

Implementation of Green Economy Program Based on Penta Helix Approach

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Abstract. Sustainable development needs to be proclaimed throughout the world, because the environment has begun to be degraded, especially natural resources that have begun to run out over time, this is because of continuous development without regard to the environmental sector, this is the concept of Green Economy. This study aims to determine how the application of the Green Economy concept in an independent village and the role of the five actors in it, namely the government, private sector, academics, and the press, commonly called the Penta Helix model to support development in Indonesia. The results showed that the application of the Green Economy principle in 3G villages had been carried out through the village conditions, programs that were made, and the activities that were there. In its development, the actors have also contributed in it, several universities in Malang, the banks, SOEs, and press friends such as the Kompas Post.

Keywords: Green Economy, Kampung 3G, Penta Helix

1 Introduction

Indonesia as a developing country also supports the SDGs (Sustainable Development Goals) issued by the United Nations. According to Infid (International NGO Forum on Indonesian Development) SDGs carry 5 fundamental principles to balance the social, economic and environmental dimensions. In addition to the 5 principles, SDGs also overshadow 17 goals (Goals) as well as 169 goals that cannot be separated, connected, and integrated with each other to achieve a better human life.

These 17 goals and 169 targets are indicators to measure the success of the SDGs. According to the Sustainable Development Knowledge Platform, one of the goals is the Sustainable Development Goals 8, one of the topics for discussion is the Green Economy. "A green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP, Towards a Green Economy, 2011). Green Economy can also be called a Green Economy which means that an economy that is able to improve people's welfare and social justice without causing negative impacts on the environment.

In realizing the concept of a Green Economy, there are principles that must be met. According to the Stakeholder Forum, Bio Regional & Earth Charter (2012) there are 15 Green Economy Principles, namely, (1) equitable distribution of welfare (2) equity and economic justice (3) intergenerational equity (4) prevention approaches (5) the right to develop (6)

internalizing externalities (7) international cooperation (8) international obligations (9) information, participation and accountability (10) sustainable consumption and production (11) strategic, coordinated and integrated to provide sustainable development planning, green economy and poverty alleviation (12) only transition (13) redefines welfare (14) gender equality (15) preserves biodiversity and prevents pollution from any part of the environment.

Malang City as a city that has a "Malang Ijo Royo-royo" program supports the concept of a Green Economy. One of them is found in Kampung 3G (Glantung Go Green) located in Purwanto Village, Blimbing District, Malang City. Kampung 3G is a village that applies Go Green to overcome the problems that exist in Glintang village. Before the 3G movement, Glintang village was a slum with other social problems, such as damaged infrastructure, high crime rates, low economic levels so that many residents were in debt and dealing with loan sharks and low health levels. From the explanation above the flood became the main problem so that it triggered the Head of the 23 Community Associations (RW) in Glintang Village namely Ir. H. Bambang Irianto to change the situation through the application of the 3G movement (Glintang Go Green).

The 3G movement began in 2012 with a simple activity of greening the environment. At the beginning of its implementation, the community is required to have green plants in their homes, as well as a mandatory requirement for the community to obtain population administration services. After 6 years, starting from a slum village accompanied by socio-economic problems, has now been able to overcome a variety of problems, ranging from flood disaster prevention to improving the welfare of the community which makes the community free from loan sharks.

In addition, the level of health increased because in the area had doctors who were able to serve the community. Improved infrastructure, and reduced crime rates. In its development, 3G Village has increasingly shown tangible results that can be felt by the community. This can be achieved by the cooperation between the people of Glintang village and various parties. The parties involved collaborated to bring developments to the 3G Village. There are five sectors (Pentahelix) involved, namely the community, Malang City Government, Academics from several universities in Malang City, the private sector, and the press. Based on the explanation above, the formulation of the problem in this study is how the role of the five sectors (Pentahelix) in the application of Green Economy in Glintang Go Green Village Malang City?

