

CHAPTER 1

INTRODUCTION

A. Background

Green growth is a resilient economic growth by not ruling out environmental problems, promoting low-carbon development and socially inclusive. Green election as an economic activity that can create community welfare through limiting natural resources and low carbon. The Indonesian government has also prepared a Green Growth program as a mitigation measure to deal with climate change (Fauziyah, 2021).

The term green election was first coined by a group of economists in a report entitled "Blueprint for a Green Economy" addressed to the British government in 1989. The report advises the UK government that sustainable development and the impact of sustainable development serve as a measure of economic progress, assessment of government projects and policies. In 2008, the term green election was again raised in policy discussions against various global crises. At the time, the United Nations Environment Programme (UNEP) championed the idea of "Green Stimulus" and defined specific areas where large-scale public investment could kick-start a "green economy." (Tusin, 2022).

There are several views between developed and developing countries on how the concept of green economy is understood in the context of sustainable development and poverty alleviation and as at the national level addressing this concept to avoid "Green Protectionism" in trade and funding for developing countries (Makmun M. , 2011)

Indonesia's transition to a green economy was created in 2007. In December 2007, Indonesia hosted the 13th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Bali. In this event, the President of Indonesia launched the National Action Plan on Climate Change. These actions focus on intra-government coordination and other areas of technical assistance, outreach and capacity building. The National Council of the Government of Indonesia (GOI) engages with external partners and key stakeholders including the Ministry (Budiarmo, 2019).

Around 10 million hectares of forest areas in Indonesia have been used for industrial Plantation Forest (HTI) industry or Business Permits for the Utilization of Timber Forest Products in Industrial Plantation Forests (HTI) until 2013. This number increased sharply compared to 1955 which only covered an area of 1.13 million hectares (Ceantury, 2019)

The definition and definition of forest destruction is the reduction of forest area due to damage to forest ecosystems called forest degradation plus deforestation and conversion of forest land or the term deforestation. The CIFOR (International Forestry Research) study examines the causes of forest cover change consisting of shifting cultivation, forest encroachment, transmigration, mining, plantations, plantation forests, logging and the timber industry.

With the existence of e-voting system, it is expected to be able to help implement the green election programs. The green election concept is expected to help reduce the use of paper and also the budget of the general election, therefore e-voting can be connected with this concept. Professor from the Faculty of Economics and Business (FEB) Gadjah Mada University, Prof. Dr. Sri Adiningsih said that the implementation of green election

is the right path with the first very clear reason, namely our planet, namely our earth must be able to maintain its sustainability condition. She said “We have only one earth that we must love and take care of so that our children and grandchildren or descendants will be able to inherit the planet prime or at least still the same as we did from previous generations.” Green economy is an economic idea that aims to improve the welfare and social equality of the community, while reducing the risk of significant environmental damage or also means an economy that is low or does not produce carbon dioxide emissions to the environment, saves natural resources and is social just. Then, the Government in Indonesia also realizes the importance of implementing a green economy is that directed and reaches all circles. Therefore, e-voting system plays an important role in realizing this green economy concept. With the implementation of the e-voting system, it is expected to reduce the negative impact on the country. For example, the use of paper during regular elections (non-electronic elections) can cause a waste of state budget on printed paper, then make the impact of Indonesia’s nature worse because it requires many trees for making paper. Especially, if after the election process ends, there will be more paper waste in Indonesia. Based on data from sources from the Agency for the Assessment and Application of Technology (BPPT) in Indonesia, the amount of paper waste in Indonesia can reach 1,599,000 tons / year. Therefore, along with the increasing number and activity of the population, the amount of paper waste generation will continue to increase along with the increase in the number of other types of waste (Ardhi, 2022)

The Indonesian government pays full attention to the development of new renewable energy on a national and global scale. One of the efforts made by the

Government of Indonesia to anticipate climate change is through the signing of the Paris Agreement as a form of involvement in global commitments to overcome climate change.

B. Problem Formulation

The excessive use of paper results in a reduction in forest area due to the continuous cutting of trees to produce paper makes the forest situation increasingly threatened and also damages the availability of fresh water, because paper production requires a lot of water. Elections are one of the reasons why paper waste is increasing and piling up, because of the swelling use of post-election paper. The implementation of the e-voting system in the election of village heads in Sleman Regency is related to the concept of green economy, therefore based on the background that has been outlined above, the study proposes a formulation of the problem, namely: Has the implementation of electronic voting in Sleman Regency in 2020 and 2021 been effective and why can the system support the green election program?

