

Strategy of Improvement of the Human Development Index in Indonesia Through Sustainable Settlement Management

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ABSTRACT

Settlement management in an effort to improve the quality of the environment is a task for all elements in achieving this goal. This is because the quality of public health is also influenced by the quality of a healthy environment. In this study regarding sustainable settlements on the HDI, it is intended to determine the effect of sustainable settlements on the HDI and the factors that influence the HDI, as well as strategies for increasing the HDI through sustainable settlements. The research method used in this study is a quantitative method with a regression analysis model to see the effect of sustainable settlements on the HDI as well as the factors that influence the HDI and the AHP analysis model to obtain alternative strategies in increasing the HDI. The results of this study are that sustainable settlements greatly affect Indonesia's HDI with the results of research testing 98 percent of sustainable settlement factors, namely access to clean water with a value of 0.982070 and telecommunications networks with a value of 21.18823 greatly affect HDI. Then there are alternative strategies that can be used in the goal of increasing the HDI, namely improving public services and access to health and infrastructure, improving decent water quality, and improving settlement management.

1. INTRODUCTION

The Human Development Index (HDI) is one of the indicators to measure the success of building the quality of life of the community which can be seen from the aspects of income, health, education and so on. Setiawan Bakti Muhammad (2008) defines development as a process to expand choices for the population which include income, health, education, physical environment and others. The HDI also provides a combined measure of three dimensions of human development, namely the health dimension as measured by life expectancy, the education dimension as measured by the level of adult literacy and purchasing power measured by having a decent standard of living. (Santika & Ketut, 2012). Humans who are the center or center in the subject as well as the object of development become the main position in carrying out development. For this reason, HDI is the main benchmark in measuring development.

Table 1. Indonesian Human Development Index

Year	HDI
2020	71.94
2019	71.92
2018	71.39
2017	70.81
2016	70.18
2015	69.55

Source: Central Bureau of Statistics (BPS)

The HDI in Indonesia from 2015-2020 reflects a significant positive average or increases every year until 2020. Indonesia's HDI is at an index value of 71.94. However, although the trend continues to increase every year, the HDI growth from year

to year is relatively small. In 2015, Indonesia's HDI has not yet touched the number 70, which is 69.55. In 2020 Indonesia's HDI rose to 71.94 or an increase of 2.66% for 6 years.

The health indicator, namely life expectancy, is one of the indicators considered in calculating the HDI which consists of several public health factors (Muhammad, 2019). Health is the main factor in human life, because health is also one of the indicators in development, both individually and in the national index assessment. The quality of human health is also an indicator that affects human resources and affects human quality (Kahang Merang, Saleh Muhammad, 2016). In Indonesia, the HDI index of public health has an increasing trend every year, but the increase has a slow growth percentage where the increase has an average of 0.18 percent annually (Central Bureau of Statistics, 2021). The concept of health is closely related to other factors that are elements in improving health. One of them is the surrounding environment. The environment which is an element in everyday life is one of the determining factors in the level of public health.

Indonesia, with a population of 273.5 million as of the 2020 population census, is the fourth most populous country in the world. The state of the population is an opportunity as well as a threat to the economy of a country. In 2016 the population density in Indonesia reached 135 jiwa/KM² and in 2019 it increased to 140 . The province with the highest density level is DKI Jakarta, which reaches 15,900. A high population density will affect the quality of the health of the environment and its people. Population density is closely related to the quality of settlements in an area. This is because settlements are places where people live and inhabit houses for living and activities. jiwa/KM² jiwa/KM² (Badan Pusat Statistik, 2021). The problem of the quality of a settlement is closely related to the condition of public health. If the number of slums in the area According to Bloom's paradigm of health, the environment has a dominant influence on the five factors. Environmental factors that affect a person's health status can come from the residential environment, social environment, recreational environment, work environment (Hermawan, 2011). The results of environmental epidemiology studies show that the level of public health or the incidence of a disease in a community group is the result and reciprocal relationship between the community itself and the environment. In turn, as an element directly involved in this reciprocal relationship, whatever happens as a result of the interaction process in the form of environmental changes will befall and be felt by the community. (Nilam, 2005).

