

life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations" (United Nations, (1975). It lays out the role of human rights in protecting human livelihoods, reaffirmed by Principle 3 of the Rio Declaration on Environment and Development, and recognizes the importance of human rights, while at the same time building a balance between human needs and the environment (Wisadha et al., 2018).

Through of several other international conferences like Rio de Janeiro Conference, Johannesburg Conference, and Rio+20 Conference, Governments are currently seeking sustainable development within a long-term development framework and the need for wider participation in policy-making, decision-making and implementation at all levels which is symmetrical with the state's obligation to make national environmental protection arrangements as a response to the decline in environmental functions (Yusa & Hermanto, 2018). Several human rights guaranteed by international law are including environmental aspects. It is therefore no exaggeration to say that there is an important link between environment and the enjoyment of human rights. It is a recognized principle of international human rights law that a healthy environment is a prerequisite for the promotion of many other rights. It can be explained directly or indirectly by how the environment functions as a condition for the enjoyment of human rights (Lewis, 2012).

Humanity leaves its mark on the nature with the activities it performs while continuing its life, for instance, CO₂ emissions are described as arising from several human and natural activities. Each of these activities contributes to emitting a certain amount of carbon into the atmosphere. The increasing environmental effects lead the environmental scientists recommend developing-country governments to integrate digitalization and environmental development programs by increasing spending in research and development. The main reason the internet consumes so much power is that the servers need to be up 24 hours a day to make this content accessible to people. Computers and servers in these organizations are provisioned and must be kept running so that users can get the services they need. Several services and developments contribute significantly to global carbon emissions. Activities range from electronic payment methods, e-commerce, streaming and entertainment services to the financial system. Each of these factors is described below as a potential impact on available carbon emissions resulting from digital services (Sharma & Dash, 2022).

Green Constitution concept in Indonesia is in line with 1945 Indonesian Constitution Article 28H paragraph (1) which shows the third human rights generation such as collective rights and development rights especially the rights of environmental, and in Article 33 paragraph (4) 1945 Indonesian Constitution that contains sustainable environmental development in Indonesia constitutionally (Yusa & Hermanto, 2018). There are a number of other laws governing this issue, including: Law No. 5 of 1960 on Basic Services in Agriculture, Law No. 41 of 1999 on Forestry, Law No. 11 of 1974 on Irrigation. In addition to the environmental laws and regulations mentioned above, there are also several other implementing regulations. Management of natural resources must benefit local communities as it helps ensure the maximum prosperity of the people in a fair and sustainable manner, in accordance with the obligations of Article 33 sub-article (3) of the Constitution. I Gede Yusa and Bagus Hermanto had tried to affirmed that the Green Constitution in Indonesia is valued as environmental norm constitution as arranged and implemented in Article 28H paragraph (1) and Article 33 paragraph (4) 1945 Indonesian Constitution and Considering part a, b, f, Article 1 Sub-article (2), Article 44, Elucidation I. General part (1) and (5) The Law of the Republic of Indonesia Number 32 Year 2009 about Protection and Management of Environment.

Indonesia is moving from the physical space to the digital space, and regulations governing the governance of social life exist not only in the physical space but also in the digital space. In addition to ITE law, other relevant laws are also needed to ensure that the digital space serves the common good and the realization of seeker justice and a sense of community justice. Therefore, the existence of digital space in Indonesia is recognized by law. However, the production of carbon emissions from activities in the digital space should be considered, including the ability to limit and control the generation of carbon emissions from activities in the digital space. Moreover, how the Indonesian government can participate in fulfilling its constitutional obligations for sustainable development.

2. Literature Review and Hypotheses

A conceptualization of the relationship between human rights and the environment provides that human beings are entitled to a healthy environment, independent from other human rights. An independent right to a good environment must be justified on the basis that an environment of a particular standard is essential for human well-being (Lewis, 2012). In the height of digitization, every action taken online has an impact on the environment. Both overcomputing and digitization are major drivers of concern that the

world's carbon footprint will continue to grow. According to a research by Pawankumar Sharma and Bibhu Dash, there are several digitalization concepts that have increased the impact on the global carbon footprint. Each factor indicates technological developments associated with technology use and increased carbon emissions. Activities range from electronic payment methods, e-commerce, streaming and entertainment services to the financial system.

