



IMPLICATION OF THE CONCEPT OF ECOCITY IN CITY PLANNING IN INDONESIA

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ABSTRACT

Concern for the environment that has worldwide affects various aspects of life, including in terms of urban planning. The application of the concept of an ecological city in sustainable urban planning pays close attention to the local aspects of the community and also the dynamic functions of the city based on current adaptations and developments. With the application of an ecological city, there is a balance between urban development and development and environmental tranquility. A city that applies an ecological concept will be able to create a city with a safe, clean, and comfortable situation for its people by maximizing all the potential of the community through empowerment, facilities, and in sync with urban planning. To be able to implement it, good cooperation between communities is needed to build a city with a balanced environmental, economic, and socio-cultural life for a better future life.

Keywords: urban planning, ecological concept, sustainable city

1. INTRODUCTION

Currently, the environment is a topic of global discussion and affects various aspects of life, one of which is urban planning. Urban planning or urban planning is the activity of allocating land use management and the construction of buildings and road networks that are useful as achieving a balance between comfort, beauty and cost. The approach to urban planning also pays attention to environmental issues which are often associated with the concept of sustainable development/ecological city planning (Fuady, 2015).

The sustainable planning of all cities in Indonesia is influenced by the increasing population and the need for development land such as housing, shops, offices, and others. (Budihardji, 2005). However, it can be observed that the current state of the city's rapid progress has not been matched by good urban management skills, as a result, it often creates various problems, as well as various examples that can be seen, namely the reduction of green land in the



city, the declining quality of the environment due to excessive use of land conversion. inappropriate, causing disasters and climate change, declining infrastructure services, causing congestion on roads, increasing slum areas in urban areas, decreasing urban management capacity and increasing urbanization and migration of people from rural to urban areas (Maryona, 2021). Based on the various problems that have occurred as described above, it can be seen that the topic that is the focus of attention in this paper is how to plan an ecologically sustainable city.

2. LITERATURE REVIEW

2.1 City Planning

The activity of allocating land use and making buildings and road networks with the benefit of achieving a balance between comfort, beauty and cost or urban planning is also a policy formulation for the utilization of the land area of the city including the space above and below it as well as guidance and control for the implementation of urban development to achieve specific purpose. City planning:

- Analysis is breakdown of data, future forecast based on current state
- Policy, namely the selection of the appropriate plan for implementation, including knowledge of the objectives and criteria for reviewing alternative plans
- Design, in other words presentation (Crowley., dkk. 2020)

The components of the city boundary are: Providing opportunities for collaborative action (whole and integrated), positive, sustainable, sustainable, with an understanding of primary and secondary facts, to make everyone worthy and happy, and maximize opportunities for decent living. The purpose of urban planning is to ensure a safe, orderly, smooth and healthy life and livelihood for city residents. The realization of the use of urban space in accordance with the city, national and regional development goals and policies (Haberl., dkk. 2016).