C. Benefits and Purpose of Research

1. Research Objectives

Based on the formulation of the problem described above, the purpose of this study is to find out whether the electronic voting (e-voting) system is effective for Sleman Regency and also to ascertain whether the concept of green election can be realized if the establishment of an electronic election system to preserve nature, especially in Sleman Regency which will be better.

2. Research Benefits

The benefit of this research is that it can be used as a reference material and evaluation material regarding the use of e-voting in the future. Also clearly know the

implementation, advantages and weakness of the e-voting system in Sleman District and green election.

D. Literature Review

This study used 21 literature reviews from articles and journals. The purpose of this literature review is to find information and be able to analyze from previous research. In this literature review it is divided into two classifications. First, the use of the e-voting system, second, strengthening the green economy program.

In writing a scientific paper, a review of previous research is needed in order to provide an overview and consideration in the relevance of the topic to be presented. The presentation of previous research is intended so that the research to be carried out by researchers is original research and avoids plagiarism elements. Here are 20 previous studies with the division of theme classifications that are relevant to the research that will be studied next.

The classification of the theme is 1) Use of e-voting system 2) Strengthening green economy programs. The first theme classification, namely the use of the e-voting system, consists of research by Lubis (2022), Taniady (2020), Ikhwani (2018), Burhanudin (2016), Beni (2021), Romadzon (2020), Nugroho (2011), Eko (2022), Wijaya (2019), Karmanis (2021) and Schneider (2018). The following are the findings of the above research which have been combined into relevant results.

The findings from (Lubis, 2022:44), (Taniady, 2020), (Ikhwani, 2018) said that this study aims to determine the implementation of the e-voting electoral system which is a new method in general elections in Indonesia. The use of the e-voting system is a step forward to realize the election principle, namely Luber Jurdil. The use of conventional systems in

previous elections was considered less effective and would eventually create various problems such as inaccurate results of vote counting.

Furthermore, from the results of research (Firmansyah B. , 2016) & (Saputra, 2021) said that the application of this electronic voting system will reduce or minimize the costs that will be incurred. As in elections that will usually use paper, ink, and so on. In this e-voting system, it will certainly be able to reduce the costs that will be incurred. From their research, Burhanuddin and Beni said that Pematang and Jambi districts wanted a vote count that could be fast, rank the voting time to the calculation process and be cost-effective without using paper anymore.

Furthermore, the results of research from (Haq, 2020), (Nugroho, 2022:1), (Santoso, 2022:160) outlined that the implementation of e-voting went well and could achieve the goal, namely reducing problems that occurred in the implementation of the village head elections, especially in the recapitulation of vote counting and post-e-relative votes had been handled well.

Furthermore, the results of research from (Wijaya, 2019:51) & (Karmanis, 2021:11), said that e-voting in general elections can increase the value of democracy, specifically increase public participation, and provide effectiveness and efficiency in the process.

Furthermore, the results of research from (Schneider, 2018) outlined that the introduction of e-voting concentrated vote shares among viable candidates and thus exhibited electoral bias. They posit that the result occurred because viable candidates were better able to communicate the information that e-voters needed to cast valid ballots than were their nonviable counterparts and also to demonstrate that e-voters responded to

changes in ballots design and internalized the information viable candidates made available to them.

The second theme classification is related to strengthening the green economy program consisting of research by Anwar (2022), Firmansyah (2022), Noviarita (2022), Antasari (2019), Makmun (2011), Prianto (2021), Wardani (2022), Muhajiddin (2021), Sari (2014) and Iskandar (2019). The following are the results of the findings of the above research that have been combined into relevant results.

Research from Anwar (2022), Firmansyah (2022), Noviarita (2022) said that the concept of green economy is one of the global strategies related to social, economic and environmental crises. The creation of a paradigm towards the green economy of society methodologically, conceptually, implementation and criticism leads to the challenge of a global strategy that has the goals of sustainability, poverty alleviation and inclusion of vulnerable social sectors.

Research from Antasari (2019), Makmun (2011), Prianto (2021) said that the green economy can be a solution to the increasing volume of waste and major environmental problems that will trigger other environmental problems. The policy also encourages the development of geothermal and renewable energy to improve forest products and access REDD carbon markets. They also added that the green economy system could face the challenges of climate change until 2030 ahead.

Research from Wardani (2022), Mujahiddin (2021), Sari (2014) said that financial management has a very big influence on an individual and alternatives to avoid excessive financial problems, besides that sustainable consumption and production patterns can apply efficiency to use resources. So that this green economy-based financial management

behavior can help to manage money by thinking about the surrounding environment. They also added that the development of this program requires support from the surrounding community so that it can be realized.

In addition, research from Iskandar (2019) explained that the implementation of an implementation, reliable and comprehensive green economy, Indonesia has historically had a truly green and real economic model with the characteristics of the Indonesian nation based on the philosophy of Islamic Eco-ethics that are in harmony with the sociocultural of Indonesian society.

