



Determination of Spatial Planning Area Criteria in the Perspective of Regional Autonomy to Ensure Sustainability of Land Resources (Case Study in the Province of East Kalimantan and North Kalimantan Province)

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Abstract

Regional spatial planning is an operational technical policy that must be implemented by local governments in an effort to make spatial planning into areas that regulate the use and or management of natural resources and the environment for various life interests. Its existence as a reference for regional economic development planning. A harmonious and balanced regional arrangement between protected areas and cultivation areas, as well as a harmonious and balanced arrangement within an area, must be able to accommodate all the interests of regional economic development optimally. This condition is a basic requirement for planning and implementing sustainable development. The importance of a balance between economic growth and environmental preservation is a concept that reflects sustainable development. Sustainable development is basically a development strategy that provides a kind of threshold at the rate of utilization of natural ecosystems and the natural resources contained therein.

Aspects underlying the arrangement of the area include legal aspects, physical aspects, aspects of regional production capability, and aspects of regional economic capacity that can provide legal guarantees and the continued use of the area. As usual, land use planning starts from the preparation of a Regional Spatial Plan (RTRW) as a mandate from: 1) Republic of Indonesia Law Number 26 of 2007 concerning Spatial Planning; 2) Republic of Indonesia Law Number 32 of 2004 concerning Regional Government; and 3) Republic of Indonesia Government Regulation No. 26/2008 concerning National Spatial Planning with the same goal, which is to increase and accelerate Indonesia's economic development. Approval of the substance by the Minister is based on an evaluation of the criteria of the area that forms the spatial pattern of the cultivation area. The assessment is determined by a ministerial decree from the Ministry of Forestry, the Ministry of Agriculture, the Ministry of Mining, and the Ministry of Public Works and Regional Prasana Settlements. However, there is an impression that each Ministry in establishing regional criteria does not coordinate between sectors and does not involve local governments, as mandated by the principle of autonomous governance as stated in Government Regulation number 38 of 2007 concerning Division of Government Affairs between Governments;

Provincial Government, and Regency/City Government, mandate that central government policy-making must involve local governments.

This study was conducted to analyze the policy to determine the criteria of the area in accordance with the functions and capabilities of the land so that it can be a clear baseline and agreed upon by each development sector and can be agreed between sectors and between Ministries, the Provincial Government, and Regency / City Governments.

Keywords: *Region; Spatial Planning; Regional Autonomy; Land Resources*

Introduction

Spatial planning is an action to divide the area into areas according to the ability of resources that can function as a container for human activities and other creatures that live on it for the needs of economic development sectors so that conflicts of interest between the users of the region are not sustained in a sustainable manner.

The division of the area in spatial planning must meet the criteria of each aspect in accordance with the function of the area that will be used as a container of activities. According to the Republic of Indonesia Government Regulation No. 26/2008 concerning the National Spatial Plan regulates the criteria for protected areas and cultivation areas, while the criteria for area criteria are regulated by each minister related to the use and regulation of the area.

Aspects that underlie the regional arrangement include: 1) legal aspects governing the spatial planning system (spatial planning procedures and procedures); 2) physical aspects and or carrying capacity of natural resources and the environment; 3) aspects of regional production capability; and 4) aspects of the region's economic capability that can provide legal guarantees and the continued use of the area. As usual, land use planning starts from the preparation of a Regional Spatial Plan (RTRW) from the national level to the level of detailed spatial plans.

The basic policy for the preparation of the RTRW is: 1) Republic of Indonesia Law Number 26 of 2007 concerning Spatial Planning; 2) Republic of Indonesia Law Number 32 of 2004 concerning Regional Government; and 3) Republic of Indonesia Government Regulation No. 26/2008 concerning National Spatial Planning with the same goal, which is to increase and accelerate Indonesia's economic development. Provincial and Regency / City Regional Spatial Planning is stipulated by Regional Regulation. Establishment of Regional Regulation on Spatial Planning must obtain substance approval from the Minister in charge of Spatial Planning.

The issuance of Law number 26 of 2007 concerning Spatial Planning confirms that the regency / city RTRW can make changes and is stipulated three years after the enactment of Law 26 of 2007. Cases in several Regencies in East Kalimantan Province However, it did not occur because of substance constraints. In 2010, none of the regency / municipal RTRW Regulations in East Kalimantan Province could be established, even up to 2015, East Kutai Regencies and Berau Regencies, and the East Kalimantan Provincial RTRW Regulations have not been established. The main obstacle is the substance of the spatial pattern of regency / city areas that have not yet received approval from the Minister of Forestry to change forest areas to other production areas.

Approval of the substance by the Minister is based on an evaluation of the criteria of the area that forms the spatial pattern of the cultivation area. The evaluation of cultivation area criteria is determined by ministerial decree, including: 1) Ministry of Forestry; 2) Ministry of agriculture; 3) Ministry of

mining; and 4) Ministry of Public Works and Regional Prasana Settlements. The problem that arises is that there is an impression that each Ministry in establishing regional criteria does not coordinate between sectors and does not involve regional governments, on the basis of the principle of autonomous governance and based on Government Regulation number 38 of 2007 concerning Division of Government Affairs between Governments; Provincial Government, and Regency / City Government, mandate that central government policy-making must involve local governments.

The zoning policy must consider legal certainty factors and be able to accommodate the interests of national development and regional development, so that the output of a legal policy on regional spatial planning can provide legal certainty in the sense that regional spatial plans cannot change during the production process, and or based on guarantees the sustainability of the production of the area with the lowest risk of ecosystem damage. Conformity of the legal basis for the determination of spatial planning policies is currently still occurring in multiple interpretations and is centralized, because in formulating the policy on zoning not involving local governments, even though spatial planning is a compulsory affair of regional governments, especially in the case of determining regional criteria as basis for condition information and potential of natural resources and the environment.

The division of areas within one region which is realized in the Regional Spatial Plan is regulated by Government Regulation No. 26/2008 concerning National Spatial Planning, where the area criteria are regulated by ministerial regulations related to the use of the area. Regional criteria in determining spatial plans refer to universal ministerial policies, even though regional diversity in Indonesia has very significant variability. Pursuant to Government Regulation number 26 of 2008 concerning National Spatial Planning, it is understood that the role of the minister is to arrange national spatial planning, so that policies on determining regional criteria are criteria for the benefit of national spatial plans.

