

Urban Island Concept and The Relevance for Archipelagic States: Case of Ambon City-Maluku Province

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Abstract—The recent studies of Island tend to focus on peripheral, isolated, and marginality aspects of the island community in mainland context. However, the understanding about interactions of several elements in archipelago development has to encompass broader context, including marine space and the others island which create a spatial system called urban island concept. The formation process of an urban island, comprising “strongly urbanized small islands or archipelagos” or “major population centers of large islands or archipelagos” are also essential issues that have not been fully explored. The issues of urban islands have become the concern of island researchers, such as in Copenhagen, Guangzhou, Hong Kong, Lagos, Macau, Mexico, Mumbai, New York, Paris, Tokyo, and Zhoushan. Indonesia which has more than 17.500 islands, also allows the formation of urban islands that need further exploration. Therefore, this paper discusses the formation process of the island city in Ambon City-Maluku Province, as a province area with a long history of island development. This paper will conduct a profound literature review as an attempt to build a theoretical framework of research in the study area. According to the preliminary study from island spatial perspectives consisting of territorial, defense and transportation benefits, Ambon is included in the category of urban islands that serves authority and trading as the main functions. This study will identify opportunities and challenges that have been encountered by Ambon City and its surrounding areas in the perspective of urban island concept focusing on connectivity between spatial functions as the primary factor. The result and conclusion of this study can give contribution in developing a robust theoretical framework of comprehensive research in urban island concept for Ambon City and other urban islands in Indonesia.

Keywords—Ambon city, Archipelago, Connectivity, Urban island

I. INTRODUCTION

The recent studies of Island tend to focus on peripheral, isolated, and marginality aspects of the island community in mainland context. However, the understanding about interactions of several elements in archipelago development has to encompass broader context, including marine space and the others island which create a spatial system called

urban island concept. Although many researchers observe cities on the island, only a few of them observe island cities or urban islands [11]. In urban island concept, cities are very likely to occur on small islands or archipelago, because (a) aspects of spatial planning (including territorial, defense and transportation) become strategic places as centers of settlements; and (b) spaces related to spatial planning for island settlements developed into cities [8].

Observations about the relationship between the island and the big city before were not much studied [25]. If previously the concept of city and island was known as an opposite process, where the city was known as a service center for rural areas, so that it became the center of the population, while the island was considered to have no attraction for the surrounding rural areas. Through a network of infrastructure, investment and population migration that occurs between cities and islands, it can be explained the process of island city formation [25].

As the largest archipelagic country in the world, Indonesia, which consists of 17,508 islands (large and small), naturally has many urban islands that need to be understood in greater depth. Urban islands can be categorized into two types [8]: “strongly urbanized small islands or archipelagos” and “major population centers of large islands or archipelagos”. Measurement of the population of the city is not a major determinant of city status. For example, the City of Venice is not a big city based on world standards but is categorized as an urban island because it is a very urban archipelago. Likewise, in other contexts such as the City of Nuuk which has a small city size, but is in the Greenland region with a small population, it functions as a city. Some city contexts can also represent both types of urban island simultaneously, for example, Malé which acts as a very populous city, as well as being the main population center of the Republic of Maldives.

The characteristics of urban island in Indonesia can be observed in Ambon City-Maluku Province [11]. As the provincial capital, Ambon City is one of the centers of activity that functions as a center of trade and government [17]. In its role as a transit center for people and goods, from

and to the surrounding area, both on a regional and global scale, Ambon City is developing into major population centers of large islands or archipelago. It is indicated by the highest population density in Ambon City at 1,132 people/km², while the lowest population density is in West Southeast Maluku Regency, which is 11 people/km² [2].

The challenges of Ambon city development and the surrounding areas in urban island concept are inter-island connectivity. This is due to limited transportation services for small islands far from Ambon City, to serve the mobility needs of local people [27]. This condition causes rural areas in Maluku Province to become undeveloped and unproductive, as well as poor and disadvantaged, with a percentage of 18.29% in 2017 [2]. The weak level of inter-island connectivity in eastern Indonesia is also stated in the study [18], which is caused by the distance between islands that are far apart which causes the distribution flow not to run optimally, so that economic linkages are also hampered.

In general, inter-island connectivity is the availability of transportation that allows people and goods to achieve various objectives with reasonable general costs. Connectivity is a relative measure of connectivity in a transportation network. Connectivity according to [22], relates to opportunities and convenience to get to the destination point from the original potential point, and vice versa. Connectivity shows how the relationship between the two, both for spatial and temporal. The more goals that can be accessed, the more the potential for transportation service provision between these two points, and the higher the frequency of service to that point, the higher the connectivity.

