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Effect of Life Quality and Environmental Management in Public Attitudes towards Sustainable Development in South Labuhan Batu District Indonesia

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Abstract:

This study aimed to explain the influence of quality of life and society attitudes in environmental management for sustainable development in South Labuhan Batu District.

This study was conducted in 5 districts with 332 people as respondents by using a Multiple Stage Cluster Sampling. Data collection techniques used were the questionnaire then tested for validity and reliability. Data were analyzed by using Multiple Linear Regression.

Quality of life and society's attitude toward environmental management directly affect the sustainable development. It does not directly affect the public attitude towards the environment but it effects the sustainable development through public attitudes to the environment indirectly. Simultaneously, the physical quality of life and attitudes of society in environmental management effect on sustainable development.

In efforts to create the sustainable development it should still pay attention to the quality of natural resources and human resources

and provide a rule regarding limits monitoring, management of the environment and public participation.

Key words: life quality, the attitude of public in environmental management, sustainable development

Classification JEL: Q5, O1, Z1.

Introduction

Sustainable development as a planned effort to integrate the concept of environmental, economic and social into the development process believed by many experts can ensure the welfare of community development right now and in the future. To create such a thing it is needed quality human beings. Thus these concepts of development are actually the human development itself that is human-oriented development (people center development) considered as a target man as well as development actors. The rising number of residents isn't becoming problems when the population has qualified human resources because it becomes the capital, so that the various problem scan be resolved soon.

The trend ongoing now is when the demands of the development needs should be met to improve the quality of life especially from physical quality sectors namely: economy, education and health, always accompanied by the exploitation of natural resources, excessive environmental pollution and social tensions. This is because the quality of the people involved in the development isn't qualified. If this trend continues the carrying capacity of the environment is certainly exceeded one day. As the consequence the breakdown of human life appears. To avoid this, the increase in quality of life must be improved not only in the physical quality factors but also the attitude of the public in environmental management (Salim, 1985).

Indonesian Man in reality is more familiar with the natural environment rather than the technology environment. The state of nature is still more decisive for the majority of Indonesian people than technology efforts. So that it is important to conduct an inventory and evaluation of existing natural resources in order to know better and be able to utilize the natural resources among on land, sea or air namely : land, water, energy, flora, fauna and others really needed for the development.

Many previous researchers who have produced research related to sustainable development, but have not been comprehensively using variables such as quality of life physically. For example: Faturahman & Ancok (1980) which only focused on the health sector and Suryotomo (1992) which only focused on economic studies as one of the components of quality of physical life. While previous researchers who focused on researching environmental about the natural resource management system in a place where local people were actively involved in the management of natural resources existed there. As well as coastal community development strategy it can be conducted through two approaches, structural and non-structural and Dartoyo (2004) in his research concluded that coastal area district management, arranged a relational inter-entity relationship diagram showed the relationship of district administration hierarchy consisting of administration coastal counties, coastal district administration and the administration of the village / coastal villages with coastal ecosystem varieties. Each entity is a database on a table field structure in accordance with the need for coastal zone management districts. Relational entity would facilitate the preparation of a program language describing the reality of real world into the language program.

Researchers who focus on regional planning examine terrestrial ecosystems to estuaries but do not assess the overall region concerned, this thesis results planning referred to the

watershed in the mainland to marine estuary in coastal areas. Consequently under certain conditions it needs spatial planning across administrative boundaries and assesses the level of sustainability of the border region as one of Agropolitan development programs through the analysis of the index and the status of border region Bengkayang from five dimension sustainabilities. This analysis using Multi-Dimensional Scaling (MDS) results index form and sustainability status (Soerjani, 1982). In Soerjani research (1982) conducts a modeling relationship development with supporting components such as environment natural, artificial and social environment. Then Dahlan applies its model with the influence of Human Resources.

Literature Review

Quality of life is as the health level and age, employment, education, freedom and security, culture and basic response to a better life and ethics (UNESCO, 1992). European Commission (1996) shows the physical qualities consisted of income, housing, environment, social stability, health, education and employment, those factors are sufficient in the sense of including a lot of things as a reflection of the quality of physical life. The problem found is its indicator is not operational yet and still has difficulty in its measurement. UNDP develops indicators of physical quality and the *Human Development Report* 1993, in this case UNDP constructs human development level (Human Development Index) into three main indicators, namely life expectancy, education level conditions and the level of income (UNDP, 1993). From the above description it can be understood that the discussion of the physical quality of life is the level of quality of life of an individual or population in looking outward happiness seen through: 1) economic factor 2 health factors), and 3) educational factors.