The diversity of regional characteristics within the country of Indonesia illustrates the different conditions and potential between regions, so that the regional economic development of each province, district and city also has different characteristics with different capabilities and capabilities. Specific area criteria policies for the preparation of provincial, district and city spatial plans still refer to criteria policies issued by ministries. Specifically, there are no government regulations that regulate specific regional criteria for provincial, district and city spatial planning.

In line with the consideration of the preparation of regional spatial planning, the arrangement of the area from the national level to the district / city level is based on the principle of justice and within the framework of improving welfare. It is expected to realize the mandate of the 1945 Constitution article 33 paragraph (4), namely the national economy is organized based on economic democracy with the principles of togetherness, efficiency, justice, sustainability, environmentally sound and by maintaining a balance of progress and national economic unity. Philosophically, development in Indonesia is based on the economic development of the five precepts with the aim of increasing the welfare of the people that is fair and equitable. Implementation of development based on Article 18 of the 1945 Constitution by the government and regional governments. The realization of the development achievement of the utilization of natural resources and the Indonesian economy is mandated in article 33 paragraphs 3 and 4.

Sustainable development is a development system that is oriented towards sustainable and stable regional productivity. The stability of production capability in sustainable development is a development that relies on ecological, economic and sociocultural structuring and management systems that are oriented towards long-term development. Development that pursues short-term economic growth results in "trade offs" so that at some point disasters will occur. The economic development strategy as mandated in the 1945 Constitution article 33 paragraphs 3 and 4 is regulated in Law number 5 of 1960 concerning the Fundamental Principles of Agrarian Law, Law number 24 of 1999 which is then changed to Law

number 26 of 2007 concerning Spatial Planning, as well as other laws governing technical economic development include laws on forestry, mining, tourism, natural resources, and others.

The government's implementation of development policy strategy mandated in article 18 of the 1945 Constitution is regulated in Law number 32 of 2004 which was later changed to Law number 23 of 2014 concerning Regional Government and Law 12 of 2011 concerning Formation of Laws invite. Based on the legal order that underlies development policy in Indonesia, there are two arrangements, namely the regulation of authority and the operational arrangements for development. Development policy arrangements related to the development of development strategy directives are determined by the government (central government) and the policy of implementation and technical implementation of development operations carried out by the provincial and district and city governments.

Regional spatial planning is an operational technical policy that must be implemented by regional governments in an effort to make spatial planning into areas that regulate the utilization and / or management of natural resources and the environment for various life interests as a reference for regional economic development planning. A harmonious and balanced regional arrangement between protected areas and cultivation areas, as well as a harmonious and balanced arrangement within an area must be able to accommodate all the interests of regional economic development optimally is a basic requirement for planning and implementing sustainable development.

Literature Review

1. Definition of Spatial Planning

Spatial territory of Indonesia is an asset that must be utilized by the people of Indonesia in a coordinated, integrated, and effective way by taking into account economic, social, cultural, and defense and security factors, as well as environmental sustainability to encourage the creation of harmonious and balanced development (Ridwan and Achmad, 2008).

The substance of spatial planning is basically an effort to realize as stipulated in the 1945 Constitution article 33 paragraph 3 is earth and water with all the natural resources contained therein controlled by the state and used for the greatest prosperity of the people, and realizing paragraph 4, namely the national economy is organized based on economic democracy with the principle of togetherness, efficiency, justice, sustainability, environmental insight and by maintaining a balance of progress and national economic unity.

Spatial planning is a place for the development activities carried out by the government and the community. The form of the substance of the spatial plan according to Law number 26 of 2007 concerning Spatial Planning is the spatial structure and pattern. Spatial pattern is the distribution of spatial allotments in an area which is a form of arrangement of the development container in accordance with the capabilities and characteristics of the region which is realized into the regions (Hermit, 2008; Government Regulation number 26 of 2008 concerning National Spatial Planning).

Based on Government Regulation number 26 of 2008 concerning National Spatial Plan article 6 governs policies and strategies for developing spatial patterns including: 1) policies and strategies for developing protected areas; 2) policies and strategies for developing cultivation areas; and 3) policies and strategies for developing strategic areas. Substantially in Government Regulation number 26 of 2008 concerning National Spatial Planning, spatial patterns governing the protection of areas are outlined and delineated into designated areas, as well as regulating the allocation of production activities outlined and

delineated into zones allotment for production forests, community forest, agriculture, fishery, mining, industry, tourism, settlement, and / or other designation.

The criteria set by the ministry related to zoning are in accordance with the mandate of Government Regulation No. 26/2008 on National Spatial Planning only on the criteria for the physical arrangement of the area. It also still does not accommodate the economic development space needs of the regency / city area. The need for spatial planning for regional economic development in regencies / cities is a detailed regional direction for the arrangement and use of business land. The criteria set by the ministry only divide up the physical space, not yet described the division of space into the production capability system of each region that was built based on the potential and condition of resources, not even the criteria built can not provide an overview of the economic capacity of the planning area, as well as the regional ecological criteria.

2. The Concept of Sustainable Development

Development can be conceptualized as a process of continuous improvement of a society or a social system as a whole towards a better or more human life (Rustiadi, et al., 2011). Development is simply interpreted as a change in the level of welfare in a measurable and natural way. Changes in the level of welfare are determined by dimensions of economic, social, political, and legal definitions (Wrihatnolo and Riant, 2006). The core values that serve as a conceptual basis and practical guidance for understanding the true meaning of development are sufficiency, self-esteem, and freedom.

Development is a way to create a better life. Todaro and Stephen (2011) assert that they must contain 3 objectives, namely: 1) increasing the availability and expansion of the distribution of basic necessities such as food, shelter, health, and protection; 2) an increase in living standards not only in the form of increased incomes but also in the availability of more jobs, better education, and greater attention to cultural and human values; and 3) expansion of economic and social choices available to individuals and the nation as a whole. It was further emphasized that development must be a multidimensional process involving a variety of fundamental changes in social structure, community attitudes and national institutions, as well as accelerating growth, reducing inequality, and reducing poverty. It was emphasized by Subandi (2014) that development must be seen dynamically and not seen as a static concept. The development process is the responsibility of all components of society and the government. The government plays a more dominant role in the development process (Listyaningsih, 2014). In the framework of national development, the government has a role as a stabilizer, innovator, modernizer and pioneer (Siagian, 2004 in Listyaningsih, 2014).