Based on recent research about small islands [5], several characteristics of small islands/archipelagic regions are smallness, boundedness, isolation, and fragmentation. However, in urban island concept, small islands are located close to the mainland have advantages as essential nodes for trade. If in coastal areas can also provide access by sea, but only along the coastline, while on the small island is fully accessible by sea, so it is an option for island-based ports and port services [8]. Ambon City can also utilize this advantage as an island city in Maluku Province. Through the availability of port infrastructure in Ambon City, it is expected to strengthen connectivity through the function of hubs and gateways for surrounding islands. Therefore, this paper will examine the opportunities and challenges of the connectivity of Ambon City and surrounding area in urban island concept.

II. LITERATURE REVIEW IN URBAN ISLAND

A. *Urban Island Studies*

Urban island studies explain why islands and cities are very closely related. This study discusses how the processes of cities and islands interact, thus contributing to an understanding of the process of urbanization on small islands/archipelago. Examples from island cities and urban archipelagos such as Copenhagen, Guangzhou, Hong Kong, Lagos, Macau, Mexico, Mumbai, New York, Paris, Tokyo, and Zhoushan, show that urbanization and urban formation occur in various places in the world. By using an urban approach to studying the island, as well as an island approach to studying the city, the presence of urban island studies is

expected to contribute to urban studies and island studies, especially the link between the two.

Urban island studies were initiated in 2014, by The Island Dynamics organization, through a special edition in *Island Studies Journal*, with the theme of cities on the island. This particular section presents an editorial introduction by [7], with six papers on various topics on urban islands focusing on the Greenland, Balearic Islands, Belize City, Mumbai and the Isle of Man [6], [24], [25], [26], [31], [33]. Although presenting different topics, overall it discusses the transition process of rural communities to urban areas and highlights the limited research on how island residents affect urban development, thus requiring further exploration.

The initiation of this urban island studies coincided with the inaugural *Island Cities and Urban Archipelagos (ICUA)* conference, which was held on October 21-25, 2014, in Copenhagen. The conference featured representations from various academic fields and disciplines (Geography, Urban Planning and Design, Architecture, Heritage, Business, Transportation, Disaster Security, Tourism, History, and Archeology), as well as research network launches (<http://www.islandcities.org>) under the umbrella of *Island Dynamics*.

B. *Review of Articles in Urban Island Studies*

The island studies have been widely used as a place of research by researchers [11]. However, discussions related to the islands are inseparable from their relationship to the land area, even covering a wider area. Various articles discussing urban island studies are generally categorized into 5 (five) approaches [28], namely: (a) Politics and government, (b) Economics, (c) Business (including tourism), (d) Heritage, culture and tradition, and (e) Ecology.

First, the political and government approach, which emphasizes the function of the island as a center of government and political innovation, and its relation to global politics. The relationship between the center and periphery is examined by [6], taking into account how economic, political, cultural and historical factors have caused Nuuk City to develop as a 'center' in Greenland. Then, [31], analyzed how the spatial structure of the island affects the mindscape of the government in Mumbai-India. Furthermore, [1] observed differences in cultural, spatial, economic and institutional conditions in suburban areas in new cities in Vienna and Tylor-Austria. Furthermore, [3] observed the ineffectiveness of government programs in relocating informal settlements in Ocho Rios-Jamaica tourist areas.

Second, the economic approach, which explores the spatial and political context of the island, to understand how the economy works. Several previous studies, conducted by [33], who used the example of the Ancient City of the Isle of Man-British Islands, to discuss what it means to be an island city. Then, [16] highlighted the position of George Town as a creative city that can be a center of growth and progress to encourage economic development in Malaysia. Furthermore, [32] explained the influence of digital ports and ports on the socio-economic characteristics of Mumbai which were formed from a collection of seven islands which were

physically joined through the reclamation process, construction of roads, trains, vehicles, and bridges.

Third, the business approach, which describes how island communities are physically isolated but have an appeal to the global economy to obtain financial benefits. The island as a tourist attraction is observed by [26], through quantitative studies on how urbanization processes through island tourism related to transportation and infrastructure conditions in the Balearic Islands.

Fourth, the inheritance, culture and tradition approach, which reveals how island people are influenced by culture from outside, but through entities and a sense of nationality that influences the politics and economy of the island. It is seen in the study conducted by [24], observing how the City of Palma has been referred to as a monster that threatens the 'authentic' culture of the Spanish Balearic Islands. Next, [4] also shows how the City of Venice-Italy faces the challenge of urbanization and population migration to mainland cities, through policies in the form of laws to maintain population demographics and tourism development.

