

## The Impact of COVID-19 Pandemic on the Realization of the Right to a Healthy Environment

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### تأثیر همه‌گیری ویروس کرونا بر تحقق حق بر محیط‌زیست سالم

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#### Abstract:

In December 2019, some people in China were diagnosed with pneumonia which was found in the first studies to be related to the animal and food market in Wuhan, China. The newly identified virus which was named "Coronavirus 2019" spread all around the world, influencing different economic, political, and cultural fields. Since one of the most important sectors affected by the virus was the environment, the present study aimed to investigate the effect of COVID-19 pandemic on the realization of the right to a healthy environment. The findings showed that the virus reduced fossil fuels-related activities, especially in the world's oil companies and fashion and textile industries with high water consumption and water pollution, Decreasing air air pollution due to reduced domestic and foreign travel, And increasing the consumption of household safe drinking water and a decrease in the production of waste, especially toxic kinds. Also, the virus partially altered consumerism and international macro-behavioral patterns inconsistent with sustainable development, so that at the individual level, the purchase of unnecessary clothing and consumables was not done solely change the mood and on a global level, it strengthened the hope of living without fossil fuels and replacing them with renewable energy.

**Keywords:** Environmental Rights, Human Rights, Healthy Environment, Ecosystem, Human Security..

#### چکیده:

در دسامبر ۲۰۱۹ ابتلای عده‌ای در چین به ذات‌الریه تشخیص داده شد. بررسی نخستین مشخص نمود که بیماری‌شان به بازار حیوانات و غذاهای شهر ووهان چین مرتبط است. سپس ویروس جدید شناسایی و «کرونا ویروس ۲۰۱۹» نام‌گذاری شد. این ویروس پس از همه‌گیری در جهان، پیامدهای خود را در حوزه‌های مختلف اقتصادی، سیاسی، فرهنگی بروز داد. یکی از بخش‌های مهم که تحت تأثیر آن قرار گرفت محیط‌زیست است. مقاله با این پرسش که همه‌گیری ویروس کووید ۱۹ چه تأثیری بر تحقق حق بر محیط‌زیست سالم داشته به پژوهش اقدام و دریافت که ویروس مذکور کاهش فعالیت‌ها در حوزه انرژی‌های فسیلی به‌خصوص از سوی شرکت‌های نفتی جهان، صنعت نساجی و مد (با حجم مصرف بسیار زیاد آب و ایجاد آلودگی آب)، کاهش آلودگی هوا به دلیل کم شدن رفت‌وآمدهای داخلی و خارجی، افزایش مصرف آب آشامیدنی سالم در حوزه خانگی، بالا رفتن تولید پسماند به‌ویژه سمی را در پی داشت. همچنین این ویروس تا حدی مصرف‌گرایی و الگوهای رفتاری کلان در سطح نظام بین‌الملل که منطبق با توسعه پایدار نیست را تغییر داد به طوری که در سطح فردی، خرید لباس‌ها و مواد مصرفی غیرضروری فقط برای تنوع و تغییر روحیه صورت نگرفت و در سطح عام و جهانی، امید به امکان زندگی بدون انرژی‌های فسیلی و به‌جای آن تجدید پذیر را تقویت نمود.

**واژه‌های کلیدی:** حقوق محیط‌زیست، حقوق بشر، حق بر محیط‌زیست سالم، زیست‌بوم، امنیت انسانی.

## 1. Introduction

Coronaviruses are a large group of simple viruses whose life and reproduction depend on the host. The glycoprotein structure and surface proteins of the virus gave it a crown-like structure due to which it is called Corona (a Latin word meaning crown).

Several types of coronavirus can cause severe diseases such as the SARS coronavirus in China in 2003 or the MERS coronavirus, which was first identified in 2012 in Saudi Arabia. It should be noted that one of the main life-threatening problems people have always been struggling with since ancient times has been the spread of infectious diseases such as plague and cholera (Dehghannejad & Kathiri, 2010: 1).

Coronaviruses may circulate in a wide range of animals or sometimes, they may be spilled over from animals to humans for different reasons such as a genetic mutation in a virus or an increase in human-animal contact.

For example, the MERS virus was transmitted from camels and the SARS virus from cats. The source of the 2019 outbreak of the Coronavirus appears to be a bat or scaly anteater (pangolins) (<https://www.who.int>).

After the terrorist attacks of September 11, 2001, and the financial crisis of 2008, according to the World Health Organization, COVID-19 affecting 206 countries, regions, and territories (<https://www.who.int>) is the third major crisis since the Cold War. During the 2008 and 2009 financial crisis, the stock market, global trade, and economic growth fell more than what they had experienced during the Great Depression of 1929-1933 (<https://www.thebalance.com>). In the 2009 Financial Crisis, governments cooperated and, as Daniel W. Drezner,

a professor of international politics, described in his book, *the system worked* (Drezner, 2016:3). Therefore, it is hoped that this cooperation will continue during the Corona pandemic.

## 2. Theoretical Framework

Dealing with each title in its specific subject area requires a theoretical framework. The intellectual framework, while defining the researcher's horizons and his view of the subject, directs the ideas, phenomena, and processes.