In the development policy which is the answer to the aspirations of the community, population and settlement problems are certainly a problem that is one of the aspirations of the community to be immediately resolved by the government. The policies taken by the government also have regulations, both legally and as a form of sustainable community empowerment. One of them is the Kotaku program launched by the government in dealing with the problem of slum settlements and access to proper sanitation by preventing the emergence of slum settlements for improving health and improving the quality of a healthy environment which has been held in 34 provinces in Indonesia (sim.ciptakarya.pu.go.en, 2021). The high population density that is not matched by the availability of land for settlements will result in the emergence of slum settlements in urban areas. When viewed from a health perspective, this settlement is not suitable for habitation because it will be vulnerable to various health problems, ranging from infectious and non-communicable diseases. (Priyono et al., 2013). In this regulation there is a game between the government and the community who work together to create this sustainable development. Community participation in this policy process also creates an impact on decent living, especially on access to housing. The government has also issued many policies to solve this problem in the context of development ranging from the economic, social to environmental fields that are directly related (Kwanda, 2003).

The policies that have been carried out by the government in suppressing the settlement problem to achieve sustainable settlements and for broad access to health for the community will be reflected in the index value on the human development index or HDI. Although the health index is not the only indicator in the formation of the HDI, health is also very influential, especially aspects of a healthy environment that will improve the quality of human health. Therefore, This research focuses on the effect of sustainable settlements on the HDI and how the strategy for increasing the HDI through sustainable settlement management is aimed at knowing the effect of sustainable settlements being worked on by the government as one of the achievement goals in the Sustainable Development Goals or SDGS on the Human Development Index (HDI).) in Indonesia. By looking at this effect through panel data regression, it can be used as a future evaluation in solving population problems for decent settlements in improving the health quality of Indonesian people and using decision-making choices to determine strategies to increase HDI through sustainable settlement management.

2. LITERATURE REVIEW

Society is a unit as an element forming a country. The state will not be separated from the population, which is because the people as residents of a country are both objects and subjects in the development of a country. The community participates in activities through government policies aimed at the welfare of the community. Community welfare is basically a social study that looks at the condition of the community in meeting their physical and spiritual needs. Government policies also play an important role in the process of developing community welfare. (Noble & Saputra, 2020). The capability of the population as human capital is one of the factors in development that can be an indicator of community welfare. Welfare as a reflection of the implementation of such development can also be seen based on the influence of the Human Development Index (HDI) as an index in the quality of human development. according to Moh & Ady, (2017) argues that the human development index also has a significant effect on economic growth. Economic growth is an increase in the gross income of a region or country, where the increase will also be reflected as an increase in the income per capita of the community. For this reason, the increase in human quality in the human development index is achieved by productivity and creativity as human capital which greatly influences the distribution of people's income which increases as the fulfillment of community needs in community welfare.

Human Development Index (HDI) as a basic index in the calculation that takes into account three basic components, namely a long and healthy life, knowledge and a decent standard of living as an index of value in human quality. This HDI is calculated by various countries around the world, especially this term was first introduced by the National United Development Program (UNDP) which is used as a periodic and sustainable value as a form of human development reports for each country. HDI is an important indicator in determining the success of the quality of the population of a country and in determining the development of a country. The human development index (HDI) is a single composite index in the measurement dimensions of human development, but still cannot measure all aspects of the development variable. Setiawan Bakti Muhammad (2008) namely Productivity, Equity, Sustainability, and Empowerment. One of the basic elements in calculating the Human Development Index (HDI) is the public health factor. Quality health status can reflect the high HDI index value as well. Quality health is easy access that creates a healthier quality of life by creating a productive environment and basic services according to the arguments of Hermawan (2011) which has an influence on environmental health with the quality of human health.

Health is an important indicator of human quality. Development indicators that become development assessments include education, income and health which are interrelated in the process of improving the quality of development. Health services and quality with several policies and programs carried out in an effort to improve health quality are very influential and related to development in the health index (Pambudi, 2020). Various government regulations in increasing health rates are also included in the budget year ceiling in improving the quality of public health. Government spending in the health sector greatly affects the quality of health, but not significantly because spending is only about 1 percent of GDP (Meylina et al., 2013). The quality of public health is also greatly affected by the quality of the environment as a place to live. according to Diamond (2020) that the health quality factor in the village and village environment greatly affects the health quality of the residents of the area. Settlements are places where people live in all activities, either as a place to rest or as a place to do work. Environmental health conditions have a positive relationship with the quality of settlements, the higher the environmental quality, the higher the health quality of the settlements (Priyono et al., 2013). So the residential environment becomes one of the important factors in determining the quality of population health in building the community HDI value index.

