#### Covid19 pandemic and Climate change impacts on world Economy

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#### Abstract:

The world was hardly hit by one of the deadliest infectious diseases in history: the COVID-19 that originated in China Wuhan in December 2019, then widespread all over the globe. Yet the outbreak of the virus has sickened more than 400 million people and cost the lives of over 5 million and 800 thousand others (2022). Almost all countries took confinement measures to mitigate the coronavirus outbreak. Those measures and the loss of life, hit hardly the global economy. Ever since, the emergency has evolved into a global public health and economic crisis. Although countries continue to fight the COVID-19 pandemic, its threat still looms large.

Moreover, climate change is already affecting the global economy through damage to property and infrastructure, lost productivity, mass migration and security threats.

The main aim of this study is to evaluate the momentous impacts caused by those two issue Covid-19 outbreak and climate change. It turns out that the coronavirus pandemic has affected the nearly \$90 trillion global economy, beyond anything it has experienced almost a century ago. The virus reduced global economic growth in 2020 to an annual rate of about -3.2%, with a 5.9% recovery. As 2020 passed as a bad dream and the global distribution of vaccines took place, the global economic recovery sprang back in 2021, nonetheless, the emergence of new variants such as delta and omicron has slowed it down. Global growth is expected to moderate from 5.9 in 2021 to 4.4 percent in 2022.Supply chain disruptions have played a key role in stalling global recovery this year. Shipping snarls along with a shortage of shipping containers, and a steep rebound in demand once pandemic-related restrictions were eased, have left producers scampering for components and raw materials. The raw material and input shortages, along with higher energy prices, have let to inflation soaring.

Similarly, climate devastating disasters that happened in 2021, has caused a damage costing around \$329 billion, making 2021 the third-costliest year on record (adjusted for inflation) for weather-related disasters, after those of 2017 (\$519 billion) and 2005 (\$351 billion), according to AON insurance company.

Keywords : Covid19, Climate change, world Economy

#### . INTRODUCTION

The Corona virus (COVID-19) epidemic first broke out in at Wuhan city of China in early December 2019 has rapidly widespread in almost every country all over the world and has become a new global pandemic crisis. The drastic lockdown measures taken by governments in response to the spreading of the pandemic have had a negative impact on the economy and financial markets. That was an unprecedented shock to the global economy. Loss of life, reduced productivity, significant reductions in income, business closures, trade disruption, and decimation of the tourism industry, all have led to a significant drop in global trade, lower commodity prices, tighter external financing conditions and large fluctuations in exchange rates.

Concurrently, the pandemic has distracted from efforts to handle with climate change, one of the major challenges of our time. Shifts in temperature and precipitation patterns and extreme weather events have already impacted economic stability and will drive projected economic damages and create risks to infrastructure and financial stability<sup>[1]</sup>. Climate change is likely to reduce global wealth significantly by 2050, as crop yields fall, disease spreads and rising seas consume coastal cities. According to a report from Swiss Re one of the world's largest providers of insurance, the effects will have as much as \$23 trillion in reduced annual global economic output worldwide as a result of climate change by 2050, representing 11% to 14% off global economic output compared with growth levels without climate change<sup>[2]</sup>.

As a matter of fact, both pandemic and climate change threaten to exacerbate the economic divergences among the world's economies. Hence the question arises, how the economic crisis unleashed by those two issues is hurting economies and what is the situation of the global economy with the recovery?