At first, the biosphere is defined as parts of the earth where life exists. In fact, at the hierarchy of the components of the universe, the biosphere is lower than the earth where life is not possible in all of its parts. (Ansarian, 2019: 18)

The theoretical framework of research on COVID-19 is human rights, which look at human beings regardless of their religion, ethnicity, nationality, wealth, and social status, just as the coronavirus acted in selecting its victims.

The right to life, the right to health, and the right to a healthy environment are among the principles of human rights most closely linked to the COVID-19 pandemic. Among the doctrines of international law, the doctrine of human security is the closest and most relevant to the subject matter.

It should be noted that since this disease is a new phenomenon, there are no specialized books and articles about COVID 19, although two books- one in Indonesian and another in Chinese- were published in early 2020 to provide recommendations on the prevention and control of the disease. Besides the mentioned cases, notes and articles were published in the studied scientific and news-analytical websites and newspapers.

### 2-1 Human Rights

Human rights are the fundamental moral guarantees that human beings enjoy in any place and with any culture, just because they are human, regardless of their religion, race, color, gender, beliefs, political thought, or social status. According to this definition, human rights are universal, i.e., all human

beings should benefit from them because they are human.

Human rights in general can be defined as the rights inherent in our nature without which we cannot live as human beings (Shaygan, 2003; 1).

Human rights in the contemporary world are of such importance that the 21st century has been called the century of human rights and information and one of the most important norms of the international community today is respect for human rights (Raskh, 2013:169).

Humans, regardless of where they live, what language they speak, what their beliefs are, and apart from their biological and social differences, are alike in terms of being human. This common denominator of all members of human society has become the basis for their enjoyment of rights and freedoms that are not bound by time and place (Levine, 1998: 29).

Overall, it can be said that human rights seek to preserve and respect "human dignity". All human beings should be respected (Najafi Esfad et al., 2005: 449). All rights in the first generation of human rights can be attributed to thinking which involves providing the conditions for thinking and creating opportunities for cultivating thinking. Human rights reflect the basic elements of human existence, namely his/her body and mind" (Seyed Fatemi, 2014: 19).

The right to life, the right to liberty (liberty from/ liberty in), freedom of religion, and equality before the law are among the first-generation rights that require only government intervention to remove obstacles to their implementation. These rights preclude acts such as torture, inquisition, intrusion, and denial of freedom of movement. Without enjoying the rights of the first generation, the human is exposed to the imaginations, ideas and desires of the rulers who are in a position that can confront them" (Tamoshat, 2007: 104)

When it comes to second-generation human

rights or positive rights, economic or social rights such as the right to work and the right to education come to mind, showing that individuals or groups are entitled to certain social goods or services.

Unlike first-generation rights, which generally emphasize non-interference and lack of barriers, second-generation rights, in addition to removing the barriers, expect the government to create facilities and supplies. The basic idea of such a distinction is that in most cases the first-generation rights are realized by refusing to do something and the second-generation by doing something, but the most important commonality of these two generations is their emphasis on the human person or in other words, on the fact that a person has rights.

The first generation emphasizes on individual freedoms and the second generation is concentrated on collective rights within a nation, hence, much attention should be paid to the universal needs. Therefore, due to the growing trend of humanization, internationalization, and socialization of international rights, the third generation of human rights was proposed" (Tamoshat, 2007: 104)

Global peace, right to development for all human beings and communities, and a healthy and clean environment as the main pillars of sustainable development were considered as the rights- known as solidarity rights- that can be claimed by human beings.

The main examples of the third-generation rights (solidarity rights) are the right to development, the right to peace, the right to a healthy environment, the right to self-determination, the right to cultural heritage, the right to humanitarian assistance, and the right to communicate.

The right to a healthy global environment is among the solidarity rights in the third generation of human rights. The right to the environment was not known by people and

citizens in the past, but in the new millennium, environmental issues have affected other areas of international law and more recently, on human rights and domestic law. Health is considered a basic human right today, and we know that human life and death are largely affected by the direct intervention of health care systems.

Since the protection of public health is considered a major responsibility of the government, health care is an important aspect of civic management and policy-making (Anesaki & Munakata, 2007: 442).

The obligation of governments to the right to health, like any human rights, has three dimensions: obligation to respect, obligation to protect, and obligation to fulfill. As for the right to health, the obligation to respect means that governments do not create barriers and restrictions for individuals or groups of individuals in enjoying this right, or that they remove existing barriers and current constraints in this regard.

Obligation to protect also refers to the obligations of governments to protect and support the right to health against government bodies, institutions, or private individuals' aggression and violation of this right. Obligation to fulfill the right to health is taking the necessary steps to meet people's health needs. Governments are obligated to provide the necessary facilities for people to enjoy the right to health (Al-Kajbaf & Ansarian, 2014: 28).

## 2-2 The Doctrine of Human Security

Human security includes the value that aims at the realization of the rights and freedoms of the people, fulfillment of their demands and aspirations, and satisfaction of citizens. The human-centric security is in contrast with the state-centric or hardware-based security because it sees the state-centric security merely as a kind of military security and deterrent to military attacks against territorial

integrity. Human security does not just pay attention to the state-centric security, but to all the things that threaten human beings (Qasimi, 2008: 529).

