UNIT 3 – INTERRELATIONSHIP BETWEEN DISASTERS & DEVELOPMENT

Factors Affecting Vulnerabilities
RISK = Hazard + Exposure + Vulnerability
Factors Affecting Vulnerability

(1) Wealth:

- Wealth is one of the most important human factors in vulnerability.
- Wealth affects vulnerability in several ways:
  - The poor are less able to afford housing and other infrastructure that can withstand extreme events.
  - They are less able to purchase resources needed for disaster response and are less likely to have insurance policies that can contribute.
  - They are also less likely to have access to medical care.

- **But there are exceptions.** For example,
  - some coastal areas contain expensive beachside real estate populated mainly by the rich, leaving the rich more vulnerable to tsunamis, storm surges, and other coastal hazards.
  - Also, the rich tend to lose more money from disasters, simply because they have more valuable property at stake.
  - Eg. Hurricane Katrina (wealthier area, fewer deaths, higher monetary damage); Cyclone Nargis (poorer area, more deaths, less monetary damage).
2. Education:

- Education is another important factor in hazard impacts.
- With education, we can learn how to avoid or reduce many impacts.
- When populations are literate, then written messages can be used to spread word about hazards in general or about specific disasters.
- Even without literacy, it is possible to educate a population about hazards in order to help it reduce its vulnerability.
- When populations include professionals trained in hazards, then these people can help the populations with their hazards preparations and responses.
Governance:

- The nature of both formal governments and informal governance in a population is another important factor.
- Governments can advance policies that reduce vulnerability.
- They can establish agencies tasked with reducing vulnerability, such as NDMA.
- They can support education and awareness efforts, as well as economic development to reduce poverty.
- Finally, they can foster social networks and empower individuals and communities to help themselves to prepare for and respond to hazards.
- Likewise, even without governments, communities can informally engage in many of these governance activities. Often the most vulnerable people are those who are politically marginalized, because these people have less access to key resources and opportunities.
- Eg. Myanmar government during Cyclone Nargis. This government is isolated from the international community and, thus, was not welcoming to international assistance in the aftermath of the cyclone.
- Haiti after its 2010 earthquake. Haiti, like Myanmar, is a poor country, but it has positive and close relationships with the international community and thus readily welcomed international assistance in the aftermath of the earthquake. This assistance saved many lives and is helping Haiti rebuild.
4. Technology:

- The capabilities of the available technology can also play a large role in disasters.
- Technology can improve our ability to forecast extreme events, withstand the impacts of the events, and recover afterwards.
- Technology is closely tied to wealth, education, and governance.
- Wealthier, more educated society's are more likely to have more advanced technology.
- A society's governance systems play a large role in how - and how effectively - the available technology is used in a disaster situation.
- Eg. All the preparations for facing the disaster and response activities in Disaster.
5. Age:

• Children and the elderly tend to be more vulnerable.

• They have less physical strength to survive disasters and are often more susceptible to certain diseases.

• The elderly often also have declining vision and hearing.

• Children, especially young children, have less education.

• Finally, both children and the elderly have fewer financial resources and are frequently dependent on others for survival.

• In order for them to survive a disaster, it is necessary for both them and their caretakers to stay alive and stay together.

• Eg. 2003 European heat wave. About 40,000 people died in one of the hottest summers ever in Europe. Many of the deaths were elderly people who were still capable of taking care of themselves. These people were not able to adapt to the extreme heat and had no one helping them out.
6. Gender:

- Women are often more vulnerable to natural hazards than men.
- This is in part because women are more likely to be poor, less educated, and politically marginalized.
- Women often face additional burdens as caretakers of families.
- When disaster strikes, women are often the ones tasked with protecting children and the elderly.
- This leaves them less mobile and more likely to experience harm themselves.