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## Assessment of the Ecosystem-based and Canvas City Approach Based on Sustainable Development by the Integrated Environmental Method (IEA)

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### Abstract

**Statement of the problem:** This paper examines the literature on sustainable development, the historical development of natural disaster, the methods of assessing sustainable urban development and its criteria and indicators, especially in Iran, because the theoretical foundations of these discussions in Iran are less well-known. Integrated Environmental Assessment Studies is an entirely new, dynamic, and systematic approach that observe the city and the environment in an ecological mutual cycle, Analyze ecosystem model assessment systems and determine the indicators that are studied and used in each region. It will be paid. In this article, along with understanding of urban environmental issues, the role of urban management in solving environmental problems in urban ecology areas has been studied.

**Aims:** 1. Understanding urban environmental problems and the characteristics of them; 2. Determining the role of urban management in solving environmental problems in urban ecology; 3. Localization of the integrated conceptual framework in relation to the application of urban management. based on the recognition of environmental characteristics.

**Research method:** The research method used in this paper based on the type of research is an analytical-exploratory method, based on the nature and method of research of the qualitative method, which has been tried to analyze the content and review of the document library and then the comparison of results are essential.

**Conclusion:** The findings of this paper show that close monitoring and evaluation of the effects of human activities on environment and its related infrastructure is a major issue. Since there are different methods and indicators for assessing urban sustainability, as discussed in the paper, there is necessity for the development of a micro-urban urbanization which is precise and comprehensive in the form of a conceptual framework. This framework should be able to Integrate with a larger scale assessment tool.

**Keywords:** *Construction, Sustainable management, Urban ecosystem assessment, Indicators assessment methodology.*

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## Introduction and problem statement

Sustainable urban development is considered as a developmental model and needs to be coordinated with the living environment while at the same time supporting the environment from the local level to global systems (Hataminejad & Shahidi, 2017).

The importance of the environment in urban studies is so evident that the term “ecological urbanization” has been introduced in urban literature. It has a unique history and impact in various urban studies, such as “urban flexibility.” Ecological urbanization seems to be a term that has a decisive influence on urban design processes in cities. The concept of environmental planning turns to a functional requirement in order to achieve a sustainable environment. It is an effective tool aimed at developing urban development in line with environmental, social and economic values. One of the strategic approaches to planning sustainable cities is “ecological planning”. Ecological planning is a multi-dimensional concept whose purpose is to preserve the richness and diversity of biodiversity and productivity through sustainable management of natural resources (Bargh Jelve, Mansouri & Eslami, 2016).

The attention of cities as a rule of the congregation of dates back at least to the years 1940-1960 and the thoughts of Howard Edom and Ian McHarag. Recent thoughts attempts to describe the space between human and nature (for example, which cities) as a social-ecological system.

City-centered approach is the first principle and it provides two complementary messages. First, this approach admit that cities are currently in the lead in managing change and leadership in an integrated, forward-looking approach. Second, a city-centered approach emphasizes the importance of cooperation in each development plan, unique aspects of the site, especially environmental assets. Therefore, city-centered approach is focused on activating local leadership and local ecology. Direct or indirect environmental degradation affects urban areas and leads to

negative systemic results that are not desirable and can lead to various deficiencies and adverse outcomes for urban areas and endanger the city’s liveliness and urban life on a large scale (Sharifian Bar Foroush & Mofidi Shemirani, 2014). Because of all these disasters, we need to consider an integrated management strategy for cities and their environment in order to reach a sustainable solution and adopt a policy that ensures urban living, as well as the safety of the environment and its productivity. Coincide. Therefore, the purpose of this research is to identify the environmental and ecological problems of the city and its specific features and characteristics, and then to provide different methods of ecological assessment of urban problems, which mainly functions through environmental indicators. Applying the integrated IEA environmental assessment method to its specific method, as well as using its specific analytical frameworks such as DPSIR, can be used as an effective template that delivers its specific features for integrated studies and introduces and set up a new methodology in Iran.

## Literature review

In the present research, we tried to use the latest and most relevant Latin and Persian sources in relation to literature based on city-based approach based on integrated environmental studies and related evaluation methods in a comparative way. Of course, due to the plenty of resources, here only the most important ones have been examined.

Redman, Grove & Kuby (2004) discusses integrated urban ecological cycles in an essay entitled “Integrated Approaches to Long Term Urban Ecological Systems Studies”, and in fact, the so-called studies regarding the relationship between ecological systems.