Human security is composed of human development program consisting of seven inviolable dimensions, and governments have a responsibility against their citizens in this regard. If the responsibility is undertaken, there will be no violence and civil and international war, because threats such as poverty and disease and poor governance are interrelated causes of political violence" (Kerr, 2008: 614).

Human security requires human development and the existence of national sovereignty to protect national and citizenship security (Yazdanfam, 2010: 21).

Human development with its seven components is known as a trans-generational human right in the human rights literature.

United Nations Human Development Report in 1990 characterized human development with seven dimensions of economic security, political security, food security, environmental security, community security, personal security, and health security. The last component showed its fundamental importance recently when a virus has spread throughout the world, killed many people, threatened many lives, and destabilize works and incomes.

## 3. Principles of International Environmental Law Applied to COVID-19 Pandemic

Before addressing the principles applicable to the COVID-19 pandemic, the concept of sustainable development is dealt with because much attention is paid to this concept when the effects of corona on the environment are analyzed.

In its clearest definition, sustainable development can be called "non-sustainable development" (WBGU, 2004: 23). The

concept of sustainability as a dynamic concept means stable equilibrium over time (Moldan & Bilhavers, 2010: 84).

High growth, if resulted from the damage and destruction of the environment, not only does not create welfare but also can reduce social welfare (Samadi & Yarmohammadian, 2013: 126)

But if development is accompanied by environmental considerations, it will sustain happiness and prosperity.

The concept of sustainable development in international law involves the adaptation, integration, and unification of economic growth, social justice, human rights, and environmental protection objectives to improve the quality of collective life for the present and future generations." (Shamsaei, 2006: 10).

Finally, it should be said that sustainable development means the process of development that meets the needs of the present generation while protecting the environment for future generations and taking their needs into account.

### **3-1 Principle of Precaution**

Among the principles of international environmental law, the principle of precaution, prevention, and cooperation in emergencies governs the COVID-19 pandemic due to the appropriateness of the purpose and nature of these principles.

The principle of prevention is related to protecting animal rights, not attacking wild animals and prohibiting their sale and purchase and preventing the spread of epidemic-prone diseases among them. In the principle of co-operation in emergencies, governments help each other based on their scientific and economic capabilities and experience.

Studies on the events and evolutions related to the COVID-19 outbreak can show the positivity of the made cooperation such as the

presence of medical and pharmaceutical representatives of countries in pandemic areas and dispatch of related aids to deal with the crisis. Also, due to the scientific uncertainty of many aspects of the coronavirus- despite the research done up to now (April 99)- a precautionary principle should be applied to leading actions and practices.

### **3-2 Principle of Prevention**

Experience and expertise have shown that avoiding environmental hazards is a golden rule. Even if the damage is compensable, the costs of restoring it to its former state are often very high (Kurukulasuriya, & Robinson, 2011; 117).

Commitment to prevent environmental damage is not only a commitment to avoid posing a serious threat to the trans-boundary environment but also a preventive approach that seeks to avoid dangers regardless of its various trans-boundary impacts or the issue of international responsibility. The principle of prevention in international environmental law aims to prevent environmental damage before they occur (Ansarian, 2019: 33).

The principle of prevention is one of the fundamental principles of environmental law because the survival of many environmental elements, whether animal or plant, depends on the principle of prevention and if this principle is not observed and one of these other elements is destroyed, they cannot be revived, so this principle is inserted in many environmental treaties (Pourhashemi & Arghand, 2013: 112).

The principle of prevention must be observed in all circumstances including the places we love and value, such as libraries, cultural, academic, religious places, or those we created out of necessity and compulsion such as prisons. In this regard, considering the need for the realization of human rights, attempts should be made regarding the health of prisoners because, as per paragraph 9 of the

Basic Principles for the Treatment of Prisoners adopted by the General Assembly in 1990, prisoners have the right to access public health services in the country, and this right applies regardless of their legal status.

### **3-3 Principle of Cooperation in Emergencies**

In international environmental law, there is the main principle called cooperation, which emphasizes the cooperation of governments in all environmental areas. Also, the principle of cooperation and assistance in emergencies independently expresses the cooperation and assistance of governments in a situation where the environment is damaged or is about to be damaged. (Ansarian, 2019: 28). Based on this principle, governments are obliged to cooperate in good faith with each other in all circumstances to protect the environment. Commitment to cooperation includes a wide range of collaborations, from providing the necessary resources and technology and holding training courses to exchanging information and assistance in the case of environmental emergencies (Tayebi, 2017: 110).

Based on the principle of cooperation and assistance in emergencies, in the case of accidents, natural disasters, or other emergencies that appear to have adverse effects on the environment, governments should promptly inform other countries and seek appropriate assistance and cooperation. This principle has been developed as a duty in customary law and has been explicitly reflected in numerous international treaties.

If cooperation had already been made between countries and experts from universities and research centers around the world while complying with proper nutrition and health care principles, the suffering and loss of many lives might be prevented. According to estimates, the Spanish flu in 1918-1920 killed about 400,000 to 2,000,000 innocent Iranians

in Iran alone. It was also said that in the first two decades of the twentieth century, Iran lost at least one-tenth and maybe forty percent of its population as a result of various infectious diseases, famines, and wars "(Milani, 2016: 166).

