

Covid-19 Crisis and Environmental Law: Opportunities and Challenges

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ABSTRACT

With the outbreak of Covid-19 globally, many measures were taken to reduce this epidemic's effects. The most important of these was the advice to stay home, which became the main line of witness slogans. With this recommendation, schools, offices, and factories were closed. The Covid-19 epidemic has had a profound effect on people's lifestyles and is likely to have other consequences. The article's main question is: What opportunities and challenges do the Covid epidemic pose to the environment, and how does it affect environmental rights? Quarantine policies have led to reduced production and transportation and a significant reduction in the pollution caused by these behaviors. Other effects may become apparent immediately. Covid-19 may increase survival damage in the future against contamination. Other developments may occur, including rethinking environmental and economic values and rethinking how resources are allocated and consumed, as Covid-19 affects the global, national, and local economies. Considering each of these consequences and their effects can help to develop environmental law and formulate effective strategies.

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1. Introduction

The Covid-19 epidemic has drawn attention to the lack of connection between humans and modern societies' environment. As an animal-derived disease, Covid-19 is the latest disease on the long list of what Jared Diamond calls "deadly gifts from our friend animals."¹ It has long been clear that human health is inextricably linked to animal life and the environment, but this phenomenon has been exacerbated by increasing environmental degradation, industrialization, and urbanization. The origins of the Covid-19 epidemic are the international community's inability to protect forests,

¹ Jared Diamond, *Guns, Germs and Steel: The Fates of Human Societies* (New York: W. W. Norton & Company, 1997) at 45.

wildlife, and land use, leading to the destruction of traditional buffer zones that have previously been used to separate humans from animals, habitats, and agents. Their pathogen was used. In its current state, environmental law, which is limited to some traditional legal structures, has failed to adopt an ecosystemic approach that provides an interrelationship between land health, humans, and biodiversity. More specifically, if the hypothesis that Covid-19 is released from a live animal market in Wuhan, China, is confirmed, it is a painful demonstration of the inability of existing environmental rights to protect wildlife. The possibility that, in the meantime, the anteater has been the host medium draws more serious attention to the shortcomings of international treaties, and in particular, the International Convention on Endangered Species of Wild Fauna and Flora. Simultaneously, the Convention mentions all eight species of anteaters in its annex and bans their international trade. In 2016, anteaters continued to be the most trafficked mammal in the world².

This paper seeks to explain the environmental opportunities and challenges posed by the Covid-19 pandemic and analyze the effects that the disease can have on environmental behaviors and values. However, it should be noted that eye drawing A full measure of the opportunities, challenges, and environmental consequences created requires the passage of time and the emergence of other environmental effects and consequences of the Covid-19 epidemic. In this regard, scientific limitations should not be taken lightly, especially since the study of environmental problems is scientifically challenging. Research on the environment and the effects of disease outbreaks on the environment is by no means an easy task under the control of a laboratory because, in the study of the environment, large holistic systems are studied in which several interconnected elements there are. Also, the effects of causal relationships between phenomena are delayed; the release of pollutants today will lead to problems in the future, affecting the response to environmental problems. As the Hague Tribunal stated in the case of the *Organa Foundation*³. The Netherlands Government, regarding the Dutch government's actions connected with climate change in 2015. According to the international regulations, "An oil tanker has to shut off its engines before shore not to

² United Nations Environment Program, "UNEP Frontiers 2016 Report: Emerging Issues of Environmental Concern", (2016), pp. 22-24. available at: https://environmentlive.unep.org/media/docs/assessments/UNEP_Frontiers_2016_report_emerging_issues_of_environmental_concern.pdf.

³ The case of the *Organanda Foundation* against the Dutch government was a case that was heard by the Hague District Court in 2015. In this case, the Uganda Foundation and a group of nine hundred Dutch citizens filed a lawsuit against the Dutch government to force the government to reduce emissions. Greenhouse gases and in particular CO₂. The court ruled that the Dutch government should reduce greenhouse gas emissions by at least 25 percent by 2020 compared to 1990 in order to fulfill its duty to protect Dutch citizens from the imminent risk of climate change. The main issue in the case was whether the government had the task of reducing greenhouse gases further than set out in the Dutch climate policy. In strengthening its argument for the government's obligation to care for its citizens, the *Organa Foundation* referred to three legal bases: Articles (2) and (8) of the European Convention on Human Rights; Article (21) of the Indian Constitution and the general reliance on care in the *Held Civil Code*. The district court ruled that the *Oregon Foundation* could not teach the first two pillars, the European Convention on Human Rights and the Dutch constitution. However, the court ruled that the government had violated the statute of limitations under the *Civil Code*, which requires precautions to be taken to reduce dangerous situations. However, the court relied on UN and EU agreements on climate change, in addition to the principles of international law and the science of climate change, to define and explain the scope of the government's duty to take care of climate change. The Court held that "international principles" in domestic law had a "reflective effect". The Court can therefore interpret interpretations of the principles and obligations under international law in cases where domestic law has set open and ambiguous standards. On this basis, the court concluded that the Dutch government failed in this case because of a goal of 17% reduction in greenhouse gases compared to 1990, contrary to a court ruling in 2015 that required the government to reduce greenhouse gas emissions by 25%.