Mc Granahan, Leitmann & Surjadi, (1997), in an article entitled “Understanding environmental problems in undesirable neighborhoods” in poor urban areas, examined the serious environmental problems in the homes of residents that caused

health disorders, and in some way the relationship between the environmental impact of urban residents that could be improved with regard to efficient urban management.

The lack of adequate sanitation, the lack of adequate drinking water, the use of contaminated fuel, solid waste not collected, and the absence of combating insect pest entirely from poverty and the shortage and lack of environmental services. Many people, especially women, children and elderly, spend most of their time around their habitat, and thus their health is directly threatened by these environmental problems. Respiratory infections and diarrhea are two main causes of childhood death. Because the environment of the home and its neighborhoods is not sanitary.

The report assesses three applied environmental research approaches that households and community involve:

- a. a wide range of household surveys;
- b. rapid assessment of participation rates;
- c. contingent assessments (Mc Granahan, Leitmann & Surjadi, 1997).

All models are operative-oriented and focus on interviewing, discussion and observation until complex experimental testing.

These three approaches can be consistent with a. strengthening government interventions; b. fundamental and radical activities; c. the provision of services to the private sector.

The approach adopted in this report is that each technique has its own advantages and is applied to any particular situation.

At the same time as developing cities, their populations will increase, and limited, and inadequate resources should be redistributed. Therefore, the lack of services such as sanitary drinking water, flood drainage, sewage treatment, waste management, and even the proper sanitation and shelter cannot be achieved with population growth. Even urban executives often do not know what to do with this complicated situation; on the other hand, the lack of up-to-date spatial

information, also adds to the poverty of citizens and urban managers, and generally leaves them out of control.

Therefore, integrated terrestrial technologies such as GIS can play an important role in creating collaborative and interactive activities and serve as valuable assets to assess, understand and portray existing facilities and address complex environmental problems.

The most important point used in this resource is the methodology and conceptualization of the urban environment and the benefits of integrating the environment into urban planning and management. Continuous barriers to the integration of the environment have been discussed in urban planning and its specific tools. Therefore, planning and management tools are among the most important foundations of the theory, which recognizes and how they work and apply them in part of this research (Fabisch & Henninger, 2014).

Seifollahi & Faryadi (2006), in their work titled "Assessing Tehran's Urban Environment quality based on Sustainability Indicators", have emphasized the indicator approach based on sustainability indicators and have tried to create a system of indexing based on the specific characteristics and characteristics of Iran. In this source, a set of 54 indicators was selected and classified as indicators of increasing or decreasing the quality of the environment in the form of a simple mathematical model.

Based on the mentioned model, Tehran's environmental quality in 2006 receive 59.5% of the average environmental rank. Therefore, the use of methodology and the use of the classification indices in this research has a significant role and shows significant practical evidence as a model of the method of doing such studies in Iran.

Bahraini & Tabibian (1998) also referred to the indexation system in a similar study entitled "Urban Environmental Quality Assessment Model".

Sharifianpour & Faryadi (2013), another study

“Comparative Analysis of Urban Environmental Assessment Indicators”. The topic of indexation in Iran has been emphasized, in his article, three precise sources and their methodological points are mentioned.

Therefore, as pointed out in the literature review, the main focus of the research in this paper is on ecological relationships between the environment and the human environment, integrated environmental assessment models, their various models and their specific methodology, as well as indicators used to evaluate these models. The integrated environmental assessment model, as well as its analytical framework, has been carefully considered.

A specific feature of the research background is the emphasis on studies that have been carried out by various scholars on indexation in Iran and have made this type of study more credible.

### **Research theoretical foundation**

#### **• Necessity of city-centered ecological approach**

The early origins of the ecological debate in urban areas should be sought in the interaction of humans and the environment, and so on, the various effects that are mostly negative and unpleasant.

It can be said that the above-mentioned mechanism of human-environment interaction was emphasized after the twentieth century, and mainly after the middle of the twentieth century, and that was when globalization and the growth of human populations, through structural change and performance, endangered the sustainability of resources. The environment is threatened, which is actually a process international integration resulting from the exchange of views, products, ideas and other cultural aspects (Yigitcanlar & Dizdaroglu, 2015).

Human interaction with the environment and its components is precisely an ecological relationship due to the intervention and participation of components, elements, factors, shareholders, and so many mechanisms in urban areas. Therefore, the focus on sustainable urban development is necessary from an ecological point of view

(ecology).

