

Karst Ecosystems in the Vortex of Capital: A Paradigmatic Study of the Commune Link Law Politics

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ABSTRACT

Exokarst, endokarst ecosystems, a unit that supplies carbondioksida beyond forest.the geological, ecological functions of the karst, as a safe habitat for fauna, flora and rare spesies. Limestone regulates water input and out, guards the endokarst ground water basins where the uterus and the chain of life of chreatures. The exploitation of limestone, about massive damage 9,5% of the national karst area. This fact raises the problem of why the poltical construction of karst law is less fair and democratic and how is the political construction of karst law based on the karst environment. This problem is studied using a normative juridical methodology which results in that modernism is represented by positivism that iprecedes growth, is not sufficient to solve the problem of the karst ecosystem,requires a holistic link commune approach, synergyzing the consept of karst governance between juridical anthropocentric, ecocentric and biocentric.karst policy, regional spatial planning is not synchronous between the center and the regions, which is a karst problem.karst is irreplaceable, the exploitation of limestone is reviewed, empowerment of alternative ecotourism, agriculture, religious tourism, culture, science is developed, so that a country with mega bidodiversity in a suustainable environment is maintained.

Keywords: *Exploitation, Holistic, Karst, Tourism, Politics.*

1. INTRODUCTION

a. Issue Background

This article is inspired by the local wisdom of the Javanese environment in avoiding the wrath of the universe, that is : "Bumi wis maringi, ibu bumi dilarani, ibu bumi kang ngadili." (Mother earth has given, mother earth has been hurt, mother earth will judge).

The local government authority over the limestone mining permit for the karst ecosystem was often different from the central government's policy, and even the local government geological, ignoring the fact ecological (species of flora and fauna) rare to karst ecosystem. Often the permit for exploitation of limestone mines was an "illegal blessing" often, permits exploitation of limestone mines as a "berkat haram" from the police and local government[1], ignoring the geological and ecological processes and facts of karst. The illegal blessing, apart from being a reward during the local elections, karst regulations which tend to be centralized, mono-interpreted, and even overlapping with the karst ecosystem, are far from the principles of justice and democracy as general principles and ideally the law.

The exploitation of the "Illegal blessing", has an impact on the damage to the karst ecosystem that reaching 9.5% of the total national Karst Landscape Area (KLA), covering an area of 154,000 Km (15.4 million Ha)[2]. Java Island reaches 20% of the total area of 1,228,538.5 hectares, which spreads in West Java, East Java, Central Java and Yogyakarta[2]. For example the West Java Cipatat Karst has experienced significant ecosystem damage due to limestone exploitation. Although it is known that karst ecology absorbs carbon dioxide (CO₂)

twice from the forest[3], and is not renewable[4], it is not an obstacle for local governments to grant permits for karst exploitation.

Regarding the Lengko Lolok permit above, previously KLH has determined the indicator area for Indonesia's ecoregion (KLH No. SK.8/MENLHK/SETJN/PLA.3/ 2018), Lengko Lolok was located in one stretch of the northern Flores ecoregion, starting from Komodo Island, Labuan Bajo to Nagakeo-Flores Regency. Therefore, KLH has given a warning to Ka. Environment and Forestry (Ka.LHK) Province and Regency. East Manggarai, so as not to rush in recommending the feasibility of an amdal in that location, but through an in-depth study of the amdal and the involvement of community elements and paying attention to the objections of the people around Lengko Lolok (KLH No. S-866/PDLUK/BKSKOL/PLA-4/9/2020) ignored by the KLHK of NTT Province, it was a symbol of the realization of policies that are not in harmony with the central and regional governments.

Based on the facts above, the damage to the karst ecosystem and the diversity of its problems, which lies at the point where the normative-juridical approach has been carried out, is not sufficient to overcome the karst problems, because apart from being closed to reinterpreting the normative juridical, there is also a mono interpretation of karst. Therefore, it requires another approach, namely a holistic approach and an empirical juridical approach. This approach will at least build a karst ecosystem policy that is constructed from three elements, namely the results of anthropocentric thinking as a moral subject and ecocentric and biocentric thinking as moral objects[10], all of which aim to maintain the

karst ecosystem and biodiversity in a single karst ecosystem[11].