damage the dock. If the engines are turned off when the berth is visible, the tanker will soon damage the berth". Therefore, since the human understanding of complex biological obligations and systems is not theoretically complete, providing an accurate scientific view of the environment's current state and the effects of diseases such as Covid-19 requires scientific tools and methods.

2. Opportunities

It is safe to say that the Covid-19 epidemic provided a golden opportunity to review many environmental behaviors and, consequently, to review many environmental rules. Accurate identification of these opportunities and providing a deeper analysis of the effects of these opportunities on environmental law requires time and a holistic view of the situation, but here are some of the most important ones.

2.1. Reviewing the Relationship between Man and Nature

Perhaps one of the most important and long-term environmental effects of Covid-19 disease is the emergence of a new kind of mental awareness of Earth's human place. The Covid-19 epidemic has shattered the assumption of human domination of nature. In this regard, many old theories, including Gaia's theory⁴, were recalled. According to Lovelock, all creatures on Earth form a single, self-regulating system, and it is the entire planet Earth that is considered living, and each of the creatures is like the cells of this living being. Thus, not only are organisms affected by their planet's environment, but they also affect the environment by being alive. In light of this theory, the Covid-19 epidemic is just a "safety response" to the environmental horrors that humans cause⁵. It has been shown that humans can not account for the consequences of the tens of thousands of complex chemical and biotechnological compounds it produces each year through economic activities, their synergistic effects, and their unpredictable effects, harmful environmental pollution, and the destruction of nature. Enough to anticipate and deal with them. Covid-19 clearly showed this human inability. This epidemic reminded us that the current weak and unstable civilization must adapt to the planet's ecological capacity and limited resilience and not go beyond it⁶.

2.2. Reducing Greenhouse Gas Emissions

⁴ According to Gaia's theory, the whole being is more than just its implementation, and one can learn about the whole and the sharp sum simply by looking at each component, but a holistic approach must be taken to a general understanding. This approach, which differs from individualistic or humanistic approaches, respects other components in nature and emphasizes that the interaction of living structures does not take place only within material environments and through material factors. , But also immaterial factors play a role in this. Two important points that are emphasized in this theory are that the continuity of stability and survival of the ecosystems on the planet depends on the existence of certain boundaries and the second is that living organisms that with their environment They interact well and live in a kind of peaceful and constructive coexistence with them, they make a lot of interest in the following years and give their children a higher chance of survival, Yousef Ghavidel Rahimi, Gaia Theory and Shape Taking Your Attitudes in Environmental Sciences, Journal of Environmental Science, 33, No. 41 (2007), pp. 84-55

⁵ Mohammad Bidhendi and Mohsen Shiravand, A Study of Environmental Ethics by Processing Gaia Theory and the Rule of Truth Expansion of Truth, Journal of Religious Anthropology, 12, No. 32 (2015), p. 81.

⁶ Sergey N. Bobylev, "Environmental Consequences of COVID-19 on the Global and Economics", Population and Economics, No. 4, (2020), at 43-48. Russian 53279.

Another major environmental impact of Covid-19 disease has been a significant reduction in air pollution and reduced greenhouse gas emissions due to quarantine and closure policies. According to statistics, air quality in major cities around the world improved significantly in March and April. Air quality has improved by factories and vehicles due to reduced emissions of carbon dioxide (CO₂), nitrogen oxides (NO_x), ozone (O₃), and particulate matter (PM)⁷. During the same period, global air traffic fell by 60 percent. Overall, this reduction in the emission of various pollutants has led to a temporary decline in carbon dioxide emissions compared to pre-crisis levels, and this has raised hopes that the international community can, in practice, find ways to reduce it in the long run significantly to prevent the impending and more severe consequences of climate change. Accordingly, as long as the Covid-19 crisis keeps economic activity to a minimum, emissions will be reduced. However, it is simplistic to assume that this is a stable and sustainable environmental development parallel with resolving the crisis and the resumption of economic activities, releasing pollutants and greenhouse gases into the level returns before that. Hence, many environmental activists have called for governments to seize this opportunity by reviewing regulations and enacting new regulations, packages, and incentives for transport companies and industrial plants to reduce greenhouse gas emissions. These regulations can prevent the level of pollutant emissions from returning to pre-crisis levels⁸.