On the other side of the green development is essentially an ecological problem, especially ecological development, namely the interaction between development and the environment (Soemarwoto, 1997). Implicitly it is said that, the quality of human life depends on how far humans can understand the surrounding environment (Grazt, 1978).

Instilling a wise attitude towards environmental development must consider four factors: (1) Awareness of the earth must be developed until each individual knows the role that he has as a member of the world community, (2) The development of a new ethics in the use of natural resources, (3) attitude towards nature should be developed based on harmony and (4) Humans must develop identification of the next generations and be ready to pass on profits, and not pass catastrophe (Mesarovic, 1974).

It is very important to cultivate a wise attitude in thethree forms of environmental management for a qualified human life. According to Dahlan, the quality of life is divided into physical and non-physical qualities, while according to Soejani in relation to improving the quality of life of the population in development it is clearly illustrated in Figure 1.

The understanding of environment itself actually includes the natural environment, tested to enhance through the built environment. Artificial environment as a human environment has been converted to the livelihoods of the population by applying science and technology. The social environment includes human relationships with institutions of social institutions, culture, and religion. Therefore the assessment of relationship among the natural environment, built environment and social environment is crucial to realize development environment (Setyabudi, 1996).

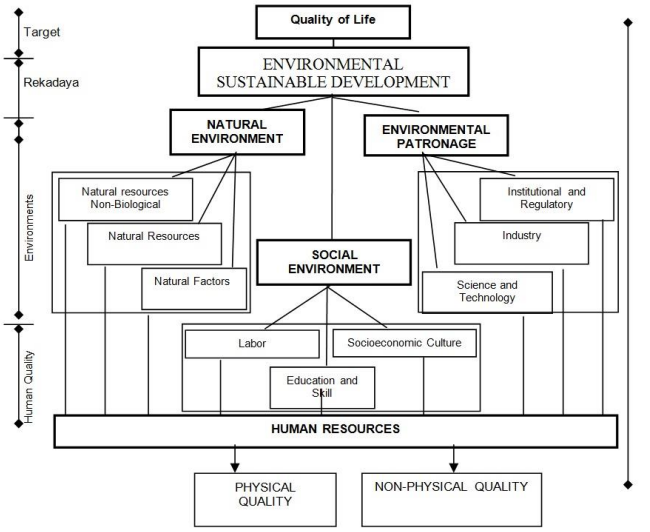

Figure 1. Linkage Model Quality of Life and Environmental Management to Sustainable Development

In an effort to build, there is always a tendency to change the environment of human activities in terms of environmental management, while the changing of an environment will affect the human life, whether it is favorable or otherwise. In fact, sometimes the environment changes go beyond the planning scale and consequently there is an unexpected environmental effect.

To create a good and healthy environment management, the organisms should be able to live and develop normally by the condition and its natural resources and the supporting environment should be always natural as long as people do not dominate the environment through their attitudes and behaviors (Soerjani, 1987).

Humans made up of inner psychic and physical get the process to affect their attitude, while attitude can affect the quality of life through development activities. Based on the relevance of the second chart above theory, it is a main reason why the attitude of the management of environmental factors is used as a study material suspected as having an *intervening*

bearable and it can be on the level of quality of the population in the development of environmentally sound.

Result and Discussion

In this study, the physical quality of life is divided into three components: economic quality, the quality of health and quality of education. While sustainable development is divided into three components: quality of ecological, social quality and the quality of the law. The quality of economy becomes a variable of construct physical qualities. In Table 1 It is shown that quality is not economically significant and positive effect on the quality of the partial ecology, it indicates that the quality of the economy is not an important factor in the effort to support the creation of sustainable development in the context of ecological quality. The different thing here is for the social quality variable was influenced by the quality of economy, although only at a significant level of 10% with a t-value = -0.152. While the quality of economy as also a factor of physical life quality is not affecting the quality of the law as a sustainable development factor.