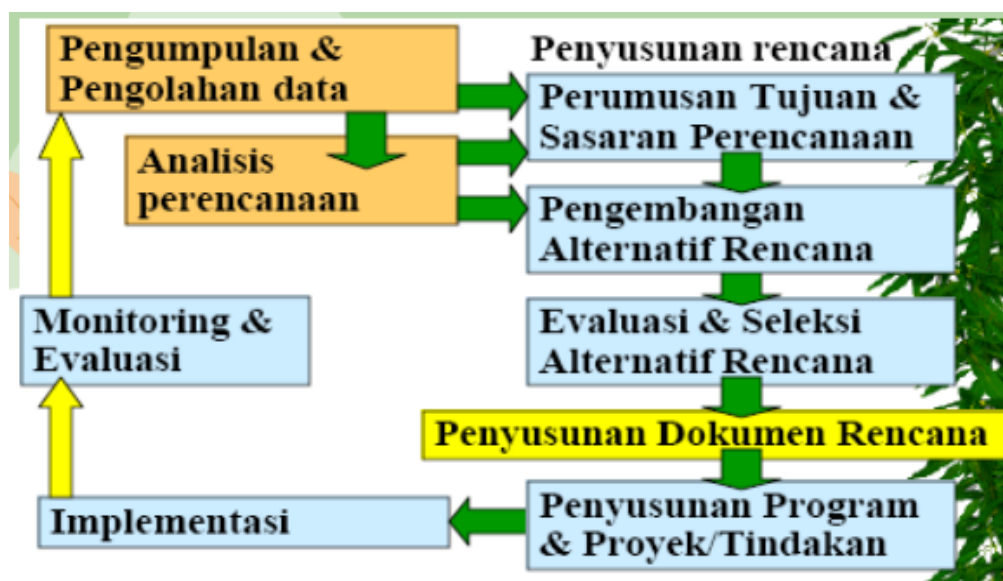


Figure 1. Comprehensive Planning Process

2.2 Ecological City Planning

Development of the Concept of Ecological City (Ecocity)

- a. Ecocity was originally developed as a human settlement model with an independent and sustainable structure and function of natural ecosystems. This concept uses technology to integrate natural and cultural diversity into integrated designs through the use of technology (Currie & Musago, 2017).
- b. The Ecocity concept is a concept that is developing along with the paradigms and movements of appropriate technology (AT), community economic development (CED), social ecology, the green movement, bioregionalism and sustainable development (Campbell, 2016).
- c. Green cities have valuable advantages in terms of ecological design standards and the introduction of renewable energy over neo-traditional urban forms, urban containment and compact cities (Hall & Balogh, 2019).
- d. Ecocity focuses on the concepts of social evolution, coexistence, adaptation and resilience, efficient use of energy, efforts to reduce natural damage, and the creation of an attractive environment for people in the structure and function of the city (Mayona, 2021).

