HIGH SCHOOL EDITION
Journal of Student Research
Volume 11 Issue 2 (2022)

Search for Sustainable Recovery: Comparison of US & EU Economic/Environmental Policies Post-COVID-19

SeongBeen Bae[1], Denise Talotta[#] and Denise Talotta[#]

[1] Northern Highlands Regional High School, Allendale, NJ, USA
[#]Advisor

Introduction

Before the COVID-19 pandemic, which has effectively changed our daily lives and society, many deemed climate change to be the greatest threat to our contemporary society. With overwhelming evidence pointing to a catastrophic future, governments, organizations, and companies worldwide have been seriously considering sustainable practices and reduction of our carbon footprints. These efforts have been a part of a global trend to support and invest in companies that consider environmental, social, and governance (ESG) factors in their company goals. In a recent analysis of the European economy, green and environmentally considered investments, measured in sustainable fund flows, barely reached $10 billion in 2016. By 2019, however, investments have skyrocketed to more than $30 billion (Kell, 2018). As of 2020, sustainable investments total $35.3 trillion worldwide, with more than a third of all assets in five of the world's biggest markets (Bioy, 2020).

Now, with COVID-19 ravaging the world and affecting all aspects of society with its rapid propagation rate and an alarmingly high death toll, virtually all countries in the world have restricted its borders to international travel and trade. According to the International Monetary Fund (IMF), the global median GDP, a sign of the world's economic productivity, dropped 3.9%, marking it the largest drop after the Great Depression. At the end of 2021, the GDP in both advanced and emerging market and developing economies (EMDE) is projected to stay below pre-pandemic levels. It will still be some time until the world economy improves.

Quarterly World GDP (GDP Forecast in Jan-2020 vs Jan-2021, 2019; Q1 = 100)

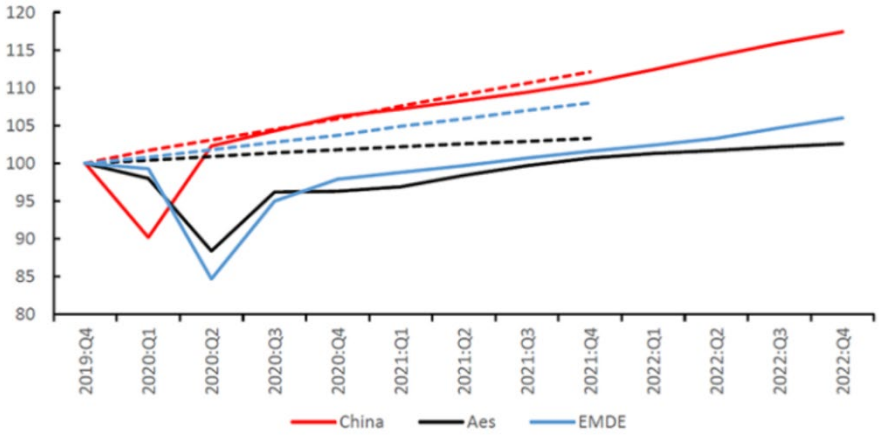

Figure 1. Quarterly World GDP. Note: Aes - advanced economies; EMDE = emerging market and developing economies. Dashed lines indicated estimates from Jan 2020 World Economic Outlook Update (Yeyati & Filippini, 2020)

In lieu of the worldwide effects of the pandemic and the persistent threat of climate change, there is a stronger incentive for governments to plan their recovery efforts to bring both economic and environmental benefits to their citizens. These plans include the goals to lower carbon transitions through targeting renewable energy, infrastructures, electric vehicles, low carbon industrial options, and natural capital. Governments hope to see multiplier effects that bring more jobs and economic growth while supporting low carbon transitions through the stimulus package. ESG factors are a cornerstone on which our sustainable future may be built. However, there are clear differences in the ways different regions of the world approach these issues. In my analysis, I will be focusing on the responses of the U.S. and the European region specifically. While there are innovative ideas that are being proposed in the U.S., there is also an equally strong effort to avoid excessive spending within the government. The U.S. also has a lack of green investment measures in comparison to other countries. In regions such as Europe, where environmental and sustainable measures are already in place before the pandemic, there is significantly more aid that has been offered within Europe compared to the U.S. Finally, I question whether these efforts truly are in accordance with ESG factors or merely adopting ESG factors to secure investments while not changing the current practices in a meaningful way.