2 Literature

Penta Helix Concept

Understanding Pentahelix according to Amrial, et al (1) is "Penta Helix Model is a design of integration between five sectors which are coordinated with each other. This concept is a development of Quadro Helix theory for districts/cities by Jann Jidajat Tjakraatmadja (2) "The Pentahelix model is a form of integration design of five sectors which coordinate with each other. This concept is a development of the Helix Quadruple theory for districts or cities according to Jann Jidajat Tjakraatmadja (2).

Another understanding of Penta Helix according to REPEc in Halibas (3) is a socio-economic development model that utilizes economic knowledge to gain innovation and entrepreneurship through collaboration and mutually beneficial cooperation between academia, government, institutions, industry, and the community.

Penta Helix has several models that distinguish how roles or performance cross sectors. Each model discusses the collaboration between sectors such as academia, government, institutions, industry and the private sector. The Penta Helix model was first coined by PWC (4) which made the city government the center of inter-sector activity. Then it was developed by Bjork (5) which made social entrepreneurs active as a center of activity, but still open to others. Calzada (5) developed another model from Bjork by both making social entrepreneurs as the center, but with a rigid attitude and not being open to other sectors.

Green Economy Concept

Sustainable development will be carried out if the environmental spatial structure can be arranged using an appropriate concept that will facilitate the realization of a sustainable environmental spatial plan. The Green Economy concept is a concept that always prioritizes the principles of sustainability in three important aspects, namely environmental, economic and social aspects. These three aspects cannot be ruled out, because in various activities carried out humans will deal directly with these three aspects, all of which will affect one another, therefore balance and efforts are needed to support each other, especially in the application of sustainable environmental spatial planning.

Green Economy is a subset of the concept of sustainable development and a new paradigm that offers a development system without compromising the ecosystem. According to some experts, the application of Green Economy is an act of practicing a theory, method, and other things to achieve certain goals and for an interest desired by a group that has been planned and arranged beforehand (6). The definition of green economy according to the Green Economy training letter No. 0317 / P.01 / 01/2003 issued by the Ministry of National Development Planning, namely "A new economic order that uses less energy and natural resources". So, the application of Green Economy is to apply a new economic concept that is oriented to improving economic aspects while still paying attention to environmental sustainability in development activities.

3 Research Methods

This type of research used by researchers is descriptive with a qualitative approach. Descriptive research is a writing that describes the actual state of the object under study, according to the actual situation at the time of direct research. Sugiyono (7) argues that descriptive research is a type of research used to describe or analyze a research result but is not used to make broader conclusions ". This location can be in a certain area or a certain institution in the community. The location of the study was conducted in Kampung Glintung Go Green, Malang City, East Java.

4 Analysis

Based on the Green Economy Principles, result of this research is stated below:

Equitable Distribution of Welfare

Inequalities in society always occur because of uneven distribution of welfare. Welfare can be seen from the level of education, health, and income. Glintung village management created

a program that maximizes the distribution of welfare distribution. In the health sector, Glintung Village already has a private community doctor who is active on Friday at no charge. This improves the quality of public health and the quality of life of the people. Low economic level causes a low level of education.

The number of school children is quite low. The education program provided is to pay for schooling up to junior high school level, while to improve the economy of residents helped by the services of visitors and with the establishment of micro businesses. The establishment of micro businesses is assisted with the provision of capital by cooperatives. Ease in getting capital so that the loan shark cycle in Glintung Village is no longer available.

Equity Between Generations

Water conservation activities carried out by Kampung 3G is an effort to store water back into the earth. This supports the Green Economy principle, namely intergenerational equity, water conservation movements or water saving movements carried out in the 3G village. This is the process of managing and protecting environmental resources so that water on the earth is stored again without being wasted. This water saving movement is carried out through a variety of media ranging from the presence of biopores of various sizes in each front of people's homes, injection wells, and catchment ditches.

Kampung 3G in carrying out the movement of water conservation or saving water is also not immune from the role of the actors in it, such as academics, the private sector and the press. From the academics and press, namely Universitas Brawijaya and Malang Post sent assistance in the form of injection wells, while from the private sector there was BRI Bank that sent physical assistance to support the water conservation movement or save water. Kampung 3G is also a pilot village for village development in other areas, especially regarding the water saving movement.

