

Implementing of Green Building Policy: From Supervision to Self-Regulatory System

Ronny Adrie Maramis¹, Theodorus H.W Lumunon²

¹ Faculty of Law, Sam Ratulangi University, Indonesia. E-mail: ronnymaramis@unsrat.ac.id

² Faculty of Law, Sam Ratulangi University, Indonesia. E-mail: theodoruslumunon@unsrat.ac.id

Abstract: The implementation of green building policies has not shown problems of effectiveness and legal level and has not gained a good momentum socially as a social movement. The introduction of policies and program implementation through the involvement of various sectors and stakeholders is necessary. General understanding of green building and its policies and enforcement is still low, but in related sectors such as civil engineering and architecture professionals as well as planning consultants have adequate knowledge. This article aims to reveal the complexity of the problems and implementation of green building in Indonesia. This study uses a normative juridical method, with a conceptual approach and field data as support. The results show that an effective way to promote, implement and monitor green building policies is to utilize a self-regulatory mechanism, a system that delegates green building regulatory to professional groups in the fields of civil engineering, architecture and contractor associations.

Keywords: Green Building; Environmental Law; Legal Policy; Self-Regulatory System

1. Introduction

Green building is the utilization of environmentally-friendly building materials, easy to recycle, standing on designated land and energy-efficient, waste disposal that can be managed, parking area supported by adequate land without disturbing infrastructure. Environmentally-friendly buildings include design, construction, operation and management.¹ This concept is an important aspect in dealing with the impacts of climate change. Climate change is one of the environmental issues that has an impact on soil damage, water scarcity, loss of biodiversity, urbanization, air, water and soil pollution. The policy of green building intends to avoid the effects of increasing environmental temperatures, taking into account the principle of energy conservation, hence, the implementation of sustainable buildings and makes life healthier.

Covid-19 pandemic has brought social problems throughout the world, where the transmission of Sars-Covid-2 virus through droplets and airborne has a relationship with environmental factors in buildings and poorly ventilated rooms will have the potential for

¹ Abair, Jesse W. "Green buildings: When it means to be green and the evolution of green building laws." *Urban Law*. 40 (2008): 623.

transmission of the virus.² Corona virus disease is directly related to zoonoses caused by anthropogenic activities on the environment resulting in climate change and damage to other ecosystems.³ This threatens the existence of animal habitats in forest areas, so that the source of germplasm as a source of food or medicine is damaged or extinct.

In Indonesia, initiatives on green buildings (environmentally-friendly) have started with the establishment of a green building council in 2009. Since then, this council has tried to advocate for the government to encourage the implementation of green buildings through legal policy intervention (*legal policy vehicle*) and professional groups as initiators. At the international and national levels, various commitments and initiatives are introduced through means of controlling pollution and environmental destruction as an encouragement to people to respect environmental conservation through environmental policy instruments. For example, the behavioral approach through counseling, education, efforts to develop clean technology by encouraging research, economic incentives such as fiscal facilities, subsidies and tax facilities.⁴ Such approach can serve as effort to tackle environmental problems, such as *global warming* and reducing emissions and carbon.

In this regard, policy makers, government and society tend to emphasize the use of legal and bureaucratic instruments with administrative regulations as application. A top-down controlling approach is a conventional approach as is often used in the New Order regime known through social engineering policies. The concept of social engineering academically has a misinterpretation and its application, the law is used as a means of obtaining legitimacy for the interests of the authorities to control the people. The law will be useful and successful if it fulfills the requirements as a rule that can be understood, accepted and useful so that it will produce strong regulations.

Nowadays, environmental laws and regulations are directed at physical regulations, such as product requirements, permits, prohibitions and obligations. The approach to physical regulation is not effective in improving the quality of the environment, especially to prevent pollution and environmental destruction. We recommend looking for a more dynamic and aspirational means. According to the observation that the behavioral approach as the right means in growing knowledge, attitudes and actions that are environmentally-friendly.

According to Orts,⁵ reflexive environmental law has characteristics among other: *the first*, reflexive environmental law is self-critical. Reflexive law understands the limitations of law as a means of driving change when faced with complex social problems. Therefore,

² Azuma, Kenichi, U. Yanagi, Naoki Kagi, Hoon Kim, Masayuki Ogata, and Motoya Hayashi. "Environmental factors involved in SARS-CoV-2 transmission: effect and role of indoor environmental quality in the strategy for COVID-19 infection control." *Environmental Health and Preventive Medicine* 25 (2020): 1-16.

