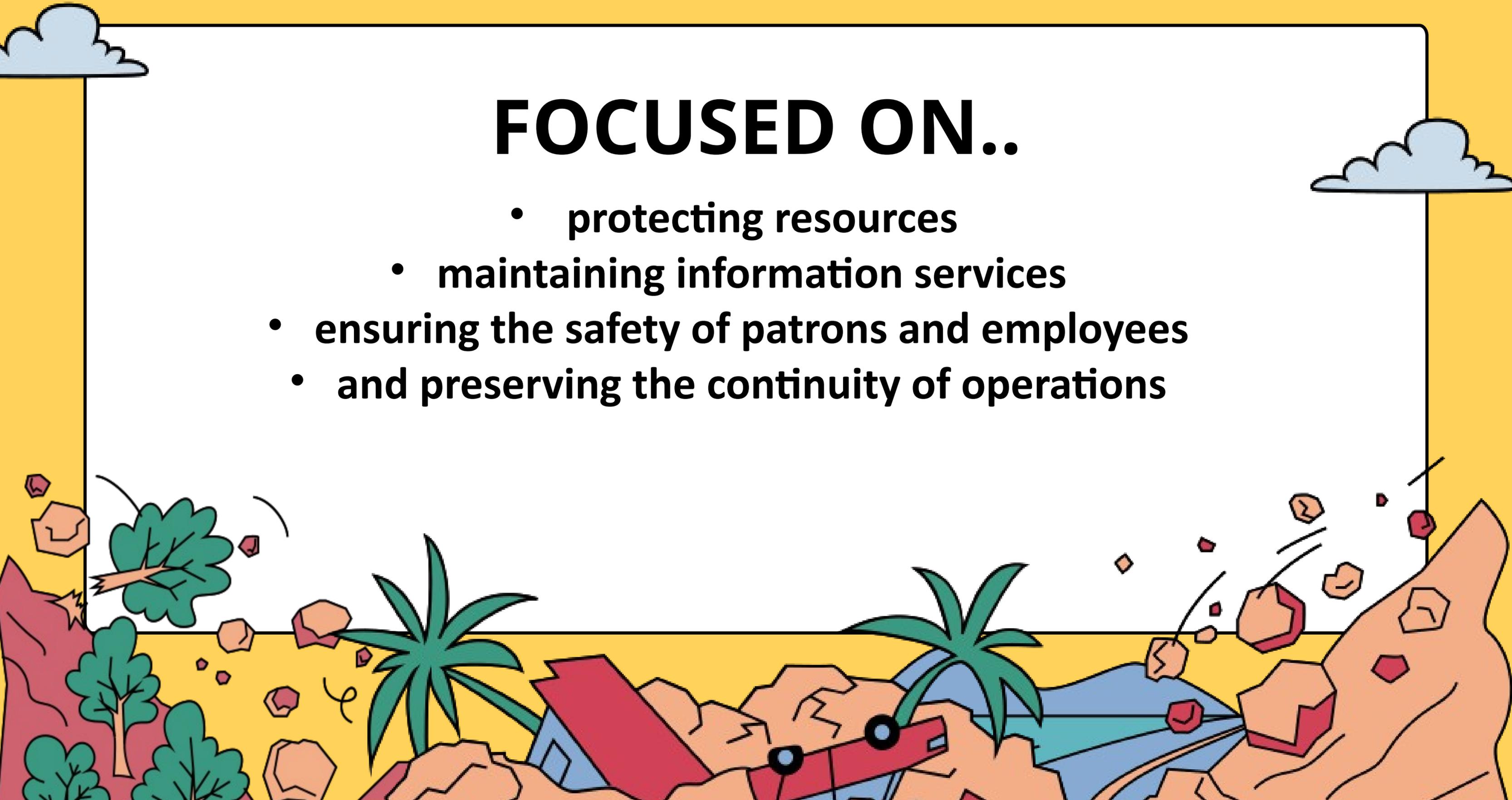
communication strategies

and recovery procedures

to handle various emergency scenarios effectively

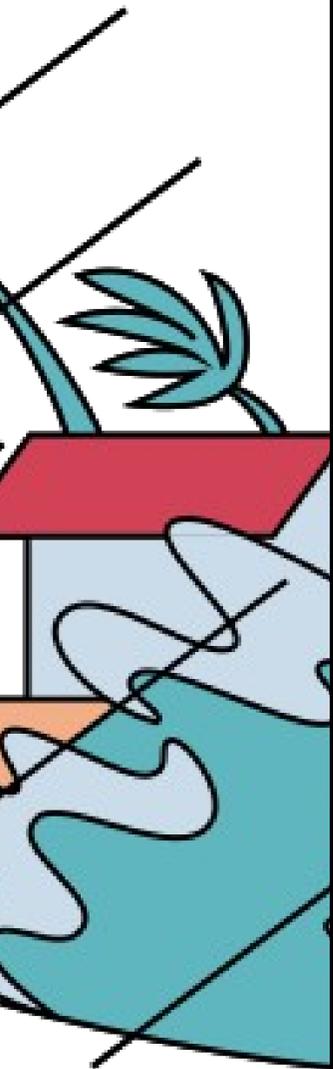
FOCUSED ON..

- **protecting resources**
 - **maintaining information services**
- **ensuring the safety of patrons and employees**
- **and preserving the continuity of operations**



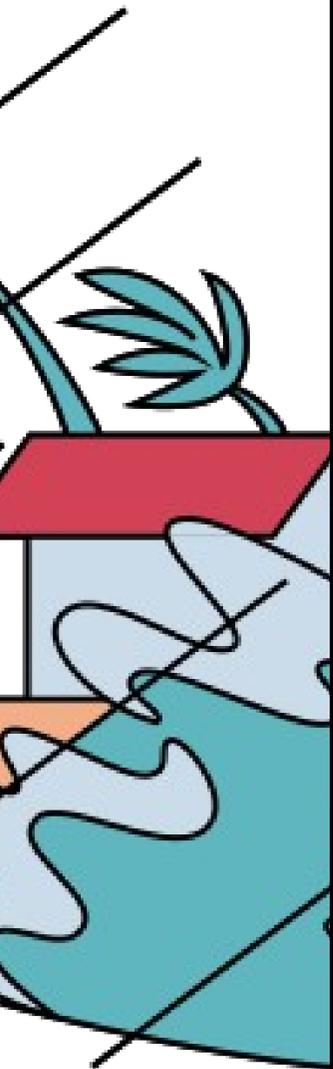
Chaos theory

- summarized by Edward Lorenz (1965) teaches us to **expect the unexpected.**
- Chaos is the science of surprises, of the nonlinear and the unpredictable.
 - Chaos Theory deals with nonlinear things that are effectively **impossible to predict or control**



Chaos theory

- theory explains a disaster as a crisis which is a **low-probability, high-impact event** that threatens the organization's viability and is characterized by **ambiguity of cause, effect, and means of resolution**, as well as by a belief that **decisions must be made swiftly.**



