



Wetland Environmental Law Enforcement in South Kalimantan

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 13 Dec 2023	<p><i>The wetland environment as part of the environment will certainly follow the legal principles and mechanisms stipulated in Law 32/2009. This is important because the wetland environment whose benefits are needed for the needs of the community, especially the people of South Kalimantan, which in terms of demographics and geography is the largest part as farmers whose lives are so dependent on the wetland environment, it is necessary that activities in wetlands are sustainable so as to maintain their sustainability and avoid damage to the wetland environment. The research question to be answered is how to enforce wetland environmental laws in South Kalimantan against damage arising from management carried out by the community?. The research method used is environmental law research supported by ecological data and analogy. The results of this study concluded that the wetland environment in South Kalimantan covers almost one-third of the area of South Kalimantan which has the potential to move the wheels of South Kalimantan's economy, but in management it is often mismanaged due to damage and pollution, so for damage control it is not enough just to be scientific in their fields but need legal assistance in the form of law enforcement. However, South Kalimantan is not used to this method so there are not enough wetland environmental law enforcement instruments available. Therefore it needs further development.</i></p>
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1. Introduction

The wetland environment is part of the environment, so the issue of wetland environmental law and enforcement means the same law as the environment as stipulated in Law 32/2009 on Environmental Protection and Management. Legal problems faced by the environment according to Law 32/2009 are in the form of pollution and environmental destruction.

Article 1 number 14 of Law 32/2009 formulates what is meant by environmental pollution is Environmental pollution is the entry or inclusion of living things, substances, energy, and/or other components into the environment by human activities so as to exceed the established environmental quality standards.

Article 1 number 17 of Law 32/2009 formulates what is meant by environmental destruction is Environmental damage is a direct and/or indirect change in the physical, chemical, and/or biological properties of the environment that exceeds the standard criteria for environmental damage.

Law 32/2009 requires the purpose of environmental management to be *sustainable eco* development, so all government and individual activities such as in the form of development activities in the context of people's welfare that cause side effects in the form of negative impacts in the form of pollution and destruction, are carried out by environmental law enforcement.¹ The legal approach in environmental and environmental management of wetlands is important because *the term "wetland law and policy" refers to the legally related rules developed by governments that pertain to activities that affect wetlands. When used in a general sense, wetland law and policy encompasses a broad range of instruments, including "...legislation, such as statutes, acts, decrees, and ordinances; regulations and other rules promulgated by agencies that have the force of law; and policies, which depending on the*

*jurisdiction may also have the force of the law or may merely provide principles or rules that guide a decision-making process". It can also include judicial decisions that apply or interpret the legislation, regulations, and policies. Wetland law and policy may govern activities that have the potential to harm wetlands as well as activities that may benefit wetlands and the ecosystem services they provide*²

In environmental law enforcement, Law 32/2009 divides *repressive* and *preventive* law enforcement, so that in this case it involves all law enforcement officials, including increasing public awareness which includes counseling activities, dissemination of information, education both formal and non-formal about law and the environment. Thus, environmental law enforcement is very complicated because environmental law is a multifaceted field of legal science. Environmental law enforcement through *preventive* and *repressive* efforts also varies, ranging from legal counseling to the application of penalties in the form of sanctions, both administrative sanctions and criminal sanctions including compensation in civil law. Meanwhile, through legal counseling by means of socialization from the mass media to lectures and discussions and overcoming them, it must also start from oneself to society as a whole.

Therefore, the framework of environmental law enforcement in Indonesia includes *preventive* and *repressive* structuring and enforcement covering the fields of administrative law, civil law, and criminal law. Repressive actions with the use of legal instruments in environmental law enforcement include administrative law, civil law and criminal law which are believed to be the most effective for now even all three instruments can be applied at once. In accordance with the mandate of Law No. 32 of 2009, three legal instruments are recognized in environmental law enforcement, namely administrative law, civil law and criminal law.

G.A. Blezeveld has given the following environmental law enforcement enforcement :

Environmental law enforcement can be defined as the application of legal governmental power to ensure compliance with environmental regulation by means of :

- a. administrative supervision of the compliance with environmental regulations (inspection) (=mainly preventive activity)*
- b. administrative measures or sanctions in case of non compliance (=corrective activity);*
- c. criminal investigation in case of presumed offences (=repressive activity)*
- d. civil action (law suit) in case of (threatening) non compliance (=preventive or corrective activity).¹*

Based on the understanding of environmental law enforcement above that in order to maintain and preserve the environment can be done through three channels:

1. enforcement of administrative environmental laws by government officials;
2. enforcement of criminal environmental law conducted through judicial juridical procedures, and;
3. Civil environmental law enforcement and "*environmental disputes resolution*" which is taken in litigation and non-litigation.² So that the definition of Environmental Law Enforcement is an effort to achieve compliance with laws and regulations and requirements in environmental law provisions that apply generally and individually, through supervision and application of administrative sanctions, civil lawsuits, and criminal sanctions.