### **4- COVID-19 and the Scientific View Epidemic**

Though restricting the human relations in administrative, commercial, manufacturing, sports, service, religious, and political places around the world, COVID-19 pandemic puts an end to the notion that some of these places are safe for the movement of some special people for a variety of reasons, including their particular historical situation and it has been a lesson for those who are looking to learn from events and happenings.

Due to the severity of its effect on the environment, the COVID-19 pandemic could earlier than other factors show the success or ineffectiveness of some mechanisms, especially therapeutic ones. Although for many social and individual problems, some proposed mechanisms were useful over time, the outbreak of COVID-19 caused solutions and mechanisms to show their effectiveness very soon.

Prescription of some foods by non-specialists to patients and their failure to heal them clarified that the human species, to get rid of the disease (especially contagious diseases) and regain health, resort to various available ways offered by different therapists by the culture of that society (Parghoo & Alipour Silab, 2017: 33). However, it is the government and the elites who demand the right path, which is to resort to scientific means.

The History of Beyhaqi mentioned many narratives of epidemics in Iran and the region, which have led to the massacre of people, mainly by referring to the meta-materials and disregarding the principles of large-scale

treatment. As in the epidemic of the plague, it was considered as a result of air corruption or the sarcasm of Jinns against humans. He quoted that pervasive diseases were resulted from selling underweight and lying and immoral acts (Fayyaz, 1996).

Therefore, they demonstrate the need for rationality, knowledge, and attention to the environment for dealing with global problems, issues, and challenges, the note that COVID-19 could remind us of. Unscientific views and associating things to chance were common in the past, but today it is far from expected due to the spread of knowledge, science, and rationality.

The scientific view epidemic and attention to the relevant propositions, as well as rationalism in opposition to the traditions at any cost, has prevented a further catastrophe. For example, Iranian and other countries' governments prohibited holding funerals and ordered the observation of all hygienic matters in burying patients because this issue in the past had caused the outbreak of epidemics. For example, the main cause of the plague in 989 in Qom was the transportation of the bodies of several plague victims died in Tabriz to Qom to be buried there "(Al-Husseini & Qazi, 2004: 723).

The scientific approach and the use of therapeutic methods and the need for caution, especially in the case of infectious diseases, have manifested itself in international regulations. As per Article 14 of the 1944 Chicago Convention, to which Iran joined as well and its provisions are valid as domestic law following Article 9 of the Civil Code, each Contracting State agrees to take effective measures to prevent the spread of cholera, typhus, smallpox, yellow fever, plague and other infectious diseases by air and to this end, the Contracting States or international monitoring bodies shall regularly advise on the health measures applicable to the aircraft. ICAO and World Health Organization

regulations, which have been updated since 2005 with the unprecedented outbreak of Ebola and SARS, require countries to take steps to prevent the outbreak of contagious diseases that could be transmitted globally by air and the signatory countries are committed to taking the necessary measures within specified periods (Lesani & Naghizadeh, 2017:1045).

### **5- COVID-19 Pandemic and Consumption Reduction, Especially in the Field of Energy**

Reducing energy consumption, especially coal and oil, due to the spread of COVID-19, has led to a reduction in pollution in various areas. According to the latest forecast of the International Energy Agency, global oil demand is projected to decline in 2020, as coronavirus has had a significant impact on reducing global demand and has limited production and travel.

It is to be hoped that by seeing the direct and positive impact of COVID-19 on reducing pollution due to reduction in demand for oil and consequently, in carbon dioxide emissions, we will move to a world free of oil and fossil fuels, and instead use new energy that is less harmful than other energies. Alternative energies for fossil fuels such as solar energy, water flow force, wind energy, and heat energy have smaller footprints in the earth " (Hazarkhani & Park, 2019: 100).

Renewable energies will also provide greater comfort and safety for those involved in the field. This can be easily compared to changing the type of work from the mine to the open air to create solar energy systems.

### **6- The Effect of COVID-19 on Strengthening International Cooperation and Reminding of the National and Global Commitment to the Environment**

Today, with the globalization of human rights culture and the need to be accountable against citizens, governments are making efforts to protect the lives of citizens, although this is not done with the same quality everywhere, it is better than the past where only the health of people was important. For example, Shah Tahmasp, after hearing of the outbreak of the plague in Tabriz, did not return to the city in 951 AH until the complete eradication of the disease (Jorjani, 2005:60). Also, regarding the treatment of other countries with their citizens, one of those who helped establish quarantine in plague-ridden areas in Iran, wrote in a letter after returning to Russia that they should use the opportunity to make their holy dream a reality, and find their way to the open sea through the Near East, i.e., they should capture Bandar Abbas in the Persian Gulf (Algood, 1992: 576). However, today, even though everyone emphasizes cooperation between nations and that the international relations are much better than the past, in some countries we are witnessing the emergence of populist and anti-environmental governments that emphasize Chauvinism, xenophobia, unilateralism which is manifested as fragmental and unity in Europe...