The definition of settlement according to Law Number 4 of 1992 concerning housing and settlements is part of the environment outside the protected area, both in urban and rural areas, which functions as a place to live or a residential environment and a place for activities to live and earn a living. The problems of settlement in Indonesia become an issue related to other variable aspects in life, of course these problems become obstacles for the population because it is the main need of life, namely a place to live. The development of Indonesia's population is increasing every year by about 1.4 percent, which triggers even higher population problems. (Ervianto, 2019). The handling of settlements carried out by the Indonesian government to date is carried out periodically (Perkim.id, 2020), namely:

- [1] Development of institutions, strategies and policies.
- [2] Capacity building of local government and communities.
- [3] Funding for infrastructure investment and urban services.

- [4] Implementation support and technical assistance.
- [5] Support programs and other activities.

The handling of these settlements is a reference in alleviating and overcoming problems, namely with the concept of sustainable building and settlement development with an environmentally friendly system (Kwanda, 2003). The concept of sustainable settlements is also used as one of the goals in the face of a population spike that is estimated to be in 2050. The very fast growth of cities which is influenced by urbanization factors from villages to cities under the pretext of increasing income as a solution to extreme poverty problems actually triggers the emergence of new problems in the population, namely the problem of settlement density (sdgs.bappenas.go.id, 2021). Sustainable urban life is one of the goals that must be completed in the 2030 target. The indicators for these goals are:

Table 2. Sustainable Settlement Goals by 2030

Indicator	Target
[11.1]	Ensure access for all to decent, safe, affordable housing and basic services, and manage slum areas.
[11.2]	Provide access to safe and affordable transportation systems.
[11.3]	Strengthen inclusive and sustainable urbanization and capacity for participatory, sustainable and integrated settlement management planning.
[11.4]	Promote and maintain world cultural heritage and world natural heritage.
[11.5]	Reducing the number of deaths and the number of people affected by natural disasters.
[11.6]	Reducing adverse per capita urban environmental impacts.
[11.7]	Provide safe and inclusive public and green open spaces.

Source: sdgs.bappenas.go.id

Based on previous research studies and theoretical studies that form the mix of this research, the researcher has a scientific framework that forms the basis for this research. The researchers will focus on looking at the effect of sustainable settlements designed by the government on the Human Development Index (IPM) as an evaluation of the relationship between these variables, as well as obtaining strategies in the process of increasing the Human Development Index (IPM) through a sustainable settlement program.

3. METHODOLOGY

3.1 Analysis Method

In this section, we will discuss the analytical method in this research, which includes research with a quantitative approach because the data used are in the form of numbers that are processed and formed in a descriptive manner. The data used in this study is secondary data obtained from the Central Statistics Agency (BPS). Secondary data in this study is in the form of annual data related to the analyzed factors. Where this research is a study of strategies to increase HDI through sustainable settlement management in Indonesia in the period 2015 to 2020. This research data is in the form of panel data, which is a combination of cross-sectional and Time Series data, namely a number of variables observed over a number of categories. and collected within a certain period of time (Ghozali & Ratmono, 2014). The factors that influence the Human Development Index analyzed are access to clean water, floor area, telecommunications network and the number of health

Andriansyah, et al. Strategy of Improvement of the Human Development Index in Indonesia Through Sustainable Settlement Management centers. The data used in this paper are sourced from the databox and the Indonesian Central Statistics Agency (BPS). For the purposes of analysis, the data used from 2015 to 2020 from 34 provinces in Indonesia.

3.2 Model Analyst

3.3.1 Panel Data Regression

Analysis with panel data regression can be done through three panel data model approaches, namely Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). The forms of panel data regression in this research are:

$$Y = \beta_0 + \beta_1 X1_i + \beta_2 X2_i + \beta_3 X3_i + \beta_4 X4_i$$

Information:

Y : Human Development Index (HDI) 2015-2020

X1 : Proper Water Use 2015-2020

X2 : Access to Sanitation 2015-2020

X3 : Telecommunications Network 2015-2020

X4 : Number of Health Centers in 2015-2020

i : Region 34 Provinces in Indonesia

In using the panel data regression analysis model, there are several tests that must be carried out in the study, namely the Chow test and Hausman test to choose the best approach in the panel data analysis model, whether using CEM, FEM or REM.