Fifth, the ecological approach, studying the interaction between the community and the environment, to the risks of environmental adaptation, resilience, and island sustainability. This approach is used by [25], who question what it means to be an island through comparing historical developments between island cities in Europe and Belize City. Then, [30] argued that the islands process was an accelerating factor in the urban physical development of Mombasa-India. Furthermore, [12] explained the concept of aquapelagio on new settlements in the Manhattan-New York metropolitan area. Besides that, [13] explained the development of the waterfront, namely the artificial road network and island canals in the Pacific Coast, Queensland-Australia. This approach is also used by [9], [10], [14], to find out how residents and government of the island adapt to environmental risks due to urbanization, resulting in population density in coastal cities and island cities. Likewise in the study of [15], which revealed the phenomenon of the gap between foreign workers and local workers, which has an impact on social, cultural, economic and environmental sustainability in the Arab-Gulf of Bahrain. Furthermore, the combination of ecological and political approaches, are used in the research of [19] and [20], to study the dynamics of climate change on the planning process of island tourism in the Philippines. In the preliminary observations, this study revealed disputes between stakeholders in the city planning process, related to climate change issues. Then in the next observation, it will be discussed further about the literature, scientific framework, and methodology for analyzing the relationship between society and climate change, and its application to island tourism.

Looking at the five approaches that discuss urban islands, in principle, the researchers argue that urban island is not only seen from the size of a city but can also be seen from its role and function as a city. Where the characteristics of a city include the level of urbanization, population density, and urban expansion [35].

III. PROSPECTS AND PROBLEMS OF URBAN ISLAND IN INDONESIA

A. *Application of Urban Island in Indonesia: The Case of Ambon City-Maluku Province*

Ambon City as an urban island in Maluku Province has experienced a very long history of development. Since the beginning, Ambon City has a strategic position for the surrounding area. It was indicated by the establishment of the Victorian fortress on the Honipopu coast of Ambon City by the Portuguese. The Dutch East Indies government then continued the city of Ambon in its function as a base for the security of Maluku and Irian Jaya as well as a center of activity or transit of spice trade from the Maluku Province to European countries. Based on preliminary studies from the perspective of island spatial structure consisting of territorial, defense and transportation aspects, it is known that Ambon City belongs to the category of the urban island, which carries the primary function as a center for controlling power, government, and trade.

As stated by [8], that island spatial structure plays a vital role in the formation of cities in the regions of small islands/archipelago. The layout of the island affects the history of urban island formation and its future development. If observed historically, Ambon City was built in the 16th century by the Portuguese. The function of the city at that time was the Portuguese defense city against attacks from the Ternate sultanate and surrounding countries, such as Hoaa-Mual (Seram), Hitu and Banda, as Portuguese attempts to control the trade in cloves [23].

Residents around the city named Ambon City as "Kota Laha" which means Benteng in the bay. While the Portuguese called it "Nossa Senhora da anunciada" which means "Mother of the city of Broadcasting" [23]. In Portuguese times, the City of Laha settled community groups from some Portuguese soldiers, Mahardika groups and community groups from various countries on Ambon Island. The city of Laha maintained the Portuguese for 30 years (1576-1605) until finally, it fell to the Dutch on March 23, 1605. After being controlled by the Dutch, an emergency government was established which ruled the fortress and Ambon City, as well as the territories that had been in Portuguese power in Ambon and Lease [17].

In accordance with the characteristics of cities formed in colonial times, Ambon City was designed as a place of power to regulate clove production in the islands of Ambon, Haruku, Saparua, Nusalaut, and is the center of the bureaucracy that regulates rural areas and also as an administrative center includes a society consisting of countries [17]. The characteristics of colonial cities contained in the archipelago have similarities with the cities that emerged in Europe since the 13th century, which functioned as a place of power and trade. However, what distinguishes it is trading in European cities controlled by the bourgeoisie, while in Indonesia by the colonialists.

As a colonial city pioneered by the Portuguese during the VOC and Dutch East Indies, Ambon City developed as a city of government and a city of commerce. In 1605, the VOC established a government administration namely

"Gouvernement van Amboina" which included areas that had been under Portuguese rule on the island of Ambon and the Lease islands in Ambon City [23]. During the Portuguese administration, Ambon City was an integral part of the trade chain centered in Goa (India), which was under the control of Portugal's political elite in Lisbon [17].

