

POLICY ANALYSIS AND SUSTAINABLE ENVIRONMENTAL DEVELOPMENT: GREEN LEADERSHIP IN NATURAL RESOURCE MANAGEMENT

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Policy Analysis and Sustainable Environmental Development: Green Leadership in Natural Resource Management

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Abstract

Environmental friendly development is defined as long-term development that maximizes the benefits of natural and human resources. Development activities, in general, have the potential to impact the environment significantly. This research aims to examine policies governing natural resource management and environmental sustainability in South Kalimantan. This study employed a single-site data analysis strategy with a qualitative phenomenological approach. Texts, documents resulting from an analysis of the existing conditions of sustainable natural resource and environmental management in South Kalimantan, environmental policy documents and budgets in the form of regional regulations; governor regulations, regent regulations, and mayor regulations, data from field observations and field notes from interviews are among the research objects. The snowball approach was utilized to determine informants in this investigation. Data analysis is accomplished by organizing the data, breaking it down into pieces, synthesizing it, arranging it into a pattern, determining what is significant and what will be examined, and determining what is important and what will be studied for yourself and others. In this study, the researcher employs the BAPPENAS MAPP policy analysis model, namely the Legislation Analysis Model (MAPP), developed and employed by BAPPENAS in 2011 to execute regulatory reforms. The research findings show that the policy for managing natural resources and the sustainable environment in South Kalimantan shows that all regulations have been maintained and that two have been revised. No regulations have been revoked based on the results of a content analysis of 15 master policies issued by the province of South Kalimantan. Finally, the policy becomes the primary commitment of the leadership role in preserving a better environment, especially Having an educated response to policies that are formulated and/or implemented in natural resource management and environmental sustainability. Capable of analyzing the proper regulations for the community to adopt by paying attention to the legal basis, needs, and friendliness of the regulations that are developed and implemented in their area. And or applied in the sustainable management of natural resources and the environment. Capable of analyzing the proper regulations for the community to adopt by paying attention to the legal basis, needs, and friendliness of the developed and implemented regulations in their area. And or applied in the sustainable management of natural resources and the environment. Capable of analyzing the proper regulations for the community to implement by paying attention to the legal foundation, needs, and friendliness of the regulations developed and implemented in their area.

Keywords

Leadership, Development, Policy, Environment, Sustainability, MAPP

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Introduction

Environmental problems are becoming a global problem, pollution, global climate change, overpopulation, exploitation of natural resources, waste disposal, biodiversity loss, deforestation/deforestation, ocean acidification phenomena, ozone layer depletion, acid rain, and genetic engineering that can cause serious problems for human health and the balance of ecosystems. Environmental problems are global issues that are experienced in Indonesia and several countries in the world. How many researchers have studied related to environmental issues (Ahmed & Aliyu, 2019; Babanyara, Usman, & Saleh, 2010; Elbaar & Meilantina, 2020; Hasnat, Kabir, & Hossain, 2018; Hatta, 2020; Normalina et al., 2021; Praveen, Ganguly, & Wakchaure, 2017). Flooding is an ecological calamity in South Kalimantan as a result of poor environmental management. According to Walhi South Kalimantan, 50 percent of the 3.7-hectare South Kalimantan area is currently encumbered with mining licences and oil palm plantations, but not yet HTI and HPH. Land cover and watersheds have been devastated and are in critical condition. At the same time, law enforcement for perpetrators of environmental crimes, rogue enterprises that exploit natural resources and the environment only for profit remains weak. After 2016, the South Kalimantan provincial government improved forest governance, carried out optimal supervision, made regulations to prevent high forest and land fires, green procurement was carried out to optimize community participation, particularly MSMEs in the provision of government goods, movement planting, green revolution, forest city cohesion, and forest city cohesion. (Observation in the field) Watershed destruction is also an issue in South Kalimantan, aggravated by climate change phenomena such as rising average global temperatures, heavy rainfall, and extreme weather. Overview of river water pollution in 2015, from 11 monitored rivers, 39 sampling locations with details: 9 locations with five monitoring stages, and 30 locations with two monitoring stages, yielding 105 samples with information: 32 samples of lightly polluted rivers, 72 samples of moderately polluted rivers, and 1 sample of heavily polluted rivers. According to the findings of the most recent critical⁹ and review conducted by the Center for Watershed Management and Protected Forests of South Kalimantan Province, the area of critical land in South Kalimantan Province reached 511,594 ha in 2018, a decrease from the data from the 2014 review, which reached 640,708 hectares (2014), to 511,594 hectares (2018), with details provided within, the South Kalimantan government collaborates with local institutions to research these issues and implement effective watershed rehabilitation initiatives. Through the green revolution initiative and the important land restoration program for the Barito watershed, South Kalimantan aims to restore the 8,300-hectare Barito watershed. The research question in this study is, "How are policies in the management of natural resources and the sustainable environment implemented in South Kalimantan?" The question is the formulation of the problem that will be the goal of this study. The purpose of this research is to "analyze policies in sustainable natural resource and environmental management in South Kalimantan" by taking into account the background, research focus, and problem formulation.

