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Measuring the scale of sustainability of new town development based on the assessment of the residents of the native settlement around the new town area of Gading Serpong Tangerang

M Ischak¹, B Setioko² and D Nurgandarum¹

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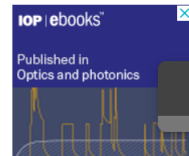
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Measuring the scale of sustainability of new town development based on the assessment of the residents of the native settlement around the new town area of Gading Serpong Tangerang

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Keywords: development sustainability, new town, original settlement

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The United Nations reported that in 2008 the population of the urban population was larger than the rural population. Furthermore in 2014, World Urbanization Prospects indicated that 3.9 billion people or 54% (and predicted to rise to 66% in 2050) of the world's population live in urban areas. The growth of cities towards rural causes increased density in sub-urban areas in developed country cities [1] and especially cities in developing countries including Jakarta [2].

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In the context of regional development, the most important thing is the achievement of quality improvement on all sides, either physically, regionally or for the society, both native local people and immigrants as new residents of planned housing. There have been many studies linking the development of planned settlements (new towns) to the concept of sustainability [6], [7], [8], but the material used as benchmarks in the implementation of the sustainability concept is more limited to its physical development only. The question that arises is which community is the benchmark for the implementation of the concept of sustainable development? In the context of the growth of the new town, it is actually very important to study from the side of the affected society, which is the people who are currently living in the original settlements adjacent to the newly developed town. This is the intention and the underlying question of research; is the development of a new town already in the context of sustainability to affected society? This is based on the idea that the development of a region by itself will have an impact on the lives of the surrounding society while the development of new town by many developers take up existing settlements land.

2. Research Method

To examine problems in the field and answer research questions, the method used was descriptive-explorative. The first step was to formulate the most appropriate sustainable criteria to be implemented based on the conditions in the field. This is due to the many concepts and theories about "sustainable". The criteria formulated were then used to analyze and evaluate the case of the development of the new town of Gading Serpong in Tangerang. Overall, the research steps are in the scheme:

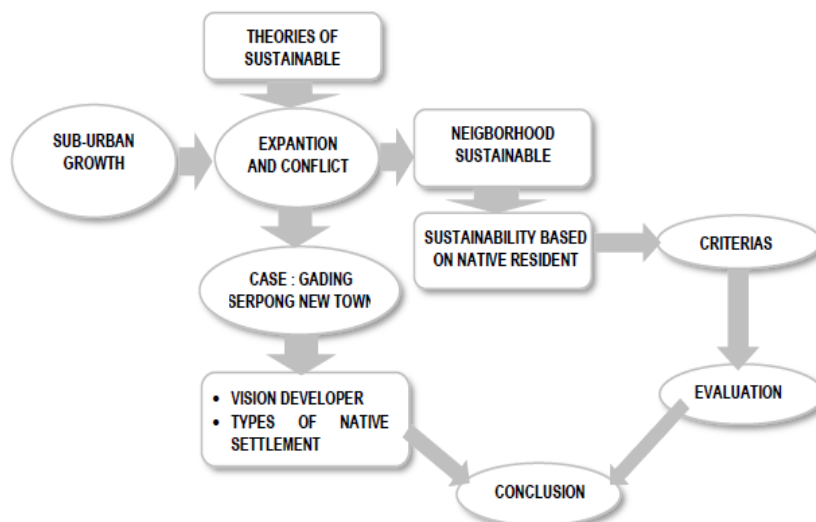


Figure 1. Research steps.

The research location was conducted in the new town area of Gading Serpong that developed by two developers, PT. Summarecon Agung, and PT. Paramount Land located in Kelapa Dua and Pagedangan District, Tangerang Regency

3. Results and Discussion

3.1. Review of theories

Sustainable development is one word popularized by the World Commission on Environment and Development in the 1987 report, "Our Common Future" and by the Earth Summit in Rio de Janeiro in 1992. It is simply stated the concept of sustainability is an ethic, set of principles and views that are oriented towards the future. Sustainability means protecting and continuing local potential (*genius loci*) and the way it works is by always linking it to a specific area [8] with the following details:

- a. Environmental Sustainability is the ability to manage the environment or the quality of the environment so that it is more meaningful to the surrounding which means managing the factors and actions that directly contribute to the quality of the environment
- b. Economical Sustainability means that sustainability on economic factors is broader than the concept of sustainability in terms of welfare, local sources, or profit margins. Basically, sustainable economy is about providing what society needs with what kind of supply is needed. It is about how we select and use the right local resources for the future.
- c. Social Sustainability requires social relation and its potential that is directed to the common goal of achieving and fulfilling the individual's basic needs regarding health, safety, shelter, education and cultural expression.