Besides quality of economy, in this study the physical life quality is also built using the construct of health quality, while sustainable development is comprised of three components, namely the construct variable ecological, social and legal qualities. The results of data analysis showed that the quality of health had a positive and significant effect on the ecological quality of partially by t-value = 4.530 with a significant value of 0.000. This suggested that health became an important factor in the effort to support the creation of sustainable development in the context of ecological quality.

The other result related to the social reality was another component of sustainable development. Similarly, the ecological quality, health quality variables affect the quality of health social. Health quality affected the quality of the social

significance level of 1% with a t-value = 14.730. On the other hand the results of the study also showed that the quality of health as physical quality of life factors affecting on the quality of the law as a sustainable development factor at the significant level of 99% with t-value = 10.224.

Table 1. Constructs Hypothesis Testing of Life Quality and Public Attitudes to Environmental Management towards Sustainable Development Construct

Dependent Variable	**Independent Variable**	**t-test**	**Sig**
Ecology Quality	Economy Quality	-0.532	0.595
	Health Quality	4.530	0.000***
	Education Quality	4.068	0.000***
	Public Attitudes in Nature Management	-0.756	0.450
	Public Attitudes in Social Management	-0.577	0.564
	Public Attitudes in Artificial Natural Environment Management	3.519	0.000***
	F-test		Sig
	9.431		0.000***
Independent Variable	**Independent Variable**	**t-test**	**Sig**
Social Quality	Economy Quality	-0.152	0.098*
	Health Quality	14.730	0.000***
	Education Quality	2.334	0.020**
	Public Attitudes In Nature Management	0.778	0.437
	Public Attitudes in Social Management	1.236	0.217
	Public Attitudes in Artificial Natural Environment Management	0.455	0.649
	F-test		Sig
	39.897		0.000***
Dependent Variable	**Independent Variable**	**t-test**	**Sig**
Legal Quality	Economic Quality	1.208	0.228
	Health Quality	10.224	0.000***
	Education Quality	2.981	0.003***
	Public Attitude in NatureManagement	1.232	0.219
	Public Attitude in Social Management	0.438	0.661
	Public Attitude inArtificial Natural Environment Management	2.160	0.032**
	F-test		Sig
	21.572		0.000***

* Significant at the alpha level 10%
**Significant at the alpha level 5%
*** Significant at the alpha level 1%

Education quality was also a construct of quality of life physically, while sustainable development consists of three components, namely the construct variable ecological quality, quality of social and legal quality. Education quality was with a t-value = 4.068 and a significant value of 0.000. The results of the analysis of these data have indicated that the quality of education had a positive and significant effect on the partial ecology quality. This suggested that the quality of education became an important factor in the effort to support the creation of sustainable development in the context of ecological quality. Of the two variables that had significant value, although both variables became an important variable but education had greater t-test than health variables. The other result related to social quality was another component of sustainable development. Similar to the ecological quality, the variable quality of education affected the quality of social. The quality of education affected the quality of social at the significance level of 5% with a t-test value of 2.334. Thus the dominant variable affecting social quality was health variable quality, followed by the education and economy qualities. On the other hand the results of the study also showed that the variable quality of education as a factor of physical quality of life affected the quality of law as a sustainable development factor at the significant level of 99% with a t-value = 2.981. So the health and education qualities became dominant variables affecting the quality of the law than the other variables.

In this study, a public attitude in environmental management was divided into three components: public attitudes in nature management, public attitudes in social management and public attitudes in artificial management. While sustainable development was divided into three components as well as the quality of economic, social quality and the quality of the law. Public attitudes variables in nature management as a factor of Public Attitudes in environmental

management does not effect on the quality of law as a factor of sustainable development

Variable of public attitudes in social management was the only factor in public attitudes in nature management that affected the quality of the legal quality as a factor of sustainable development despite the significant level of 99% by value of t-value = 2,160. Public attitude in social management variable as a factor in public attitudes in nature management does not effect on the quality of law as a sustainable development factor.

Explanation of the above findings was also strengthened by the effect of the health and education variable qualities that significantly affected the overall sustainable development of economic. Though partially quality variables had no significant effect but simultaneously the three variables forming construct of physical quality of life namely: economy, health and education qualities had a significant effect (Table 2).

