



**THE IMPACT OF THE COVID
PANDEMIC ON THE
MANAGEMENT OF THE
MODERN CLIMATE CRISIS**

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Executive Summary

Climate change has been an issue that has theoretically plagued the planet for many decades. The speed with which it evolved showed the low reflexes of the states as the Earth has now passed through the time of the Climate crisis.

The Sars-Covid-19 virus appeared in late 2019 and soon turned into a global pandemic, highlighting in this case, the pathogenesis of the global community in the management of global threats and crises.

However, the main consequences of Covid-19 are two. On the one hand, there is an awakening in the ranks of the citizens for the protection of the planet in any form of danger, and therefore in the strengthening of environmental awareness; but on the other hand, major economic interests have been affected, which delay the process of citizens and global actors to deal with the effects of the climate crisis in the near future.

The recent Glasgow Conference left a huge gap in humanity's desire to curb and tackle climate change effectively. However, it is encouraging that an agreement has been reached between the participating States to substantially strengthen its prevention mechanism.

In conclusion, the Covid-19 pandemic acts as a catalyst in the current management of the global climate crisis.

Introduction

The climate crisis is an unbearable reality and during the third decade of the 21st Century, there is a geometric increase in its effects, with the adaptation and mitigation policies by the world community being considered of utmost importance for the treatment of the greenhouse effect and the reduction of gas emissions into the atmosphere.

Since 2020, the Covid-19 pandemic has posed a second global health threat.

The current report analyses how the will and the policies of the states for the protection of the environment were influenced by this unprecedented situation for the planet.

1. Covid 19, Climate Crisis and Policies

a. A review of Climate Crisis policies from 1992 to the present

Climate change is inextricably linked to global warming. Global warming allows solar radiation to enter the Earth's surface and, through greenhouse gases (GHG) in the atmosphere, such as CO₂ and methane, maintains a stable global

temperature. However, after the First Industrial Revolution, there was a significant increase in the concentration of GHGs due to massive human emissions, which could threaten global sustainability and even the entire life on the planet.

Climate change effects include glacier melting, ocean acidification, sea-level rise, and an increase in droughts. Furthermore, social effects include impacts on vulnerable social groups and increased inequalities, environmental migration caused by the gradual disappearance of coastal areas, and cultural heritage destruction. Warmer temperatures also exacerbate drought, desertification, and biodiversity loss, putting people's health at risk. These conditions can potentially spread human diseases and even pandemics, with zoonotic diseases accounting for 70% of all cases.

After considering the global implications and dangers, the international community decided to act in 1992, during the Earth Summit, held in Rio de Janeiro, under the auspices of the United Nations. One of the main outcomes was the United Nations Framework Convention on Climate Change (UNFCCC), which

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The two main pillars of climate policy are adaptation and mitigation. Despite the clear reference in the convention document, member-states preferred to take mitigation-oriented measures to address immediate climate change rather than investing in urban and rural infrastructure as the adaptation pillar suggests. The UNFCCC's main instrument is the Conference of the Parties (COP), which makes decisions at the highest level.

Moreover, the UNFCCC implements specific environmental principles. These are the common but differentiated responsibility (CBDR) principle, which allows developing countries to have different rights in terms of GHG emissions. The precautionary principle, which is partially implemented in the UNFCCC due to its connection to fiscal results, and the equity principle, aims to protect the planet for future generations (Tsaltas, 2017, pp. 161-165).

In 1997, the member countries reached the first agreement to reduce global emissions. That was the Kyoto Protocol, a text-based on economic considerations in the United States. It directly affected developed countries, which were divided into Annex I and Annex II, whereas developing countries were in non-Annex and were affected indirectly.

Moreover, the following mechanisms were established: *Emissions Trading*, *Clean Development Mechanism* and *Joint Implementation*.