³ Mishra, Jitendra, Priya Mishra, and Naveen Kumar Arora. "Linkages between environmental issues and zoonotic diseases: with reference to COVID-19 pandemic." *Environmental Sustainability* 4 no. 3 (2021): pp. 455-467.

⁴ Siti Sundari Rangkuti, *Hukum Lingkungan & Kebijakan Ling Nasional Ed 4* (Airlangga University Press, 2020). p, 121.

⁵ Orts, Eric W. "A reflexive model of environmental regulation." *Business Ethics Quarterly* 5, no. 4 (1995): 779-794.

reflexive law departs from the ability of those who are usually regulated communities to self-critical and self-referential assessments/references, as the basis for self-regulation. *The second*, reflexive environmental law encourages capacity building and the role of institutions and systems outside the legal system. In this case, one of the efforts that are encouraged through reflexive law is the disclosure of information to the public regarding the performance of the management of the business/activity environment. *The third*, environmental law seeks to encourage third parties (intermediaries), apart from the market and the State, in environmental protection efforts.

Reflexive environmental law is manifested in various instruments, including voluntarism, public disclosure, third-party certification, and participation by public interest groups. In addition, there are procedures institutional self-reflection and self-criticism.⁶ Statutory provisions as well as political moral support in environmental improvement and development efforts are at the international and national levels, but significant progress in the country in this field is not visible enough. Then what are the causes and where are the weak points and obstacles when it comes to the success of this green building program?

Systemically, one of the weaknesses is the view that still assumes that the legalistic approach through top-down way is an effective way to engineer the green building movement in Indonesia. This study wants to show the opposite of the above approach which shows the complexity of enforcement, controlling and coordination between departments or agencies at the central or regional government level is still a classic problem, especially those related to environmental issues and licensing at the levels of provinces, municipal and regency. Therefore, a new approach that is more effective and efficient is needed. This study aims to examine social and legal issues and identify forms of facilities that are aspirational and responsive to the implementation of green buildings.

2. Method

The type of research is normative-juridical with a conceptual approach, uses the concept of *self-regulatory* as part of customary law which generally applies to professional groups. This concept is used to support the principles of green building based on the ecological criteria described in environmental engineering. Field data as support is carried out through *Focus Group Discussions (FGD)* involving stakeholders in the architectural and civil engineering professions, academics in the fields of ecology and law. The analysis was conducted in a descriptive analytical manner, *snowballing* is used as field data testing.

⁶ Wibisana, Andri G. "Instrumen Ekonomi, Command And Control dan Instrumen Lainnya: Kawan Atau Lawan? Suatu Tinjauan Berdasarkan Smart Regulation." *Jurnal Bina Hukum Lingkungan* 4, no. 1 (2019): pp. 172-197.

3. Indonesia's Deforestation and Contributing Factors to Global Warming

Scientists have warned of environmental damage⁷. Awareness about the environment reached its peak in the world when the former vice-president of the United States through a series of coordination and applied studies managed to collect evidence and declared that the world had entered the stage of *global warming*. Global warming is main contribution of massive mining, oil, and industrial production that causes global warming, the increase of earth's temperature so that the polar ice caps melt, sea level rise, the loss of small islands along with damage to the environment.

Climate change is evidence that shows how humans have exploited nature in an extraordinary way. Pre-industrial revolution, the concentration of carbon dioxide (CO₂) in the atmosphere was around 270 ppm. This condition is relatively stable for thousands of years. Since the post-industrial revolution, the concentration of this gas has continued to increase to reach 367 ppm in 1999. This level has not occurred for previous 420 thousand years.⁸

In addition, global environmental and forest damage, such as the use of wood materials, contributes greatly to the depletion of the ozone layer which has a direct impact on human life. The keyword global warming socially, politically and economically has a broad dimension. Several years before and after the reform took place.⁹ There are known policies and protocols for good governance. The principles contained therein and related to green buildings in this protocol are effectiveness and efficiency is the development through the sustainable use of resources to meet the needs of society. Sustainability refers to both ensuring social investment carry through and natural resources are maintained for future generation.¹⁰

Global warming is emerged from various human activities starting from the burning of fossil fuels, industry, and massive deforestation which causes carbon emissions with the resulting impact, namely the greenhouse effect which also has long-term effects on life and it is required to reduce activities that can damage forests or activities that can cause emissions.¹¹ The phenomenon of increasing temperature or global warming occurs almost in worldwide, thus giving a negative impact on the environmental sustainability index. So, in this study, we focus on the impact of deforestation that triggers global warming and we can identify efforts to reduce global warming.