COVID-19 Impact on the U.S. Economy and the Environment

The US economy contracted 19.2% from its peak point of the fourth quarter in 2019 to the second quarter in 2020 as the news of the virus spread first to China then to the rest of the world. In March 2020, nonessential businesses were mandated to shut down in order to slow down the spread of COVID-19, putting nearly 22.632 million people out of work (Mutikani, 2021). In response to the crisis, the United States Congress passed four special appropriation laws, such as Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") to support the federal government's relief effort. As of October 2020, $2.59 trillion was available for COVID 19 relief, and 80% ($2.08 trillion) of the funds were allocated to the CARES Act, providing businesses with much needed aid. Meanwhile, 19% ($483 billion) was allocated to the Paycheck Promotion and Healthcare Enhancement Act to provide direct funds to the unemployed (Data lab, 2020). During this period, ESG concerns were minimal as the primary concern lay in providing funds for industries that were in danger of collapse as well as emergency funds for American citizens and businesses.

In addition to having disastrous effects on the economy, the pandemic exposed the underlying economic and environmental issues that existed before the outbreak. Soaring wealth inequality in the U.S. left low-income and average families to feel the brunt of the employment and health impacts (O'Callaghan, 2021). Although the recovery packages relieved the financial burdens of millions, the assistance was simply not enough, and nearly 11 million Americans were at risk for eviction. Though there were moratoriums for eviction notices, there were almost no other measures to provide more help for tenants beyond the current relief they received and half-hearted rallying calls for lawyers and judges to help with eviction diversion efforts. However, the Supreme Court ruled in July 2021 that moratorium would not be extended and tenants were expected to pay the full price once the moratorium ends at various periods throughout the end of 2021 and early 2022 (Liptak & Thrush, 2021). Furthermore, the deep flaws of the healthcare system were exposed through the dramatic increase of hospitalizations of COVID patients (Gavin, 2021).

The environmental consequences were more balanced, with both positive and negative impacts. However, the positive impacts were certainly the most pronounced benefits of the COVID-19 pandemic due to the reduction in transport and fossil fuel/resource consumption throughout the world. Greenhouse gas such as ni-

trous oxide, nitrogen dioxide, and carbon monoxide, which are key contributors to climate change, were reaching record lows, improving air quality significantly. Additionally, noise pollution, and water pollution also decreased because of the reduction of industrial pollution and reduced traveling. On the other end, there are some negative environmental consequences of the pandemic. Biomedical waste and safety equipment waste (masks, gloves, disinfectants) increased due to medical procedures related to the diagnosis and treatment of COVID patients (Rume & Islam, 2020). Though the negative impacts are inevitable and required to ensure the safety of patients, governments must try to maximize the positive impacts. The greatest concern for policymakers considering sustainability in regards to pollution is that its levels will eventually return to previous levels unless some actions are taken. These next few years will be a valuable opportunity for governments to enact policies that will ensure that pollution levels do not return to pre-pandemic levels.

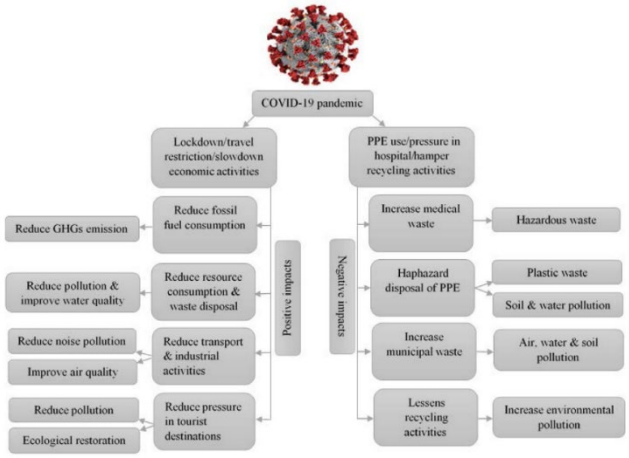

Figure 2. The positive and negative environmental impacts of the COVID-19 pandemic (Rume & Islam, 2020)