On the other hand, today's society is experiencing a new constitutional moment in which the disruptive impact of digital technology is the main catalyst. The increasing relevance of digital technologies in today's society has given extraordinary power to non-state actors who own, commercialize, or control this technology, to the detriment of traditional rule-of-law actors such as nation-states. Digital constitutionalism is a collection of values and ideals that permeate, guide and inform concrete normative instruments. In particular, it has been argued that digital constitutionalism forces the emergence of a set of normative countermeasures to changes in the constitutional balance produced by digital technology (Celeste, 2019).

This article is aimed to see the connections of digital constitutionalism in Indonesia in the currently emerging computation era, the carbon emission pollution caused by digitalization, and the right to a good and healthy environment.

3. Methods

This research is a normative juridical research by examining legal materials that answer questions that are the focus of research conceptualizing law as rules or norms that provide standards of human behavior that are considered reasonable (Sukismo, 2008). The researchers conduct a normative juridical law research in order to find answers to the problem formulation of this research. This research also aims to find solutions to events that have occurred previously so that if in the future a similar event occurs, it can be overcome and even addressed before it occurs. Furthermore, this research aims to find how the State can take part in carrying out the constitutional mandate (Article 33 (4) of the 1945 Constitution of the Republic of Indonesia) regarding sustainable development in the current digitalization era.

Approaches

This article is carried out with statutory and comparative approach. Statutory approach is carried out by examining the law provisions, both domestic and international law, and regulations related to sustainable developments and green governance (Marzuki, 2007). This approach is chosen by the authors as it is needed due to the aspects that will be studied by the author are several regulations (Ibrahim, 2007). According to Johnny Ibrahim, "normative research must use a statutory approach since the focus of the research is various legal rules. The analysis resulted from the research conducted with this approach will be more accurate if it is assisted by other suitable approaches in order to widen legal considerations that are appropriate to deal with the legal problems." (Ibrahim, 2007).

In order to carry out this research, it is important understand the hierarchy of laws in Indonesia. According to Law Number 12 of 2011 concerning the Establishment of Legislations, the hierarchy of laws and regulations in Indonesia includes (1) The 1945 Constitution of the Republic of Indonesia (UUDN RI 1945), (2) Decree of the People's Consultative Assembly, (3) Laws or Government Regulations in Lieu of Laws, (4) Government Regulation, (5) Presidential Regulation, (6) Provincial Regulations, and (7) Regency or City Regulation

The comparative approach is done by conducting comparative studies of law, including comparing the laws of one country with the laws of other countries, especially about the implementation of sustainable developments and green governance (Ibrahim, 2007). The provisions and regulations related the topics are analyzed with grammatical and systematic interpretation techniques. Comparative approach is a philosophical approach which is a study or a study of intellectual conceptions that exist in the main legal institutions or other institutions of foreign legal systems. This approach is carried out in order to reveal the background of several different legal provisions of the same problem from two or more countries and is expected to be used as a recommendation for the preparation or the amendment of legislation.

4. Results

Various impacts and consequences of climate change affect the quality of people's lives; therefore, it is necessary to take steps to protect the community as referred to in Article 28 H paragraph (1) of the 1945 Constitution of the Republic of Indonesia and Article 65 paragraph (1) of Law Number 32 Year 2009 concerning Environmental Protection and Management. From 1981-2018, Indonesia experienced a temperature increase trend of around 0.03 °C per year. From 2010-2018, national GHG emissions experienced an increasing trend of around 4.3% per year.

At COP-26 in November 2021, climate finance will be one of the key topics for achieving Net Zero Emissions in 2050. Carbon pricing has become a trusted and promoted tool in various forums, and its use continues to grow around the world. Carbon Pricing or Carbon Economic Value (NEK) is part of a comprehensive package of measures to mitigate climate change. Imposing a carbon tax has several advantages as follows (1) Reduction of greenhouse gas emissions from emission sources, and (2) Carbon tax revenue can be used to increase development funds, climate change adaptation and mitigation, environmentally friendly investments, as well as support for low-income communities in the form of social assistance.

