

Research Article

Implementation of Sustainable Development Policies in the Environmental Sector Based on e-Governance in Riau Province

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Abstract.

This study aims to analyze the application of e-governance in supporting the implementation of environmentally sustainable development policies in Riau Province and the factors that influence it. The research used descriptive qualitative methods using primary data collected through focus group discussions and secondary data collected through documentation techniques. The results of the study found that the Local Government of Riau Province has consistently and continuously implemented environmentally sustainable development through the Riau Hijau program. E-governance has been well implemented in implementing Riau Hijau by collaboration between the government, the private sectors, and the civil society to succeed Riau Hijau supported using information and communication technology (ICT). The supporting factors for the application of e-governance in supporting the implementation of environmental sustainable development policies in Riau Province were: the local government's high commitment and consistency; the existence of supporting policies both macro and micro that are clear, sustainable, and systematic; policy implementers really understand the details of Riau Hijau; Riau Hijau has clear and measurable target groups and benefits; Riau Hijau is operationalized in various concrete and systematic projects and activities; Riau Hijau is supported by adequate financial resources and infrastructures; and Riau Hijau is supported by various local agencies. The inhibiting factors were that not all the relevant stakeholders make optimal use of the existing ICT facilities; there are inadequate ICT facilities and infrastructures in some areas in Riau Province; and problems in environmental issues. Based on these findings, this study recommends optimizing the use of ICT for all Riau Hijau stakeholders, and there needs to be an increase and equity of ICT facilities and infrastructures.

Keywords: sustainable development, environment, Riau Hijau, e-governance

1. INTRODUCTION

In a socio-political perspective, development is a translation of developmentalism which is identified with modernity (Warjio, 2016). In the early 1950s and 1960s developmentalism was still synonymous with modernization, growth, change and industrialization in the style of the western world (Nasution, in Warjio, 2016). Modernization theory states that there is a dichotomy between traditional and modern societies. Development will

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be successful if there is a transition from a traditional or pre-modern society to a modern society which is carried out by modernizing all areas of people's lives. According to this theory, the backwardness of a country in the economic field occurs due to the influence of internal factors, especially socio-cultural factors. Therefore, if a country wants to make progress, traditional society must follow modern thoughts and practices like western countries which have already developed and prospered, because the traditional way of life and mindset are obstacles to development. One of the most well-known figures from this theory is Rostow who stated that the main key to modernization is economic growth (Abdoellah, 2016).

In its development, this modernization paradigm has received a number of criticisms. One of them, this theory is considered too western-oriented because it makes western society an ideal example of modern society so that it is synonymous with westernization (Abdoellah, 2016) and is also considered ethnocentric (Keban, 2014). Furthermore, this theory is also criticized because it is considered not in favor of the values of traditionalism and local wisdom. Besides that, modernization has also tended to damage the preservation of nature because in reality modernization is carried out by exploiting natural resources so that it has the potential to become a threat to the survival of future generations (Dawam Raharjo, in Warjio, 2016). Thus, modernization is considered not to care about the preservation of environment/environmental sustainability. Modernization is considered by some to only care about the economy, so that it is a source of ecological destruction in the present and the future (Abdoellah, 2016).

This fact ultimately raises awareness of the need for deeper attention to environmental issues in carrying out development. In this awareness the concept of sustainable development was born that the basic idea originated from the document *The Limits to Growth* from The Club of Rome, 1972 (Friedmann, in Hardjanto, 2011) which basically explained that the world is in a crisis due to the depletion of natural resources. If no changes are made then the world will soon be destroyed. This condition raises awareness of the adverse effects of excessive development, so that attention to environmental sustainability is starting to become an important world agenda (Hardjanto, 2011).

Since then the implementation of development that pays attention to balance and environmental sustainability has continued to be discussed. Until finally in 1987 this concept was first known as sustainable development (Soemarwoto, in Abdoellah, 2016). This concept is further developing and worldwide, sustainable development has become a keyword in the development policies of various countries in the world (Abdoellah, 2016).