This concept helps scientists and researchers to consider systematically ecological issues and provide solutions for using methods and evaluation models based on a dynamic and systematic process.

Therefore, environmental processes need to be integrated with the planning process. This integration is important in terms of understanding the physical characteristics of the developed areas as well as recognizing the environmental mechanism, its strengths, limitations and risks in the planning process (Yigitcanlar, Dur & Dizdaroglu, 2015).

#### **• Ecological planning and sustainable cities**

The historical process of ecological planning goes back to the early activities of Frederick Lowe Olmstad, Ebenezer Howard, Frank Lloyd Wright, Patrick Gades, Louis Mumford, and Ian McGraw. Among the pioneering view of urban planning is the latest McGraigan theory.

He introduces the ecological usage theory of the earth and expands the model of information intelligence layers that uses sustainability maps of different land use patterns to identify sensitive ecological sites and provide breakdown-based strategies. And matched the analysis. This model also provides a theoretical foundation for the GIS (Yigitcanlar, Baum & Horton, 2007).

At the beginning of the 21st century, ecological planning emerged as a global sustainability vision that look for integrating human and natural constructions (Yigitcanlar, Dur & Dizdaroglu, 2015).

Ecological planning is more than an instrument and is based on the science of interactions between people and the earth as a way of thinking about the dialogue between human activities and natural processes, and it is a global view that specifies the process and scope of professional activity and research in the planning field (Yigitcanlar & Dizdaroglu, 2015).

summarized the key features of ecological planning as follows (Yang, Yang, Yan & Ouyang, 2004).

- Fulfilling the innate human needs;
- Moving towards sustainability of resources;
- Preservation of ecological integrity;
- Imitating natural ecosystems.

#### • **Sustainable urbanization and its features**

The goal of modeling cities as “sustainable economy” can be ethically sound, effective, healthy and fair, self-regulating, self-renewing, flexible, and psychologically complementary and co-operative. In this regard, cities need to be considered as ecosystems in order to develop sustainable development policies and programs.

A sustainable urban ecosystem will manage the natural environment by:

- Effective use of natural resources;
- To zero waste production through recycling and reuse;
- Maintaining ecological functions and processes with automatic adjustment;
- Providing flexibility against environmental disturbances;
- Flexibility in response to these disorders (Yigitcanlar & Dizdaroglu, 2015).

In addition Newman & Jennings (2009) believe that urban construction focuses on a number of principles based on the following:

- Provide a long-term urban perspective;
- Achieve long-term economic and social security
- Preservation and revitalization of biodiversity ecosystems;
- Minimizing the ecological effect of cities;
- Creating a sense of place that reflects the distinctive features of cities;
- Sustainable production and consumption;
- Enabling cooperative networks towards a sustainable future.

It is imperative to explore the city as a natural resource and recognize human activities as a natural environmental engagement while converting cities into sustainable societies. Therefore, the adoption of a comprehensive and integrated sustainability assessment approach is required to monitor this interaction over time and according to the geographic

scale (Yigitcanlar & Dizdaroglu, 2015).

The following are the various dimensions of the socioeconomic development that includes many aspects of human life and can be urban and rural:

- Noncommercial safety;
- Noncommercial health;
- Ecological Industrial Metabolism;
- Ecological Landscape;
- Ecological awareness.

Different dimensions of urban ecological development, which ultimately extend to a number of ecological design principles, are certainly not intended to support ecological sustainability and urban ecosystem sustainability, in order to provide citizens with better living standards and healthier urban environments.

Therefore, determination of the sustainability of an ecological environment or urbanization should be determined through the tools and methods that can serve as indicators and models (Table 1).

Choosing the appropriate assessment method depends on (1) the subject of evaluation, (2) the nature and complexity of environmental impacts, and (3) the dimensions of time and scale (Yigitcanlar & Teriman, 2015).

#### **Sustainable indicators of urban construction**

Urban sustainability indexation is a tool that reflects environmental changes over a period of time, and focuses on environmental issues that arise from interactions between the environment and human information activities (Yigitcanlar & Dizdaroglu, 2015).

All indicators are common in addressing these questions: (1) what happens to natural resources, (2) why this happens, and (3) what is being done about it (Hammond & Mc Laughlin, 1995).

