



URP-302: Urban Hazard and Risk Management

**Topic 1: Basic Understanding of Hazard and  
Disaster Management**

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# Hazard Vs. Disaster

Natural hazards and natural disasters are related but are not the same.

- A natural hazard is the **threat of an event** that will likely have a negative impact.
- A natural disaster is **the negative impact that** happens after the natural hazard has actually occurred. A disaster significantly harms a community.
- **Disaster= Hazard + Vulnerability**

\*\*Vulnerability is a function of **Exposure**, **Sensitivity**, and **Adaptive capacity**.



# Vulnerability

=

## Exposure

+

## Sensitivity

-

## Adaptive Capacity

Exposure is the degree of the stress that a certain asset is going through Exposure includes the change, including the magnitude and frequency of extreme events.

Sensitivity is the degree to which a built, natural, or human system will be impacted by changes in climate conditions.

Adaptive Capacity is the ability of a system to adjust to changes, manage damages, take advantage of opportunities, or cope with consequences.



# Hazard Vs. Disaster

<b>Hazard</b>	<b>Disaster</b>
Hazard is an event that has potential for causing injury/ loss of life or damage to property/ environment	A disaster is an event that occurs suddenly (in most cases) and disrupts the normal course of life in affected area.
Hazards can lead to disaster	A disaster is the result of a hazard
Hazards (usually) comes with warnings	Ignoring warning can lead to disaster
Hazards maybe inevitable	Disasters can be prevented
In a less populated area, a severe hazard might not turn into a disaster.	In an overpopulated area, very minor hazard might lead to a serious disaster.

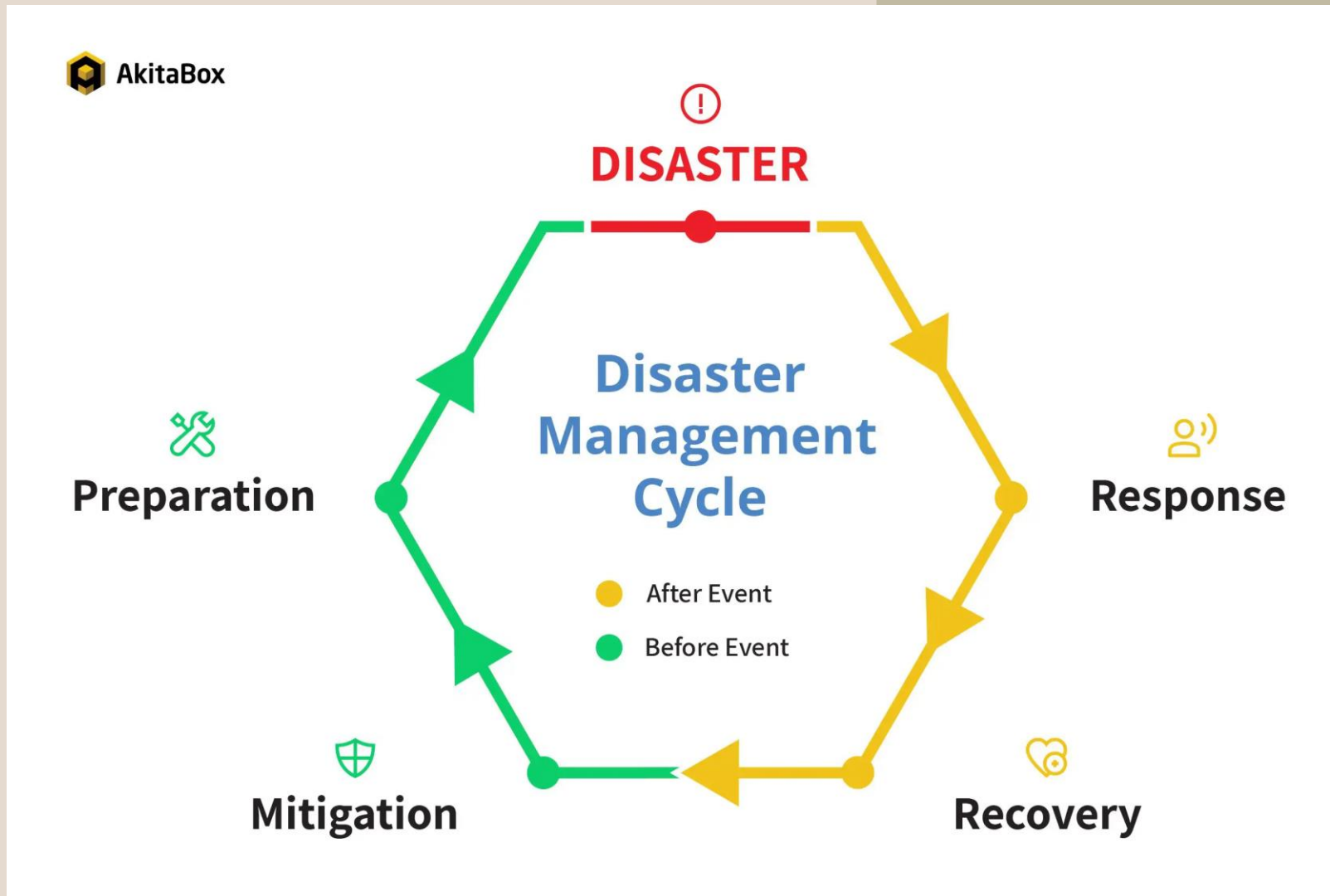


# Disaster Management

- Disaster Management can be defined as the effective **organization, direction, and utilization** of available “counter disaster resources”
- There must be **pre-disaster mitigation measures** to avoid or reduce the impacts of disasters. This is also known as “**Risk Management**”



# Disaster Management Cycle



# Disaster Management Cycle

- **Prevention:** Measures taken to avert a disaster from occurring
- **Mitigation:** To prevent future emergencies and take steps to minimize their effect. Ex: building codes and zoning, Vulnerability analysis, Public education.
- **Preparedness:** To take action ahead of time to be ready for an emergency. Ex: Emergency training, Warning systems
- **Response:** To protect people and property in the wake of an emergency, disaster, or crisis. This includes the efforts to minimize the disaster created by a hazard. Ex: Search and rescue, Relief distribution.
- **Recovery:** Returning the community to a normal situation. Ex: Rebuilding the houses, Medical aid, etc.



Thank you