The first was focused on developed countries. Countries with low GHG emissions could sell their excess units to other countries, allowing both to meet their emissions targets. The second mechanism encourages green investments in developing countries by developed countries to lower GHG emissions. This is a win-win situation because developed countries can save emission units to meet national targets while developing countries benefit from western investments in sustainable development. The CDM was particularly effective because it provided developed countries with the lowest-cost emission reductions (Olsen, 2007, p. 62). The third mechanism was similar to the previous

one, but it targeted Eastern European transition economies.

On the one hand, Kyoto Protocol established a framework for reducing global emissions on an economic basis through market mechanisms with significant contributions from the private sector. A compliance and monitoring system was also established with developed countries reporting on their progress toward national targets regularly. Furthermore, the CBDR principle was implemented with developed parties committing to reduce their emissions as the primary cause of man-made climate change. Developing countries were under no obligation to limit their emissions in exchange for the benefits of CDM implementation.

On the other hand, despite high ambitions, the Kyoto Protocol has proved largely ineffective. In reality, it had a very limited scope covering a very short binding period (2008-2012) combined with an extremely low goal extent, just a 5.3% reduction in developed-country emissions required for ratification. That was the greatest drawback because it applied only to developed countries whereas developing states were free to continue emitting GHGs. Finally, that

provision triggered a vicious cycle. Instead of being reduced, emissions from developed countries were transferred to developing countries (Aldy et al., 2003, p. 375).

The following COPs were limited to technical aspects of the Kyoto Protocol, such as funding. Despite the large participation in COP-14 in Bali, the high hopes for a new era of climate policy were dashed at COP-15 in Copenhagen, which was a resounding failure. There was a significant disagreement on economic interests, which resulted in an even worse outcome, direct negotiations between developed countries and Brazil, South Africa, India and China, known as BASIC countries, dealing a significant blow to the official processes of climate regime and clustering developing countries.

The outcome was the Copenhagen Accord, a political document with no commitments rather than a legally binding agreement with the initial goal of reducing global emissions. It did, however, culminate a framework for a future agreement underlying the need for mitigation and adaptation actions. Therefore, countries should limit global temperature rise to less than 2°C and

reach a global and national peak in GHG emissions as soon as possible through voluntary national targets. The failure of COP-15 to reach a timely, effective, and binding agreement was a major failure (Christoff, 2010, p. 651). Instead, these provisions would be met at COP-21 in Paris several years later.

In general, COP-15 has been cited as a negative precedent in climate policy regarding international cooperation and disrespect for formal negotiation processes.

The most recent memorable event in climate policy occurred in COP-21, which was held in Paris, where parties reached the pronounced Paris Agreement following tough negotiations. The agreement resulted from public and scientific pressure to establish efficient mechanisms to address climate change immediately. The parties agreed that the ultimate goal should be to keep the global temperature rise below 2°C. However, developing countries persisted and eventually succeeded in lowering the limit to 1,5°C.

To achieve this goal, each country should submit National Determined Contributions (NDCs) every five years, a report depicting the measures taken and

proposed at the national level. NDCs are divided into conditional, which are dependent on technology transfer and financial assistance and are preferred by developing countries, and unconditional, which do not require any additional prerequisites (Salawitch et al. 2017, pp. 118-119). Furthermore, each party's subsequent NDCs would have stricter provisions than the previous one.

Another important process is the Global Stocktake, which assesses the implementation process and provides countries with guidelines for planning mitigation and adaptation measures to meet national targets. To gradually improve NDC targets, Global Stocktake assists parties in recognising their progress, the next steps that should be taken, and their options for enhancing their national and international interventions (Klein et al., 2017, p. 320). Furthermore, Article 13 establishes an Enhanced Transparent Framework to ensure comprehension and support of climate change actions and, in addition, that the various conditions of developing countries are taken into account, while article 15 establishes a committee to aid in implementation and compliance. These three mechanisms, together with Global

Stocktake, form a pledge and review system that aims to ensure a transparent and accountable system with enhanced monitoring. This system promotes international climate policy cooperation and coordination by providing incentives through flexible commitments to achieve technology transfer and normative goals (Raiser et al., 2022, pp. 2-13).