The sustainable concept in a settlement and urban environment is closely related to the subject of ecology, which focuses on the relationship between humans and the environment [10]. Wherein the planning and design of settlements should be persuasive to the analysis of ecological systems that can provide a decent place to live in. One of the characters of society in the sub-urban settlement is a strong sense of neighborliness, with the thickness of human scale among the buildings of their houses [11] yet cities cannot be considered sustainable if their component parts, such as neighbor hoods, do not meet sustainability criteria [12]. The term neighborhood has been in the urban dweller's vocabulary for a very long time, with many of the same characteristics regardless of the culture to which one is referring.

3.2. Types of native settlements due to land expansion by developers

The pattern of land acquisition and development carried out by the developer produces an effect on the formation of the native settlement type into at least three forms: small enclave settlements [11], large enclave settlements [3], and settlements that are cut off and directly adjacent to the development land [4] (Figure 2).

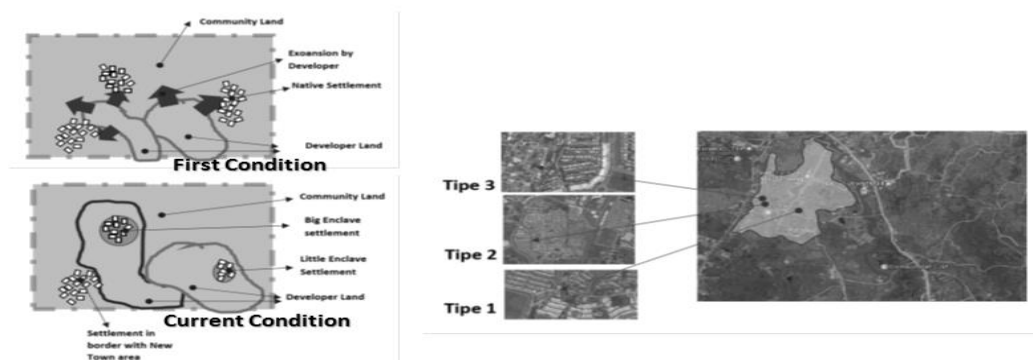


Figure 2. The pattern of land acquisition and development.

3.3. Vision and Mission of the Developers

To measure the level of development sustainability undertaken by developers, the first measuring tool used is to measure the concepts and desires of the developer companies summarized in the vision and mission of the company. As seen in the Table 1, it can be observed that the vision of the two development companies is very ambitious to be the most advanced company in the field of property

business development. This is actually not a strange thing, just like any other company's vision. It is interesting to observe the mission of both companies. Neither company explicitly discloses the application of a comprehensive concept of sustainability, including the environment and affected society around the new town development site.

Table 1. The vision of the two development companies.

Developers	Vision	Mision
Summarecon Agung Grup	To be the “Crown Jewel” of property developers in Indonesia that continuously delivers optimal economic value to its customers, employees, shareholders and other stakeholders, as well as fulfilling its social and environmental responsibilities.	<ol style="list-style-type: none"> 1. Focus on maximizing the benefits of an integrated development model, including townships development, by utilizing competitive advantages in each sector: residential, shopping centers and other commercials. 2. Developing high-value products for the consumers, encourage entrepreneurship, implementing the principles of good corporate governance and continuous improvement. 3. Developing high quality Human Resources, responsible, prosperous, according to the companys values and culture.
Paramount Land	To be a leading property company in Indonesia, by building homes and people across the nation with heart	To faithfully serve with the highest commitment to our customers and communities ,so they can live holistically and sustainably by developing townships, real estate, large mixed-use development, infrastructure and high quality living environments, whilst continuously also observing and supporting education both quantitatively and qualitatively, as Indonesia becomes firmly grounded as a globally recognized nation of strength, moving into its golden era of development over the next 20-30 years.

3.4. Scope of Sustainability

From the study of sustainable development, there is a scheme of relevance between sustainability elements and variables influencing the context of sustainable new town development which is seen from the side of the resident of native settlement, inside and around the developed area as the new town (Figure 3).

3.5. Sustainability

3.5.1. Social Sustainability

Social sustainability studies are measured by four criteria. The first is community accessibility to social facilities and public facilities. Only Type 1 of native settlements have constraints due to access to education facilities (basic and secondary), health (clinic, general practitioner), economy (environmental market), and religion (mosque) that must first exit from the boundaries of their settlements. In the type 2 of native settlements almost all social facilities and public facilities are in the settlement. While in type 3, access to social facilities and public facilities are not influenced by the existence of new town.

