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Integrated Urban Management and Environmental Assessment in Sustainable Urban Development in Iran

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Abstract: *With the expansion of cities and the emergence of metropolises in the geographic map of the world, urban management has encountered many problems. One urban management challenge is the sustainable urban planning. One of the reasons for highlighting this issue is the presence of phenomena that have contaminated the world's soil, water and air. Therefore, governors have become concerned with environmental issues in the wake of sustainable urban development. One of the solutions to sustainable urban development is the removal of environmental barriers. Sustainable development is considered as a fundamental principle in smart urban planning, and uncontrollable urbanization can lead to increase in different problems, such as natural resources depletion, ecosystem degradation, environmental pollution and climate change on a big scale. Accordingly, it is considered necessary to reform the existing urban and regional executive system, so as to confront the future challenges in urban planning, and to focus on the goal of urban sustainability. The present paper is of applied research type, in a way that a systematic review of the available researches has been conducted, given the descriptive and comparative dimensions. This paper contributes to a mechanism which aims at helping the creation of urban planning, with respect to the problems that exist regarding sustainable development. The results of this study indicate that integrated urban management and environmental assessment is a multi-dimensional plan that can compensate for the lacks of responsible organizations and, ultimately, ensure the environmental quality of urban planning.*

Keywords: *Urban Planning, Environmental Assessment, Integrated Urban Management, Sustainable Development.*

INTRODUCTION

In the calendar of civilization, major cities are defined as "places where people have lived, centralized, and settled," being important accordingly (Chunliang, 2014: 204). Therefore, it can be said that the multiplicity of management and inconsistency of public and private organizations and institutions which are responsible for the urban concerns is a major issue in the field of urban management (Dijk, 2015: 38). Today, a desirable administration of the city is not feasible without integrated urban management. It's a certain fact that the qualitative and quantitative management of cities and metropolises is not possible without integrated urban management. The urban management system is a systemic view that creates a strategic view. Over the past few decades, the lack of a comprehensive urban decree or a planning system in cities has led to initiatives to produce urban development plans, and a look at their failure to achieve the stated goals confirms that in the planning, execution and assessment phases, plans and the effective factors have not been systematically addressed (Woodrow, 2014: 54).

The increasing urban development has a profound impact on human societies and their living environment, thus urban management has evolved gradually with the emergence of metropolises. Changes in the urban living environment have become so accelerated that have forced experts and pundits in many fields to continuously explore and study in order to overcome the problems and issues that face the cities, especially metropolises (Schwedler, 2013: 125). Studies have shown that urban managers and authorities are seriously concerned about prerequisite planning in order to cope wisely with future urban issues and sustainable and prosperous development (Claesson, 2014: 12).

According to estimates, by 2030, two billion people will be added to the urban population, with the greatest impact of such increase being on the third world countries. On the other hand, small and medium-sized urban centers form more than 50 percent of the urban population of the world. Therefore, it is very necessary to use urban management and planning in accordance with the needs and resources of cities. Moreover, the complexity and pace of changes in the global community forces the societies' practitioners to come up with policies and programs that fit contemporary conditions. In such an environment, managers and leaders of the organization must think and act strategically. For this purpose, integrated urban management has been introduced as a necessity in governments, organizations and societies. Therefore, it can be a key tool in confronting urban problems and achieving a better future, especially from an environmental point of view. Therefore, through identifying the challenges in this type of urban planning, one can draw the right orientations for advanced, prosperous and desirable cities in Iran (Bryson, 2015: 54).

The Theoretical Framework

Environmental Assessment and Urban Sustainability

Environmental assessment evaluates a man-made phenomenon and measures its effects in order to control its negative effects. With the rapid growth of the world's population and its concentration in cities, the concept of sustainable urban development has been introduced as a key component in the long-term vision of human societies (Malmberg, 2016: 22). Protecting and improving the urban environment is possible through environmental responsibility and guarantee by reducing the reliance on natural resources, minimizing air pollution, avoiding earth pollution, following energy efficiency, enhancement in biodiversity, and the reuse or eradication of burnt ground, which ultimately lead to the improved quality of life (Hemphill, 2016: 485). Sustainable urbanism or urbanization is such an urbanization that, on one hand, provides the possibility of living in accordance with human dignity in the existing and future cities for generations that come one after the other, and on the other hand, it is compatible and friendly toward the environmental considerations. Thus, sustainable urbanism and urbanization moves the urban socio-economic development forward in a way that leads to the protection of earth resources and environment, and prevents the destruction of natural environment. In other words, sustainable urbanism and urbanization form and evolve based on and in accordance with the capacity of the ecosystem or the natural system (Houghton, 2015: 4).