Table 1. 1 Literature Review Summary

No	Classification	Writer	Findings
1	The Use of E-Voting System	Lubis (2022), Taniady (2020), Ikhwani (2018), Burhanudin (2016), Beni (2021), Romadzon (2020), Nugroho (2011), Eko (2022), Wijaya (2019), Karmanis (2021) and Schneider (2018)	The Implementation of the e-voting system is a step forward in realizing the election principle, namely Luber Jurdil. Conventional system used in previous elections were thought to be less affective and would eventually result in various problems, such as inaccurately results of voting counting. The use of this electronic voting system will reduce of minimize the cost incurred, as in elections that typically use paper, ink and other materials and e-voters responded to changes in ballot design and internalized the information viable candidates made available to them.
2	Strengthening of Green Election Programs	Anwar (2022), Firmansyah (2022), Noviarita (2022), Antasari (2019), Makmun (2011), Prianto (2021), Wardani (2022), Muhajiddin (2021), Sari (2014) and Iskandar (2019)	The green economy is one of the global strategies for addressing social, economic and environmental crises. The creation of paradigm towards the green economy of society methodologically, conceptually, implementation and criticism lead to the challenge of a global strategy that has goals of sustainability, poverty alleviation and inclusion of vulnerable social sectors. The green economy can be a solution to the increasing waste and major environmental problems.

Source: processed by author

Based on several literature reviews that have been described, it basically explains the use of the e-voting system and strengthening the green economy program. However, from all previous studies, no one has studied the factors that cause the green economy to help use the e-voting system in Sleman Regency. Therefore, this research does not come from other people's thoughts, but this research is new and comes from one's own thoughts.

E. Theoretical Framework

In the study entitled “The Effectiveness of E-voting System in Strengthening Green Economy Programs: The Case Study of The Village Head Elections in Sleman Regency” will use 4 theories, namely the theory of effectiveness theory, the theory of e-voting, green economy theory and head village election theory, as follows:

1. Theory of Effectiveness

According to the big dictionary Indonesian the word effectiveness comes from the root word "effective" which means there is an effect (effect, influence, effect) efficacious and efficacious, can bring success. While in terms, effectiveness is a result of achieving goals that have been attempted. Effectiveness is the ability to choose goals by utilizing the right facilities and infrastructure to achieve goals appropriately and quickly, with successful and or failed achievements (Pribadi, 2016).

Effectiveness is generally viewed as the achievement of operative and operational objectives. Effectiveness is how well the work is done, the extent to which a person produces output as expected. This can be interpreted, if a job can be carried out according to plan, it can be said to be effective without regard to time, energy and others (Septianningsih, 2023).

The effectiveness in this study is related to the program to be studied, namely the researcher wants to see the extent of the effectiveness of the implementation of the program, namely the implementation of elections with an electronic system (e-voting). In measuring effectiveness will be done carefully because the objectives of the program that object to the community are very broad and abstract.

According to Campbell (1970), the measurement of effectiveness in general and most prominent is: Program success, Goal success, Satisfaction with the program, level of input and output, achievement of overall goals. Program effectiveness can be carried out with operational capabilities in carrying out work programs in accordance with previously set objectives.

Mahmudi suggests effectiveness is the relationship between output and purpose. The greater the contribution of outputs to the achievement of objectives, the more effective the organization, program or activity will be (Mahmudi, 2015).

Effectiveness is the utilization of resources, facilities and infrastructure in a certain amount that is consciously determined in advance to produce a number of goods for the services of the activities it runs. Effectiveness shows success in terms of achieving or not the targets that have been set, if the results of the activity are getting closer to the target, it means higher effectiveness. According to Siagian (1983), work effectiveness means the completion of work on time as previously established (Siagian, 1983).

According to Effendy, effectiveness is the communication whose process achieves the planned goals in accordance with the budgeted cost, the set time and the specified number of personnel (Effendy, 2006)

Siswanto (2007) in his book entitled Introduction to Management suggests that effectiveness means carrying out the right job. Effectiveness means the ability to choose the right goals. An effective manager is one who chooses the correct job to run. Effectiveness is the ability to carry out tasks, functions of an organization or the like in which there is no pressure or tension between their implementation (Agung, 2005).

According to Emerson in Handayani, effectiveness is a measurement in achieving predetermined goals. Likewise, according to Schermorhorn, effectiveness is a measure of the achievement of a task or goal. Meanwhile, according to Devung, effectiveness is the level of ability to achieve goals appropriately and well. The same opinion was expressed by Barnard, that effectiveness is the achievement of the right goals mutually agreed.