Recovery of the U.S. and Environmental, Social, and Governance Investments

Before climate change became a widely accepted phenomenon, all non-financial considerations were deemed part of the Socially Responsible Investment (SRI) movement, based on moral and ethical criteria that have mainly revolved around limiting investments in alcohol, firearms, or tobacco. Then, in 2004, UN Secretary General Kofi Annan spearheaded an effort, with the support of the International Finance Corporation (IFC) and the Swiss government, to contend that companies will increasingly need to contribute to and develop sustainable markets and consider the wellbeing of society when investing. Such goals were to be accomplished by examining a number of factors: “how corporations respond to climate change, how good they are with water management, how effective their health and safety policies are in the protection against accidents, how they manage their supply chains, how they treat their workers and whether they have a corporate culture that builds trust and fosters innovation” (Kell, 2018). These values went against the traditional notion of the fiduciary duty companies have towards investors. As more studies confirmed the risks of organizations that do not value ESG factors,

companies across the U.S. and Europe rushed to determine how their companies can shift their priorities to incorporate ESG goals. Governments and companies alike understood that the positive impacts of sustainability goals within policy will ensure survival and longevity.

On examination of the negative impacts on the economy and environment, the actions of the U.S. government were not promising, and there was a serious question about whether the plans were actually planning for sustainability. The total funding allocated to country-specific measures expected to lead to a positive environmental impact was estimated to be USD 336 billion. In contrast, the funding that is presumed to bring negative or mixed environmental impact was estimated to be USD 334 billion ("OECD", 2021). Only 23.4% of recovery spending and 4.2% of total spending was likely to reduce GHG emissions. For air pollution, 16.0% of recovery spending was expected to bring positive impacts, but 16.4% may increase net air pollution. 3% of recovery spending benefits natural capital (stock of natural resources), while 17% may affect it negatively. (O'Callaghan, 2021). These numbers show that although the U.S. has been committed to recovery spending, there has not been an equal effort to reduce the harmful impacts that come with efforts within the recovery plan.

U.S. Recovery Part II: Build Back Better and the American Jobs Plan

The true hallmark of the recovery efforts since the onset of the COVID-19 pandemic was the Biden Administration's Infrastructure Investment and Jobs Act, announced in 2020, and set to cost $2.6 trillion. The ultimate goal for this plan was to build back the economy by strengthening the middle class and plan for a more sustainable future for all. This legislation aimed to improve water quality and public transit including Amtrak, provide equal accessibility of high speed internet, repair roads and bridges, strengthen supply chain by upgrading ports and airports, build national networks of Electric Vehicle chargers, and upgrade power infrastructure and energy technology to reach zero emission ("White House", 2021). Instead of the initial proposal, however, a smaller Infrastructure Investment and Jobs Act of $550 billion was passed. Now, there are only $65 billion of funds alloted to Power Infrastructure (facility generating electricity), $15 billion alloted to electric vehicles, and $0 alloted to the Clean Energy tax credits. Most concerning is the decision to deny a $566 billion fund of R&D and manufacturing on methods and products that would have contributed to combating climate change (Bhatia & Bui, 2021). Also, the Biden Administration has suggested the Build Back Better framework that contains specific goals: transformative investment in children and caregiving, combating climate change, expansion of affordable health care, and bringing down the cost for the middle class by taxing the largest corporations and the wealthiest individuals. By promoting and subsidizing renewable energy, offering rebates and credits to those consumers who decide to choose renewable energy sources, and fighting for environmental justice, this plan seems to perfectly embody ESG factors ("White House"). However, the future of the Build Back Better Act is unclear in Congress, with overwhelming opposition from the Republicans who claim that this bill would harm the financial stability of the federal government and would not benefit the middle class either.

Fortunately, there were some sustainable and environmental measures that were passed under The CARES Act. Within this act, $50 billion were allocated to The Small Business Green Recovery Fund helping with green innovations and investments among small businesses. This aid will offer diverse financial support for small businesses: green bonds, green grants, and green loans. These three tactics will help small businesses to transit to green because most of the small businesses have limited access to the financial market to handle green projects or transit. Proposed fund will induce sustainable recovery and competitiveness. Though these measures seem like a significant benefit, there is indication that these funds are slipping through the cracks and landing on industries that are actively harming the environment. Critics note that among the $600 billion tax breaks offered by the CARES Act, $100 billion potentially would benefit smaller companies within the fossil

fuel industries. (Schalatek, 2020). Moreover, none of the policies in the CARES Act prioritized climate transition, which requires clear long term planning and a significant monetary investment.

