PRUDENTIAL PRINCIPLES IN FOREST MANAGEMENT POLICIES

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ABSTRACT

This research was conducted to analyze how the impact of forest management policies that do not consider the precautionary principle. The precautionary principle becomes one of the important principles considered in environmental policy. In the development of environmentally sound policies, policy makers must make decisions even though faced with the uncertainty of science that might have an impact on the environment. The precautionary principle reflects thoughts about actions before losses occur, and also before conclusive scientific evidence is obtained. This paper used a normative juridical approach; the data is processed based on secondary data. The results of the study concluded that (1) the principle of prudence is an instrument to minimize environmental problems caused by policy makers faced with scientific uncertainties that have the potential to impact on the environment (2) the existence of the principle of caution in forest management is very necessary in formulating policies. They must have the perspective of the law they aspire to. It is laws that have justice. Justice for the environment and justice for society.

Keywords: Precautionary Principle, Policy, Environment.

INTRODUCTION

The welfare state is described as government intervention through public policies, including environmental policies, with the aim of public welfare. The welfare state is the most appropriate answer to the form of state involvement in advancing the welfare of the people (Elviandri, 2019). Indonesia as a welfare state, harmonizes the policies formulated in the legal norms implemented by the state apparatus to safeguard the interests of the people. The people have legitimacy to demand the state to carry out its obligations and demand its rights which are regulated in the constitution (Elviandri, 2019).

The Constitution states that the need for a healthy and clean environment is a human right. The right to a good and healthy environment means that the environment is available which enables humans to develop optimally, harmoniously, harmoniously and in balance. In line with Heinhard Stieger's statement about the importance of guaranteeing the protection of environmental rights, specifically environmental rights. Stieger stated: "*The subjective rights are divided in two groups according to their legal guarantee: the fundamental rights at the constitutional level and the ordinary legislation. Fundamental rights are of essential importance for the constitutional and legal order. Ordinary subjective rights below the constitutional level enjoy less legal protection than constitutional subjective rights"* (Heinhard, 1980).

Placement of the right to a good and healthy environment has important meaning as the rights of citizens. The right to a good and healthy environment is legally protected by law. The state requires good faith to implement the laws and regulations that are structured and are obliged to guarantee and protect the rights of its citizens.

The state has the authority to manage natural resources for the welfare of the people. The state's control over natural resources listed in the constitution is related to the state's responsibility to realize social welfare and the greatest prosperity of the people (Handayani, 2015). The state is responsible for managing and protecting the environment while maintaining sustainable natural resources. At any level, the state needs to intervene in the management of natural resources and the environment, with the aim that people's sources of prosperity are not damaged due to the neglect of environmental management principles.

Minimizing pollution or environmental damage can be done through policies that lead to operational regulations that apply environmental principles. The results of the Indonesia Corruption Watch study, Emerson Yuntho and the team explained that there were five local regulations that were contaminated, all of which had the potential for corruption due to discretion or the extent of regional head policy. In managing natural resources in the area. The regulation has the potential to provide opportunities for collusion that leads to corrupt practices in carrying out forestry planning, potentially damaging forest functions, and licensing transactions by officials to determine the management of forest areas that have the potential to destroy natural resources (Gregory et al., 2006).

There are also regional regulations that have the potential to cause forest destruction, because they provide opportunities to clear land by burning forests.

In the case of forest fires that occurred in several regions in Indonesia, the National Disaster Management Agency stated that more than 857 ha of land were burned in forest and land fires throughout 2019. The land is spread in 6 different provinces. And land from January to September 2019 amounting to 857,756 ha with details of mineral land 630,451 ha and peat 227,304 ha. The data is data collected from January to September 2019. Some other examples that there are disputes over ownership of natural resources, (Angga, 2017) or on the management of geothermal in protected forests that cause pollution of water sources around exploited (Yanis et al., 2019) geothermal sources.