These policies have been followed to some extent during the COVID-19 outbreak, so that, according to news and analytics websites, Dr. Li Wenliang, who in virtual conversations with his colleagues spoke about the existence of a mysterious disease like SARS, was arrested by the government (police) and was forced to sign a text implying the performance of misconduct and illegal conduct. It was also reported that Chinese government officials announced the start of the crisis after a delay of several days, which led to its outbreak (<https://edition.cnn.com>).

It seems that COVID-19 could partially repair this gap and distance and bring the states and nations closer. There are examples of cooperation between people of different

ethnicities, religions, and nationalities.

COVID-19 has encouraged many people with different ideologies to work together by reminding them of the most important human right, i.e. the right to life, and the very important and fundamental right, the right to health. We see this even among groups that conflict with the central government or other religions and ethnicities.

An example of this is the Taliban, which, despite its religious hate speech and its constant incompatibility with the national government and all foreign forces, even human rights Organizations and non-governmental charities, announced after the crisis that it would open its areas to medical and relief forces and it will be safe (<https://www.aa.com.tr>). Another example is the presence of the Spanish Armed Forces in Catalonia to build a hospital there following the emergence of the COVID-19 and the demand of this country for help. However, this was not the case before the crisis by the Catalans due to the independence-seeking arising from identity issues and political culture resulting from the accumulation of grief over the defeat against Spain in 1714" (Ansarian & Tayebi, 2018: 124).

Among the cases of humanitarian assistance to each other are the \$ 1 billion donations of Jack Dorsey, CEO, and co-founder of Twitter, who donates 28% of his fortune to programs for fighting the COVID-19 pandemic (<https://www.nytimes.com>).

## **7- COVID-19 and Reminding of the Close Relationship between Humans and the Environment and the Need for Change in Consumption Patterns**

The confirmed proposition is that the outbreak of the COVID-19, which has overshadowed the planned and orderly functioning of the world, originated from the wildlife markets in China. However, we should not focus only on one factor, but use the arisen situation and

reconsider our treatment with nature in general.

According to Inger Andersen, executive director of the UN Environment Program, Nature is sending a serious message to us humans with the outbreak of the Coronavirus and the current climate change crisis. We humans need to reconsider our treatment with the environment, especially deforestation and the illegal animal trade because we put a lot of pressure on nature (<https://www.theguardian.com>).

It should be noted, however, that this is not the first time the world has contracted an epidemic, with the 1918 flu affecting at least 50 million people worldwide from all age groups with no history of the disease (<https://www.livescience.com>).

Since wildlife eating is not very common, people around the world can easily question it, and China is currently closing the wildlife market for food (Shapiro, 2020).

It seems that one of the causes of the spread of these deadly diseases is rooted in the great desire of humans to eat the meat of animals, both wild and domestic.

More than 75% of all diseases transmitted to humans are caused by shared human-animal diseases" (<https://www.unenvironment.org>).

If humans had achieved such a level of bioethics that they should not buy and sell wild animals for their enjoyment of their meat or skin, or keeping them, the virus might not have developed and thus the physical and mental safety of humans were not overshadowed.

Today, keeping tens of thousands of animals in very cramped, dense livestock farms provides conditions for the spread of all kinds of viral epidemics, of which COVID-19 and Zoonoses (transmissible from animal to human) are just some examples.

The contagious diseases such as mad cow, SARS, and Mers sprang from industrial farming two decades ago. Bird flu spread in

the United States in 1992, causing poultry owners to lose tens of millions of chickens to keep people from becoming infected. Also, at the same time, India and China reported outbreaks of bird flu in their poultry farms, which did not infect anyone. But five years later, in 1997, a similar bird flu outbreak hit Chinese poultry farms, this time killing about 60 percent of those infected. The 2009 swine flu outbreak also had its roots in a pig farm in North Carolina.

Public health experts have warned in recent years about animal-borne diseases in industrial livestock. Michael Greger, author of the famous article "Bird Flu: A Virus of Our Hatching", described industrial animal husbandry as an irreplaceable environmental storm for infectious diseases, and warned that "If you want to create global pandemics, then build factory farms" (Greger, 2019: 128).

Changing people's eating habits by cutting or minimizing animal products extensively reduces the rate of epidemics.

In this regard, we should mention the change in the case of "protein", which in the past was considered the only equivalent of meat, but today more and more people have realized the existence of a range of proteins that are of plant origin.

By changing eating habits and using a variety of plant proteins, the need for animal husbandry and slaughterhouses is eliminated, the risk of epidemics is minimized, our bodies gets rid of large amounts of antibiotics and other dangerous chemicals that enter the body, environmental pollution resulted from industrial animal husbandry is reduced, and the destruction of green forests, the pollution and acidification of the oceans, and the imminent destruction of biodiversity on the planet are stopped (Shapiro, 2020). We should also mention the change in the habit of consuming other necessities such as clothes many of which are unnecessary to buy, considering that 2700 liters of water are used

to produce each shirt (<https://www.wri.org>). Today's scientific and experimental achievements have made it possible for us to take the advice of public health professionals more seriously and as necessary. Because Tobacco smoking is one of the most popular factors in the spread of COVID-19 (<https://www.scientificamerican.com>) and its consumers are at greater risk, during the disease outbreak, according to statistics of tobacco sales and also the closure of tobacco centers, it can be said that its role in air and environmental pollution has decreased due to non-use and reduced production.