Robbins in (Tika, 2010) gives the definition of an achievement is an achievement in an organization both in the short and long term. Likewise, the same is the case with A.F Stoner in (Nawawi, 2013) who defines effectiveness as the ability to determine the goals to be achieved. Daft in Priansa, Juni in Garnia revealed that effectiveness is how far the organization is in achieving its goals.

Komaruddin in Zainuddin argues that effectiveness is the level of success or failure in achieving its goals (Zainuddin, 2014)

To measure program effectiveness, according to (Sutrisno, 2007) he identified the results of expert studies on the measure of program effectiveness in an organization, namely 1) Program understanding, seen from the extent to which the community can understand program activities; 2) Right on target, judging from what you want to achieve or become a reality; 3) Timely, in terms of the extent to which the program can

affect the use of time in the implementation of services; 4) The achievement of objectives, measured through program objectives in service delivery; 5) Real change, measured through the extent to which the program is able to provide an effect or impact and real change for society.

The effectiveness process model is a model that emphasizes the main processes related to effectiveness and does not view effectiveness as the last state. Thus, this model recognizes that both the organization and its environment are constantly changing. This model implies that the important role of management is to understand how these interrelationships can increase the likelihood of the success of an organization or community.

It can be concluded that effectiveness is an effort to achieve a goal by looking at the accuracy of completing work on time that has been set. This means that whether the implementation of a task is considered good or not depends on whether the task is completed or not, especially answering the question of how to carry it out and how much it will cost to do so.

In Richard's opinion there are several measures of effectiveness, namely:

- 1) Quality, meaning the quality produced by a company / organization.
- 2) Productivity, meaning the quantity of services produced.
- 3) Preparedness, that is, assessment is comprehensive in relation to the possibility of completing a specific task well.
- 4) Efficiency, which is a comparison of several specs of achievement to the cost of producing these achievements.

- 5) Income, which is the number of resources that are still left after all costs and obligations are met.
- 6) Growth is a comparison of present and past existence.
- 7) Stability, that is, the maintenance of a structure, function and resources over time.
- 8) Accidents, which are the frequency in terms of repairs that result in time losses.
- 9) Work spirit, which is a feeling of being related in terms of achieving goals that involve additional effort, togetherness of goals and feelings of belonging.
- 10) Motivation, meaning that there is a power that arises from each individual to achieve goals.
- 11) Scouting, which is the fact that members of a company/organization like each other, means that they work well together, communicate and coordinate.
- 12) Adaptability, meaning that there is a new stimulus to change the standard procedure of operation, aims to prevent openness to environmental stimuli.

So, the measure of effectiveness is a standard for the fulfillment of the principles and goals to be achieved. In addition, it indicates the degree to which the program/activity carries out its functions optimally (Muliadi, 2016).

According to Duncan in Steers (2003) said that effectiveness can be measured from the following indicators:

1) Achievement of Objectives.

Goal achievement is the overall effort to achieve goals should be viewed as a process. The achievement of goals consists of factors, namely: (1) the period of achievement is determined, (2) the target is a concrete target and (3) the legal basis.

2) Integration

Integration is a measurement of the level of an organization's ability to socialize, develop consensus and communicate with various other organizations. Integration consists of several factors, namely: (1) procedures and (2) socialization processes.

3) Adaptation

Adaptation is a measurement of how an organization is able to adapt to its environment. Adaptability is the ability to dynamically change or harmonize standard operating procedures when the environment changes. Therefore, adaptation is a process of self-adjustment carried out to align an individual to changes that occur from several factors, namely: (1) increasing abilities and (2) facilities and infrastructure.

2. E-electronic Voting Theory

A democratic country is a country that puts the highest power in the hands of the people. The people are involved in determining every policy in the government. Democratic government will certainly refer to the concept of evolutive and dynamic democracy in accordance with the context and socio-historical dynamics (Suhelmi, 2000).

The approach to democracy and its relevance to elections is to look at the democracy of citizens in the making and implementation of political decisions. E-voting, as a voting process that allows voters to vote safely and confidentially through the internet (Karmanis, 2021).

Electronic Voting is a shortening of e-voting. E-voting is closely related to e-government. E-government which is an information technology system developed by the government in providing choices to the community. At anytime and anywhere to get easy access to information and services provided by the government. This is certainly an alternative for the government that utilizes as an alternative channel of choice through this information technology.

Technology usually moves faster than the legal system. However, the technological revolution must always be pursued as a means to improve human life especially in terms of voting. In this regard, the application of technological developments should be carried out carefully in relation to the improvement of society (Simarmata, 2011).

