

Analysis and Selection of Optimum Direction of Bokan Physical- Spatial Development

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Extended Abstract

Introduction

Influenced by the global economy, urbanization has been accelerated in most parts of the world. This is actually changing the shape of the world. The growth in the urban population and the increase in rural migration to cities have fundamentally changed all the social, economic, environmental and physical aspects of cities. This turned them from a static and stable state into an dynamic environment replete with paradoxes. This population growth has had its own problems. One of the problems is the speeding physical development of cities. Urban physical development is a dynamic and continuous process and in this process the limits and physical space at cities will increase both qualitatively and qualitatively in vertical and horizontal directions. If this process is unplanned, the environmental and physical aspects of cities will face with too much problems. This is why the optimal planning and site selection and development of physical aspects in cities is of much importance in their future development. Based on the 2007 census, the city with a population of 150703 is the third city in population in the west Azarbaijan Province. According to population and physical aspects, the cities has undergone some major changes during the past few decades in a way that the unplanned and uncontrolled physical- spatial development of cities have resulted in the distraction of a large amount of agricultural fields and gardens around the city. This study attempts to investigate the

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physical development at this city in the recent decades and to determine the optimal physical-spatial development in the future using Geographic Information System (GIS).

Methodology

This study is an applied research in purpose with descriptive- analytic method. After collecting the document data and doing the required modification and completing the data through field study, an attempt was made to update the maps through observation and the information available in relevant centers and to digitize the maps and create some bases. To create layers and the required information for this study from the maps, the information available in the master plan development of Bokan and some other information were utilized.

Results and discussion

According to the analysis at 1987 census, Bukan city has a population of 150703 which ranks third regarding its population in the west Azarbaijan after urmia and khoy. Due to various environmental and human factors, this city has been under constant changes during the past 50 years. These factors are consisted of village- city migration, job opportunities, natural potential for physical development, and inter intra city and provincial roads. Population and physical changes of Bokan are so thought- provoking. The population of this city was 5308 in 1957 but 150703 in 2007. In other words, during the last 50 years the population of this city has become 29 times as much as it was in 1957. According to the fields around Bokan, we can divide this city into three areas: completely suitable, unsuitable, and completely unsuitable. This is based on the maps of fertilized lands, gardens and Nale Shekan Mountains. These are near the city and have the lowest priority for the future development of the city. This means the authorities should prevent the wasting of these lands and orient the development of cities toward the lands where have low value concerning the environmental and natural factors.

Conclusion

The results of this study show that the physical- spatial development of Bokan in the recent decades has been fast and unplanned. The results of locating using GIS reveals that the north-east lands of Bokan are in the best direction for the continuous development of this city in the future and that the city should move in this direction in the coming years. Results also indicate that Boukan physical growth was Non application planning and has experienced Sprawl development in the past few decades that this type of growth causes environmental and economic problems for the city of Boukan. It can also be argued that the best land for physical growth is located in the eastern part of the city of Boukan in Road Boukan - Shahindezh.

Keywords: Bokan City, Geographic Information System (GIS), location, physical-spatial development, urban sprawl growth.