Based on the explanation above, it can be said that the continuous process of blooming the womb of life and the chain of life to the karst ecosystem is truly guaranteed for the next generation, so that Indonesia, which has the status of a mega biodiversity country, is maintained and that status is what distinguishes Indonesia from other countries

PAD does not always come from exploitation of limestone mines, but can also be obtained from sources of biodiversity in karst areas. Regarding this, several karst areas that produce economic value as the results of LIPI research[12], for example, karst in Ponjong District. There, non- physical karst potential is developed, with several zoning namely culture, science, agriculture and crafts and lifestyle and local wisdom of the local community. These social facts have implications for the legal construction of the karst area, focusing on protecting the ecosystem with the design of natural ecotourism, conservation, science, culture, supported by infrastructure that is united with karst nature.

Based on the social and legal facts mentioned above, it can be identified problems surrounding the legal politics of limestone exploitation in the karst area, which often ignore the legal politics of the safety of the womb and the life chain of the karst ecosystem, which results in inequality between generations of the karst area. The ecological and geological benefits of karst biodiversity are constitutional rights of citizens, but often there is a lack of harmony between the authorities. The diversity of karst ecosystems is under the authority of the Ministry of Environment, while the determination of the karst landscape area (KBAK) of the Ministry of Energy and Mineral Resources, thus, will only provide protection for karst biodiversity and its supervision after the determination of the KBAK. The authority of the two ministries often shows the ego-sectoral potential of uncertainty in integrated and comprehensive protection against karst, which results in damage[13].

2. DISCUSSION

a. Karst Habitat The Spring of the Uterus and the Chain of Life

Then according to juridical norms, karst is distinguished between limestone or dolomite objects, while karst landscapes, objects that show exokarst and endokarst landscapes have geological protected status as a national protected area unit (Article 1 Regulation of the Ministry of Energy and Mineral Resources No. 17 of 2012). It can be interpreted that the aspect of juridical norms on endemic flora and fauna ecosystems has not been explicitly regulated, rather than the geological aspect. Thus, it can be said that the karst ecosystem aspect is not an important content to be protected, both exokarst and endokarst ecosystems which are an integrated ecosystem with interconnectedness and interdependence with each other[15]. so that central and regional coordination in determining karst management is integrated in its implementation.

The disintegration of the rights and authorities of the central and local governments towards the karst ecosystem will bring karst natural disasters for decades to come, there will be a "tragedy of the commons" for natural resource management, as predicted by Garrett Hardin[16]. This reminds us and policy makers so that the legal politics of karst policies that seem mono- interpreted for the interests of certain groups of shared property (karst) also turns out to have an impact on the damage to the karst ecosystem of the common property which supplies more carbon dioxide than forests, where the damage is not felt. now but felt by future generations (50-100 years).

Starting from Hardin's premise above, saving karst starts from the legal politics of the karst ecosystem, which is justice-oriented and democratic for the future of the karst ecosystem. This is what is known as intergenerational justice for the management of the karst ecosystem. More than that, it is also an implementation of the 2nd principle of Pancasila, namely just and civilized humanity. This means that when managing the karst area environment carelessly, only thinking about temporary gains because of the "illegal blessing" from politicians and the local government for karst exploitation, in fact it illuminates the value of the 2nd principle of Pancasila. Therefore, understanding the karst ecosystem is not piecemeal, but understands it holistically and integratively that one system and another are symbiotic-mutually interdependent.

Regarding the karst ecosystem, ordinary people only understand that what is visible is physical (visible), while what is invisible is not part of the karst. This misunderstanding has plagued the pattern of policy-making by regional officials[17] in granting permits to manage the karst. Meanwhile, karst is not limited to non-physical but also invisible (beauty under karst, rivers and flora and fauna) as a unitary karst topographic area.