Thus, in line with the purpose of our study, the article highlights the following points:

#### 1. Global Economic Effects of COVID-19:

The world was hardly hit by the COVID-19 pandemic, an unprecedented global phenomenon that negatively affected global economic growth in 2020 beyond anything experienced in nearly a century, although the recession of 1929 has thankfully been avoided. The crisis has led to a sharp drop in global trade, lower commodity prices, tighter external financing conditions and large fluctuations in exchange rates, but a limited reduction in current account deficits and surpluses worldwide. In 2019 the global

current account balance (the absolute sum of all surpluses and deficits) declined by 0.2 percentage point of world GDP, to 2.9 percent of world GDP (Figure 1).



and Global Imbalances, 2021, p 8

Sectoral shocks associated with covid-19 crisis explain the increase in global current account balances- the sum of absolute deficits and surpluses in 2020. The sum of absolute current account deviations from their desired medium-term levels - were broadly unchanged in 2020 at around 1.2% of global GDP. In contrast, the sum of absolute headline current account balances increased by 0.4 percentage point of global GDP to 3.2 percent of global GDP. According to IMF, around 70% of surplus balances in 2020 were held by advanced economies, up from 69% in 2019. Forecasts of global current account balances for the coming years have been revised up (Figure 1).

One of these negatives caused by the COVID19, a major and sudden global stock market crash began on 20 February 2020 and ended on 7 April, ever since it was known as the 2020 stock market crash.

Those major disruptions in the world economy were caused by reduced personal interaction, due to official restrictions and private decisions. Meanwhile, Disruptions to education have slowed human capital accumulation and concerns about the viability of global value chains and the course of the pandemic have weighed on international trade and tourism. Yet exceptional policy support prevented a global economic depression, even as the pandemic took a heavy toll on lives and livelihoods, while, the post-pandemic economic landscape and policies remain highly uncertain, discouraging though investment, as the risks of further waves of contagion, reversal of capital flows and further decline in international trade, altogether loom in the horizon. Thence, the COVID-19 was a brutal external shock.

The World Health Organization (WHO) first declared COVID-19 as global health emergency on January 31, 2020. On March 11, it declared the viral outbreak officially a pandemic, the highest level of a health emergency.<sup>[3]</sup> Ever since, the emergency has evolved into a global public health and economic crisis that has affected the nearly \$90 trillion global economy, beyond anything it has experienced almost a century ago. In 2020, which was a year of extremes, travel stopped altogether for a while. Oil prices fluctuated widely. The weak and financially vulnerable oil and gas companies were pushed towards bankruptcy. The business of shale emerged as the worst casualty, with their very foundation getting rattled, bringing OPEC+ back as swing producers responsible for balancing the world oil market. The unprecedented accumulation of supply and demand shocks not only disrupted the oil markets, but also completely depleted excess crude oil storage capacity and turned the oil crisis into one of a kind storage crisis.<sup>[4]</sup>

The trade in medicinal products boomed and reached new heights. Household spending shifted to consumer goods rather than services and savings ballooned as people stayed home amid a global confinement. It is estimated that the virus reduced global economic growth in 2020 to an annual rate of about -3.2%, with a 5.9% recovery expected in 2021 and 4.9 percent in 2022. Global trade is estimated to have declined by 5.3% in 2020, but it is expected to grow by 8.0% in 2021.According to consensus forecasts, the economic contraction in 2020 was not as negative as initially expected, in part due to the fiscal and monetary policies adopted by governments in 2020, notably the United States.<sup>[5]</sup>If not for the crisis and these pandemic-related shifts and policy responses, global balances would have continued on their declining path. The stocks of external assets and liabilities remain near historic highs, with large valuation-induced changes and attendant risks for both creditor and debtor economies. Net borrower countries from abroad with external deficits, can become vulnerable to a sudden cease in capital flows, whereas, net lender countries can also run the risk of investing too much of their savings abroad as investment needs arise domestically. The challenge is to determine when imbalances are excessive or pose a risk. Therefore, while external deficits and surpluses are not necessarily a cause for concern, excessive imbalances-larger than warranted by the economy's fundamentals and appropriate economic

policies—can have destabilizing effects on economies by fueling trade tensions and increasing the likelihood of disruptive asset price adjustments.