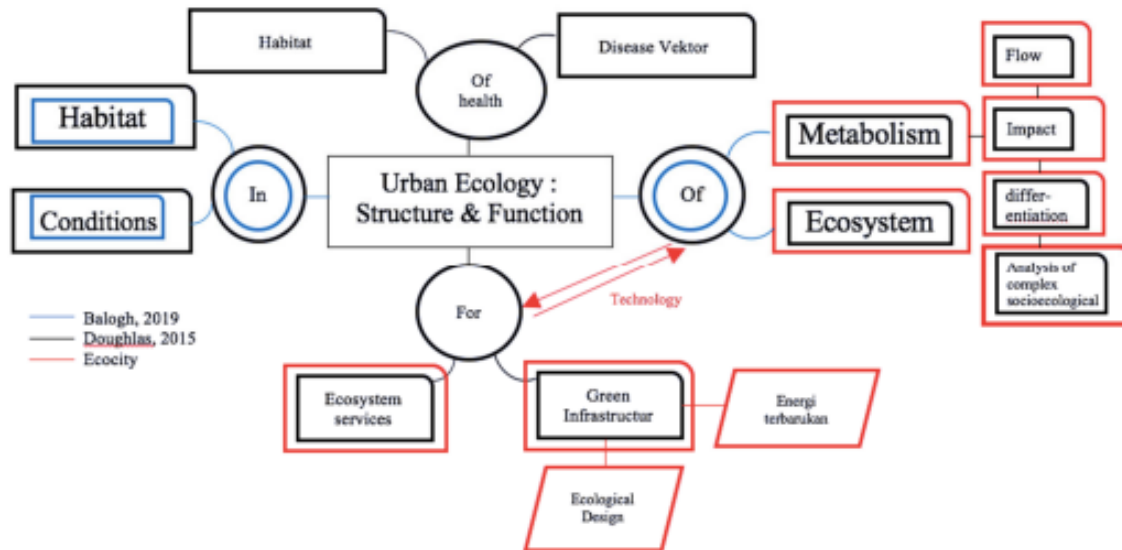


Figure 2. Ecocity Concepts in Urban Ecology

Urban ecology focuses on the study of the biological and abiotic structures and functions of cities. The ecological structure of a city is composed of the number, size, composition, and type of components, and is composed of biological and biological components (Romano, 2018). Functionality is the process by which a species adapts or evolves into an urban environment. Looking at urban ecology and the development of ecological cities, we can see that the development of urban ecology was initially focused on urban organisms, including animals and plants, until the early 1970s. (Karyono, 2006). The development of ecocity in urban ecosystems calls the city a human-dominated system with the following provisions:

- Humans dominate the earth's ecosystem.
- Development of a more realistic ecosystem model will lead to greater success in solving environmental problems.
- A relatively new ecological concept, namely the city as an ecosystem where humans live (Sutriadi, 2018).

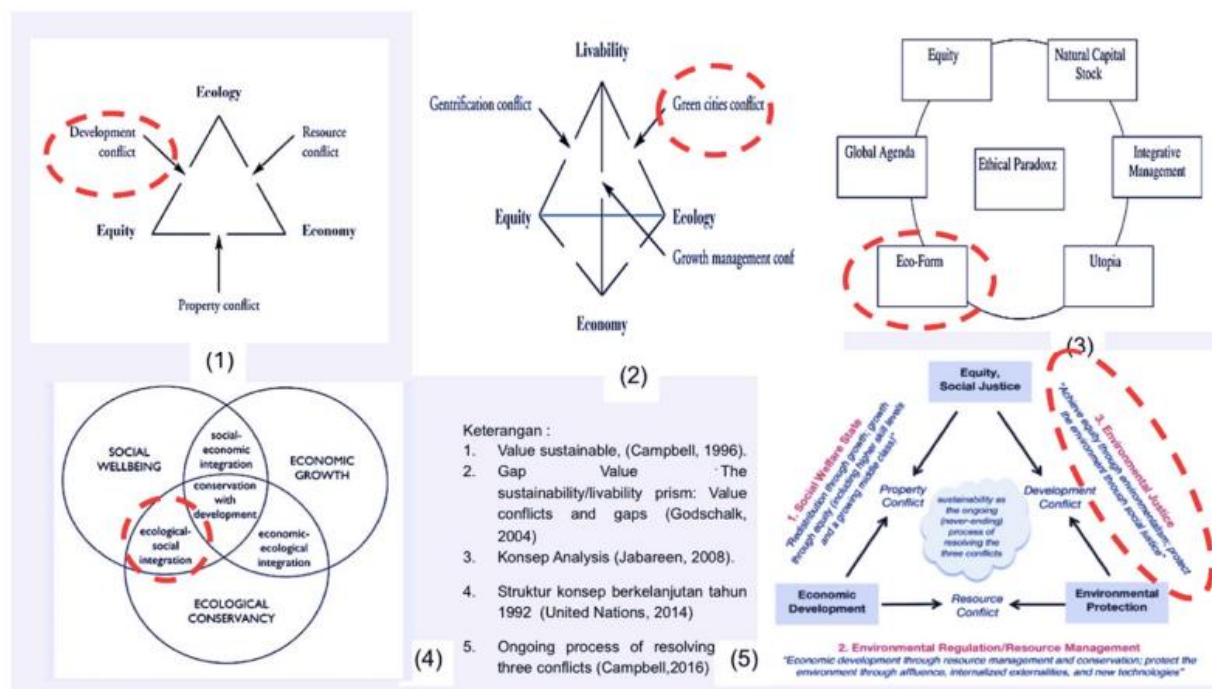


Figure 3. Ecocity in the Development of the Concept of Sustainable Development

2.3 Implications of the Ecocity Concept in Urban Planning in Indonesia

The National Urban Development Policy and Strategy (KSPPN) 20152045, developed by the Ministry of National Development Planning (Bappenas), lays the foundation for sustainable and competitive urban development. The principle of sustainable development in urban development: meeting the needs of today's cities without compromising the needs of future urban generations. This condition requires an environmental study that focuses on the interaction between living organisms and the urban environment, or what is known as urban ecology. One of the key approaches to addressing today's urban problems is the green city concept, and it is very important to apply it in Asian countries and study its impact on society.