The second criterion is the guarantee of the continuity of social and religious events. Until now residents in all types of native settlements can still do social and religious events in any environment level without obstacles. The third criterion is the bonding and family territory and social harmony. For this criterion the residents' type 1 and type 3 are those who feel it the most. Due to the expansion of land by the developers most of the neighbors and relatives moved out of the village area. The release of the neighboring ties and territories is handled by still inviting relatives and neighbors who have moved out to social and religious events within the family or village. The fourth criterion is convenience in carrying out activities and social interaction. For the fourth criterion, the residents of all types can do activities and social interactions smoothly without any constraints.

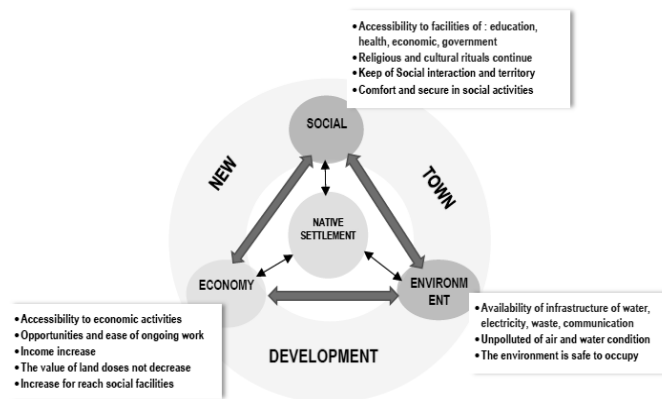


Figure 3. Sustainable new town development.

3.5.2. Economic Sustainability

Economic sustainability is seen from five criteria: 1) accessibility to a new economic activity center, 2) availability and employment opportunities, 3) increase in family income, 4) increase in land value, 5) increase in family expenditure to meet basic needs. In terms of economic sustainability, almost all criteria are applied to all types of native settlements. The presence and development of new town by developers brings a huge economic value to the surrounding society. The criteria felt the most by the society in all types of native settlements are the availability and job opportunities such as shopkeepers, office employees, security personnel, parking, park management, and as housekeepers. Another economic opportunity is the emergence of opportunities due to the large number of workers in the new town coming from outside the region in need of rental housing and the need for cheap eating places.

This condition results in the emergence of many boarding houses, rented houses and cheap food stalls in all types of native settlements. Thus, if there is an initiative from the inhabitants to capture the opportunity, the criteria for increasing family income can be met. Another economic benefit felt by the society in the three types of native settlements due to the construction of new town of Gading Serpong is the higher price of land occupied.

3.5.3. Environment Sustainability

Environment sustainability is seen from three criteria: 1) availability and affordability of road, electricity, clean water, disposal, 2) air and water quality, and 3) environmental conditions in support of habitable activities. On the whole, what stands out in environmental sustainability is the physical constraint of a massive wall that divides developer lands to what does not belong to them. The developers only restrict land with walls, but socially and infrastructure component is not restrictive at all; by giving access to the entrance and exit so that the residents of the native settlements in the three types still feel the supply of clean water, electricity, roads, and very good sewer. Likewise, the air and groundwater conditions have no significant constraints. These causes people in three types of native settlements to feel the comfort of the environment.

4. Conclusion

The construction of new town implemented by developers results in development that is oriented only on commercial values, so it does not meet the concept of sustainability when viewed comprehensively with the surrounding environment and society. Whereas if the new town development is seen from the people living in the native settlements around, it can be concluded that the concept of sustainability can run except in the residential of native settlement of type 1 which is small enclave settlements located within the developer's land whether the new town is not built, is being built or has been built around it. Society in all types of native settlements take the advantage from the existence of new towns, and this is greatly influenced by the treatment of developers who generally open access to all infrastructure and supporting facilities built to be traversed and used by surrounding society.