2.3. Facing the Climate Change

One of the Covid-19 outbreak achievements is the possibility of tackling climate change in terms of governments responding to the epidemic. This is especially evident when comparing responses to the Covid-19 epidemic with responses to climate crises. Global health and climate change are both issues of collective action, and there are many similarities. For example, both crises rely heavily on scientific knowledge and require case studies that may not have tangible collective consequences and suffer from behavioral and policy ambiguity. The World Health Organization's warnings about the alarming level of action by governments seem strange to those involved in climate change⁹. However, governments' unprecedented measures to curb the outbreak of Covid-19 have been more severe and effective than measures taken to reduce greenhouse gas emissions.

Until recently, it was thought that a serious lifestyle change would be impossible to reduce climate change. It has been argued that economic growth has always taken precedence over environmental protection. It has always been said that governments do not have the necessary funds to finance energy transfers in countries and abroad. However, the Covid-19 epidemic suddenly showed that it all became possible quickly and on a large scale when the danger became apparent. The literature used to refer to both problems may be the same - crisis, emergency, etc. - but their implications and implications in the context of climate change have been more than fearful¹⁰. When responses to climate change are compared to responses to the Covid-19 epidemic, the international community's inability to take decisive action to resolve the climate change

⁷ Robert Hamwey, "Environmental Impacts of Coronavirus Crisis, Challenges Ahead", UNCTAD, 2020, available at: <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2333>

⁸ Ibid

⁹ Emile N. Houngbo, "COVID-19 Pandemic and Climate Change: A Thought", (2020), available at: <https://www.researchgate.net/publication/340647628>.

¹⁰ See: https://www.who.int/dg_speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--11-march-2020.

crisis becomes even more apparent¹¹. From this perspective, governments can, with greater courage and toughness, advance global programs to combat climate change after controlling and controlling Covid-19 disease and relying on its experiences.

2.4. Reviewing Economic Models Considering Sustainable Development

Another opportunity that the economic crisis and the economy's closure provide for the environment is to review the economic model with a sustainable development approach. The current model, which is based on the high export of anti-environmental raw materials and leads to the analysis and destruction of countries' capital and natural resources and various environmental pollution, should be reconsidered. In oil-rich countries, the sharp drop in oil prices in March 2020 clearly showed that a model based on the export of natural raw materials, in addition to environmental effects, can have many welfare effects on the population and the economy in times of crisis. Writers have long spoken of quitting oil addiction, but a lack of political will in many countries has prevented a shift in attitudes toward non-oil economies¹².

Solutions to address these issues are clear and have been repeatedly emphasized by decision-makers and academia, including diversification of revenue sources, modernization of industries and machinery, initiative and innovation, scientific activities, and use. Advanced value-added technologies, all of which lead economies to transition to a sustainable economic and environmental model. What is clear is that the latest model will have less environmental degradation than the previous model. In this regard, the reduction of exploration and extraction projects of natural resources, the reduction of travel, and extreme tourism pressure can help reduce the analysis and destruction of natural resources and reduce urban pollution¹³. In the post-Covid-19 era, the world needs to develop new economic and administrative mechanisms to reduce extremist tourism.

3. Challenges

The Covid-19 epidemic provided some early opportunities to reform environmental law and develop more effective regulatory strategies in its various aspects and performance. However, this epidemic also brought many challenges. The following are some of the most important challenges of this crisis for the environment and environmental rights.

3.1. Increase in Non-Recyclable Waste

The volume of non-recyclable waste has increased with the outbreak of Covid-19 disease. The sharp decline in agricultural and fisheries exports has led to large amounts of organic waste. Local waste, such as masks and disposable gloves, and hospital waste, is obvious because, in many cities, municipalities have stopped their recycling activities for fear of spreading the virus in recycling centers. Food retailers have resumed plastic bags, citing health concerns about consumers' use of paper edges. Besides, due to the advice to keep people at home, many citizens have increased their online food ordering

¹¹ Leslie-Anne Duvic-Paoli, "COVID-19 Symposium: The COVID-19 Pandemic and, 2020, <http://opiniojuris.org/2020/the-Limits-of-International-Environmental-law-03/30/covid-19-symposium-the-covid-19-pandemic-and-the-limits-of-international>.

¹² David Andelman and Guy Deutcher, "Kicking the Oil Addiction: Facts and Fiction", *World Policy Journal*, No. 32 (2), 2015, at 53-61. <https://www.researchgate.net/publication/279251307>.

