Introduction

Despite tremendous advances in technology and access to the impossibility of past centuries, remains of man against natural disasters such as earthquakes, floods, droughts and occasional weak financial risk is losses and damages. In this practical and neglecting the construction of a regional power, risk, compliance and non-sensitive land uses within the vicinity of residential areas and rivers faults, exacerbated disasters provide. The earthquake is inevitable. The great tragedy of the human and financial toll of life and is associated with adverse effects. Such that, it matter has been proposed as one of the most serious threats humanity. To deal with this natural disaster and its negative effects, including issues that governments have been highly regarded in the past century, 90s was called the effects of natural disasters. So will the status of earthquake disaster management. Experience gained from previous studies show that, if the terms of the planning and implementation of temporary accommodation, not predetermined, then locate settlements, temporary crises, unpredictable factors are involved. It affects the quality and variety. Most important preparation prior understanding of the critical vulnerabilities is prioritizing and identifying possible solutions for prevention and control of hazards. Certain conditions and limitations of Tehran - a few million population, worn fabric, non-reinforced masonry buildings with heavy structures without the necessary strength, narrow passageways, develop criteria for temporary settlement brings an undeniable. To specify the location of the temporary settlement camps ¬ victims of earthquake in Tehran urban areas - especially in areas where active faults in the vicinity of the mountains are the feet - is essential. Iran and much of the world, citizens are usually temporary location for the settlement of accident, regardless of the standards required by aid agencies is experimental. It may lack the proper location of disaster even worse than the initial injury can cause. From the environmental perspective, the best location for a username, where username is the least load on the environment comes. Username or too little pressure and damage to the environment caused by the change in location, the establishment will be incurred. So, planning, management and appropriate deployment of the interim before the earthquake affected population require. As can be seen, the sources of the problem from different angles, such as the

earthquake prevention and disaster preparedness, etc. are paid. But the most obvious problem is that in most of these studies focused on reactive management methods and experimental. In most cases, after the accident occurs. In this paper, we focus on the above, one of the districts of Tehran in particular the location database, the software IDRISI and fuzzy algorithm has been studied. To demonstrate the efficiency of the overall pattern of locating suitable temporary accommodation proposed in this paper, a region in Tehran was chosen as a case study. Locating desired to be done in this area. According to the most vulnerable cities in the world against earthquake hazards, the results are presented in the form of an overall system. Methods and results generalize to other areas (other cities).

Materials and methods

After extracting the data layers and set criteria for locating temporary housing, plans to integrate and analyze the available layers into the GIS environment. In order to do good and acceptable format maps IDRISI and ArcView software and maps used in the analysis have been turned. Effective for locating the first layer should be standardized. This is a decision requiring the rules. Therefore, in this study of two Boolean logic and Fuzzy Logic is used to combine layers.

Finding and results

In this study, two methods for locating temporary accommodation were used Boolean logic and fuzzy logic. To combine the layers using Boolean logic first map of the study area, respectively. Then the value of the polygon (zero or one), polygon with a value, as well as polygon of the extraction process and a separate map was prepared. Using this method (Boolean logic), 30 locations have been identified desires for temporary accommodation.

It also uses fuzzy logic for combining layers, the method of weighted linear combination (WLC) is a multi-criteria evaluation methods were used. Multi-criteria assessment based on the combination of a set of criteria to achieve a certain objective basis for decision-making is based. Weighted linear combination method with the

IDRISI software, utility map of the study area was found to desirable values range of the map was between 72 to 248.

This study analyzes the suitability map; filter module in IDRISI was used to remove noise pixels. Then it was drawing to a homogeneous polygon. The resulting map of the area, were analyzed, and the fuzzy value of each polygon, polygon with fuzzy values greater than 205, as well as polygon of a separate plan was developed. At this stage, cheek Poly 17 (place) based on the priority value in the analysis phase.

Fig 1. Restriction map of the study area, Source: The authors.