Indicators are one of the key components of sustainability, which helps to get an overview of the status of development, and also reveals whether sustainability goals have been achieved or not. As indicated by Gabrielsen and Bush

Table 1. Ecological Concept. Source: Bargh Jelve, Mansouri & Eslami, 2016.

Concept	Dimensions of ecological development
Ecological safety	Clean air, safe and reliable water supplies, food, living and working environments, urban services and natural disaster protection.
Ecological health	Efficiency and economic efficiency of ecological engineering for recycling and treatment of human waste and all waste of gray waters.
Ecological Industrial Metabolism	Protecting resources and the environment through industrial transition, emphasizing reuse of materials, creating a lifecycle, renewable energy, efficient transportation and responding to human needs
Ecological landscape	Organized structures, open spaces such as parks and plazas, connection factors such as streets and bridges, and natural impacts such as topography of land and waterways, in a way that maximizes biodiversity and access to urban environments for all citizens and protects resources and energy. Similarly, minimize the problems such as car crashes, air pollution, destruction of natural water flows, thermal islands and global warming.
Ecological awareness	Help people find to their place in nature and their cultural identity. Likewise, they can change their behavior and their ability to protect high-quality urban ecosystems.

2003, environmental indicators are used for four main reasons:

1. providing information on environmental problems that help planners and policy makers to assess the extent of their enthusiasm in addressing environmental problems.
2. supporting the design of policies that helps to identify environmental factors.
3. Monitoring the Effects and Effectiveness of Policy Execution.

Promote public awareness of environmental issues through providing information on the environmental impacts and responses generated by the implementation of these policies (Yigitcanlar & Dizdaroglu, 2015).

It should be noted that so far many indicators have been used to evaluate the environmental quality assessment in different parts of the world from Japan to London, China, France, Norway and Slovenia, and so on. Each of these countries has provided a number of indicators.

In Iran, because these indicators are very general and not effective for assessing the quality of

urban environment, nor are there standards for measuring them, or they are conceptually vague and non-transparent. Like the sustainable climate or public health, or even in some cases, Iran's statistical documents and evidence for using some of these indicators are either not available or does not seem adequate, such as the state of the local government, so the use of these indicators is not feasible.

As mentioned before, it would be better to rely on indicators that have already been matched by other scholars in a comparative way with many international indicators and have tried to find the most practical and practical ones, whose criteria for assessing it with respect to socio-economic conditions Cultural, political and environmental aspects of Iran.

Perhaps, in the meantime, it would be possible to emphasize the two categories of studies that Bahraini & Tabibian (1998) which in fact were the result of a comparative study of international and national indicators and, to a large extent, the criteria for assessing the quality of the

environment in the cities of Iran are consistent and can be used as a general indicator for the present study with a quantitative effect and the basis of the study.

In the research project conducted by Bahraini and Tabibian entitled "Preparation of Urban Environment Quality Assessment Model", urban sustainability / instability indices are divided into three main factors based on three categories of basic human needs: basic needs (biological and physiological), Social and economic needs and cultural and artistic needs. The basic needs are divided into three categories: natural environment, welfare and health, safety and security. Social and economic needs are divided into seven categories of housing, economy and employment, education, social environment, urban facilities and energy, energy and transportation, and finally, cultural and artistic needs are divided into two categories of artistic and artistic and cultural heritage, a total of 12 groups of indicators are:

Each of the 12 index groups is subdivided into sub-indices in the relevant field, and ultimately reaches the criterion that is the most desirable level of field quality measurement.

It should be noted that 12 index groups will then be analyzed in a tree model by a simple mathematical model.

In this method, it is possible to use it for neighboring neighborhoods, and it is possible to divide and study them in different zones according to the size of their neighborhoods (Bahraini & Tabibian, 1998).

The main result of this assessment is in 2006 (census year based on this study). Shows that Tehran has achieved more than half of the best expected quality, 59.9%. Comparison of this result with the final value of Tehran's environmental quality was 53.3% in similar studies in 1996.

(The census year) shows that environmental quality has increased slightly over the past ten years. Observing this trend may indicate a more vivid and more sustainable route for a city to

move. On the other hand, attention to these results can show the city's strengths and weaknesses to Tehran's urban planners. Finally, it can be argued that such an insight will facilitate a better decision on the implementation of development plans. Accordingly, the establishment of integrated urban management in Tehran could solve many urban problems and thus accelerate the process of improving the quality of the environment. Of course, it should be noted that the implementation of this integrated management is not achieved only by the municipality and city authorities, but also requires the participation of people and other relevant departments (Table 2).

