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Preface

To cite this article: 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **819** 011001

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We are glad to introduce you the proceedings of the first 2nd International Conference Earth Science and Energy (ICESE) 2020. The 2nd ICESE 2020 addresses challenges and innovations the field of Food Science, Earth Science, Environmental Science and Environmental Issue. It also provides a premier interdisciplinary platform for researchers, educators and practitioners to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of science, Energy, Food Science, Forest Science and environmental issue related.

As we may aware, the World Health Organization officially declared the novel coronavirus COVID-19 a pandemic. Governments around the world are now issuing restrictions on travel, gatherings, and meetings in an effort to limit and slow the spread of the virus. The health and safety of the author and reseacher community is our first priority and we are supporting these efforts. Therefore, the ICESE 2020 conference was held virtually on 11 November 2020.

The ICESE conference is hosted by PT. Kresna Acitya Nusantara Mediatama and co-hosted by Universitas Muhammadiyah Sidoarjo, Relawan Jurnal Indonesia. This year, we held this flexible online conference to gather experts and scholars around the globe with the aim to continue disseminating the latest advanced research in the field of Food Science, Earth Science, Environmental Science and Environmental Issue. The conference was held from Yogyakarta as the host of the event. The ICESE 2020 event is virtually implemented with a model that all invited speakers are given time to present their material for about 30-45 minutes each. It then followed by a question and answer by the participants with a direct questioning system, through chat forums and Q&A forums provided by the zoom application. Overall, the conference took 6 hours.

The number of participants who joined the zoom room was recorded around 271 participants. The authors or participants are came from 5 countries, namely Indonesia, Malaysia, Brunei Darussalam, Philippine and India. Indonesian Participants are come from 19 Provinces of 33 Provinces.

The committee of the conference are honored to have invited following renowned experts as our keynote speakers. Prof. Dato' Dr. Kamaruzzaman Sopian from Universiti Kebangsaan Malaysia; Assoc Prof Ir. Ts. Dr. Mohd Nazri Mohd Warip, P.ENG, CENG, CITP from Universiti Malaysia Perlis; Dr. Ir. Jamaaluddin, M.M from Universitas Muhammadiyah Sidoarjo.

We are glad to share with you that around 163 pre-registered authors are submitted their work in the conferences. However, its about 96 papers are selected and accepted for the conferences. All the papers have been through rigorous review by a panel of reviewers who provide critical comments and corrections, and have contributed substantially to the improvement of the quality of the papers to meet the requirements of International publication standard and IOP EES Scope.

We would like to express our sincere gratitude to the Chairman, the distinguished keynote speakers, as well as all the participants. We also want to thank the publisher for publishing the proceedings. May the readers could enjoy the gain some valuable knowledge from it. We are expecting more and more experts and scholars from all over the world to join this international event next year.

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The government policy on the covid-19 handling viewed from environmental and biodiversity perspectives

To cite this article: Suwari Akhmaddhian *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **819** 012044

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The government policy on the covid-19 handling viewed from environmental and biodiversity perspectives

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Abstract. This legal analysis aims to analyze the government policy on the Covid-19 handling viewed from the environmental and biodiversity perspectives. This study applied a normative juridical research method. The results showed that Large-Scale Social Restriction policy makes the environment and biodiversity better as the industrial and economic activities stop temporarily and the production activities stop exploiting the environment. Finally, it can be concluded that the government policy in the form of Large-Scale Social Restriction has positive impacts on the environment and biodiversity in several places, especially in urban areas, so that the policy can be applied in the future.

1. Introduction

On March 11, 2020, the World Health Organization (WHO) declared that the Corona Virus Disease 2019 (COVID-19) is a Global Pandemic and constitutes a Public Health Emergency of International Concern (PHEIC) on the basis of the massive development of the positive cases of COVID-19 reported by several countries [1]. The first case of Covid-19 in Indonesia was identified on March 2, 2020. For that reason, the government issued Presidential Decree No. 11 of 2020 on the Determination of a Public Health Emergency due to the Corona Virus Disease 2019 (COVID-19) on March 31, 2020 and Presidential Decree No. 12 of 2020 on the Determination of Non-Natural Disaster of the Corona Virus Disease 2019 (COVID-19) Spread as a National Disaster on April 13, 2020 (Disantara, 2020).

In preventing the spread of the Covid-19 in Indonesia, the Government of the Republic of Indonesia can refer to Law No. 6 of 2018 on Health Quarantine. Based on Article 49 of this Law, quarantine can be in the form of House Quarantine, Regional Quarantine, Hospital Quarantine, or Large-Scale Social Restriction carried out by Health Quarantine Officials. However, in this case, the Indonesian Government applied Large-Scale Social Restriction, instead of regional quarantine, as stipulated in Government Regulation (PP) No. 21 of 2020 on Large-Scale Social Restriction.