In UU 32/2009, three paths are recognized in environmental law enforcement, namely through administrative environmental law enforcement channels, civil environmental law enforcement channels and criminal environmental law enforcement channels. Law enforcement through these three legal channels can be in the form of *repressive* efforts that need to be carried out effectively, consequently and consistently against perpetrators of pollution and environmental damage and can also be preventive efforts, but these preventive efforts only exist through administrative environmental law enforcement.

The wetland environment as part of the environment will certainly follow the legal principles and mechanisms stipulated in Law 32/2009. This is important because the wetland environment whose

benefits are needed for the needs of the community, especially the people of South Kalimantan, which in terms of demographics and geography is the largest part as farmers whose lives are so dependent on the wetland environment, it is necessary that activities in wetlands are *sustainable*. So that to maintain its sustainability and avoid environmental damage to wetlands, protection and management of wetlands are carried out according to the provisions of the law that has regulated them.

The problems that arise in wetland management in order to remain sustainable and avoid damage then the role of law is so important for that, the formulation of the problem is how to enforce wetland environmental law in South Kalimantan against damage arising from management carried out by the community? .

2. Materials And Methods

The research method used is environmental law research supported by ecological data and analogy called by Terry Hutchinson *Reform-Oriented Research*, namely *doctrinal* legal research *yang the evolving taxonomy for incorporation of insights from other disciplines*.⁵

3. Results and Discussion

South Kalimantan Province has a wetland environment of about ³ 1,194,471.98 hectares, or about 32.39 percent of the total land luas in South Kalimantan. This potential is a natural wealth that must be managed properly. Agriculture is an ideal business field carried out in wetland areas. In 2020, the Agriculture, Forestry and Fisheries sector contributed 14.39 percent of the GDP of South Kalimantan Province, and was in second place after the Mining Sector which contributed 18.29 percent of GDP. This information indicates that the existence of wetlands in South Kalimantan can really be used for activities that can build the wheels of the regional economy, namely agricultural activities.

The position of wetland areas in South Kalimantan is spread across several districts. Like Barito Kuala Regency, if you look at the typology of the area, it is a district that has the largest wetlands in South Kalimantan. The development of the agricultural sector in Barito Kuala Regency in 2020, is 27.81 percent of the economy of Barito Kuala . In other words, more than a quarter of the economy in Barito Kuala is contributed by the agricultural sector.

Given the vast area of wetlands in South Kalimantan, and the considerable contribution of the agricultural sector in South Kalimantan, the use of wetlands must be properly controlled and monitored. The use of wetlands on the one hand does bring benefits but on the other hand the use without paying attention to the preservation of nature, it will be very dangerous for the sustainability of wetlands in the future. It is the same as it happens in other countries that *Wetlands are areas of land that are temporarily or permanently covered with water. They can be natural or artificial (or man-made), fresh water or brackish, and they include bogs, fens, swamps, marshes, floodplain and shallow lakes. Wetlands perform a number of functions, including flood and erosion control, water purification and shoreline stabilization. However, we are confronted with the problem of wetland loss as a result of a number of anthropogenic activities, such as pollution, hunting, human settlement, agricultural drainage, fishing, wood- cutting, watershed degradation, soil erosion, siltation and diversion of water supplies. This is partly due to the lack of awareness about the important functions performed by wetlands*.⁴

A wetland is an area of land that is temporarily or permanently covered with water. They can be natural or artificial (or man-made), freshwater or brackish, and they include swamps, swamps, floodplains and shallow lakes. Wetlands have a number of functions, including flood and erosion control, water purification, and shoreline stabilization. However, we are faced with the problem of wetland loss due to a number of anthropogenic activities, such as pollution, hunting, human settlements, agricultural drainage, fishing, logging, watershed degradation, soil erosion, silting and water diversion. Supplies. This is partly due to a lack of awareness about the important functions performed by wetlands.

Basically, wetlands are an ecosystem that is needed by people in South Kalimantan. By their nature, a good wetland, will contain abundant biodiversity. Meanwhile, from an economic point of view, wetlands are a source of food production through food crop farming, fisheries, and other activities. However, the use of wetlands must be accompanied by providing good knowledge to the community about the importance of wetland sustainability. The use of wetlands for economic activities should not be as if it were an activity of wetland exploitation. Wetland ecosystems must be maintained, so that the use of wetlands does not necessarily damage the wetland ecosystem.