Electronic voting (e-voting) system comes from word electronic voting which refers to the use of information technology in the implementation of voting. Voting is one of the main foundations of democracy. Initially, this voting system was carried out only through the legislative system and non-electronic voting system (as it is often referred to as voting). Now, the non-electronic voting system has developed along with advances in technology and information after years of implementation while ensuring that the principles of democratic elections have been fulfilled. Until finally the idea emerged regarding the e-voting system which is expected to be able to accommodate all election principles effectively and efficiently.

The e-voting process must be designed in such a way as to guarantee the fulfillment of the election principles namely direct, general, free, secret (abundant) and honest and fair in direct elections. In the context of democracy, electronic voting systems (e-voting) must also respect and guarantee the attributes and characteristic of direct elections such as transparency, certainly, security, accountability and accuracy. In addition to technological readiness, of course this must be supported by the community's readiness to implement this e-voting system in the future. Unpreparedness coupled with the government's lack outreach to e-voting can also be a triggering factor for the failure of the implementation of this system. In Indonesia, the e-voting system is still relatively new (Akbar, 2016). Indonesia's hopes for realizing e-voting need to be studied further because it is full of opportunities and challenges to face a new system in a place where people are still not ready to accept technology.

E-voting is an acronym for electronic voting. As has been elaborated simply that e-voting is related to e-government, which is an information technology system developed by the government to facilitate access to information and services. In addition, e-voting also leads to the purpose of e-government which leads to the purpose of implementation of the ITE Law so that it has not been adjusted to the objectives of the 1945 Constitution (Suleman, 2018).

According to Rokhman (2011), E-voting is an electoral system where data is recorded, stored and processed in the form of digital information. In other words, e-voting is a vote whose implementation process starts from voter registration, election implementation, vote counting and sending vote results electronically.

According to Jimly Asshidiqie, there are four that need to implement an e-voting system. Preparation for e-voting planning starts from the preparation of election personnel and participants, preparation of population data, technical preparations related to technology and the need for preparation in the community (Fakayun, 2020). The application of the e-voting system in the general election process has the advantages of being easy to calculate, conduct elections, prevent fraud and reduce costs (paper, ink, etc.). E-voting, voters will certainly find it easier to carry out the election process. The e-voting selection process uses a Direct Recording Electronic (DRE) system and touch screen.

Technically, Kahani defines e-voting as the use of computers or voting equipment in elections. Furthermore, Smith and Clark define e-voting as one method of voting using a computer in a booth at a designated place. Then Hajjar et.al. This includes the use of computers instead of the traditional use of voice with ballots. Zafar and Pilkjaer define e-voting combining technology with democratic processes to make voting more efficient and convenient for voters (Priyono, 2010).

E-voting Scheme

The e-voting scheme is a set of protocols that maintain the security or confidentiality of voters in conducting voting and interacting with the election committee and counting votes. E-voting is usually divided into two types; online (e.g., Via the internet) and offline (using vote counting machines or ballot papers).

The purpose of e-voting system security is to guarantee voter privacy or confidentiality and accuracy of choice. The security of this system has several criteria, namely:

- 1) Eligibility: only registered voters can vote.
- 2) Reusability: each voter can only make one choice.
- 3) Anonymity: voter choices are kept secret.
- 4) Accuracy: options cannot be changed or deleted during or after the election and also cannot be added after the election closes.
- 5) Fairness: counting votes before the election closes cannot be done.
- 6) Vote and GoL voters can only vote.
- 7) Public Verifiability: anyone can check the election process (Canard & Sibert 2001)

3. Green Economy Theory

Green economy is an economic idea that aims to improve the welfare and social equality of the community, while reducing the risk of significant environmental damage. Green economy can also be interpreted as an economy that produces low or no carbon dioxide emissions to the environment, saves natural resources and also has social justice (PPSDM, 2021).

In addition to economic activities, infrastructure and assets obtained must also have conditions, namely having low carbon emissions and pollution, increasing energy and resource efficiency and preventing loss of biodiversity and natural ecosystems. This kind of investment requires support through public spending, policy reforms and also changes in tax-related regulations. The United Nations Environment (UNE) has promoted development measures related to natural income as a critical economic asset

and source of public income, especially for the poor whose livelihoods depend on natural resources.

Promoting the green economy as a new source of sustainable economic growth in the future is a must for the global good. In addition, we must focus on embracing every opportunity to achieve a just and affordable transition. The Government's commitment is also manifested in various efforts ranging from strengthening private sector collaboration, encouraging innovative financing by forming the Sovereign Wealth Fund, enacting the Job Creation Law while still paying attention to the environmental dimension and contributing to the Just Energy Transition Partnership by launching a Comprehensive Investment Plan of USD20 billion.