Chow test

The Chow test is used to determine the best model between CEM and FEM which will be used in panel data analysis in this study. The hypotheses used are:

H0 : Using the CEM model

H1 : Using the FEM model

Hausman test

Hausman test is used to select the best model between FEM and REM which will be used in the analysis of the panel data of this study. The hypotheses used are:

H0 : Using the REM model

H1 : Using the FEM Model

After performing the Chow test and Hausman test and getting the best approach model, the next step is to test the classical assumption of regression as one of the prerequisites in conducting regression analysis in order to fulfill the unbiased regression coefficient.

3.3.2 Analytical Hierarchy Process (AHP)

Analytical Hierarchy Process (AHP) is a decision-making method by simplifying a complex problem structured in a hierarchy by assigning a weight value to a criterion to formulate a priority policy strategy. (Julia, 2020). The formulation in the AHP formulated in this study is based on a strategic hierarchy with literature observations and the results of data processing in the previous analysis. The alternative strategies that are processed can be seen in Figure 1.

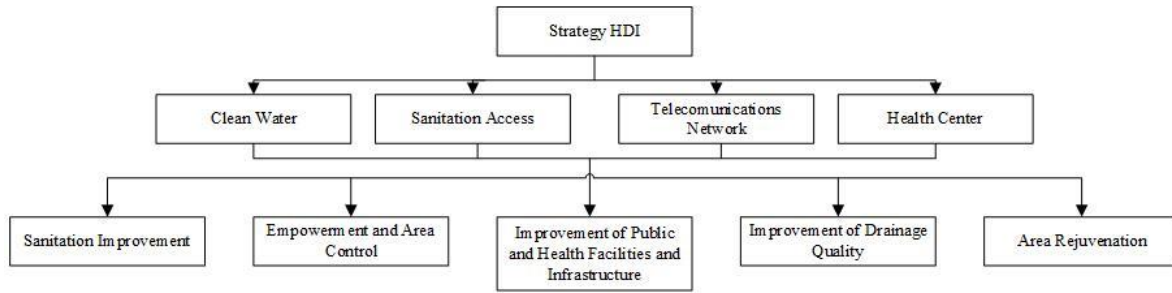


Figure 1. Analytical Hierarchy Process Structure

4. RESULT AND DISCUSSION

4.1 The Effect of Sustainable Settlements on the Human Development Index in Indonesia

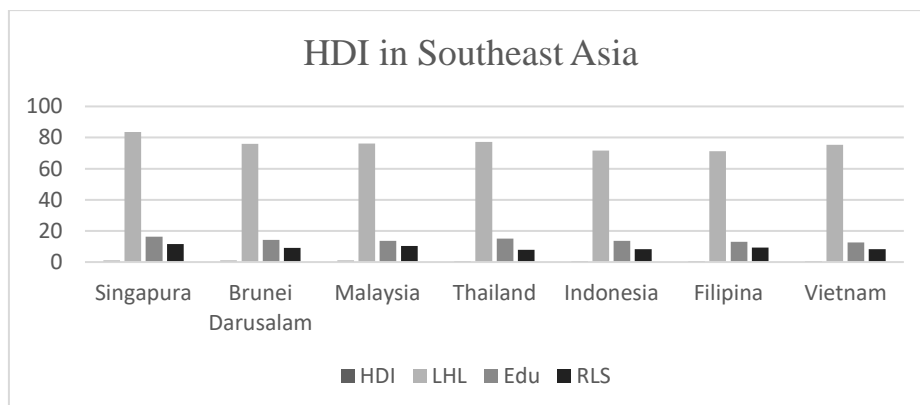
Indonesia's Human Development Index in 2021 will reach 72.29 or an increase of about 0.49 percent compared to 2020. Indonesia is also ranked fifth as the highest HDI index in Southeast Asia with the country with the highest HDI index in Southeast Asia, namely Singapore. Based on the consideration of indicators of economic aspects, education and age from the United Nations Development Program (UNDP), Indonesia is ranked 107th in the HDI index of a total of 189 countries.