Literature Review

According to Wibawa (1994), the Grindle model is dictated by the policy's⁵ content and the context in which it is implemented. The policy's contents include the types of benefits to be generated; the desired degree of change, the policymaker's perspective, (Who) implements the program, and the resulting resources. Power, interests, and strategies of the actors engaged are the implementation context. Institutional and governmental characteristics, Complimentary and responsive The distir⁵tiveness of this theory resides in its thorough grasp of the policy framework, particularly about the implementor, the recipient of implementation, the arena of conflict between implementing actors, and the circumstances of the implementation resources necessary. According to the hypothesis of Sudarsono (2012), there are three sets of variabl⁸ that determine the effectiveness of implementation. These three factors include the features of the problem (tractability of the problems), the qualities of the policy/law (the ability of the statute to structure implementation), and the environmental variables (nonstatutory variables affecting⁵ implementation). The theory of Donald S. Van Meter and Carl E. Van Horn Meter and Horn argues in Sudarsono (2012), there are five variables that affect implementation performance. These five variables include standards and policy objectives; Resource; Inter-organizational communication

and strengthening of activities; Characteristics of implementing agents; and Social, economic and political conditions. MAPP theory based on MAPP Operationalization based on Atmaja (2017), there are 4 (four) stages: regulatory inventory, regulatory identification or classification, regulatory analysis, and action plans. Phase I, the inventory of regulations, namely the collection of laws and regulations relating to the implementation of the main tasks and functions/authorities or laws and regulations relating to certain sectors. Phase II, identification/classification of regulations, namely the activities carried out, identify potential problems, namely conflict, multiple interpretations, inconsistent, and non-operational (not useful). Phase III, regulatory analysis, is carried out on the provisions of the article based on the identification results. Stage IV, the action plan is an action plan that contains concrete steps as a follow-up to the analysis results.

3 Research Methods

The method used in this study is single-site data analysis using a qualitative phenomenological approach. This research is located in Banjarmasin City, South Kalimantan Province, Indonesia. Time The research was carried out from June to July 2020 for two months. The research objects include texts, documents resulting from analysis of the existing conditions of sustainable natural resources and environmental management in South Kalimantan, environmental policy documents and budgets in the form of regional regulations; governor regulations, regent regulations and mayor regulations, data from field observations and field notes from interviews. In this study, the determination of informants using the Snow Ball model adjusts the information needed during the research process. Research subjects/key informants can be seen Table

Table 1.
Research Informants

Informant	South Kalimantan Province Locus
Main	
governor	1
Provincial DPRD	1
Mayor	2
Regent	3
Head of SKPD	2
Traditional Figures	2
NGO	1
College/Practitioner/Academic	2
Amount	5

2 According to Bogdan and Biklen (1982), data analysis is the process of systematically searching and compiling data obtained from interviews, field notes, and other materials so that they can be easily understood and the findings can be informed others. Data analysis is done by organizing the data, breaking it down into units, synthesizing it, arranging it into a pattern, choosing what is important and what will be studied, and yourself and others. In this research; The researcher uses the MAPP Bapenas policy analysis model, namely The Legislation Analysis Model (MAPP) is a model developed and used by BAPPENAS in 2011 to implement regulatory reforms. MAPP is a model developed and used by BAPPENAS in 2011 to implement regulatory reforms. MAPP is a tool to review or evaluate regulations that are indicated to be problematic or potentially problematic. The operation of MAPP begins with an inventory of regulations, identification and classification of problematic or potentially problematic regulations, and continues with regulatory analysis (Bappenas, 2012). Phase I, inventory of regulations, Phase II, identification/classification of regulations, namely the activities carried out are identifying potential problems, namely conflict, multiple interpretations, inconsistent, and non-operational (not useful). Phase III, regulatory analysis, is carried out on the provisions of the article based on the identification results. Stage IV is an action plan, namely an action plan that contains concrete steps as a follow-up to the analysis results. Directorate of Legislation Analysis (2012) uses MAPP to produce 3 choices of action decisions. which states that the decisions of this action are: (1) the Regulation is retained, (2) the Regulation is revised and (3) the Regulation is repealed (Triyono, 2012). MAPP uses 3 (three) main criteria used to assess the quality of regulations/regulations/policies (Bappenas, 2011). This main

criterion was developed from the theory of law enforcement, namely philosophical, juridical and sociological. These criteria are legality (legal basis), needs (needs) and friendly (friendly).