In addition, to promote the green transition from the demand side, the Government also provides incentives to accelerate the renewable and environmentally friendly energy business sector, such as tax and allowance exemptions, import duty exemptions and VAT and luxury tax reductions, tax rates based on CO₂ emissions and fuel consumption, and incentives for the purchase of electric vehicles.

Over the last decade, the green economy concept has emerged as a fundamental policy framework for sustainable development in developing countries. Indeed, the UN Conference on Sustainable Development defined the green economy as one of the several approaches and tools for achieving sustainable development (The Future we want, UN, 2012). According to the Rio+20 Outcome Document, a green economy should “contribute to eradicating poverty, as well as sustained economic growth, to increase social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of

the Earth's ecosystem". Though implementation is at different stages, several African countries (such as Ethiopia, Kenya, Rwanda, Senegal, Mozambique and Tunisia) have adopted green economy strategies or policies (UNECA, 2020). Green policies are mainly implemented in agriculture, energy and mining industry and manufacturing, transportation infrastructure, construction and green building, water and the environment, urban infrastructure development and waste management. The process of implementing village head elections has caused many problems caused by the actions of local officials or regional head committees to people who use voting rights fraud. Then, an idea emerged in the implementation of elections to villages by utilizing technology that is able to provide solutions using the electronic voting (e-voting) method. The presence of e-voting as a new method is expected to be able to answer all challenges and weaknesses in holding general elections, especially village head elections in Sleman (Afnan, 2018). In addition, e-voting is also able to pave the way to publish and realize the concept of green economy in Indonesia where the concept of green economy is able to make Indonesia green again, one of which is by reducing the cutting of trees only for papermaking.

There are two main objectives of the Green Economy concept, namely:

- 1) First, it is not just an economic concept that only considers macroeconomic problems, especially investment in sectors that produce environmentally friendly products and the production of goods and services that are more environmentally friendly (green investment), but also focused on how the contribution of green investment to the production of goods and services and to the growth of jobs in fields related to green jobs.

- 2) Second, the green economy concept tries to prepare guidelines on pro-poor green investment or green investment that can encourage poverty alleviation. The main objective is to encourage policymakers to get all levels of government and the private sector to participate in supporting this increase in green investment.

In recent years, the concept of green economy has gained attention, because this concept is in line with the efforts of the world community in order to find solutions to various global challenges that are happening today. However, the relationship between the concept of green economy and concepts related to other aspects cannot be clearly articulated and this needs to be pointed out.

The World Commission on Environment and Development (WCED) in its report entitled Our Common Future identifies several critical problems that must be used as a basis in formulating environmental policies in the concept of sustainable development, namely:

- 1) Encourage growth and improve quality.
- 2) Get basic necessities regarding work, food, energy, water and sanitation.
- 3) Ensure population growth rates that support sustainability.
- 4) Perform resource convergence and capabilities.
- 5) Technology orientation and managing risk.
- 6) Integrate considerations of the economic environment in the decision-making process.

Therefore, the concept of green economy has developed. The concept of green economy is a paradigm in sustainable development that is important in overcoming the impacts of climate change that occur.

Green economy according to Cato (2009), has the following characteristics:

- 1) Locally based economy
- 2) Markets are seen as places of socializing and fun companionship where news and political views are at stake as much as goods and money
- 3) Involves asset distribution using enhanced estate and capital gains taxes
- 4) Taxes are used strategically for the sustainability of development, not to influence power and business behavior.
- 5) Guided by the value of sustainability rather than by the value of money
- 6) Abandoning addiction to economic growth and leading to a steady-state economy
- 7) A welcoming economy where relationships and communities become substitutes for consumption and technology
- 8) Give a broader role to the informal economy and cooperative and community-based systems that support each other
- 9) Health systems that focus on the development of good health and the provision of primary, locally based care rather than high-tech drugs and extensive pharmaceutical companies
- 10) Replacing fossil fuels and intensive farming systems with organic farming and various systems such as farming with community support.

The concept of green economy is very suitable to be combined with the concept of green election. Green election is a concept of holding elections / regional elections that

do not pollute the environment. This concept can be applied at every stage of the election/regional election, one of which is the campaign (Salabi, 2021). There are several things that can support the realization of green elections:

1) Campaigns with Technology

Campaigns through social media have different characteristics from conventional or traditional media campaigns. Because social media can transcend geographical restrictions. In addition, the target will be wider and on target.

2) Campaign Props and Eco-Friendly Materials

To support the application of the green election concept in the implementation of elections/regional elections as campaign props, the concept of environmentally friendly materials is needed. Environmentally friendly materials as a campaign tool must begin to be applied. The use of environmentally friendly materials aims to prevent waste that can actually be reused, reduce new raw materials, energy and pollution.