#### **1-1-** Short-Term Recovery :

In the year 2021, the global economic recovery continues despite, slowing down by a resurging pandemic that poses unique political challenges. Services production is expanding, albeit prone to setbacks. Vaccinations have shown to be effective at mitigating the adverse health impacts of COVID-19. Although, uneven access to vaccines, vaccine reluctance, and a high rate of infection made many people vulnerable, which fueled the spreading of the pandemic. The observed prevalence of the delta and Omicron variants and the threat of new variants that could affect the effectiveness of the vaccine make the future course of the epidemic very uncertain. Under the influence of the extremely transmissible Delta variant, the global toll of COVID-19 has increased by nearly 5 million deaths (Fig.2) and health risks are numerous, preventing a complete return to normalcy. Outbreaks of the disease in critical part within global supply chains have caused longer-than-expected disruptions, fueling inflation in many countries. In present, vaccine access remains the principal driver of fault lines looking more persistent in the global recovery, reinforced by the resurgence of the pandemic. The foremost policy priority is therefore to vaccinate adequate numbers in every country and prevent more virulent virus mutations.

#### Figure 2: New confirmed covid-19 deaths



The dangerous near-term divergence in economic prospects across countries remains a chief concern, which is expected to leave lasting imprints on medium-term performance. Gaps in the expected recovery across economic groups have widened, for example between advanced economies and low-income developing countries. These differences are a consequence of the so-called "great vaccine gap" and large disparities in the aid provided by the public authorities. In advanced countries about58% of the population is fully immunized and some people are currently receiving booster injections, while by contrast around about 64% of the population in emerging market economies and more than95% in low-income developing countries is still unvaccinated (Figure 3).



Figure 3: The great Vaccination divide

Source: IMF, World economic outlook, October 2021, p 3

Differences in policy support across countries also underlay gaps in recovery speeds. Sizable fiscal support continues to be significant in advanced economies, while many emerging market economies are reducing their political support this year, as policy space shrinks with the duration of the pandemic (Figure 4). It is assumed that the central banks of major advanced economies such as Australia and Canada will leave their interest rates unchanged until the end of 2022, although in some cases asset purchases are expected to be reduced before then. Whereas, some central banks in emerging markets, notably in Brazil, Chile, Mexico and Russia, have taken a less accommodative stance.<sup>[6]</sup> Policymakers are confronted with a challenging trade-off: maintaining near-term support for the global

economy while preventing unintended consequences and medium-term financial stability risks. A prolonged period of extremely easy financial conditions, while needed to support economic recovery, can lead to overly stretched asset valuations and could fuel financial vulnerabilities. Some of the warning signs, such as the increase in financial risk-taking and rising fragilities in the nonbank financial institutions sector, point to the deterioration of the fundamental foundations of financial stability. If left unchecked, these loopholes can develop into old structural problems, jeopardizing medium-term growth and testing the resilience of the global financial system.<sup>[7]</sup>

# Figure 4: Fiscal stance (2020-2022)

(change in structural primary fiscal balance, percent of potential GDP) Fiscal tightening is already under way in emerging market and developing economies and will pick up in advanced economies as well in 2022.



Source: IMF, World economic outlook, October 2021, p3.

As regards growth predictions, they are foreseen based on financial conditions remaining supportive. The overall picture remains one of largely favorable financial conditions. Equity markets are buoyant, credit spreads remain narrow, and net flows to emerging market economies have been broadly stable so far (particularly to hard currency bond funds).Vaccine rollout, policy support, and continued supportive financial conditions constitute the key considerations for the forecasts.



Source: IMF blog (<u>https://blogs.imf.org/2021/10/12/a-hobbled-recovery-along-entrenched-fault-lines/</u>)

The International Monetary Fund's global growth forecast for 2021 has been revised down slightly to 5.9% and unchanged for 2022 at 4.9%. However, this modest revision hides a significant drop in the rating for certain countries. The outlook for the group of low-income developing countries has been severely undermined by the worsening dynamics of the pandemic. Therefore, Country prospects continue to diverge, driven by a vaccine divide and disparities in policy support (Figure 5).

