**HAZARD PARADIGM:**

Based on different hazard concepts and human reaction, there are five hazard paradigms recognized as following:

1. Famine policy paradigm:

Famine policy paradigm originated from the pre-Qin period of China. The main features of this paradigm are as follows:

- Catastrophes are created by nature

- Disaster alleviation is main responsibility of the government represented by the emperor

- The policy of benevolence is the principal implementing policy against natural disasters.

2. Engineering paradigm

In the 20th century, engineering paradigm was the mainstream paradigm in the world. This paradigm concerns those issues such as the regularities of natural disasters occurrence; the strength and frequency of the potential natural disasters in different region; and the methods of disasters resistance for protection.

3. Behavioral paradigm

In the 1930s, behavioral paradigm appeared in the western developed countries. The main points of this paradigm are as following: human perceptions and behaviors influence the consequences of natural disasters, but disaster is a natural process primarily; the principal goal of disasters management is resistance extreme events through project management control; the basic preventive measures include improving disasters early warning for short-term and preparation better land-use planning for long-term.

4. Social vulnerability paradigm

Social vulnerability paradigm came from experience of some western scholars in the developing countries in the 1970s. They discovered the developing countries suffered enormously from natural disasters. They thought the main cause of disaster is human behavior rather than nature and technology development. According to social vulnerability paradigm, the disasters reduction depends on the social- economic and political reform.

5. Sustainable paradigm.

Sustainable paradigm was growing up as a new inspiration at end of 20th century. The basic principles of disaster reduction are to maintain and improve the quality of natural environment and living condition of people, to ensure the justice that the same and different generations have the same right to enjoy the resources and environment and to promote regional sustainable development through integrated capacity-building of regional disaster risk management.

**CONCENTUAL ASPECTS**

**HAZARDOUS EVENT**

EARTHQUAKE

**VULNERABLE ELEMENTS**

* Mountainous region
* Presence of crack on land surface
* Presence of loose, sandy and soggy soil
* High population density
* Presence of non-engineered construction, poor building typology

HAZARD x VULNERABILITY

RISK

(Probable harmful Consequences)

DISASTER

(Actual materialization of risk/

Potential realized)

Influenced by human preparedness

**CLASSIFICATION OF HAZARD AND DISASTER**

**QUASI-NATURAL HAZARD**

(partly natural and partly man-made)

**TECHNOLOGICAL/MAN MADE HAZARD**

**NATURAL HAZARD**