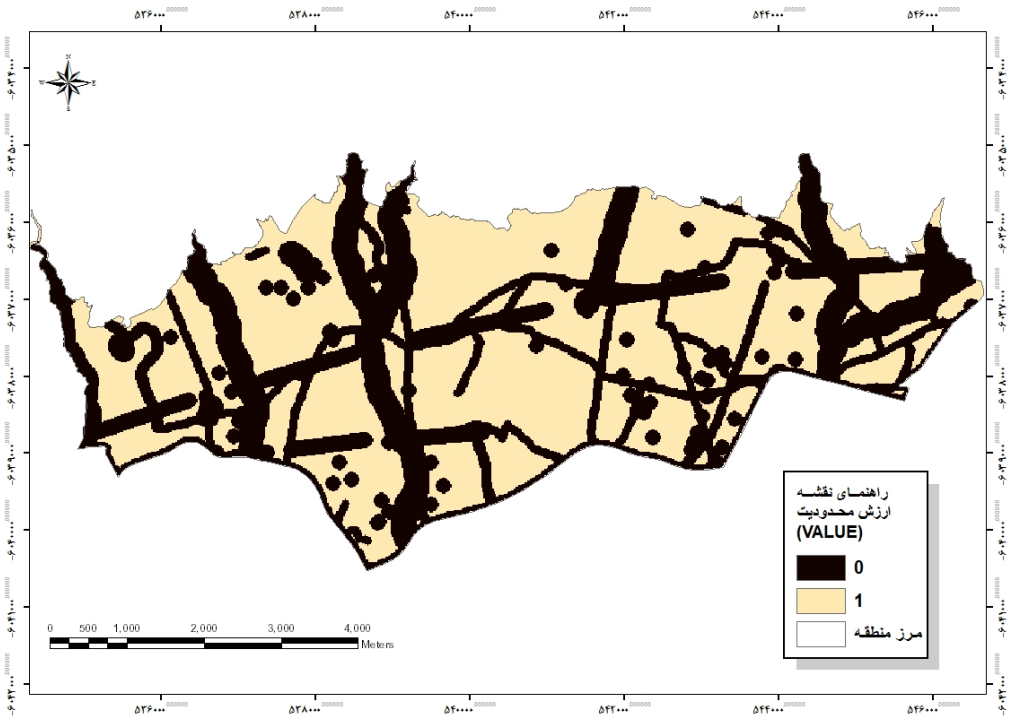

Fig 2. Forms a valuable bridge map (Boolean logic) Source: Authors.

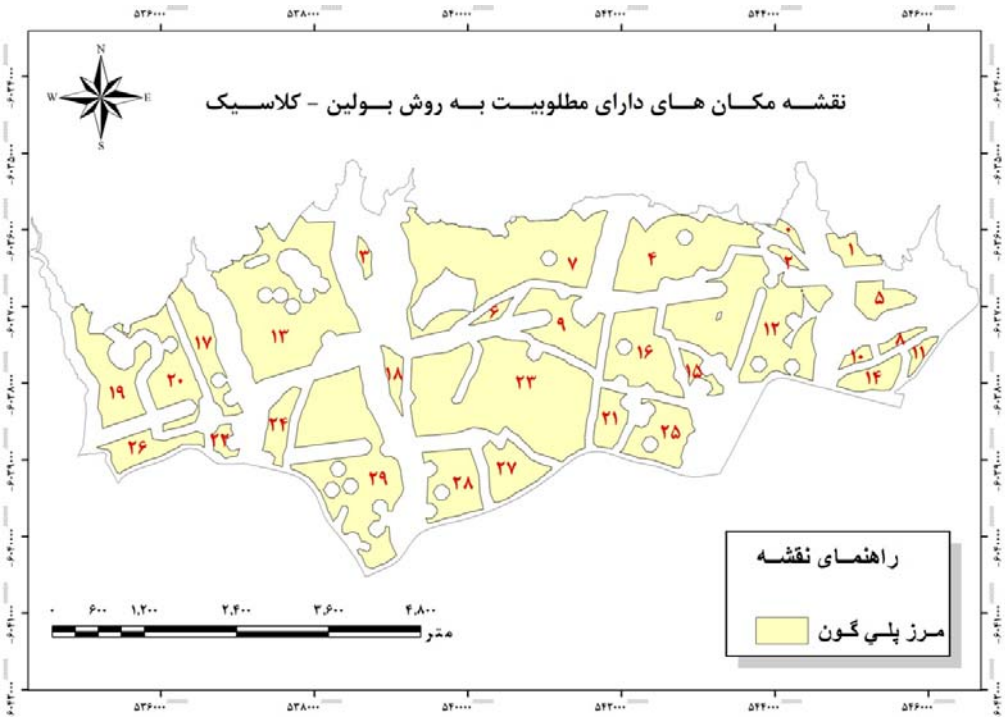

Fig 3. Suitability map of the study area, Source: The authors.