Regarding the island's spatial function as territorial and defense, small islands have the primacy as political and economic control [8]. For example, cities in Europe, namely in the first castle in Copenhagen, were built on the expansion of the offshore island of Slotsholm in the 12th century, which served to protect the port of Copenhagen from outside attacks and the strengthening of political authority for city dwellers [7]. If observed in the territorial function, Ambon City also began as an integral part of a military defense fortress built by the Portuguese in 1576. From that time until around the end of the 18th century, the city of Ambon was known as the City of Migrants, because it was inhabited by immigrants who 95% of them are from Bugis, Makassar, Bali, and others, a small percentage are Dutch, Chinese, and only about 5% are native Ambonese [17].

Furthermore, during the period of Dutch rule (17th and 18th centuries), Ambon City functioned as a clove export airport produced in countries scattered on the island of Ambon and its surroundings. It can be attributed to the transportation function of the island's spatial structure, making small islands strategically located as ports, because they are located close to the mainland, so that they become essential nodes for trade [8]. As the center of trade in the Netherlands, Ambon City was one of the chains of the trading system which covered the archipelago with its center in Batavia, which was built by the Dutch in 1619. As it is known that Batavia had a hierarchical connection with metropolitan cities in Europe, such as Amsterdam [17]. That shows that Ambon has always been part of an international trade network since the Portuguese built it in the 16th century.

Thus, since the beginning of the formation of Ambon City, aspects of the island's spatial structure provide territorial, defense and transportation benefits for the process of its formation. Therefore, Ambon City is an urban island in the center of the population category of larger islands/archipelago. This fact is seen in its almost four and a half century history; Ambon City has alternately become the center of government of various powers, the center of political activity and the center of world trade.

B. Opportunities and Challenges for The Connectivity of Ambon City and The Surrounding Areas in Urban Island Concept

Ambon City as an urban island which has long been an essential node for trade has the opportunity to develop into a Center for Economic Activity and Business Transit both on a regional and global scale. This is further strengthened by the strategic geographical position of Maluku Province, because of the geostrategic location and potential regional dynamics of dealing with the Asia Pacific and Australia Oceania Regions, through the International Archipelagic Sea Channel (ALKI) III Track, and in the Flores zone - Banda Ecoregion

as an area that has extraordinary potential and is rich in various flora and fauna [2].

The challenge is the position of the islands that are far apart, with an uneven level of population distribution, as well as difficult accessibility and difficulties, has led to wide open territorial spaces, making it difficult to manage. As a result, many Maluku archipelago people are in limited access to growth centers, such as markets, financial resources, transportation, and access to information to conduct economic activities, education, health, and socio-culture [34]. One of the efforts that can be done by increasing connectivity to open isolated areas so that they can connect with economic centers [29].

To connect between islands in Maluku Province, that is necessary to strengthen connectivity in Ambon City as the axis of traffic of people, goods, and services. One effort that needs to be done to achieve this goal is the provision of adequate infrastructure as inter-island traffic. As with government policies related to inter-regional connectivity through the Sea Toll program [21], which aims to reduce the price disparity between the western and eastern regions of Indonesia. So that in the future it can be integrated with feeder services through pioneering services and people's shipping, which in turn can strengthen social connectivity, in order to achieve a balance of development.

Based on the description, it was concluded that connectivity became a significant factor in examining the concept of the urban island in Ambon City, Maluku Province. The importance of connectivity in the archipelago is due to (a) Linking rural areas to larger markets providing better access for households to lower goods and services and higher prices stable; and (b) Contribute to higher production and export results, in an effort to increase the competitive advantage of goods with high added value, with cheaper production costs and the right way [29].

In the urban island concept in the case of Ambon City, connectivity can improve rural access to essential utilities and adequate essential services in urban areas, as well as efficient rural-urban connectivity through supporting infrastructures such as road, rail, water, air, non-motorized transportation, and others. Strengthening connectivity is beneficial for the efficiency of mobility of people, goods, and services, thereby increasing inter-island connectivity to improve regional economies in Maluku Province.

IV. CONCLUSION

Based on preliminary studies from the perspective of island spatial structure consisting of territorial, defense and transportation aspects, it is known that Ambon City belongs to the category of the urban island, which carries the primary function as a center for controlling power, government, and trade. In the study of the concept of the urban island in Ambon City, increasing connectivity is needed, so that relations within and between islands can run smoothly to support regional economic development. Ambon City as an urban island which has long been an essential node for trade has the opportunity to develop into a Center for Economic Activity and Business Transit both on a regional and global scale. Connectivity has become a significant factor in examining the concept of the urban island in Ambon City,

which aims to increase the mobility of people, goods, and services, thereby increasing inter-island connectivity to improve regional economies in Maluku Province.

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