



Hawaii Hazards Awareness & Resilience Program

Produced by
Hawaii State Civil Defense



HAWAII HAZARDS AWARENESS & RESILIENCE PROGRAM:

GOAL: To enhance community resilience to multiple hazards through a facilitated education and outreach program that promotes hazard understanding and awareness, and offers tools and information resources to guide mitigation, preparedness, response and recovery.



PART 1: UNDERSTANDING DISASTER RISK

Module 5: Risk Assessment

Contents

- What is Disaster Risk?
- What is a Disaster?
- Describing the Components of Disaster
- What is a Risk Assessment?

Module 5: Risk Assessment

WHAT IS DISASTER RISK?

What is Disaster Risk?

The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period. (UNISDR 2009)

- Existing conditions of risk contribute to disaster outcomes.
- Disaster risks can be assessed and mapped based on an understanding of potential hazards, characteristics of the population and socio-economic conditions.

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WHAT IS A DISASTER?

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What is a Disaster?

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. (UNISDR 2009)

- Disaster impacts may include loss of life, injury, disease, damage to property, loss of services, environmental degradation, etc.
- Disasters can be described as a result of the combination of:
 - Exposure to a hazard
 - Conditions of vulnerability
 - Insufficient capacity to reduce or cope with negative consequences.

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DESCRIBING THE COMPONENTS OF DISASTER

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Describing the Components of Disaster: *Hazard*

Hazard

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

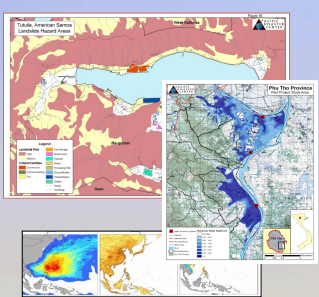


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Describing the Components of Disaster: *Exposure*

Exposure

People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.




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Describing the Components of Disaster: *Vulnerability*

Vulnerability

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.



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Describing the Components of Disaster: *Coping Capacity*

Coping Capacity

The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters



Module 5: Risk Assessment

WHAT IS A RISK ASSESSMENT?

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What Is a Risk Assessment?

A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend. (UNISDR 2009)

- Risk assessments:
 - Describe hazard characteristics (e.g., location, frequency, intensity).
 - Analyze the physical, social, economic, environmental vulnerabilities of exposed elements (e.g., people, property, environment, etc.)
 - Evaluate the effectiveness of coping capacities with regard to the likely risk scenarios.

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Why Assess Risk?

- Risk Assessments:
 - Help disaster managers, decision makers and community members understand the patterns of risk and its consequences.
 - Help make disaster management activities (mitigation, preparedness, response, recovery) more effective.
 - Identify gaps (e.g., warning system coverage) and hotspots (e.g., most at-risk areas).
 - Inform planning and development activities.
 - Enable the prioritization of resources.

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Many Types of Risk Assessment

- Can be qualitative or quantitative.
- Simple or complex.
- Focus on multiple hazards or a single hazard.
- Performed for communities, sectors, systems or objects.
- Generally, should tell us something about:
 - The frequency and intensity of relevant hazards.
 - Assets and resources of interest that may be exposed.
 - What makes them more vulnerable?
 - What helps them cope with hazard impacts?

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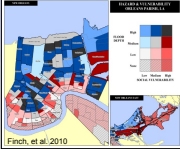
Risk Assessment Considerations

- Like maps, risk assessments provide estimations and interpretations of reality.
- They are practical tools to help us do our jobs more effectively.
- They address a limited number of factors; so it is important to keep in mind what is not included.
- What you include depends on the purpose and goals of the assessment.

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Risk Assessment Tools and Methods

- A variety of tools and methods are used to capture and combine components of risk. Examples:
 - Mapping software (e.g., GIS)
 - Models
 - Indices
 - Narratives
 - Vulnerability & Capacity Assessment (VCA) Toolbox


Country	Capacity		Governance		Infrastructure		Economic Strength		Rank
	Index	Score	Index	Score	Index	Score	Index	Score	
USA	0.85	100	0.85	100	0.85	100	0.85	100	1
Japan	0.82	95	0.82	95	0.82	95	0.82	95	2
Germany	0.78	90	0.78	90	0.78	90	0.78	90	3
France	0.75	85	0.75	85	0.75	85	0.75	85	4
UK	0.72	80	0.72	80	0.72	80	0.72	80	5
Canada	0.68	75	0.68	75	0.68	75	0.68	75	6
Italy	0.65	70	0.65	70	0.65	70	0.65	70	7
Spain	0.62	65	0.62	65	0.62	65	0.62	65	8
China	0.58	60	0.58	60	0.58	60	0.58	60	9
India	0.55	55	0.55	55	0.55	55	0.55	55	10
South Africa	0.52	50	0.52	50	0.52	50	0.52	50	11
Brazil	0.48	45	0.48	45	0.48	45	0.48	45	12
Indonesia	0.45	40	0.45	40	0.45	40	0.45	40	13
Philippines	0.42	35	0.42	35	0.42	35	0.42	35	14
Thailand	0.38	30	0.38	30	0.38	30	0.38	30	15
South Korea	0.35	25	0.35	25	0.35	25	0.35	25	16
Sweden	0.32	20	0.32	20	0.32	20	0.32	20	17
Denmark	0.28	15	0.28	15	0.28	15	0.28	15	18
Norway	0.25	10	0.25	10	0.25	10	0.25	10	19
Finland	0.22	5	0.22	5	0.22	5	0.22	5	20

Source: FOC







Learning Check

1. What are the components of a disaster?
2. What is the purpose of conducting a risk assessment? How are they useful?



Questions?

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The Hawaii Hazards Awareness & Resilience Program (HHARP) is the result of a collaborative partnership between Hawaii State Civil Defense and the Pacific Disaster Center.

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