Ultimately, the U.S. recovery plans are inadequate and do not seriously consider how these plans may be benefitting industries that engage in harmful practices. When these plans were first announced, there was hope that there would be a significant investment towards these measures. However, throughout the past two years, proposals are continually cut and defunded due to their costliness. In contrast, Europe, a culturally and economically comparable region to the U.S., have taken a markedly different approach to plan for a sustainable future.

Europe: ESG funding and The Green Deal

In Europe, there are notable differences in their approach to climate change and sustainable measures compared to their American counterparts'. EU environmental policy was first introduced in 1972 at the European Council held in 1972 to flank the economic policies and expansion ongoing all over Europe. The first environment action programme and the European Economic Community (EEC) was set up to start discussions and draft environmental policies over the years. At first, these measures were merely suggestions in which to build upon more robust environmental policies. Then, The Single European Act of 1987 was passed with a new "Environmental Title," which was the first common environmental policy with the specific aim to preserve the quality of our environment and plan towards a sustainable future (European Parliament, 2020). Since 1972, there have been eight environment action programmes that have developed policies to fit with contemporary issues. European countries also ensure that there are specific measures to keep companies accountable for their actions. This "polluter pays" principle is enforced by the Environmental Liability Directive, which will assess the environmental damage to protected species and natural habitats. The success and popularity of these measures have re

In 2019, the European Commission presented the European Green Deal, a "roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all" (EU Environmental Policy). In these measures, the European Parliament was taking on the bold challenge of achieving climate neutrality (zero net greenhouse gas emissions) by 2050 and would make Europe the first climate neutral continent in the world. This program emphasized the importance and value of natural capital as well as prioritized the wellbeing of the citizens who were in this pursuit. Though there are still many shortcomings to European environmental policy, there are significant victories to environmental goals. In 2017, European countries reduced their emissions by 22% compared to 1990, far surpassing their goals and expectations. Since then, emission levels have dropped another 24.5%, further ensuring a future in which society will not be dependent on fossil fuels as the primary resource. These policies would later become the foundation in which green recovery efforts would be passed during the pandemic

Europe has the most diverse and developed ESG market. In June 2019, 3,730 sustainable funds were reported, and it increased to 6,147 funds in September: 65% increasing. Also, sustainable funds occupy about half of the overall funds flows; sustainable funds were USD 108.7 billion out of USD 219 billion overall funds. Most of their funds flows were dominated by active funds.

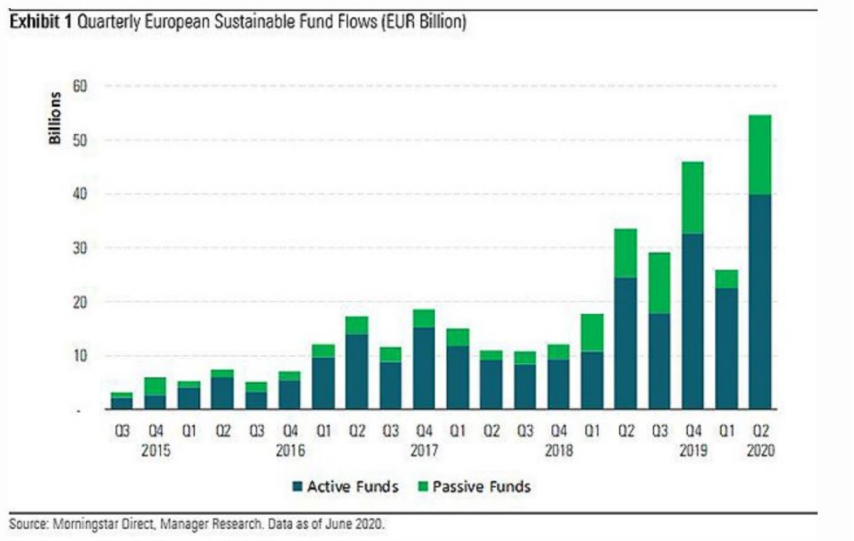

Figure 3. European Sustainable Fund Flows over time (Bioy, 2020)

Building Better Abroad: the European Union

Just as Americans were struggling, Europeans were suffering from economic impact due to COVID 19. After the pandemic outbreak, real GDP decreased by about 12%, in the European Union (EU). In 2020, both in the EU27 (all EU members) and Euro area (Euro Zone), the unemployment rates soared to 7.8% and 8.7% respectively. Although the unemployment rate is still lower than the 2008 Financial Crisis, the impact of the pandemic is more severe than before. In the second quarter of 2020, total working hours for employees dropped significantly, dipping from about 110 to about 85 hours. The production in the EU27 in March and April 2020 decreased 20% compared to the previous period (DeVet et al, 2021). The first wave of COVID-19 created bottlenecks to nearly all sectors of industry due to lockdowns and shutdowns.

