TOWARDS CORPORATE GOVERNANCE OF SUSTAINABILITY: CLIMATE JUSTICE TRANSFERS AND A BEHAVIORAL GREEN NEW DEAL

Julia Margarete Puaschunder *

* Graduate School of Arts and Sciences, Columbia University, New York, USA; OMNES Education, Economics & Finance Department, International University of Monaco, Monaco
Contact details: OMNES Education, Economics & Finance Department, International University of Monaco, 45 Rue Grimaldi, 98000 Monaco

OPEN ACCESS

How to cite this paper: Puaschunder, J. M. (2025). Towards corporate governance of sustainability: Climate justice transfers and a behavioral Green New Deal. *Corporate Governance and Sustainability Review, 9*(3), 116–126. https://doi.org/10.22495/cgsrv9i3p9

ISSN Online: 2519-898X
ISSN Print: 2519-8971

Received: 01.03.2025
Revised: 22.04.2025; 14.05.2025; 16.07.2025
Accepted: 23.07.2025

JEL Classification: H87, K32, Q5
DOI: 10.22495/cgsrv9i3p9

Abstract

This paper first addresses climate justice based on climate gains and losses redistribution to introduce the potential of the Green New Deal to steer positive change and action beyond the precautionary approach. The Mapping Climate Justice proposes a three-dimensional climate justice approach to share economic benefits and the burden of climate change right, just, and fair around the globe. Scientific data is grounded by ethical imperatives that argue for a pre-precautionary principle based on Rawls' veil of ignorance and Kant's categorical imperative. Empirically, gross domestic product (GDP) gains and losses of a warming globe are captured to be distributed unequally around the world. Macroeconomic modeling highlights the disparate impact of climate change around the world. As a recommendation based on the inequality inherent in global warming, the ethical climatorial imperative demands an equalization of the gains of climate change around the globe to offset losses incurred due to climate change. This ethical mandate leads to a description of strategies on how to breed climate equity within society, around the world, and over time. Recommendations are aimed at ensuring to share the burden but also the benefits of climate change within society in an economically efficient, legally equitable, and practically feasible way now and also between generations.

Keywords: Carbon Taxation, Climate Change, Climate Justice, Global Governance, Green Bonds, Green New Deal, Governance, Inequality, Justice, Leadership, Social Change, Sustainability, Redistribution, Top-Down Leadership

Authors' individual contribution: The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

Acknowledgements: The Author thanks Alexis Ponchelle for institutional publication support. Financial support of the OMNES Education group and the International University of Monaco is most gratefully acknowledged.

1. INTRODUCTION

We live in a time beyond the precautionary principle. In the age of climate change, the precautionary approach is currently challenged by two trends: First, the incentivization and redistribution of climate change gains and losses. Second, the Green New Deal emphasizes steering green market action as an economic driver with respect for ecological potential. Given that we are beyond the precautionary principle, the climate crisis demands proactive governance and innovative solutions that go beyond risk aversion.

In this context, two emerging trends are reshaping climate policy discussions: the incentivization and redistribution of climate change gains and losses, and the Green New Deal's emphasis on steering green market action as a catalyst for ecological and economic renewal. This paper contributes to the evolving discourse by exploring how corporate governance, behavioral economics, and ethical imperatives can collectively support a fair and effective global response to climate change.

Despite growing interest in climate justice and sustainable finance, current research has not sufficiently addressed how climate change benefits, such as increased gross domestic product (GDP) in certain regions, can be equitably redistributed to compensate for losses elsewhere. This literature gap is particularly pressing in the context of intergenerational equity and the emerging field of climate gain redistribution. The central aim of this study is to introduce and empirically examine a redistributive model grounded in ethical theory and macroeconomic data. The following proposed research, therefore, seeks to answer:

RQ1: How can climate gains and losses be fairly allocated across countries and generations?

RQ2: What financial and behavioral tools can support this redistribution effectively?

This inquiry is grounded in a multidisciplinary theoretical framework that incorporates Rawlsian justice theory, Kant's categorical imperative, and principles from behavioral economics. Empirical evidence is derived from macroeconomic data on global GDP shifts and temperature projections to analyze climate winners and losers. A normative model is then proposed, supported by a climate bonds-and-taxation strategy, to mitigate inequality and encourage sustainable economic behavior.

The relevance of this study lies in its novel combination of ethical reasoning with economic modeling to develop actionable policy tools that support both climate mitigation and adaptation. Its significance is further underscored by the urgency of addressing climate-induced inequalities and the potential for a behavioral Green New Deal to transform economic structures. The findings contribute to scholarship on climate justice, green finance, and sustainability governance by outlining concrete mechanisms, such as taxation, bond issuance, and behavioral nudges, for redistributing climate-related gains.