It is a good time to do more protection of the environment and consider appropriate mechanisms for this in different areas, including the conclusion of an international treaty to prevent the sale and purchase of wild animals worldwide.

COVID-19 has caused many, especially those who study and care about their surroundings, to pay more attention to the environment, sustainable development, and sustainable operation.

### **8- COVID-19 and Saving Human Lives through Getting Rid of Air Pollution**

We first talk about air pollution, which has become a major problem for human beings today, whereas in previous decades there was even no knowledge of it.

Air pollution may be caused by different factors including the power supplied for factories from fossil fuels such as coal which is also used in many homes and places for thermal energy and transportation in the form of cars, trains and airplanes for food, other necessities, and tourism. Transportation contributes to climate change and increases energy consumption by polluting the air and waterways and destroying wildlife habitats (Kiss & Shelton, 2005: 262).

Air pollution is the first type of pollution that humans have tangibly understood. The

burning of fossil fuels releases sulfur dioxide and nitrogen oxides into the Earth's atmosphere. It is estimated that 60 to 70 percent of acid rain is due to sulfur oxide emissions, and the rest is due to nitrogen oxide emissions (Kiss & Shelton, 2005: 196). Materials released into the atmosphere (due to chemical interactions) are converted to acidic compounds and, after being displaced by natural agents, fall to the surface with rain and snow or in the form of solid particles. These acids destroy living organisms in lakes and rivers and damage soil and forests" (Malkum, 2013: 57).

The basic commitment of countries in the field of air pollution was confirmed in the "Trail Smelter" case. The arbitrator, in this case, stated that according to customary international law, no government has the right to use or allow the use of its land in a way that causes damage- due to smoke- to another land or property and persons living in it (Mousavi, 2015: 12).

Air pollution hurts all elements of life, specifically on the right to health and climate change. For example, the phenomenon of "smoke fog" which is caused by the high density of various pollutants and their stagnation has a variety of dangerous consequences to human health. Air pollution leads to the death of many people and the outbreak of various diseases. An important issue that causes many to neglect air pollution and its role in death and the incidence of various types of cancer, is the lack of announcement of its effectiveness clearly and accurately because air pollution is not included as the cause of death of the deceased although black carbon penetrates deep into the lungs and has a destructive effect on them (<http://www9.who.int/airpollution/en>). Lung cancer, stroke, and other causes are recorded as the cause of death, while the amount of fat or meat consumption is accurately announced in the occurrence of stroke. As estimated, one

million people in China die each year from air pollution.

Air pollution from car smoke and traffic afflicts 4 million children a year with asthma, which is equivalent to 11,000 cases a day. That is why governments as public policymakers committed to the health of their citizens (and committed to non-pollution elsewhere) must take various measures to keep the air clean and avoid air pollution. One of the important measures is licensing production and service units. Licensing systems have played a major role in preventing air pollution (Kiss & Shelton, 2005: 193).

Air pollution, according to the World Health Organization, is an invisible killer and leads to stroke, heart diseases, lung cancer, chronic lung obstruction, lung disease, and respiratory infection. According to World Health Organization, in 2018, breathing heavy contaminants in the air afflicted 9 out of 10 people with respiratory problems, killed 7 million people in the world every year, and caused 24% of the total death from Strokes and 43% of all lung cancer deaths. (<http://www9.who.int/airpollution/en>)

Now, after expressing the tangible and innumerable damages of air pollution, it is suggested that air pollution can be greatly reduced by replacing renewable energy, managing transportation, and using electric vehicles. COVID-19 has cleared the air in many areas by reducing the demand for fossil fuels and transportation.

COVID-19, staying at home and reduction of industrial activities and energy consumption have saved the lives of many Chinese citizens, said Marshall Burke, an environmental economist who pointed to the direct link between bad weather and premature death from breathing in polluted particulates. He says, at least two months of reduced emissions are likely to save 4,000 children under the age of five and 73,000 adults over the age of 70 in

China alone."

This statistic seems to be correct based on the proven facts about the very destructive impact of air pollution. This data or other similar ones shows that sustainable development and consumption management are needed to get rid of air pollution and environmental crises (<https://www.sciencealert.com>). Unbalanced development and disregard for the environment lead to the destruction, degradation, and depletion of resources.

The prevalence of COVID-19 caused many people to stay at home and not to use their private cars, stopped tourist and intercity buses, parked the airplanes in the parking lots of the airports, and due to all of them, decreased the air pollution to a large extent following the reduction in the production of carbon dioxide, monoxide. Besides, it may lead to positive attention and reconciliation of many abusers and anti-environmentalists because they saw clean air after many factories were closed or their activities were reduced and people had to stay at home and this issue has a positive effect on them. When they see the clean air and clear sky in cities where the possibility of vision has been reduced due to the polluting machines and vehicles and as they notice that diseases caused by air pollution are reduced, they realize they need to pay more attention to the environment and protect it.

