**Topics**

**Domino effects**

* Domino effects are referred to a chain of accidents in which a primary accident
starting in a unit spreads to adjacent units, causing secondary accidents the total consequence of which could be much more severe than the primary event.

**Natechs**

* Natechs are referred to technological accidents such as release of hazardous materials, fires or explosions in industrial plants which are triggered by natural disasters like earthquakes, floods, and hurricanes. Compared to normal technological accidents, which are a matter of random failures or human error, natechs usually give rise to more catastrophic consequences since the likelihood of simultaneous damage to hazardous units and domino effects is much higher.

**Land use planning:**

* Land use planning (LUP) as an effective and crucial safety measure has widely been employed by safety experts and decision makers to mitigate off-site risks posed by major accidents. Accordingly, the concept of LUP in industrial plants has traditionally been considered from two perspectives: (i) land developments around existing industrial plants considering potential off-site risks posed by major accidents and (ii) development of existing industrial plants considering nearby land developments and the level of additional off-site risks the land developments would be exposed to.

**Human error:**

* Humans play an important role during the design, installation, production, and maintenance phases of a product or system. Human error may be defined as the failure to perform a specified task (or the performance of a forbidden action) that could lead to disruption of scheduled operations or result in damage to property and equipment.

Security:

* This area involves estimating access and harm caused due to war, terrorism, riot, crime (vandalism, theft, etc.), and misappropriation of information (national security information, intellectual property, etc.).

Environmental damages:

* This field involves estimating losses due to noise, contamination, and pollution in the ecosystem (water, land, air, and atmosphere) and in space (space debris).