¹³ Ayu Aleksandrova, "Modern Features of Tourism Spatial Development", *Geography and IoTISI*, No. 2, 2018, at 12-16.

and door-to-door delivery with disposable packaging. This has created acute challenges for the waste management industry, especially as it operates at a limited capacity due to the Covid-19 crisis. With the introduction of import restrictions in countries and a sharp decline in transport companies' activities, the disease has greatly increased the volume of non-portable agricultural products and fisheries. Many export-oriented manufacturers produce large quantities of their products for sale in the domestic market; Therefore, the level of organic waste has increased significantly. As this volume of waste decays, methane (CH₄) emissions, a greenhouse gas from decaying products, are expected to rise sharply during the crisis and in the months that follow¹⁴.

3.2. Ecosystem Hazards

Natural ecosystems and protected species are endangered during the outbreak of Covid-19. Due to public closures and the implementation of quarantine policies, the conservation and monitoring of natural ecosystems have been temporarily suspended. In many countries, rangers in national parks and land and sea conservation areas must stay home on public holidays and leave these areas unattended. Their absence has led to an illegal increase in deforestation, wildlife hunting, and hunting. However, according to some experimental observations and in parallel with reduced traffic and human activity, some wild species have moved to rural areas with special habitats such as national parks.¹⁵ Also, the cessation of ecotourism activities has exposed natural ecosystems to illegal harvesting and encroachment. Besides, since ecotourism is often the main economic foundation in many places; Rising unemployment due to the Covid-19 epidemic may lead many households to divert resources from fragile and unstable ecosystems as they seek alternative ways to provide food support to their families¹⁶. According to the World Travel and Tourism Council, the Covid-19 pandemic has led to the loss of 50 million jobs in the travel and tourism industry.

3.3. Effects on Indigenous Rights

Many indigenous people live in remote and impoverished areas that lack adequate health care services, and limited resources and facilities in the Covid-19 crisis can make it more difficult for Indigenous people to access and benefit from health care. In the meantime, older Indigenous people are exposed to more significant harms. Regardless of the need to protect their right to life, pay attention to the important role in preserving and transmitting traditional indigenous knowledge and culture and traditions to future generations are essential¹⁷. In the Amazon region, an indigenous advocacy organization called COICA approaches the indigenous genocide of indigenous peoples due to indigenous communities' lack of access to health care and governments' failure to take action to protect indigenous peoples during a Covid-19 outbreak. COICA has also spoken, notwithstanding the lack of access to health care services, the lack of environmental information and the lack of access to health care information in the indigenous language, and in particular, the lack of up-to-date research on, In particular, preventive measures for indigenous communities by governments during the outbreak

¹⁴ Robert Hamwry, an eit, at 4

¹⁵ Richard T. Corleti et al., "Impacts of the Coronavirus Pandemic on Biodiversity, (2020), available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC71392>

¹⁶ Sotiris Folinis and Theodore Metaxas, "Tourism: The Great Patient of Coronavirus COVID-2019", (2020), available at: <https://www.researchgate.net/publication/340771406>.

¹⁷ UN Department of Economic and Social Affairs, "Indigenous Peoples and The Covi-19 Pandemic: Considerations", 2020, available at: https://www.un.org/development/desa/indigenouspeoples/wpcontent/uploads/sites/19/2020/04/COVID19_IP_considerations.pdf

of the disease is evident. This means that many indigenous peoples who speak minority languages or those who do not have access to the World Wide Web are denied reliable and reliable environmental and health information from reliable sources. It can be considered as the main role of environmental information for the natives¹⁸.

Indigenous, rural, and coastal populations also rely on the sustainable use of the local environment and its natural resources, whether these farmers are small farms or small, medium, and medium-sized enterprises engaged in biological trade, forestry, and fisheries. Ecotourism services are active. As the crisis disrupts their connection to national and international demand markets, rural producers, many of whom support the entire household, can now fully maintain business and livelihood models¹⁹. They are not themselves. If the crisis persists, many will be forced to abandon existing sustainable production to earn money quickly in domestic markets, potentially leading to more poverty and over-exploitation of natural resources and pressure on the ecosystem to destroy biodiversity is disappearing in the lands occupied by the natives. With the decline in exports of agricultural products and fisheries, the production level has decreased, which has led to a significant increase in the level of unemployment in both sectors.²⁰ Many post-harvest processing sector workers are indigenous women heads of households in dire financial straits due to these problems, especially women living in developing countries with no social security systems²¹.

3.4. Weakening Environmental Impact Assessment

One of the fundamental mechanisms of environmental law is evaluating the environmental effects of projects and actions and evaluating their health effects. The advantages of this in environmental law are a significant reduction in non-recyclable waste and resource depletion, a significant reduction in pollutants' emission into the environment, green design, and eco-friendly products to minimize their environmental impact. In production, consumption, and discharge to the environment, monitoring the environmental impact of raw materials and increasing environmental awareness among employees and workers.²² Responses to Covid-19 disease may have unintended environmental effects themselves, for example, the hasty construction of hospitals without careful environmental assessment or repeated spraying of disinfectants on a scale Extensive in cities to eradicate the virus without assessing its environmental impact.