### Research method

Qualitative research and content analysis and exploratory method have been used in this research. The methods of analysis used in this study, which are detailed in another article on their analytical results, are beyond the scope of this paper, in summary, are based on two methods (IEA) in order to understand the environmental problems and the causes and outcomes of them. It is the analyst of the development of environmental indicators and its analytical framework (DPSIR), which, at the spatial-temporal scale, identifies current environmental issues and analyzes its changes.

DPSIR is a tool for integrating economic, social and physical systems (natural) through a systematic approach to provide a basis for more accurate analysis within the IEA approach. This model is a framework for functional analysis and determination of the causal interaction structure of environmental problems. This model is a decision-making tool that collects and analyzes a lot of information in order to create and formulate indicators that can reflect the causal relationship between human activities, environmental outcomes, and appropriate responses to environmental changes (Khatibi, Danekar, Pourebrahim & Vahid, 2016).

Since this model can explain the relationship between

socioeconomic and environmental systems, it can be widely used to analyze the interconnection process of human-environmental systems (Pinto, de Jonge, Neto, Domingos & Patricio, 2013; Hou, Zhou, Burkhard & Müller, 2014).

This methodology is based on a specific indicator system that is presented below. After determining these indices for the studied area through the hierarchical analysis method, these indices can be analyzed and the final conclusions are made to determine their priority for the relevant experts as well as residents (Table 3).

### Findings

Today’s conditions in cities require governments and government agencies to analyze and evaluate the quality of cities in different ways.

in this way, while recognizing the existing quality, strengths, weaknesses and failures, the possibility of planning more consciously and purposefully to eliminate Deficiencies and improving the quality of

cities. To this end, the city-based approach based on the integrated approach of urban environmental planning and sustainable urban management is the most efficient method (Fig.1). On the other hand, this integration process has many common interests (both economic and social), including the reduction of poverty in certain areas. The IEA approach to understanding environmental issues and its causes and outcomes is, in fact, an analyst for the development of the environmental indicators process, and the DPSIR, the IEA functional framework, in the spatial and temporal range to identify current environmental issues and its developments.

DPSIR is a tool for integrating socio-physical and physical systems (natural) through a system approach to provide a basis for more detailed analysis within the EA methodology, and indeed one of a variety of analytical frameworks for IEA. This model is a framework for functional analysis and the determination of the interaction

Table 2. Criteria for the selection of urban environmental indicators. Source: Sharifianpour & Faryadi, 2013.

Metrics	A good indicator is an indicator that ...
Society and Sociology	<ul style="list-style-type: none"> <li>- Is concerned with selected topics and issues.</li> <li>-Has a sensitivity to the environment and relevant human activities.</li> <li>-Applies to local or national environmental issues</li> <li>-correctly reflects the priorities of public policy.</li> </ul>
Analytic / Reliable Integrity	<ul style="list-style-type: none"> <li>-Is based on scientific and technical principles.</li> <li>-Is based on international models and based on an international agreement on its credibility.</li> </ul>
measurement	<ul style="list-style-type: none"> <li>-Is based on justified prices and benefits and profits.</li> <li>-Has appropriate documents and qualities that are recognizable and acceptable.</li> <li>-Is periodically update and follow the proper process.</li> </ul>
User-centric and user-friendly application	<ul style="list-style-type: none"> <li>-Transparent, understandable and easy to establish. Therefore, it is appropriate for the target group in terms of complexity.</li> </ul>
Comparability	<ul style="list-style-type: none"> <li>-Is able to assess the conditions and trends.</li> <li>-Be able to compare and be lower than and above the target.</li> <li>-Is able to compare in time and space.</li> </ul>



Table 3. Related topics and Related Indicators. Source: Kissinger &amp; Rees, 2010.