Karst geological protected areas, as the basis for local governments (Regents & Governors) to arrange regional spatial planning and KBAK are included in the spatial plan. Even though there are geological and ecological facts of karst, the local government's initiative to propose geological scientific research to the relevant ministries on these geological facts is often ignored or because of limited knowledge about karst. To make matters worse, if there are illicit promises before the election to providers of funds for the campaign, again the spatial layout can be changed in order to smooth out the illicit blessings to limestone miners. Therefore, the role of the community is very important, and has taken the initiative to propose to the Ministry of Energy and Mineral Resources to investigate the KBAK to obtain legal certainty for the protection of the karst ecosystem so that the geological protection function as well as the protection function of the fauna and flora ecosystem in both exokarst and endokarst are guaranteed for the future of the nation.

For this reason, a regulation that requires karst area zoning is needed to determine the plan for the use of the karst area, according to the regional spatial plan based on more detailed zoning technical standards, so that the impact of utilization and exploitation in the karst area can

be minimized, including maintaining the hydrological function and CO₂ absorption, as well as other protected functions in karst areas in Indonesia that have economic, scientific and human values, related to beauty, recreation, education, spiritual religion or belief.

b. Karst Ecosystem Legal Politics

Robert B. Seidman and William J. Chambliss said that the operation of law does not work in a vacuum, it is inseparable from the influence of social forces that work simultaneously and dialectically. Law as a sub-system of the legal system and social system that influence each other, is a logical implication that law is a political product, just as law is a human framework and politics is flesh attached to the bone, while power without law is despotism[23].

Starting from the above thought, the politics of karst law has always been at the point of a vortex of ideological and political interests which David Trubek referred to as "purposive human action[18]. Meanwhile, Karl Marx called it a representation of the hidden interests of capitalists (invisible interest) through positive law[22]. Therefore, it can be said that law is the production of a long process that contains valuable legal substance and social reality as a reflection of the soul of the nation.

Legal substance relates to the whole rule of law, legal norms and legal principles, both written and unwritten, including court decisions. The legal structure determines the material content of the legal substance. Meanwhile, legal culture determines the value and effectiveness of the law, which is always contextual with pluralistic social realities.

Legal pluralism with a democratic character is humanistic in nature, in contrast to legal centralism, which is depressive in nature, dehumanistic, considers the only law for all citizens by ignoring ecological and geological facts. The paradigm of legal centralism is very contrary to the ecological and geological reality, so some people think that legal centralism is only a utopia in the midst of socio-cultural pluralism of Indonesian law.

The flow of positive law rests on the law. For example, mining, forestry, conservation of living natural resources and their ecosystems, spatial planning and so on are political processes that believe that all social norms have been integrated into these positive legal norms. While there are still other legal spaces as controllers, customary law, religious law, and other norms that grow and live in the circulation of the development of indigenous peoples as a reality[24], which live side by side with state law, do not cancel each other out. Therefore, law is not only a statutory regulation, but also law in its form as a local regulation originating from a customary law habit, aspires to an ideal law, according to M. Friedman, is to strengthen a legal system that contains a legal structure, substance law and legal culture where all three will be able to realize justice (*gerechtigheid*), expediency (*doelmatigheid*) and legal certainty (*rechtmatigheid*).

Based on the explanation above, social reality is a source of material law for the politics of karst law, the environment and national conservation. However, this social reality has not yet been integrated into the

regulation of the karst ecosystem, and even permits for the exploitation of royal limestone have been granted to miners, resulting in significant damage to the karst ecosystem. According to the author, the granting of permits as an illicit blessing from the regional government and/or politicians is a form of dehumanist legal politics or *tuna-adab* legal politics in the sense that the legal politics of managing the karst ecosystem is no longer rooted in the existence of karst values itself but only oriented towards the interests of economic growth that result in damage to the karst ecosystem as a reward for the exploitation.