⁷ Union of Concerned Scientists. "Climate Science: The science is clear: climate change is happening. We are the cause. We need to act now." Available online at: <https://www.ucsusa.org/climate/science> Accessed November 25, 2020.

⁸ Wibisana, Andri Gunawan. "Tangan Tuhan di Pengadilan: Dalih Bencana Alam dan Pertanggungjawaban Perdata dalam Kasus Lingkungan." *Jurnal Hukum dan Pembangunan* 41, no. 1 (2011): 102-149.

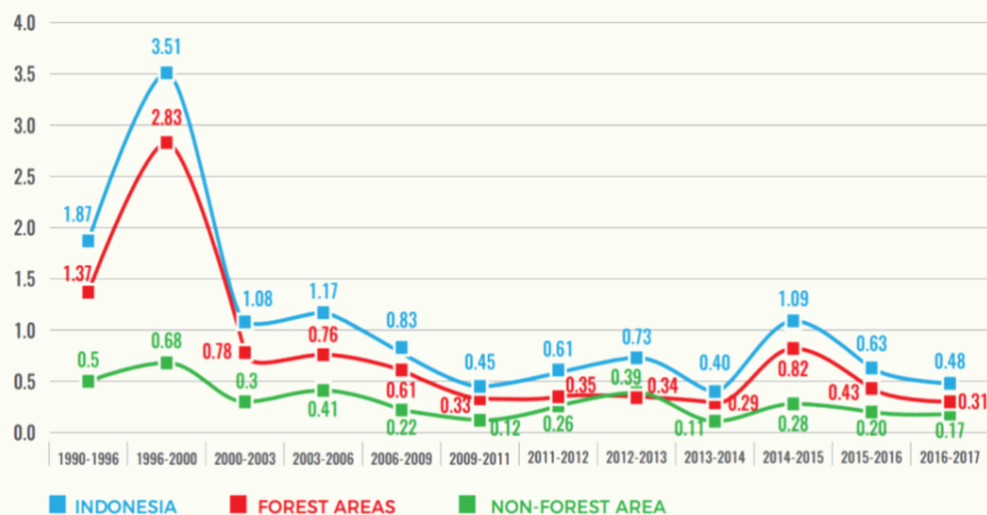
⁹ Kharisma, Bayu. "Good governance sebagai suatu konsep dan mengapa penting dalam sektor publik dan swasta: Suatu pendekatan ekonomi kelembagaan." *Jurnal Buletin Studi Ekonomi* 19, no. 1 (2014): 1-34.

¹⁰ Sustainable Development - an Overview," ScienceDirect Topics, accessed March 18, 2022, <https://www.sciencedirect.com/topics/engineering/sustainable-development>.

¹¹ Dewa, Dimas Dinar, and Anang Wahyu Sejati. "Pengaruh perubahan tutupan lahan terhadap emisi GRK pada wilayah cepat tumbuh di Kota Semarang." *Jurnal Penginderaan Jauh Indonesia* 1, no. 1 (2019): 24-31.

Deforestation is the loss of forest land which is a difficult problem to overcome, so good knowledge and cooperation are needed between various elements that are able to move the community to be involved in reducing activities or supporting programs that are considered capable of solving problems that are being faced together. Data updates in the last few years sourced from the Ministry of Environment and Forestry that data from 2013 to 2014 deforestation decreased at 0.4 million hectares from the previous year at 0.73 million hectares per year. Furthermore, in 2014-2015 the deforestation rose again to 1.09 million hectares, then in 2015-2016 it fell again to 0.63 million hectares annually, and fell again in 2016-2017 with a figure of 0.48 hectares per year.¹² The rate of deforestation can decrease or increase every year due to various human or community activities, so cooperation and mutual awareness are needed for efforts to reduce deforestation which will have a positive impact on the environment and the health of the community itself. The rate of deforestation in Indonesia can be seen in Figure 1.

Figure 1. Deforestation in Indonesia



Source: Ministry of Environment and Forestry (KLHK, 2020)

The graph above shows the deforestation in Indonesia which can be seen that the deforestation occurred in 1985 to 1998 around 1.6 to 1.8 million hectares annually, the high deforestation is certainly caused by humans themselves. Then, in 2000, the deforestation continued to increase to 2 million hectares, in 2013-2014 there was a decrease in deforestation at 0.4 million hectares per year, then in 2014-2015 to increase to 1.09 million hectares annually, and in 2016 to 2017 it again decreased by 0.48 million hectares.¹³ Forest problems as occur in Indonesia is very worrying. Reducing of

¹² Wahyuni, Herpita, and Suranto Suranto. "Dampak deforestasi hutan skala besar terhadap pemanasan global di Indonesia." *JlIP: Jurnal Ilmiah Ilmu Pemerintahan* 6, no. 1 (2021): pp.148-162.