Carbon as a universal standard for measuring the performance of efforts to combat climate change, reflected in nationally determined contributions, along with an international dimension in the form of significant economic value and primarily economic benefits to communities. Carbon as a strategic indicator and the principle of sustainable resource management under the mandate of Article 33 paragraph (4) The 1945 Constitution of the Republic of Indonesia. The economic value of carbon is one of the instruments in realizing the Government's obligation to contribute to the reduction of greenhouse gas emissions, through the selection of the most efficient, effective, and effective mitigation and adaptation actions without reducing the achievement of the contribution targets set nationally.

Maxensius Tri Sambodo stated that carbon tax is a tax imposed on carbon emissions that have a negative impact on the environment. The carbon tax is one of the new types of taxes that is being implemented in Indonesia. He added that the legal bases to implement carbon tax are Law Number 16 of 2016 concerning Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change, Law Number 7 of 2021 concerning Tax Harmonization, Government Regulation number 46 of 2017 concerning Environmental Economic Instruments, and Presidential Regulation number 98 of 2021 concerning the Economic Value of Carbon.

To further encourage the strengthening of climate-related funding capacity, the government issued Presidential Regulation Number 98 of 2021 concerning the Economic Value of Carbon (NEK) regulates carbon pricing systems (carbon trading and carbon offsets), results-based payments (RBP), levies on such as carbon taxes and PNPB, and other mechanisms. The imposition of a carbon tax may primarily serves as an increase in government revenue, however it also serves as a climate protection tool to achieve sustainable economic growth according to the polluter pays principle. The introduction of a carbon tax is expected to change the behavior of economic stakeholders and switch to low-carbon, green economic activities. Thus, there are two laws that underlie the carbon tax, namely Law 7/2021 on the Harmonization of Tax Regulations and Presidential Decree 98/2021 on the Implementation of the NEK.

In Law Number 7 of 2021 concerning Tax Harmonization, it has been established that the subject of a carbon taxes is any natural or legal person who purchases carbon-containing goods or engages in activities that cause carbon emissions. A carbon tax is payable on the purchase of carbon-containing goods or activities that produce a certain amount of carbon emissions in a certain period. The timing of payment is determined at the end of the calendar year from the purchase of carbon-containing goods or from the activities or any other time determined by Government Regulation Article 13 Law No 7 of 2021. The criteria for negative impacts on the environment include natural resource depletion, environmental pollution, or environmental damage.

In the Explanation, the term "goods containing carbon" refers to, but is not limited to, commodities containing fossil fuels that contribute to carbon emissions. The term "activities that generate carbon emissions" means activities that generate or emit CO₂ emissions originating from, inter alia, the energy, agriculture, forestry and land conversion, industry and waste sectors. Included as part of purchases and imports of goods that emit CO₂ domestically.

While it is true that the Government has done the effort to tax carbon emission by implementing carbon tax/carbon pricing, its implementation in Indonesia at the moment is only limited to a certain sector. The carbon tax scheme and implementation went into effect on April 1, 2022 and will be imposed for the first time on companies operating in the coal-fired power plant sector, with caps and tax regimes aligned with the implementation of the carbon market. It is already an operational area for a coal-fired power plant. According to a carbon tax roadmap designed for a just and sustainable energy transition. Per 2022, there are several points that are expected to be achieved, namely (1) Synchronization of Cap & Trade and Cap & Tax of the Electricity Sub-Sector, (2) Determination of the cap for the coal power generation sector by the Ministry of Energy and Mineral Resources, (3) Limited application of carbon tax (cap & tax) to coal-fired power plants at a rate of IDR 30,000/tCO₂e, (4) Setting up a carbon trading support MRV System (SRN), and (5) Preparation of carbon trading technical regulations (KLHK). While further goals are expected to be achieved in 2025.

For the purpose of this article, it is now important to mention the acknowledgement of digital space in Indonesia. The definitions of electronic system, Information Technology, and Electronic Data do not explicitly mention and acknowledge digital space as an ecosystem that may produce its own carbon emissions. Meanwhile, in this digitalization era, every activity involving Cloud and computation requires high energy that emit carbon. Heat is a computational by-product that, if left unchecked, will undermine the functioning of our digital civilization. Therefore, the heat must be reduced relentlessly to keep the engines in constant condition. Data centers use 200 terawatt hours (TWh) more energy per year than some nations, according to a Monserrate (2022) report. Data center power consumption accounts for 0.3% of total carbon emissions, and when the calculations are extended to include connected devices such as laptops, smartphones and tablets, the total is 2% of global carbon emissions.

