

So, hazard that may cause some kind of impact on human life and property does not only define the disaster, it also matter that how many people when they are exposed to that hazard. But that is not only enough, it also depends on what and what types of people, what are their characteristics, what are their features, who are exposed to that disaster, so to define disaster so, the question is why is so?

We consider this is a vulnerability, that vulnerability is one of the critical conditions to define that the degree of disasters. Now, we define vulnerability as the condition, that determined by physical, social, economic and environmental factors or process which increase the susceptibility of a community to the impact of hazard.

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Vulnerability

- ☐ Which places are more vulnerable to a hazard?
 - ☐ Which geographical region, socio-economic class etc.
- ☐ Who are the vulnerable people?
 - ☐ Relative vulnerability among households and individuals
- ☐ What should be done?
 - ☐ Link to intervention/ adaptation

So, which places are more vulnerable to a hazard; which geographical region, socio-economic class etc., who are the vulnerable people like which kind of households or individuals are and what should be done like, what kind of capacity or adaptation, capacity building or adaptation measures, preventive measures we can take.

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Social Vulnerability

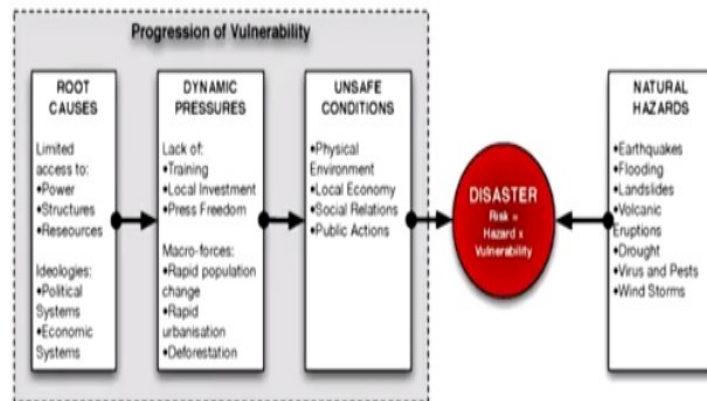
- Coping Ability
 - Resistance
 - Resilience
- Social Environment
 - Age
 - Gender
 - Ethnicity
 - Household type
- Economic Environment
 - Income and Assets
 - Insurance
 - Debts

So, these also define that what extent people are at risk, so as I said that, there are different conditions that define the vulnerability. We have the social vulnerability like, coping ability, resistance or resilience or we could have some social empowerment like, age, gender, ethnicity, household type as I said that younger people are when a society is comprising only by elder people, the society is considered to be more vulnerable than when there are younger people also.

And females are compared to be more vulnerable because they have many less socio-economic opportunities, political opportunities, so than the male counterpart, so they are considered to be more vulnerable in a male-dominated society. It is also depends on what kind of ethnicity these are exposed to disasters when a mainstream ethnic community or majority of ethnic community they are exposed; they are less vulnerable than a minority community or minority ethnic races.

So and also it depends on household type, is on joint family or nuclear family, so these all social environments that define the social vulnerability of a disaster, we have to also consider the economic environment or economic factors of vulnerability. One is the income and assets and insurance and debts. How much the person's income has, not only income, but also if they have insurance like if someone has flood insurance so if they are affected, and how they will be impacted by the flood, it depends on insurance. Because if they are impacted, their livelihood would be hampered, and if they have insurance back there that can help them to recover from that process. Also, if they have loan or debts that also define that what extent they can absorb the shock of a particle, a disaster.

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So, we have this model of disaster, defining disaster vulnerability, we will talk this one later on.

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Physical factors

- ☐ Materially oriented
- ☐ Comes from the schools of land-use planning, engineering and architecture.
- ☐ Considerations and susceptibilities of location and the built environment.
- ☐ "placed in harm's way"
- ☐ "being in the wrong place at the wrong time" (EXPOSURE ?)
- ☐ Population density levels,
- ☐ Remoteness of a settlement, the site,
- ☐ Design and materials used for critical infrastructure and for housing.

But this is just for as a reference; we can have also physical factors of disaster vulnerability. Like, the land use and this mainly came from land use and engineering architectural perspective to define the physical vulnerability of disaster and also like the which locations the building are there, what are their conditions so, these all defined the buildings of vulnerability.