The EU brought packages that can repair the social and economic damage caused by COVID 19. These packages are regarded as the path to a sustainable and resilient recovery. First, as a temporary safety net for workers and businesses of the member states, €540 billion was allocated under three categories: €200 billion for Pan-European guarantee fund for loans that are provided by the European Investment Bank (EIB) to corporations; €240 billion to support EU member countries and from European Stability Mechanism (ESM); and €100 billion to support citizens under the unemployment Risks. €800 million from the EU Solidarity Fund provided support for the health care sector directly. Among the member states, Germany (37%) implemented the largest fiscal stimulus, and Italy (37%), France (23%), and Spain (22%) implemented large stimulus too. The measures at national level mostly focused on mitigating unemployment and short term problems (DeVet et al, 2021).

More significantly, the EU passed the NextGenerationEU (NGEU) program and the Multiannual Financial Framework (MFF) 2021-2027. With €2.018 trillion set as the current budget, this deal is considered the largest stimulus package ever. Throughout 2021-2027, these funds will be used not only to rebuild Europe from COVID-19 but also make a more resilient, greener and digital system. Under the NGEU and MFF, more than 50% of the fund will be used for research and innovation, fair climate and digital transition, and preparedness and new health programs. 30% of the package will focus on fighting climate change. In addition, it will also address modernizing policies, biodiversity protection, and gender equality (European Commission, 2021).

Under the NextGenerationEU (NGEU), the “Recovery and Resilience Facility” will induce green investment. The goal is to mitigate the economic and social impact of COVID-19 pandemic and make sustainable

and resilient EU economies/societies. This will prepare the EU for both challenges and opportunities to transit green. Investments and reforms financed by the Recovery and Resilience Facility will help EU Member states to mobilize public investment toward sustainable and inclusive recovery and create jobs. The result will be cleaner energy and transport, conserving nature, renovating buildings, education, faster internet, and other benefits for all Europeans with the budget estimated at the current price is €723.82 billion (European Commission).

In addition, there are very clear investments to protect the environment. The European Maritime, Fisheries, and Aquaculture Fund will support investments and actions that contribute to protect biodiversity and sustainable fishing. The amount of funds allocated in this part is €6.11 billion. €5.43 billion will be allocated to Programme for environment and climate action (LIFE) with four subsections: nature and biodiversity, circular economy and quality of life, clean energy transition, and climate change mitigation and adaptation. This aims conservation of environment and clean energy transition, innovative technologies, and implementation of the plan that counteract the climate change. Since the transition can affect the businesses in some negative way, the EU also proposed Just Transition Fund with €8.45 billion plus €10.87 billion. The European Commission will provide grants, and member states can identify the territories that will be impacted most negatively by green transition (European Commission, 2021). Therefore, small and medium sized enterprises can be supported and it gives incentives to transform to a green economy more smoothly: achieving emission cuts and job protection simultaneously.

Reformation of US Recovery

Region	Q3 2021 Flows		Assets		Funds	
	USD Billion	% Total	USD Billion	% Total	#	% Total
Europe	108.7	77%	3,431.6	88%	6,147	82%
United States	15.7	11%	330.7	8%	484	6%
Asia ex-Japan	8.1	6%	61.3	2%	308	4%
Australia/New Zealand	1.9	1%	27.2	1%	144	2%
Japan	5.1	4%	31.6	1%	237	3%
Canada	1.7	1%	22.2	1%	166	2%
Total	**141.2**		**3,904.5**		**7,486**	

Source: Morningstar Direct, Manager Research. Data as of September 2021. Figures include final Q3 data for China and updated inflow data for Taiwan.

Figure 4. Global sustainable funds 2021 Q3 statistics (Bioy et al, 2021)

It is very clear that the American and European approach to environmental policy and sustainable investments has notable differences. The EU spent decades to lay the foundation on which environmental policy developed, which culminated into the European New Deal. Furthermore, the EU invests many more times into sustainable funds than the US as shown in Figure 4 (Bioy et al, 2021). Unlike its American counterparts, the EU has been meeting its environmental goals while building up the organizations and funds that oversee the evaluation and enforcement of environmental policies. The US only addresses short term policies like improving energy efficiency, and fails to address long term policies like nature conservation and biodiversity. Also, it includes protection for the small businesses that might be negatively impacted by the transition. The plan of NGEU is very detailed and categorized too, so it is comparably better at targeting and planning.