The regulation regarding human rights as stipulated in Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law) as amended by Law Number 19 of 2016 are mainly focused on the privacy rights. Article 26 paragraph (1) of Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law) as amended by Law Number 19 of 2016, states that "Unless specified by laws and regulations, the use of any information through electronic media involving data of a person must be carried out with the consent of the person concerned." The explanation of the article is that the protection of personal data is one part of personal rights (privacy rights) which include the right to enjoy a private life and be free from all kinds of interference, the right to communicate with others without spying, and the right to access information about personal life and data of a person.

Furthermore, based on ITE Law (Law Number 11 of 2008) article 2, information and electronic transactions can be cross-territorial or universal. This implies that data storage may be placed outside the territory of Indonesia as stated in the Government Regulation concerning the Implementation of Electronic Systems and Transactions (PSTE) Number 71 of 2019 in article 21. This condition raises a new question regarding who is responsible for the carbon emission produced by the procurement of data storage.

5. Discussion

Digital Constitutionalism

The concept of constitutionalism derives from the constitution, and in its development even asserts the existence of the rule of law, but the essence of constitutionalism proposes the limitation of power in the state. Constitutionalism regulates the implementation of the rule of law in the individual's relationship with the government. Constitutionalism presents a situation in which a sense of security can be fostered because there are limits to the pre-established powers of government (Marzuki, 2010).

A constitution defines the basic rules and processes of a political community. The term refers to a mechanism that limits the limits of a state's power over its citizens. One of several core dimensions of constitutionalism is the *foundational and primary position* of constitutional rules within a hierarchy of legal norms. The efforts involve extending established civil rights into the digital realm. It may also include clarification of rights and freedoms that appear to be inherent in the digital environment (Lex et al., 2015).

The term constitutionalism can be used to refer to the difficult philosophical issues that surround the existence of a constitution. The term can also be used to describe shift that have taken place in the legal system and captures the following features of a polity. Authoritative bodies are established by written constitutions, from which they derive their authority. The Constitution gives final power to the people through elections. Power is legitimate only if it follows the dictates of the Constitution. And these are overseen by the Constitutional Court. For the purposes of this article, the term constitutionalism describes the extent to which norms of a constitutional nature generally applied between citizens and the state; and should be applied and between private parties as well (Craig, 2001).

Often times, "digital constitutionalism" is defined as a common term to connect political rights, governance norms, and limitations on the exercise of power on the Internet. Some studies do not explicitly "write out" the political groups of interest because the Internet is not neatly delimited by national borders. However, research by Gill, Lex, Dennis Redeker, and Urs Gasser (2015) shows that, even when the intended scope is not specified, a contextual reading suggests that the authors of the document have adopted the principles as universal and international recognition. I have found it to be clear that I simply understand.

Considering power as the capacity of one constitutional subject to direct the conduct of another, it can be seen that private companies produce, sell and manage technology products and services around the world are emerging in the constitutional scenario as the new dominant party along with States. In the digital society, technology companies also hold a form of power as they may act as "online gatekeepers". They have the power to regulate individuals' access and use of digital technology, and as such, they can influence how individuals exercise their rights through these technologies. Technology companies control a huge part of the daily lives of an unprecedented number of people.

The potential for these non-state actors to violate people's fundamental rights is becoming more and more intense. At the same time, checks and balances do not adequately address this situation, instead focusing on the relationship between the individual and the state (Celeste, 2019). In the United States, the term constitutional rights is almost non-existent in the "private" realm. The Constitution applies primarily to the "public" actions of State actors and organizations in which the State is directly involved. This means that constitutional rights, such as freedom of expression and association, due process requirements, and the right to participate in the democratic process, where they exist, all apply only to the state and to the private sector. means that it does not apply to Some scholars have suggested that constitutional rules may apply to platforms that can be considered quasi-public forums, but the law has yet to move in that direction.