#### Figure 6: A tale of two worlds



Source: IMF blog (<u>https://blogs.imf.org/2021/10/12/a-hobbled-recovery-along-entrenched-fault-lines/</u>

The large differences in economic prospects between countries remains a crucial concern. The aggregate output of the group of advanced economies is expected to retrace its pre-pandemic trend in 2022 and exceed it by 0.9% in 2024. In contrast, the aggregate output of the group of emerging markets and developing economies (excluding China) is expected to remain 5.5% lower than the pre-pandemic forecast in 2024. These divergences are the result of the "vaccination divide" and wide disparities in political support (Figure 6).

Another policy issue is supply disruptions. On the one hand, COVID-19 outbreaks and climate change-related disruptions have caused shortages of essential inputs and led to a decline in manufacturing activity in several countries. On the other hand, these shortages, together with the release of pent-up demand and the rebound in commodity prices, have led to accelerating consumer price increases, for example in the United States, Germany and many emerging market and developing countries. Food prices have risen the most in low-income countries, where food insecurity is most acute, increasing the burden on the poorest households and increasing the risk of social unrest.

# **1-2-** Employment Growth:

In a report prepared for the January 25-29, 2021, World Economic Forum, the International Labor Organization (ILO) estimated that 93% of the world's workers at that time were living under some form of workplace restrictions as a result of the global pandemic and that 8.8% of global working hours were lost in 2020 relative to the fourth quarter of 2019, an amount equivalent to 255 million full-time jobs being lost at a global level. Total working hours lost in 2020 compared with 2019 were highest in Europe (14.6%) and the Americas (13.7%), where quarantines and lockdowns had been extensive, followed by lower middle income economies (Figure 7).



# Figure 7: Composition of Working-Hours Lost by Region, 2020

Source: *ILO Monitor: COVID-19 and the World of Work,* International Labor Organization, Congressional Research Service Report, "Global Economic Effects of COVID-19" November 10<sup>th</sup>, 2021, p 10.

Similarly, the Organisation for Economic Cooperation and Developpemnt (OECD) estimated in July 2021 the pandemic-related recession cost 22 million jobs in OECD countries in 2020 and that 114 million jobs had been lost globally, compared with 2019. The estimate concluded that unprecedented government fiscal policies supported worker's incomes, thereby likely limiting the impact of shutdowns and social restrictions on labor markets. Nevertheless, the OECD concluded the unique nature of the crisis accentuated and deepened economic and social divides along skill levels, education, income, and gender bases in OECD countries and amplified longstanding trends toward increasing economic inequalities in manyOECD countries.<sup>[8]</sup>

Several economist believe that pandemic-related distruptions to labor market in developed and developing countries could have long-lasting effects, even though the pandemic deceases and economic activity ramps up, firms may not abandon the labor saving lessons they learned, with fewer jobs created. We can expect leaner staffing in retail stores, restaurants, auto dealerships, and meat-packing facilities, among many other places.<sup>[9]</sup>

Aftermath the disastrous hit of 2020, labor markets recovery is underway, but uneven. Global employment remains below pre-pandemic levels, reflecting a combination of negative production gaps, workers' fears of on-the-job infection in contact-intensive occupations, childcare restraints, labor demand evolves as automation accelerates in some sectors, income replaced

through replacement income through furlough schemes or unemployment benefits helping to cushion income losses, and frictions in job searches and matching.

Emerging and developing market economies, such as Latin America and the Caribbean and South Asia, have been hit harder, with particularly large cuts to working time in 2020. Within economies, employment of young people and low-skilled workers is still lower than that of older and highly skilled workers.

All advanced economies are expected to return to their pre-COVID-19 production levels by the end of 2022, but only two-thirds of them are expected to return to their previous jobs. Emerging and developing market economies are showing a similar trend (Figure 8).<sup>[10]</sup>





Source: IMF, World economic outlook, October 2021, p 9.