By referring to the concept of sustainable development, the current development must be able to guarantee environmental preservation and environmental sustainability.

As in the 1987 WCED Report which explained that the capacity of the environment to support development has limitations (Nurman, 2017). So, because of these limitations, in the development process, the environment must be preserved/no excessive exploitation. Furthermore, in the 1987 Brundtland Report it was stated that there was a need to change the orientation of development from one that was only oriented towards economic aspects to become sustainable development and focused on a balance between economic, social and environmental issues in order to ensure the sustainability of the future of the world and mankind (Achmad, 2016).

Seeing that the idea offered by the concept of sustainable development is very rational and has even become a necessity, many countries are trying to adopt it in their development policies, including Indonesia. This can be seen when Indonesia declared the Millennium Development Goals (MDGs) together with more than 150 countries at the Millennium Summit in 2000. These MDGs then transformed into Sustainable Development Goals (SDGs) (Abdoellah, 2016).

Not only at the national development level, sustainable development policies are also implemented at the local government level. One of the local governments is the Riau Provincial Government. Several policies have been issued by the Provincial Government of Riau that reflect the spirit of sustainable development. One that has received considerable public attention was when Riau Province succeeded in introducing the first Regional Action Plan for Sustainable Development Goals or RAD TPB/SDGs in Indonesia in 2018, which in turn made this province a pilot area for implementation of this matter (Feradis, 2021).

The implementation of sustainable development policies at the local government level that pays attention to the environment as implemented by Riau Province is very important, because it is at this local government level that sustainable development finds more urgency. This is because local governments are more in direct contact with the community, so that any policy that is implemented benefits and impacts will be felt directly by the community. Thus, the Provincial Government of Riau must be able to implement this development policy optimally.

Related to the implementation of development, (Siagian, 2007) has reminded that the implementation of development is the responsibility of all components of the nation starting from the government, politicians, academics, private sector and society. What was stated by Siagian, in public administration literature is known as governance. Governance itself implies that the implementation of government is no longer just a government affair, but is carried out jointly between the government, the community and the private sector (Wibawa, 2014). With this collaboration, it is hoped that government

management affairs, including in the implementation of sustainable development, can be more effective and efficient.

Along with the progress of the times, especially in the era of the industrial revolution 4.0 which is very synonymous with the use of information and communication technology (ICT), then governance is also experiencing development. In this case many experts believe that governance will be able to run more optimally if it adopts the use of ICT in all its activities. This is where the concept of e-governance was born, which refers to the meaning of using ICT in governance processes and activities (Nurhadryani, 2009).

In relation to sustainable development, it can be understood that e-governance is one of the important keys in the successful implementation of sustainable development policies. This understanding is reinforced by the results of Salsabila's research (2020) which found that there is a strong link between e-governance and sustainable development.

Referring to the background above, it can be understood that e-governance is an important key in the successful implementation of environmental sustainable development policies in Riau Province. Therefore, it is interesting to conduct a study related to how this e-governance is implemented in supporting the implementation of sustainable development policies in the environment sector in Riau Province. This means that it is important to examine in depth how the government, the private sector and the community work together in implementing sustainable development in the environmental sector in Riau Province where the collaboration is carried out by empowering ICT.

In addition, this research is also important to explore and understand more deeply the dynamics of implementing sustainable development at the regional level so that it can become a practical lesson for other regions as well as a means of perfecting the concept of sustainable development. The hope is that the paradigm of sustainable development can really become a powerful solution in answering one of the main development problems that are always being debated today, namely the problem of balance and environmental sustainability.

Furthermore, (Otto Soemarwoto in Abdoellah, 2016) argues that sustainable development policies in principle focus on how to create jobs, how to eradicate poverty, how to grow the economy and how to protect the environment. Of the four dimensions, the environmental dimension is the main strength of the sustainable development paradigm because it is this dimension that distinguishes it from other development paradigms. Therefore, in order to be more focused and directed, in analyzing the implementation of sustainable development policies in Riau Province, this research will focus its studies on

sustainable development that focuses on the environment or also known as sustainable development in the environmental field.