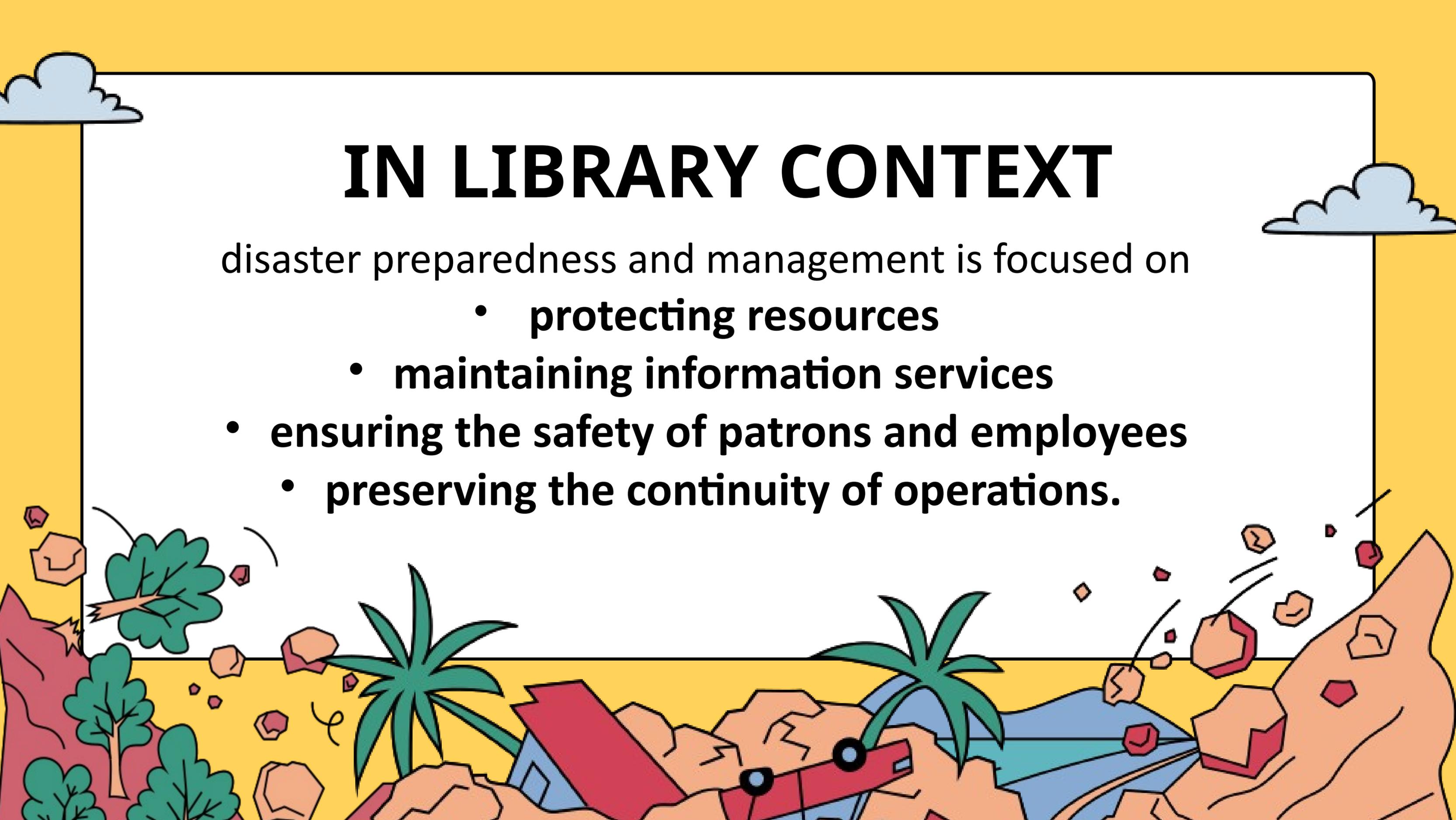


TYPES OF DISASTERS

Natural

Technological

Human Caused



IN LIBRARY CONTEXT

disaster preparedness and management is focused on

- **protecting resources**
- **maintaining information services**
- **ensuring the safety of patrons and employees**
- **preserving the continuity of operations.**

NATURAL

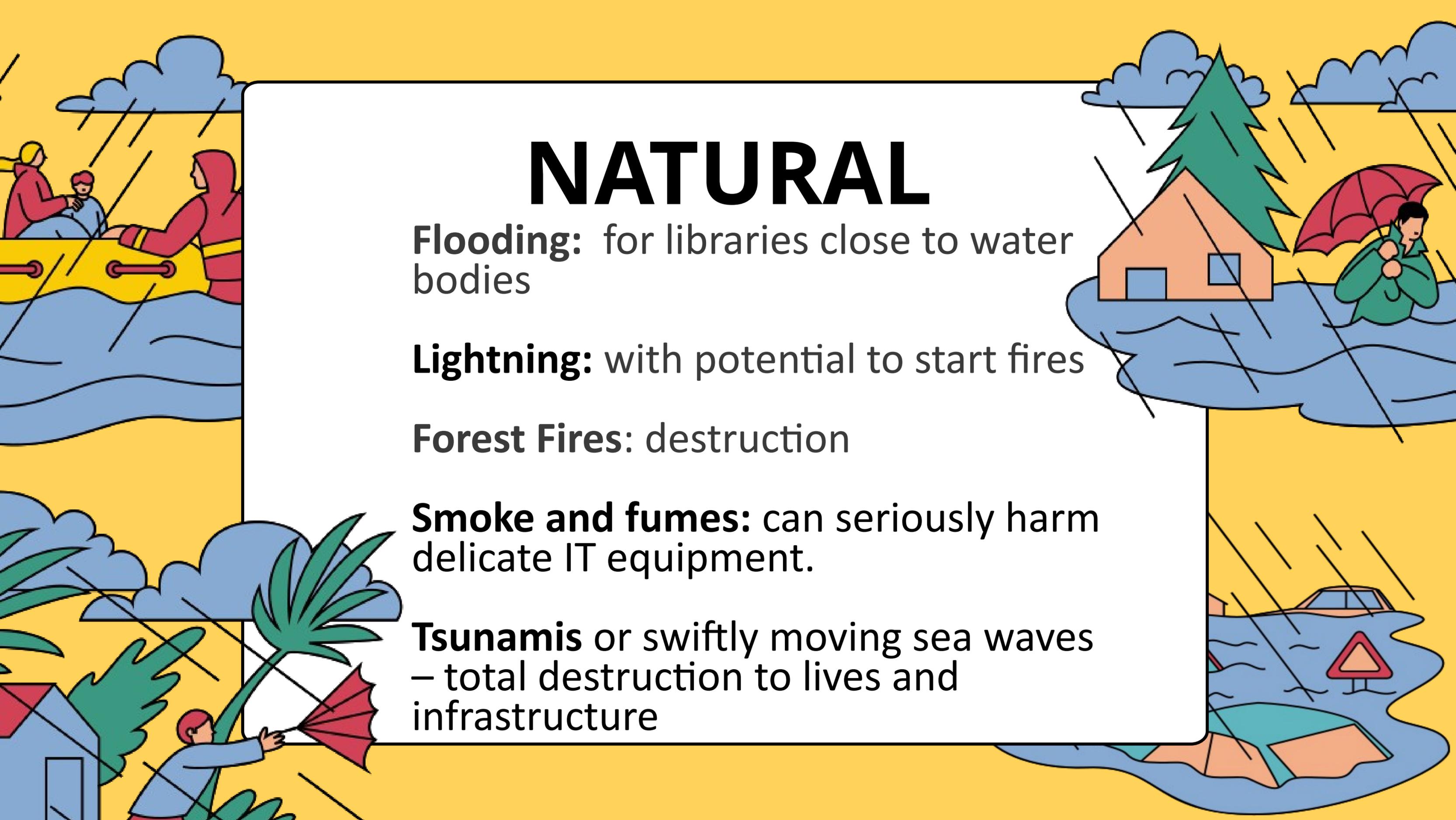
Flooding: for libraries close to water bodies

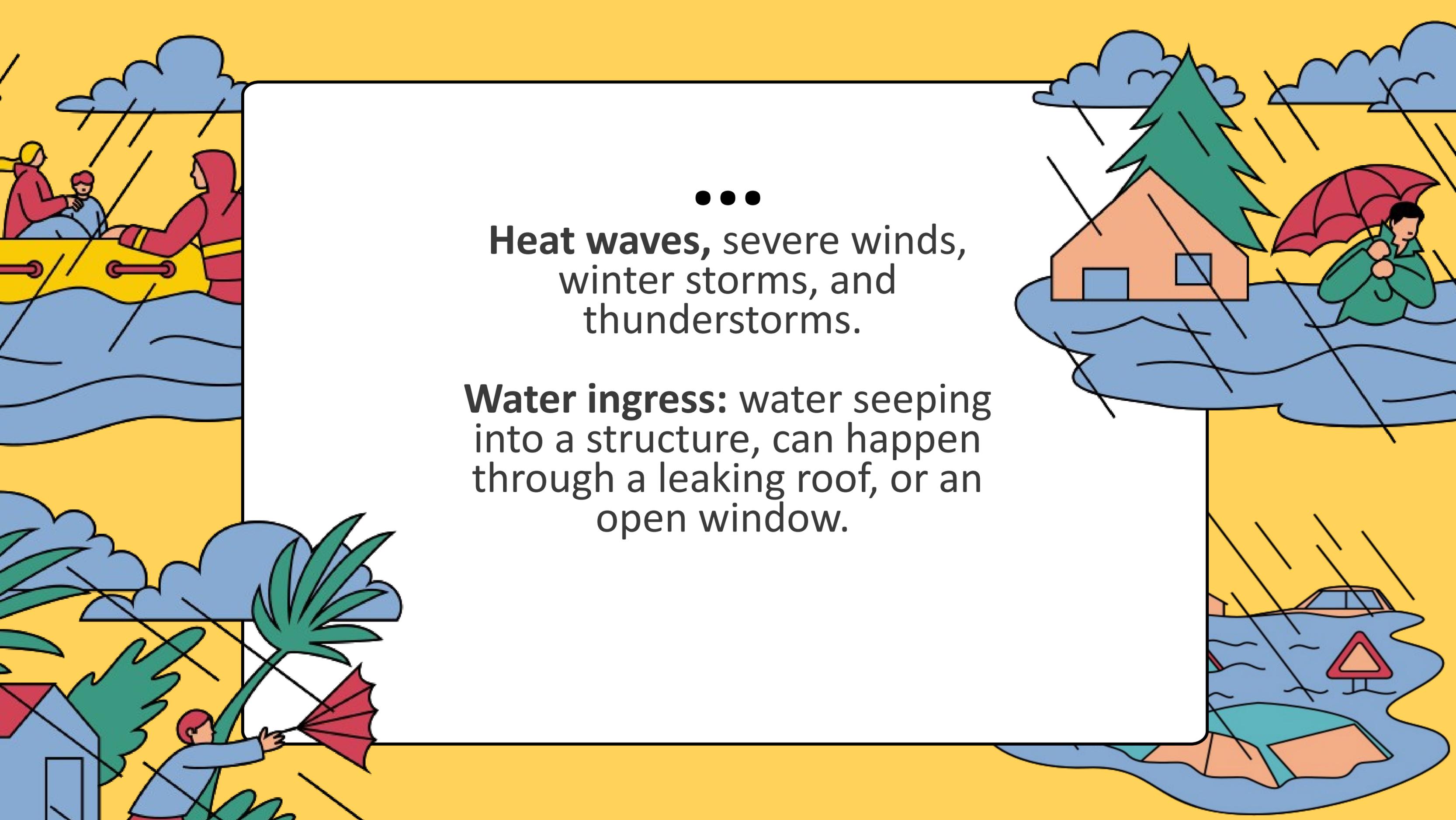
Lightning: with potential to start fires