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by Mohammad Ischak

Submission date: 10-Apr-2023 08:36AM (UTC+0700)

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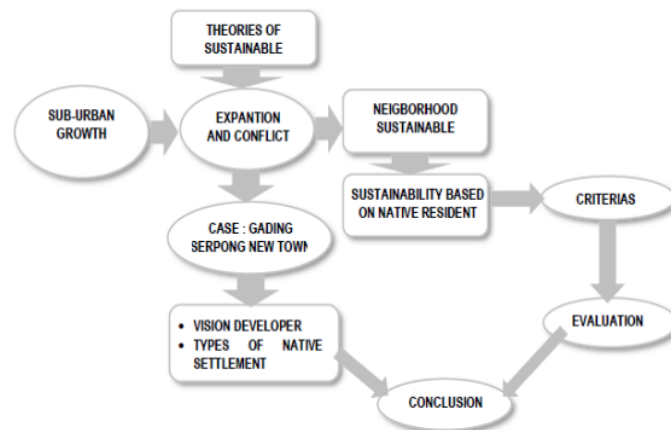


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3. Results and Discussion

3.1. Review of theories

15

Sustainable development is one word popularized by the World Commission on Environment and Development in the 1987 report, "Our Common Future" and by the Earth Summit in Rio de Janeiro in 1992. It is simply stated the concept of sustainability is an ethic, set of principles and views that are oriented towards the future. Sustainability means protecting and continuing local potential (genius loci) and the way it works is by always linking it to a specific area [8] with the following details:

- a. Environmental Sustainability is the ability to manage the environment or the quality of the environment so that it is more meaningful to the surrounding which means managing the factors and actions that directly contribute to the quality of the environment
- b. Economical Sustainability means that sustainability on economic factors is broader than the concept of sustainability in terms of welfare, local sources, or profit margins. Basically, sustainable economy is about providing what society needs with what kind of supply is needed. It is about how we select and use the right local resources for the future.
- c. Social Sustainability requires social relation and its potential that is directed to the common goal of achieving and fulfilling the individual's basic needs regarding health, safety, shelter, education and cultural expression.

The sustainable concept in a settlement and urban environment is closely related to the subject of ecology, which focuses on the relationship between humans and the environment [10]. Wherein the planning and design of settlements should be persuasive to the analysis of ecological systems that can provide a decent place to live in. One of the characters of society in the sub-urban settlement is a strong sense of neighborliness, with the thickness of human scale among the buildings of their houses [11] yet cities cannot be considered sustainable if their component parts, such as neighbor hoods, do not meet sustainability criteria [12]. The term neighborhood has been in the urban dweller's vocabulary for a very long time, with many of the same characteristics regardless of the culture to which one is referring.

3.2. Types of native settlements due to land expansion by developers

The pattern of land acquisition and development carried out by the developer produces an effect on the formation of the native settlement type into at least three forms: small enclave settlements [11], large enclave settlements [3], and settlements that are cut off and directly adjacent to the development land [4] (Figure 2).

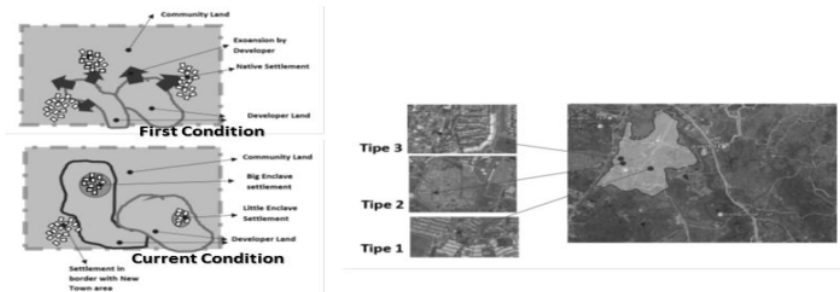


Figure 2. The pattern of land acquisition and development.

3.3. Vision and Mission of the Developers

To measure the level of development sustainability undertaken by developers, the first measuring tool used is to measure the concepts and desires of the developer companies summarized in the vision and mission of the company. As seen in the Table 1, it can be observed that the vision of the two development companies is very ambitious to be the most advanced company in the field of property

business development. This is actually not a strange thing, just like any other company's vision. It is interesting to observe the mission of both companies. Neither company explicitly discloses the application of a comprehensive concept of sustainability, including the environment and affected society around the new town development site.

Table 1. The vision of the two development companies.

Developers	Vision	Mision
Summarecon Agung Grup	To be the "Crown Jewel" of property developers in Indonesia that continuously delivers optimal economic value to its customers, employees, shareholders and other stakeholders, as well as fulfilling its social and environmental responsibilities.	<ol style="list-style-type: none"> 1. Focus on maximizing the benefits of an integrated development model, including townships development, by utilizing competitive advantages in each sector: residential, shopping centers and other commercials. 2. Developing high-value products for the consumers, encourage entrepreneurship, implementing the principles of good corporate governance and continuous improvement. 3. Developing high quality Human Resources, responsible, prosperous, according to the companys values and culture.
Paramount Land	To be a leading property company in Indonesia, by building homes and people across the nation with heart	To faithfully serve with the highest commitment to our customers and communities ,so they can live holistically and sustainably by developing townships, real estate, large mixed-use development, infrastructure and high quality living environments, whilst continuously also observing and supporting education both quantitatively and qualitatively, as Indonesia becomes firmly grounded as a globally recognized nation of strength, moving into its golden era of development over the next 20-30 years.