Moreover, countries are encouraged to achieve Global Peaking in emissions as soon as possible to be on track for a climate-neutral world by 2050. Article 4 gives developing countries a more convenient time frame to meet that goal. Apart from new implementation mechanisms, the Paris Agreement redefines climate policy by prioritising adaptation measures, as stated in Article 7. This is the first time since UNFCCC ratification that the global community has focused on that aspect of climate policy. As a result, the Paris Agreement broadens the adaptation legislative framework, aiming for stronger national commitments and mechanisms for transparency and assessment under the recognition of a multilevel adaptation framework (Lesnikowski et al., 2017, p. 825).

Most concerns about the Paris Agreement provisions stem from the lack of a definition of the decarbonisation year, as well as the lack of an explicit timeline for the elimination of fossil fuels, provisions on emissions from aviation and shipping, and, last but not least, a limited reference to climate justice (Doelle, 2016, pp. 13-15). Furthermore, despite NDCs, there are no binding targets to be met, thanks to US pressure, which resulted in the replacement of the word "shall" in the final agreement with "should," which implies optionality.

Nonetheless, aside from technology transfer and funding terms, there are no provisions for developing countries (Huggins & Maguire, 2018, pp. 164-178). As a result, critics argue that the CBDR principle is no longer clear, even though NDCs differ by country because both developed and developing countries must implement the same pledges.

Overall, the Paris Agreement is unquestionably a pivotal point in the evolution of climate policy, the implementation of which is dependent on political will. Instead of the Kyoto paradigm, a more transparent monitoring process is introduced, along with specific long-term goals. Governments have

recognised that climate change is unavoidable, so urban and rural infrastructures must be updated to prevent destruction from extreme weather events and general climate effects in the environment and vulnerable groups of society.

b. Covid-19 impact review to date

Most coronaviruses cause severe infections of the respiratory system in humans, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

In December 2019, a new infectious respiratory disease, COVID-19, emerged in Wuhan, Hubei China, caused by SARS-CoV-2, which belongs to coronavirus diseases. According to researchers, the SARS-CoV-2 spike protein interacts to angiotensin-converting enzyme 2, a cellular receptor that serves as an entrance site into human cells. (Verma, 2020). It has over 20 times the binding affinity of SARS (Verma, 2020).

The 2021 report reveals 239007759 million verified covid-19 cases and 4871841 million covid-19 deaths globally. (Talic, S. et al., 2021, p.375).

More specifically, on December 14th, in the United States COVID-19 deaths

surpassed 300.000. As the United States constitutes 4% of the globe's population, they rank first in the world in pandemic deaths, in total 19% of the global, with the 12th worst COVID-19 mortality rates globally (Vinueza-Naranjo, P.G. et al., 2022). Although, the statistics for mortality are not able to capture the full devastation of COVID-19-related morbidity involving physical health also social, emotional, and spiritual well-being. (Koh, H. K, 2021, p.133-134). According to World Health Organization, 5.19.105.112 cases of Covid -19 were reported globally, as well, as 6.266.324 deaths (WHO, 2022). In Europe, there were 218.268.130 confirmed cases and 2.002.392 deaths. Although France had the most cases (28.328.353) United Kingdom is the country with the highest number of deaths, 177.095 in total. Additionally, in America there were 154.826.856 cases and 2.733.759 deaths (WHO, 2022).

The spread of Covid-19, a highly contagious virus, had serious impact on global and national economies and foremost on people, regardless of geographical boundaries. The SARS-CoV-2 had big impact on global public health and economies. (Verma, A.K. &

Prakash, 2020, p.7352-7363). In particular, global GDP decreased by 5.2 per cent in 2020 compared to 2019, according to World Bank (data.worldbank.org). This decrease is due to the fiscal and monetary regulations that the nations put in place to maintain household income and protect cash flows in the business sector. (Carlsson-Szlezak P. et al, 2020) It is expected that there will be wide-ranging effects on the labour market, and financial markets, in the production sector. The negative impact of these impacts depends on the type of restrictive measures and the time of their implementation. Naturally, these effects affect the economic inequalities in specific societies. (Brodeur, A. et al., 2021, p.1007-1044).