Forest Fires: destruction

Smoke and fumes: can seriously harm delicate IT equipment.

Tsunamis or swiftly moving sea waves – total destruction to lives and infrastructure





• • •

Heat waves, severe winds, winter storms, and thunderstorms.

Water ingress: water seeping into a structure, can happen through a leaking roof, or an open window.

HUMAN

War : for centuries of humanity history

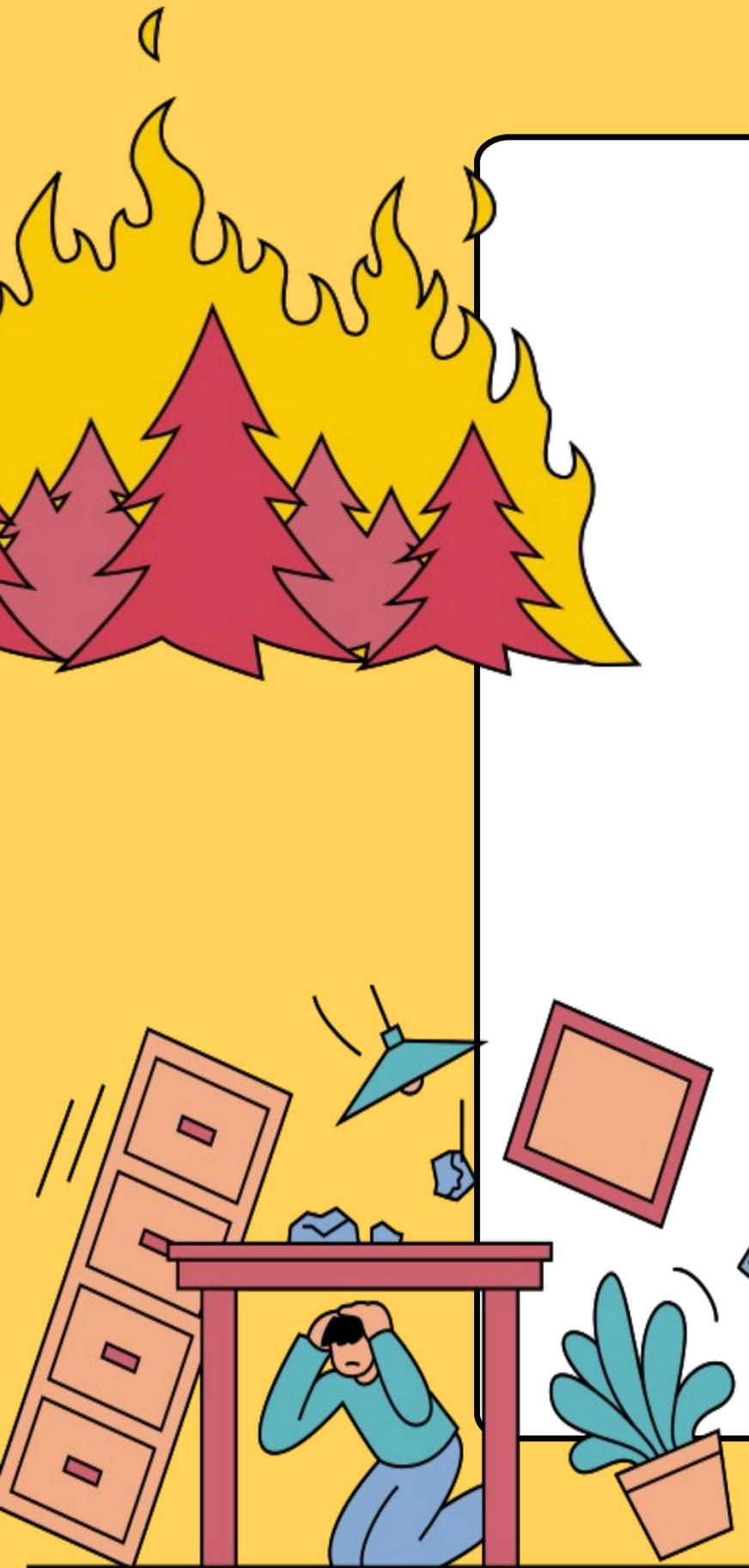
Rioting and civil disturbances

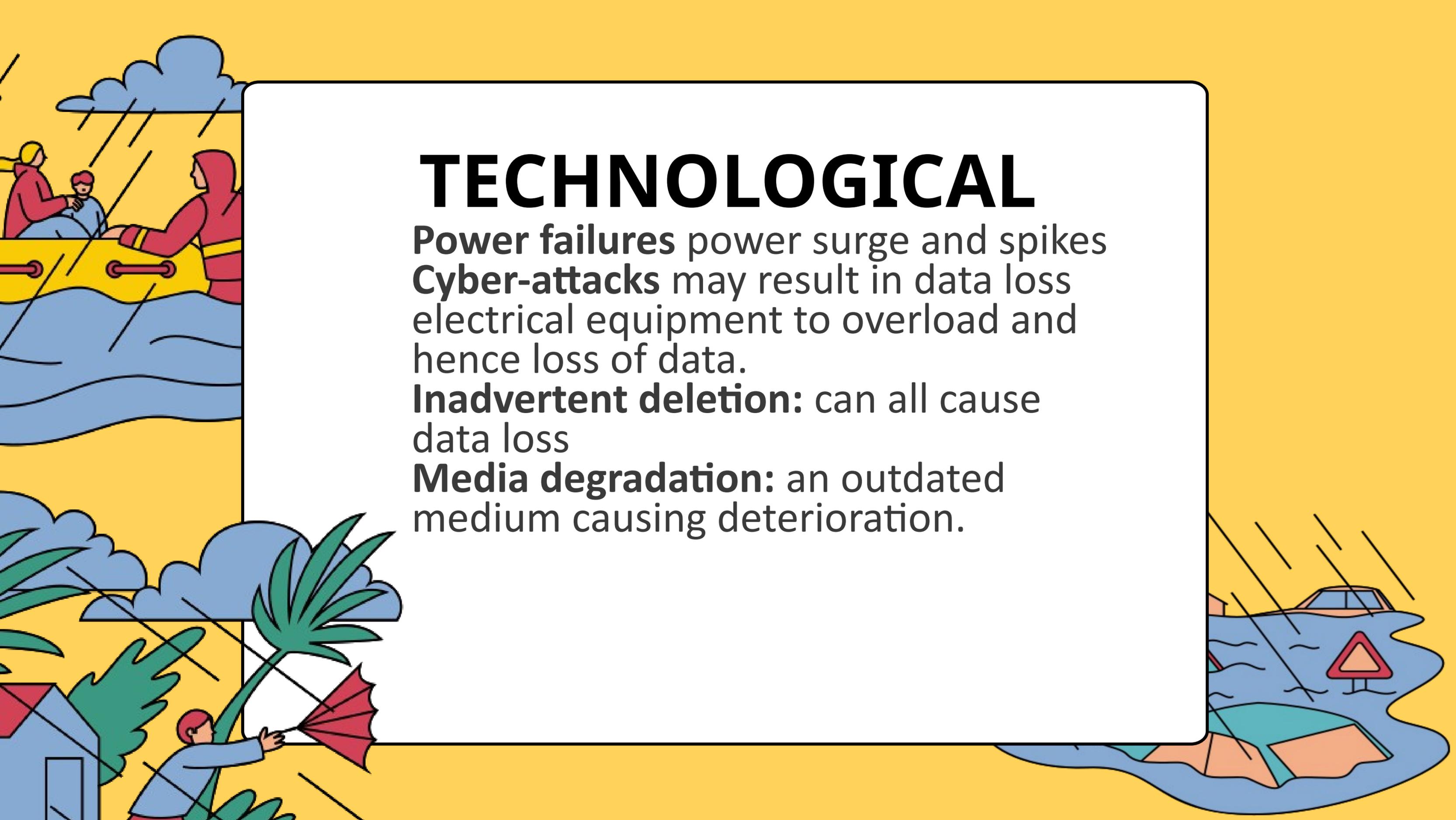
Hostile groups and individuals

Human caused Fires

Vandalism

Terrorism





TECHNOLOGICAL

Power failures power surge and spikes
Cyber-attacks may result in data loss
electrical equipment to overload and
hence loss of data.