Space development is a very strategic thing to meet the needs of community life ranging from dwelling to business places that are able to improve the regional economy. The fulfillment of life must be regulated so that the expected needs can be met. According to Ridwan and Achmad (2008) that the State is required to play a role and intervene in aspects of meeting the needs of the community in order to realize the welfare of the people. Meeting these needs naturally requires land and space as a place to carry out activities, therefore a spatial planning concept or concept is needed. (Ridwan and Achmad, 2008). The space in question is the physical form of the region in geographical and geometrical dimensions which is a container for humans in carrying out their life activities in a decent quality of life (D.A. Tisnaamidjaja in Ridwan and Achmad, 2008).

Spatial territory of Indonesia is an asset that must be utilized by the people of Indonesia in a coordinated, integrated, and effective way by taking into account economic, social, cultural, and defense and security factors, as well as environmental sustainability to encourage the creation of harmonious and balanced development (Ridwan and Achmad, 2008).

On a national scale, the development process often faces problems. The development approach which places great emphasis on macroeconomic growth, tends to ignore the occurrence of large regional disparities (Rustiadi et al., 2011). High economic growth is the most popular development performance, however rapid growth which results in damage to natural resources and the environment has an impact on the deterioration of development itself. Environmental damage or degradation can reduce the pace of economic development with high costs borne by the state through costs related to health and reduced productivity of resources (Todaro and Stephen, 2011).

The importance of a balance between economic growth and environmental preservation is a concept that reflects sustainable development. The strategy used is to provide a threshold in the rate of utilization of natural ecosystems and the natural resources in it. The need for ecosystem assessment proposed by Alcamo, Joseph, et al. (2005) in Djajadiningrat, et al. (2014) can help a country, region or company in terms of: 1) better understanding the relationships and links between ecosystems and human well-being; 2) understand the function of ecosystems in alleviating poverty and improving community welfare; 3) integrating economic, environmental, social and cultural aspirations; 4) integrating information from natural and social sciences; 5) identify and evaluate policies and management options for preserving ecosystem services and adjusting them to human needs; and 6) implementing integrated ecosystem management.

Ordóñez and Duinker (2010) state that sustainable development is firstly a capacity to maintain ecological, social and economic stability in the transformation of biosynthetic services to humans, secondly to meet and optimize the needs of the present and future generations, thirdly the persistence of necessary and desirable systems (socio-political or nature) indefinitely, fourthly integration of ethical, economic, social and environmental aspects in a coherent manner so that generations of people and other living things can live at the present time and in the future without limits, the fifth meets the needs and aspirations under factors environmental, social and technological barriers, the sixth living in harmony with nature and others and the seventh maintaining the quality of the relationship between humans and nature.

The principles of sustainable development (Zulkifli, 2013) include: 1) equity and social justice. This first principle has the meaning that the development process must continue to ensure the equitable distribution of natural resources and land for present and future generations. Development must also guarantee the welfare of all walks of life; 2) respect diversity. Biodiversity and cultural diversity need to be maintained in ensuring sustainability. Biodiversity is related to the sustainability of natural resources, while cultural diversity is related to the equitable treatment of each person; 3) using an integrative approach. Sustainable development prioritizes the relationship between humans and nature. Where humans and nature are elements that cannot stand alone; and 4) a long-term perspective, in this case sustainable development oriented not only to the present but to the future. To guarantee that future generations have the same or even better environmental conditions.

3. Government Policy in the Concept of Regional Autonomy

The concept of state regulation by the government is outlined in a policy as a manifestation of the commitment of government administrators to carry out its functions. According to Ngiam Tong Dow (2006) in Nugroho (2014) competitive advantage that cannot be copied, stolen or destroyed by competitors is good governance namely “what our competitors cannot take away from us is good government”.

Government policy is a policy set or carried out by the government in controlling its government for the welfare of society better known as public policy (Ali and Andi, 2012). In the administration of government, public policy and law have an important role. The discussion on law can cover two aspects:

1) justice aspects concerning the needs of the community for a sense of fairness in the midst of the many dynamics and conflicts in the community; and 2) this aspect of legality concerns what is referred to as positive law, namely a rule established by a legitimate State power and in its enforcement can be enforced in the name of law.

About the character of policy in Indonesia, it is regulated in Law number 12 of 2011 concerning the Formation of Regulations and Regulations that supersedes Law Number 10 of 2004. Article 7 stipulates the types and hierarchy of laws consisting of: 1) Laws The foundation of the Republic of Indonesia in 1945; 2) Decree of the People's Consultative Assembly; 3) Government Regulations in lieu of laws; 4) Government Regulations; 5) Presidential Regulation; 6) Provincial Regulations; and 7) Regency / City Regional Regulations.

In the context of carrying out provincial / district / city regional autonomy and the task of assistance (Republic of Indonesia Law number 32 of 2004 concerning Regional Government, articles 2 and 3) each regional government forms a Regional Regulation (Perda). Perda is a further elaboration of the higher laws and regulations by taking into account the characteristics of each region.

Actualization of policies formulated in the form of legislation in a hierarchical manner, applies according to policy requirements in the line of institutional authority relationships. Political policy formulated into an agreement referred to as legal policy in the form of a law in the order of the policy is located as the highest strategic policy (Ali and Andi, 2012).

The method of policy analysis according to Dunn (2000) combines five procedures, namely those commonly used in problem solving, namely (1) definition (problem formulation), which is to produce information about conditions that cause policy problems; (2) predictions (forecasting) that provide information on the future consequences of implementing alternative policies; (3) prescriptions (recommendations), namely providing information about the value of alternative consequences of future policies; (4) description (monitoring), which is to produce information about the present and past consequences of implementing alternative policies; (5) evaluation, namely the use of alternative policies in solving problems. The policy analysis process according to Patton and Sawicki in Nugroho (2014) can be carried out before and after the policy. Post-policy analysis usually takes the form of a description.

Methodology

The study was conducted from 2004 to 2016 by observing the approval process for the substance of the spatial plan for the Province of East Kalimantan since the proposed technical plan for the RTRWP. up to the RTRWP Regional Regulation Draft.

This policy analysis study uses qualitative methods and with a holistic approach. The preparation of the model is based on the policy analysis process, namely: 1) problem formulation; 2) review of the area criteria determined by the Minister; 3) evaluation of the policy to set regional criteria; 4) verification and implementation of area criteria (verification is carried out interviews with stakeholders in the Regency and Ministry, field review of the condition of the area specified in the district spatial plan (forest, agriculture, mining, industrial, and other areas); and 5) analysis of synchronization and integration of the determination of regional criteria between the district and national (criteria set by the ministry).