4. Head Village Elections Theory

Village head is a term for village leaders in Indonesia. The village head is the highest leader of the village government. The election of the village head can participate by voting to elect a candidate for the village head who is responsible and can develop the village. Therefore, the election of the village head is very important because it strongly supports the village government organizers (Najah, 2017)

As the head of government at the village level, the village head is responsible to the community through the village consultative body and reports to the regent on the

implementation of his duties. In addition, the village consultative body has the duty to elect the village head from elections conducted by the village community and also has the right to submit proposals to the regent.

In the case of the relationship between the village consultative body and the other village head, the village regulation is only legally valid if it is stipulated by the village consultative body if one of the village consultative bodies or the village head is not involved in establishing the regulation, the regulation is not legally valid.

Village regulations set by village consultative and village heads also include the determination of the village revenue and expenditure budget every year. Therefore, the rationale in Law Number 23 of 2004 regarding village government regulations is diversity, participation, native autonomy, democratization and community empowerment. Then it is mentioned that:

- 1) The village government consists of the village head or referred to by other names and village officials.
- 2) The village chief is directly elected by the villagers from qualified candidates.
- 3) The candidate for village head who is elected with the most votes is determined by the village consultative body and approved by the Regent.

Law No. 6 of 2014 Article 31 states that village head elections are held simultaneously in all districts / cities in Indonesia. The district/city government determines the policy of implementing village head elections simultaneously with district/city regulations. Then, in Article 40 of PP No. 43 of 2014 concerning the

Implementation Regulations of Law No. 6 of 2014 concerning Villages, it is determined that simultaneous village head elections can be held in waves at most 3 three times within a period of 6 years.

To avoid unintended consequences of its implementation, village head elections are held simultaneously in all districts/cities. This election considers how many villages can bear the election costs charged to the district/city budget. This allows for rapid implementation in accordance with Regional Regulations of 4 districts/cities.

General elections are a means of democracy in determining who is entitled to occupy seats in the country's political institutions, namely the legislature and the executive. One form of general election is the election of village heads. The election of village heads in Indonesia is carried out directly, where villagers can determine for themselves who their village head is according to their conscience. This system is a description of the practice of democracy in Indonesia at the lowest level that must be carried out fairly, honestly, freely and confidentially (Minister of Home Affairs Regulation No. 112 of 2014 Article 1) (Fauzan, 2019). However, this electoral system is not followed in electing the head of the sub-district, where the head of the village head is appointed by the officials above him.

The election of Village Heads is regulated in the Regulation of the Minister of Home Affairs Number 112 of 2014 concerning the election of Village Heads is:

- 1) The Village Head is directly elected by the villagers from qualified candidates.
- 2) Village Head elections are direct, public, free, secret, honest and fair.

With this principle, the election of Village Heads has the same principles as general elections that take place in Indonesia. The definition of these principles is as follows:

a) Immediately

People have the right as voters to vote or vote directly according to the will of their conscience without any intermediaries.

b) Common

General elections mean guaranteeing equal opportunities for all citizens without discrimination based on ethnicity, race, religion, and class, sex, occupation and social status.

c) Free

Every citizen who has the right to vote is free to make a choice without any pressure or agreement from anyone.

d) Honest

In conducting general elections, government organizers/implementers, election participants and supervisors including voters and all parties involved must behave and act honestly in accordance with applicable regulations.

e) Secret

In voting, the public is guaranteed that their choice will not be known by the party or in any way. Voters cast ballots with no one else knowing.

f) Fair

In the implementation of general elections, every voter and general election participant gets equal treatment and is free from fraud from any party.

On the one hand, the election of village heads is an example of democracy because it involves the community in choosing their leaders, which is expected to build and prosper the village community. However, other standards such as equality of choice, voter understanding of how best to vote and no exceptions to the electorate have not been met. Therefore, the process of selecting village heads often causes problems.

F. Conceptual Definition

According to Hamdi (2020), Conceptual Definition is a limitation about the understanding given by researchers to the variables or concepts to be measured, researched, and extracted data. Conceptual definitions with various variables can be put forward based on the theoretical basis described above as follows:

1. E-Voting: is a method of collecting votes using electronic devices.
2. Green Election: is a concept of economic development that must be accompanied by the sustainable maintenance of natural resources and the environment.
3. Head Village Election: is the exercise of people's sovereignty in the village in order to elect village heads who are direct, public, free, confidential, honest and fair.