Inadvertent deletion: can all cause
data loss

Media degradation: an outdated
medium causing deterioration.

DISASTER PREPAREDNESS AND MANAGEMENT

PREPARATION

- entails taking **corrective action** such as continuous planning, organizing, and training as a critical cornerstone that focuses on **readiness to respond to incidents, hazards, and emergencies.**
- The **preservation of the library's collections and facilities** becomes a top priority once the safety of humans is guaranteed

MANAGEMENT

- It is the **organization, planning, and application of measures,** preparing for, responding to, and initial recovery from disasters.
- focuses on plans to **decrease the impact of disasters** and **build back better.**
- Disaster Management encompasses **response, recovery, mitigation, and continuity planning.**

DISASTER PREPAREDNESS & MANAGEMENT

- Employing both **preventive** and **mitigation** methods together is essential.
- A **high degree of readiness** enables libraries to respond to a range of disruptive problems and offer well-coordinated and efficient crisis management.
- Librarians must possess the knowledge, abilities, and tactics necessary to **anticipate and handle** changes in the face of any crisis.



DISASTER PREPAREDNESS

1. CONDUCT RISK ASSESSMENT

2. PREPARE DISASTER PLAN

3. CONDUCT STAFF TRAINING / DRILLS

4. DESIGN POST-DISASTER RECOVERY AND RESTORATION



1. CONDUCT RISK ASSESSMENT

- **Identifies vulnerabilities** unique to library collections (rare books, archives, digital assets)
- **Prioritizes protection** of irreplaceable cultural heritage materials
- **Quantifies** potential financial and cultural losses
- **Helps secure** funding for preventive measures
- **Creates awareness** among staff about potential threats
- Forms the **foundation** for all disaster preparedness activities

Why?





RISK ASSESSMENT...

- Form a **dedicated assessment team** including library staff and facility managers
- **Identify and inventory all valuable and vulnerable** collections
- Assess **building infrastructure** (roof, plumbing, electrical systems)
- Evaluate **geographical** and **environmental risks** (floods, earthquakes, humidity)
- Analyze **historical incidents** and **near-misses**
- Calculate the **potential impact and likelihood** of each identified risk
- Document **findings in a comprehensive report with clear recommendations**

How?





2. PREPARE DISASTER PLAN

How?

- Create a structured **disaster preparedness and response manual** tailored to different types of emergencies.
 - Establish **designated roles** and responsibilities for staff during an emergency.
 - Develop a **communication system** to quickly inform patrons and employees about emergencies through alarms, SMS alerts, or public announcements.
 - Install **backup power supplies**, such as generators, to maintain essential operations during power outages.
- 
- 



2. PREPARE DISASTER PLAN...

Key components of a disaster response plan

- **Emergency contact** information and a clear chain of command
- **Evacuation procedures** for staff and patrons
- **Specific protocols** for salvaging different material types
- Equipment and **supplies inventory** and locations
- **Documentation procedures** (photographs, incident reports)
- **Communication strategy** for staff, public, and media
- **Recovery workflow** with assigned responsibilities

How?





SAMPLE DISASTERS

A. WATER DAMAGE

B. FIRE

C. NATURAL DISASTERS

**D. HUMAN CAUSED
EMERGENCIES**



A cartoon illustration of a coastal town being hit by a massive tsunami wave. The wave is depicted as a large, blue, curling mass of water that has inundated the buildings. A person is shown running through the water, and a wooden post is visible in the foreground. The background shows a yellow sky and a blue sea.

WATER DAMAGE

Immediate Response: Establish protocols for water shut-off, electrical safety, and initial damage assessment

Collection Triage: Develop prioritized salvage lists for wet materials (freeze rare books within 48 hours, air-dry photographs, etc.)

Equipment Readiness: Maintain inventory of water extraction tools, dehumidifiers, fans, and plastic sheeting

Vendor Relationships: Pre-establish contracts with water damage restoration and freeze-drying services

Prevention Measures: Install water detection systems near valuable collections and automatic shut-off valves



FIRE

Evacuation Protocol: Create detailed evacuation maps, meeting points, and staff roles during fire emergencies

Fire Suppression Knowledge: Train staff on the proper use of different fire extinguishers for various materials

Collection Protection: Implement regular drills for covering collections with fire-resistant tarps

Documentation: Maintain digital backup inventory of collections with prioritization for salvage

Coordination Plan: Establish communication procedures with the fire department regarding collection locations and priorities



NATURAL DISASTERS

Earthquake Preparation: Secure shelving to walls, implement overhead restraints for tall stacks, use book snakes

Flood Mitigation: Elevate valuable collections, install flood barriers, maintain sandbag supply

Power Outage Management: Maintain generators for climate control systems to prevent humidity damage

Geographic Considerations: Tailor plans to region-specific threats with seasonal preparation checklists



HUMAN-CAUSED EMERGENCIES

Security Breach Protocol: Develop lockdown procedures, silent alarm systems, and staff communication codes

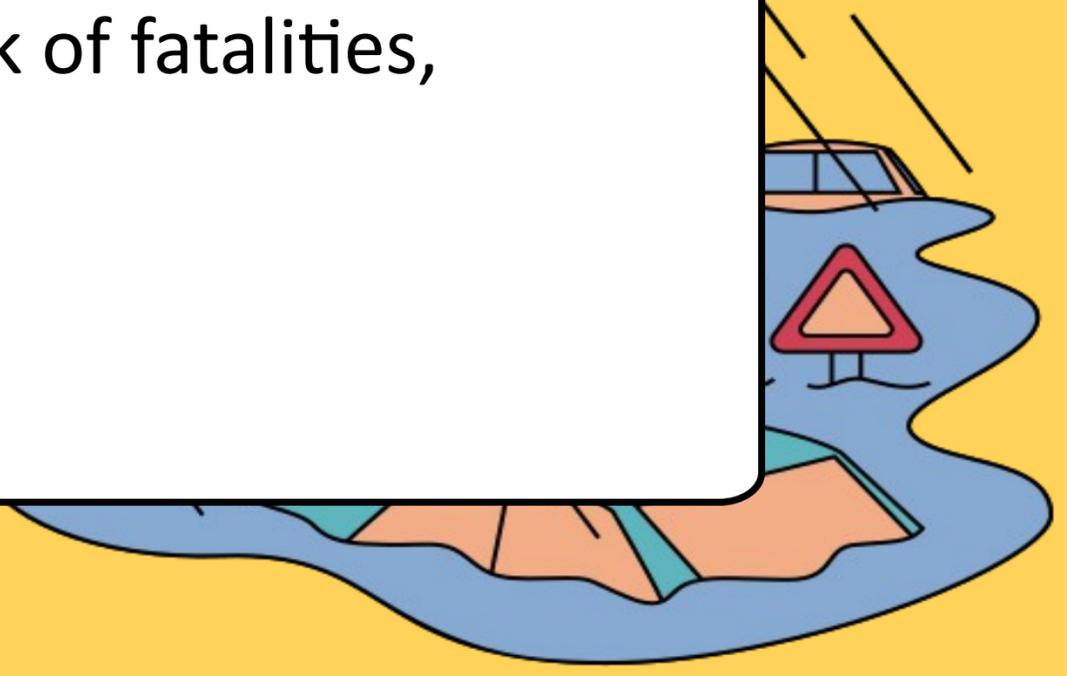
Theft Prevention: Implement tagging systems, surveillance, and special handling procedures for rare items

Vandalism Response: Create documentation procedures for damage assessment and insurance claims



3. STAFF TRAINING & DRILLS

Types of training staff should undergo

- Conducting **mandatory staff training** sessions using press clipping, pictures, and videos of relevant disasters in other institutions
 - Exercises around responses to '**mock disasters**' help test the preparedness of the emergency services and others.
 - Conducting **training** on how to manage emergencies can contribute to lowering the risk of fatalities, injuries, and property damage.
- 
- 



Why?