All of this, especially in developing countries, may disrupt the process of sustainable development. Besides, the virus may prevent some environmental treaties from being implemented. For example, reporting obligations with the capacity building's financial commitments may not be met due to changing priorities. Second, the Covid 19 epidemic is likely to delay global efforts for environmental action and certainly divert the policy attention needed in 2020. It was predicted that 2020 would be a year of change in international environmental law. Plans were made for an intergovernmental summit, including the 26 COP climate program in Glasgow with ambitious climate goals, the 15

¹⁸ Coordinadora de las Organizaciones Indigenas de la Cuenca Amazonica (COICA).

¹⁹ See <https://www.culturalsurvival.org/news/9-ways-indigenous-rights-are-risk-during-covid-19-crisis>.

²⁰ Robert Hamwey, op. cit. at 5.

²¹ Lucas Ferrante and Philip Fearnside, "Protect Indigenous Peoples from Covid-19", *Science*, Vol. 368, Issue 6488, 2020, at 251-252, available at: <https://www.researchgate.net/publication/340696998>.

²² Gurumurthy Vijayan Iyer, "Environmental Health Impact Assessment (EHIA) Process for Coronavirus' Impact Towards Sustainable Development", 2020, at 17. <https://www.researchgate.net/publication/340582707>.

COP biodiversity program in Cumming, China, to agree on a post-2020 global biodiversity framework, as well as negotiations. Following the adoption of a new marine biodiversity treaty in areas outside the national governments' jurisdiction, the Covid-19 pandemic has created considerable ambiguity about holding important meetings, delaying action, and missing opportunities. Has been. In this regard, the reduction of governments' welfare and economic revenues due to the crisis may reduce the budget and political will to protect the environment²³.

4. Effects and Developments

Some of the opportunities and challenges that Covid-19 disease poses to environmental law were explored in the previous paragraphs. This section discusses some of the impacts and developments that these opportunities and challenges have on environmental law. In fact, in this section, four types of consequences that are targeted by the Covid-19 epidemic are explained: 1- Normative environmental developments; 2- Demographic effects and change in environmental criteria; 3- Review of values; And 4- Reviewing the allocation of resources (including resources that can be spent on the environment with other welfare facilities). Each of these examples has potentially important implications for environmental law presuppositions, environmental law's ability to regulate the environment efficiently, and how humans interact with the environment in the years and decades to come.

4.1. Normative Environmental Developments

In a general sense, environmental law seeks to shape human behavior in the light of its environmental effects. However, what can be deduced from the challenges mentioned in the previous paragraph is that almost all environmental laws are designed to be implemented in non-epidemic situations, and the environmental effects of human behavior are based on normal situations. Nor have they predicted epidemic assumptions. As a result, fundamental changes, whether in human behavior or the effects of these behaviors, can upset environmental laws and, in fact, make environmental laws regulate behavior with the effects of behaviors that no longer exist externally. The Covid-19 pandemic has disrupted normal behavior and, consequently, the implementation of environmental laws. As mentioned, some behaviors have decreased (such as transportation, emissions, tourism under pressure from national parks, and some other environmental behaviors (such as the production of the medical, hospital, and plastic waste). There is a variety of environmental behaviors, pre-approved regulatory strategies - such as waste management systems to deal with hazardous medical waste, air pollution policies to address conventional pollution levels, or emissions policies to address Climate change: However, these strategies have been developed for non-epidemic times, and many of them will need to be reviewed in the coming months and years²⁴.

In particular, concerning environmental law, the most important question that arises is whether the measures taken to address the dangers of Covid-19 mean the creation of a new norm, with only a few exceptions to the status quo. Before the epidemic is considered? The importance of answering this question lies in the fact that any

²³ Ibid, at 17.

²⁴ The Psychology of Environmental Law NYU Press, forthcoming 2021, (Discussing the Central Role Behavioral Assumptions Play in Environmental Law).

perception of the status quo plays an important role in law in general and environmental law. Let's consider that the suffering caused by this epidemic is much greater than the pleasantness that comes from its opportunities and achievements. Identifying the current situation can be a solid basis for assessing the damage and subsequent achievements and formulating laws. And provide new environmental regulations. From this perspective, recognizing the current situation is an important social and psychological action that involves choosing from several possible reference points. This point in the context of the epidemic raises the question of what level or levels of environmental quality should be considered reference points²⁵? More specifically, have recent widespread behavioral changes in response to epidemics – such as cleaner air and cleaner water, increased animal populations, revitalized national parks, reduced greenhouse gas emissions, increased hazardous plastic waste, reduced transport use? And does public transportation and the reduction of incentives to extract natural resources create a new norm according to which future environmental policies should be evaluated?