The construction of karst law is constructed on the facts of karst nature. In the sense that these facts are considered as natural geniuses, not the result of man-made science and technology engineering, which in the common consciousness of the ecological, geological, fauna and flora facts are useful and beneficial for humans and other creatures. While the construction of economic-based karst law is solely for shared prosperity, it has no meaning for humanity anymore, when it is interpreted unilaterally by the state. So interpreting shared happiness is carried out in a link-commune legal politics, because then the source which is the object of income for prosperity is interpreted together, in the sense of involving all relevant stakeholders, it is not enough just based on a normative juridical approach.

Protection regulations have actually been regulated in basic norms and instrumental norms as well as international conventions (Article 28 H paragraph (1) of the 1945 Constitution of the Republic of Indonesia) which determine that everyone has the right to live in physical and spiritual prosperity, to live and to have a good, healthy environment and to have constitutional health services. This is reflected in several principles of implementing the national economy adhering to the principles of being environmentally sound, fair and sustainable (Article 33 paragraph (4) of the 1945 Constitution of the Republic of Indonesia).

Thus, with the adoption of the right to the environment as a human right in the state constitution that adopts the principles of sustainable and environmentally sound development into the body of the state constitution, then it is implemented with the protection of biological diversity and its ecosystem, including biological elements in nature consisting of natural resources. Natural resources of plants and animals together with the elements outside form an ecosystem. In addition, the establishment of protected forest, as well as conservation forest, is actually part of the principle of protection for life support in its function to regulate water management, prevent flooding, control erosion, and maintain soil fertility. These principles Indonesia adheres to the Green Constitution which is implemented into the legal politics of sustainable and equitable management of the karst ecosystem between generations.

In line with the principles of protection as described above, the concept of holistic management of karst ecosystems as outlined in the concept of the legal politics of link commune, on the management of karst ecosystems, is motivated by the weakness of modern

anthropocentric cosmological thinking that only relies on normative juridical, themed and welfare-oriented mankind. However, the welfare coat only causes social inequality and environmental damage as well as the extinction of several rare species because their ecosystems are damaged due to growth-oriented human exploitation. Departing from these weaknesses, a holistic approach with link community law politics, building togetherness in acting and acting on the problems of the karst ecosystem damaged due to exploitation, is an ideal karst legal policy.

c. From Mono- Interpretation Law Politics to Commune Links

The welfare of the people is not the sole monopoly of the state, but the responsibility of all elements of society. The scenario of welfare through development whose legal politics has mono interpretation of development, makes people trapped in an unsettled modern life space, which results in an unbalanced social transformation of society. Likewise, local laws will be eliminated from their living space and then positioned in an intolerant space. The mono-interpreted legal mindset always moves from the orientation of manipulative political movements, where the potentials that come from their social capital are often considered less able to support the concept of prosperity and welfare as planned by the state.

Referring to the social strata of welfare according to Albert & Mahnel above, it can be said that welfare is a system of social life and livelihood, both material and immaterial, inner and outer prosperity. That is what distinguishes the welfare goals of the Indonesian nation from other nations. The Indonesian people are not only pursuing physical development, but also spiritual development. For this reason, the legal concept of Link-Commune is needed as a concept that constructs local potentials to be discussed together, what and how to optimize the local potential for the prosperity and welfare of the local people and MHA and generate foreign exchange for the local government. The social impact of the mono interpretation is that society is negated out of the concept of prosperity as the ideal concept is, namely: from them by them for them and the state stands as a provider of facilities and infrastructure for the physical and spiritual welfare of the community.

The legal concept of Link-Commune integrates local norms with positive legal norms, by involving many stakeholders in formulating development programs, including recommendations for international conventions. Development in the context of realizing people's welfare is not a government monopoly. Elements of the community must be involved in it, because fighting for the happiness of the community in addition to the obligations of the state, is also the obligation of community elements by empowering local potential, both extrinsic potential and intrinsic potential.

Therefore, the legal political concept of Link-Commune is a solution to dismiss the concept of mono interpretation of happiness-prosperity which is only the concept of the state as the right one and negates public participation. The Link-Commune concept offers an alternative concept as a comprehensive policy concept

and the concept of resolving conflicts and constructing environmental protection, no one is harmed, because it brings all stakeholders to make decisions on the development.