Table 2. Constructs Hypothesis Testing of Life Quality and Public Attitudes to Environmental Management towards Sustainable Development Construct

Dependent Variable	**Independent Variable**	**t-test**	**Sig**
Sustainable Development	Economy Quality	-0.437	0.662
	Health Quality	7.091	0.000***
	Education Quality	4.678	0.000***
	F-test		Sig
	25.693		0.000***
	Public Attitudes in Nature Management	-0.512	0.609
	Public Attitudes in Social Management	0.102	0.919
	Public Attitudes in Artificial Natural Environment Management	3.669	0.000***
	F-test		Sig
	4.517		0.004***

*** Significant at an alpha level 1%

The results showed that the Public Attitudes in Nature Management and Public Attitudes in Social Management partially had no effect on sustainable development. While variable of Public Attitudes in Nature Management was

significant at an alpha level of 1% with a t-value = 3.669 (Table 2).

Table 3. Hypothesis Testing of Life Quality Construct and Life Quality towards Public Attitudes in Nature Management

Dependent Variable	Independent Variable	t-test	Sig
Public Attitude in Nature Management	Economy Quality	-.547	.585
	Health Quality	.235	.814
	Education Quality	1.032	.303
	F-test		Sig
	.427		.734
	Quality of Physical Life	.230	.818
	F-test		Sig
	.053		.818

Economic, health and education qualities had a significant value > 0.05, thus it could be concluded that the variables did not significantly affect the attitude of the community in environmental management. Meanwhile all variables at same time did not significantly affect the public attitudes in environmental management with sig of 0.734 or > 0.05. Quality of physical Life had no significant value> 0.05, thus it could be concluded that these variables did not significantly affect the public attitudes in environmental management.

Table 4. Testing of Hypothesis of Life Quality and Public Attitudes in Environmental Management towards Sustainable Development

Dependent Variable	Independent Variable	t-test	Sig
Sustainable Development	Quality of Physical Life	5.433	0.000***
	Public Attitudes in Nature Management	2.065	0.040**
	F test		Sig
	17.038		0.000***

**significant at an alpha level 5%

*** Significant at an alpha level of 1%

Other findings showed that the physical quality constructed was affecting significantly to sustainable development at a significant level of 99% with t-value = 5.443, while the public attitudes in environmental management constructed was

affecting significantly to sustainable development at a significant level of 95% with t-value = 2.065.

Although variable of public attitudes in environmental management constructed did not significantly affect to a sustainable development but in term of the ecosystem it was very important for environmental management efforts because the social consideration was closely related primarily to the political process and decision-making in the development of environmental knowledge. Changes in the environment could also affect the socio cultural life of rural communities, as well as changes to lifestyle, beliefs, emotions and society knowledge.

Conclusion

1. Quality of life directly affects sustainable development. Sequentially it constructs of life quality variable, then the quality of health is on the first rank, the quality of education is on the second rank and the quality of the economy is on the third rank.
2. The public attitudes towards environmental management directly affect a sustainable development. Sequentially it constructs the public attitudes in nature management then the public attitude in artificial natural environment management is on the first rank, the public attitude in social environment management is on the second rank and public attitudes in natural management are on the third rank.
3. Quality of life doesn't affect the public attitude towards environment directly, but quality of life affects the sustainable development indirectly through public attitudes towards environment.
4. Simultaneously, the quality of physical life and public attitudes in environment management effects on a sustainable development

Suggestions

1. In efforts to realize a sustainable development, South Labuhan Batu Regency Government should still pay attention to the qualities of natural resources and human resources supporting the use of natural resources in the development process so do not worry about the existence of a scarcity of natural resources both renewable and non-renewable natural resources, It also includes about the spatial arrangement process towards industrialization.
2. In order to manage and monitor the environment efforts for achieving a sustainable development in Regency of South Labuhan Batu should provide a rule regarding limits of monitoring and management of the neighborhood for the development actors so that it does not harm the public directly. Of course it includes the empowerment and wastewater treatment and does not cause the damage to environment.
3. In term of the society changes we altogether support to produce and consume more intelligently then find new ways and more sustainable economic growth and also ensure that all profits from its growth. We need the new and clean sources of energy, better ways of working on the earth's resources, more efficient transport of people and goods, and more inclusive global society.

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