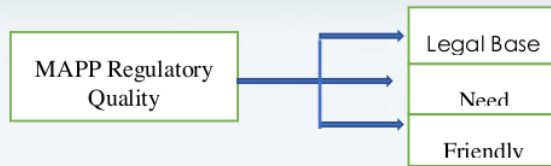


Figure 1. MAPP analysis

Results and Discussion

Sustainable Natural Resources and Environmental Management Policy in South Kalimantan

In-Law No. 10 of 2009 is clearly stated regarding sustainable development in Law no. 10 of 2009 regarding sustainable development in Law no. 32 of 2009 is mentioned about sustainable development. In-Law No. 32 of 2009 clearly states about sustainable development. The policy for managing natural resources and the sustainable environment in South Kalimantan is translated in Regional Regulation no. 7 of 2016, which was formulated by taking into account the strategic issues of sustainable development. Regional sustainable development strategic issues are contained in 13 priorities, 168 programs, and 238 indicators. The condition of sustainable natural resource and environmental management in South Kalimantan follows the Sustainable Development Goals (SDGs) formulated at the global level involving the leaders of 193 UN member countries at the end of September 2015. Sustainable development as a global action plan implemented until 2030 has five principles. The basic principles are People, Planet, Prosperity, Peace, and Partnership in 3 dimensions: economic, social, and environmental harmony (Bappeda of South Kalimantan Province, 2020). The development of natural resources (SDA) and the environment (LH) is directed at improving people's welfare while taking into account the principles of sustainable national development in the future (Djayaputra, 2021; Nurjaya, 2014; Rasnawati & Yasa, 2021; Sunarto & Sumarto, 2019; Wahidim, 2015). The creation of a balance between the use and preservation of natural resources and the environment is an important prerequisite for the implementation of sustainable development of natural resources and the environment. Regulations relating to the management of natural resources and the sustainable environment in Indonesia refer to Law Number 32 of 2009, concerning sustainable development, which is a conscious and planned effort that integrates environmental, social and economic aspects into development strategies to ensure environmental integrity and safety, capability, welfare and quality of life of present and future generations (Article 1). Law number 41 of 1999 and Law number 1 of 2014 concerning forestry (South Kalimantan Provincial Forestry Service, 2020). The results of the regulatory inventory, namely the collection of laws and regulations of the province of South Kalimantan related to the management of natural resources and the sustainable environment, obtained 15 regulations as documents of research findings can be seen in the following table: Implementation of Law No. 9 of 2015 concerning the second amendment to Law No. 23 of 2014 concerning Regional Government. Based on the research findings, there are 6 (districts/cities) as a locus for implementing pro-environmental regulations, referring to policies in stages and policy initiatives from the districts/cities. The quality of the applied regulations was analyzed using the MAPP policy analysis model. The legality (legal basis) that the regulations related to the management of Natural Resources and the sustainable environment in South Kalimantan were analyzed as many as 15 Regulations (regulations of the main provincial products, not derivative regulations) which include: Regional Regulations and Governor Regulations, in their Regulation there are no potential problems which has the potential to cause multiple interpretations in the formulation of norms and concerning other regulations, the regulations made by the South Kalimantan Provincial Government do not have the potential to cause conflict, inconsistency, duplication, all of which have been supported by implementation instructions and operational guidelines. (O2/DK/P/040720).

Table 2. ¹ Regulations Related to the Green Leadership Model in the Management of Natural Resources and the Sustainable Environment in South Kalimantan.

No	Regulation/Policy
1.	South Kalimantan Regional Regulation Number 7 of 2016, concerning South Kalimantan's RPJMD 2016-2021
2.	South Kalimantan Regional Regulation Number 8 of 2018, concerning the Implementation of Waste Management
3.	South Kalimantan Regional Regulation Number 3 of 2018, concerning South Kalimantan's policies and strategies in the management of household waste and similar household waste
4.	South Kalimantan Regional Regulation Number 2 of 2006, concerning Water Quality Management and Water Pollution Control
5.	South Kalimantan Governor Regulation Number 036 of 2008, concerning Amendments to South Kalimantan Governor Regulation Number 04 of 2007, concerning Liquid Waste Quality Standards (BKMLC) for Industrial, Hotel, Restaurant, Hospital, Domestic and Mining activities.
6.	South Kalimantan Governor Regulation Number 14 of 2013, concerning Regional Action Plans for Reducing Greenhouse Gas Emissions
7.	South Kalimantan Governor Regulation Number 66 of 2017, concerning the Main Duties, Functions and Job Descriptions of the South Kalimantan Provincial Environmental Service
8.	South Kalimantan Regional Regulation Number 02 of 2017, concerning the Environmental Protection and Management Plan of South Kalimantan Province
9.	South Kalimantan Governor Regulation Number 070 of 2008, concerning Quality Standards for Emissions from Immovable Sources and Thresholds for Motor Vehicle Exhaust Emissions
10.	South Kalimantan Governor Regulation Number 053 of 2007, concerning Quality Standards, Ambient and Noise Level Standards
11.	South Kalimantan Governor Regulation Number 043 of 2007, concerning Regional Sea Water Quality Standards
12.	South Kalimantan Governor Regulation Number 05 of 2007, concerning Designation and Quality Standards for River Water
13.	Regional Regulation Number 24 of 2008, Concerning the Supervision and Protection of Fish Resources in South Kalimantan
14.	South Kalimantan Governor Regulation Number 095 of 2018, concerning Green Public Procurement to Support the Green Revolution in South Kalimantan Province
15.	South Kalimantan Regional Regulation Number 7 of 2018, concerning the Green Revolution Movement
16.	Regional Regulation Number 13 of 2018, concerning the Zoning Plan for Coastal Areas and Small Islands (RZWP3K) of South Kalimantan Province for 2018-2038,