Meanwhile, the U.S. has been stuck in the process of negotiation without action. Most importantly, any time a bold proposal is presented, the bills are reduced to almost nothing. According to The New York Times (2021) analysis of the proposal, only about 21.2% of the Infrastructure Investment and Jobs Act proposal

from the Biden Administration passed the congress. Out of $550 billion bills, the amount allocated into categories that are related to green recovery is about 14.5%. One of the reasons why addressing green recovery is lacking is political polarization: many Republicans and some Democrats (or a majority of the Congress) oppose the bill due to its costliness and negative economic impact (Demissie & Morris, 2021) Also, the Build Back Better Plan, which contains indirect green stimulus like tax cut on electric vehicles and green energy, seems unable to pass in the Congress. Right now, the U.S. only has several direct green incentives; there is little effort to fund research on climate change, improve energy technology, or set realistic goals to meet. Most of the current policies are merely short term policies, such as increasing energy efficiency, and lack any long term plans to build environmental policies upon. In addition, 1/6 of the tax breaks in the CARES Act ironically benefits the fossil fuel industry. Therefore, it is not properly designed or well targeted. Determining market distortion is impossible for now, since the impact of policies are not reported yet.

The first step in the solution to better U.S. environmental policy is for U.S. citizens to be more aware of this Climate issue. Organizations such as the Environmental Protection Agency must strategize and aim to inform the public about the true benefits of sustainability and green recovery. Then, constituents of both Democratic and Republican politicians may push their leaders to make important long term decisions that will benefit both the people and our environment. The greatest push should be to ratify the American Green New Deal, setting a clear path and goal towards a sustainable future.

Next will be to expand the Environmental Protection Agency (EPA) and establish initiatives and committees with specific tasks to keep organizations and companies accountable for their harmful actions. While the EU has the ever active Environmental Liability Directive to oversee this task, the US only has the limited EPA, which only gives $4 billion in grants to businesses that take initiative protecting our natural environment, to enforce policy. Furthermore, while companies are rewarded for their environmentally sound practices, there is not a greater push to punish companies who actively are harmful to the ecosystem. The U.S. has a long way to go before it has even begun to seriously tackle these environmental issues. But if the U.S. does not act now, the country will simply not be prepared when the devastating consequences of climate change come to its shores.

Acknowledgments

I would like to thank my advisor for the valuable insight provided to me on this topic.

References

Bhatia, A., Bui, Q., (2021 July 28), The Infrastructure Plan: What's In and What's Out, *The New York Times*, https://www.nytimes.com/interactive/2021/07/28/upshot/infrastructure-breakdown.html

Bioy, H. (2020, August 4). *Sustainable Fund Flows Hit Record in Q2*. Morning Star. https://www.morningstar.co.uk/uk/news/204525/sustainable-fund-flows-hit-record-in-q2.aspx
Bioy, H., Jimili, S., Stankiewicz, A., Tam, I., Kennaway, G., Sato, H., Jung, A. & Chow, W., (2021) Global Sustainable Fund Flows: Q3 2021 in Review. *Morningstar.*
D'Alfonso, A., (2022), *European Green Deal Investment Plan,* European Parliament, https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/file-european-green-deal-investment-plan
Department of Energy. (2021). *DOE Fact Sheet: The Bipartisan Infrastructure Deal Will Deliver For American Workers, Families and Usher in the Clean Energy Future*. https://www.energy.gov/articles/doe-fact-sheet-bipartisan-infrastructure-deal-will-deliver-american-workers-families-and-0

Demissie, H., & Morris, J. (2021, November 28). *As inflation concerns mount, Republicans, Democrats still at odds over Build Back Better plan.* ABC News. https://abcnews.go.com/Politics/inflation-concerns-mount-republicans-democrats-odds-build-back/story?id=81422341

DeVet, J., Nigohosyan D., Nunez Ferrer, J., Gross, A., Kuehl, S., Flickenschild, M. (2021). *Impacts of the COVID-19 pandemic on EU industries*. European Parliament. https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662903/IPOL_STU(2021)662903_EN.pdf