G. Operational Definition

Effectiveness is a process carried out to measure a success in realizing planned goals. In this case, effectiveness is needed in supporting the green election program using

electronic voting, therefore effectiveness is needed so that the green election that is expected to help this program is carried out. Where Duncan in Steers (1985) classifies measures of effectiveness measures as follows:

Table 1. 2 Operational Definition

Variable	Indicator	Parameter
Effectiveness	Achievement of Objectives	<ol style="list-style-type: none"> 1. The period of achievement is determined 2. Target 3. Legal Basis
	Integration	<ol style="list-style-type: none"> 1. Procedure 2. Socialization Process
	Adaptation	<ol style="list-style-type: none"> 1. Increased Capabilities 2. Facilities and Infrastructure

Source: Processed by Author

H. Research Method

1. Types and Approaches of Research

In this study the author used Qualitative method. According to Fai (2022), qualitative research methods are research methods that emphasize analysis or descriptiveness. In a qualitative research process, things that are subject perspectives are more shown and the theoretical foundation is used by researchers as a guide, so that

the research process is in accordance with the facts encountered in the field when conducting research. According to Eko (2020), in qualitative research, the research "process" is more important than the "results" obtained. Therefore, researchers as data collection instruments are one main principle. According to Hamdi (2020:32) in Fatimah (2021) explained that this research uses a case study approach. This approach examines the phenomenon and unclear context and uses a variety of sources of evidence. In this study using the type of case study research. According to Suharsimi Arikunto, a case study is an intensive, in-depth approach to certain symptoms. The case study used in this study is The Effectiveness E-Voting System in Strengthening of Green Economy Programs: Case Study of Village Head Elections in Sleman Regency.

2. Data Sources

a) Primary Data

According to Sugiyono (2018) Primary data is a data source that directly provides data to data collectors. Data are collected by the researcher himself from the first source or place where the object of research was conducted. Researchers use the results of interviews obtained from informants regarding research topics as primary data.

b) Secondary Data

According to Sugiyono (2018) Secondary data is a data source that does not directly provide data to data collectors, for example through other people or through documents. In this study, the secondary data sources are in accordance with the Election Law, books, journals, articles related to research topics regarding the Effectiveness of E-Voting System in Strengthening of Green Economy Programs.

3. Data Collection Technique

Data collection techniques are the most important step in research because the main purpose of research is to obtain data (Sugiyono, 2010). The following are data collection techniques:

a) Documentation Studies

The term Documentation Study comes from the word "document" which means written charcoal. This technique is also a procedure for collecting data by collecting existing data. The study of documentation is also commonly referred to as data collection which is used to trace historical data. According to Hamidi (2004: 27) explained that this technique is information derived from important records of both institutions or organizations and individuals. The documentation study on the research was obtained from the Sleman Regency government.

b) Interview

Interview is a technique in collecting data by having conversations with research subjects and in order to understand the views of research subjects to understand more deeply about social situations informed by their own language (Huberman & Miles, 1992). The interview technique can be said to be a two-way conversation between the researcher and the subject under study to find data or facts in the field directly.

These data collection techniques will be used to collect data on Effectiveness of E-Voting System in Strengthening of Green Economy Programs: Case Study Head Village Elections.

4. Data Analysis Techniques

Data analysis technique is the process of systematically searching and compiling data obtained from interviews and literature studies. Data analysis is carried out as an effort to compile data that has been obtained from interviews and literature studies, by organizing data into categories and describing it into units, conducting sites, arranging into patterns, choosing which ones are important to learn and making conclusions so that they are easily understood by themselves and others (Sugiyono, 2012: 89). The data analysis techniques in qualitative research methods include interviews, data reduction, data presentation using original regional documents and conclusions from the data presented. Then to test the validity of data with Triangulation Techniques, according to Sugiyono (2015:241), triangulation is a data collection technique that combines various collection techniques and existing data sources. The triangulation used in this study is source triangulation.

Data analysis techniques according to Hamdi (2020) are as follows:

- 1) Data collection and management: at this stage after the completion of the data collection process the process of copying interview recordings into text is carried out. The data collected in the form of interview results and physical data will be sorted according to predetermined indicators or measuring instruments.
- 2) Data Selection: This stage involves relevant and useful data during the analysis process except for data that is less relevant to the research topic will not be used.
- 3) Inter-Variable Analysis and Data Validation: After the data selection step, the next step is to correlate the discovery of one variable with another. In addition, there is an important stage, namely data verification, if there are differences in

data encountered by researchers, this process is recommended for confirmation with related parties to prove data validation.

- 4) Explain and conclude: the step of explaining is a response step in formulating a problem based on analysis and verification of data that can be changed. It will only be the basis for the conclusion that becomes the end of the series of studies. Theoretical implications, practical implications, suggestions, and recommendations certainly need to be included in the conclusion.