The results of interviews with informants reinforce that: "The process of making a regulation related to the management of natural resources and the sustainable environment in terms of proposals for the budget is strongly supported by the South Kalimantan Provincial Council which has a role in determining a policy that will be implemented by the region" (W01/DPRD/P/120820).



Figure 2. Interview with the Chairman of Commission 3 of the DPRD of South Kalimantan Province, Mr H. Syahrizani

Need(needs) that the 15 regulations that have been made and implemented in the management of natural resources and the sustainable environment in South Kalimantan have clear objectives and are needed/needed by the community and state administrators in their implementation. As has been done by the Hulu Sungai Selatan Regency Government, the activities of managing natural resources and the sustainable environment always refer to the laws and regulations of the central Government, which are described in regional regulations, governor regulations and regent regulations following the respective authorities. Area. In this study, the operationalization stage of MAPP only reached stage II to meet the availability of research time. Information about the process of making a regulation that will be applied in the region in the management of natural resources and the sustainable environment can be seen in the following excerpts from the interview: "The rules/regulations that are made are published according to the needs of the region in protecting the environment, especially related to forest management" (W01/TA/HSS/060720).



Figure 3. Interview with the Regent of Hulu Sungai Selatan Mr. H.Akmd Fikri

Friendly(friendly) 15 regulations related to the Green Leadership Model in managing natural resources and the sustainable environment in South Kalimantan are easy to understand and comply with and do not impose excessive burdens (in the form of costs, time and processes) to parties directly affected by regulations or by. In other words, regulatory objectives can be achieved without placing unnecessary burdens on groups and communities affected by Regulation. For example: "The regulations regulate proportionally the costs, time and processes for parties which will apply for a certain permit. (W01/B/HST/020820). Another opinion expressed by another informant stated: "Regulations that can direct the public do not only depend on the quality of the content or text but also depend on the effectiveness of their socio-political interactions" (W02/P1/AK/070620). Whereas regulations are made by taking into account social, economic and cultural and political aspects, so that these regulations focus on the interests of the community, which are directly related to the policies made (Hancher & Moran, 1989; Robertson, 2010; Stephens et al., 2018). The results of the analysis of 15 regulatory research findings using MAPP resulted in 3 choices of action decisions, namely: (1) regulation was maintained; 15 regulations made until the research is carried out are still enforced, and their implementation is maintained, (2) revised regulations; In its implementation, it was found that two revised regulations related to the Green leadership model in the management of natural resources and the sustainable

environment were found, namely Regional Regulation Number 7 of 2016 and Pergub Number 036 of 2007, and (3) no regulations were revoked. All regulations applied to the six regulatory research loci, all of which have been maintained since they were published, are socialized and implemented, apply to the policy's objectives. (O2/L1/101020). In implementing 15 policies related to the Green Leadership Model in managing natural resources and the sustainable environment in South Kalimantan in natural resource management and FMU-based forest development in the form of site-level forest management that is in direct contact with the forest. Implemented through priority programs in the form of the Green Revolution, social forestry, control of forest damage and other supporting programs. The Green Revolution Program (South Kalimantan Regional Regulation number 7 of 2018 concerning the Green Revolution Movement) in handling critical land area of 511,594 Ha and waste management (O2/DK/P/030820) As excerpts from interviews with the following informants, which stated that: "Regulation that was rejected at the beginning of its implementation does not mean that the Regulation is not pro-environmental preservation, because Banjarmasin is a city that was managed after many people needed different strategies in terms of managing the environment, especially the problem of waste management as a classic problem for the city these thousand rivers" (W01/W/BJM/050820)



Figure 4. Interview and publication with the Mayor of Banjarmasin, Mr H.Ibnu Sina, regarding reducing the use of plastic bags.

To protect and preserve the environment, the City of Banjarmasin has implemented a regulation in the form of Mayor's Regulation No. 18 of 2016 concerning the reduction of the use of single-use plastic bags, which is supported by several mayoral circulars, Budget Support with a larger portion compared to other programs that are unrelated. The City of Banjarbaru employs a different strategy in regards to the Mayor's Regulation on waste management, namely Mayor's regulation number 66 of 2016 as a City with Character. This city was truly designed before being inhabited (by design), making Banjarbaru City superior, more organized, and better managed. Associated with the green leadership model. The following are extracts from informant interviews: "Banjarbaru implements thematic villages as ecotourism in urban areas, which gives its own colour in managing natural resources and a sustainable living environment, it is easier for the City of Banjarbaru because this city was designed from the start (by design), the city first becomes, then the residents who complete" (W01/W/BJB/080720).