Materials and research tools include questionnaire, stationery and: 1) the text of the law relating to spatial planning regulations; and 2) maps related to spatial planning of 1: 50,000 scale (Administration, appearance, soil, topography, geology, hydrology, climate, land capability, land use, forest area, spatial pattern, and spatial structure).

Data analysis uses a qualitative approach which is a analysis of the discretion of the policy process of setting regional criteria determined based on the relevant ministerial decree which is used as the basis for the preparation and stipulation of regional regulations on district / city RTRW. Creswell (2008) defines it as an approach or search to explore and understand a central phenomenon. To understand the central phenomenon, the researcher interviewed the study participants or participants by asking general and rather broad questions. Information submitted by participants is then collected, the information is usually in the form of words or text. Data in the form of words or text is then analyzed. The results of the analysis can be in the form of descriptions or descriptions or it can be in the form of themes. From these data the researcher makes interpretations to capture the deepest meanings. Creswell (2010: 20) emphasizes that a qualitative approach can be carried out with a variety of approaches including: participatory studies, discourse analysis, ethnography, grounded theory, case studies, phenomenology, and narratives. Using qualitative methodology is considered relevant because it can capture and find out information about the main phenomena explored in the study, study participants, and location of the study (Creswell, 2012: 167).

An important aspect of the qualitative method is the democratic aspect. It means that the input and information of participants is a very important source of data. Their ideas, opinions and thoughts are accommodated. The qualitative method treats participants as subjects and not objects. This is where participants find themselves as valuable, because the information is very useful. This research method provides a very large space for participants. They avoid being objectified by researchers who only answer questions that have been prepared and select answers that are already available.

The stages of data analysis: 1) legal policy analysis by conducting a review (reviewing and or evaluating) the process of drafting Regency RTRW up to the stipulation of regional regulations (Perda) of regency / city RTRW; 2) technical analysis of area criteria based on criteria established by the ministry which will be verified with regional characteristics, natural resource potential and the environment of the district area; 3) formulation of policy recommendations for district spatial plans (RTRW) using integrated and integrated environmental and sustainable criteria with the following criteria: (a) allocation of area use; (b) land capability; (c) land suitability; (d) commodity suitability; (e) regional production capability; (f) the economic value of natural resources and the environment; and (g) economic risks to land use.

The policy analysis model for determining the regional criteria that will be used is to use a synchronization-integration model which is a modification of the institutional policy model, which is the policy determined by the government and regional governments.

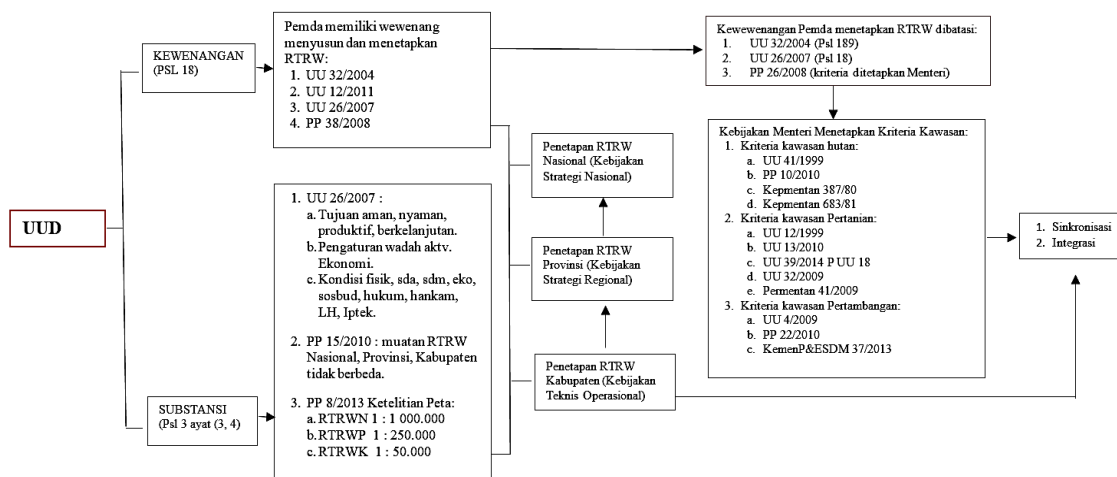


Figure 1. Framework for setting criteria for a regional spatial plan

Results and Discussion

Geographically East Kalimantan Province (before the division into East Kalimantan and North Kalimantan) is located between 1130 44 ' - 1180 59' East and 40 25 'LU - 20 25' South. The position of East Kalimantan is very strategic as an international sea transportation route because it is bordered by the waters of the Makassar Strait and the Sulawesi Sea which is the Indonesian Archipelago II Sea Channel (ALKI II). East Kalimantan Province is located in the eastern part of Kalimantan Island with the following boundaries: In the north, East Kalimantan Province is bordered by Sabah (Malaysia), in the east with the Makassar Strait and the Sulawesi Sea, in the south with South Kalimantan and in the west bordering West Kalimantan, Central Kalimantan and Sarawak (Malaysia).

Area criteria are regional characteristic factors that describe the conditions and potential of the region, which are used as a basis for determining an area. Arrangement and arrangement of spatial allotment areas in an area which is a form of arrangement of the development container in accordance with the capabilities and characteristics of the region which is realized into the regions (Hermit, 2008; Government Regulation number 26 of 2008 concerning National Spatial Planning).

Based on Government Regulation number 26 of 2008 concerning National Spatial Planning, zoning has been determined in the compilation of spatial patterns, namely national protection zones, which are spelled out into types and distributions of protected zones (article 50), disaster prone areas (article 53 clause 2), and zones cultivation (article 63) consisting of production forest areas, community forest areas, agriculture, fisheries, mining, industry, tourism, settlements, and / or other designation areas.

The criteria for the area of the national spatial plan in accordance with the mandate of Government Regulation No. 26/2008 concerning Spatial Planning is technically determined by the minister who has duties and responsibilities in his field. The criteria for areas that have been determined by the minister who has the task area are: 1) stipulation of criteria for forest areas; 2) determination of criteria for agricultural areas; and 3) determination of mining area criteria.

First. Determination of Forest Area

Determination of forest areas in Indonesia is based on policies determined by the government that is based on Law number 41 of 1999 concerning Forestry. In Article 1 paragraph (1) Forestry is a management system that has to do with forests, forest areas, and forest products that is carried out in an integrated manner, in paragraph (2) that Forests are a unified ecosystem in the form of landscapes containing biological natural resources dominated by trees in the natural alliance of the environment, which cannot be separated from one another.