¹³ *Ibid.*

deforestation will certainly have a good impact on the environment, as a constitutional right to a good and healthy environment.

4. Weaknesses of Top-Down System Approach and It's Implication

The collection through Focus Group Discussions (FGD) involving stakeholders such as professionals, environmentalists and academics shows opinions that tend to be divided into different types of opinions; *the first* is incomplete legal regulation, *the second* is the lack of regulatory differentiation, and *the third* is related to the application of administrative law and administrative provisions related to environmental permits, building permits which are not consistent if they are not called consistent. The second represents academics who see that the issue of environmental permit and green building promotion has not been conceptualized and systematically coordinated in the direction of implementation, and along with the view that there is not enough social transformation of green building values in Indonesia.¹⁴

Legal practitioners tend to see legal aspect as a shortcoming, on the other hand environmental practitioners and bureaucrats see that there are quite a number of statutory provisions in the environment that have experienced *dualism* so that it becomes a gap for investors to obtain permits and recommendations while development is not executed. The implementation is important because at this point the controlling of development must be in accordance with environmental principles, including green buildings.¹⁵ Law application seems confusing, there are legal provisions that are sourced from two regulations at the national level, thereby weakening structural control and coordination at the provincial and regency/municipal levels. Another problem has lower-level regulations that are inconsistent with environmental policies in higher-level regulations.

In criminal law, the function of criminal sanctions is essentially an *ultimum remedium*. Nowadays, in environmental law, criminal sanctions imposed on polluters and environmental destroyers have shifted from *ultimum remedium* to main law enforcement instrument or *primum remedium*.¹⁶ Theoretically, the phenomenon of confusing environmental law enforcement must be acknowledged due to the approach used. The top-down approach follows the teachings of legal engineering as a form of erroneous translation of legal function in *social engineering* from Dean Roscoe Pound, which means how law in the social context and common law law plays a role in social change in the context of US' legal *realism*, both interpreted by Roscoe Pound and Karl Llywen (*The American Realism*) are about court decisions not legislation where its enforcement relies on executive power.

¹⁴ "Penerapan Green Building di Indonesia," Indonesia Environment & Energy Center, February 11, 2021, <https://environment-indonesia.com/penerapan-green-building-di-indonesia/>.

¹⁵ Palilingan, Toar Neman, Donna Okthalia Setiabudhi, and Toar KR Palilingan. "Environmental policy, public health and human rights: Assessing the regional regulation on waste." *Hasanuddin Law Review* 4, no. 3 (2019): 339-347. DOI: <http://dx.doi.org/10.20956/halrev.v4i3.1413>

¹⁶ Siti Sundari Rangkuti. *Op Cit.* p. 339.

The international commitment that was also agreed upon and supported by the Indonesian government in the field of good governance through the bureaucracy requires that several principles in the life of government are considered to have not progressed within about fifteen or so it will be called too late. Hypothetically, the movement of green building should be easier to roll out with the new momentum, namely the emergence of social awareness in the field of *environmental movement, global warming, emission and carbon exchange programs* and with the commitment of 1 ½ decade in the field of good government policy and various national policies of countries around the world, for example the signing of Agenda 2030 with 17 Sustainable Development Goals (SDGs) and one of the goals is to tackle climate change.¹⁷

Regarding the universal commitment to the concept of sustainable development, that development must meet the needs of the present generation without compromising the ability of future generations to meet their needs.¹⁸ The paradigm of sustainable development has been accepted as a political ethic of development for all countries in the world.¹⁹ Green buildings have a fundamental role in achieving sustainable development. Commitment to the implementation of green buildings must be in line with procedural principles of sustainable development which includes access to the right to environmental information, community participation in decision-making processes and effective access to justice.²⁰

For good governance, care for the environment and green buildings are related to the principles of good governance, where this principle is will have meaning if it is supported by institutions related to the public interest. There is a positive relationship between good governance and environmental management. Without good governance, it is difficult to expect the creation of a good, healthy and sustainable environment.