Table 4. Indonesia Human Development Index 2020

Indicator	Value Index
School's old hope	12.98
Life Expectancy	71.47
Average Length of School	8.48
Per capita Expenditure	11,013
HDI	71.94

Source: Central Bureau of Statistics (2022)

From the indicators that make up the HDI, which can be seen in table 4, the comparison of the composition of the HDI index value in Indonesia consists of the expected length of schooling with a value of 12.98, namely in Indonesia, the expected length of schooling by the population ranges from 12.98 years, life expectancy is 71.47, namely The Indonesian population from birth has a life expectancy of 71.47 years, the average length of schooling is 8.48, namely the average education period of the Indonesian population only reaches 8.48 years and per capita expenditure is 11.013, namely expenditure in rupiah per person in Indonesia only. around 11 thousand only. This index figure is quite far when compared to other countries, including countries in one region, namely Singapore. Singapore has a life expectancy of 83.6 compared to Indonesia which is only at 71.47.



Source: CNBC Indonesia (2020)

Figure 2. HDI in Southeast Asia (processed)

The value of the life expectancy index is an urgent task to be solved in an effort to increase the HDI in Indonesia. Life expectancy is closely related to the level of health. Life expectancy is a tool in evaluating government work programs in work programs to improve health development. Health facilities ranging from public health services to supporting the community's healthy living needs are components that must be met in accessing public health services. The environment as

a place to live also plays a role in the process of developing the quality of health. The environment that is interrelated with community activities is good for a place to live, namely the residential environment is a capital in developing the quality of public health. A healthy and sustainable settlement plan is a progress goal that must be immediately realized in an effort to improve health quality as an increase in people's life expectancy. For this reason, there is a close relationship between sustainable settlements and community welfare as human development in terms of improving the quality of public health which will be discussed in the next discussion.

4.1.1 Factors Affecting Human Development Index

In determining the factors that affect the HDI, by using an estimation model as an analysis to see the influence of sustainable settlements which is a factor in the preparation of the health HDI in Indonesia. This analysis uses panel data regression with time series in 2015-2020 with cross-sectional data in 34 provinces in Indonesia. Before estimating the model, to choose the best model, the Chow test and Hausman test are performed, which can be seen in table 5, to get the best model.

Table 5.Chow and Hausman Panel Test Results

Test	Prob.	Result	Decision
Chow Test	0.0000	Fixed Effect Model	Fixed Effect Model
Hausman Test	0.0000	Fixed Effect Model	

Source: Calculations Using Eviews10 Software

From the test results in determining the best estimation model, namely the Chow test and Hausman test, the results obtained are in the Chow test the probability value of 0.0000 is less than 0.05, then H0 is rejected and H1 is accepted or the best FEM model. Then the Hausman test results with a probability value of 0.000 less than 0.05 then H0 is rejected and H1 is accepted then the best model is FEM. Therefore, in this study, the best estimation model is the Fixed Effect Model (FEM).

Table 6.Result of Estimation of Factors Affecting HDI

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	65.83480	0.632025	104.1549	0.0000
X1	0.004153	0.004228	0.982070	0.3275
X2	-0.000491	0.004611	-0.106579	0.9153
X3	0.068378	0.003227	21.18823	0.0000
X4	-0.000203	0.002230	-0.090858	0.9277
R-squared	0.996463			
F-statistics	1256,427			
Durbin-Watson stat	1.255243			

$\alpha=1\%$

Panel data regression analysis of the factors that affect the Human Development Index based on sustainable settlements in Indonesia produces a coefficient of determination or R-squared value of 0.996463, then the dependent variable, namely HDI 99 percent can be explained or affected by the independent variable, namely sustainable settlements and remaining 1 percent is influenced by other factors beyond the estimation of this study. The calculated F value of the estimated result is 1256,427 which is significant at the 1% level, then the independent variables together significantly affect the independent variable, or sustainable settlements have a significant effect on increasing the Human Development Index in Indonesia. Then the calculated F value shows a fairly good calculation value with a constant value of 65. 83480 which means that when there is no increase in the independent variable or sustainable settlements, the dependent variable or HDI is at 65.83480. The results of the estimation of factors that affect HDI in Indonesia based on sustainable settlements, namely the use of clean water, access to sanitation, telecommunications networks and the number of health centers will be discussed next.

