

Key concepts: determinants of risk

Capacity: The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

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.

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.

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

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.

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.

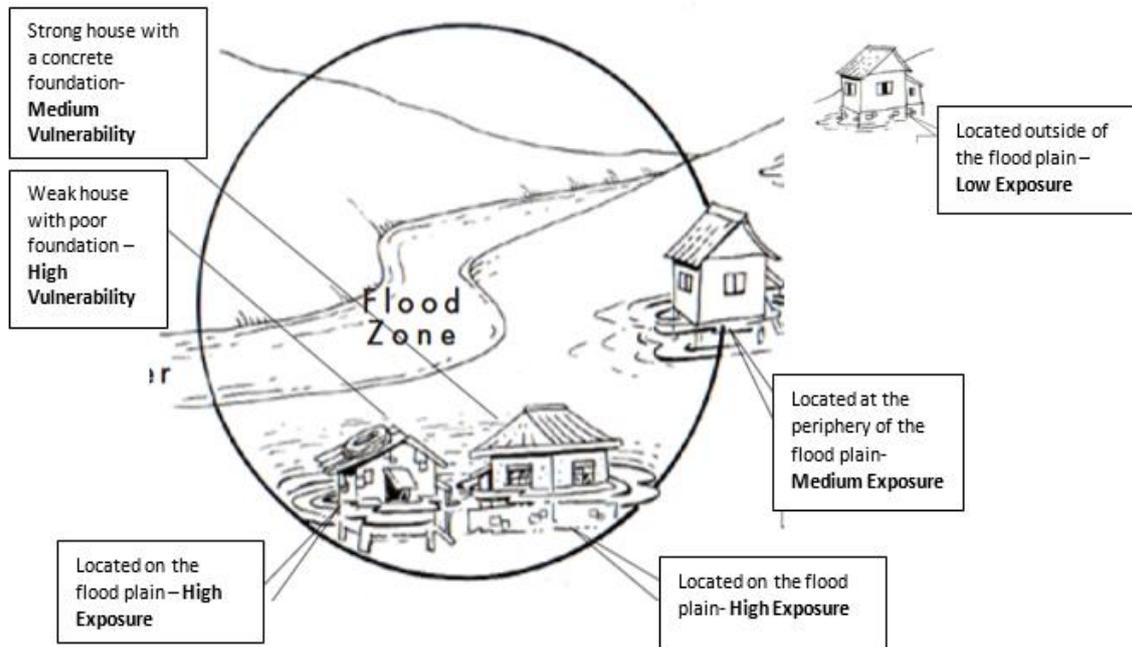
Difference between a *hazard* and a *disaster*

There is no such a thing as a natural disaster. Disasters are a combination of a natural hazard, the exposure and vulnerability to the hazard and the capacity to face it. Thus, the “natural” part of the formula is the hazard.

$$\text{Disaster} = \frac{\text{Hazard} \times \text{Exposure} \times \text{Vulnerability}}{\text{Capacity}}$$

Difference between *exposure* and *vulnerability*

Often people subsume exposure into vulnerability but it is better to differentiate. The location of the capital under consideration (human, economic/livelihood, physical and natural) determines the degree of exposures to a hazard. As shown in the picture below, whether it is well-built or poorly built house as long as they are in the same location, they are equally exposed to flood risk. Those houses located outside of the flood zone have low exposure. However, vulnerability looks at the condition of the houses- how well it is built, what materials were used, how strong is the foundation to withstand the force of the flood etc. For those two houses located in the flood zone though their exposure is the same their condition is different. The well-built one has lower vulnerability to flood than the poorly built one. That makes a big difference on the risk level of the two houses.



(Adapted from IIRR/Cordaid: Building Resilient Communities Manual)

Difference between *vulnerability* and *capacity*

There are two basic differences between the vulnerability and capacity assessment:

1. During the vulnerability assessment we are finding out the susceptibility aspects (weak points) of the different capitals while during capacity assessment we are exploring the strengths of those capitals;
2. During vulnerability assessment the focus is mainly on those capitals located in the exposed location while for the capacity assessment we consider the capitals found both within the exposed locations and outside of the exposed locations but can be mobilized, accessed and used by the community.

In a nutshell, vulnerability and capacity are opposite sides of the same coin: one shows the weaknesses while the other part shows the strengths. The capitals subjected to assessment under both vulnerability and capacity case are divided into six: human, economic, social, physical, natural and connectedness. During vulnerability and capacity assessment we consider all these capitals; one from weakness point of view and the other from strengths points of view.

Examples

Vulnerabilities	Capacities
Human vulnerability: lack of adequate knowledge of risks, health and basic needs coverage - shelter, food and water/sanitation.	Human capital: have adequate knowledge of risks, health and basic needs coverage - shelter, food and water/sanitation.
Social vulnerability: lack of social cohesion, limited social support system/network/, cultural segregation based on sex, age, religion, ethnicity, no/limited participation in political decision making.	Social capital: have strong social cohesion, good level of trust, strong membership of groups, spirit of collaboration and support, social support system/network/, no visible segregation based on sex, age, religion, ethnicity, adequate level in the political decision process.
Economic vulnerability: limited economic opportunities, limited diversification of livelihoods, assets don't withstand the force of the hazard, no savings.	Economic capital: adequate economic opportunities, jobs, remittance, opportunities for diversification of livelihoods, assets withstand the force of the hazard, good savings.
Physical (Infrastructures and services) vulnerability: poor design and construction quality of roads, schools, health facilities, drainage lines, and limited/absence of basic services -school, health, agricultural extension, water, etc.	Physical capital (Infrastructures and services): good design and construction qualities of roads, schools, health facilities, drainage lines, and have access to basic services -school, health, transport, water, agricultural extension, mobile network coverage, energy, etc.
Natural environment vulnerability: deforestation, poor waste management, drying of wetlands, poor land use.	Natural environment capital: well-maintained natural environment – forest, wetlands, farm, biodiversity, wildlife, good environmental sanitation, good land use management.
Connectedness vulnerability: lack of network with local RCRC branches, local government, NGOs, UN agencies, limited participation in political decision making etc.	Connectedness capital: have good network with local RCRC branches, local government, NGOs, UN agencies etc). Other organizations grouped these vulnerabilities as human, social &political, financial, physical and environmental.