In an era marked by escalating climate risks and widening global inequalities, this paper explores a visionary framework for achieving environmental justice and sustainable economic reform. Bridging the ethical imperatives of fairness with empirical economic analysis, an economic model is introduced that combines the redistribution of climate gains and losses with the transformative potential of the Green New Deal. Drawing on the principles of climate justice, the model highlights the disparate impact of climate change by estimating the expected macroeconomic gains and losses from a warming globe. These disparities are outlined to advocate for a more equitable sharing of the benefits and burdens of climate change, both within and between nations, and across generations. The proposed strategies emphasize macroeconomic efficiency, legal feasibility, and moral responsibility, culminating in a call for a behavioral and financial reorientation toward sustainability. The paper also addresses the practical realities of climate change mitigation and adaptation efforts in cases and the political agenda of the Green New Deal. By integrating climate equity, intergenerational fairness, and green market incentives, this paper presents a compelling vision for governing sustainability in the 21st century.

The structure of this paper is as follows. Section 2 reviews the conceptual underpinnings of climate justice and outlines key ethical and economic theories that guide this study. Section 3 provides practical examples. Section 4 introduces the macroeconomic model and methodology used to evaluate climate gain and loss distributions. Section 5 presents empirical findings regarding climate change winners and losers across the globe. Section 6 discusses the implications of a climate tax-and-bonds transfer strategy for policy and corporate governance. Section 7 introduces the behavioral Green New Deal and examines its potential for systemic transformation. Section 8 provides global environmental governance implementation. Section 9 offers concluding thoughts and outlines future research directions.

2. LITERATURE REVIEW

The growing body of literature on climate justice explores the complex interplay between ethical imperatives, economic inequalities, and environmental governance. The most recent decade has seen a growth in literature on corporate social responsibility and sustainable finance, given the awareness of global warming challenges (Ktit & Khalaf, 2024; Lobe & Halbritter, 2023; Nagalingam et al., 2022; Pisano et al., 2022; Velte, 2022). Scholars have highlighted that climate change impacts are distributed unequally across the globe, with economically advanced nations historically benefiting from carbon-intensive development while developing nations face disproportionate burdens from climate disruptions (Sachs, 2021; Kahn et al., 2019). This recognition forms the basis for emerging redistribution frameworks grounded in moral and economic reasoning.

Recent macroeconomic models have attempted to map out the winners and losers of climate change using indicators such as GDP per capita and temperature deviations from optimal productivity zones. For example, Burke et al. (2015) and Puaschunder (2020b) estimate that while some nations may benefit economically from warming trends, others will suffer significant losses. These findings underscore the ethical necessity of redistributing climate-related gains to more vulnerable regions. Complementary to this, the Intergovernmental Panel on Climate Change (IPCC, 2021) and the International Monetary Fund, IMF, (Kahn et al., 2019) support incorporating regional climate data into policy design to ensure fair burden-sharing.

To operationalize these concepts, interdisciplinary approaches are being developed. These include the integration of Rawlsian ethics, Kant's categorical imperative, and the Kaldor-Hicks compensation principle to create a moral framework for global climate finance (Rawls, 1971; Kant, 1783/1997; Kaldor, 1961). Puaschunder (2020b) proposes a tax-and-bonds redistribution strategy wherein high-emission, climate-benefitting countries support mitigation and adaptation efforts in less advantaged areas. This idea is reinforced by calls for top-down governance by global institutions like the World Bank and the IMF (Braga et al., 2020; Semmler et al., 2021).

Furthermore, social change leadership is framed as essential to mobilize both state and non-state actors. Drawing on behavioral economics and the concept of global green governance, initiatives such as the Global Green New Deal (United Nations Environment Programme [UNEP], 2009) and the European Green Deal are discussed as templates for driving systemic change (Boyle et al., 2021; Mazzucato, 2013). Puaschunder (2022) emphasizes the need for inclusive, participatory strategies that align top-down policy frameworks with grassroots action to enhance legitimacy and compliance.

Climate justice within countries: To finance climate change mitigation and adaptation efforts, a diversified taxation scheme is proposed. To find a fair and just distribution of the burden of climate change, a taxation mix of 1) consumption tax, 2) progressive tax, and 3) inheritance tax is recommended. Consumption tax can curb harmful emissions and directly nudge behavior towards sustainability. Yet to place a fair share of the burden of climate change mitigation upon society, these taxes have to be adjusted to the individual disposable income, not to a heavier charge on low-income households. Retroactive taxation of past wealth accumulation at the expense of environmental damage can be enacted through an inheritance tax on the corporate sector. Industries should be taxed when a merger or acquisition, or a board member change occurs, to reap benefits from past wealth accumulation that potentially caused carbon emissions.