Figure 5. Interview with the Mayor of Banjarbaru Mr. H.Nadmi Adhani

Other excerpts from the interview are: "Banjarbaru is a concept of a city with good environmental management, a concept of a city with character, and a concept of atrocity is a city heritage that I want to leave behind during my leadership, this is realized through regulations that are intended to suit the characteristics of the people of Banjarbaru City" (W02/W/BJB/ 080720). Meanwhile, the regulations of Tanah Bumbu Regency focus on human development (using a value approach) in an uncommon effort to manage natural resources and the environment responsibly. Tanah Bumbu Regency, a mining area explored and exploited, has some environmental harm (particularly the Meratus mountain forest, which is quite concerning due to land conversion and forest decline), but this does not indicate that it does not cannot be rehabilitated. The following are extracts from informant interviews: "... As a leader in Tanah Bumbu, I believe that the most important item connected to Regulation in natural resource management and a sustainable environment is to increase the quality of its human resources. Make a one village one tahfiz program, in which each village in Tanah Bumbu Regency has one tahfiz (al-Quran memorizing) house because I believe that a religious approach to religion in the younger generation, beginning with improving moral quality, will have an impact on behaviour changes in the community and the environment" (W01/B/TB/050820).



Figure 6. Interview with the Regent of Tanah Bumbu, Mr. H.Sudian Noor

"... thematic villages are an alternative solution in overcoming the impact of post-mining damage that often occurs in Tanah Bumbu Regency, spread in almost 62 villages in Tanah Bumbu Regency" (W02/B/TB/050820). The management of natural resources and the sustainable environment in Tanah Bumbu Regency is adjusted to the community's needs. The right effort to repair a damaged environment with powerlessness in deciding a policy is to improve the moral and spiritual quality of its people, especially the younger generation through human development, the efforts that have been made are supported by data from the Ideal Human Development Index, which is increasing every year as shown in the following table:

Table 3.
Human Development Index of 6 Research Loci/sites in South Kalimantan 2014-2019

Regency/CityRegency/Municipality (1)	2014 (2)	2015 (3)	2016 (4)	2017 (5)	2018 (6)	2019 (7)
Regency/Regency						
1. Upper South River	65.25	66.31	67.52	67.80	68.41	68.80
2. Upper Central River	65.37	66.56	67.07	67.78	68.32	68.80
3. Seasoned Ground	66.94	67.58	68.28	69.12	70.05	70.50
City/Municipality						
1. Banjarmasin	74.94	75.41	75.94	76.46	76.83	77.16
2. Banjarbaru	77.30	77.56	77.96	78.32	78.83	79.22
South Kalimantan	67.63	68.38	69.05	69.65	70.17	70.72

Source: Bappeda of South Kalimantan Province (2020)

The same thing was conveyed in excerpts from interviews with the following informants that the implementation of a regulation must be fully supported by the local community, especially the

traditional tribal elders who are directly involved in its implementation: "Inviting indigenous peoples, especially people who live in the mountainous area of Meratus Loksado, to jointly obey government regulations in managing protected forests and their areas, by implementing regulations that focus on policies on community empowerment efforts from the younger generation level, with the socialization process through various art events favoured by the millennial generation" (W01/DLH/HST/160820).



Figure 7. Interview and Discussion with the Regent of Hulu Sungai Tengah Mr H.Ahmad Chairansyah and the Head of the Department of Environment for the District of Hulu Sungai Tengah Mr. H.Yani in the Office of the Regent of Hulu Sungai Tengah.

Interview result: "Creating a policy as well as an innovation to encourage everyone to join in the "Tree adoption" program, which is an activity to pay for a tree in a forest region to be maintained by indigenous people and may not be chopped down at any time." (W02/DLH/HST/16820) Approaches to the community, socialization by regional leaders, regulations in the form of announcements, appeals, announcements, circulars to the Governor, Regent, and Mayor Regulations connected to the authority possessed by local governments that can be done According to Law Number 9 of 2015, article 65 paragraph (6), "carrying out the daily tasks of regional heads" in this provision refers to routine government tasks that are not related to strategic policymaking in the financial, institutional, personnel, and licensing aspects, as well as other strategic policies. In general, the analysis of rules for natural resource management and the sustainable environment is separated into two types of policies, namely: Regional regulations, in general, have limited authority in determining the direction of policies for managing natural resources and the sustainable environment in South Kalimantan that are strategic in nature because they are the authority of the Centre, and the provincial Government is only given the authority to provide recommendations, not the authority to issue permits. Because most of the arrangements for managing natural resources and the environment are strategic, these regulations have a significant impact on the sustainable management of natural resources and the environment in district/city (Lokus) areas.