5. Self-Regulation System: Guidelines Orientation for Green Building

Self-regulation system refers to the tradition of internal regulatory policies, where certain professional communities have very high expertise specifications (differential) and internal reviews must be performed strictly and regularly. In this context, the author would like to convey that the promotion of green buildings can be done through self-regulatory system within the associations of contractors, architecture and civil engineers. One of the important elements in the profession is standard of professionalism, code of conduct and professional ethics with the aspect of regular peer review of professional actions. As a development of this idea, the author argues that the promotion of green buildings will be more effective through granting wider authority to contractors, engineers and architects because this group is the leading community in dealing with investors, as well as initiating building construction. The efficiency and effectiveness of

¹⁷ Kröll, Christian, Anne Warchold, and Prajal Pradhan. "Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies?" *Palgrave Communications* 5, no. 1 (2019). <https://doi.org/10.1057/s41599-019-0335-5>.

¹⁸ Sonny Keraf, *Etika Lingkungan*, 1st ed. (Jakarta: Kompas, 2002). p, 158

¹⁹ Ibid. p.166.

²⁰ Rochmani and Safik Faozi. "Budaya Hukum Hakim dalam Penyelesaian Perkara Lingkungan Hidup di Pengadilan." *Dinamika Hukum* 18, no. 1 (2017): 60-73.

the implementation of this function will be easier to promote professionally compared to law enforcement efforts and litigation policies that are full of economic and political considerations. Change or shift the emphasis on green building promotion and litigation policies to self-regulatory policies will be very easily affordable, scalable with low cost.

At the orientation stage, flexibility, compatibility, complexity, and cost in accordance with social acceptance are attributes of green building, as well as observation and availability of information. In detail, it can be explained as follows: *the first*, the guidelines for proper green building are easy to understand and implement in the most vulnerable communities at the same time, the lower middle class. These guidelines should be considered as directives to provide flexibility so that there is no diffusion in the society that implements them. *The second*, the guidelines in question must be able to penetrate sectoral boundaries and be well integrated so that they can be used as a reference to encourage non-government agencies to function as supervisors later. *The third*, implementing actors must be able to do *self-appraisal*, namely looking for a harmonious relationship between nature, social and economy by paying attention to social participation factors. *The fourth*, related to the implementation of the green building policy, efforts regarding building capacity must also be regulated so that strengthening is achieved that allows the formation of institutions for the policy, thus there will be a process of updating theories and conceptions and equipment in line with increasing professional skills and public awareness.

Contrary to the litigation approach, the self-regulation approach does not require controlling (*regulatory*), does not emphasize certain standards, and does not emphasize permit and sanctions on development planners and implementers who do not comply with policies. Policy and implementation together with the application of sanctions on development planners and implementers are two links that must be watched out for in the implementation of green building policies.²¹ This is not effective, but importantly to overcome environmental problems is to raise awareness so that people obey the law not because of the threat of sanctions but because of awareness to respect the environment.

The approach by prioritizing professional responsibility, related to green buildings has a measurable, and applicable because it is related to their professional knowledge and skills, knowledge-based civil engineers, architects and contractors better understand issues regarding planning, construction, and supervision as well as building management related to green buildings. The practical aspect of promoting green buildings through this profession is regulation by prioritizing standards of care and profession, professional disciplines and codes of ethics that are organized into a single unified professional standard code of care and conduct. Enforcement of professional standards and codes of conduct is an effective way of promoting professional behavior.

From the aspect of professional organization, there are several professions that already have self-mechanisms, such as *Ikatan Dokter Indonesia (IDI)*, *Persatuan Insinyur Indonesia (PII)*, and *Ikatan Arsitek Indonesia (IAI)*. If these professional organizations have adopted

²¹ Leiringer, Roine. "Sustainable construction through industry self-regulation: the development and role of building environmental assessment methods in achieving green building." *Sustainability* 12, no. 21 (2020): 8853.

a green policy in their professional conduct, it will be a positive pressure for the proponent or building owner investors to conform to the green policy. There are several things that need to be considered in the implementation of self-regulation related to sustainable green buildings.

6. Conclusion

The issue of green building has been understood up to the conceptual and promotional level. The understanding of green buildings, especially the scope, content and materials is still understood in the sphere of academic and not yet at the socio-cultural level. An important factor in maintaining the momentum of environmental awareness and the process of human development and physical life and for a sustainable future is the impact of green building management on sustainable development. The implementation of green buildings must be recognized as having many dimensions, one of which is the social and environmental dimensions. The implications of green building ideas and programs will be more effective if the program is introduced through government bureaucratic mechanisms, both at the central and local levels. Controlling of this policy will be effective if it involves the community from professional groups related to the environment and green buildings such as contractors, professional associations of civil engineering and architects and associations of environmental experts. Ideally, these groups have an internal protocol that allows monitoring of every planning, implementation and management and controlling of green buildings.