The above concept puts forward the process that should be passed in formulating the concept of development by involving the community, so that these development programs truly touch the basic needs and felt needs of the community itself. The neglect of this process results in a process of structural poverty [24] on the one hand and provides space for prosperity on the other hand within the framework of the Unitary State of the Republic of Indonesia with the ideology of Pancasila, which is idealized as the source of all sources of national law or the national legal tree.

In line with the Link-Commune politics above, which is then linked to public involvement in formulating legal materials, it is the commandment of democracy and justice as universal fundamentals of every nation. The democratic demands related to the Link-Commune are not only related to the aspect of togetherness in formulating prosperity, but also as a form of siding with the weak as a general principle of fair law. This concept explains that when the formulation of legal political policies relating to natural resources anywhere in the world is only monopolized by the authorities in a mono interpretation to benefit corporations, since then the welfare has been partially castrated by the rulers themselves.

The castration of people's happiness is only for the benefit of a few people, giving rise to fundamental questions in society, why is the law made and for whom is the law? Of course the law for humans is not the other way around. The law becomes an instrument for humanizing humans[25], not exploiting weak humans or exchanging one's virtues with the weaknesses or helplessness of others, but what is exchanged is the value inherent in every human being so that the law is realized to make human (utilitarian) happy, which has a deliberation character that always brings happiness together[26]. (*bonnum commune*), not a group of people. Thus, the mono-interpretation of the legal politics of prosperity and the management of karst natural resources will shift to the Link Commune legal politics which synergizes government plans with local resources and active involvement of local communities including indigenous peoples.

The legal politics of the karst link commune ecosystem, is motivated by a concept that humans co-evolution with nature, there is no evidence that humans can survive without a mutually beneficial relationship with nature. In the course of time, in the name of the prosperity of the people, it is only measured by pursuing economic growth resulting in the exploitation of forest natural resources, karst, conservation areas carried out on a large scale, resulting in ecological suicide as written by Jared Diamond in his book *Collapse*[27].

d. Problems With the Authority for Determining KBAK and Spatial Planning

The agency that has the authority to determine the KBAK is the Ministry of Energy and Mineral Resources,

in this case the Geological Agency. The determination is the result of integration research with other ministries, namely KLH. The karst indication data provided by KLH covers the carrying capacity of the national water reservoir and the national ecoregion. Such regulations serve as material considerations to determine the determination of KBAK through further research by geology, which is followed up in provincial and regional spatial planning schemes.

Related to the spatial scheme, the issue of objectivity and honesty is important. Be honest with the facts on the ground, such as caves, stalagmites, stalagmites, lakes, limestone and so on. Objectivity includes the subject of controlling the object because of promises during the election, and the entrepreneur is willing to exploit it, so it is not impossible that the regional spatial planning will be determined unilaterally by the regional government on the wishes of the exploiter. This is because the right of the closed community to raise objections to regional spatial planning, except for cultural space is not a priority in the spatial plan. then when there is a claim from the community, the official easily answers that the limestone mining exploitation plan is in accordance with the spatial designation of the area, in other words it is in accordance with the provisions of the applicable legislation.

e. Half-Hearted Karst Ecosystem Protection

In common sense, the principle of irreplaceable karst is the primary focus of karst protection, at least keeping it away from activities that result in damage, both in the short and long term. The theme of Earth Day 2017, which is environmental and climate literacy, is reminded of the destruction of the environment that results in the extinction of endangered species. happening all over the world, which feels not for the next 50-100 years, but right now[29]. Pacifici found that there are 410 species of mammals, and 300 species of birds, threatened with extinction, whose findings were published in the journal *Nature Climate Change* on February 13, 2017)[29]. Therefore, the International Union for Conservation of Nature (IUCN) strongly condemns the extinction of several species, either because of policies or neglect of their habitats that are not maintained and preserved and have IUCN red lists or an emergency for the conservation of biodiversity and their ecosystems.