Carbon footprint

The Kyoto Protocol (1998) stated that there are six types of gases are classified as major Greenhouse Gases (GHGs), carbon dioxide (CO₂) is the most important anthropogenic GHG. The global concentration of carbon dioxide in 2005 increased in value from 280 ppm³ to 379 ppm³. This concentration of carbon dioxide far exceeds natural concentrations over the last 650,000 years (180-300 ppm). From the last 10 years (1995-2005 average: 1.9 ppm per year) (Rahayuningsih et al., 2021). CO₂ emission is a major sustainability issue due to their environmental impact and is the main cause of global warming thus being a serious problem in today's society. CO₂ emissions are explained to come from multiple human and natural activities. Each of these activities contributes to releasing a certain amount of carbon into the atmosphere (Sharma & Dash, 2022).

Technology and data centers are contributing to a huge increase in power consumption hence affecting CO₂ in the atmosphere. The rise of these technologies has been described as having certain environmental impacts due to the increase in carbon emissions. It is estimated that the overall increase in carbon emissions is largely due to the proliferation of data centers in most organizations today.

Energy consumption is a major source of carbon emissions for technology companies, but data center cooling systems are also known to release various chemicals into the atmosphere. These chemicals contribute to the total amount of carbon in the atmosphere. Therefore, more data centers expose more chemicals to the atmosphere. These substances continue to impact the carbon footprint of these data centers (Sharma & Dash, 2022).

Sustainable development

The improvement of humanity has caused climate change and natural disasters. Through their actions, people have negatively impacted their surroundings, endangering Earth and the destiny of future generations.

The concept of sustainable development consists of the idea of improvement (socioeconomic development in harmony with ecological boundary conditions), the concept of needs (redistribution of resources to ensure quality of life for all), and the concept of future generations (the possibility of long-term usage of resources to ensure the necessary quality of life for future generations). The main idea of sustainable improvement derives from the Triple bottom line concept, implying that the stability among 3 pillars of sustainability – environmental sustainability targeted on keeping the quality of the environment (Klarin, 2018).

There are two important factors of the concept of sustainable development of which different organizations and institutions had participated in the creation of the sustainable development concept, namely development and sustainability, preceded the creation of the concept itself. United Nations (UN) has been active in the field of sustainable development by organizing numerous conferences, taking actions and publishing various publications in order to achieve the sustainable development goals (SDGs) and the Millennium Development Goals (MDGs). The United Nations Division for Sustainable Development (UNSD) has also been established to promote and coordinate the implementation of sustainable development. Since the introduction of the concept, many international conferences, congresses, summits and meetings have been held, resulting in various declarations, reports, resolutions, conventions and agreements and dealing with the environmental problems.

The Rio Declaration contains 27 principles of sustainable development on the rights and responsibilities of the United Nations. The Declaration not only gives people the right to development, but also the obligation to protect the environment. It also emphasizes the need for cooperation and understanding between the public and private sectors, as well as civil society, as the environment is a public common good. This principle emphasizes that people should be at the heart of their efforts to achieve sustainable development and that action to prevent environmental degradation should not be delayed. At

the same time, it emphasizes that all nations have the sovereign right to use their own resources, and that polluters should bear the cost of pollution, as long as they do not endanger the environment of other nations.

The right to a good and healthy environment is a form of human right as stipulated in the 1945 Constitution of the Republic of Indonesia. The environment is integral to the human life and is an essential asset that must be managed and protected in order to function. The policies of authorities and political elites should not intervene to destroy the environment. The implementation of issued policies must favor the environment, if not favor the environmental function and the general public. Exploitation of natural resources only meets the needs of the economic market, regardless of the damage to the environment, and this has negative consequences. quality of human life (Christmas & Aminah, 2019).

Green Governance

In the current era of modernization, there are many aspects of development that ignore environmental quality and its perseverance. Since the concept of sustainable development was formally advocated, scholars have focused on studying economic growth and social justice sustainability, sustainable development and resource environmental sustainability, human development and environmental ecological sustainability, as well as DPSIR model of the sustainable development efficiency. The relationship between humans and nature is mainly reflected in two aspects: *firstly*, economic and social systems draw resources and energy from resource and environmental systems. *Secondly*, social and economic systems discharge waste into resource and environmental systems. The purpose of green governance is to regulate the relationship between humans and nature in a meaningful way. In other words, to enable balanced economic, social and environmental development at the same time (Li & Zheng, 2018).