Based on the description above, the formulations of the problem in this study are:

1. How is the implementation of e-governance in supporting the implementation of environmental sustainable development policies in Riau Province?
2. What factors influence the implementation of e-governance in supporting the implementation of environmental sustainable development policies in Riau Province?

2. LITERATURE REVIEW

Related to the adoption of the sustainable development paradigm as a development policy, there have been several studies discussing this matter. (Oekan S Abdoellah, 2016) in his book entitled *Sustainable Development in Indonesia at the Crossroads*, has analyzed the dynamics of implementing sustainable development in Indonesia. In this book Abdoellah focuses more on development issues in Indonesia, opportunities and challenges of sustainable development until to recommendations or strategies for implementing sustainable development in Indonesia. Meanwhile (Mira Rosana, 2018) examines *Environmentally Friendly Sustainable Development Policies in Indonesia*. In this study, Rosana focuses her studies on aspects of the relationship between development and the environment and how sustainable development with an environmental perspective is implemented in Indonesia.

The next study is *The Implementation of Environmentally Friendly Sustainable Development Studies in Lempake Village, North Samarinda District, Samarinda City*, written by M. Zaini and (Agus Tri Darmawanto, 2015). In this study Zaini and Darmawanto focused their study on the implementation of sustainable development by looking at it from an environmental education perspective. Furthermore, there is also research entitled *Implementation of Sustainable Development Policy* written by (Dicky Siswanto Renggi Tay and Sugeng Rusmiwari, 2019). By taking the locus in the village of Tlekung, Batu City, this research focuses on the forms of implementation of sustainable development policies and their inhibiting and supporting factors, by looking at them from the perspective of applicable regulations.

Then there is also research entitled *Implementation of Residential Area Policy in Supporting Sustainable Development in the City of South Tangerang* by (Izzatusholekha, et al, 2019). This research examines sustainable development by looking at it from the

perspective of settlement arrangement. The next study is research entitled *The Role of the Batu City Government in the Implementation of Tourism Development Policy based on the Sustainable Development Paradigm* written by (Asih Widi Lestari and Firman Firdausi, 2017). This research examines sustainable development by looking at it from the perspective of tourism development.

The next study came from Ari Mulianta Ginting, et al, with editor (Muhammad Zilal Hamzah, 2019) entitled *Development of Sustainable Development Policy in Indonesia*. This study examines sustainable development by looking at it from the perspective of economic growth, human resources, balance of transactions and trade and the Islamic finance industry. Then there is also writing from (Lydia Wijayanti, 2012) namely the *Implementation of Sustainable Development Policy Innovations in the City of Surakarta: Relocation of street vendors in Banjarsari Monument Park to Notoharjo Klitikan Market*. In this study, Wijayanti examines sustainable development through the perspective of urban development policy innovation.

Referring to the description above, this research will direct its study to the aspects of implementing e-governance in supporting the implementation of sustainable development policies in the environmental sector in Riau Province, which basically have not been comprehensively described in previous studies. Furthermore, this research will examine sustainable development policies by simultaneously looking at the context of the policy content and the policy environment so that the Merilee S. Grindle Model policy implementation approach is used as the basis for analysis. With this model the implementation of the policy will be analyzed from the sides:

1. The contents of the policy include:
2. Adoption of the needs and aspirations of policy target groups;
3. The benefits obtained by the policy target group;
4. Progress, changes and improvements to be achieved;
5. The exact location of the program;
6. Details of policy implementers;
7. Policy support resources.
8. The policy environment includes:
9. Policy implementer strategy;
10. Government characteristics;

11. Responsiveness of the target group;

(Subarsono, 2021).