The advent of the industrial revolution, the rise of living standards, the invention of the automobile and the advancement of transportation technology have caused the excessive growth of cities after the world war, that has led to environmental problems, pollution, traffic, poverty, poor habitation, etc. in cities (Hilden, 2016: 121). In the contemporary capitalist system, the city as a suitable place and urbanization as desirable way of life are considered among major environmental problems of the current city, and are the result of their conflict and confrontation with the natural environment; because urban development is necessarily accompanied by the domination of buildings, industries, transportation and economic activities on natural spaces, and this domination changes over time to the city's dominance over nature, and causes the extensive urban pollution. The result of this process will be the imbalance and inconsistency between man and nature and the imbalance of ecosystem relations. With the development of cities, the appearances and values of the natural environment have become subject to further destruction and erosion, and the urban population is

deprived of natural attractions and has shown psychological and social problems. The concentration of population in urban and marginal cities, and the disparity between the growth of services and urban infrastructure, especially in developing countries, have transformed urban areas to non-sanitary and polluted places, and caused them to encounter problems of wastewater and waste disposal, supply of sanitary water and so on (Laary, 2016: 49).

Although, today there are well-known and scientific methods and approaches for city affairs management that can be used in urban management of metropolis, the specific political, economic, geographic and cultural conditions of countries put many barriers upon applying these methods. Some of these barriers are related to the stage of development, the structure of the national economy and the process of industrialization of countries. It may be said that a group of underdeveloped countries have a lot of similarities in this regard. The fact is that in Iran, over the past four decades, the fate of the capital and other major cities of the country has become heavily dependent on the mentioned structural factors, which in turn complicates the transformation and improvement of urban management (Stewart, 2016: 196). Executive objectives and plans are the correction of the status of related structures and management in the affairs of cities. In other words, the acceptable and high level of economic growth and employment, social progress and the protection of the urban environment are the other aspects of urban sustainability. Urban sustainability is a social development plan that seeks to recognize the needs of urban residents, protects environmental resources, and broadens its economic and social resources at all urban levels (Garciam, 2015: 197).

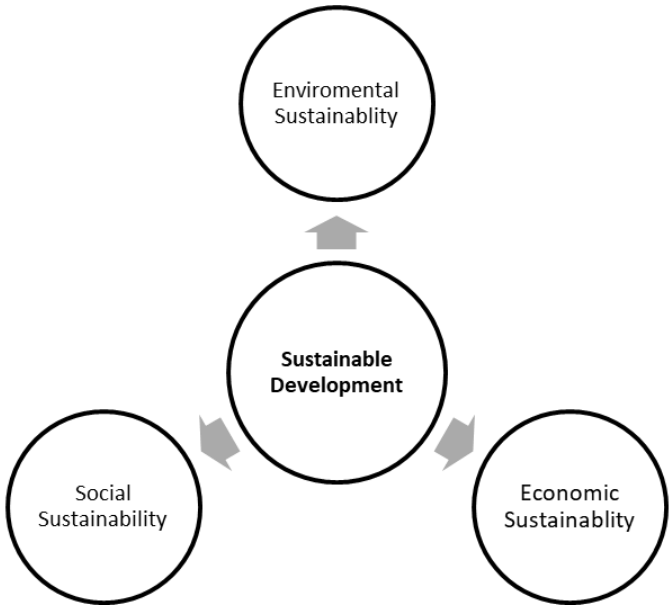

Figure 1. Sustainable Development Indicators (Garciam, 2015: 197).

Integrated Urban Management in Sustainable Urban Development

The attention of global organizations to the issue of urban management in developmental studies over the last few decades has given it a special place. This approach, in particular with the establishment of the Urban Management Program in 1989 and in partnership with the World Bank, the United Nations Development Program and the United Nations Human Settlements Center, has attracted official and international support. According to the latest report of the Urban Management Program, this program is the largest multi-organizational technical assistance in the field of urban development (Davey, 2014: 46).