According to the observation of Deloitte, "COVID-19 affects the world economy in three main directions: effect on production, distribution on supply chain and by its financial impact on business and markets. The supply sector suffered the initial impact of COVID-19. The closed Chinese factories had led to a decrease of supply, services, and goods, pushing the global economy to higher prices and lower production. The response from the demand-side to the

contraction to raise demand exacerbated the inflation, with small conflict so on employment as on output, mainly in case the supply curve will be price-insensitive, because of the inability to find alternate sources of materials and parts. (Maital, S., & Barzani, E., 2020, p.1-12).

A more pessimistic view, adopted by Bain & Co., states that "the COVID-19 outbreak, is expected to cost as much as any other epidemic, because of the changing role of China. "SARS reduced the GDP of China by 1%, in 2003 when China used to account for 4% of global GDP but it currently accounts for 16%. Epidemics such as SARS-Cov-2, have a disproportionate impact on secondary and tertiary industries. Manufacturing and services contributed 93% of China's GDP more than their proportion of GDP (85%) during the SARS outbreak 20 years ago. (Maital, S., & Barzani, E., 2020, p.1-12).

Globally, most nations followed the guidelines of health experts for Covid-19 and immediately adopted strict measures to mitigate the infections and adverse health impact. (Hale Thomas et al., 2020) Despite the urgent need for all countries to follow the measures for the fortification of public health, the effect on

the financial market was intense due to the sharp rise in unemployment with serious concerns for the liquidity of companies. Most of the nations responded immediately by introducing measures to provide financial support to households and businesses in order to be able to cope with the needs caused by the pandemic. During this period of the health crisis the planet went through, the differentiation in the fiscal response and in the means available to each country was seen. The advanced economies responded by more than 9% of GDP in expenditure and revenue measures and another 11% in support through guarantees and fiscal activities. Middle economies used almost all means to meet the crisis of with 3.4% of GDP in revenue measures. In terms of developing countries, it was expected that they would respond with fewer resources, using only 1.8% of GDP to secure expenditures and revenues. (Lacey, E. et al., 2021).

There is a great variety in the policies each country adopted during the pandemic period, given that most followed 8 to 20 meters since September 2020. On average, up to 3 interventions were adopted to support health systems

and up to 5 to support businesses and households. (Lacey, E. et al., 2021).

c. Covid-19 and Climate Crisis

Covid-19 caused high urgency which for many commentators, activists and researchers was seen as a window of opportunity to increase environmental awareness and (Beattie & McGuire, 2020) change in economic strategy (Barlow et al., 2020; The Economist, 2020). The global pandemic mobilized citizens and caused unprecedented lockdowns, and travel restrictions and disrupted mobility including borders closed, which initially impacted positively on the environment. It has been observed globally that the reduction of freight in the road, maritime and air sectors have led to a reduction of air pollution and GHGs emissions, with the concentration of N₂O and CO to have been reduced by 60% in some cities, compared to the same figures in 2019 (EEA, 2022; Manenti et al, 2021; EEA, 2020c). The reduction of N₂O emission which is one of the key indicators of economic activity is closely related to shutdowns in industrial countries such as

the US, Canada, India, Italy, Brazil etc. (Boswal et al, 2011). Air travel levels dropped by 96% compared to 2019 (Wallace, 2020) together with oil requirements by 435,000 barrels in the first semester of 2020 (IEA, 2020). Therefore, responses to environmental challenges highly depend on the macro-level economy. Regional differences do not affect climate change because gas emission tends to be uniform in the atmosphere, while air pollution at the regional level affects local air quality (OECD, 2021).