The results of the estimation of the variable use of clean water on HDI obtain a t-statistic value of 0.982070, then the variable of clean water use has a significant positive effect on HDI. This means that every 1 percent increase in the use of clean water by the community in settlements will increase the HDI in Indonesia by 0.98 percent. This is because water is a source of livelihood whether it is used for primary needs or for secondary needs. In residential areas, water is the main source to meet these needs, especially in maintaining cleanliness. Maintaining cleanliness by using clean water in the living

environment in settlements can improve the quality of health which encourages an increase in life expectancy so that it can increase the value of the HDI index. Oni (2018) access to water greatly affects public health, poor access to water use has a major impact on public health.

Then from the estimation of the telecommunications network variable in sustainable settlements, HDI also has a significant positive effect with a t-Statistic value of 21.18823. This means that every 1 percent increase in telecommunications networks in sustainable settlements can increase the HDI by 21 percent. This is because the rapid development of the city requires a city to be able to provide easy access services. Dominant settlements filled by the community as residents who settle for a place to live become a necessity in using telecommunications networks. The current environment that must be adaptive to telecommunications in its activities has a positive impact, including on the economy through jobs that can increase income. The estimation results are also in line with the arguments put forward by Dipra & Ragil (2013) that the telecommunications network is very supportive and facilitates community activities in settlements.

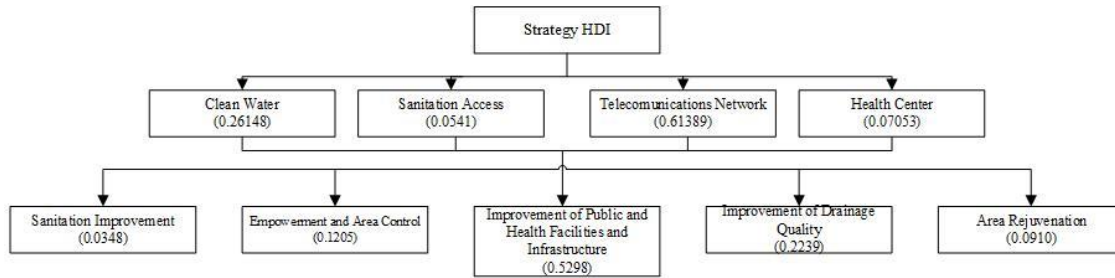
On the other hand, the estimation results of the variable access to sanitation and the number of health centers in sustainable settlements have a significant negative effect, namely the sanitation f-statistic of -0.106579 and the number of health centers of -0.090858. So it means that if you are loyal to a 1 percent increase in access to sanitation, it will reduce Indonesia's HDI by 0.1 percent and for every 1 percent increase in the number of health centers, it can reduce Indonesia's HDI by 0.09 percent.

4.1.2 Result Discussion

The results of the study of the effect of sustainable settlements with the use of clean water, access to sanitation, telecommunications networks and the number of health centers on the Human Development Index in Indonesia have a significant effect, with a positive influence on HDI, namely the use of clean water and telecommunications networks. In the previous discussion between the quality of environmental health which has a relationship with sustainable settlements, which affects the life expectancy of the population which is an indicator component in the HDI by NU DP, and Indonesia's HDI lags in life expectancy compared to nearby countries such as Singapore, Brunei Darussaalam and Malaysia. be an evaluation to continue to improve the quality of public health in encouraging the increase in HDI. Increasing HDI is certainly a joint task of both the government and the community who must participate in each other's participation in solving these problems. So a strategy is needed to improve the quality of the environment with sustainable settlements to increase the HDI, which will be discussed next.

4.2 Strategy to Increase HDI with Sustainable Settlements

In getting the results of the analysis to determine the strategy in increasing Indonesia's HDI through sustainable settlement management, namely by using the AHP method based on criteria and alternatives to produce a strategic hierarchy. Based on the criteria by comparing the factors in sustainable settlements for the strategy to increase the HDI of the telecommunications network, it becomes the main priority in sustainable settlements with a value of 0.61389, then the second priority is access to decent water with a value of 0.26148. This is in accordance with the results of panel data in the following discussion, where telecommunication networks and adequate water access significantly have a positive effect on HDI in Indonesia. The telecommunications network is a top priority which is also due to the importance of access to services that serve as a liaison to support the needs of the community, the infrastructure that is the mainstay of the community, namely by supporting telecommunications networks that directly contribute to the welfare of the community. Then water is also a source of life, so access to proper water is a need for everyone in meeting their needs, for that decent water is a support in sustainable settlements. Furthermore, the priority in the sustainable settlement factor for HDI is health services with a value of 0.07053 and access to sanitation with a value of 0.0541 which can be seen in Figure 1. infrastructure that is the mainstay of the community, namely by supporting telecommunication networks which directly contribute to the welfare of the community. Then water is also a source of life, so access to proper water is a need for everyone in meeting their needs, for that decent water is a support in sustainable settlements. Furthermore, the priority in the sustainable settlement factor for HDI is health services with a value of 0.07053 and access to sanitation with a value of 0.0541 which can be seen in Figure 3.