Policies related to sustainable natural resource management in South Kalimantan

Sustainable Agriculture

Sustainable agriculture is included in South Kalimantan Province's policy goal 2 of the TPB/SDGs, namely eliminating hunger, achieving food security and good nutrition, and increasing sustainable agriculture, so that in order to achieve the goal of no hunger by 2030, 5 targets are set, which are measured using 16 indicators. These goals include eradicating hunger and malnutrition, tripling agricultural production, assuring sustainable food agriculture, managing genetic diversity, and boosting agricultural productive capacity and investment. To meet the TPB aim of Goal 2 without Hunger, the policy directions of the 2018-2021 RPJMD include: eliminating hunger, achieving food security and good nutrition, doubling agricultural productivity, and increasing sustainable agriculture. To achieve the goal, government policies, programs, and actions are specified, particularly food production and supply policies are geared toward meeting the requirement for quality food to provide sufficient, variety, nutritionally balanced, and safe food at accessible costs (Bappeda of South Kalimantan Province, 2020).. Target The Strategic Plan of Regional Government Work Units/Agencies/Bureau includes operational policies and programs to increase production and supply, such as activities carried out by the Bureau/SKPD in South Kalimantan in the form of sustainable agriculture, including seed production and control of

OPT DPI food crops; measuring the productivity of food crops and horticulture; and providing services (Bappeda of South Kalimantan Province, 2020). This is an example of added value application in the agricultural sector. The bigger the potential economic activity/income of workers / farmers, the better the workforce's ability to get food and healthy eating patterns. 2020 (Ministry of PPN/Bappenas).

Conservation and Sustainable Use of Land Ecosystems

According to Minister of Forestry Decree No. 435/MENHUT-II/2010, the forest area of South Kalimantan Province in 2009 was 1,779,982 hectares. According to the Forest Use Agreement (TGHK), an area of 526,425.00 hectares (29.57 per cent) is protected forest, nature reserve forest and nature conservation area of 213,285.00 hectares (11.98 per cent), and limited production forest of 762, 188, 00 hectares (42.82 per cent), permanent production forest of 126,660.00 hectares (7.12 per cent) and c (8.51 per cent) (South Kalimantan Province Forestry Service, 2020). Minimizing Illegal Logging refers to Law 41 of 1999 on Forestry, as well as Government Regulation No. 45 of 2004 on amendments to Government Regulation No. 28 of 1985 concerning forest protection, and it has been emphasized that sanctions for violating forest damage "criminal provisions of article 78 paragraph (1) to the article (6)," with a maximum threat of 5 years to 15 years, and a maximum fine between 2020 (Bappeda of South Kalimantan Province, 2020). Terrestrial ecosystem development from 2016 to 2021 with the goal of reaching the green revolution. The policy direction is based on spatial use patterns (spatial analysis) by dividing the area within the area with the direction of use and specified criteria. Based on this research, the forestry development strategy focuses on forest development based on forest functions, including ecological, economic, and social functions. Regulation of the Minister of Forestry No. P.6/2009 on the area for the formation of FMUs. Forest Management Resort (RPH) establishment in the form of UPT KPH (Pergub number 023/2017 jo. number 0102/2018) and KPH unit (SK 78/Menhut.II/2010).

Marine Ecosystem Sustainability and Utilization

South Kalimantan Province already has rules in place to manage marine resources and protect small fishermen. Furthermore, the area of marine conservation zones has grown—spatial Planning for the Seas. The management of maritime space is now under the authority of the provincial government, according to the passage of Law Number 23 of 2014 Concerning Regional Government, which includes up to 12 miles of a coastline measured from the highest tide. The Governor of South Kalimantan enacted Regional Regulation No. 13 of 2018 Regarding the Zoning Plan for Coastal Areas and Small Islands (RZWP3K) of South Kalimantan Province for 2018-2038 in July 2018, following a Strategic Environmental Study conducted by the South Kalimantan Provincial Government (KLHS). Zoning Plan for the Coastal Zone and Small Islands (RZWP3K). The RZWP3goal K's is to support sustainable and integrated management of marine resources by increasing protection of the marine, coastal, and small island environment; (ii) protecting the socio-cultural interests of maritime, indigenous peoples, and traditional fishers; and (iii) improving community welfare through the development of marine and maritime economic growth. (South Kalimantan Bappeda, 2020). (iii) enhancing community welfare by developing marine and maritime economic growth hubs; and (iv) promoting investment by giving legal certainty. (South Kalimantan Bappeda, 2020). (iii) enhancing community welfare through the development of marine and maritime economic growth hubs; and (iv) promoting investment by giving legal certainty (Bappeda of South Kalimantan Province, 2020).