Energy-related emissions have also been reduced by 7%, together with agriculture-related environmental pressures by 2%, while the highest reduction has been observed in the use of non-metallic minerals, including construction materials (ibid). Pandemic-related lifestyle might not have resulted in emission declines possible to achieve the 1.5° or 2° temperature goal, but Covid-19 has alerted citizens and triggered environmental thinking in their mobility habits. Different cities adopted cycling facilities (Kraus and Koch, 2021; Nikitas et al., 2021), while citizens responded rapidly to changes of collective behaviour, especially to global challenges

such the climate crisis (Selin, 2021). Furthermore, what was observed not only in National but also supranational levels and International Organisations, such the DG Research and Innovation of the European Commission, the OECD and numerous non-governmental organisations, including the European Environmental Bureau, is a formulation of post-Covid strategies (EEA, 2022). Specifically, the EC responded with mobilizing unprecedented financial resources through its NextGenerationEU COVID-19 recovery plan, allocating 750 billion €, including 25% of the fund for climate-friendly measures (EC,2021).

However, the pandemic also had negative consequences for the environment. One of the most profound negative impacts is the increase of biomedical waste, related to diagnosis, treatment and disinfection purposes which generated tons of medical waste, counting more than 190 m tonnes higher than the usual consumption of items made of plastic (Rume & Islam, 2020). A direct effect on the environment is not the only consequence of the COVID pandemic. Measures to combat climate change are part of the national budgets both in the Western and developing world. Therefore,

governments had to mobilize funds to recover from COVID-19 and to support their structural economies, which led to reduced spending for supporting climate change measures. Only in the US, the Rockefeller Foundation estimated that an additional \$75 billion in spending would be needed in order to implement a policy of 30 million tests per week (Cutler & Summers, 2020, p.1496).

Hence, in the developing world public spending for COVID-19 has severely impacted on climate spending (Caldwell et al, 2021). Governments' revenues reductions due to the pandemic, in most of the countries combined with the need to relocate funds for health and social services, which caused spending cuts on climate initiatives. The strain of financial conditions also occurred to spending shortfalls of international aid, which was an important secondary source of climate finance in developing countries. For example, the Indonesian government allocated \$1.4 billion less for climate action in 2020 compared to the previous year, a decrease of 20.5%, while in Fiji Islands, which have suffered from natural disasters due to the climate crisis, a 40% reduction in the country's funds for tackling climate change in 2020 has been

recorded. Similarly, Bangladesh announced a decline in climate spending by 7% and its national budget on environmental expenditure was the lowest since 2016.

d. Glasgow Conference:

Correlation of Covid-19 with the climate crisis and evaluation of the conference's conclusions

The recent COP-26, held in Glasgow, had been postponed due to the Covid-19 pandemic. As a result, it was anticipated that parties would focus on its impact to eliminate it and find solutions to move forward.

Despite this belief, there were only a few references to the pandemic in the final decisions (UNFCCC, 2021), in an attempt to highlight the obstacles that had been created and influenced the implementation process negatively. There is only one reference to health in general, which reveals that the current governmental trend is to keep an eye open on it and avoid its direct connection to climate change despite health issues have dominated the agenda (Masuda, 2022).

Glasgow Climate Pact mentions the financial impact of the pandemic particularly for the increasing indebtedness, mainly concerning

developing countries. It is a critical factor that can deter many developing countries from investing in mitigation and adaptation actions to allocate funds to health infrastructure to prevent and respond to Covid-19 and other pandemics.

Furthermore, as Decision 3 mentions, the National Adaptation Plan progress was slowed down due to the pandemic. The rise in medical care costs has impacted adaptation finance limiting adaptation spending with fiscal space and increasing reluctance to invest in adaptation actions (Neufeldt, Christiansen, Dale, 2021). Similarly, Decision 6 states that the pandemic has hampered the implementation of the Green Climate Fund work plan, and that additional efforts should be made.

Apart from that, the rest of the references to the pandemic were about the difficulties that special committees faced and their efforts to restore progress on the previous condition. For instance, Decision 5 requested from the Standing Committee of Finance (SCF), which is appropriate to assist COP in the Financial Mechanism of the Convention to hold another part of the Forum about health and security issues.