### **9- Mutual and Common Understanding of Humanity and Interdependence between Societies**

The development of relationships and interactions has different aspects. The harms, problems, and challenges do not just remain in the same area, and according to international environmental law, environmental crises know no borders. The epidemic of the virus also showed that joys and sorrows are becoming global, and therefore. the global

citizen and his responsibilities should be considered. With the spread of the virus, many have realized that 99.9% of the human genome is the same (<http://sitn.hms.harvard.edu>) and despite the differences in human religion, ethnicity, nationality, beliefs, and customs, everyone shares the need for security and safety.

The outbreak of the virus and almost identical efforts to combat it, such as staying at home, observing social distancing, and exploring and researching vaccines to get rid of it, have shown that human beings everywhere, regardless of ethnicity, race, nationality, religion or gender, have common instincts, desires, aspirations and are exposed to common harms and challenges, the biggest of which is the indifference to the environment and the anti-green behavior pattern that needs to be corrected.

One of the consequences of this virus is the reminder of the right to life and respect for human lives, for which all matters should be suspended. Everywhere in Iran, the cry for the protection of human life and responsibility for it is heard more than ever. Man is no longer a tool. Man himself is the goal and more important than anything else. The greatest change is human-centeredness, and man is in the service of nothing (Nozari, 2020).

COVID-19 and its outbreak around the world could have consequence such as the emergence of crises and challenges that scientists and thinkers have warned of over the years due to anti-environmental behavior and misbehavior around the world, and many people find its possibility and dangers far-fetched and improbable or imagine it happening after their death.

Phenomena such as global warming, deforestation, and plunder of scarce land and sea resources that scientists have been warning about for years are still not taken seriously and are even ridiculed" (Jafari, 2020).

## **10. The Effect of COVID-19 on Soil Pressure and Food Insecurity**

Every human being consumes food every day according to his/her need for energy, many of which are dependent on soil. Human life is seriously endangered if the soil becomes contaminated or cannot be a suitable host and substrate for production. Food security depends to a large extent on the health of the soil.

The COVID-19 pandemic has put pressure on food sources. On the other hand, for the preparation of food and some goods, a lot of pressure was applied in some places and times, resulting in pressure on nature in any case. On one hand, those who had access to excessive food waste due to perishable items. On the other hand, lack of access to materials needed by some puts pressure on resources. Since fear disrupts the functioning of individuals, this situation will be intensified.

Thus, due to the pressure on fishermen who have been less able to fish due to the coronavirus outbreak, and farmers, gardeners, ranchers whose incomes have been reduced due to lack of demand, it may be possible that all those who are closer to the environment, as well as people who cannot travel due to restrictions, put more pressure on nature, especially the soil, at the end of the COVID-19 crisis to compensate for the losses incurred.

This is where the model of sustainable development and sustainable consumption comes into play, which states that, while benefiting from the environment, people should think about preserving and protecting various resources. It is with sustainable development that both consumption and environmental protection can be achieved. If all productive, industrial, and economic measures are based on sustainable development, the economy will be stronger without unreasonable pressure on the environment.

## **11- The Effect of COVID-19 on Goods and Energy Consumption**

The COVID-19 pandemic has affected-increase or decrease- the consumption of many goods, products, and energy. Of course, due to the continuation of the COVID-19 pandemic and the existence of various variables, in some sectors such as electricity, it is not possible to accurately calculate the rate of decrease or increase, but in other areas such as oil and gasoline, consumption reduction is quite clear and it is approved.

### **1-11 Increased Consumption of Healthy Drinking Water**

Although water, as a vital element, covers more than three-quarters of the earth's surface, only 0.000006% of the earth's water and 0.26% of freshwater can be used by humans (Water, 2016).

Lack of drinking water on the one hand, and its heterogeneous distribution in terms of quantity and geographical boundaries on the other hand has made water and its distribution as one of the important issues at the national level and especially internationally in cross-border watersheds.

Following many people's staying at home and the reduction of activities due to the COVID-19 epidemic, at homes, hospitals, and medical centers, the amount of water consumed has increased due to personal hygiene, washing the purchased items, and bathing. Of course, the closure of offices and academic and research institutions have probably reduced water consumption, especially in countries and regions that used to abuse it. Increased water consumption is important because the biosphere as a whole is facing a shortage of safe drinking water. The deficiencies are even greater and the problem is twofold in some ecosystems.

The higher the water consumption is, the

greater the possibility of contaminating rivers, streams, and water sources will be. Also, water resources will be reduced due to widespread Coronavirus.

### **11-2 Increased Production of Household, Toxic and Hospital Waste**

The outbreak of COVID 19 which has infected more than 1.5 million people has led to an increase in waste. At the household level, people's staying at home, their increased consumption, and the closure of restaurants and entertainment centers have increased per capita waste production.

However, it is likely that in the hospitals, despite the decrease in non-respiratory referrals, an increase is observed in the production of toxic and hazardous wastes. Hospital waste contains a wide range of pathogenic microorganisms and is therefore considered hazardous waste." (Banaiy-Ghahfarokhi et al., 2013: 60).

During COVID-19 outbreak or in similar situations, waste management is a very important issue both to realize the right to health and the right to a healthy environment and to ensure food security. This is especially important in Iran which produces 20 million tons of waste per day, three times the world standard (<http://www.salamatnews.com>).