The answers to the above questions become clearer by referring to the anti-erosion principle, one of the influential environmental policy principles. In simple terms, the anti-erosion principle is based on the premise that environmental quality should not be degraded and eroded, and to achieve this goal, and it emphasizes increasing environmental austerity and standards.²⁶ For example, the US Clean Water Act - one of the primary goals of “preserving the chemical, physical, and biological integrity” of a country's water is interpreted to impose anti-erosion requirements to protect water quality strictly. Slowly now, whether these anti-erosion requirements can also be used to support the environmental quality improvements caused by Covid-19? - Like improvements due to declining industrial production, reduced visitors to national parks, and restrictions on transportation and travel? Although the anti-erosion principle has a long history in the context of conservation, sustainability, and other environmental traditions, it has never before dealt with this type of widespread global behavioral change and its dramatic effects on environmental quality. However, do these developments mean that this is a unique opportunity to consolidate environmental progress through the continued implementation of anti-erosion requirements or apply a general principle to exceptional, irrational conditions to achieve biological goals? Is the environment unsuitable? Legal decision-makers in a wide range of environmental contexts will soon face these dilemmas²⁷.

One of the important dimensions of this puzzle is that, like other law areas, environmental law norms can apply, which means adapting to continuous changes in risk and behavior. In general, environmental law cannot predict fundamental and seismic behavioral changes, meaning that regulatory bodies have turned their attention to normal conditions rather than to various stages such as the epidemic and post-epidemic stages. In the main environmental norms, no measures are envisaged to deal

²⁵ Arden Rowell and Josephine van Zeben, “The New Status Quo of the Paris Agreement: The Psychological Impact of the 2 Degrees Aspiration”, *European Journal of Risk Regulation*, Vol. 5, (2016), at 51. Electronic Copy available at: <https://ssrn.com/abstract=2793916>.

²⁶ Robert L. Glicksman, “The Justifications for Nondegradation Programs in M. Prieur & G. Sozzo, (eds), *U.S. Environmental Law*”, Brussels: Bruylant Publishing, (2012) at: https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=1679&context=faculty_publications.

²⁷ EPA, *Water Quality Standards handbook*, Chapter 4: Antidegradation, (2012), available at: <https://www.epa.gov/sites/production/files/2014-10/documents/handbookchapter4.pdf> (Providing a History of Antidegradation Policy in Water Quality, and an overview of Current Approaches to Antidegradation).

with businesses' gradual return and sudden emissions due to increased travel resumption. While some environmental laws provide for exemptions and allow suspensions during emergencies, these regulations are designed to deal with imminent temporary threats and, like dual switches on and off, Logic operates zero and one applied to a situation not²⁸.

This is likely to make enforcement difficult in the coming months and even years and lead to many behavioral changes. For example, how will environmental impact assessments be done at the end of the epidemic? For example, in the United States, under the National Environmental Policy Act, if the federal government decides to build a hospital by opening up parts of public land for public access, an environmental impact statement must be included before any action is taken. Perform a possible environmental analysis of its alternatives. Of course, there are exceptions to this rule, which are not provided for in the law itself, but in the Disaster Relief and Emergency Assistance Act (known as the Stafford Act²⁹) cited by Donald Trump on March 13, 2020, to declare a national emergency. Exceptions apply to immediate responses to national emergencies, which means that decisions made to respond to emergencies caused by the Covid-19 epidemic, such as the closure of parks and national lands, Restrictions on transportation, suspension of enforcement measures, construction of field hospital facilities, will be exempt from the requirements of the National Environmental Policy Act³⁰, decisions restricting individual freedoms that require social distancing and staying at home. They will also likely benefit from similar exemptions.

But the important question is, do these exceptions apply to measures designed to return to a gradual return to normal before the epidemic? In other words, national parks can be closed in an emergency, but can park be reopened to all new visitors with all their environmental impact without analyzing the environmental impact? In other words, do emergency exemptions and exceptions apply at the time of exit to resume pre-emergency behaviors? For slow, long-term emergencies such as an epidemic, these questions are particularly confusing - and more ambiguous with legal implications such as those in national environmental policy. The point is that in most environmental laws, the grounds for exemption from environmental impact assessment in an emergency are based on assumptions such as urgency and the need to act without observing rituals. This assumption may well apply to initial measures (such as closing parks, but they may not apply to more gradual decisions about when and under what circumstances the situation will return to normal (such as reopening parks). In part, the answer depends on whether or not these actions are seen as a "return to normalcy" and, as usual, here as normal before the epidemic and the quality of the environment before it. And the resulting environmental quality should be considered as a basis for evaluation. There is still no clear answer to these questions, although it seems that there should be an opportunity to review many environmental norms, emphasizing environmental protection principles such as prevention, precaution, and anti-erosion.