It is pretty clear that Covid-19 had a negative impact on the global effort to address climate change. Although adaptation actions and financial contributions for this purpose were limited during the pandemic, it is recognised that health sector is a priority issue that should be considered in climate change actions.

In general, there was an anxiety in public dialogue and official speeches about planet sustainability prior to COP-26, as well as a constant reminder that COP-26 was our last chance to save the planet from climate change.

Although deliberations did not result in a revolutionary agreement with far-reaching consequences, they were considered quite successful. By signing Glasgow Climate Pact, member parties reaffirmed Paris Agreement commitments such as actions to keep rise to 1,5° C and measures toward the adaptation pillar.

The involved parties succeeded in making the Paris Agreement more operational, specifically on finance, adaptation and transparency. In the context of climate policy funding, developed North has committed to reduplicate adaptation funding without

binding commitments, followed by Glasgow–Sharm el-Sheikh work programme to establish framework metrics on adaptation progress, with mandatory reporting tables to ensure transparency (Michaelowa, 2021, p. 303). However, one major issue is that finance is based on loans rather than grants, which can deteriorate national economies and foremost those of developing countries (Cutts, 2022).

Although public participation promotion in the Glasgow Climate Pact is limited, the contribution of local people, particularly indigenous and youth, to address climate change is recognized as an essential factor, as well as the inclusion of human rights in the work programme (Lennan & Morgera, 2022, p. 149). Furthermore, it is the first COP that decided to eliminate coal, indicating progress in public opinion (Depledge, 2022, p. 150).

Additionally, two agreements were reached among parties during COP-26 regarding deforestation and methane (CH₄). First is the Glasgow Leaders' Declaration on Forests and Land Use, which promotes sustainable land use, including forest conservation and restoration to reduce vulnerability to

climate change effects and contribute to the global effort of keeping global temperature rise at 1,5°C (Glasgow Leaders' Declaration on Forests and Land Use, 2021). Within the agreement, parties declared their will to stop global deforestation by 2030 with Brazil's participation and included projections on finance and public participation to raise hopes for its implementation (Jaiswal, 2021).

Second is the Global Methane Pledge, a US-EU initiative signed by 111 countries representing 45% of global methane emissions and aiming to reduce them by at least 30% by 2030. Although methane remains in the atmosphere for a much shorter period than CO₂, it provokes more devastating effects on climate because it is 80% more powerful. Although this pledge aims to initiate global action, national actions to reduce methane emissions could help significantly against climate change. (UNFCCC.int) Nonetheless, it is apparent that this agreement is only a starting point and much more must be done, as significant reduction through current technology at a low economic cost is entirely feasible (Anon, 2021, p. 875).

The previous sentence accurately describes the outcomes of COP-26. It is another round of climate talks which reaffirms the global recognition of the need to address climate change effects as soon as possible but demonstrates the

absence of the necessary political will and determination to move one step further and faster. The legal and technological tools are now available, so it is upon governments and civil society to use them.

Conclusions

- The Covid-19 pandemic, despite the inertia it caused to industrial structures worldwide, did not affect the global climate crisis.
- The health waste generated during the global health crisis significantly strained the environment.
- The advent of Covid-19 has primarily demonstrated the planet's inability to tackle two global risks simultaneously (due to the lack of sufficient resources from developing countries).
- The Covid-19 pandemic, although it has strengthened the environmental footprint and environmental awareness in societies, has hampered the effective implementation of measures in the management of the environmental crisis, mainly due to the large funds allocated to deal with the health crisis, not providing the necessary funds, especially in developing countries, to implement adequate environmental policies.
- The EU and its members have been a model in managing the climate crisis since 2020, as at the time of the pandemic, they allocated 23 billion euros (almost double since 2013) to deal with it.
- The Glasgow Conference did not live up to expectations of a link between Covid-19 and climate change [simple reports were made] (Andreoni, 2021), but it did add another gear to its adaptation and mitigation policies (reduction of methane emissions into the atmosphere) which should be intensified in the near future by the International Community.

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