The policy will then be analyzed from an e-governance perspective. This means that the analysis will be carried out within the framework of how the government, the private sector and the community work together in implementing sustainable development in the environmental sector in Riau Province where the collaboration is carried out by empowering ICT. Thus, the results of this study are expected to further complement the repertoire of studies on sustainable development policies, particularly on how the concept of sustainable development in the environmental sector can be applied effectively and efficiently at the local government level by adopting the concept of e-governance.

3. METHODOLOGY

The research method used in this study is descriptive qualitative because it seeks to reveal in depth the application of e-governance in supporting the implementation of sustainable development policies in the environment sector in Riau Province. Thus, this research is expected to fully describe the phenomenon of the process and implementation of sustainable development policies in the environmental sector in Riau Province.

Furthermore, the data analyzed included primary data obtained through focus group discussion (FGD) techniques both face to face (offline) and online (via WA and email) and secondary data collected through documentation techniques from several publications issued by the Riau Provincial Government and BPS (Central Statistics Agency) Riau Province.

The parties who became resource persons or informants in the FGD were:

1. Officials from the Research and Development Regional Development Planning Agency (Bappedalitbang) represented by the Head of Bappedalitbang and staffs;
2. Officials from the Environment and Forestry Service (DisLHK) are represented by the Head of DisLHK and staffs.

The resource persons or informants were selected based on their position and role because they understand and have key data related to how to implement sustainable development in the environmental sector based on e-governance in Riau Province, as follows:

1. Bappedalitbang is involved in the process of formulating, implementing, monitoring, evaluating and reviewing sustainable development policies in the environmental sector;
2. DisLHK is involved in the process of formulating, implementing, monitoring and evaluating sustainable development policies in the environmental sector as well as monitoring environmental quality and health in Riau Province.

Secondary data collected and analyzed included the RPJMD of Riau Province, Riau in Figures, reports on implementation of development programs and activities, results of studies, and all documents related to sustainable development in the environmental sector based on e-governance in Riau Province.

This research takes the locus in Riau Province. The reason for choosing this locus is because the Provincial Government of Riau has very good achievements in implementing sustainable development so that from this achievement there is a lot of potential that can be explored, studied and developed.

Face-to-face (offline) data collection was conducted from May 11 2022 to May 14 2022. Meanwhile, online data collection was carried out from April to June 2022 using WhatsApp or email media. The data collected in this study are classified according to the research framework. Then sorting is carried out in such a way that the data used is truly appropriate and can explain the phenomenon under study. Data analysis was carried out comprehensively and strengthened by triangulation techniques.

4. RESULTS AND DISCUSSION

With reference to the theoretical framework and framework that has been prepared previously as well as the factual findings during the research, the following analysis can be carried out:

Riau Province has a very good commitment in implementing sustainable development that pays attention to environmental sustainability. This commitment can be seen from the issuance of a policy in the form of Governor of Riau Regulation Number 33 of 2018 concerning Regional Action Plans for Sustainable Development Goals (SDGs) for Riau Province for 2017-2019 (RAD TPB/SDGs). The policy explains that sustainable development is a development agenda that is being implemented in Riau Province. In order for its implementation to be more directed and systematic, sustainable development in Riau Province must refer to the RAD TPB/SDGs.

Furthermore, the Riau Provincial Government has also issued Riau Provincial Regulation Number 3 of 2019 concerning the Riau Province Regional Medium-Term Development Plan for 2019-2024 (RPJMD 2019-2024). The RPJMD explains that environmentally sustainable development is one of the missions of the Riau Provincial Government in implementing the 2019-2024 development. The RPJMD also mentions the term Riau Hijau as a description of the implementation of sustainable development that pays attention to the environment in Riau Province which aims to improve the quality of the environment and reduce greenhouse gas emissions. As a follow-up to the RPJMD, the Governor of Riau issued Regulation Number 9 of 2021 concerning Riau Hijau, which will later become guidelines for the implementation of Riau Hijau. The policy also explained that Riau Hijau is the Government's effort to realize people's prosperity.