Source: Processing Results Using AHP Super Decisions Software

Figure 3. Hierarchical Strategy Results

Comparison between alternatives that are an option in determining a hierarchical strategy in increasing HDI in Indonesia through factors in sustainable settlements, there are several alternatives that are adapted to government programs in the process of achieving sustainable urban and settlement goals. The results of using the AHP method show that the priority results in alternative strategies to increase HDI with sustainable settlement management are improving public services and access to health and infrastructure which are the main priority with a value of 0.5298, then the next priority is improving water quality with a value of 0.2239, the third priority namely improving settlement management with a value of 0.1205, the fourth priority alternative is rejuvenation of the area with a value of 0.0910 and the last priority alternative is sanitation improvement with a value of 0.0348. The alternative strategy that is processed is one of the implementations that can be carried out by the government and the community simultaneously in determining policies as a target for achieving an increase in Indonesia's HDI. For this reason, the implementation of policies that can be taken is based on three main priorities based on alternatives that have been calculated using the AHP method in the following discussion.

4.2.1 Policy Implication

Based on processing using the AHP method with a comparison of factors and alternative strategies, there are three priorities that become policy implementations that can be carried out as a strategy to increase HDI.

Improvement of Public Services and Access to Health and Infrastructure

There are three indicators used in measuring the Human Development Index (HDI), namely education, health, and community welfare, so improving human development cannot be separated from improving the quality of public services, especially in the Education and Health sector. As explained in Law Number 25 of 2009 concerning public services, the first thing that service providers need to pay attention to is the existence of clear standards, one of which regulates the certainty of cost standards. So that the government must provide clarity on the standard of education costs, especially schools organized by the government, so that the community also gets a decent education.

Where Public services are a benchmark for the success of implementing tasks and measuring government performance through the bureaucracy. One of the government's efforts is to implement the principles of good governance, which are expected to provide excellent service to the community (Maryam, 2016). This means that with the existence of good governance, it is hoped that the government can provide maximum services and in accordance with the needs of the community through searching for what issues the community actually needs. The realization of quality public services is one of the characteristics of good governance (Maryam, 2016). In addition, no less important is the availability of supporting facilities ranging from hardware to software such as the availability of technology for the realization of good education. (Amaliyyah, 2021).

The concept of human development fulfills a very broad dimension with many choices, it is only possible if the population has the opportunity to have a high life expectancy or a long and healthy life, have the knowledge and skills or expertise and have the opportunity or opportunity to realize this knowledge in productive studies, so that people or residents have high purchasing power (Yektiningsih, 2018). The condition of public health is greatly influenced by the services and policies in the health sector carried out by the government, both for the purpose of curing disease and preventive health efforts through various instruments owned by the government. Currently, one of the problems in the health sector that often arises among the public is the problem of BPJS Health, which is directly related to the standard cost of health services. The government needs to minimize the BPJS problems so that it is easier for people to seek treatment and the achievement of human resource development is marked by the high quality of life achieved by the community.

Improved Water Quality

Settlements are part of the environment outside the protected area, either urban or rural, which functions as a place to live and place activities that support livelihoods and livelihoods.(Ervianto, 2019). In the formation of sustainable settlements, there are various components that must be considered, one of which is the component of creating a healthy residential environment, including the availability of adequate water quality for the community. Given that water is a source of life for the community, policies are needed that can protect the availability of decent water for the community, such as,

1. Ensure water security through increasing knowledge, changing attitudes and behavior in the use of drinking water and sanitation management,
2. Provision of productive infrastructure and service management through the implementation of asset management in planning, budgeting, and investment,
3. The implementation of drinking water and sanitation synergies carried out at the national, provincial, district/city, and community levels,
4. Increasing the effectiveness and efficiency of funding for drinking water and sanitation infrastructure,
5. Increasing the role of spatial planning as a guideline in the use of provincial space,
6. Improving the provision and quality of strategic infrastructure services.