The procedure for establishing protection forest and production forest areas refers to the Decree of the Minister of Agriculture No. 837 / Kpts / Um / 11/80 Concerning Criteria and Procedures for Determining Protected Forests and Minister of Agriculture Decree Number 683 / Kpts / Um / 8/81 About Criteria and Procedure for Determination of Production Forest by using determinants of slope, soil type, and rainfall.

This procedure for determining forest area applies to all regulations governing forest area as contained in Law number 26 of 2007 concerning Spatial Planning in article 55 concerning the criteria for protected areas and article 64 concerning the determination of production areas still refers to the basic criteria with slope factor, soil type and rainfall intensity are calculated based on the score.

According to Soerianegara (1976) Forests are plant communities controlled by trees and have different environmental conditions than those outside the forest. According to Darjadi (1980) Forests are a group of trees that are large enough and dense so that they can create their own microclimate. According to Odum (1971) Forests are biological entities (biocoenosis) consisting of flora and fauna that

are present both above and below ground. According to Spurr and Barnes (1980) forest is a biological unit that is dominated by trees or woody plants.

Trees or staples are woody plants and are divided into two groups of plants, namely a root-bearing tree (dicotile) consisting of a tree trunk which is the main trunk that grows upright, tree canopies, roots and root support functions to strengthen the establishment of trees, and the second group is a fibrous rooted tree (monocot) consisting of trees, roots, midribs and leaves, unbranched fibrous trees. Trees are distinguished from shrubs, namely shorter height, usually below 6 meters and the trunk does not stand upright (Wikipedia in Indonesian, www.wikipedia.org/wiki/tree).

According to Haygreen and Jim (1982) that a tree is defined as a woody plant that has a height of 15-20 feet (4.5 - 6 m) or more with the characteristics of a single main stem rather than a lot of stems. Smaller plants are called shrubs. Species that usually grow into trees, sometimes develop into shrubs, especially if the conditions are less favorable.

Forest ecosystem is an ecological system that is interrelated with living creatures that occupy forests in a unified whole that is inseparable from the various elements of life of organisms and in organisms. Forest areas are overgrown by dense trees and plants that form a large form of life in the world both in the tropics, cold climates, mountains, lowlands, small islands on a continent. The forest ecosystem has a function to store carbon dioxide, to be a place to live animals and plants, the main preserver of the soil, the hydrological modulator and the important function of the biosphere to maintain the continuity of life on this earth ([http:// wikipedia.Ecosystem.org](http://wikipedia.Ecosystem.org)).

According to Indriyanto (2006) that the formation of forest ecosystems is a type or form of arrangement of forest ecosystems that occurs due to the influence of dominant environmental factors on the formation and development of communities in forest ecosystems. According to Santoso (1996) in Indriyanto (2006) that based on environmental factors that have a dominant influence on the form of community structure or forest ecosystems, the forest ecosystems are grouped into two formations namely climatic formations and edaphic formations.

According to Arief (2001) that climatic formation is a forest formation in which its formation is strongly influenced by climate elements namely temperature, humidity, light intensity, and wind. According to Schimper (1903) in Richards (1952) that forests included in climatic formation are tropical rain forests, monsoon forests, thorn forests, savannah forests, sub-tropical rain forests, temperate rain forests, coniferous forests, and mountain forests. Furthermore, edafic forests are forest formations which in their formation are influenced by soil conditions, namely soil physical properties, soil chemical properties, soil biological characteristics, and soil moisture, which are included in edaphic formations are swamp forests, brackish forests, and coastal forests.

Tropical rain forests are included in climatic formations, are a very complex community, while the main striking feature is that the majority consists of woody plants in the form of trees, climbing plants and several types of epiphytes, undergrowth consisting of shrubs, and young climbers (Richard, 1952). According to Schimper (1903) in Richards (1952) the plant community has a character that is always wet with a canopy height of at least 30 m, but is usually higher.

According to Richard (1952) that the tropical rain forest has a structure of layers in five strata, namely from A - E. Layer A is the top layer with a height of more than 80 meters, but there is also a lower height of 40 - 50 m high and irregular head, then layer B consists of trees that have a height of 18-30 m with regular crowns, then layer C consists of trees with a height of 4-18 m and has a continuous canopy. These trees are low, small, and have many branches. The layers are continuous and rather tight. While layer D consists of layers of shrubs and shrubs that have a height of 1-4 m. These include young trees,

small palms, large herbs and large ferns. Layer E is composed of layers of soil cover plants or layers that have a height of up to 1 m.

The function of the forest in terms of socioeconomic interests, the nature of the natural surroundings, and the characteristics that are acceptable to human life, can be said that the forest acts as a resource. Forest functions as a natural ground cover that has many benefits in order to maintain the stability and continuity of the life of existing creatures (humans, animals, and plants). Starting points for forest formation include climate, soil and forest biology components. Any differences in the shape of the canopy will affect the stability and survival of the life underneath so that the stability and survival of the flora and fauna in the forest affects the survival of humans (Arief, 2001).

The forest has a production function because the forest is a source of income for products that have economic value, and has an ecological function because the forest is very important for the survival of living things that is able to produce oxygen and absorb carbon dioxide, as a water source, prevent erosion, prevent flooding, as animal habitat, as a source of biodiversity and others, and has a social function because it provides social benefits for the community such as food sources, medicines, cultural sites and research sites (Kuswandana, et al. 2011).

The function of forest production has an important role in the economy because the production of forest products can increase people's prosperity. Forest that has a function of production (production forest) is a forest area that is overgrown with hard trees whose development is always sought and devoted to harvesting its produce, whether in the form of wood or other byproducts such as gum, resin, rattan, and others. The process of producing forest products must maintain its ecological function (Arief, 2001).

Forest area criteria determined by the Ministry of Forestry are based on Minister of Agriculture Decree Number 837 / Kpts / Um / 11/80 Concerning Criteria and Procedures for Determining Protected Forests and Minister of Agriculture Decree Number 683 / Kpts / Um / 8/81 Concerning Criteria and Procedure for Determination of Production Forest by using determinants of slope, soil type, and rainfall.