Based on the cases that occur, there must be emphasized that the use of forest land and utilizing forest resources, not just formal legality without regard to the principles of environmental sustainability. From some formulation of environmental principles, the application of the principle of prudence is one of the efforts to minimize environmental damage and maintain environmental sustainability. This principle of prudence emphasizes how to prevent so as not to decrease the quality of the environment due to environmental damage. Local regulations are one of the legal instruments that can regulate behavior, and become important when the precautionary principle is included. The precautionary principle in forest management policies in the region (regional regulations) is a solution to prevent the occurrence or minimize forest damage. The purpose of this paper is (1) to analyze the principles of prudence in environmental policies and (2) to analyze the existence of the principles of prudence in forest management.

RESEARCH METHODS

This research was descriptive-analytical in nature where the data were presented based on facts. The research approach used a normative approach. It examines legal norms (laws and regulations) and library materials as secondary data. Qualitative juridical methods were employed to analyze the data. To achieve clarity on the problem discussed. Then a logical interpretation was constructed by investigating the law itself by looking for the relationship between the law and other laws as long as the law is still relevant.

RESEARCH RESULTS

Prudential Principles in Environmental Policy

The environment is a "*unity of space with all objects, power, conditions, and living things, including humans, and their behavior which affects the continuity of life and the welfare of humans and other living things".* As a system, its elements affect each other (Siahaan, 2004). The combination of various elements, making the environment has complex problems. In line with Otto Soemarwoto, the environment or human environment is the sum of all objects and conditions that exist in the occupied space that affect their lives (Soemarwoto, 2004).

Pamela Hill (Rahmadi, 2015) defines that environmental protection is "*reducing pollution, making sustainable choices, seeking holistic solutions, and distributing the burdens and benefits of industrialization on the environment fairly among all populations, considering their current situations, their contributions to the harms being addressed, and the resources available to them."* The series of protections is intended to create not only to protect humans but also the environment itself.

Related to that case, environmental management has the main goals and objectives, namely management in an integrated manner in the utilization, recovery and development of the environment. The main objectives and targets are structured among others by the fact that there has been an exploration and exploitation of human beings. They do not know the boundaries of natural resources that cause environmental damage and pollution. There needs to be a systematic and integrated effort that can be done to preserve environmental functions and prevent pollution or damage to the environment which includes planning, utilization, control, maintenance, supervision, and law enforcement.

Systematic efforts which include planning, utilization, control, maintenance, supervision, and law enforcement are carried out in an integrated manner. This integration includes all in the environmental fields for the continued functioning of the environment. Efforts to protect and manage the environment are carried out by the state by fulfilling several principles, including the principle of state responsibility, the principle of sustainability, and the principle of benefits. The realization of sustainable development with an environmental perspective is a conscious and planned effort, which integrates the environment and resources into the development process. The aim is to guarantee the ability, welfare, and quality of life of present and future generations. The state must be able to control the use of resources wisely and minimize the impact of businesses and or activities that cause environmental damage.

In terms of carrying out its responsibilities, the state must ensure that the utilization of natural resources will provide maximum benefits for the welfare and quality of life of the people.

This utilization must be felt by the present and future generations, guaranteeing citizens' rights to a good and healthy environment. The guarantee of rights for each citizen and each generation is a manifestation of the principle of justice. Where the protection and management of the environment reflects proportional justice for every citizen across regions, across generations, and across genders.

Several studies describe how the realization of the principle of justice that must be carried out by the state. Kuehn (Wibisana, 2011) gave the concept that justice in sustainable development is intended for intergenerational and intergenerational justice. Intergeneration and intergenerational justice will be realized if there is an equal treatment for those who cause environmental injustice. The party must be sanctioned to restore the environment, or provide compensation for losses that cause environmental damage (corrective justice). As we know that environmental impacts resulting from environmental activities that are dangerous and insurmountable will become the burden of all generations (Imamulhadi, 2013).

In their development, this is called the principle of intergenerational equity. This principle states that current and future generations have the same right to occupy the earth not under conditions the bad one. Thus, the burden of an environmental problem must be shared by the community in one generation.