Nearly all advanced economies and a significant portion of emerging and developing economies are expected to return to pre-pandemic output levels by the end of 2022. Instead, the recovery in employment is expected to lag compared to output in a number of countries.

NB: For employment, the bars measure the fraction of countries expected to regain 2019 employment by 2022. For output, the comparison is of real GDP between 2019:Q4 and 2022:Q4 (Figure 8).

# 1-3- Rises in Inflation, High Uncertainty:

The economic forecasts reflect the lingering risks to a sustainable global recovery posed by the resurgence of contagious cases and the potential inflationary pressures associated with pent-up consumer demand fueled by increased personal savings. On the supply side, shortages reflect continued disruptions in labor markets, production and supply chain bottlenecks, disruptions in global energy markets and restrictions on shipping and transport which add to inflationary pressures.

Inflation pressures were increasing as a result of rising energy and commodity prices, production bottlenecks, and rising demand, but there was uncertainty about whether the increase was transitory or could become entrenched.

Even as employment rates remain below pre-pandemic levels, headline inflation rates have increased rapidly in the United States and in some emerging market, although there are differences in the extent of pressures across countries. Core inflation-which removes the influence of food and energy prices-has also risen in many countries, but to a lesser extent (Figure 9).



#### **Figure 9: Inflation trends**

Source: IMF, World economic outlook, October 2021, p 9

Headline inflation rose on average, with advanced economies rising more markedly. Core inflation also picked up, but more moderately.

As some developed economies start recovering, central banks and national governments are weighing the impact and timing of tapering off monetary and fiscal support as a result of concerns over potential inflationary pressures against the prospect of slowing the pace of the recovery.

In addition, the IMF concluded that pandemic outbreaks in critical links of global supply chains have "resulted in longer-than-expected supply disruptions," which are feeding inflation in many countries. The IMF concluded that "risks to economic prospects have increased and policy trade-offs have become more complex." According to its last report, the IMF expects elevated inflation is to persist for longer than envisioned previously, with ongoing supply chain disruptions and high energy prices continuing in 2022. Inflation also should gradually wane as supply-demand imbalances decrease in 2022 and monetary policy in major economies responds, assuming inflation expectations stay well anchored<sup>[11]</sup>.

Inflation continued to rise throughout the second half of 2021, not only because of the emergence of new variants, but also because it has been driven by several factors of varying importance across regions (Figure 10).



#### Figure 10: Change in inflation, December 2020-latest



The forecast is subject to high uncertainty that grows as variants threaten the recovery resilience. Frustration with the handling of the pandemic is juxtaposed in some cases with the increase in food prices, slow employment growth, and long-standing erosion of trust in government institutions. A further intensification could damage sentiment and weigh on the recovery and that could lead to social unrest.

#### 2-**Climate change impact on Economy:**

Humans are increasingly influencing the climate and the earth's temperature by burning fossil fuels for energy use, cutting down forests and farming livestock. There is a strong scientific consensus that the Earth is warming and that this warming is mainly caused by human activities. The term "climate change" refers to long-term variations in temperature and weather conditions. These variations may be a natural phenomenon, but since the beginning of the 19<sup>th</sup> century they have mainly resulted from human activity, in particular the use of fossil fuels (such as coal, oil and gas), that creates the emission of greenhouse gases, mostly carbon dioxide (CO2) and methane. Agriculture, steelmaking, cement production, and forest loss are additional sources. Greenhouse gas emissions from human activities adding to those naturally occurring in the atmosphere strengthen and increase the greenhouse effect, causing climate change which includes both global warming and its impacts on Earth's weather patterns. Climate change is one of the defining issues of the early current century. In recent years, not only climate scientists but also major world political leaders have labeled climate change an "existential threat". The phrase can refer to a literal threat to humanity's existence, but also to the danger that unchecked climate change can pose to our ways of life and place in the natural world. Based on the scientific consensus that global warming is occurring and that human-made CO2 emissions are driving it. The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. It implemented the objective of the UNFCCC (United Nations Framework Convention on Climate Change) to reduce the onset of global warming by reducing greenhouse gas concentrations in the atmosphere to a level that would prevent dangerous anthropogenic interference with the climate system. 192 parties adhered to the protocol in 2020 (Canada withdrew from the protocol in 2015). In 2015, an agreement was signed by 196 countries' representatives in Paris often referred to Paris Climate Accords aiming at climate change mitigation, which consists of actions to limit global warming by reducing emission of greenhouse gases so as to holding the increase in the global average temperature to well below 2°C above pre-industrial levels; at adapting to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development; and at last at financing consistently with a pathway towards reduced greenhouse emissions and climate-resilience development.