Several local government programs have made plans to implement an eco-city, namely the city of Surabaya as an eco-city, to create a city that is comfortable, clean, green and energy efficient for urban communities. One of the implementations of eco-cities is to apply the green building concept by giving the Green Building Awareness Award to building managers in Surabaya. Furthermore, the development of the Bogor Eco-City concept, namely a green, healthy



and environmentally friendly city. This concept is supported by the existence of a database and monitoring system that uses local data based on data about the characteristics of the city of Bogor (PN/BAPPENAS, 2015).

3. EXPERIMENTAL

The method used is a literature review based on the development of the concept of ecocity, urban ecology and sustainable city. The approach taken is a semi-systematic review. A semi-systematic review or narrative is a review designed for a topic that has been conceptualized differently and studied by different groups of researchers in various disciplines as an effort to overcome the constraints of a full systematic review process (Wong et al., 2013).

4. RESULTS AND DISCUSSION

Sustainability principles and concepts are things that are only abstract and only exist in the world of imagination. In the mind of continuity principles and concepts have different characteristics and positions. Concept is a pure imagination that is formed in the mind with the aim of providing a real picture of a form or process. Then this concept is digested again by common sense in order to understand, explain or even carry out the treatment of the reality or phenomenon. Construction on the mind based on a belief about the forms and processes that occur in the city is called the concept of a sustainable city (Joss & Tomozeiu, 2013).

The concept of a sustainable city has a broad meaning, but in general its understanding can be understood in terms of context and substance which aims to pay attention to the environment in the city. Although this context and substance exist in an environment that prioritizes the environment as an important aspect, it also requires some form of approach involving other comprehensive aspects. Or similar fields are not only related to the environment, but jointly relate to other fields such as: planning & design, technology, economy, social & culture, and politics. (Jabareen, 2008).

An ecologically sustainable city approaches the vision of where the situation is when it is faced with various kinds of social, economic and environmental problems that are difficult to find a solution for. Concerning economic and environmental issues, it becomes increasingly



difficult to describe cities that have a broad meaning in small towns that are remote or in remote areas. This is much different from the new thinking about the city, where the characteristics of the city as an open system, where an open system is a city system integrated with environmental and economic systems (Snyder, 2019).

Efforts to maintain environmental conditions by not causing damage to the environment is an ecological city concept for the sustainability of the life of cities in Indonesia, the ecological city must be part of the solution to these conditions. The first requirement that must be met is that the function of a city must pay attention to environmental balance.

The second condition is that the city is seen not only as a physical form, but also psychologically (aesthetically) attractive, as a satisfaction for the community/community, and the city must survive and must continue.

5. CONCLUSION

An ecological city development approach based on ecological principles can be both a hope and a challenge to the deteriorating environmental conditions of the city, because the development approach is directed at short-term economic benefits. The ecological city has similarities with the concept of a sustainable city, which emphasizes the importance of balancing economic, social and environmental benefits in urban development. Ecological cities also consider cities whose urban development is based on the sustainability or future of the city, a just, healthy and productive community life supported by environmental potential and efficient use of urban resources. Having a visionary view is a must. The important role of the government in increasing public awareness of environmental protection. Preservation of the green environment if all residents know that the function of green open space for the urban environment is to improve the quality of life and the urban environment with the aim of improving the welfare of city residents. Make the most of a better and healthier environment. The existence of urban green open spaces is very important, and the existence of various types of plants, especially large trees, plays a very important role in the survival of city life. Therefore, it is necessary to implicate the concept of ecocity in urban planning in Indonesia.



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