The definition of green governance provided by scholars is considerably different because of the various research objectives. A study by Li and Zheng grouped these definitions into three categories. For the purposes of this article, green governance is defined as sustainable development. Meanwhile, Post, Rahman, and Rubow argued that green governance is long-term economic, social, and environmental sustainability. The pollution caused by enterprise's exceeds the optimum level of pollution required for social development. Therefore, green governance should avoid 'governance failures' caused by similar 'collective action dilemmas'.

In order to reduce the potential for enormous environmental damage, and to implement one of the principles of good governance related to the commitment to environmental protection, a new concept in environmental management was born. Environmental governance is a new paradigm in the environmental field and is an important part of achieving good governance. The concept of environmental governance is expected to be able to make environmental aspects the main mainstream of development in Indonesia, which both carry out economic and social aspects (Purniawati et al., 2020). Environmental governance provides a conceptual framework for regulating the behavior of public and private actors in favor of an ecologically oriented environment. This framework creates interrelationships between communities (global, regional, national and local) in relation to access to and use of environmental goods and services, and encourages specific environmental ethics. Environmental governance as a system consists of socio-cultural dimensions, political and economic interactions among many civil society actors. Good environmental governance is defined as good governance that cares about the sustainability and preservation of the environment. The government that has been trying to actualize the principles of Good Governance still requires additional requirements, namely linking all development policies with the principles of ecological sustainability (Santosa, 2008).

Regulations in Indonesia

Digital Space in Indonesia

According to Law Number 11 Of 2008 Concerning Electronic Information and Transactions (ITE Law), national development is a continuous process that must always be responsive to various dynamics that occur in society. The use of information technology plays an important role in trade and the growth of national economies to realize people's welfare. With the rapid development of technology, the government felt the need to comprehensively regulate the use of information technology in order to facilitate the growth of the digital economy and the exercise of national sovereignty over electronic information in the territory of the Republic of Indonesia.

In Indonesia, an electronic system is defined as a set of electronic devices and processes designed to prepare, collect, process, analyze, store, display, publish, transmit and/or distribute electronic information. Information technology, on the other hand, is the technology for collecting, creating, storing, processing, publishing, analyzing and/or distributing information. Also, electronic information is one or more pieces of Electronic Data, including but not limited to text, sound, images, maps, designs, photographs, electronic data interchange (EDI), electronic mail (e.g., e-mail, telegram, telex, facsimile, letters, tokens, etc.), numbers, access code, symbol, or processed perforations that is/or can be understood by a person.

Based on the Letter of the Minister of Communication and Information Technology of the Republic of Indonesia Number 3 of 2021 concerning Guidelines for the Use of Third Party Cloud Computing Services for Ministries/Institutions for Fiscal Year 2021, cloud computing is a model for the fair, simple, on-demand provisioning of a set of computing resources that can be configured together—networks, servers, storage, applications, and services—that can be rapidly provisioned and distributed at minimal cost. A third-party cloud computing service provider, on the other hand, is a private electronic system provider that provides, manages, and/or operates cloud computing services.

Environmental Governance in Indonesia

The term 'governance' in the environmental context or environmental governance sees states and societies as both objects and subjects of environmental conservation efforts. The state, as an organization with resources and power, has the ability to drastically change natural conditions. The fate of the environment is therefore determined primarily by the ability of governments to regulate their actions in a way that is consistent with ecological principles. The scope of the Indonesian environment includes the archipelagic perspective where Indonesia can exercise its sovereignty, sovereign rights and jurisdiction (Purniawati et al., 2020).

The protection and management of the environment in Indonesia is regulated under Law No. 32 of 2009 that states the environment is the unified space of all objects, forces, conditions and living things, including humans and their actions, which affect nature itself, the continuity of life, and the well-being of humans and other living things. Furthermore, the law defines environmental protection and management as systematic and integrated efforts made to maintain environmental functions and prevent pollution and/or damage to the environment. This includes planning, use, administration, maintenance, monitoring and law enforcement. Sustainable development is defined as a conscious and deliberate effort to integrate environmental, social and economic dimensions into development strategies to ensure security, skills, well-being and quality of life now and in the future (Law Number 32 of 2009 on Environmental Protection and Management).