In 2021, referring to the Explanation and Material Content of the Draft Riau Province Regional Regulation concerning Amendments to the Regional Regulation of the Riau Province Number 3 of 2019 Concerning the Medium Term Development Plan for the Riau Province Regional Medium Term Development Year 2019 - 2024, as an effort to improve the quality of development in the region, the Government of Riau Province carry out the process of amending the RPJMD 2019-2004. In this process of change, the Riau Hijau policy contained in the RPJMD is further strengthened. In the draft change to the RPJMD, the strengthening of the Riau Hijau policy can be seen from the inclusion of the Riau Hijau policy into the Regional Special Policy so that Riau Hijau becomes an increasingly priority in the implementation of development in Riau.

The existence of the various policies above and their dynamics shows that the Provincial Government of Riau has a high awareness and is very serious in implementing sustainable development in the environmental sector in its territory. Related to this awareness and commitment, the FGD with the Riau Bappedalitbang Team explained that they themselves, as actors implementing this development, understand that the meaning of the concept of environmentally sound development is development that pays attention to the environment for the welfare of the people, the real form of which is Riau Hijau. Riau Hijau is used as an umbrella for the regional head's mission policy in accordance with the concept of changing the 2019-2014 RPJMD. In its operationalization, reducing greenhouse gas emissions which is a strategy in the green economy is used as one of the regional performance indicators for Riau Province. Riau Hijau has also been discussed separately in the Special Regional Policy Sub-Chapter. The existence of this commitment eventually received appreciation from the Ministry of Home Affairs so that it could become a model for other provinces, especially regarding

how to mainstream environmentally sound development in the stages of development policy formulation at the regional level.

In terms of implementation, sustainable development in the environmental sector in Riau Province already has clear goals and benefits. The FGD with the Riau Bappedalitbang Team explained that the target group of this development policy were all citizens in Riau Province, it was hoped that this development policy could meet the needs of today's society and society in the future so that people's welfare in Riau Province could be maintained. Apart from that, with this development policy, the real change to be achieved is to improve the quality of the environment in Riau Province. These changes can be measured by looking at the achievements or changes that have occurred in the conditions of greenhouse gas emissions and the environmental quality index (IKLH) in Riau Province.

In its operationalization, there are various program activities that have been carried out which show that sustainable development in the environmental sector in Riau Province (Riau Hijau) has been implemented concretely and systematically. The FGD with the Riau Bappedalitbang Team and the Riau LHK Service Team explained that the program activities included food insecurity management, renewable energy management, coastal marine and small island management, environmental planning and maintenance, waste management, fisheries management, drinking water supply and a safe environment. healthy, etc.

In addition to the various programs above, the FGD with the Riau Bappedalitbang Team explained that there are also policies that support the implementation of Riau Hijau which increasingly show concrete action from the implementation of Riau Hijau. One of these policies is the Governor of Riau Regulation Number 50 of 2019 concerning Restrictions on the Use of Single-Use Plastics in the Riau Provincial Government. The Riau Bappedalitbang Team further explained that compared to conditions in 2019, in 2020 the IKLH increase reached 13% and the GHG emission reduction reached 37%. All of this shows that existing programs and policies have succeeded in supporting the achievement of the Riau Hijau indicator targets.

In implementing Riau Hijau, the Provincial Government of Riau has prepared the necessary resources properly and systematically. The FGD with the Riau Bappedalitbang Team explained that one of the resources that was carefully prepared was related to financial resources. The Riau Bappedalitbang team explained that in the Riau Hijau budgeting, through the e planning system, tagging of climate change financing has been carried out on a number of regional apparatus organizations supporting Riau Hijau, such

as the Environment and Forestry Service, BPBD, Health Office, PUPRPKPP Service, Education Office, ESDM Office, Maritime Affairs and Fisheries Service, Plantations Service, etc. In discussing the work plans of regional apparatuses, this tagging is prioritized. It was further explained that a budget of 55 billion rupiah had been allocated in 2020, 48 billion rupiah in 2021 and 46 billion rupiah in 2022 to support climate change financing. Even though there was a reduction in the budget, this was due to rationalization for the covid-19 pandemic. In addition to preparing financial resources, the Riau Provincial Government has also used other resources in the form of supporting facilities and infrastructure. The intended infrastructure is in the form of media. The media is used as a means of advocacy and outreach to actors outside the government, especially in terms of involvement in the formulation, implementation, monitoring and evaluation of the Riau Hijau action plan.