Extreme weather events and slow onset events caused by climate change are already resulting in loss and damage, both economic and non-economic. These are certain to increase as the climate changes further. Slow onset events, as initially introduced by the Cancun Agreement (COP16), refer to the risks and impacts associated with: increasing temperatures; desertification; loss of biodiversity; land and forest degradation; glacial retreat and related impacts; ocean acidification; sea level rise; and salinization.

In the other hand, one of the most visible consequences of a warming world is an increase in the intensity and frequency of extreme weather events such as head waves, cold waves, tropical cyclones: hurricanes and typhoons. The global weather-related disaster losses, such as loss of human lives, cultural heritage, and ecosystem services, are difficult to value and monetize, and thus they are poorly reflected in estimates of losses. According to the World Meteorological Organization (WMO) and UN Office for Disaster Risk Reduction (UNDRR). Storms, the most prevalent cause of damage, resulted in the largest economic losses around the globe. meanwhile, economic losses have increased sevenfold from the 1970s to the 2010s, going from an average of \$49 million, to a whopping \$383 million per day globally<sup>[12]</sup>. As climate change influenced hazard behavior grows more volatile and severe, the expansion of population footprints will additionally grow the risk of costlier disasters. Disaster losses are increasing rapidly due to an increase in wealth and exposure (more people with more stuff living in vulnerable areas), making it difficult to quantify how climate change might be responsible for the concerning rise in disaster costs in recent years. Despite the unprecedented burden of natural catastrophe and pandemic-related losses over the last five years, the reinsurance sector continues to be well-capitalized meaning they can comfortably manage to pay the large losses. In its latest annual report, "AON" a multinational professional services firm that sells a range of financial risk-mitigation products, including insurance, estimates \$343 billion direct economic losses and physical damage resulting from natural disasters in 2021. This marked the seventh-costliest year on record after adjusting actual incurred damage. According to the regarded report the total damage solely wrought by weather disasters was (\$329 billion), making 2021 the third-costliest year on record (adjusted for inflation) for weather-related disasters, after those of 2017 (\$519 billion) and 2005 (\$351 billion)<sup>[13]</sup>. The German Munich RE (Munich Reinsurance Company), has 2021 tied with 2005 and 2011 as the second-costliest year on record for insured losses from natural disasters, with only 2017 being more expensive<sup>[14]</sup>.

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#### Source: Aon 2021 annual report, p 90

Extreme climate events brought misery to millions around the world in 2021, which really was a year of climate breakdown, featured a record four mega-disasters costing at least \$20 billion, and had 47 billion-dollar weather disasters. A Report of Christian Aid, identifies 15 of the most destructive climate disasters of the year. Ten of those events cost \$1.5 billion or more. Most of these estimates are based only on insured losses, meaning the true financial costs are likely to be even higher. Among them four were the costliest: Hurricane Ida which struck the US in August costing \$65 billion and killing 95 people. July floods in Europe cost \$43 billion and killed 240 while summer seasonal flooding in China's Henan province caused \$17.5 billion of destruction, killed 320 and displaced over a million. February 15-20, 2021 North American winter storm caused at least \$2 billion in damages, mainly due to blackouts and structural damage and cost the lives of at least 29 persons. The report focuses on financial costs that are higher in developed countries because they have higher property values and can afford insurance, whereas some of the most devastating extreme weather events in 2021 hit poorer nations which are bearing the brunt of climate change even though they have contributed least to the problem<sup>[15]</sup>.