4.2. Demographic Effects and Changes in Environmental Criteria

Other effects of the Covid 19 pandemic are related to the pandemic's rotations and affect underlying hazards. As mentioned, environmental laws are tailored to pre-epidemic

²⁸ Michael B. Gerrard, "Emergency Exemptions in Law in the Time of COVID-19", (2020), at <https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1239&context=books> (Katharina Pistor, Ed.).

²⁹ Robert T. Stafford Disaster Relief and Emergency Assistance Act.

³⁰ National Environmental Policy Act (NEPA)

expectations and demographic realities, environmental conditions, and pre-epidemic hazards. For example, in the United States, national ambient air quality standards³¹ are set at levels necessary to protect public health and allow for a sufficiently safe margin. Determining the permissible level or tolerable air pollution threshold requires risk analysis, which assesses pollutants' impact on public health. An assessment that, along with other factors or accurate demographic information about the aging population and the number of respiratory patients, is completed. More importantly, the same amount of pollution can cause more or less damage, depending on how the pollution accumulates and how it spreads among the population³².

Population sensitivity is very important. For populations with much more vulnerable citizens, lower tolerable pollution levels should be defined to have fewer health consequences, while a more resilient population may have higher resilience to pollution and bear lower health risks. If Covid-19 disease already makes the population sicker, the same infection levels previously tolerable may cause greater and more intolerable damage³³. As some current studies show, already high levels of air pollution can exacerbate the consequences of Covid-19 and its damage: This is for areas with high population densities such as urban environments with areas around the world such as China's industrial areas, where the population already has a vulnerability to Covid-19 due to high levels of pollution, can cause long-term health consequences and endanger people's health. Health effects that make the same population more vulnerable to air pollution when pollution reaches pre-Covid-19 levels³⁴.

Other assumptions that environmental law pays less attention to are the criteria and intermediate nature of environmental conditions. These intermediates and metrics are used to calculate how well an individual can tolerate additional contamination while remaining safe and sound. These basic criteria have been established to some extent in the pre-Covid-19 condition, and in many cases, those assumptions are not currently applicable. For example, current assessments and calculations of how much a person can be exposed to hazardous substances and pollutants are based on the assumption that most of a person's day is spent outdoors. These assumptions may have given rise to a long trend in environmental law from the perspective of environmental law; All environments are outdoor and outdoors, and the quality of the indoor environment is largely ignored³⁵. However, these assumptions do not apply to most people in closure and quarantine. At the very least, assumptions about environmental conditions should be adjusted to consider the indoor environments in which people live. It may seem somewhat ambitious, but it is an opportunity for environmental law to expand its approach to the interior as well.

4.3. Review of Values

Existing environmental laws have been enacted in the light of pre-epidemic social values and public commitments. However, crises such as the recent pandemic may have far-reaching implications for citizens' normative and political values. The epidemic is likely

³¹ Clean Air Act, 42 U.S.C. §7409(b) (1).

³² Qian Di et al., "Air Pollution and Mortality in the Medicare Population", *New England Journal of Medicine*, Vol. 376, 2017, at 2513-2522 at https://www.nejm.org/doi/full/10.1056/NEJMoa1702747?query=featured_home.

³³ Arden Rowell, "Allocating Pollution", *University of Chicago Law Review*, Vol. 79, Issue. 3, 2012, at 985-1049.

³⁴ <https://www.theguardian.com/environment/2020/apr/20/air-pollution-may-be-key-contributor-to-covid-19-deathsstudy>.

³⁵ Rowell & Bilz, op. cit. at 67.

to lead to a reassessment of the risks and benefits of some relationships with the natural world by people. For example, in terms of risks, we have seen movements to counter all kinds of human-wildlife interactions that have led to the closure of wildlife markets such as the Wuhan Animal Market in China³⁶, where Covid-19 disease is likely to be the first leap. From animal to human. While environmental and animal rights activists have advocated the closure of these markets and the cessation of other types of wildlife trade and international trade, the current epidemic crisis could help shape public and governmental perceptions and assess the risks associated with these behaviors. Slowly Another is that the long quarantine period may encourage individuals to reconsider their commitments, thoughts, and normative values by staying away from nature. The closure of many national, state, and local parks may cause people to re-evaluate these spaces' value and perhaps even lead them to reconsider their priorities. Therefore, it can be said that the Covid-19 epidemic affects possible and even reasonable responses to wider social problems. For example, collective changes in epidemic behavior can make the likelihood of future collective behavioral changes, such as the efficient management of climate change, through a dramatic reduction in travel, more conceivable and more likely to occur³⁷.