Sustainable urban development theory is the result of discussions by environmentalists about environmental issues, especially urban life, which was proposed as followed by the sustainable development theory to

support environmental resources. In this theory, the issue of keeping resources for the present and future is posed through the optimal use of earth and bringing the least waste to non-renewable resources. Sustainable urban development theory addresses issues of urban and regional environmental pollution, reducing production capacities (regional and national local environment), supporting recycling, refusing to support harmful development and eliminating the gap between the poor and the rich. It also identifies ways to achieve these goals through national, regional, rural, and urban planning, which is in line with the law of more control in the city and the rural areas. This theory is significant due to its strategic vision of the role of the state in this planning, and believes that governments should comprehensively support the urban environment. This sustainability theory examines the structure of the city, the sustainable patterns of habitats, and the effective transport patterns of fuel consumption. Because this theory recognizes the creation of the city solely for the sake of the quality of the inhabitants' lives. Briefly, the theoretical foundations of the concept of sustainability in the city and the region includes the following factors: reduction of pollution, maintenance of natural resources, reduction of urban waste, increased recycling, reduced energy consumption, excessive increase of beneficial living creatures in the city and rural area by creating forest community and urban trees and green areas, urban decentralization and reduction of dispersion, increasing average density in urban and suburbs, reducing communicatory route distances, creating local employment, diversifying housing development in employment centers, developing small towns to reduce reliance on large cities, balanced social structure, public transportation and roadblocks, management of unrecoverable waste, distribution of resources, and the provision of sustainable local space. In this way, firstly the protection of earth and adopting a proper usage policy increase through replacing resources and modernizing them, and secondly the ground for sustainable urban development is achieved according to urban and regional planning and organizing (Hudalah, 2015: 312).

The expansion of urbanization and, consequently, the specific problems of urban life have excessively necessitated the attention to useful strategies and ways for improving the lives of citizens. Among urban environmental issues, urban transportation, urban safety and urban planning, one of the most important factors that has an increasing and decisive impact on urban constituents is urban management that affects other components and elements of the urban system. In fact, the importance of urban management is so much that it seeks to address many urban instabilities in improving the quality of urban management methods; so that many experts, specialists and urban managers believe that the way of urban sustainability is to change the approach of urban management (Bang, 2015: 1647).

In terms of its practical responsibilities, the urban management system is required to plan and execute urban development and construction plans and designs. The urban management, in the form of the country's dominant economic, social and legal planning system, prepares urban development plans for urban areas, and then converts plans into operational projects and executes them in the framework of an integrated collection of administrative and executive systems (Steinberg, 2015: 69).

The problem facing urban planners today is how to apply sustainable urban policies and plans and manifest sustainability aspects in cities. Achieving such situations requires the orientation of the goals and executive plans, the correction of the status of the related structures and management in the affairs of the cities. In other words, the acceptable and high level of economic growth and employment, social progress and the protection of the urban environment form the other aspects of urban sustainability.

Table 1. The Features of the Urban Management System in Iran and its comparison with developed countries (Azizi, 2017: 69).

Features of Urban Management in Iran	Features of Urban Management in Developed Countries
Urban system is extraterritorial.	Legitimacy, sovereignty and authority of the system is in the hand of people.
Management is responsive to authorities.	Management is responsive to people.

System growth and changes are sudden and unpredictable.	System growth is spontaneous and natural.
Participation and sympathy of people about their city's affairs is very low.	Participation and sympathy of people is very high.
Management values and propensities are influenced by government and political context.	Different values and propensities are influenced by social convergence.
The absence of a regular and reciprocal relationship between the elements of this system.	There is a reciprocal relationship between the urban body of the urban management and the urban society.
Urban management lacks much independence and authority.	Urban management has much independence.
The responsibilities of the urban management system are limited.	The system of the city has a complete system of management in all of its urban activities (with the exception of activities related to city's security).
People refuse to pay taxes.	People pay taxes voluntarily and with no refusal.