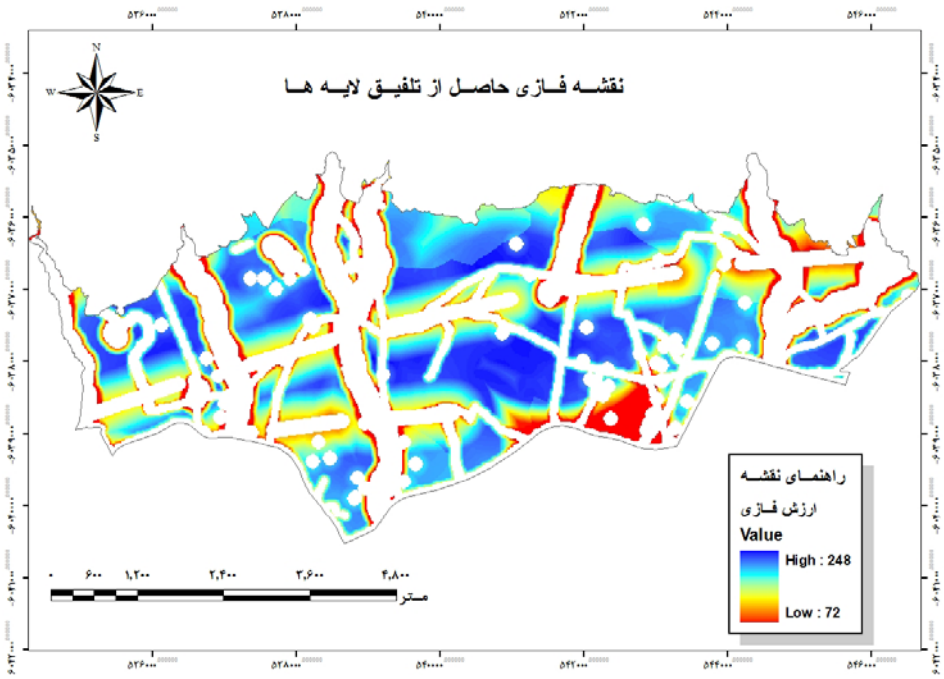

Figure 4. Map poly-phase high-value species up than 205, Source: The authors.

Total area of the selected place 649/1 hectares. As previously mentioned, a number of shelters for temporary accommodation between 410 to 615 acres, so the space required for selected locations provide temporary housing homeless people. The location of interest in the first place may not be the decision-makers. The problem is that this positioning is based on various criteria. They are usually located far from conventional, not conventional. Can be understood by surveying the area where the criteria is sustaining aspects. Such as accessibility, proximity to medical centers and services, security, permeability, allowing cultivation, sex, land, green space and fuel sources. The suitability of the site for temporary accommodation (based on location criteria) shows. Figure 5 Location Number 8 is shown in the satellite photo.

Fig 5. Satellite photo location num.8 Source: The authors.

Conclusions

Because of its strategic location of the capital Tehran, Iran is one of the most important cities. On the other hand, the risk of earthquake in Tehran, Iran is one of the riskiest areas. This position is required for placement in the crisis management plan scheduled to be carried out in Tehran. One of these programs is the location for temporary accommodation. For this purpose, in this study a model for locating temporary housing using fuzzy algorithms and software IDRISI presented. As seen, the proposed method leads to systematic use of temporary accommodation in places. The most important issue is to locate suitable location criteria. Unfortunately currently seeking temporary accommodation place only on the basis of a few criteria such as per capita land ownership is usually the end of is a wasteland. All of these criteria to determine the factors influencing factors such as social, cultural, geographic, political, and economic and is required. In short, each of which may lead to inefficient outcomes and incidence of selected locations during or after the temporary accommodation. Thirteen criteria were identified and used in this study. These criteria include measures such as access to water resources and security. Since the data is

mostly used in locating a place of temporary accommodation. And the ability to process and analyze spatial data in IDRISI, using fuzzy logic, the use of this software can be a powerful tool used by managers. On issues like this, to deal with a specific purpose, often requires that several criteria be assessed. Weighted linear combination method in which a range of measures constantly standards are typically numeric. And then combined by a weighted average, can help in deciding the best solution is optimal.I n this study, the number of Tehran 136,786 people homeless shelter needed in consideration of 45 to 30 square meters per person shelter, was estimated to number between 410 to 615 acres and 17 locations with a total area of 1/649 acres for temporary housing in an area of Tehran municipality were identified.

The results of this study showed that the method of locating regions of Boolean comparison method based on fuzzy logic, a greater number are Boolean logic is not appropriate in areas where land is limited. Fuzzy evaluation method was shown by the WLC method gives the power to make decisions. The important factors that considered the question of positioning are the most affected. The same importance to the issue of impact, and on the right, the consequences of locating the WLC method has better resolution spectra are available. Therefore in this study to understand the issues related to reasoning or decision-making problems are fuzzy logic, which can be raised against the classical logic is a high performance.