The obligation to use a natural resource that is economical, prudent and implement conservation of natural resources is one form of recognition of the protection of intergenerational rights. State efforts to bring justice to every citizen across regions, across generations, or across gender, require the implementation of the principle of prudence in carrying out activities of exploiting natural resources that may result in pollution and/or environmental damage.

As a precautionary measure, it is necessary to take into account that there is uncertainty regarding the impact of a business and/or activity. The uncertainty of preventing impacts occurs because there is a limited mastery of science and technology, which is often the reason for delaying steps to minimize or avoid threats to environmental pollution and/or damage.

The precautionary principle formulation is the 15th principle and is a derivative of the principle of sustainable development delivered at the 1992 (Imamulhadi, 2013) Earth Summit in Rio de Janeiro, stated that *"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty will not be used as a reason for responding to cost-effective measures to prevent environmental degradation."* This principle explains that uncertainty regarding the impact of a business and/or activity due to limited mastery science and technology are not grounds for delaying steps to minimize or avoid threats to environmental pollution and/or damage.

The principle of caution in the study of etymology, derived from the term "*precaution*" (Latin "*prae*" means "*before*", and "*cautio*" which means "*security*" or "*security*"). The term "caution" in the Black's Law Dictionary is defined as: (1) "*security given to ensure performance of some obligations";* and (2) *"the person who gives the security"* (Garner , 1999). In general, the precautionary principle can be interpreted as a principle of prudent action taken before the impact occurs (Latifah, 2016). The precautionary principle began to be known and became a discussion in international law since the 1980s. Before entering the realm of international law, in the early 1970s the principle of prudence was first applied in German environmental law as vorsorgeprinzip (meaning future or cautious). The state is obliged to avoid environmental damage/pollution by careful planning. This principle also serves as a justification for the

prevention and control of massive pollution through the application of the best technology to minimize the possibility of pollution (Wibisana, 2011).

The definition of precautionary principle in national legislation and international law instruments, not uniformly adding the precautionary principle formulation, will remain the same elements contained in the precautionary principle. The elements are (Latifah, 2016):

Risk Uncertainty

Precautions are taken only if the potential risks or hazards contained in a product or activity cannot be fully demonstrated because scientific data are inadequate or inconclusive (Vent, 1991), meaning that there is a causal relationship between the product or activity and the potential damage or danger that will be caused because it has not the evidence (Hans, 2005).

There is a scientific assessment of the potential risks posed. Implementation of the precautionary principle must still begin with a complete scientific assessment and identification of each degree of scientific uncertainty conditions for the potential risk that will arise (Foster, 2011).

There is the potential for serious or permanent damage. Damage is said "*to be serious if the damage affects the life and health of individuals, vital natural resources (such as water, soil, and air), species sustainability, climate and ecosystem balance"* (Andorno, 2004). The size of the damage threshold depends on the culture of the local community so precautionary measures can be determined (Latifah, 2016).

Proportional preventive measures. Not every condition has potential risks, so that precautionary measures are only taken by first considering the impact on the community (the impact on protecting public health and the environment compared to economic interests) (Mandel, 2006).

There is a shift in the burden of proof. The burden of proof is borne by the creator of technology. The creators of technology must be able to prove that the new technology they created is not dangerous. Precautionary principles use the reverse burden of burden approach to a product or activity that has potential risks that threaten public health and the environment (Latifah, 2016).

This precautionary principle must always be coupled with the precautionary and prevention principles. The principle of early prevention states: Eliminating and preventing pollution emissions where there is reason to believe that damage or harmful effects are likely to be caused, even where there is inadequate or inconclusive scientific evidence to prove a causal link between emissions and effects. Where this principle states that the protection of biodiversity is necessary for early prevention and states that environmental damage can be seen as an external cost of an economic activity that must be borne by economic activity actors. Based on this principle the cost of environmental damage must be integrated into the decision making process relating to the use of natural resources.

