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Lifesaving open areas after earthquake and land management

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Abstract

Humans depend on the resources of nature since their existence. As human populations and technology advance, humans' impact on critical natural resources and natural areas, ecosystems, and atmospheric processes has grown. As society developed and urban life grew, people began to separate themselves from nature. Environmental disasters, most of which are natural disasters, have reminded people that they should use and manage natural areas and resources correctly. It is a constant need and responsibility for people and society to manage their relations with the environment. In the study, evaluations were made about the land use planning and land management of open spaces, which undertake many functions after earthquake disasters that cause devastating environmental, human and economic damages.

Introduction

Natural disasters such as floods, storms, earthquakes, forest fires cause many physical, economic, ecological and sociological damages and losses on natural areas, residential areas and people. The continuation of life after these disasters and the process of returning to normal is an issue that needs to be solved with the interdisciplinary cooperation of many sectors. The roots of interdisciplinary communication depend on the principles of scientific and engineering studies.

In order to protect and improve human health and environmental health, it is necessary to understand the interactions between human and environment. Knowing how natural systems work and reducing harmful effects helps prevent further disasters and environmental damage in the long run. In this respect, open green spaces are useful in natural and cultural structure with many functions in normal times, and they are life-saving with many functions after disasters.

Evaluation

All users and supporters, including the state, NGOs and the public, decide on the planning and management of the use of open spaces after the earthquake disaster. At the same time, these stakeholders are the first to be affected by the decisions, regulations and approaches. Plans and practices in which all of them decide together and coordinate are successful. All state institutions, aid organizations and civil aids that try to eliminate disaster damage use open spaces such as parks, squares, sports fields, recreation areas, gardens of public institutions and organizations in the disaster area for purposes such as gathering, sheltering, and carrying out various services. During the site selection process of existing areas for the re-establishment of the settlement, many issues such as the purpose for which they will be used and the impact of the type of use on the environment should be considered.

Governments take responsibility for issues related to measuring infrastructure, education and training impacts. The public and non-governmental organizations discuss project proposals on land use and land management with the state, and voice their suggestions on natural areas and resources. These responsible

activities are applications such as conservation designs, land use practices, pollution disposal, and land and water conservation approaches in site development. In some cases, these practices and designs result in creative plans, designs, and applications for services and landowners. Community participation is an indicator of the democratic political planning process. The success of implementation of projects and programs depends on public acceptance [1].

Planning and management of open spaces are activities such as developing or protecting resources, controlling pollution, using basic facilities, determining acceptable risk levels. The current and future status of the expense spent on investments is important for benefit-loss analysis. In this regard, it is thought that ecology economics will help to make the right decisions in the planning process [2-3].

Conclusion

The issues that need to be addressed in the planning and management of open spaces, which play an important role in the survival of the peoples after the earthquake, removal of the debris, arrangement of the physical environment, resettlement and establishment of the living space, are as follows.

1-People management and public participation

- Participants and roles in land use planning and management
- Reflection of social culture, values and ethics
- Interdisciplinary relations in land use planning (engineering, economics, cooperation, environmental law)
- Role of the planner (technical staff, public participation moderator, interdisciplinary negotiator, designer, observer)

2-Land usage planning

- Determination of development and settlement areas of urban
- Determination of development and settlement areas of rural
- Determination of development and settlement areas of public areas
- Determination of the effects of land use on environmental health
- Determination of the effects of land use on water systems
- Determination of the effects of land use on agricultural production areas
- Determination of the effects of land use on natural resources
- Determination of the effects of space use on energy and material consumption
- Determination of the effects of land use on cultural heritage and community identity

3-Land conservation and ecological conservation in open areas

- Criteria and scientific tools in land protection
- Ecological restoration
- Water and soil protection

4-Design for the development of sustainable, living and rational use of land

- Basic concepts of sustainable design
- Practices for sustainable and living design development (transportation solutions, parking areas, squares, urban forests, cemeteries, pedestrian paths, etc.)
- Design in accordance with the cultural structure and historical heritage

5-Rational growth management and land use control

- Determination and protection of soil usage characteristics and soil quality
- Prevention of loss of urban lands
- Determination of suitable settlement areas with scientific data

6-Environmental information systems

- Data in land planning and management (open-closed areas to be used after the disaster, structural and open spaces of public spaces, manpower and task distribution, storage-distribution of materials, etc.)
- Identification of data limitations and uncertainties

7-Prevention of post-disaster environmental pollution

- Identifying areas where debris will be removed, stored and sorted

- Prevention of damage to soil and water resources of temporarily established shelters
- Disposal of waste and garbage to be formed in temporary shelter areas and prevention of damage to the environment

8-Planning and management of agricultural and animal production areas

- Supporting agriculture and livestock activities in rural life
- Supporting forestry activities

9-Integrative methods for field analysis

- Inventory collection
- Quick assessment
- Determination of carrying capacity
- Environmental impact assessment

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