4.4. Review of Resource Allocation

As the epidemic crisis leads to a reassessment of people's values and beliefs about the environment, so too may the rethinking of the allocation and distribution of resources and significant shifts in wealth and the availability of resources to implement those beliefs and Lead commitments³⁸. Although the pandemic's full economic effects remain obscure, the disease can at least impose some opportunity cost economically: the resources used to produce the mask cannot be spent on improving environmental climate. If, as many commentators now predict, the epidemic, which affects national and global prosperity and wealth, will lead to a recession or even depression, this crisis's effects will be even deeper. Like poorer ones, Poorer communities spend less on the environment because they have less money to spend overall. Besides, regardless of the welfare effects of Covid-19 in some cases, the pandemic itself creates additional complex costs for enacting or enforcing environmental laws, some feasibility-based standards for enforcing regulations may disrupt production chains becomes more challenging (for example, if access to chemicals, safety equipment is not provided to employees who previously relied on waste management). Environmental audits may also be more complex and costlier in cases where manufacturing firms have variable production schedules during an epidemic crisis or epidemic restrictions restrict access to them. All of this requires governments to quickly review the way resources are allocated and distributed in the economy to prevent the depletion of environmental support resources. In this regard, international institutions have to provide urgent support to poor and developing countries in the event of a possible reduction in environmental budgets.

³⁶ Peter Singer and Paola Cavalieri, "The Two Dark Sides of Covid 19", (2020), Project Syndicate, online at: <https://www.project-syndicate.org/commentary/wetmarkets-breeding-ground-for-new-coronavirus-by-peter-singer-and-paola-cavalieri-2020-03?barrier=accesspaylog>

³⁷ Naushad Khan et al., "Climate Impact on Corona Virus in the World", 2020, available at: <https://www.researchgate.net/publication/340488255>.

³⁸ Lisa Robinson, "How US Government Agencies Value Mortality Risk Reductions", *Review of Environmental Economics and Policy*, Vol. 1, Issue 2, 2007, at 283-299.

5. Conclusion

The Covid epidemic crisis is a fascinating picture of the Anthropocene. Human impact on earth has been so profound that it has created a new geological epoch. Humans have destabilized the fragile balance of ecosystems and are now grappling with their direct consequences. Yet despite all the challenges; the epidemic of this disease is an opportunity to correct these effects and build new foundations. Many of its environmental challenges may be gradually addressed as the crisis ends and economic activity returns to normal, but its opportunities, such as reducing air pollution, are also lost. In the short term, Covid 19 disease appears to have a positive effect on the environment, leading to a significant reduction in air and greenhouse gas emissions, and as a result, existing environmental commitments may be more easily met. Simultaneously, caution should be exercised, as the crisis is unlikely to have lasting environmental effects. Still, lessons to be learned from this epidemic will help us understand the mechanics of environmental sustainability, patterns of social consumption, and how to reduce Understand the crisis of the environment better in the future world.

The Covid-19 epidemic has had repercussions on human behavior, demographics, environmental conditions, values, and resource allocation, and therefore challenges legal structures and traditional, outdated approaches based on these structures created before. Concerning environmental law, the discrepancy between past assumptions and emerging conditions is significant. It is time to recognize this incompatibility as governments and societies begin to choose the best way forward to return and resume activities. The current period is an important and even revolutionary period for environmental law. This period may lead to some mistakes by policymakers but simultaneously provides a unique opportunity to review existing legal structures and norms, including organizations and treaties that have so far been ineffective in protecting the planet. A few months ago, the changes needed to respond to its environmental crises seemed so serious that it made almost any progress impossible. But the Covid-19 epidemic has freed governments from the same path and allowed them to create green strategies, launch structural investments, and facilitate behavioral change. However, a little patience is needed to paint a more accurate picture of the state of environmental rights in the post-epidemic period. However, it seems that solutions such as the development of special environmental regulations for emergencies, more serious attention to social values such as the health and safety of workers and employees and the rights of consumers, including the development of a mandatory and stricter safety system and Hygiene of special workshops during epidemics, immediate closure of markets for the sale and purchase of urban animals, review of the urban planning system and land acquisition to revive traditional buffer zones between human and animal habitats, creating collective funds to compensate the community and low-income groups, formulating a special civil liability system for violators of emergency restrictions and regulations are among the most important ways governments can turn the Covid-19 threat into a golden opportunity for more effective protection of the environment.

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Conflict of Interest Statement:

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

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