References

- Abair, Jesse W. "Green buildings: When it means to be green and the evolution of green building laws." *Urban Law*. 40 (2008): 623.
- Azuma, Kenichi, U. Yanagi, Naoki Kagi, Hoon Kim, Masayuki Ogata, and Motoya Hayashi. "Environmental factors involved in SARS-CoV-2 transmission: effect and role of indoor environmental quality in the strategy for COVID-19 infection control." *Environmental Health and Preventive Medicine* 25 (2020): 1-16.
- Dewa, Dimas Danar, and Anang Wahyu Sejati. "Pengaruh perubahan tutupan lahan terhadap emisi GRK pada wilayah cepat tumbuh di Kota Semarang." *Jurnal Penginderaan Jauh Indonesia* 1, no. 1 (2019): 24-31.
- Kharisma, Bayu. "Good governance sebagai suatu konsep dan mengapa penting dalam sektor publik dan swasta: Suatu pendekatan ekonomi kelembagaan." *Jurnal Buletin Studi Ekonomi* 19, no. 1 (2014): 1-34.
- Kroll, Christian, Anne Warchold, and Prajal Pradhan. "Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies?" *Palgrave Communications* 5, no. 1 (2019). <https://doi.org/10.1057/s41599-019-0335-5>.
- Leiringer, Roine. "Sustainable construction through industry self-regulation: the development and role of building environmental assessment methods in achieving green building." *Sustainability* 12, no. 21 (2020): 8853.

- Mishra, Jitendra, Priya Mishra, and Naveen Kumar Arora. "Linkages between environmental issues and zoonotic diseases: with reference to COVID-19 pandemic." *Environmental Sustainability* 4 no. 3 (2021): pp. 455-467.
- Orts, Eric W. "A reflexive model of environmental regulation." *Business Ethics Quarterly* 5, no. 4 (1995): 779-794.
- Palilingan, Toar Neman, Donna Okthalia Setiabudhi, and Toar KR Palilingan. "Environmental policy, public health and human rights: Assessing the regional regulation on waste." *Hasanuddin Law Review* 4, no. 3 (2019): 339-347. DOI: <http://dx.doi.org/10.20956/halrev.v4i3.1413>
- Rochmani and Safik Faozi. "Budaya Hukum Hakim dalam Penyelesaian Perkara Lingkungan Hidup di Pengadilan." *Dinamika Hukum* 18, no. 1 (2017): 60-73.
- Siti Sundari Rangkuti, *Hukum Lingkungan & Kebijaksanaan Ling Nasional Ed 4*. Airlangga University Press, 2020.
- Sonny Keraf, *Etika Lingkungan*, 1st ed. Jakarta: Kompas, 2002.
- Sustainable Development - an Overview," ScienceDirect Topics, accessed March 18, 2022, <https://www.sciencedirect.com/topics/engineering/sustainable-development>.
- Union of Concerned Scientists. "Climate Science: The science is clear: climate change is happening. We are the cause. We need to act now." Available online at: <https://www.ucsusa.org/climate/science> Accessed November 25, 2020.
- Wahyuni, Herpita, and Suranto Suranto. "Dampak deforestasi hutan skala besar terhadap pemanasan global di Indonesia." *JIP: Jurnal Ilmiah Ilmu Pemerintahan* 6, no. 1 (2021): 148-162.
- Wibisana, Andri G. "Instrumen Ekonomi, Command and Control dan Instrumen Lainnya: Kawan Atau Lawan? Suatu Tinjauan Berdasarkan Smart Regulation." *Jurnal Bina Hukum Lingkungan* 4, no. 1 (2019): pp. 172-197.
- Wibisana, Andri Gunawan. "Tangan Tuhan di Pengadilan: Dalih Bencana Alam dan Pertanggungjawaban Perdata dalam Kasus Lingkungan." *Jurnal Hukum dan Pembangunan* 41, no. 1 (2011): 102-149.

Conflict of Interest Statement: The author(s) declares that the research was conducted in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

Copyright: © HALREV. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Hasanuddin Law Review (Hasanuddin Law Rev. – HALREV) is an open access and peer-reviewed journal published by Faculty of Law, Hasanuddin University, Indonesia.