According to Article 1 of Government Regulation No. 21 of 2020, Large-Scale Social Restriction is a restriction on certain activities in an area suspected of being infected with the Covid-19 to prevent the spread of the virus. The policy taken by the Indonesian Government is different from other countries, such as America, Malaysia, France and India, in which they enforce Regional Quarantine. The government does not apply a regional quarantine due to economic consideration. Here, the



government prefers to limit the operational activities of economic facilities, such as markets, shopping centers, and offices. Meanwhile, as a response to the Large-Scale Social Restriction policy, school activities ranging from kindergarten to tertiary level are shifted to online learning. Up to November 9th, 2020, the number of people confirmed to be positive of the Covid-19 in Indonesia was 440,569 people. The data was collected from the official government website (www.covid19.go.id).

Table 1. The number of people confirmed to be positive of the Covid-19 in Indonesia

No.	Status	Number	Percentage	Note
1.	Treatment	53.614	12.20 %	
2.	Recovered	372.266	84.50 %	
3.	Death	14.689	3.30 %	
	Total	440.569	100 %	

By enforcing Large-Scale Social Restriction, instead of regional quarantine, the government does not seem to be serious in handling Covid-19 and also seems to sacrifice the lives of the people for the purpose of economic activity. As a result, the number of deaths due to the Covid-19 is more than 14.000 people.

2. Methodology

This study applied This study applied a normative juridical research method which is a method based on secondary data in the form of legislations, theories, scientific articles, newspaper articles, and other secondary sources. The legislations used in this study include Law No. 6 of 2018 on Health Quarantine, Government Regulation (PP) No. 21 of 2020 on Large-Scale Social Restriction, Presidential Decree No. 11 of 2020 on the Determination of a Public Health Emergency due to the Corona Virus Disease 2019 (COVID-19), and Presidential Decree No. 12 of 2020 on the Determination of Non-Natural Disaster of the Corona Virus Disease 2019 (COVID-19) Spread as a National Disaster.

3. Result and Discussion

Public policy is a series of actions/activities proposed by a person, group or government in a certain environment to overcome various obstacles/difficulties in order to achieve the expected goals (Agustino 2008: 7). Meanwhile, according to Wiliam N. Dunn, public policy is a complex dependence pattern of mutually dependent collective choices, including decisions not to act, developed by government agencies or offices (Dunn 2003: 132). Here, public policy involves everything stated and done, or not done, by the government. Besides, public policy can also be defined as policy developed by government agencies and offices (Andreson 1979: 3).

Environmental problems can be viewed from various aspects, including medical, technological planning, environmental engineering, economic, and legal aspects. As stated by Siti Sundari Rangkuti, the legal aspects of environmental management and natural resource conservation in Indonesia need to be studied intensively as environmental management is inseparable from legal aspect (Khotijah 2010: 356). Yet, this does not mean that legal experts can deal with environmental problems alone without any intervention from other disciplines related to environmental field (Khotijah 2010: 371). Natural resource is a sensitive issue that can cause conflicts among citizens or with the state (Tignino 2011: 193).

In addition to paying attention to its legality, natural resource management also need to pay attention to the environmental aspects being studied so that the impacts on other living things can be identified (Silalahi 2002: 29). For instance, water resource conservation requires a comprehensive policy so that its quantity and quality meets human needs. The theory used in this study is the Government Authority Theory. Based on this theory, the authority coming from the legislation is obtained through three ways, namely [2]:

- a. Attribution – an authority obtained by a government organ directly from the legislation.

- b. Delegation – a delegation of authority from one government organ to another government organ.
- c. Mandate – occurs when a government organ allows another government organ to carry out his authority on his behalf.

Government policies must be based on the principles of good governance. In this case, good governance must be transparent, accountable, fair, and responsible [3]. In its implementation, the government must pay attention to the principles of good governance consisting of the principle of legal certainty, the principle of public order, the principle of public interest, the principle of openness, the principle of proportionality, the principle of professionalism, and the principle of accountability. [4]

The Impacts of the Government Policy in Handling Covid-19 on the Environment and Biodiversity. The outbreak of this pandemic could be just one way for the earth to call for human attention for a moment. As stated by Niel Makinuddin, an activist of Yayasan Konservasi Alam Nusantara, earth seems to be sending a message to human, “please stop exploiting me for a moment. Give me a moment to breathe and recover from various damages that you have done.” In the same vein, Barnabas Ohoiwutun (2020) argues that if the Covid-19 is a sign given by the earth due to the excessive human interference, then washing hands, wearing masks, and applying social distancing is not enough to overcome it [5].