In relation to urban management methods, there are different scientific models that have tried to take into account the actors, tools and levels of management that greatly contribute to our more comprehensive understanding of the management model of Iranian cities. One of these models is the concept model of Azizi et al. that considers urban management from three perspectives. Therefore, understanding the integrated urban management depends on understanding communications within these three fields, which are: 1. urban management actors, which includes: (a) decision-makers with urban planners, (b) urban decision-makers or policymakers, (c) city's executive managers, and (d) urban stakeholders that are obviously the people and the private sector. 2 urban management layers, which includes: a) policies, b) organizing and planning, and c) executive layer. 3 urban management tools, which includes: a) human resources, b) organization and institutions, c) financial resources, and d) rules and regulations (Azizi, 2017: 69).

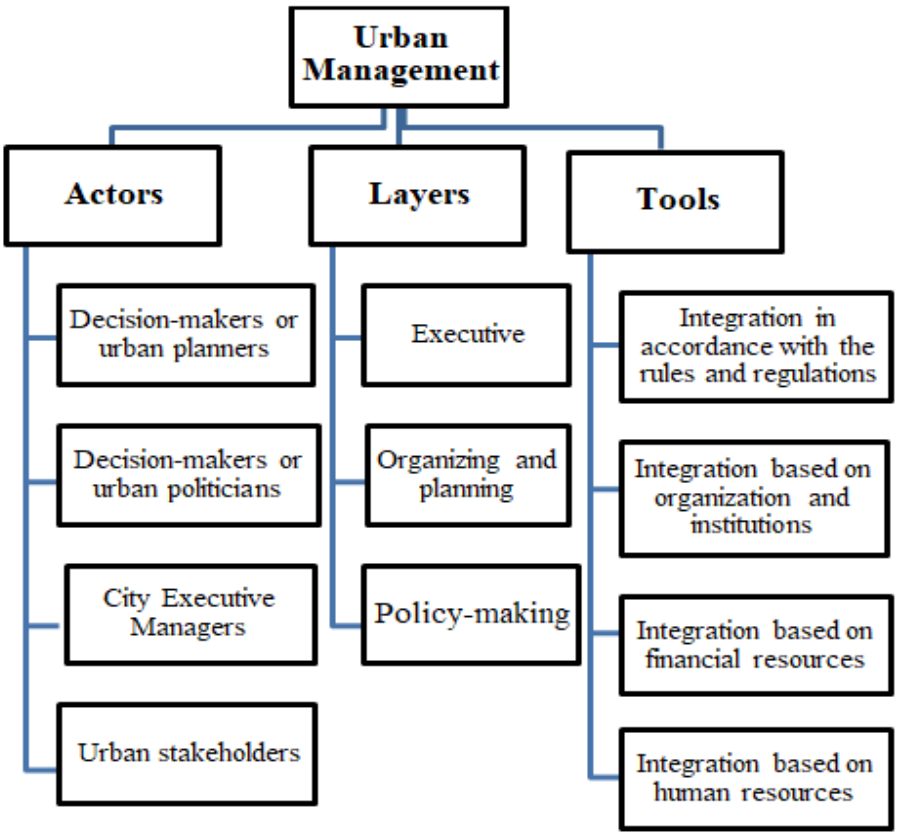

Diagram 1: Actors, Layers and Tools of Urban Management (Azizi, 2017: 69).

The Challenges of Urban Management and Environmental Threats in Iran

In Iran, environmental protection is a public responsibility, and economic activities that lead to the destruction of the environment are prohibited. In fact, the main custodians in protecting the environment are the public sector, the public sector, the private sector and the people. According to this law, almost all organizations of different levels are tangled up with environmental issues. However, the responsibility of some organizations as the custodians of the environment, especially in the urban area, appears to be more highlighted. At the top of such organizations is the State Environmental Protection Agency. Regarding the public sector which includes municipalities, some limited responsibilities have been considered in the field of environmental protection, such as the expansion of green spaces and confrontation with air pollutants, etc. In Iran, urban environmental management has not been accepted as a single phenomenon, and therefore, each sector and its elements and factors are under the management of a particular organization and institution. Therefore, it should not be ruled out that municipalities, as the largest public non-governmental organization, can play a major role in urban environmental management. Of course, the extent to which the municipalities have the capacity to accept this heavy responsibility, or the degree to which the municipalities have been successful in understanding and executing their law-mandated duties and-or whether they have started those responsibilities are discussions that need great contemplation. If we accept this fact that the proper execution of environmental management in municipalities requires at least three main tools (the organizational and institutional structure, human and financial resources), the main position of municipalities have been forgotten in most municipalities of the country because of the financial and administrative concerns. Moreover, it is normal that municipalities do not feel the need to expand their current scope of activities (particularly environmental issues); firstly because in most municipalities of the country, there has not been any defined organizational and institutional structure for environmental management so far. Secondly, due to the current executive responsibilities of municipalities, there is no scientific and expert knowledge which is necessary and proportionate for the environmental management of the city. This means that according to the connectivity of the executive issues, the range of the employees who are active at municipalities is considered more according to their capacity in executing the current issues, rather than according to the scientific and expert aspects. Thirdly, by accepting the fact that "exploring the new responsibilities that have been defined in the field of environmental management for the municipality requires extra time and expenses for the municipalities", one cannot expect that the municipalities, who are often involved in solving their financial problems, welcome the execution of such responsibilities without the necessary credit resources being provided for them (Khan et al., 2013: 164).