So, some people are saying that, placed in harm ways, or being in the wrong place at the wrong time, some people may consider this is also as kind of exposure but for some people

this is also considered to be as vulnerability. And so, population density levels, remoteness of the settlements, design and material used for critical infrastructures, what kind of building materials we are using so, these all define the physical factors of social vulnerability.

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Social factors

- ☐ Level of wellbeing of individuals, communities and society

- ☐ Education
- ☐ Age
- ☐ Gender
- ☐ Social Status and Class
- ☐ Social equity
- ☐ Culture and traditional values
- ☐ Social Institution
- ☐ Health




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And as we discussed also that social factor of vulnerability are the level of well-being the communities of societies like education, age, gender, social status, social equality, culture and traditions, health conditions they all define the vulnerability of the people.

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Economic factors

- ☐ Economic status of individuals, communities and society

- ☐ Income
- ☐ Economic reserves
- ☐ Debts
- ☐ Access to credits, loans and insurances




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Also, we have economic factors like economic status of individual, community, and society and income, income reserves, debts, access to credits, loan, insurance they all define the disasters.

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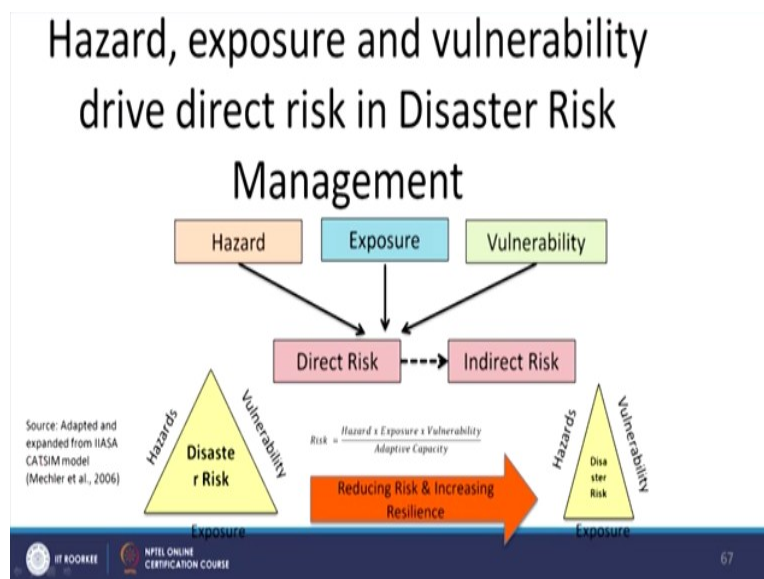
Environmental factors

- ☐ The extent of natural resource depletion
- ☐ The state of resource degradation
- ☐ Exposure to toxic and hazardous pollutants



Also, we have environmental factors like the extent of natural resource depletions, the state of resource degradations, exposure to toxic and hazardous pollutants.

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So, hazard, exposure and vulnerability these 3 components are important to understand disaster risk. We will later on also discuss about disaster vulnerability in a more broader perspective.

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So, Hazards X Exposure X Vulnerability = Disaster Risk ?

Disaster : A disaster is a function of the risk process. It results from the combination of **hazards**, conditions of **vulnerability** and insufficient **capacity** or measures to reduce the **potential negative consequences of risk**.



The illustration shows a large, dark red, conical shape representing a landslide or a large pile of debris. A grey rock is shown falling from the top of this pile. To the right of the landslide, there is a green, wavy line representing a body of water or a path. A small yellow boat is visible on the water. Above the landslide, there is a small blue cloud with raindrops falling from it.

Disaster : A serious disruption of the functioning of a community or a society causing widespread human, material, conomic or environmental losses which exceed the ability of the affected community or society to cope using its own resources

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But, here is the definition of disaster that is hazard, exposure and vulnerability; that is defining the disaster. And it is a formal definition given by United Nations, ISDR as disaster is a function of the risk process, it results from the combination of hazards, condition of vulnerability and insufficient capacity or measures to reduce the potential negative consequence of risk.

So, a disaster is a serious disruption of the functioning of community or a society causing widespread human, material, economic, environmental losses which exceed the ability of the affected communities or society to cope using its own resources.

Thank you very much.