The procedure for determining Production Forests and Protection Forests, and Conservation Forests using the parameters of slope, soil type, and rainfall which are the criteria in the calculation as follows:

Table 1. Slope Factor

Slope class	Slope (%)	Description
1	0 – 8	Flat
2	8 – 15	Sloping
3	15 – 25	A bit steep
4	25 – 45	Steep
5	45 or more	Very steep

Table 2. Rainfall Intensity

Rainy Class	Rain Intensity (mm / rainy day)	Description
1	Less than 13.6	Very low
2	13,6 – 20,7	Low
3	20,7 – 27,7	Medium
4	27,7 – 34,8	High
5	More than 34.8	Very high

Table 3. Soil Type Factors

Land class	Type of soil	Description
1	Alluvial, Glei Land, Planosol, Gray Hydromorph, Groundwater Literit	Not sensitive
2	Latosol (Oxisol)	Somewhat sensitive
3	Brown Forest Soil (Inceptisol), Non Calcic Brown (inceptisol), Mediteran (Alfisol)	Insensitive
4	Andosol (Andisol), Laterit (Oxisol), Grumosol (Molisol), Podsol (Spodosol), Podsolik (Ultisol)	Sensitive
5	Regosol, Litosol, Organosol, Renzina	Very sensitive

The method of calculating scores is $\text{Score} = (20 \times \text{slope class}) + (15 \times \text{soil class}) + (10 \times \text{Rain Intensity class})$ Criteria:

- a. Protection Forest has a score of more than 175
- b. Limited Production Forest score 125 - 174
- c. Ordinary Production Forest score of less than 125
- d. Additional criteria for protected forests are
 - 1) Forest areas that have field slopes $\geq 40\%$
 - 2) Forest area at an altitude of ≥ 2000 meters above sea level
 - 3) Forest areas that have erosion sensitive soil with slopes $\geq 15\%$
 - 4) Forest area which is a water catchment area
 - 5) Forest area which is a coastal protection area

Determination of the area criteria carried out by the Ministry of Forestry is contrary to Republic of Indonesia Law No. 41 of 1999 concerning Forestry, namely that in the criteria for determining forest areas tree factors are not included in the calculation. In addition, the determination of forest area based on the Decree of the Minister of Agriculture No. 837 / Kpts / Um / 11/80 Concerning Criteria and Procedures for Determination of Protected Forests and Decree of the Minister of Agriculture Number 683 / Kpts / Um / 8/81 About Criteria and Procedures for Determination of Production Forests by using the determinants of slope, soil type, and rainfall can no longer be a reference for the determination of forest area criteria, because it is not in accordance with the mandate of Law number 41 of 1999 concerning Forestry article 1 paragraph (2) that Forests is an ecosystem unit in the form of a landscape land contains biological natural resources that are dominated by trees in the natural alliance of their environment, which cannot be separated from one another. The area criteria specified by the minister do not include trees in the area criteria.

Furthermore the area criteria do not describe the function of the forest as stipulated in Article 6 paragraph (1) that the forest has 3 (three) functions, namely a) the function of conservation; b) protected function; c) the production function in paragraph (2) that the Government determines the forest based on the following basic functions a) conservation forest; b) protected forest; c) production forest; Article 1 paragraph (7) that a production forest is a forest area that has the main function of producing forest products; Article paragraph (8) states that protected forest is a forest area that has the main function as protection of life support systems to regulate water management, prevent flooding, control erosion, prevent sea water intrusion, and maintain ground water.

The ministry's policy in setting regional criteria in spatial planning is not in accordance with the mandate of the law. The implication of this policy is that there are some forest areas that have become

shrubs, settlements that existed before the issuance of the Forestry Law included in the forest area, conflicts of interest in the economic activities of the community.

Second, Establishment of criteria for agricultural areas

The criteria for agricultural areas are stipulated by the Minister of Agriculture Regulation No. 41 / Permentan / OT.140 / 9/2009 concerning Technical Criteria for Agricultural Allocation Areas. This criterion is intended as a basis for the implementation of recommendations for the area of agricultural designation in the Provincial, Regency / City Regional Spatial Planning and Regency / City Spatial Planning by the Government, Provincial Government and Regency / City Government, as well as stakeholders who will use the area designation agriculture.

The technical criteria set by the Ministry of Agriculture use several basic principles, namely land suitability for food crops, horticulture, plantations, and animal husbandry with very suitable land standards (S1), moderately suitable land (S2) and marginally appropriate (S3); and agro-climate requirements that are adapted to local conditions; Sustainable agricultural land; agricultural allotment areas are stipulated in a framework to support national food security; The level of water availability is one of the fundamental determining factors for the success and sustainability of agricultural areas. Technical criteria for agricultural allotment areas based on their commodities are divided into: 1) food crop cultivation areas; 2) horticultural cultivation area; 3) plantation area; and 4) Animal husbandry cultivation areas.

First. Food crop cultivation areas with the following regional characteristics: 1) location refers to provincial and district / city RTRW, and refers to suitability of wetlands and dry land; 2) peatland food crop commodity development refers to the existing peatland suitability class; 3) built and developed by the government, regional government, private sector, and or community in accordance with bio-physical and socio-economic aspects; 4) based on national and regional food crop commodities and or local commodities that refer to land suitability; 5) can be integrated with other cultivation commodities; 6) food agriculture areas in wetlands that have been cultivated continuously without transferring the function of commodities that cover one or more of the 7 (seven) main commodities of food crops (rice, corn, soybeans, peanuts, green beans, cassava, and sweet potato); and 7) food agriculture areas in wetlands that have been cultivated continuously without the transfer of commodity functions that cover one or more of the 7 (seven) main commodities of food crops (rice, corn, soybeans, peanuts, green beans, cassava, and sweet potatoes), and alternative food crops according to the potential of their respective regions.

Second. Horticultural cultivation zones are determined on the basis of: 1) having land suitability supported by the existence of cultivation, harvesting, and post-harvest facilities and infrastructure; 2) has the potential for system development and horticultural agribusiness ventures; and 3) have easy access and transportation infrastructure and road transportation, close to the marketing and production center.

Third. Plantation area with characteristics: 1) location refers to provincial and district / city RTRW, and refers to land suitability in both wet and dry land; 2) the development of peatland plantations refers to the applicable legislation; 3) built and developed by the government, regional government, private sector, and / or community in accordance with biophysical and socio-economic and environmental aspects; 4) based on national and regional plantation commodities and or local commodities that refer to land suitability; 5) development of farmer groups, joint farmer groups, business groups or cooperatives or individual farmers; and 6) can be integrated with other cultivation commodities.