Based on the source of facts on the impact of karst mining management above, the key lies in the legal politics of karst ecosystems so that they place the interests of biodiversity and ecosystem integrity rather than pursuing exploitative pragmatic interests. The ecological functions of the biodiversity of the karst ecosystem will provide life to other living ecosystems and maintain the diversity of those ecosystems. For example, bats, bees, orangutans, elephants and others. These creatures as agents of pollination and seed dispersal, and thus the extinction of elephants, will change the face of Indonesia's tropical forests. A healthy ecosystem, for example, a variety of plants and living things, functions to clean the air, absorb carbon gas and create a healthy environment for living things as guaranteed by the state constitution.

From the description above, it can be said that the destruction of karst will have an impact on the disappearance of other life in the karst ecosystem for living and non-biological living things. The karst ecosystem as an instrument of the womb and the life chain of the diversity of karst flora and fauna, good and sustainable habitats and ecosystems becomes a breeding ground for biodiversity and fauna from generation to generation that functions and is beneficial for farmers in dealing with agricultural pests. For example, as previously explained that each karst contains approximately 30 springs, karst caves, there are new types of spider species, then the diversity of endemic flora and fauna as an important element of life in the karst area. That is all the richness of this nation's biodiversity, whose habitats are protected and conserved. The karst cave is preserved in such a way that the karst species remain in one ecosystem. Karst protection is oriented to "irreplaceable karst" which is a philosophical principle of karst protection. which is reflected in the politics of justice law between generations.

According to the limestone mining permit for karst areas in certain zones, it will still be affected by the environment and ecosystem. Regarding this matter, Bernadus steni[30], said that limestone mining in karst has not taken into account the cost of environmental services, such as water as the primary need of all living things, which ironically, mining requires a large volume of water which is always related to the natural environment which of course also has an effect on the environment. social, cultural, economic environment and changing ways, patterns of behavior of local communities.

Thus, the legal politics of the karst ecosystem, must look at the karst ecosystem with a philosophical "irreplaceable", complete whole, and the role and function of karst for life and also function as a womb and chain of life between generations. Karst that provides permanent springs, natural habitats for unique and rare flora and fauna, historical cultural heritage, economic support from agricultural products (candlenut, cashew, tobacco) non-timber forest products (honey nests, burning wallet, medicines, exoteric ecotourism beautiful landscapes, for example, waterfalls, karst caves, and various beauties of these karst landscapes, all of which are social capital that belongs to us all, to be managed under the scenario of the principles of justice, sustainability and sustainability.

3. CONCLUSION

Constructing a karst ecosystem protection law that is mono interpretation of karst, exploitation of limestone, will cause damage to the karst ecosystem, both exokarst and endokarst. Meanwhile, the ecosystem of rare (unique) fauna and flora is neglected. The absoluteness of the normative juridical approach is insufficient to solve the problems of the karst ecosystem with the complexity of the problem, so it requires another approach, namely a holistic link- commune whose law stems from an ecocentric or biocentric approach to karst. So that the

legal construction of managing karst based on normative juridical anthropocentric, ecocentric and biocentric empirical juridical, to protect the karst ecosystem that is equitable between generations as well as justice for endemic karst flora and fauna. The philosophical principle of karst is irreplaceable, so mining exploitation opportunities will be closed. Government regulations for the management of karst areas, which have not yet been realized, often create ecological and geological uncertainties and injustices between generations.

Karst ecosystem, safe habitat for animal diversity, and plays an important role for humans from the non-mining economic sector. The wallet bird's nest in the karst area is a sector of local people's income. Bats in karst caves as their habitat function as natural controllers of agricultural pests and the pollination of several types of plants, insect predators, control of insect pollution that has the potential to carry malaria, and spread livestock diseases. The exotic value of karst, its irreplaceable benefits and functions, will change the political paradigm of karst law to agriculture, tourism and socio-culture, by providing environmental facilities and infrastructure in accordance with the nature and characteristics of the karst.

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