3.4. Scope of Sustainability

From the study of sustainable development, there is a scheme of relevance between sustainability elements and variables influencing the context of sustainable new town development which is seen from the side of the resident of native settlement, inside and around the developed area as the new town (Figure 3).

3.5. Sustainability

3.5.1. Social Sustainability

Social sustainability studies are measured by four criteria. The first is community accessibility to social facilities and public facilities. Only Type 1 of native settlements have constraints due to access to education facilities (basic and secondary), health (clinic, general practitioner), economy (environmental market), and religion (mosque) that must first exit from the boundaries of their settlements. In the type 2 of native settlements almost all social facilities and public facilities are in the settlement. While in type 3, access to social facilities and public facilities are not influenced by the existence of new town.

The second criterion is the guarantee of the continuity of social and religious events. Until now residents in all types of native settlements can still do social and religious events in any environment level without obstacles. The third criterion is the bonding and family territory and social harmony. For this criterion the residents' type 1 and type 3 are those who feel it the most. Due to the expansion of land by the developers most of the neighbors and relatives moved out of the village area. The release of the neighboring ties and territories is handled by still inviting relatives and neighbors who have moved out to social and religious events within the family or village. The fourth criterion is convenience in carrying out activities and social interaction. For the fourth criterion, the residents of all types can do activities and social interactions smoothly without any constraints.

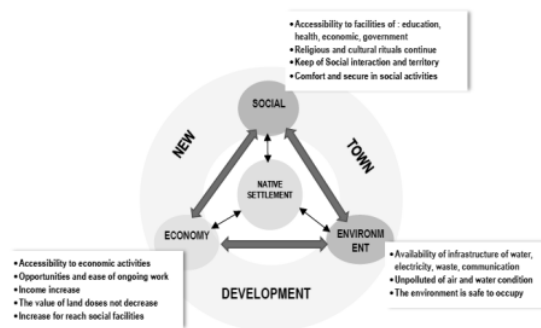


Figure 3. Sustainable new town development.

3.5.2. Economic Sustainability

Economic sustainability is seen from five criteria: 1) accessibility to a new economic activity center, 2) availability and employment opportunities, 3) increase in family income, 4) increase in land value, 5) increase in family expenditure to meet basic needs. In terms of economic sustainability, almost all criteria are applied to all types of native settlements. The presence and development of new town by developers brings a huge economic value to the surrounding society. The criteria felt the most by the society in all types of native settlements are the availability and job opportunities such as shopkeepers, office employees, security personnel, parking, park management, and as housekeepers. Another economic opportunity is the emergence of opportunities due to the large number of workers in the new town coming from outside the region in need of rental housing and the need for cheap eating places.

This condition results in the emergence of many boarding houses, rented houses and cheap food stalls in all types of native settlements. Thus, if there is an initiative from the inhabitants to capture the opportunity, the criteria for increasing family income can be met. Another economic benefit felt by the society in the three types of native settlements due to the construction of new town of Gading Serpong is the higher price of land occupied.

3.5.3. Environment Sustainability

Environment sustainability is seen from three criteria: 1) availability and affordability of road, electricity, clean water, disposal, 2) air and water quality, and 3) environmental conditions in support of habitable activities. On the whole, what stands out in environmental sustainability is the physical constraint of a massive wall that divides developer lands to what does not belong to them. The developers only restrict land with walls, but socially and infrastructure component is not restrictive at all; by giving access to the entrance and exit so that the residents of the native settlements in the three types still feel the supply of clean water, electricity, roads, and very good sewer. Likewise, the air and groundwater conditions have no significant constraints. These causes people in three types of native settlements to feel the comfort of the environment.

4. Conclusion

The construction of new town implemented by developers results in development that is oriented only on commercial values, so it does not meet the concept of sustainability when viewed comprehensively with the surrounding environment and society. Whereas if the new town development is seen from the people living in the native settlements around, it can be concluded that the concept of sustainability can run except in the residential of native settlement of type 1 which is small enclave settlements located within the developer's land whether the new town is not built, is being built or has been built around it. Society in all types of native settlements take the advantage from the existence of new towns, and this is greatly influenced by the treatment of developers who generally open access to all infrastructure and supporting facilities built to be traversed and used by surrounding society.

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