<b>Issue</b>	<b>Related topics</b>	<b>Related Indicators</b>
<b>Poverty</b>	- low income - Health - living conditions	- Percentage of people below the national poverty line - Percentage of people who use appropriate health facilities - Percentage of people in the neighborhood living in shed
<b>Governance</b>	- Crime and delinquency and urban violence	- The number of violations and crimes recorded per 10,000 population
<b>Sanitation and Health</b>	- Nutrition status - Health status and relevant hazards	Nutrition status for children and adults - - Smoking rate and suicide rate - The prevalence of diseases such as diarrhea in children
<b>Education</b>	- Level of education	- Number of adults with high school and university education - Percentage of people who are exposed to natural disasters (according to natural disasters)
<b>Natural Disasters</b>	- Vulnerability against natural disasters - Preparing for natural disasters and responding appropriately	- Economic losses due to natural disasters in terms of population and gross domestic product
<b>The EARTH</b>	- Land use and its location	- Land user changes - Poor quality of land
<b>Healthy Drinking Water</b>	- Water quality	- Various biological and chemical contaminants in water
<b>Bio Variation</b>	- Biomass	- Access to refined water and its quality - Effective management of protected areas - Selected areas with key systems and indicators - fragmentation of habitats
<b>Economic Development</b>	- microeconomic performance	- Per capita GDP - The amount of investment in GDP - The amount of savings - Net Savings Rate Set
	- Employment	- labor productivity and labor cost - Employment rate and employment status / gender - The rate of women's participation in household wages - Employment in various economic sectors
<b>Consumption and pattern of production</b>	- Energy consumption	- Annual energy consumption per capita according to the main types of users - The share of renewable energy sources in total energy supply - The amount of energy used as a whole, as well as in different parts of the activity
	- Waste generation and management	- Production of waste and its amount - Production of hazardous waste - Disposal of waste, burial and recycling