European Commission - European Commission. *Recovery plan for Europe*. https://ec.europa.eu/info/strategy/recovery-plan-europe_en

European Commission. (2021, April 29) *The EU's 2021-2027 long-term Budget and NextGenerationEU Facts and Figures*. https://op.europa.eu/en/publication-detail/-/publication/d3e77637-a963-11eb-9585-01aa75ed71a1/language-en

European Parliament. *Environment policy: General principles and basic framework: Fact Sheets on the European Union: European Parliament*. Fact Sheets on the European Union | European Parliament. https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework

Gavin, K. (2021, October 18). *Patients hospitalized for Covid could pay thousands of dollars, study suggests*. University of Michigan. https://labblog.uofmhealth.org/industry-dx/patients-hospitalized-for-covid-could-pay-thousands-of-dollars-study-suggests#:~:text=The%20study%20finds%20that%20each,a%20preprint%20in%20June%202021.

Gross, S. (2021, June 16). Republicans in Congress are out of step with the American public on climate. Brookings. https://www.brookings.edu/blog/planetpolicy/2021/05/10/republicans-in-congress-are-out-of-step-with-the-american-public-on-climate/

Jessop, S. (2021, July 18). *Sustainable investments account for more than a third of global assets*. Reuter. https://www.reuters.com/business/sustainable-business/sustainable-investments-account-more-than-third-global-assets-2021-07-18/

Kell, G. (2018, July 11). The Remarkable Rise of ESG. *Forbes*. https://www.forbes.com/sites/georgkell/2018/07/11/the-remarkable-rise-of-esg/?sh=572678fe1695

Lashitew, A. (2021). *Small Business Green Recovery Fund to power US climate transition*. Brookings. https://www.brookings.edu/research/small-business-green-recovery-fund-to-power-us-climate-transition/

Liptak, A., & Thrush, G. (2021, August 27). Supreme Court ends Biden's eviction moratorium. *The New York Times*. https://www.nytimes.com/2021/08/26/us/eviction-moratorium-ends.html

Mutikani, L. (2021). U.S. economy contracted 19.2% during COVID-19 pandemic recession. *Reuter.* https://www.reuters.com/business/us-economy-contracted-192-during-covid-19-pandemic-recession-2021-07-29/

O'Callaghan, B. and Murdock E. (2021). *Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery Spending - Oxford University Economic Recovery Project*. United Nations Environment Programme. https://wedocs.unep.org/bitstream/handle/20.500.11822/35281/AWBBB.pdf

OECD. (2021, April 19). *The OECD Green Recovery Database: Examining the environmental implications of COVID-19 recovery policies*. The OECD Green Recovery Database. https://read.oecd-ilibrary.org/view/?ref=1092_1092145-fqx3tx0r1q&title=The-OECD-Green-Recovery-Database

Rume, T. & Islam, S. (2020). Environmental effects of COVID-19 pandemic and potential strategies of sustainability. *Heliyon,* 6(9). https://www.cell.com/action/showPdf?pii=S2405-8440%2820%2931808-9
Schalatek, L. (2020, July 2). *Urgently wanted: a US stimulus package in which more than the dollar bills are green*. Heinrich Böll Stifutung. https://us.boell.org/en/2020/07/02/urgently-wanted-us-stimulus-package-which-more-dollar-bills-are-green

Udalova, V., (2021, March 8) *Initial Impact of COVID-19 on U.S. Economy More Widespread Than on Mortality.* United States Census Bureau. https://www.census.gov/library/stories/2021/03/initial-impact-covid-19-on-united-states-economy-more-widespread-than-on-mortality.html

USA spending. *The Federal Response to COVID-19.* https://www.usaspending.gov/disaster/covid-19?publicLaw=all

USA spending Data lab, (2020, October) *How is the federal government funding relief efforts for COVID-19?*. https://datalab.usaspending.gov/federal-covid-funding/

White House. (2021, November 6). *Fact Sheet: The Bipartisan Infrastructure Deal.* https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/06/fact-sheet-the-bipartisan-infrastructure-deal/

White House. *The Build Back Better Framework.* https://www.whitehouse.gov/build-back-better/
Yeyati, E. L., & Filippini, F. (2021, June 9). *Social and economic impact of covid-19.* Brookings. https://www.brookings.edu/research/social-and-economic-impact-of-covid-19/