### **11-3 Increased Consumption of Plastics and Chemicals**

With the need to disinfect passages, buildings, public places, the production and consumption of detergents and disinfectants have increased, and as a result, more chemicals entered the life cycle and since their waste is environmentally hazardous, the incidence of damage to the environment is increasing. It should be noted that 400 million tons of toxic, poisonous, explosive, erosive, flammable, and infectious wastes are produced annually in the world. Inadequate disposal of these wastes contaminates soil, groundwater, and habitat of

fish and animals, and is also associated with cancer and congenital disorders (Kummer, 2013: 426-436).

#### **11-4 The Effect of Covid-19 on Electricity Consumption**

Electricity is one of the most important energy used in the household and public sectors. The outbreak of COVID-19 caused a reduction in the number of factories and production units or their closure, which, in addition to reducing the activities of the public, administrative, governmental and recreational sectors, has reduced electricity consumption, and on the other hand, due to the people's staying at home, being in quarantine and using television and social networks, increased electricity consumption all over the world. This is significant because electricity generation as well emits carbon dioxide (Panahi et al., 2015: 43), especially in many areas such as Iran, where far more carbon dioxide is produced due to the generation of electricity compared with gasoline.

#### **12- COVID-19 and Reduced Tourism**

Tourism can both act as an opportunity to strengthen the environment and put pressure on these resources by increasing the consumption of natural resources" (Kiss & Shelton, 2005: 267).

Globally, the environmental impact of tourism can contribute to biodiversity loss, ozone depletion, and climate change, all of which led to the adoption of the Hague Declaration on Tourism in 1989 (Kiss & Shelton, 2005: 270). Staying at home and advising people to stay wherever they are has reduced tourism. A reduction was observed in transportation and consumption of energy including fuel, electricity, water, and therefore, in harm to all kinds of animal and plant species. Of course, the solution is not to ban tourism, but to implement it so properly and following sustainable development, that not only led to the improvement of employment, welfare,

prosperity, and cultural dialogue but also causes respect for and protection of the environment.

## **RESULTS AND DISCUSSION**

One of the consequences of COVID-19 has been the clean air in many places, the cleanliness of streams and rivers, due to which many have paid more attention to the gift of clean and breathable air and become aware of the need to protect the environment.

One of the lessons to be learned from the COVID-19 pandemic is the need to change the attitudes and perceptions of statesmen and citizens so that everyone who has a greater share in production and consumption should be more responsible and spend the higher cost. Of course, governments have a key role to play in this regard and must act by the principles of good governance with a view to the environment. Therefore, quotas should be determined for the production of carbon dioxide, according to which each person should only be involved in pollution to a certain extent. In this regard, it should be noted that there is a two-way and sensitive relationship between the economy and the environment. On the other hand, with the weakening of the economy, the environment is harmed because fossil and mineral resources and everything that exists in nature, such as trees, streams, and rivers, are used unsustainably for growth and income. On the other hand, the growth of income and the strengthening of the economy will lead to the development of construction and encroachment on/ misuse of nature, and as a result, the environment will be harmed.

With a common understanding of the worries, pains, and fears of this disease and job situation around the world, a solution should be presented to this crisis and enough contemplation should be done to avoid repeating such challenges. Of course, the main and important solution is to change the

behavioral pattern from negligence and environmental damage to green action.

Corona and its epidemic must end at the point where the scope of human presence and intervention in the lives of other organisms, both domestic and wild, is re-examined and, once its negative consequences are revealed, limited and banned altogether.

With the COVID-19 pandemic, the use of virtual networks in communications, work, education, and research has flourished, reducing traffic and pollution. To perpetuate such a situation, governments should strengthen e-government, using virtual means of communication instead of face-to-face meetings and symposiums, even at the international level due to the high emissions of greenhouse gases by aircraft.

As a human movement with different vehicles has decreased, less carbon dioxide and monoxide have been produced. Planning for this should be done on a large scale by policymakers with the participation of citizens because the resulting heat islands will disappear and the rate of global warming will be reduced.

One of the effects of COVID-19 was becoming aware of the wrong pattern of economic development that has been pursued by most countries as the dominant system. Constant movement based on unbalanced

development and disregard for the environment will lead to the destruction and depletion of resources. To stop this destructive process that has seriously endangered life, all actors, including governments (one of the consequences of Corona has been the strengthening of the roles of government as a public policymaker and good evil), organizations and individuals should act based on sustainable development. Among other effects of the COVID-19 epidemic is the increased tolerance of others and cultural growth; For example, not holding a funeral despite its importance in the traditional culture of the Middle East and not performing religious rites in relevant places around the world are signs of the evolution of public culture and shows the importance of human life, health, and happiness.

It is hoped that the pattern of behavior by governments, transnational corporations, rational citizens, and the pattern of sustainable consumption will replace the current global situation. Finally, it should be said that for environmental problems, only one solution will not work, but multifaceted solutions must be provided, taking into account other rights and duties. In some situations too, there should be the courage to bear the loss and the (bad) cost incurred or the same strategic loss to stay safe in the future (worse and worst).

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