Fourth. Livestock cultivation area with characteristics: 1) location refers to provincial and district / city RTRW, and refers to land suitability; 2) built and developed by the government, regional government, private sector, and / or community in accordance with biophysical and socio-economic and

environmental aspects; 3) based on national and regional flagship livestock commodities and or strategic livestock commodities; 4) development of farmer groups into business groups; 5) can be integrated with other cultivation areas; and 6) supported by the availability of water, feed, technology, institutional and market sources.

In the framework of preparing the determination of agricultural allotment area, it is carried out by the procedure for utilization of agricultural allotment area through stages: 1) preparation of designation of agricultural allotment area based on standard criteria and technical specifications, taking into account the results of identification of the potential and condition of the regency / city, and directed at the centers of agricultural production both in the existing area and in the area of development; 2) pay attention to macro regional development plans and pay attention to the orientation of domestic and regional market needs; and 3) the stages of designing include the inventory and identification of data and information; preparation of maps of the distribution of locations of production centers; setting priorities for agricultural infrastructure; recommended directions for the use of agricultural allotment areas in accordance with commodities in the regency / city area.

Determination of criteria for agricultural areas is also regulated in Minister of Public Works Regulation No. 41 / PRT / M / 2007 concerning Guidelines for Technical Criteria for Cultivation Areas, with the characteristics of the area presented in Table 1. Characteristics of agricultural designation areas consisting of wetland agriculture, dry land, and annual agriculture. Each of the characteristics of the agricultural allotment area has technical criteria.

The area criteria established by the Ministry of Public Works sourced from the Ministry of Agriculture's Soil Research and Development Center provide directives for land use only (wetland agriculture, dryland agriculture and annual crop agriculture), while the criteria set by the Ministry of Agriculture for agricultural purposes provincial and district / city level that should be according to Indonesian Government Regulations. Number 26 of 2008 concerning National Spatial authority of the minister is to compile regional criteria for the National Spatial Plan.

The issuance of Minister of Public Works Regulation No. 41 / PRT / M / 2007 concerning Guidelines for Technical Criteria for Cultivation Areas has exceeded its authority in determining agricultural areas.

The criteria set by the Ministry of Agriculture in substance have paid attention to aspects of land capability and suitability but the implementation of the Minister of Agriculture unilaterally determined the area without coordinating with the provincial, district / city government, this is evidenced by the issuance of the Minister of Agriculture's decree on the determination of agricultural areas.

Third. Establishment of Mining Area Criteria

The criteria for mining areas are stipulated by the Regulation of the Minister of Energy and Mineral Resources of the Republic of Indonesia No. 37 of 2013 concerning Technical Criteria for Mining Allocation Areas, namely in article 2 stipulating mining allotments can be in the form of mining areas for minerals, coal, oil and gas, and / or geothermal.

Technical criteria for mining designation areas are based on the distribution of carrier rock formations, there are indications, there is potential, and there are reserve data, after which delineation of mining areas is carried out. Delineation of areas can overlap or there is one or more types of mine.

The policy to determine the criteria for the area is regulated by the government in this case is determined by a ministerial decree that is universal, whereas when viewed from the regional system in

Indonesia is a heterogeneous region that is influenced by climate, altitude, land, hydrological system, so that the policy to determine the criteria of the area in substance the region must follow the characteristics of the region.

Conclusions

Based on the results of the policy analysis of the determination of the area criteria in regional spatial planning, the following conclusions are made:

1. The stipulation of area criteria by the Minister does not involve regional governments as mandated in the regional autonomy law. It is recommended to involve the Regional Government in setting regional criteria;
2. The stipulation of area criteria by the Minister is not in accordance with the mandate of the legislation. It is recommended to adjust the mandate of the applicable laws and regulations;
3. There are no regional criteria standards that can be agreed upon by the Government, regional governments, and various sectors to avoid conflicts of interest. It is recommended that standard regional criteria be agreed upon by the Government, Regional Government and related sectors;
4. Regional criteria determined by the Minister have not been oriented towards the sustainability of the use of land resources; and
5. It is recommended that the Government and regional governments can develop an “agenda setting” to revise the laws and regulations related to the policy for establishing regional criteria based on the autonomous government system.

References

Books

- Arief, Arifin. 2001. *Hutan dan Kehutanan*. Kanisius. Yogyakarta.
- Arif Zulkifli 2013. *Prinsip-Prinsip Pembangunan Berkelanjutan atau Principle of Sustainability Development.*” <http://www.bangazul.com/>. Diakses Jumat, 26 Juni 2015.
- Arsyad, S. 2010. *Konservasi Tanah dan Air*. Edisi Kedua. IPB Press. Bogor.
- Abidin, Said Zainal. 2012. *Kebijakan Publik*. Salemba Humanika. Jakarta.
- Ali, Faried dan Nurlina Muhidin. 2012. *Studi Kebijakan Pemerintahan, Heteronom dan Otonom*. PT. Refika Aditama. Bandung.
- Cresswell John W. 2008. *Educational Research Planing, Conducting, and Evaluating Qualitative Approaches*. London. Sage Publications.
- Creswell, John W. 2010. *Research Design Pendekatan Kualitatif, Kuantitatif, dan Mixed (1st)*. Celeban Timur, Yogyakarta: Pustaka Pelajar.
- Creswell, J.C. 2012. *Education Research, Planning, Conducting and Evaluating Quantitative and Qualitative Research*. 4th edition. Boston: Pearson
- Darmawijaya, M. Isa. 1990. *Klasifikasi Tanah : Dasar-dasar teori bagi peneliti tanah dan pelaksana pertanian di Indonesia*. Gajahmada Unbiversity Press. Yogyakarta
- Daryadi Loekito. 1980. *Sendi-sendi Silvikultur. BPLPP Departemen Pertanian*. Jakarta.
- Djaenuidin, A. dkk. 2003. *Petunjuk Teknis Evaluasi Lahan Untuk Komoditas Pertanian*. BPT PUSLITBANGTANAK. Bogor.
- Djajadiningrat, Surya Tjahja. Et al. 2014. *Ekonomi Hijau*. Rekayasa Sains. Bandung.
- Djikerman. J.C and D.W. Dianingsih. 1985. *Evaluasi Lahan*. Unibraw Press. Malang.
- Dunn, William N. 1994. *Public Policy Analysis: An Introduction*. Terjemahan Wibawa, dkk. 2000. Pengantar Analisis Kebijakan Publik. Gajah Mada University Press. Yogyakarta.

