

## RESILIENCE AND FLEXIBILITY OF CITIES AGAINST DISASTERS

Fereshteh Mokhtari<sup>1</sup>, Fatemeh Arab Mokhtari<sup>2</sup><sup>1</sup> M. A in Geography, University of Isfahan, [fmokhtari2@yahoo.com](mailto:fmokhtari2@yahoo.com)<sup>2</sup> M. A in climatology, University of Yazd, [f.mokhtary92@gmail.com](mailto:f.mokhtary92@gmail.com)**Abstract**

Nowadays, increasing resilience in natural disasters has turned to an important field and today's synchronized movement and reciprocal of permanent development and disaster management is discussed toward increasing resilience. The resilience instead of prevention or decreasing the effects of damages and casualties resulting of natural disaster focuses on enhancing the operation of a system encountering with damages.

In present study, The researchers study today's resistance and flexibility of urban area when encountering with natural disaster especially earthquakes and floods in Iran and then offer some techniques about increasing urban's resilience and resistance in front of natural disasters.

This is a descriptive and analytical research. The results show that the effective planning and executive and correct steps has not been executed for decreasing dangers of flood and the amount of resilience in area where are flood plain in Iran is at the minimum. Also the studies show crisis management in recent earthquake isn't very successful and only in recent years some steps in making resistant building and rebuilding old buildings and informing and teaching people has been done very slowly.

So, the amount of the resistance in cities in Iran when encountering with earthquake is at the minimum but this amount can be enhanced when encountering with flood and earthquake by planning and effective steps in the evaluation of safety of the substructures and rebuilding them, informing and preparing people and authorities, and also allocating financial source for old vulnerable areas and establishing some community-center groups.

These steps also cause to decrease the amount damage in natural disaster.

**Keywords:** Natural disasters, resilience, Tehran, Iran

**Introduction**

The United Nations predicts that 80% of the world's population will live in cities by 2050. The settlement of people and buildings on flood plains and earthquake faults will lead to vulnerable cities in face of disasters. The concept of urban resilience

means that the individual, community, ecosystem, or a city are able to withstand or recover quickly from a threat and pressure, and they can easily change to a new condition.

The establishment of Iran plateau on the eventful zones of Earth, a heterogeneous natural conditions, as well as social and economic development accelerated in recent decades have created conditions which the occurrence of crises would be inevitable. In the evolution of approaches of crisis management, we are observing that the communities firstly try to develop processes of recovery after the occurrence of crisis with a practical approach. During the time and advancement of science and technology, mankind has reached to this achievement that by gaining knowledge about crises, fortify his handmade structures. Nowadays the advanced world have passed the borders of physical and functional approaches to community-based approach. The new views have passed considering the urban structure and are paying attention to the human dimension and lives under the roofs of the city. (Kazemiyan et al., 2: 2013). In this study, the researchers initially examined the current state of urban resilience against natural disasters in Iran (with an emphasis on earthquake and flood). Then they provide strategies to enhance urban resilience and resistance facing natural disaster.

**DEFINITIONS OF RESILIENCY**

Psychologists may focus on the flexibility and resilience of people against external influences. Engineers may consider a building resilience in force. (Zobel & Khansa, 2: 2014). Resilience, rather than preventing, or reducing the impact of losses and fatalities from natural disasters, focuses on enhancing the performance of a system in facing risks. (Kusumastuti et al., 2: 2014). The resilience is determined by a degree of social system which has the ability of organizing itself to increase the capacity to learn from past disasters for better future protection and safety, and to improve disaster risk reduction measures (Arouri et al., 2: 2014). The title of

**COMMUNITY RESILIENCE AND NATURAL DISASTERS**

Communities may experience severe physical and social damages as the consequences of natural disasters and processes such as earthquakes, tsunamis, floods, volcanic eruptions, etc. (Wisner and Kelman, 3: 2015). Natural disasters often cause extensive losses in