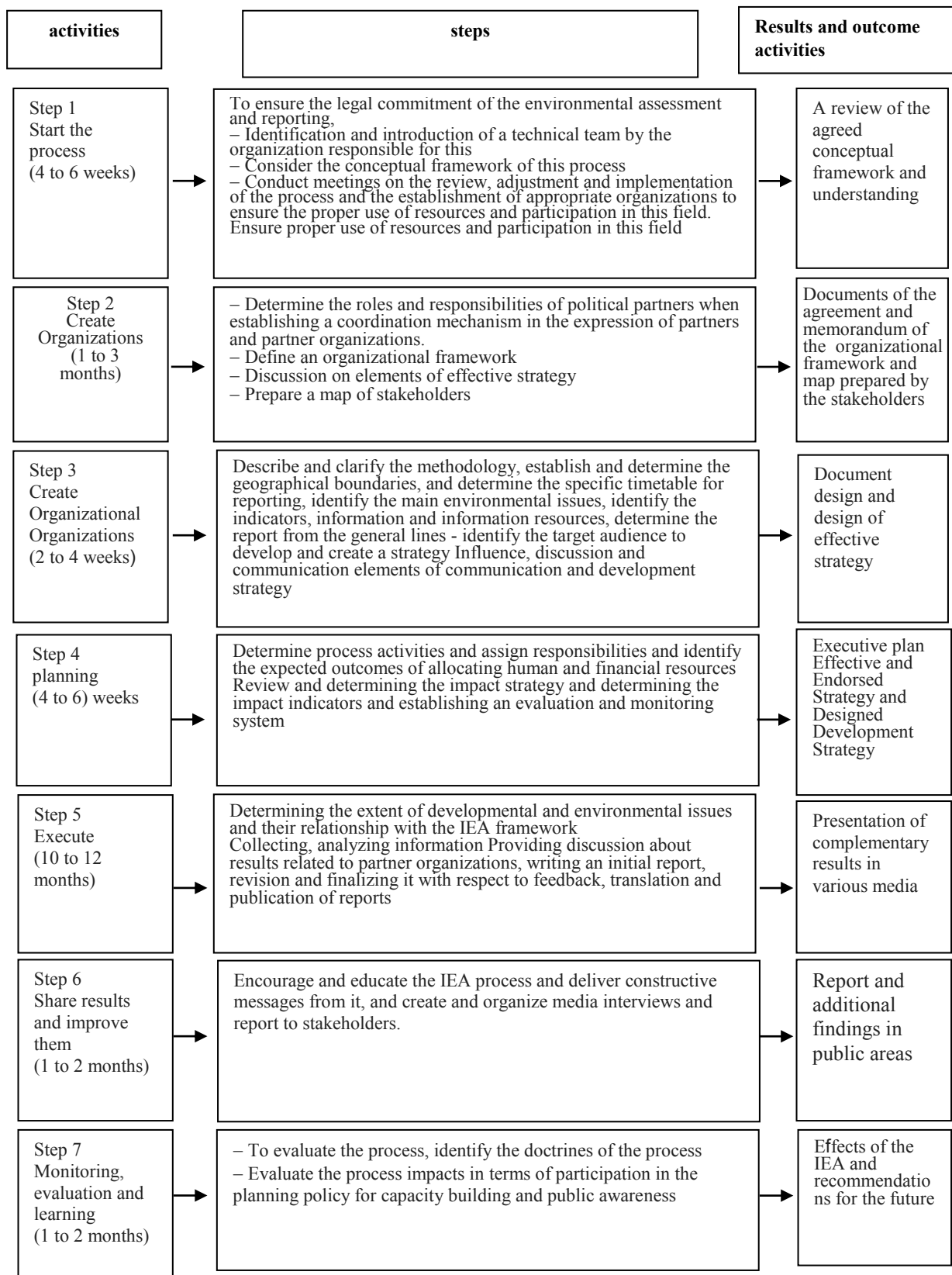


Fig. 1. National Process Steps. Source: Kristensen, 2004.

structure of the causal problems of environmental problems. This model is a decision-making tool that collects and analyzes a vast amount of information to create and formulate indicators that can reflect the causal relationship between human activities and environmental outcomes and responses to environmental change. In this approach, the results of constructing and applying the 12-point indices of urban environmental quality assessment of Iran with its specific methodology and its operation with regard to the use of a simple mathematical model and statistical nutrition of its designed model requires another research, with its angles Good Recognition and practical and practical application of it (Fig. 2).

### Discussion and analysis

Therefore, the model presented in this assessment is a homogeneous adaptive model that can also be used to assess the environmental quality of other cities. The performance of this evaluation model depends on the input of the information and the replacement of the correct information, which in a collective movement from the bottom up can explain the quality of the urban environment. Meanwhile, based on studies conducted and according to the standars database to provide accurate information, in order to use this model to examine the quality of the environment in urban neighborhoods, each of the three needs