The concept of early prevention has indeed been widely accepted and applied in various aspects of life. In connection with this precautionary principle, it was stated that science does not always provide the insights needed to protect the environment effectively, and that the undesirable effect of my results if measures are taken only when science does provide such insights (Freestone & Ellen, 1996). Freestone and Hey argued that *"The essence of precautionary concept, the precautionary principle, is that once a risk has been identified, the*

lack of scientific proof of cause and effect shall not be used as a reason for not taking action to protect the environment", so the application of the principle of prudence caution (Freestone & Ellen, 1996):

1. Once a risk has been identified. If a loss has been identified that might arise;
2. Where there are threats of serious or irreversible damage. If there is a serious threat or the threat cannot be recovered as a result, so that the impact is forever on the environment;
3. Lack of scientific certainty. If there is a lack of ability to measure the likelihood of consequences or impacts that will occur (uncertainty over certainty about the magnitude and extent of the impact that will occur).

Existence of Prudential Principles in Forest Management

The application of the precautionary principle is carried out if a loss has been identified, loss and/or damage to the environment that has not yet occurred or the damage and/or loss has the potential to occur. This is due to lack of knowledge of how much impact will occur and how much maybe the impact will occur. In relation to forest management there are several regulations that have the potential to cause forest destruction, for example:

1. Law Number 32 of 2009 concerning environmental protection and management. These environmental laws are increasingly difficult to eradicate the practice of land clearing by burning. Article 69 Paragraph (2) states that clearing land by burning is permitted by taking into account the local wisdom of each region.
2. Regulation of the Minister of Environment No. 10 of 2010 concerning Mechanisms for Preventing Pollution and Environmental Damage Related to Forest/Land Fires.

This regulation itself was made to make effective efforts to prevent pollution and environmental damage caused by forest and land fires. In Article 4 paragraph (1), paragraph (2) and paragraph (3) written permission, that the customary law community who burn land with a maximum land area of 2 (two) hectares per head of family to be planted with local varieties of varieties must notify the village head. The village head sends a notification to burn the land to the agency that carries out government affairs in the field of environmental protection and management of the district/city. However, the permit for burning the land is not permitted under conditions of rainfall under normal, long dry and dry climates.

Central Kalimantan Governor Regulation Number 15 Year 2010 Amendment of Central Kalimantan Governor Number 52 Year 2008 is concerning Guidelines for Land and Yard Opening for Communities in Central Kalimantan. In Article 1 paragraph (1), (2), (3) and (4) that everyone who conducts land clearing and plots of land by means of limited and controlled burning must obtain permission from the authorized official (regent/mayor). Permit land clearing by burning, arguing that this governor's regulation stipulates that people may burn land but must first obtain permission from relevant officials in their area, such as village heads, sub-district heads adjusted to the area to be burned

As for the area of burning, the authority to grant permits is regulated with land area under 5 ha, delegated to:

1. Camat, for land area above 2 ha to 5 ha;
2. Head of village/village head, for land area of more than 1 ha to 2 ha;
3. Head of community, for land area up to 1 ha.

Permit cumulative burning for the same area and day:

1. District level a maximum of 100 ha or
2. The village/village level is a maximum of 25 ha.

Riau Province Regional Regulation concerning Guidelines for the Control of Forest Fire, Land and Environment of Riau in 2007. Riau which has the largest peat land in Sumatra also allows land clearing by burning. Permission to burn land for agriculture, plantations and cultivation. The terms of burning are regulated through Article 3 paragraph (4) of the provisions regarding land burning licensing regulated by village and district level regulations regarding customary rights.

In the forest area management policy, the precautionary principle has not been implemented. The policy or decision was issued by not considering the protection functions, local protection functions, life support functions, biodiversity protection functions of the forest area which are allowed to be cleared by burning forest land, because decisions are made without based on complete data, accurate and real conditions of a forest area.

As a result of forest fires, local communities also experience social losses in the form of loss of forest as a source of livelihood, livelihood and identity of indigenous peoples. There are ecological losses, such as loss of habitat where biodiversity of flora and fauna are located and damage to important ecosystems that provide environmental services in the form of air and water clean.