Figure 12: Global Billion-dollar weather disasters 1990-2021, as cataloged by Aon.



As for "AON" plc report estimates, the year 2021 had, for the first time on record, four individual weather events topping the \$20 billion economic loss threshold, that were weather/climate related namely Hurricane Ida, July floods in Europe July floods in China's Henan and North-American winter storm (quoted above). In 2004, there were two hurricanes (Charley and Ivan) and two earthquakes (October 23Japan Earthquake and the December 26 Indian Ocean Earthquake and Tsunami).<sup>[16]</sup>

2021 was the most expensive year considering insured losses ever for winter weather, at \$17 billion, and third-costliest for severe weather (including severe thunderstorms, tornadoes, and hail)—nearly \$27 billion. Only 2020 (\$38 billion) and 2011 (\$33 billion) had higher severe weather insured losses.<sup>[17]</sup>

The year 2021 marked 21 individual billion-dollar insured fires globally. Insured damage from wildfires in 2021 cost \$5 billion, marking the seventh consecutive year that insured wildfire losses surpassed \$2 billion. Prior to 2015, the globe recorded just four years in which aggregated wildfire-related insured losses topped \$2 billion.<sup>[18]</sup>

As regards drought losses in 2021 were thankfully below the 2000-2020 average, at \$21 billion. The pandemic helped push global food prices to their highest levels in 46 years in 2021, and food prices would have been dangerously high if above-average drought losses had hit the major grain-growing breadbaskets of the world.<sup>[19]</sup>



#### Figure 13 : Global economic losses from drought (in 2021 USD).



# Source: <u>https://yaleclimateconnections.org/2022/01/third-costliest-year-on-record-for-weather-disasters-in-2021-343-billion-in-damages/</u>

Damages in 2021 were below the 2000-2020 average (Aon 2021). In contrast with extreme weather events, addressing losses and damages caused by slow-onset processes is still neglected in the climate change context, both at the national and international level, which undermines the scale of the challenge. Slow-onset processes, including increasing m-ean temperatures, SLR, ocean acidification, glacier retreat, permafrost degradation, salinization, land and forest degradation, desertification, and biodiversity loss, will cause a wide range of economic and non-economic impacts (Figure 14)<sup>[20]</sup>.



#### Figure 14: Overview of loss and damage due to slow on-set processes

**Source:** "Germanwatch" publication series, <u>Slow-onset Processes and</u> <u>Resulting Loss and Damage : An introduction (January 2021)</u>, p 24.

Slow-onset process will result in a wide range of economic and noneconomic losses and damages. Figure 14, based on the literature review conducted by "Germanwatch", gives a detailed comprehensive overview of potential loss and damage from slow-onset processes and provides specific loss and damage details for each process including mean temperature increase, SLR, ocean acidification, glacier retreat, permafrost degradation, salinization, land degradation land and forests, desertification and loss of biodiversity (Figure 14).

# . Conclusion:

Covid-19 pandemic and the health the COVID-19 lockdowns and other precautions taken in early 2020 drove the global economy into crisis decreed in a large number of countries, drove the global economy into crisis caused a global recession. The crisis began with the stock market crash of 2020 and spreads around the world. The effects of the recession have had lasting impacts and the recovery is far from over; it continues but momentum has weakened, hobbled by the pandemic fueled by the highly transmissible. COVID has generated mass unemployment and sharp deterioration in labor market conditions. There is a risk that long-term postcrisis potential growth rates will be lower than their pre-crisis levels.

In the other hand, climate change remains the most severe global risk heading for the next decade and the pandemic has distracted from efforts to tackle it according to a report by the World Economic Forum. The commitment of nations and governments to shift towards clean energy has far-reaching implications in saving the planet from the heading challenge of climate change.