Meanwhile, in terms of the actors involved in the implementation of Riau Hijau, the FGD with the Riau Bappedalitbang Team explained that there were many actors involved in the preparation and implementation of Riau Hijau, namely the government, private sector, academics, NGOs, development partners and the media. In fact, funding support does not only come from the government, but also from actors outside the government. Furthermore, there are twenty-three actors outside the government, both from the private sector and CSOs (civil society organizations) who are committed to participating in the implementation of the Riau Hijau action plan. In addition, through the Governor's Decree, the Riau Hijau Forum was also formed. With this condition, it is hoped that it will become a joint report for Riau Province to achieve the optimal greenhouse gas emission intensity target.

In line with the statement of the Riau Bappedalitbang Team, in the Riau Hijau Document (Governor Regulation Number 9 of 2021 Concerning Riau Hijau), Chapter IV explains that the Riau Hijau Regional Action Plan involves government and non-government actors. This involvement is related to mitigation and adaptation actions in the implementation of Riau Hijau, including mitigation and adaptation actions for handling abrasion and low carbon development. The actors involved in the action included government elements from the LHK Service, BPBD, PUPRPKPP Service and DKP. Meanwhile, non-government elements include CSOs, the private sector and LAM. In addition to mitigation/adaptation actions, the Riau Hijau Document also explains that the Riau Provincial Government collaborates with actors outside the government to jointly monitor and evaluate the implementation of the Riau Hijau policy.

Furthermore, the FGD with the Riau Bappedalitbang team also explained that collaboration between the government, the private sector and the community in implementing

Riau Hijau was also supported by the use of information and communication technology (ICT). ICT is used as a means of communication for the Government and the community in interacting to jointly carry out actions to support the achievement of Riau Hijau. The Provincial Government of Riau received a lot of input on this matter, especially from CSOs. In addition to this, there has also been integrated data management in Riau Province, which is regulatively stipulated through Riau Governor Regulation Number 23 of 2021 concerning One Data for Riau Province. Furthermore, in the implementation of Riau Hijau, the input of actions related to climate change adaptation and mitigation is website-based through the BAPPENAS AKSARA system or application. Furthermore, the FGD with the Riau Bappedalitbang Team also explained that related to the use of ICT in the implementation of Riau Hijau, the management of the one data system was delegated to the Riau Province Communication and Information Service, while for AKSARA BAPPENAS is a product from the Ministry of PPN/BAPPENAS which can be used by the Regional Government.

Based on the description above, the existence of multi-actor involvement which is also supported by the use of ICT shows that in implementing the Riau Hijau policy the principles of e-governance have been well implemented. In this case there are good collaborative activities between the government, the private sector and the community in an effort to make the Riau Hijau policy successful supported by the use of ICT. The implementation of e-governance shows the Riau Provincial Government's awareness that nowadays the main key to successful development is through a digital networking system with various parties. The government can no longer act as the only development actor and must also be proactive in empowering the use of ICT in its development policies. With the existence of e-governance in the implementation of Riau Hijau, it has brought various facilities that can help successfully achieve the goals of Riau Hijau effectively and efficiently. One of the indicators of success, as explained in the FGD with the Riau Bappedalitbang Team, is making Riau a pilot development area with a minimal carbon level. In addition, in the BAPPENAS AKSARA platform, Riau became the first province in terms of piloting reporting on greenhouse gas emission reduction actions the private sector and CSOs. This all happened because of the seriousness of the Provincial Government of Riau in involving actors outside the government in the implementation of Riau Hijau.