Utilization of Energy, Mining and Mineral Resources

The policy direction outlined in the South Kalimantan Provincial RPJMD 2016-2021 is to increase the sustainable management and added value of natural resources (SDA). (South Kalimantan Province, Year 2020). The normative basis for natural resource management in this context is Government Regulation No. 22 of 2011, which governs mining areas properly, including the stages of the general investigation, exploration, feasibility studies, mining construction, management or refining, transportation and sales, and post-mining. This is reinforced by Government Regulation Number 24 of 2012 concerning Amendments to Government Regulation Number 23 of 2010 concerning the Implementation of the Mineral and Coal Mining Business, which in the Implementation of the Mining Business Department of Energy and Mineral Resources of (Bappeda

of South Kalimantan Province, 2020). The policy direction for improving natural resource management and added value is executed through optimizing added value in the usage of mineral and other mining resources, expanding output and the variety of energy resource mix, and increasing efficiency and equity in energy consumption. Mining business licenses are regulated by Law Number 4 of 2009 in article 1 (7) concerning Mineral and Coal Mining (Minerva Law); mining business permits (IUP) are permits granted to carry out mining businesses under the authority of the Government, in the management mineral and coal mining to grant IUP. Article 6 of Government Regulation Number 23 of 2010 Concerning the Implementation of Mineral and Coal Mining Business Activities (PP 23/2010) states that IUPs are given by the Minister, Governor, or Regent/Mayor following their power. Article 14 paragraph (3) of Law Number 23 of 2014 Concerning Regional Government "Government affairs in the energy and mineral resources sector, as referred to in paragraph (1) relating to the management of oil and gas are under the authority of the central government." Department of Energy and Resources Mineral Resources of (Bappeda of South Kalimantan Province, 2020). According to the most recent data from the ESDM Office of South Kalimantan Province for 2019, there are 43 active IUP-OP holders, including 40 firms and 3 KUD (ESDM, 2020).

Policies related to sustainable environmental management in South Kalimantan

Sustainable Cities and Settlements

7 According to Law No. 1 of 2011 on Housing and Settlement Areas, a house is a building that serves as a suitable place to live, a means of fostering a family, a reflection of the dignity and worth of its inhabitants, as well as a part of a settlement both in urban and rural areas, equipped with infrastructure, facilities, and public utilities as a result of efforts to fulfill livable housing requirements. The reduction in slum areas is calculated in accordance with the provisions of PUPR Ministerial Regulation Number 2 of 2016 on Quality Improvement of Slum Housing and Slum Settlements. Slums are calculated by entering investment data built in the slum delegation site, from Regency/City APBD funds, Provincial APBD, APBN, and PHLN.

Solid Waste Management, Proper Sanitation and Irrigation

Policies on sanitation management, waste management, and water management follow Law number 14 of 2014 concerning Regional Government. Other regulations governing this matter are as follows:

1. Law Number 11 of 1974 concerning Irrigation
2. Law Number 32 of 2009 concerning Environmental Protection and Management
3. Government Regulation Number 35 of 1991 concerning Rivers
4. Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control
5. Government Regulation Number 122 of 2015 concerning Drinking Water Supply System
6. Presidential Regulation Number 185 of 2014 concerning Acceleration of Drinking Water and Sanitation Provision
7. Regulation of the Minister of Public Works and Public Housing Number 28/PRT/M/2015 concerning the Establishment of River Border Lines and Lake Border Lines (South Kalimantan Provincial Environmental Service, 2020)

Urban settlements cannot be separated from the waste problem. The regulations governing waste/cleanliness are following the research focus; the loci selected purposively, namely the City of Banjarbaru and the City of Banjarmasin, include the following regulations:

1. Law Number 18 of 2008 concerning Waste Management.
2. PP Number 81 of 2012 concerning the Management of Household Waste and Similar Waste of Household Waste.
3. Regional Regulation Number 32 of 2011 concerning Management and Retribution for Waste/Cleaning Services.
4. Regional Regulation Number 3 of 2016 Amendments on Management and Retribution for Waste/Cleaning Services.
5. Mayor's Regulation No. 66 concerning Reduction of Plastic Bags in Modern Retail.

6. Mayor's Regulation Number 27 of 2018 concerning Procedures for Payment of Retribution at the Gunung Kupang TPA.
7. Mayor Regulation Number 32 of 2018 concerning the Jakstrada of Banjarbaru City.
8. Law No. 8 of 2008 concerning Waste Management
9. Regional Regulation No. 21 of 2011 concerning Cleanliness/Parking Waste Management
10. Mayor's Regulation Number 18 of 2016 concerning Reduction of Plastic Bags
11. Mayor Regulation Number 60 of 2018 concerning City Policies and Strategies in the Management of Household Waste and Waste Similar to Household Waste
12. Circular Letter Number 660.01/1364-KPS/DLH/XII/2017 Regarding ASN Obligations to be Waste Bank Customers
13. Circular Letter Number 660.01/1365-KPS/DLH/XII/2017 Regarding the Call for Reducing the Use of Plastic Bags in Schools.
14. Jakstarada Number 60 Year 2018
15. Circular Letter Number 660.01/1237/SET-DLH/VIII/2019 Regarding Reducing the Use of Plastic Bags in all Muslim houses of worship (Mosques, Langgar and Mushola)
16. Appeal for Segregating Waste from the Source Number 660/0052/SET/DLH/I/2020 City of Banjarmasin.