- Fletcher, J.R. and Gibb, R.G. 1990. *Land Resource Survey Handbook for Soil Conservation Planning in Indonesia*. DSIR Land Resources Scientific Report 11-128 pgs. (Published Jointly by DSIR Land Resources, New Zealand, Department of Scientific and Industrial Research, and by DSIR Land Resources, New Zealand, Department of Scientific and Industrial Research, and the Directorate-General, Reforestation and Land Rehabilitation, Ministry of Forestry, Indonesia).
- Food and Agricultural Organization. 1985. *Guidelines: Land evaluation for irrigated agriculture*. FAO Soils Bulletin 55, Rome.
- Food and Agriculture Organization of the United Nations. 2008. *Feeding the World Sustainable Management of Natural Resources Fact sheets*. Rome.
- Food and Agriculture Organization of the United Nations. 1976. *A framework for land evaluation*. FAO soil bulletin N0.32, Rome.
- Führer Erwin. 2000. *Forest Functions, Ecosystem Stability and Management*. Fores Ecology and Management, Vol. 132 (1).
- Liang, Jingjing., Mo Zhoua , Patrick C. Tobinb, A. David McGuirec , and Peter B. Reichd. 2015. *Biodiversity influences plant productivity through niche–efficiency*. Proceedings of the National Academic of Sciences of The United States of America, Vol 112 (18)
- Hermit, Herman. 2008. *Pembahasan Undang-Undang Penataan Ruang (UU No. 26 Tahun 2007)*. Mandar Maju. Bandung.
- Indriyanto. 2006). *Ekologi Hutan*. Bumi Aksara. Jakarta.
- I. Soerianegara (1976. *Ekologi Hutan Indonesia*. Fakultas Kehutanan
- Kuswandana Yadi., Hartono Prabowo., dan Bayu Catur Nurcahya. (2011) *Kerangka Karya Pengelolaan Hutan Produksi Lestari*. Disampaikan pada Diklat Manager Pengelolaan hutan Produksi. Berau.
- Listyaningsih. 2014. *Administrasi Pembangunan*. Graha Ilmu. Yogyakarta.
- Nugroho, Riant. 2014. *Public Policy*. Elex Media Komputindo. Jakarta.
- Odum, E.P. 1971. *Fundamentals of Ecology*. Trided. Sanders, Philadelphia.
- Ordóñez, C; P. N. Duinker, (2010). “*Interpreting Sustainability for Urban Forests*”, Jurnal Canada. Vol 2 hal. 124-127, dalam <http://www.mdpi.com>. diakses 2 agustus 2018
- Richards. 1952. *Tropical Rain Forest*. Mc-Graw-Hill Book Company. New York.
- Ridwan, Juniorso dan Achmad Sodik (2008) *Hukum Tata Ruang Dalam Konsep Kebijakan Otonomi Daerah*. Nuansa. Bandung.
- Rustiadi, Ernan, Et al. 2011. *Perencanaan dan Pengembangan Wilayah*. Yayasan Pustaka Obor Indonesia. Jakarta.
- Rossiter D.G. 1994. *Lecture notes: Land evaluation*. Cornell University, College of Agriculture and Life Sciences, Department of Soil, Crop and Atmospheric Sciences.
- Spurr, H.S and B.P. Barners. 1980. *Forest Ecology*. John Willey & Sons Inc. New York.
- Subandi (2014). *Ekonomi Pembangunan*. Alfabeta. Bandung.
- Todaro, Michel P dan Stephen C. Smith (2009). *Economic Development*. Alih Bahasa Agus Dharma. 2011. *Pembangunan Ekonomi*. Gelora Akssara Pratama. Jakarta.
- Tora, N. 2012. *Survei Tanah ~ Kerapatan Pengamatan Setiap Survei* <http://nandagokilz1.wordpress.com/2012/07/10/survei-tanah-kerapatan-pengamatan-setiap-survei/> . downloaded: October 10, 2012.
- Tutik, Titik Triwulan. 2008. *Pokok-Pokok Hukum Tata Negara Indonesia*.
- Wahab, Solichin Abdul. 2014. *Analisis Kebijakan, Dari Formulasi Ke Penyusunan Model-model Implementasi Kebijakan Publik*. Bumi Aksara. Jakarta.
- Winarno Budi. 2014. *Kebijakan Publik*. PT. Buku Seru. Jakarta.

Regulations

The 1945 Constitution of the Republic of Indonesia

Law of the Republic of Indonesia Number 5 of 1960 concerning Basic Regulations on Agrarian Principles.

Law of the Republic of Indonesia Number 24 of 1992 concerning Spatial Planning

Law of the Republic of Indonesia Number 41 of 1992 concerning Forestry
Law of the Republic of Indonesia Number 32 of 2004 concerning Regional Government
Law of the Republic of Indonesia Number 26 of 2007 concerning Spatial Planning
Law of the Republic of Indonesia Number 18 of 2004 concerning Plantations
Law of the Republic of Indonesia Number 25 of 2007 concerning Investment
Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management
Law of the Republic of Indonesia Number 12 of 2011 concerning Formation of Regulations and Regulations
Government Regulation of the Republic of Indonesia Number 38 Year 2007 Concerning Division of Government Affairs between the Government, Provincial Regional Governments, and Regency / City Governments
Republic of Indonesia Government Regulation No. 26/2008 concerning National Spatial Planning,
Republic of Indonesia Government Regulation Number 10 of 2000 Concerning Map Level Accuracy for Regional Spatial Planning
Republic of Indonesia Government Regulation Number 15 Year 2010 Concerning Spatial Planning Implementation
Government Regulation of the Republic of Indonesia Number 10 of 2010 concerning Procedures for Changing Allocation and Function of Forest Areas
Presidential Regulation of the Republic of Indonesia Number 4 of 2009 concerning the National Spatial Planning Coordinating Board
Decree of the Minister of Home Affairs number 50 of 2009 concerning Guidelines for Regional Spatial Planning Coordination
Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 28 of 2008 concerning Procedures for Evaluating the Draft Regional Regulation Regarding Regional Spatial Planning
Regulation of the Minister of Public Works of the Republic of Indonesia Number 11 / PRT / M / 2009 Concerning the Guidelines for Substantive Approval in the Establishment of Regional Regulation on Provincial Spatial Planning and Regency / City Spatial Planning along with the Election Plan
Regulation of the Minister of Forestry of the Republic of Indonesia Number P.28 / Menhut-II / 2009 concerning Procedures for Consultation in the Context of Granting the Approval of the Forestry Substance for the Draft of Regional Regulation concerning Regional Spatial Planning

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