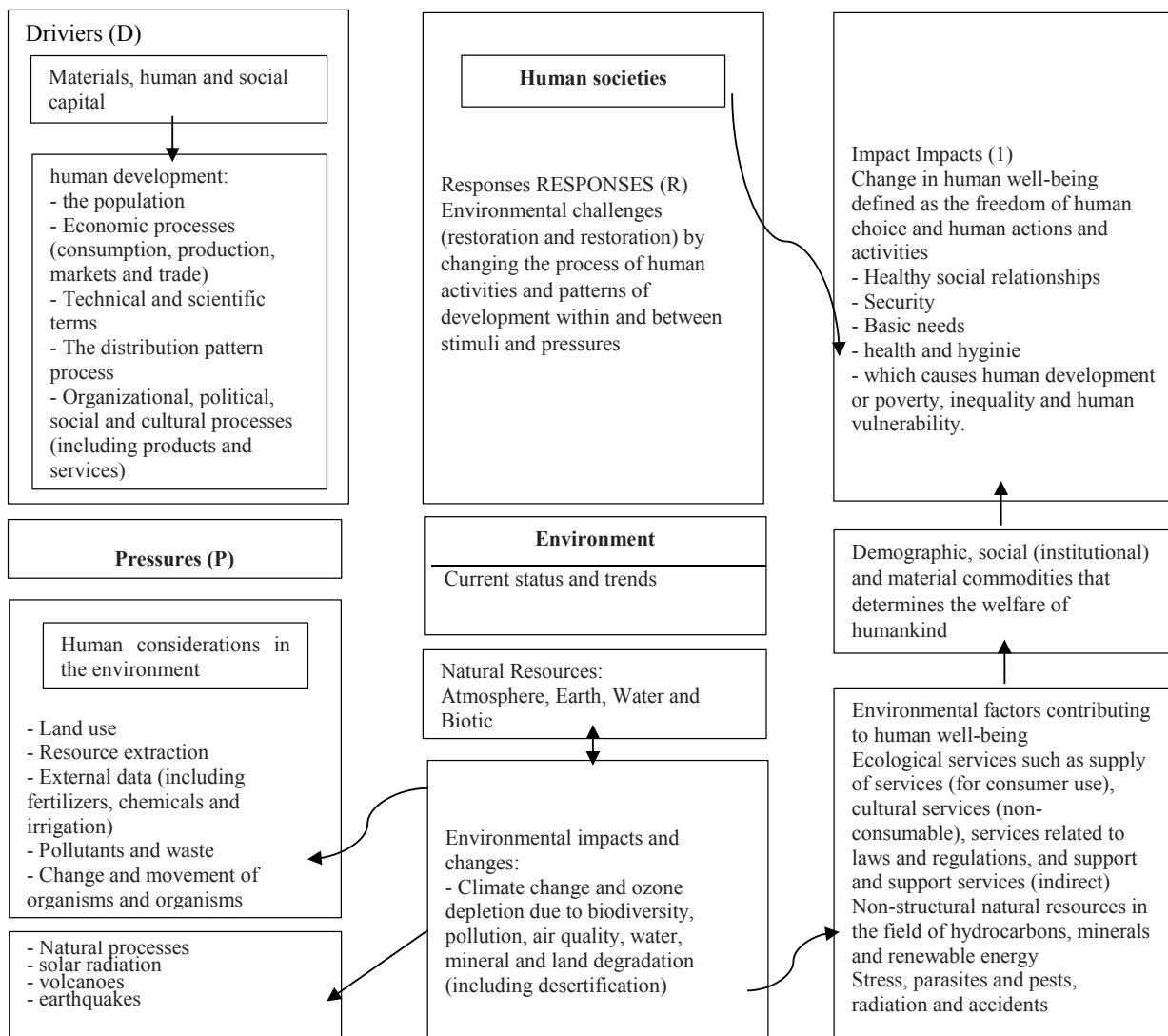


Fig. 2. Conceptual flowchart of DPSIR. Source: Kristensen, 2004.

indicators that are the largest and smallest, local and not macro, so that the assessment is done in the context of urban neighborhoods with less difficulty and higher precision. Meanwhile, in studying the quality of urban environment of neighborhoods, some of the indicators have a higher planning range and aiming at more accurate and more practical results at local scale. Therefore, it is better to distinguish between the indicators in three dimensions: the basic biological and physiological needs of social and economic needs and the cultural and artistic needs of the indicators of the natural environment and safety and security from the group of basic needs, indicators of the social environment and facilities and urban transport and transportation from the group of social and economic needs and finally the index of the human environment or the artifact from the group of cultural and artistic needs and then collecting information from official statistics and sources, questionnaires and field observations, and with their special methodology, they Analyze the quality of urban neighborhoods The comparative face was determined.

### Conclusion and recommendations

The primary objective of this paper is to focus on the importance of urban-based ecosystem approach for sustainable urban development in Iran and approaches, methods and formulation of various indicators related to them using the literature, and the second goal is to demonstrate the necessity of introducing and adopting the most practical and most likely approaches. Indicators for such studies in Iran that are consistent with organizational systems and in accordance with socioeconomic, cultural, environmental and decision-making conditions, and can be applied to mathematical formulation and specific and universally applicable standards for all cities.

The findings of this paper show that close monitoring and evaluation of the effects of human activities on the environment and its related

infrastructure is a major issue.

It should be noted that a sustainable urban construction strategy is needed to explore the city as a construction site and to examine the interaction between urban development and human activities. The assessment of urban sustainability is a tool that helps policy makers and decision makers to improve their efforts towards sustainable urban development.

Since there are different methods and indicators for assessing urban sustainability, as discussed in the paper, there is the need for the development of a micro-urban urbanization that is precise and comprehensive in the form of a conceptual framework. This framework should have the ability to integrate with larger scale assessment tools. To this end, many efforts have been made by some famous scientists. Practical methods such as adopting an approach for collecting data using indicators, specifying values or specific ranges, performing a relative stability assessment using indicators at the micro level, and generalizing these findings to the local level and then to the regional level and the wider levels by These scientists and theorists have been suggested.

In Iran, this kind of studies is very rare, and in the early stages unfortunately. The reasons for this include the following:

In the eyes of authorities, these studies have not been accurately defined, the need for such studies is unknown and perhaps vague and unclear, there is no organizational structure responsible for these studies, and ultimately, in general, there is no trust in the accuracy of these studies and it is never expected to be feasible.

Therefore, it is suggested that, in order to carry out the operational plans related to the ecological assessment indicators.

First, the official custodians and approvals of these types of programs and studies are determined, and then, in order to generalize and apply these programs, they must be made aware of them more than trusting them. Meanwhile,

the accuracy of the various evaluations requires a harmonized and homogeneous database, the necessary statistics, the application of appropriate statistical standards and the type of data necessary for the various physical, economic, social, cultural and environmental indicators, and whenever possible, the database of the necessary data with the characteristics and The features that should be mentioned have been made to some of them. Certainly, the reliability of these studies could be reliable.

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