3. STAFF TRAINING & DRILLS

- **Serve as the cornerstone** of effective disaster preparedness - offering far more than simple procedural practice.
- When regularly conducted, these exercises **build essential muscle memory** for emergency procedures, ensuring that staff can respond instinctively rather than hesitating during critical moments.
- Drills **identify gaps and weaknesses** in emergency response before a real disaster strikes





4. POST DISASTER RECOVERY & RESTORATION

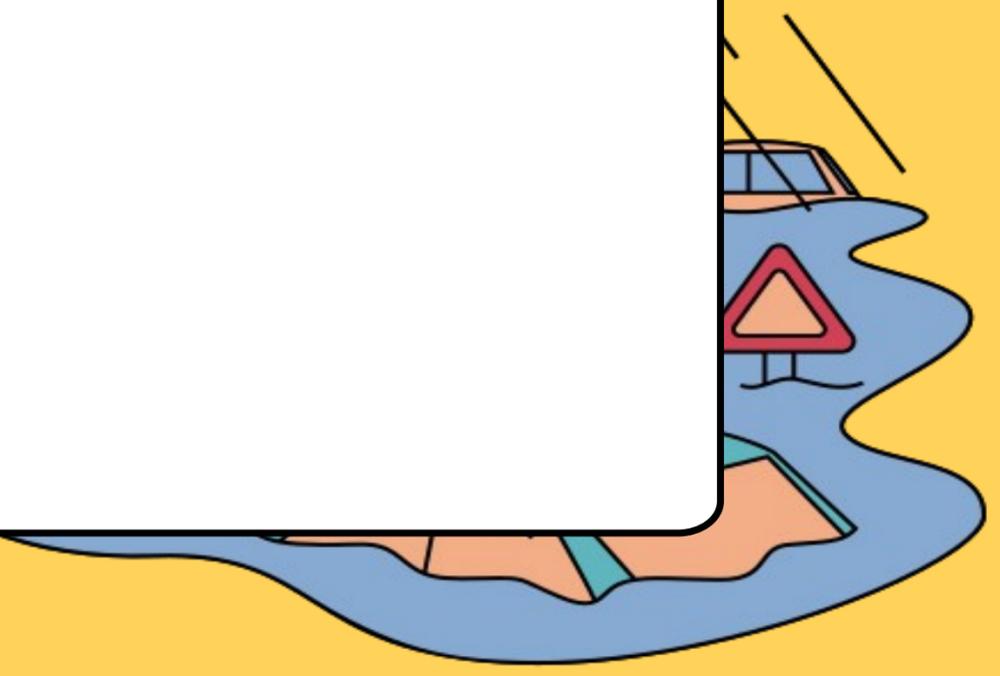
- Develop a recovery plan prioritizing the **salvage and restoration** of critical collections and digital assets.
 - Establish **partnerships with restoration experts** and institutions specializing in document preservation.
 - Use **digital backups and cloud storage** to restore lost data efficiently.
 - Conduct **post-disaster evaluations** to identify lessons learned and update disaster plans accordingly.
- 
- 

4. POST DISASTER RECOVERY & RESTORATION

Steps for rapid damage assessment

- Assess the extent of damage (structural, water, mold, fire).
- Document losses with photos and reports for insurance claims.
- Prioritize the safety of staff and visitors before re-entry.

How?



4. POST DISASTER RECOVERY & RESTORATION

Priorities in salvaging collections and resuming services

- **Dry and stabilize** wet/damaged books (freeze-drying, dehumidification).
- Recover **digital data** from backups/cloud.
- Reopen **essential services** gradually while rebuilding infrastructure.
- **Seek community** and funding support for long-term restoration.

How?





4. POST DISASTER RECOVERY & RESTORATION

Regular Review and Updates

- Ensures relevance with changing technologies and threats.
- Keeps policies aligned with current best practices and standards.
- Addresses new risks and emerging vulnerabilities.
- Improves efficiency and effectiveness of response strategies.
- Helps maintain compliance with legal and regulatory requirements.

Why?





4. POST DISASTER RECOVERY & RESTORATION

Learning from past incidents

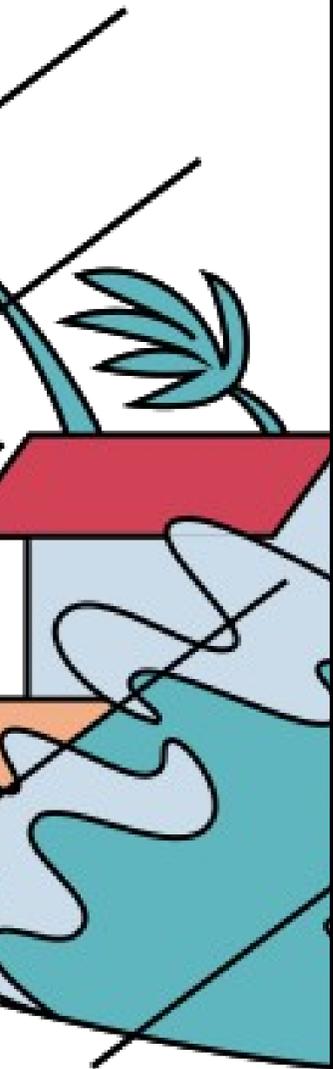
- Analyzing past failures helps identify gaps and weaknesses.
- Allows for continuous improvement in disaster preparedness.
- Enhances staff awareness and training based on real-case scenarios.
- Strengthens mitigation strategies to prevent recurrence.
- Encourages a proactive approach rather than a reactive response.

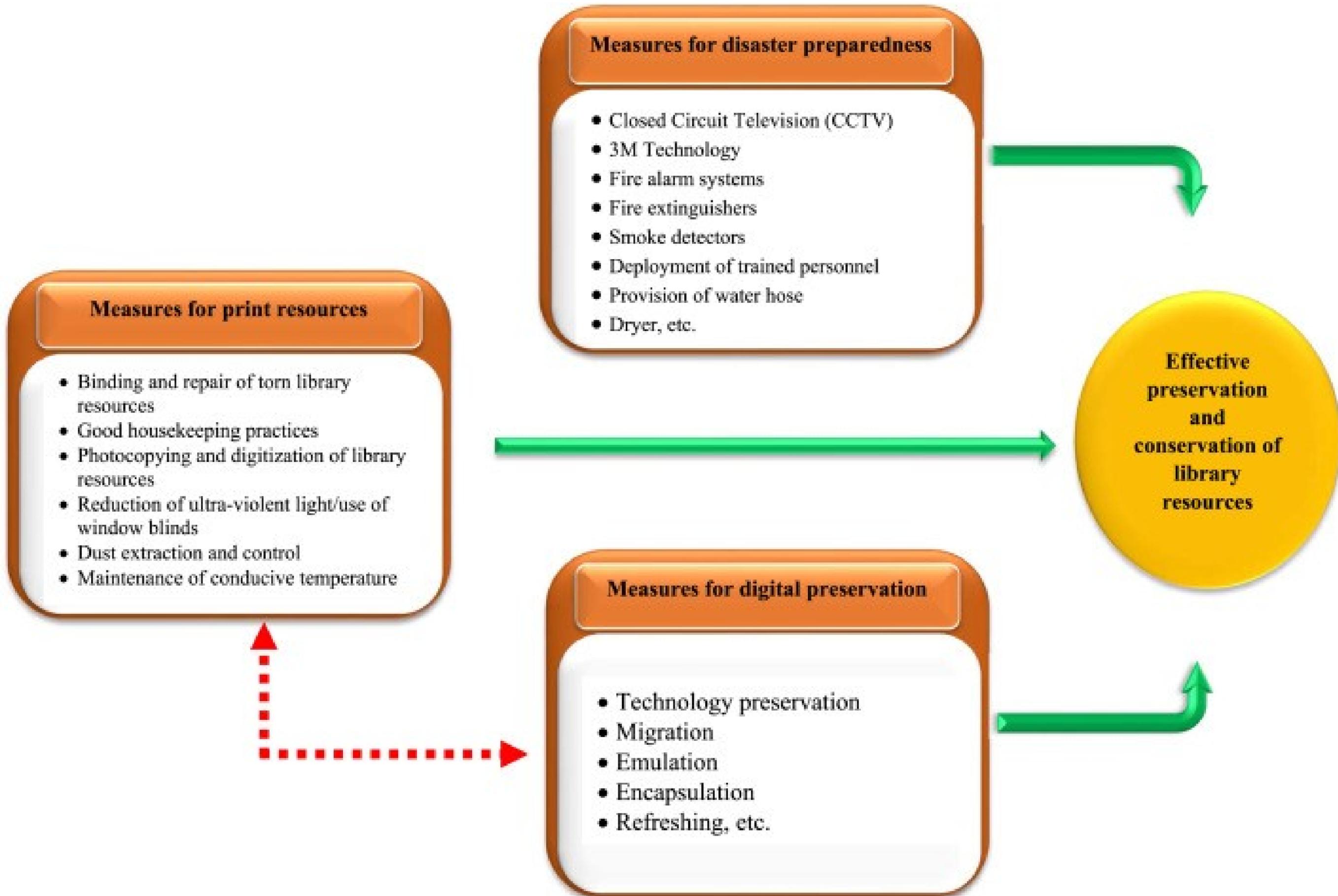
Why?