On the other hand, regulations established in this scope are only oriented towards strengthening the "right to control the state", with almost all of them referring to Article 33 paragraph (3) of the 1945 Constitution. Giri Ahmad Taufik, a researcher at Pusat Studi Hukum dan Kebijakan Indonesia (PSHK), said the state's right to control the management of natural resources is limited. In the concept of state management, the role of each actor in managing natural resources is limited by Article 33(4) of the Constitution. By maintaining a balance between justice, sustainability, environmental awareness, independence, and progress and national economic cohesion (Putra, 2020).

For the purpose of this article it is important to mention that in order to control climate change, the Government has ratified the Paris Agreement through Law Number 16 of 2016 concerning Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change, which contains the Government's obligation to contribute to the nationally determined reductions in greenhouse gas emissions to limit the increase in global average temperature from less than 2°C to 1.5°C above pre-industrial levels, President of the Republic of Indonesia enacted Presidential Regulation Of The Republic Of Indonesia Number 98 Year 2021 Concerning Implementation Of A Carbon Economic Value For The Achievement Of Nationally Established Contribution Targets And Greenhouse Gas Emission Control In National Development.

6. Conclusions

Conclusion

The regulation regarding human rights as stipulated in Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law) as amended by Law Number 19 of 2016 are mainly focused on intellectual property rights and privacy rights. ITE Law is enacted accordingly to several human rights mentioned in the Constitution, namely Article 28D(1) on Recognition, Guarantee, Protection, Fair Legal Certainty and Right to Equal Treatment under the Law; Article 28E(2) concerning the freedom to believe in beliefs, to express thoughts and attitudes, according to his conscience; Article 28E(3) on the right to freedom of association, assembly and expression; Article 28F, on the right to transmit and receive information in order to develop the personal and social environment, and the right to retrieve, receive, possess, store, process and access information through all channels available for transmission; Article 28G (1), regarding the right to personal protection, family, honor, dignity and property under his control, and has the right to a sense of security and protection from the threat of fear to do or not do something which is a human right; Article 28J (2), that states everyone has a duty to comply with the restrictions imposed by law when exercising their rights and freedoms. Laws are designed solely for the purpose of recognizing and

respecting the rights and freedoms of others and fulfilling fair demands in accordance with moral and religious values, social safety and security; and Article 33(2) states that the sectors of production that are important to the State and affect the livelihood of the people are controlled by the State. According to the provisions of Article 33(4), the national economy is organized on the basis of economic democracy with sustainability principles and environmental insights; and the provision stipulated in Article 9 (3) of Law Number 39 of 1999 concerning Human Right that mentions "Everyone has the right to a good and healthy environment" are not explicitly recognized and governed in ITE Law.

Suggestion

In order to govern and control carbon emission produced as a result of computation as well as digitalization, the Government shall first acknowledge its importance, production flow, and impacts. Digital constitutionalism will not only recognize the existence of internet/digital ecosystem but also draw a clear line power and responsibility of both public and private sector.