Methodology

The present article is of applied type, using the combination of quantitative method (systematic review) and qualitative method (comparative review), so that according to the two descriptive and adaptive dimensions, a systematic review of available researches have been conducted. In descriptive study, the papers have been explored, analyzed and formulated as an article according to such criteria as the title, year, author or authors, the purpose of the study and the term used for the basic connection of the research with each other. Also, since the selected articles are related to Iran and the rest of the world, an opportunity has been provided for the investigation of the comparative dimension of the differences between domestic and foreign articles in terms of descriptive characteristics, the issue of urban management and the difference of concerns surrounding that issue.

Location of the Studied Country

Iran is located in the northern hemisphere between 25 to 40 degrees in north latitude from the Equator and between 44 and 63.5 degrees in east longitude from the Greenwich Summit, which indicates that Iran is in the temperate region. Iran has access to the sea from both sides of the north and south. From the north, Iran

is adjacent to the Caspian Sea. The proximity to the Caspian Sea, with respect to climate, has led to the fact that the coastal provinces of this country, such as Guilan, Mazandaran and Golestan, which are enclosed between the mountains of Alborz on the one hand and the sea on the other hand, are completely influenced by the humid waves of this sea, and also the high rate of humidity, especially the presence of rain during the summer season, has contributed to the growth of vegetation and the creation of forest areas. On the other hand, Iran is located in the southwestern part of Asia; Southwest Asia is in fact an intermediate region between the three continents of Asia, Europe, Africa, and Iran in this region is greatly affected by the events of these three continents, because every incident that occurs in these continents, or the economic, cultural, political and military relations that are established between the three continents, will inevitably have an impact on Iran. Iran has a shape similar to that of an uneven parallelogram, and the length of one diameter is from the Ararat in the northwest of the country to the Gwadar Bay in the southeast with an area of 2250 km, and the length of its other diameter is from Khorramshahr on the Persian Gulf coast to the Sarakhs in the northeast with an area of 1400 km. Thus, the two provinces of Azerbaijan in the northwest of Iran and Sistan and Baluchestan in the southwest of the country are far from each other and also from Tehran, the capital of the country, compared to other provinces. The geographic form and extent of the country's soil have been constantly changing since the eighth century BC i.e. the time of the Medes kingdom, which formed the first Aryan dynasty till about a century ago.