Preservation and Conservation of Library Resources

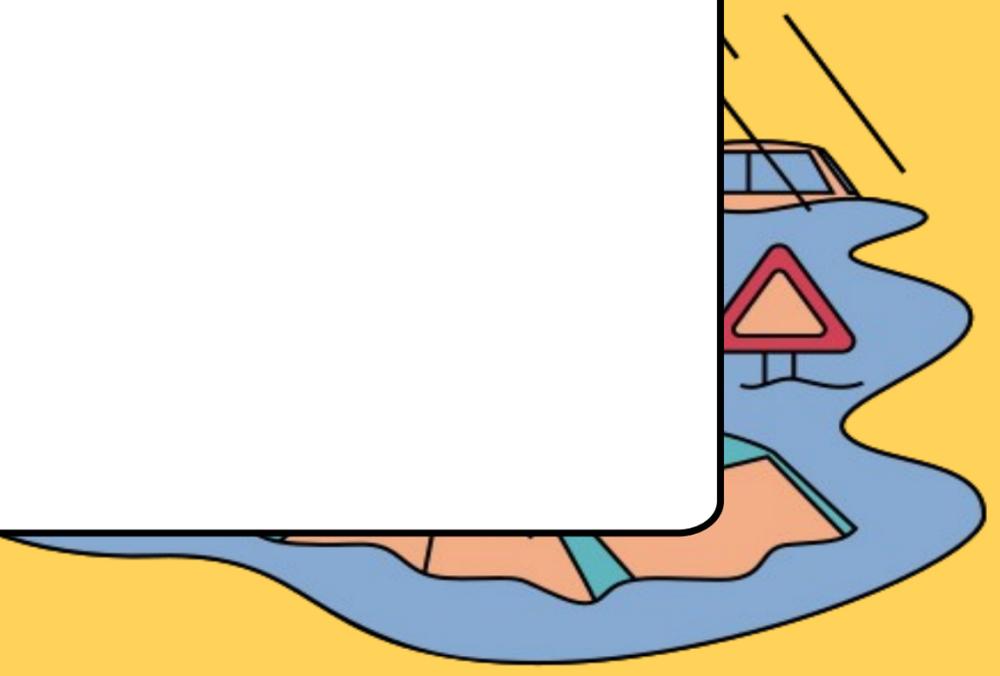
- Disasters destroy library resources
- It is critical that libraries put preservation and conservation as a top priority in disaster preparedness





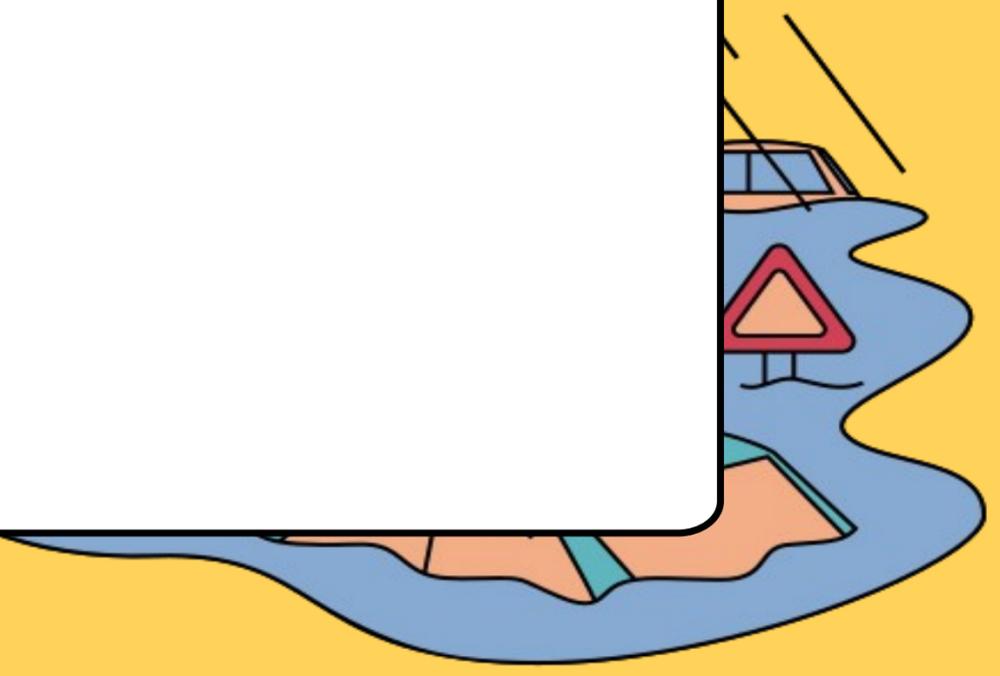
An illustration of a yellow boat with three people inside, navigating through blue waves under a dark, stormy sky with rain falling. The people are wearing red and blue clothing. The boat has two red oars.

PRESERVATION OF PAPER-BASED RESOURCES

- **Acid-free** enclosures and storage materials
 - Regular inspection for **pests or mold**
 - **Digitization** of rare/valuable items
 - Water-resistant **protective coverings** for priority items
 - **Disaster-specific response kits** for salvage operations
- 
- An illustration of a person in a blue coat holding a red umbrella, standing in the rain. There are palm trees and a house with a red roof in the background. The sky is dark and raining.
- 
- An illustration of a boat on a body of water, with a red triangular warning sign on the shore. The water is blue and the sky is yellow.

An illustration of a yellow inflatable boat with three people inside, navigating through blue waves under a dark, stormy sky with rain falling. The people are wearing life jackets and hoods.

PRESERVATION OF DIGITAL MEDIA

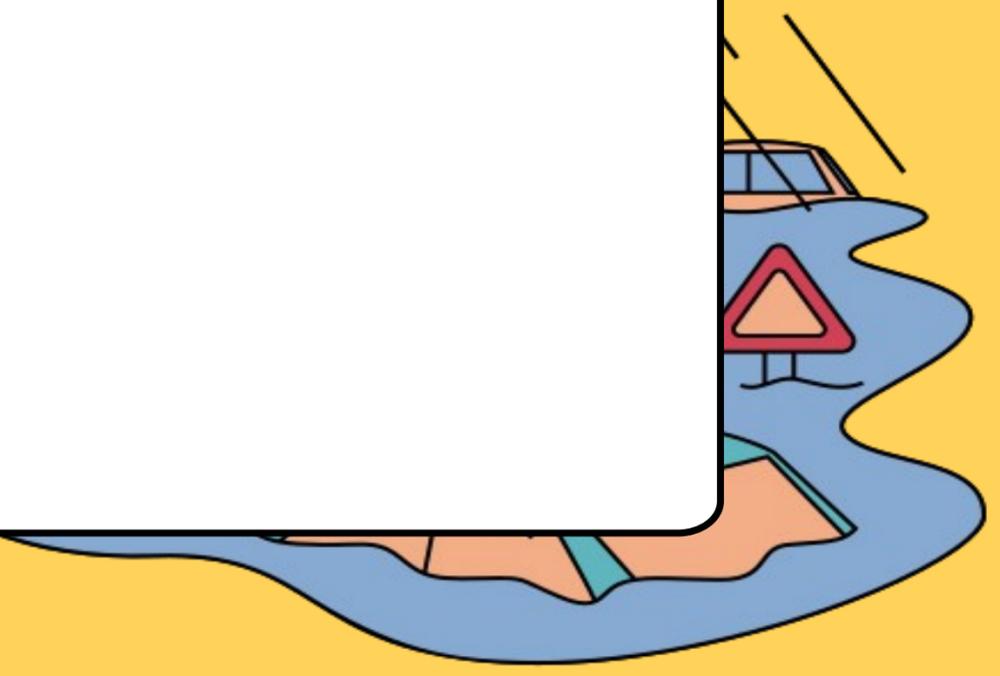
- Regular backups stored in multiple locations
 - Cloud-based preservation systems
 - Migration strategies for obsolete formats
 - Redundant storage systems
 - Specialized recovery procedures for water/fire damage
- 
- An illustration of a person in a blue coat holding a red umbrella, standing in the rain. In the background, there are palm trees and a house with a red roof.
- 
- An illustration of a boat on a body of water, with a red triangular warning sign on the shore. The scene is set against a yellow background.