Prevention Approach

Efforts made by the residents of Glintung Go Green Village in preventing environmental degradation have implemented a number of methods implemented from several identification of risks to environmental impacts. This was done in accordance with the concept of a green economy that takes into account the impact on the environment itself. The forms of efforts to prevent environmental degradation carried out by Glintung Go Green Village are such as planting plants vertically, greening each resident's house, making biopores, forming poor waste banks and making injection wells. All forms of efforts made by the residents of Glintung Go Green Village are a form of cooperation from all supporting actors in it.

All of the collaboration in it is the result of an initiative from Go Green Kampung residents who create an innovative development environment that also invites other actors who are outside the Go Green Kampung area. In the development of the environment, especially the prevention of environmental degradation, it can be seen that the role of government is in the form of assistance in the provision of plant seeds, then from the community to take care of the seeds until the end of planting.

Right to Development

Development is also the right that is owned by every element of society. If it is associated with the application in Glintung Go Green Village, the right to develop can be owned by the community. Especially in the environmental field. As said by the guest speaker Mr. Indra as chairman of the Malang Garbage Bank (BSM), that coaching had been carried out by academics namely Prof. Dr. Ir. Mohammad Bisri, MS. and Mr. Erik as a lecturer in Water Resources

Engineering at Brawijaya University to the Glintung Go Green community. In his quote explained that before serving as Chancellor of Universitas Brawijaya, Pak Bisri who served as dean often did coaching to the community. Pak Erik as a lecturer from the Irrigation Faculty of Brawijaya University also often provides guidance, especially in the area of greening. Aside from academics, coaching was also carried out by the Agricultural Technology Assessment Center (BPTP) represented by Mr. Saiful Husni who at the time was the BPA.

The explanation shows that there is an effort from the Glintung Go Green to give the right to develop to the community through environmental development. So it can be seen that the Glintung Go Green has implemented one of the principles of green economy, namely the right to develop with the help of academics, a component of Pentahelix, as extension material to the community.

International Cooperation

The construction of the 3G village involved various parties including visits from abroad, from Asian countries such as China, the Philippines, Japan, Malaysia, Singapore and Thailand, even from Europe such as the Netherlands and Germany, where some guests from these countries were brought by Mrs. Farida as the head of the Malang City PKK and the wife of Abah Anton as the Mayor of Malang City, overseas visits to the 3G village have various purposes, such as research, comparative studies, and proof.

Like the research team from Ghuang-zhou China who visited the 3G village to conduct a review as a pilot, because in the area of origin the research team did not have water conservation although the term was more advanced. Some 3G village programs implemented in Ghuang-zhou such as biopori and injection wells, and can make Professor Bisri's name internationally recognized because some of these programs are patents from Professor Bisri

Information, Participation and Accountability

To achieve a goal requires a common thought. Efforts to equate a thought are by providing an accurate information, giving the widest access to find information. After the information has been given carefully there will be a public participation in making decisions. During the Glintung Village trip there was a time when the RW Chairman held a continuous meeting to draw up a plan, giving an understanding to the community. It was not only an understanding but building a sense of responsibility to the community. Reforestation is not just planting crops but is responsible for environmental sustainability.

Sustainable Production and Consumption

The implementation of sustainable consumption and production in Glintung Go Green Village has been implemented. This is evidenced by the efforts made by Go Green Village in reducing production that pollutes the surrounding environment such as air pollution, and the hot atmosphere due to the absence of green plants. The principle applied in Glintung Go Green Village pays attention to the environment by implementing farming with organic fertilizer. The use of pesticides in its application has a significant impact such as the impact of air pollution from the odor produced and the quality of the soil which can eliminate its nutrients. Pesticide reduction has a good impact on the surrounding environment, especially the impact on health.