In several cases of changes in the designation, function and use of forest areas, various permits have been issued without being followed by the requirements determined by relevant laws and regulations, for example the obligation to prepare an analysis of environmental impacts, an instrument for analyzing environmental impacts or environmental permits. The instrument is a study of the major and significant impacts of a planned business and/or activity on the environment required for the decision making process regarding the conduct of a business and/or activity.

Every business plan and/or activity that is likely to cause a large and significant impact on the environment must have an analysis of environmental impacts. An analysis of environmental impacts states that businesses and/or activities that are likely to have a major and significant impact on the environment include:

1. Changing landforms and landscapes;
2. Exploitation of natural resources, both renewable and non-renewable;
3. Processes and activities that can potentially lead to waste, pollution and damage to the environment, as well as deterioration of natural resources in their utilization;
4. Processes and activities whose results can affect the natural environment, the artificial environment, and the social and cultural environment;
5. Processes and activities whose results will affect the preservation of resource conservation areas and/or protection of cultural reserves;
6. Introduction of types of plants, types of animals, and types of microorganisms;
7. Manufacture and use of biological and non-biological materials;
8. Application of technology which is estimated to have great potential to influence the environment;
9. Activities that have a high risk, and or affect national defense.

Preventive action has not been implemented properly, because in reality in the policy on forest area change, instruments to prevent damage to forest areas are ruled out, in the sense that these instruments are not used as norms of governance (best management) by decision makers. A paradigm needs to be formed to apply the precautionary principle to prevent forest destruction.

As an instrument to prevent damage to forest areas, namely: the precautionary principle, this principle is not applied or is not used as a basis for consideration, by policy makers in determining policy changes in the designation, change in function, and use of forest areas so far. The non-implementation of the legal principle as a general principle proves that the forest area management policy has not been directed to the welfare of the community with the goal of managing social, cultural, economic aspects and preservation of environmental functions in a balanced proportion. Sustainable forest areas, namely the principle of forest destruction pay, the principle of responsibility of the state, government, business world, community.

Good and sustainable forest area management policies, policies directed at the welfare of the community with the goal of managing social, cultural, economic and environmental aspects in a balanced way, therefore the actualization of the principle of the preservation of environmental functions in environmental policies is very important. It needs to develop the ius constituendum perspective. ius constituendum brings the law to justice, where forest management policies must balance justice for the environment and the interests of managers.
The principle of environmental law as a general principle, which has a more coercive nature and leads to the development of the leadership character of decision makers. The legal principle as outlined is a general principle, it is hoped that it can change the way of decision makers, then it becomes a paradigm that is followed by stakeholders. Furthermore, it is hoped that the principle can become a doctrine or a source of law as a solution to overcome the problem of damage to the forest area, both by the legislators, the government, law enforcers, and business actors, as well as the general public.

CONCLUSION

Based on the results of the above study, it is concluded that: In environmental policy, the precautionary principle is an instrument for preventing pollution or damage related to problems faced by policy makers due to the uncertainty of science in estimating environmental impacts. At the level of environmentally sound policy development, the policy makers formulate legal norms in the form of laws and regulations, even though they are confronted with the uncertainty of knowledge in practicing environmental impacts. It is under these conditions that the precautionary principle is implemented. The precautionary principle reflects thoughts about actions before losses occur, and also before conclusive scientific evidence is obtained. This means having to wait for conclusive scientific evidence and proof of a definite level of risk, but it must prevent environmental harm.

The existence of the principle of prudence in forest management is very necessary. Legislation is a concrete formulation of legal norms. Increasing demands for land clearing and/or utilizing forest areas, goes hand in hand with the need for increased legislation. Responsiveness of community needs must be accommodated and accommodated in a statutory regulation. The pattern of formal legalistic positivistic law must be balanced with a progressive mindset with the perspective of the *constituendum* (the law aspired). The law aspired is the law of justice. Justice

for the environment and justice for the community, then there must be an effort of policy makers to pay attention to the principle of prudence in every policy.

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