As previously mentioned, the government applies Large-Scale Social Restriction policy in handling Covid-19 in Indonesia. Referring to this policy, the movement of people and goods for a certain province or district/city (which has a significant number of cases) is limited. Even though restrictions are enforced in certain areas, the level of human activities varies in each area so that its impact on the environment or biodiversity will also be varied.

For example, when the authors interviewed several communities/farmers in several villages in Kuningan District, they said that their daily activities of farming run as usual despite the outbreak of the Covid-19. However, if you look at printed or electronic media, human activities in several big cities, such as Jakarta, have changed significantly with the enforcement of Large-Scale Social Restriction (PSBB). Therefore, the impact of the government policy in handling Covid-19 on the environment can only be seen in big cities or certain destination areas (such as tourist attractions), not in rural areas.

Referring to various sources, the government policy in handling Covid-19 has both positive and negative impacts on the environment and biodiversity, namely [6]:

- a. The decrease of NO₂ concentration – the suspension of most industrial activities has decreased the level of air pollution. Besides, satellite imagery found a significant decrease in global concentrations of nitrogen dioxide (NO₂): a gas emitted from car engines and manufacturing plants which is responsible for a poor air quality in various major cities, such as in Rome, Madrid and Paris (Zambrano-Monserrate, et al. 2020). Zambrano-Monserrate et al. also add that NO₂ concentration during quarantine in Wuhan and China were decreased by 22.8 µg/m³ and 12.9 µg/m³, respectively; likewise, in other 365 cities.
- b. The decrease of CO₂ emission – Similar to NO₂, carbon dioxide (CO₂) emissions have also been decreased during the Covid-19 pandemic. When economic activity stops, CO₂ emissions decrease. For the last time, this condition happened during the 2008-2009 financial crisis. According to Carbon Brief, in China, carbon dioxide emissions decreased by 25% when lockdown was implemented. However, this is only happened temporary.
- c. A new world for wildlife – some animals, especially those sensitive to humans, tend to have sprung up. The reduced number of vehicles passing on the road gives a space for small creatures, like hedgehogs, to emerge from their hibernation.
- d. The decrease of wildlife trade – conservationists hope that the Covid-19 pandemic will help decrease the global wildlife trade which is responsible for the extinction of a number of species. The virus is predicted to be originated in Wuhan animal market which sells live animals and is a center for both legal and illegal trade of wildlife.
- e. The increased level of water quality – shortly after the enforcement of lockdown in Italy, a photo

of a clear canal in Venice was spread around the world. Besides, as the cruise ships resting for a while, the oceans experience a reduced noise pollution so that it can reduce the stress level of marine creatures, such as whales. In other parts of the world, such as Acapulco (Mexico), Barcelona (Spain), and Salinas (Ecuador), coastal waters become cleaner (Zambrano-Monserrate et al. 2020).

f. The increase of plastic waste – one of the worst impacts of this pandemic on the environment is the increasing use of single-use plastics from medical equipment, such as gloves, to other plastic packaging. During this pandemic, people are more likely to choose packaged foods, cafes no longer use reusable cups in an effort to stop the spread of the virus, etc. Quarantine has also triggered consumers to shop online so that household organic waste and plastic waste have increased [7]. Besides, quarantine has caused waste recycling activities in several countries, such as the United States, to stop. This condition will certainly increase the pile of waste.

g. The issue of the climate crisis is neglected temporarily – the Covid-19 pandemic has marginalized the issue of the climate crisis. However, experts warn that the important climate decisions should not be ignored, even if the UN climate conference is postponed until 2021. Although emissions have decreased during this pandemic, unfortunately we are not seeing a broad and long-term climate change.

In many protected areas in various parts of the world, the outbreak of the Covid-19 has prompted conservation area managers to close their conservation areas. This condition has certainly been beneficial for wildlife sensitive to human as their stress levels will decrease [8]. The description on the impacts of the Covid-19 pandemic and its policies took many cases from several countries. However, if it is drawn to a smaller scope, namely in Indonesia, the same conditions are likely to occur, such as a decrease of air pollution in big cities, an increase of water quality in several coastal ecosystems, and a decrease of stress level of wildlife. However, in some places, the government policy in handling the Covid-19 may not have a significant impact on the environment and biodiversity, such as in rural areas.

4. Conclusion

The earth's condition is improving due to the lower levels of global pollution and emission. Yet, it is not because of certain policies, but it is because of the cessation of industrial activities during the Covid-19 outbreak. The government policy in the form of Large-Scale Social Restriction has positive impacts on the environment and biodiversity in several places, especially in urban areas, so that the policy can be applied in the future. The Large-Scale Social Restriction can be implemented regularly so that the environment becomes good and healthy in accordance with the mandate of the constitution.

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