Strategic, coordinated and integrated to provide sustainable development planning, green economy, and poverty

The planning carried out by Glintung Go Green Village in developing strategies, coordination and integration to provide sustainable development planning, green economy and

poverty has a coordination that not only involves men but also involves women as financial coordinators. Besides coordinating in financial matters, it also coordinates the SMEs of the Glintung Go Green Kampung community. The management carried out by Glintung Go Green Village has a very good impact on sustainable development planning and the green economy and poverty. This resulted in the creation of harmony in all activities in Glintung Go Green Village

Only Transition

In carrying out development there will be a transition or change, both in terms of social and environmental. Green economy has a principle of fair transition where even though the transition needs to incur costs, it needs to have a fair impact on its surroundings. The most vulnerable transitions need to be protected and supported so they don't turn into negative impacts.

In this research, which is located in Glintung Go Green village, has some changes or transitions that are fair and have a positive impact on the community. Looking at the presentation of the transition data that appears from the Glintung Go Green village development, the most felt changes are in the fields of health, education, and community mindset. Through the guest speaker Mr. Indra as chairman of the Malang Garbage Bank (BSM), he said that one of the success factors of Glintung Go Green Village was the success in changing the mindset of people who were initially reluctant to collaborate and finally wanted to do it, even though changing it was not as easy as desired.

In addition, changes can also be felt in the field of health where previously public health was not guaranteed, and the absence of a private doctor was guaranteed because there was a private doctor in the village who was ready to practice in the village and check public health. In the field of education, the children of the community are guaranteed the cost of education as confirmed by Mr. Indra's statement. To realize a fair transition and sustainable development in the green economy needs to be spent. Through the Pentahelix approach, one component that can deal with cost issues is the private sector. One example of a private party that overcomes the issue of cost or capital to the transition of Glintung Go Green village is BRI. Pak Indra revealed that there was assistance worth 50 million rupiah from BRI, but not in the form of cash but physical assistance, namely parks and gateways.

The explanation shows that the Glintung Go Green development rights have fulfilled one of the principles of green economy, a fair transition. One of the transitions received assistance from the private sector, a component of Pentahelix, as a provider of development assistance to the village of Glintung Go Green.

Gender Equality

Gender equality and equality is a prerequisite for the transition to a green economy and achieving sustainable development. Women have an important role as agents of change for environmental management and the development of their actions must be properly valued and their skills must be improved. In Glintung Go Green village, gender equality is well respected by involving the participation of women in various things, one of which is financial management and cooperative management. In addition, women, especially mothers, are given great trust to coordinate the community and receive complaints from the community. This is a good reflection of the village of Glintung Go Green which is now well-known by the wider community

5. Conclusions

Development is the process of achieving goals or better conditions. Communities do it in stages and have control over their environment, and the concept of planned, mature and sustainable development is needed. The development that is widely proclaimed at this time is a sustainable development that pays attention to and considers the environmental dimension. Malang City supports and Green Economy.

One of them is located in Kampung 3G (Glantung Go Green), Purwantoro Village, Blimbing District, Malang City. Glantung village was originally a slum with several other social problems, such as flooding which is the main problem. Chairman of the 23 Community Associations (RW) of Glantung Village, namely Ir. H. Bambang Irianto seeks to change the situation through the application of the 3G (Glantung Go Green) movement which began in 2012, initially starting with simple activities such as greening the village where the community was given the obligation to plant green plants in their homes which is also a mandatory requirement for the community to obtain services population administration.

Slowly Glantung village began to be able to overcome various problems. In addition, it is able to improve public health because it already has a doctor who is able to serve the community. Improved infrastructure, and reduced crime rates. In implementing its programs, 3G village has consultants in developing 3G village development consisting of Malang City Government, Malang Post, Ministry of Agriculture, and Brawijaya University. In addition, the 3G village also built networks or partners to collaborate, such as the Malang City Government, several universities in Malang such as Brawijaya University, Malang State University, Malang Islamic University, Widyagama University, and Machung University, private parties such as Bank BRI and several BUMN, and press institutions such as Malang Post.

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