# 4. Bibliography List :

<sup>1</sup>-Kayla Stan, Graham A.Watt& Arturo Sanchez-Azofeifa, <u>Financial</u> stability in response to climate change in a northern temperate economy, Nature Communication, Volume 12, number 7161, 2021, p 2.

<sup>2</sup>-Swiss Re Institute, <u>The economics of climate change: no action not an option, 22 Apr 2021</u>, Swiss Re Management Ltd, Zurich, 2021, pp 9- 10.

3-James K. Jackson, Martin A. Weiss, &authers, <u>Global Economic Effects</u> of <u>COVID-19</u>, Congressional Research Service Report prepared for members and Committees of Congress, R46270, Version 82, November 10, 2021, p 1.

4-Kaushik Ranjan Bandyopadhyay, <u>Oil and Gas Markets and COVID-19: A</u> <u>Critical Rumination on Drivers, Triggers, and Volatility</u>, Energies, 15, 2884, 2022, p 2.

5-James K. Jackson, Martin A. Weiss, & authers, Congressional Research Service, <u>Global Economic Effects of COVID-19</u>, idem, p 1.

6-International Monetary Fund (IMF), <u>World economic outlook, Recovery</u> <u>During a Pandemic, Health Concerns, Supply Disruptions, and Price</u> <u>Pressures</u>, Joint Bank-Fund Library, Washington, 2021. p 3. 7-International Monetary Fund (IMF),<u>Global financial stability report</u> (COVID-19, Crypto, and Climate: Navigating Challenging Transitions), IMF library, USA, October 2021, p 3.

8-OECD, Employment Outlook 2021 (Navigating the COVID-19 Crisis and Recovery), OECD Publishing, Paris, 2021, pp 4-5.

9-David Autor & Elisabeth Reynolds, <u>The Nature of Work after the COVID</u> <u>Crisis: Too Few Low-Wage Jobs</u>, The Hamilton Project, Brookings Institution, July 2020, p5.

10-International Monetary Fund (IMF), <u>World economic outlook, Recovery</u> <u>During a Pandemic, Health Concerns, Supply Disruptions, and Price</u> <u>Pressures, October 2021, idem, p 3.</u>

11-International Monetary Fund (IMF), <u>World economic outlook, Recovery</u> <u>During a Pandemic, Health Concerns, Supply Disruptions, and Price</u> <u>Pressures</u>, idem, p 2.

12-United Nations News, WMO/Daniel Pavlinovic, Climate and weather related disasters surge five-fold over 50 years, but early warnings save lives, - WMO report - Across the world, more incidents of extreme weather events are being recorded - UN News: Global perspective Human stories, 01 September 2021. (https://news.un.org/en/story/2021/09/1098662).

13-AON, <u>2021 Weather, Climate and Catastrophe Insight</u>, Aon plc, 2022, p8.

14-Hurricanes, cold waves, tornadoes: Weather disasters in USA dominate natural disaster losses in 2021, Munich RE, 2022/01/10 (https://www.munichre.com/en/company/media-relations/mediainformation-and-corporate-news/media-information/2022/natural-disasterlosses-2021.html)

15- Kat Kramer, Joe Ware, <u>Counting the cost 2021 A year of climate</u> breakdown, Christian Aid, London, December 2021, pp 16-23.

16 - AON, <u>2021 Weather, Climate and Catastrophe Insight</u>, idem, pp 4, 8, 10.

17 -AON, <u>2021 Weather, Climate and Catastrophe Insight</u>, idem, pp 4, 64.

18 -AON, <u>2021 Weather, Climate and Catastrophe Insight</u>, idem, p 60.

19 - AON, 2021 Weather, Climate and Catastrophe Insight, idem, pp 26,62.

20-<u>Slow-onset Processes and Resulting Loss and Damage : An introduction</u>, Germanwatch, Bonn, Germany, January 2021, p 24 .