An illustration of a yellow inflatable boat on blue water. Three people are inside: one in a red jacket is rowing, another in a blue jacket is sitting, and a third in a red jacket is sitting. Rain is falling diagonally across the scene. A blue cloud is in the upper left.

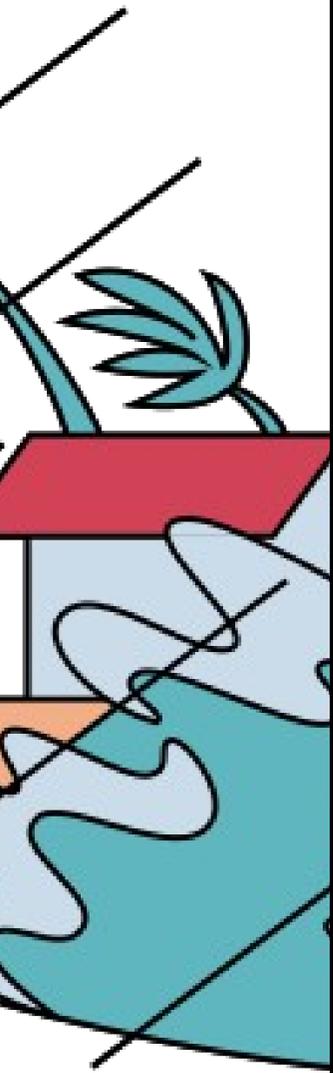
CLIMATE CONTROL OF RESOURCES

- Prevents deterioration caused by fluctuations in temperature and humidity.
- Controls mold growth, which thrives in humid conditions.
- Reduces the risk of pest infestations (e.g., booklice).
- Slows down the degradation of paper, bindings, and media materials.

Why?

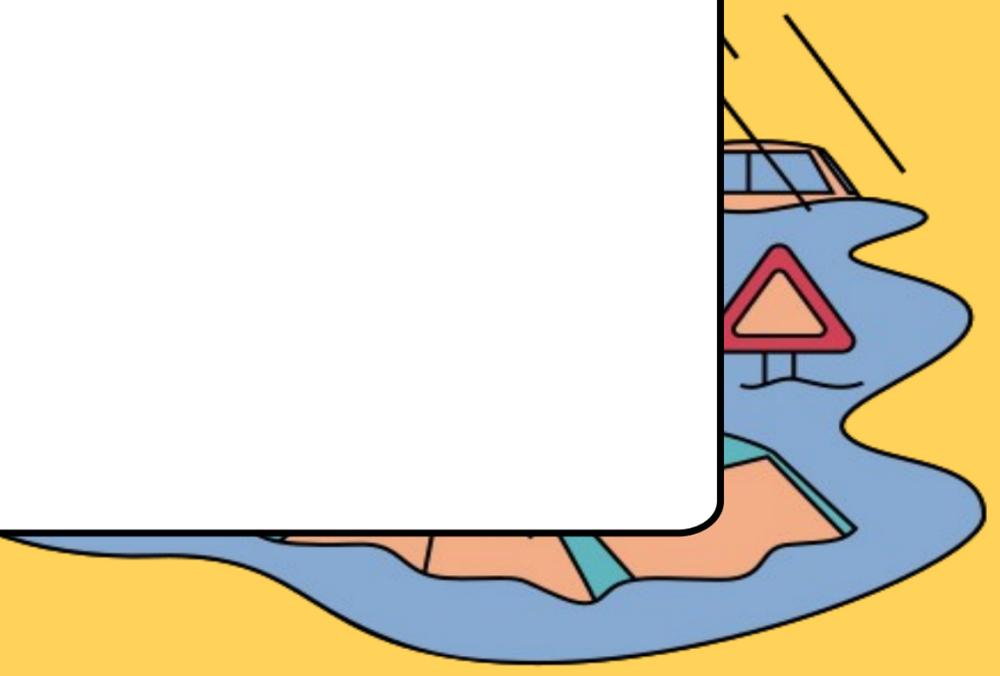


CASE STUDIES



1994 NORWICH FIRE

- The 1994 Norwich Central Library fire, which was started by an electrical malfunction and destroyed a whole collection of books, manuscripts, and archive items, was the most destructive in the United Kingdom
- OVER 100,000



In photos: The Norwich fire which destroyed 100,000 books

24TH AUGUST 2022

[HERITAGE](#)

[NORWICH](#)



Firefighters tackling the roaring blaze at the Norwich Central Library fire on August 1, 1994 - TH. (Image: Archant Library)

*Get involved
with the news*

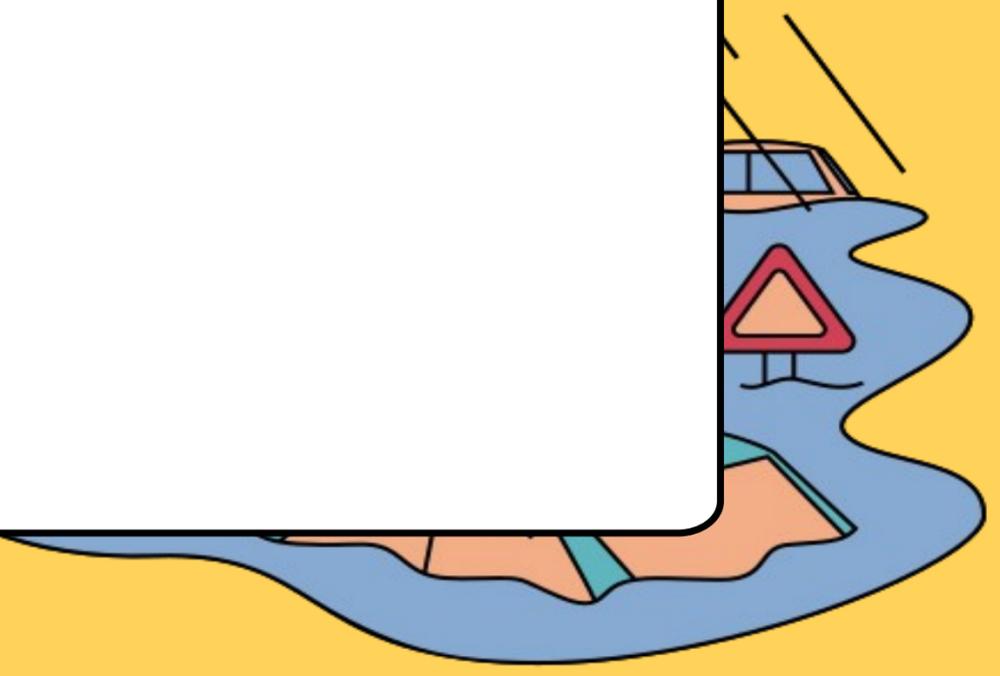
Send your news & photos





1994 NORWICH FIRE

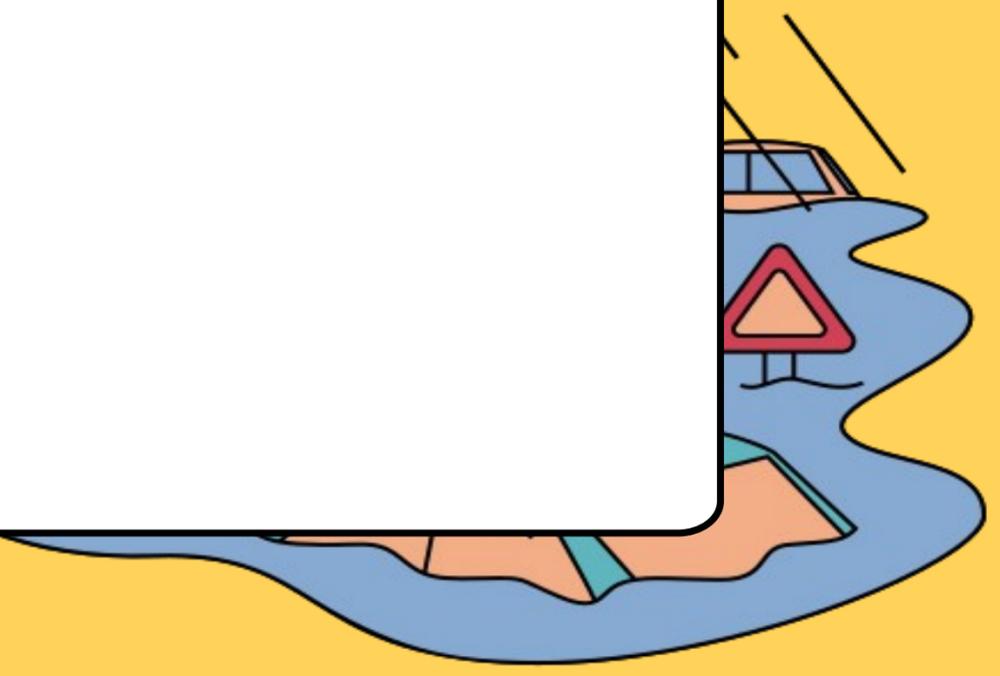
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2022 RUSSIA'S DESTRUCTION OF UKRAINE CULTURAL HERITAGE

- UNESCO has verified damage to 110 sites since Russia's invasion began on February 24. That includes 48 religious sites, 10 museums, 22 historic buildings, 11 buildings dedicated to cultural activities, 13 monuments, and **six libraries**.
- 
- 



SERGEY DOI ZHENKO (EPA/JEE)

Los Angeles FIRES 2025

Complete destruction of the Los Angeles Public Library's (LAPL) Palisades Branch Library.

