# A REVIEW ON EFFECTIVENESS OF EMERGENCY TELECOMMUNICATION SYSTEMS IN IRAN

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## ABSTRACT

Emergency telecommunication systems play fundamental role in disaster risk management, before, during and after the crisis. In fact, any data about disasters and all the information about damages and casualties should be collected and transmitted through reliable telecommunication channels to relevant authorities in appropriate time, to be used for decision making and planning for providing necessary responses. Therefore, developing a comprehensive emergency telecommunication network and empowering the capacity of the existing systems should be considered as one of the DRM priorities in all countries subjected to natural hazards. Furthermore, resiliency of telecommunication services should be considered as one of the main goals for assuring proper data transmission at the time of disaster. In this line, besides of robustness of the physical instruments and redundancy in providing necessary services, it is essential to develop relevant telecommunication protocols for the time of crisis (such as ETSI in Europe) and to provide basic training to people and authorities for telecommunication after disasters. In addition, having appropriate autonomy in implementing the plans at the time of crisis is another requirement of reliable emergency telecommunication.

In this paper, having a look on the importance of telecommunication services in earthquake risk mitigation and management, the existing telecommunication system in Iran will be introduced and its shortages and problems to be used as emergency telecommunication system will be discussed. Then having a look on the similar systems in other countries, a proposal for improvement the existing conditions will be presented and discussed.

## INTRODUCTION

Developing a comprehensive emergency telecommunication and information network should be considered as one of the main priorities in disaster risk mitigation and management in all the countries subjected to earthquake or other natural hazards. For this purpose many items should be taken into consideration, some as follows:

- Providing redundancy in telecommunication services to be applicable at the time of crisis and emergency conditions;
- Ensuring proper network operation at the time of disaster;
- Providing physically resistance conditions against earthquake;
- Creating broad coverage of network services.

In this paper having a look on the international experiences to improve telecommunication systems to be used for the emergency conditions, the existing condition of available fixed and mobile systems in Iran