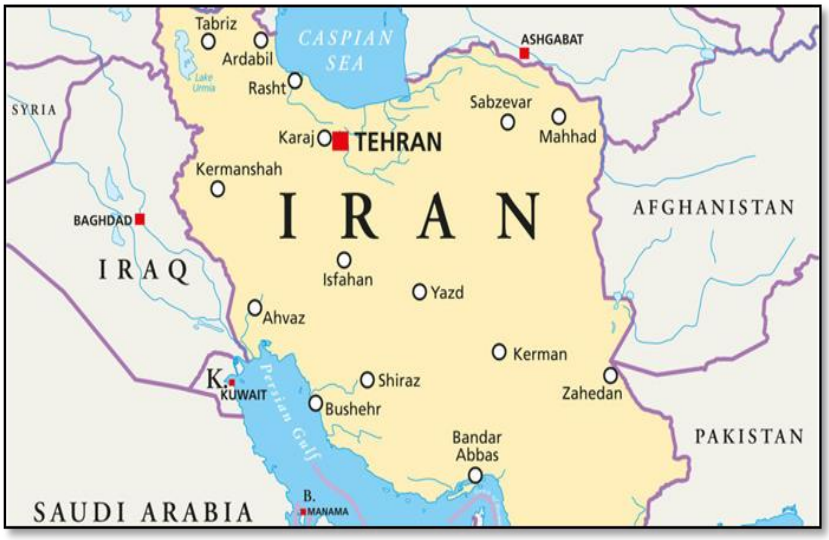

Figure 2. Location of Iran

Today Iran, with an area of 1648195 square kilometers, is one twenty-seventh of the size of the Asian continent and nearly one- ninetieth of the world's land. The southernmost point of this land is the “Gwadar” port and its northernmost point is the “Ararat slope”. The easternmost region of Iran, “Kuhak,” is on the Pakistani border and its westernmost village is the "Bazargan" on the Turkish border. The time difference between the easternmost and westernmost border areas of Iran is about an hour and eighteen minutes. In different places in Iran, various vegetation and animal life is seen. This diversity depends on the natural condition and the climate. The definite border of plant and animal areas are not exactly clear; however, with regard to the climate, the difference between plants and animals is seen in three places of the temperate Caspian region, the temperate mountainous region, and the desert and semi-desert regions.

The population of Iran over the past seventy years has escalated from around 10 million in 1921 to 60 million in 2011. The rate of this increase has not been the same over the entire 70-year period, and its fast acceleration has begun since 1951, and has increased to its three and half times in just 40 years, from about

17 million to 60 million. Given the past population trends and censuses, the annual population growth has been dramatically escalating. The population growth rate is estimated to be 47.1 percent between the years 2011 and 2016. The rapid growth of population in Iran has neutralized the impact of economic and social planning, and has seriously raised the issue of population control. The natural growth of population in Iran is currently about 1.41% per year, which means that every year, ½ million people are added to the country's population. The land of Iran is generally mountainous and semi-arid. More than half of the country's land is comprised of mountains and heights; a quarter of it is comprised of deserts, and less than a quarter of it is comprised of arable land. The country's water resources are divided into eight regions, each of which consists of several catchment areas. The country's territory is divided into 37 areas and 147 sub-areas and 598 plains. In each of the sub-areas, there are plains with different areas where cities, villages and agricultural ranges are often located.

Figure 3. Caspian Sea and Persian Gulf in Iran

Conclusion

The expansion of urbanization followed by the specific problems of urban life, has increasingly necessitated an attention to useful strategies to improve the lives of the citizens. One of the most important factors that has an increasing and decisive influence on the urban environment is the integrated urban management. With the issue of environmental protection becoming more serious in today's world and the necessity to pay more attention to the dimensions of this issue from the point of view of urban management, it appears that municipalities as essential influencing institutions will play a major role in the realization of the objectives of urban environmental protection. Therefore, identifying the legal responsibilities of the municipalities in this field will greatly help to improve the planning and raising the quality of service in the urban environmental sector. According to what has been presented about the municipalities in Iran since the past, the responsibilities of the municipalities in the field of environmental protection can be summarized in three major frames: solid waste pollution, water and wastewater pollution, and air and noise pollution. In this regard, in analyzing the position and role of municipalities in relation to urban environmental issues, three categories of factors can generally be mentioned, as such: organizational structure, legal conditions, and financial conditions. Municipalities currently have an inappropriate intra-organizational structure. Moreover inconsistency and weakness of inter-organizational collaboration of parallel work and interference with urban environmental responsibilities with other government organizations can be noted.

According to the conducted studies, legal conditions are considered as one of the main reasons for the failure in realizing the allocation of urban environment issues to the municipalities. In this regard, the revision of failure in the execution of the financial and human regulations were mentioned. These conditions are related to the support conditions for urban environment management from two perspectives: budgeting and expert workforce. To allocate urban environment discussions to municipalities, adequate funding should be provided,

since the current budget is in line only with the current responsibilities, and the specialist human forces should be assigned in the field of urban environment discussions. Considering the current conditions of cities, sustainable urban development can be considered as a balanced structure that has cultural, economic, social, political and environmental dimensions. In the past, attention to the economic dimension and the selection of proposed activities in the city was only in terms of economic benefits, and now the execution of urban projects and activities, regardless of the negative consequences and its destructive environmental effects, causes instability in the city. Therefore, there is a necessity for any action in the city to be accompanied with environmental considerations.

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