Another library affected by the wildfires is the Malibu Library, which sustained smoke and water damage as firefighters worked tirelessly to prevent the structure from igniting. Many books and digital resources were destroyed



ARSON ATTACKS ON LIBRARY

FEATURED

News

Remembering the Day the Library Burned

The Anniversary of the Day When a Downtown Treasure Burned

by Glen Creason Apr 24, 2012



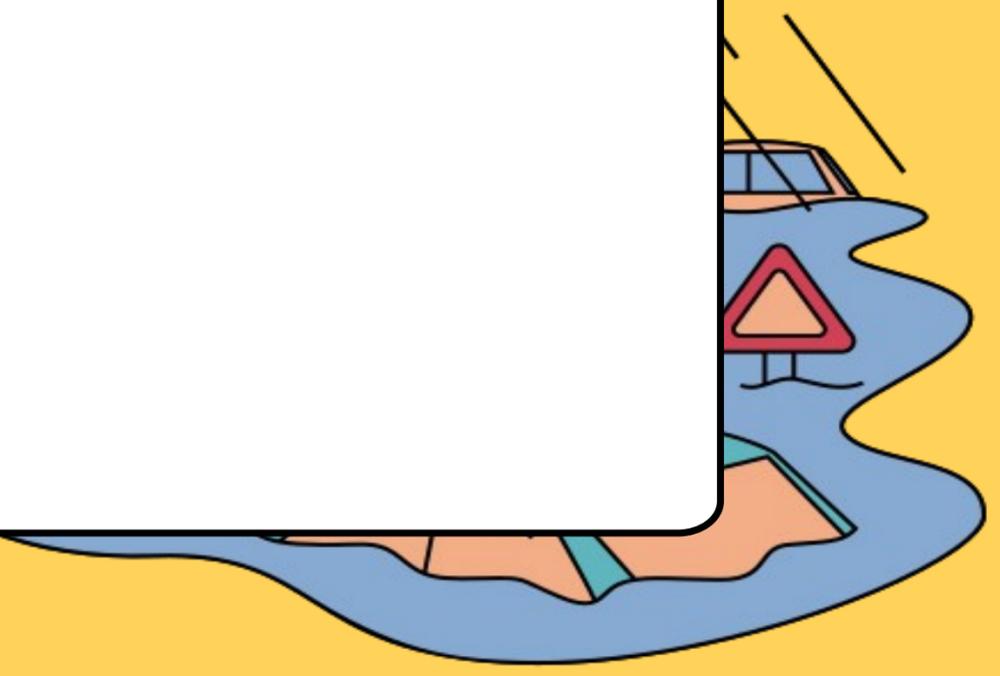
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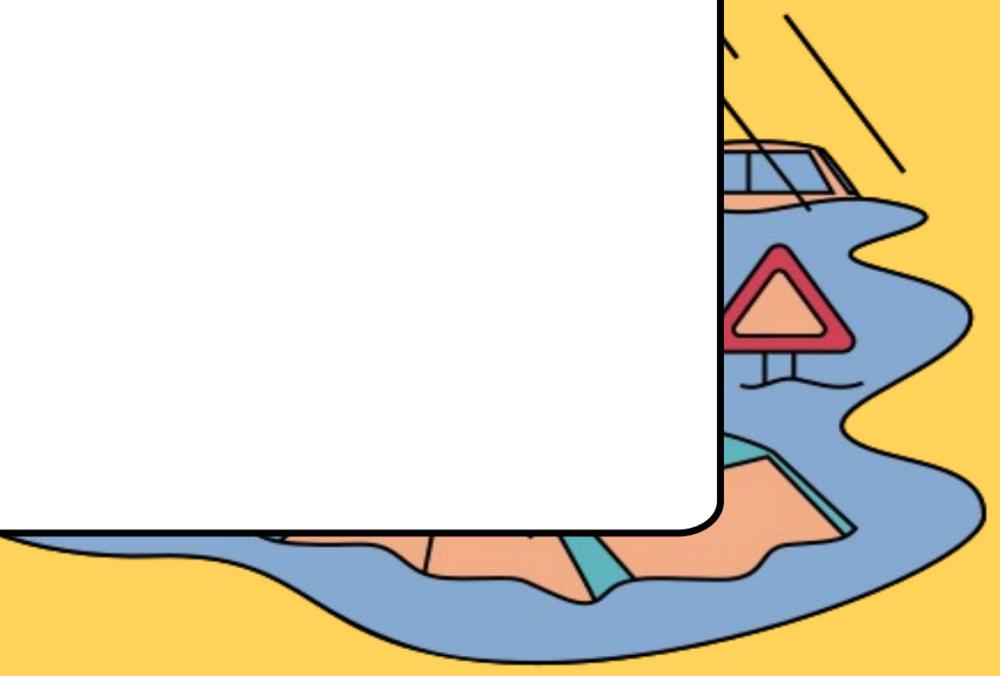
LESSONS LEARNT

Any building that has a valuable collection must have

- sufficient **fire alarm system** and smoke detectors and the facility must be divided into sections using fire division walls.
 - install **automatic fire extinguishing** systems can provide the best possible protection.
 - Comprehensive **Disaster Plans**
 - **Climate Control** and Protective Storage
 - Digital Preservation plans
 - **Strengthened Security** and Fire Prevention Measures
 - **Collaboration** in Recovery Efforts
- 

An illustration of a yellow boat with three people inside, navigating through blue waves under a dark, rainy sky. The people are wearing red and blue clothing. The boat has two red handles on its side.

OUTCOMES ACHIEVED

- Increased Investment in Disaster Preparedness
 - Advancements in Library Infrastructure
 - Growth of Digital Archives
 - Policy and Legislative Changes
 - Greater Public Awareness and Support for Libraries
- 
- An illustration of a person in a blue coat holding a red umbrella, standing in the rain. There are green palm trees and a blue building in the background.
- 
- An illustration of a boat on the water with a red triangular warning sign on its side. The water is blue and the sky is yellow.



WAY FORWARD

Integration of Technology in Disaster Management

Sustainable and Adaptive Disaster Management

Collaboration with Community and External Organizations



Integration of Technology in Disaster Management

- Implement an automated inventory system to track library assets and facilitate recovery after a disaster.
 - Utilize Geographic Information Systems (GIS) to analyze environmental risks and plan accordingly.
 - Maintain offsite backups for digital resources, ensuring access even if the physical library is damaged.
 - Incorporate artificial intelligence (AI) and machine learning for predictive risk analysis and early warning alerts.
- 
- 



Sustainable and Adaptive Disaster Management

- Implement environmentally sustainable disaster mitigation strategies, such as flood-resistant building designs and energy-efficient backup power systems.
 - Regularly review and update disaster preparedness plans to address emerging threats, such as cyberattacks and climate change-related disasters.
 - Foster a culture of resilience among library staff and patrons by continuously promoting preparedness training and awareness programs.
- 
- 



Collaboration with Community and External Organizations

Partner with emergency services, fire departments, and disaster response agencies to enhance preparedness.

Engage in disaster awareness programs to educate library users on emergency procedures.

Establish agreements with nearby libraries and institutions for resource-sharing and mutual assistance during crises.

Participate in government and international initiatives focused on disaster management and cultural heritage preservation.



A cartoon illustration of a landscape on the left side of the page. It features a volcano with red lava flows and a large plume of white smoke. In the background, there are blue mountains and green hills. A river flows through the scene, with several green trees along its banks. The sky is yellow with a few small clouds and a sun or moon in the top left corner.

CONCLUSION

Although **risks cannot be totally eliminated**, their impact can be lessened in several ways.

libraries may face **risks and challenges** that could turn into **opportunities** if well handled.

Disaster preparedness and management therefore plays a crucial role in safeguarding libraries and information centers

implementing **proactive disaster management** strategies, libraries can mitigate risks, respond effectively, and recover swiftly from unexpected crises.

**BEING READY IS YOUR
SECRET POWER, GUIDING
YOU THROUGH TOUGH
TIMES WITH COURAGE.**