References

- Celeste, E. (2019). Digital constitutionalism: A new systematic theorization. *International Review of Law, Computers & Technology*, 33(1), 76-99. <https://doi.org/10.1080/13600869.2019.1562604>
- Christmas, S. K. & Aminah. (2019). The principles of environmental based development in international law and sustainable development goals. *Jurnal Hukum Novelty*, 10(2), 101-110. <http://dx.doi.org/10.26555/novelty.v10i2.a13910>
- Craig, P. (2001). Constitutions, constitutionalism, and the european union. *European Law Journal*, 7(2), 125-150.
- United Nations. *Declaration of the United Nations Conference on the Human Environment 1972*.
- De Gregorio, G. (2020). The rise of digital constitutionalism in the European Union. *International Journal of Constitutional Law*, 19(1), 41-70. <https://ssrn.com/abstract=3506692>
- Ibrahim, J. (2007). *Teori dan Metodologi Penelitian Hukum Normatif*. Bayu Media Publishing.
- Kementerian Keuangan Republik Indonesia. (2021). Pajak Karbon Di Indonesia Upaya mitigasi perubahan iklim dan Pertumbuhan Ekonomi Berkelanjutan. *Webinar Penyelenggaraan Nilai Ekonomi Karbon Di Subsektor Ketenagalistrikan*.
- Klarin, T. (2018). The concept of sustainable development: From its beginning to the contemporary issues. *Zagreb International Review of Economics and Business*, 21, 67-94. <http://dx.doi.org/10.2478/zireb-2018-0005>.
- Pemerintah Indonesia. *Undang-Undang No. 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik*.
- Pemerintah Indonesia. *Undang-Undang No. 7 Tahun 2021 tentang Harmonisasi Peraturan Perpajakan*.
- Pemerintah Indonesia. *Undang-Undang No. 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup*.
- Redeker, D., Gill, L., & Gasser, U. (2018). Towards digital constitutionalism? Mapping attempts to craft an Internet Bill of Rights. *International Communication Gazette*, 80(4), 302-319. <http://dx.doi.org/10.2139/ssrn.2687120>
- Lewis, B. (2012). Environmental rights or a right to the environment? Exploring the nexus between human rights and environmental protection. *Macquarie Journal of International and Comparative Environmental Law*, 8(1), 36-47.
- Lex, G, Redeker, D, and Gasser, D. (2015). Towards Digital Constitutionalism? Mapping Attempts to Craft an Internet Bill of Rights. *Berkman Klein Center for Internet & Society Research Publication 2015-15*.
- Li, W. X. J. & Zheng, M. (2018). Green governance: New perspective from open innovation. *Sustainability*. <http://dx.doi.org/10.3845.10.3390/su10113845>.
- Marzuki. (2010). Konstitusi dan konstitusionalisme. *Jurnal Konstitusi*, 7(4).
- Marzuki, P. M. (2007). *Penelitian Hukum*. Penerbit Kencana

- Monserrate, S. G. (2022). The cloud is material: On the environmental impacts of computation and data storage. *MIT Case Studies in Social and Ethical Responsibilities of Computing*.
<https://doi.org/10.21428/2c646de5.031d4553>
- Purniawati, P., Kasana, N., & Rodiyah, R. (2020). Good environmental governance in Indonesia (perspective of environmental protection and management). *The Indonesian Journal of International Clinical Legal Education*, 2(1), 43-56. <https://doi.org/10.15294/ijicle.v2i1.37328>
- Putra, A. (2020). *Kertas Advokasi Kebijakan Atas UU No. 11 Tahun 2020 tentang Cipta Kerja Bidang Sumber Daya Alam*. Pusat Studi Hukum dan Kebijakan Indonesia.
- Rahayuningsih, M., Handayani, L., Abdullah, M., & Solichin, Arifin, M. S. (2021). Kajian jejak karbon (carbon footprint) di FMIPA Universitas Negeri Semarang. *Indonesian Journal of Conservation* 10(1) 48-52, <https://doi.org/10.15294/ijc.v10i1.30038>.
- Santosa, P. (2008). *Administrasi Publik: Teori dan Aplikasi Good Governance*. PT. Refrika Aditama.
- Sharma, P. & Dash, B. (2022). The digital carbon footprint: Threat to an environmentally sustainable future. *International Journal of Computer Science and Information Technology*, 14(3), 19-29. <http://doi.org/10.5121/ijcsit.2022.14302>
- Sukismo, B. (2008). *Karakter Penelitian Hukum Normatif dan Sosiologi*. Penerbit Puskumbangsi Leppa Universitas Gadjah Mada.
- Wisadha, A., Adhitya, M., & Widyaningsih, G. A. (2018). Human rights and the environmental protection: The naïveté in environmental culture. *Udayana Journal of Law and Culture*, 2(1), 73-96. <https://doi.org/10.24843/UJLC.2018.v02.i01.p04>.
- Yusa, I. G. & Hermanto, B. (2018). Implementation of green constitution in Indonesia: Guarantees of constitutional rights of sustainable environmental development. *Jurnal Konstitusi*, 15(2).