For this reason, the government has an obligation to socialize for the preservation of wetlands. about how to use wetlands, without disturbing the wetland ecosystem. So it takes a lot of time to inform the community, considering that people also have their own habits in the use of wetlands. In addition to socialization, local governments can coordinate with various parties to strengthen institutions on wetland use in South Kalimantan.

To optimize the management of wetland resources professionally, there needs to be a potential study and mapping of the area that refers to the Regional Spatial Plan (RTRW) that has been determined. Synchronization of potential studies and regional mapping with RTRW so that there is no overlap in regional policies. Information on mapping potential areas and land suitability in fisheries will be used to rationally select alternative land management in each field.

Internationally, signatory States to the Convention on Wetlands have also agreed to 'formulate and implement their plans to promote the wise use of wetlands in their territories as stated below:

In addition to the promotion of conservation of Wetlands of International Importance, the Parties to the Convention have also agreed to 'formulate and implement their planning so as to promote...the wise use of wetlands in their territory'. However, the Parties are only required to discharge this obligation 'as far as possible'. The term 'wise use' has been defined (during COP-3 in 1987 in Regina, Canada) as:

"the sustainable utilization of wetlands for benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem". Since the 70s the government has developed these businesses in wetlands on the islands of Sumatra, Kalimantan, Sulawesi, Maluku, and Papua through settlement development activities, but unfortunately, not all development areas are successful, many are not developed (mal-developed). Wetland ecosystems before clearing provide many forest products, such as wood, rattan, resin, various types of fish and other products. After the wetlands were cleared, the aforementioned results declined dramatically due to various environmental problems on the cleared land and on other land around it. These environmental problems include *subsidence*, decreased pH of soil and water bodies due to acidic sulfates, floods, droughts, peat forest fires, and so on. Some of these problems are national disasters. As a result, in general, the carrying capacity of land for life has decreased dramatically.⁸

The shrinkage of wetland areas in densely populated areas occurs due to the need for land for settlement, agriculture, and industry. This includes, among others, causing reclamation efforts by stockpiling coastal and swamp ecosystems as well as bending, narrowing, and widening rivers for infrastructure development. In addition, shrinkage also occurs in forest areas and protected areas, this generally occurs due to natural disasters such as fires and also due to unclear regional boundaries.⁹

Wetland damage can also be in the form of pollution which then causes changes in the ecological equilibrium of wetlands, sedimentation of lakes and swamps, the entry of invasive alien species, and resource depletion due to overuse. The damage caused many wetland areas, especially swamps and lakes, to experience siltation, eutrophication, loss of native species, and decline in community welfare.

In certain areas, activities carried out in an attempt to develop or survive can cause pollution. Wetland pollution poses a serious threat to the structure and function of wetland ecosystems. Pollution in wetlands occurs due to human activities (*human-Induce*) both inside and outside the wetland environment. In general, sources of pollution come from human activities that produce waste (residues) and pollutants that are disposed of carelessly. Most pollution occurs in water bodies, thus reducing water quality.

Wetlands that have fallen victim to pollution are mostly adjacent to the following areas:¹²

1. Urban centers; Rapid development and population increase are encroaching on some wetlands as part of urban areas. The rapid urbanization process affects pollution that is getting worse due to waste disposal (solid waste) and liquid waste originating from residents, domestic, and industry.
2. Areas near large polluting industries, such as sisal processing (fiber; Industry is a major source of water, air and soil pollution. Industrial waste can contain heavy metals such as mercury, chrome lead, and cadmium; Cyanide, nitrite and nitrate salts, organic matter, micro-organisms and nutrients, chemicals and toxic such as pesticides.

3. Areas where mining is the main means of income; Resources contained in wetlands are very potential to be managed, especially mining. Not infrequently we find mining sites around wetlands. Pollution arising from mining activities is very concerning. With the advent of natural gas and possibly oil drilling in coastal areas, there may be enormous negative impacts on the ocean especially the fragility of wetlands, and coasts. On the scale of large, organized mining, environmental impacts are relatively easy to prevent and control. However, unorganized and uncontrolled small-scale mining has done tremendous damage to the environment. Overburden is the main waste produced by the mining industry. The fraction of useful commodities is usually very small, and the rest is rock and soil garbage that is discarded without regard for the environment.
4. Areas where pesticide application is extensive; Pesticides pose environmental pollution problems when discharged into the environment because they are toxic to many non-target species. Some pesticides remain active for a long time or can break down into more toxic compounds. Sources of pesticide pollution come from storage and management that does not. The lack of awareness of the dangers associated with handling pesticides further complicates the problem. Water is a major recipient of pesticide pollutants. About 50% of pesticides sprayed on plants fall on the ground or are carried away by wind and enter water bodies through rainwater or irrigation. Some pesticides end up contaminating drinking water.