Even so, in implementing e-governance to support the implementation of Riau Hijau, there are several obstacles that are quite an obstacle. The FGD with the Riau Bappedalitbang Team explained that these problems included, among other things, reporting on actions to reduce greenhouse gas emissions not all stakeholders had utilized ICT

and inadequate internet facilities and infrastructure in some areas in Riau Province. Furthermore, several problems also occur in the environmental aspect which is the main core of Riau Hijau. As explained in the Riau Hijau Document (Governor Regulation No. 9 of 2021), these problems include environmental conservation activities that are still not optimal, forest border management activities that are still not optimal, management of critical land which still has to be balanced with the rate of emergence of critical land itself, the potential for abrasion in coastal areas, renewable energy that has not been used optimally, the number of motorized vehicles that continues to increase, and the handling of rubbish and waste that is not yet optimal. Even though there are several obstacles, the Provincial Government of Riau is optimistic that with good management and sustainable implementation of Riau Hijau, all of these problems can be overcome.

Besides the obstacles, there are also supporting factors which are the driving force for the implementation of e-governance in the implementation of Riau Hijau. Based on FGD with the Riau Bappedalitbang Team, it is known that this factor is the provincial government's commitment to reporting data related to the achievement of Riau Hijau indicators and actions to reduce greenhouse gas emissions in Riau. This illustrates the high commitment of the Riau Provincial Government in implementing Riau Hijau. With its capacity as the main actor in implementing Riau Hijau, the high commitment of the Riau Provincial Government is basically the main factor in opening the way for the implementation of Riau Hijau, including the implementation of e-governance in it.

5. CONCLUSION

Referring to the discussion that has been done, this research concludes:

1. The Riau Provincial Government has consistently and continuously implemented sustainable development in the environmental sector in Riau Province. This environmentally sound development is called Riau Hijau. E-governance has been well implemented in implementing the Riau Hijau policy. In this case there are multi-actor collaboration activities that are going well, namely between the government, the private sector and the community to jointly succeed the Riau Hijau policy supported by the use of information and communication technology (ICT).
2. Factors influencing the implementation of e-governance in supporting the implementation of sustainable development policies in the environment sector in Riau Province can be divided into supporting factors and inhibiting factors.

The supporting factors are that local governments have high commitment and consistency; existence of supporting policies both macro and micro that are clear, sustainable and systematic; policy implementers understand well the substance of the Riau Hijau policy; Riau Hijau has clear and measurable target groups and benefits; Riau Hijau is operationalized in various concrete and systematic projects and activities; Riau Hijau is supported by adequate resources both in terms of budget and facilities and infrastructure; Riau Hijau is carried out in an integrative manner by involving various regional apparatus organizations.

Meanwhile, the inhibiting factor is that not all relevant stakeholders have optimally utilized existing ICT facilities, inadequate ICT facilities and infrastructure in parts of Riau Province and problems with environmental issues. Even though there are several obstacles, the Provincial Government of Riau is optimistic that with good management and sustainable implementation of Riau Hijau, all of these problems can be overcome.

Based on the research conclusions, this study recommends:

1. It is necessary to optimize the use of ICT for all Riau Hijau stakeholders. In this case socialization and technical guidance can be carried out to all stakeholders regarding the importance of using ICT in facilitating the implementation of Riau Hijau including procedures for using the ICT. Simplification of the application and mechanism for using ICT also needs to be done to further attract stakeholders' interest in using ICT.
2. It is necessary to increase ICT facilities and infrastructure in order to optimize the distribution of ICT facilities and infrastructure throughout the Riau Provisional area. In this effort the Provincial Government of Riau can do so through a collaborative governance mechanism. In addition, the Riau Provincial Government should increase the budget allocation for improving ICT facilities and infrastructure.

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