Policy Objective 6. The policy directions to achieve the target of ensuring the availability and sustainable management of clean water and sanitation for all are: (1) Accelerating the Preparation of Detailed Regency/City Spatial Plans to be evaluated by the governor, (2) Preparation of guidelines for implementing spatial use and facilitation efforts to comply with the spatial plan, (3) Accelerate the development of water resources infrastructure, through the resolution of obstacles to licensing, financing, land provision and overcoming social problems, (4) Improvement of hydrological monitoring systems and water quality and water resources information systems, (5) Improve the management of water source infrastructure, through the operation and maintenance of water source infrastructure in order to restore its storage function & capacity,(6) Development of water resources management methods based on the principles of adaptive use and conservation zoning by balancing economic and ecological considerations in a sustainable manner, (7) Improvement of irrigation network services to support food security through Participatory Irrigation System Development and Management (PPSIP), (9) Acceleration of construction & rehabilitation of flood control infrastructure to protect public infrastructure and productive areas.rehabilitation of flood control infrastructure to protect public infrastructure and productive areas.rehabilitation of flood control infrastructure to protect public infrastructure and productive areas.

Improved Settlement Management

Sustainable settlements, namely the development of settlements with conditions to improve the quality of the community's living environment. Settlement management occurs based on the use of spatial planning and building design that accommodates environmental aspects. Where the layout or building design is able to provide comfort and bring health to its users. This is based on the principle of sustainable settlements that hope to improve the quality of residential areas. If there is no policy on these settlements, there is the potential for negative impacts to arise with the quality of settlements getting increasingly slum. There needs to be a policy that is qualified and has the essence that the house greatly affects the quality of the community and its environment. Placing the community as the main actor to launch a strategy for empowerment of sustainability.(Ervianto, 2019)that is:

1. Empowering the community by organizing housing and settlements with the concept of a healthy house.
2. Creating a sustainable, healthy and livable environment.
3. Achieve access to proper sanitation for domestic wastewater, garbage and environmental drainage.
4. Create settlements that are protected from disasters, carry out mitigation, preparedness, and post-disaster rehabilitation capabilities.
5. Improving the safety and security of buildings with their compatibility with the environment.
6. Providing the use of renewable and sustainable energy to support the sustainability process.

This policy is able to increase the HDI because it is racing towards increasing the standardization of people's lives, which prioritizes health, safety, and comfort. The failure of handling slums so far is due to the perspective of settlement which focuses on arrangement but still ignores the right to a comfortable life. Slum settlements should not only focus on

structuring but be able to create productive areas that have added economic value for the poor and environmental contributions that lead to conservation and reforestation for sustainable settlements.

5. CONCLUSIONS

The position of Indonesia's HDI in 2021 which is in the fifth highest position in Southeast Asia with an HDI index value of 72.29 based on UNDC after several countries that are at a higher level such as Singapore, Brunei, Malaysia and Thailand. Indonesia's HDI has experienced a slow increase of around 0.49 percent per year, especially in the life expectancy index. The life expectancy of the population in Indonesia is strongly influenced by the environmental conditions around the place of residence and place of activity, namely settlements. Settlement factors based on 99 percent research results greatly affect HDI in Indonesia with several factors originating from sustainable settlement management being factors that affect HDI in Indonesia, namely the first use of clean water, with a research t-Statistics value of 0,982070 which means that every 1 percent increase in the use of clean water will increase Indonesia's HDI by 0.98 percent. Then the second is the telecommunications network with a research t-Statistics value of 2.118823, which means that every 1 percent increase in the telecommunications network increases 2.1 percent of Indonesia's HDI. Then there are several factors that do not have a positive effect on the factors that affect HDI from the research results, namely access to sanitation and the number of Puskesmas.

Environmental quality based on settlements that affect HDI is the task of all elements from the government, the community to the private sector in managing settlements, namely through sustainable settlements. Furthermore, a sustainable settlement management strategy in creating a healthy environment for increasing HDI becomes the formulation in this study, as for strategies that can be carried out in sustainable settlement management to increase HDI, namely the first to increase public services and access to health and infrastructure, where this is one of the needs and support in population activities as well as a form of public health facilities, then the second is improving the quality of proper water where water is a source of livelihood because it is a necessity for public consumption,

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