Conditions like this have not been taken legal efforts even the Government and experts have made many efforts to restore ecologically, but even then it is not complete because there are still many found in various areas of wetland damage including in South Kalimantan.

Unlike in Indonesia, in the US it is stated:

EPA's Section 404 enforcement program pursues enforcement actions against entities who conduct unauthorized activities (e.g., dredging, filling, grading without a permit) in waters of the United States. We work with the Army Corps of Engineers (Corps) and other agencies to prioritize and select cases and to coordinate field research, damage assessments and legal proceedings. Enforcement can be pursued via civil (judicial or administrative) actions or through criminal proceedings in conjunction with EPA's Criminal Investigations Division. Reports of potential violations from other agencies or communities are added to our enforcement tracking system and case files are prepared for potential enforcement actions. EPA's enforcement goals are to restore illegally filled waters and wetlands and deter future violations.

EPA often requires individuals -- companies and other entities -- to pay monetary penalties for violating wetlands requirements. In addition, EPA can require restoration or mitigation of impacts to any waters or wetlands that may have been damaged or destroyed. In these cases, the first priority is to remove the discharged material and restore the site. However, if this is not feasible, mitigation at other sites may also be considered. Restoration and mitigation can include a range of activities, such as:

1. Restoring streambeds or wetlands which may have been damaged
2. Reintroducing native species through planting
3. Removing "exotic," or non-native species

Individuals must monitor restoration projects to ensure that native species reintroduced to the area are growing properly. In addition, the growth of non-native plants must be minimized. Projects must be monitored for a fixed period of time which is determined by the specifics of the site. Typically, the monitoring period ranges between five and ten years.

In order to determine if a restoration project has been successful, each project must meet success criteria, which are established Belaon a case-by-case basis for each site. The criteria are linked to project goals determined by EPA. For example, to restore vegetation to an area, EPA may require that the site achieve certain survival rates of native plants or percent land cover by a specific date. For instance, the site may be required to exhibit 80% survival of planted native species after the first year, and 100% during each of the next four years.¹³

Learning with USEPA, it is clear that it is not enough for scientific actions in their fields to be carried out so far but must involve laws to control damage to wetland environments as well as the environment in general.

4. Conclusion

The wetland environment in South Kalimantan covers almost one-third of South Kalimantan's area which has the potential to move the wheels of South Kalimantan's economy, but in management it is often mismanaged due to damage and pollution, so it is not enough just to control it scientifically but need legal assistance in the form of law enforcement. However, South Kalimantan is not used to this method so there are not enough wetland environmental law enforcement instruments available. Therefore it needs further development

References:

- MHRD Govt of India, Module :Environmental Law Regulation of Wetlands, A. Gateway to all Post Graduate Courses
- Biezeveld, 1995, "Course on Environmental Law Enforcement", Syllabus, Surabaya, January 9-14 h.13)
- Suparto Wijoyo, Wilda Prihatiningtyas, *Problematika Penegakan Hukum Lingkungan di Indonesia*, Airlangga Development Journal, 2016, Surabaya hal. 3
- Tery Hutchinson, "The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law", *Erasmus Law Review* Access, hlm. 1
- Pusat Pengembangan Infrastruktur Informasi Geospasial Universitas Lambung Mangkurat, Penghitungan ini didasarkan atas metode Global Wetlands Version 3
- Environmental Managemen and Co-ordination (Wetlands, River Banks, Lake Shores and Sea Shore managemen) Regulation, 2009 (Rev. 2012), h. E12-271.
- Aris Poniman, dkk., *Penyediaan Informasi Spasial Lahan Basah untuk mendukung Pembangunan Nasional*, *Forum Geografi*, Vol. 20, No. 2, Desember 2006: 120-1134
- Kementerian Lingkungan Hidup, *Strategi Nasional dan Rencana Aksi Pengelolaan Lahan Basah Indonesia*, 2004.
- Lamers, L., Loeb, R., Antheunisse, A., Miletto, M., Lucassen, E., Boxman, A., Smolders, A., and Roelofs, J., 2006. Biogeochemical constraints on the ecological rehabilitation of wetland vegetation in river floodplains. *Hydrobiologia*, 565, 165–186.
- Mkuula, S. (1993) *Pollution of Wetlands in Tanzania*. Unpublished Report, National Environment Management Council, Dar es Salaam, 85 p.
- US EPA, Section 404 of the Clean Water Act.