Those underlined that policy is a governmental decision based on happenings in the community for the benefit of the community itself. It can also take the form of attempts to build peace in the community. According to Nugroho (2004), public policy has a definite function: to control life together to fulfil the agreed-upon goals (vision and mission) (Nugroho et al., 2020; Nugroho, 2012). Regarding the process of making a regulation, it must be friendly, as he stated in an online public lecture based on the results of interviews with informants from IPB Academics: "Regulation must pay attention to the characteristics of individuality and diversity, the nature of the community is related to the effectiveness of social interaction with the community, not just the regulation" (W02/P1/A).



Figure 8. Interview and discussion with traditional leaders (Provincial Damang) Damang Ayal accompanied by the Head of Loksado Sub-district, Mr H.Rudy at Damang Residence, Malaria Village, Loksado District, Hulu Sungai Selatan Regency.

In general, the rules for managing natural resources and the sustainable environment in South Kalimantan refer to the Central Government Regulation regarding efforts to use them by the private sector/stakeholders via recommendations from the provincial government, which is assumed to be aware of the community's true conditions.

Disaster mitigation

The Provincial Government of South Kalimantan has made disaster management efforts in coping with floods, forest and land fires, harsh weather, drought, and landslides. The Regulation of the Head of the National Disaster Management Agency Number 02 of 2012 concerning General Guidelines for Disaster Risk Assessment and other reference guidelines in ministries/agencies at the national level issued by BNPB is one of the foundations for developing a directed, planned, and integrated disaster management plan. The 2016–2020 Disaster Risk Assessment Document (KRB) for South Kalimantan Province results from this study. It describes in-depth the analysis of disaster risk studies in South Kalimantan Province. At least once every 5 (five) years, the KRB document is

reviewed and modified. (South Kalimantan Province, Year 2020, Bappeda). The disaster management policies used in the pre-disaster, disaster, and post-disaster periods include: 1) raising the effectiveness of disaster prevention and mitigation; 2) improving disaster emergency readiness and handling; and 3) capacity development for disaster recovery, (Bappeda of South Kalimantan Province, 2020). Presidential Decree No. 1 of 2019 about the National Disaster Management Agency establishes standards and directions for disaster management operations that include disaster prevention, disaster response and recovery, rehabilitation, and reconstruction fairly and equitably. Through Presidential Regulation (Perpres) No. 61 of 2011 concerning the National Action Plan for Reducing Greenhouse Gas Emissions, the Government of Indonesia has made an initial commitment to assist the reduction of GHG emissions from various sectors in the development sector (RAN-GRK). The Governor of South Kalimantan issued Regulation No. 14 in 2013. Total emissions from land-based sources are 107.13 Mt CO₂-eq (2011-2020), 26,344 Mt CO₂-eq (2010-2020) from energy, transportation, and industry, and 6,481 Mt CO₂-eq (2010-2020) from waste, according to the RAD-GRK of South Kalimantan Province (Bappeda of South Kalimantan Province, 2020). The flood disaster in South Kalimantan in 2015 submerged 6,700 dwellings in 15 sub-districts in the regencies of Banjar, Hulu Sungai Selatan, and Hulu Sungai Tengah. A flood happened at the beginning of 2021, which was the largest flood in the previous five years according to the community. At the time of writing, losses cannot be projected with certainty. Floods struck 11 districts/cities, each with a different level of catastrophe risk (O3/DK/P/190121). Management Procedures Natural Resources and Sustainable Environment rules are clear, easy to understand and apply, user-friendly (easy to implement), and accountable (can be accounted for) (Bappenas, 2012).

Conclusion

The MAPP study published by Bappenas is used in the policy analysis process. MAPP assesses the quality of regulations/regulations/policies using three (three) main criteria (Bappenas, 2012). The results of MAPP's regulatory analysis yield three options for action. The decisions for these acts were: (1) the Regulation was kept; (2) regulations were altered; and (3) the Regulation was abolished, according to the Directorate of Legislation Analysis (2012). According to the policy for managing natural resources and the sustainable environment in South Kalimantan, all regulations have been maintained, two regulations have been revised, and no regulations have been revoked based on the content analysis results of 15 master policies issued by the province of South Kalimantan. Finally, the policy became the most important commitment of the leadership role in preserving a better environment, namely, having an informed reaction to policies created and adopted in the sustainable management of natural resources and the environment. Capable of analyzing the appropriate regulations for the community to implement by paying attention to the legal foundation, needs, and friendliness of the regulations developed and implemented in their area.

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