Climate justice between countries: Following the introduction of the gains from climate change (Puaschunder, 2018a), the Climate Justice in the 21st Century endeavor proposes a model to distribute the benefits of a warming earth in a fair way. Based on legal subsumptions and ethical imperatives, argumentations of those countries having better means of protection and conservation of a stable climate, lead to the pledge of climate change winners having to bear a higher weight of climate stabilization efforts. Drawing on the conclusion of the climatorial imperative, advocating for the need for fairness in the distribution of the global earth benefits among nations based on Kant's (1783/1997) imperative to only engage in actions one wants to experience being done to oneself, the redistribution of climate gains and losses is argued philosophically and ethically to alleviate climate inequality (Puaschunder, 2017a, 2017b, 2018a, 2020b).

3. PRACTICAL EXAMPLES

Practical examples for climate bonds and taxation strategies could be to use carbon taxes and green bonds to redistribute climate change benefits and finance mitigation/adaptation across nations and generations. For instance, Sweden's Carbon Tax since 1991 has collected around 130 USD per ton of CO_2. Its impact raised billions for sustainable infrastructure and marked a shift toward ethical, long-term investment planning. The European Union (EU) Green Bonds are another example. The EU launched its first green bond in 2021, raising billions to fund climate-friendly projects, which aligns with using bonds to shift capital toward sustainability.

As for climate justice between countries, the transfer of gains from climate change "winner" countries to "loser" countries via taxation and financial support would be an example. For instance, the Green Climate Fund was established under the United Nations Framework Convention on Climate Change (UNFCCC) to transfer funds from developed to developing countries to assist with mitigation and adaptation, which reflects the redistribution idea presented. Countries like Germany, France, and the UK have been leading contributors, practicing climate justice between nations.

The Behavioral Green New Deal is an example of using behavioral nudges and green governance to drive systemic changes in consumption and production. Real-world examples include nudging in energy use by the UK Smart Meters. The UK introduced smart meters that provide real-time usage feedback, nudging consumers to reduce energy use. This is consistent with behavioral economics strategies. Leadership in Energy and Environmental Design (LEED) Certification in the US is another example. These green building certifications encourage construction practices aligned with sustainability reporting standards (Asogwa et al., 2022; Rao et al., 2022). Its influence reflects behavioral shifts in the construction and real estate sectors.

Intergenerational Justice via Green Bonds would be another real-world example that uses green bonds to finance projects today that benefit future generations, with repayment distributed over time. For instance, New York City financed its watershed protection and water infrastructure through municipal bonds. Users today pay off past bond-funded projects, an example of intergenerational cost sharing.

Corporate climate responsibility introduces corporate inheritance taxes and progressive taxation for sectors that benefited from past carbon emissions. For instance, an emerging practice is environmental, social, and governance (ESG) reporting and carbon accounting (Bonaparte, 2024). For example, BP, Shell, and Microsoft have begun including Scope 3 emissions in their disclosures and set net-zero targets. This transparency and accountability model is in line with climate justice and redistribution through corporate governance.

Carbon taxation adjusted for income is another example of a successful implementation. For instance, British Columbia in Canada introduced a revenue-neutral carbon tax in 2008, gradually increasing the rate while returning revenues through tax reductions and rebates. This is a powerful example of a progressive carbon taxation to avoid burdening low-income households disproportionately. The impact includes emission declines while the economy grew, providing the feasibility of income-adjusted carbon taxation.

Corporate inheritance tax for sustainability would, for instance, be the German Inheritance Tax for Corporations. Heirs of large businesses pay a scaled tax unless they continue operating the business for a set period and maintain jobs. This comes close to mirroring the idea of taxing wealth accumulation linked to environmentally harmful industrial growth. This opportunity could be adapted to target sectors historically contributing to emissions, tying wealth transfer to sustainability criteria.

Climate justice through international transfers would be enacted via Norway's International Climate and Forest Initiative. In the actual implementation, Norway pays countries like Brazil and Indonesia to preserve forests, effectively transferring climate gain. This embodies the notion of redistributing

gains from climate-winner nations to at-risk regions. As for impact, these kinds of transfers avoided millions of tons of emissions by incentivizing conservation over deforestation.

Green New Deal-inspired projects include massive investments in sustainable transportation (e.g., rail), energy-efficient buildings, and decarbonization of energy. The Green New Deal has elements of green stimulus and carbon neutrality targets.

Behavioral economics in climate policy includes nudging for energy efficiency in the UK with energy bills that include usage comparisons to neighbors to encourage reduced consumption. These nudges are expected to change behavior with subtle incentives rather than mandates. This strategy has proven to reduce household energy use by 2–3%, scalable for global impact.

4. RESEARCH METHODOLOGY: MODEL

The chosen methodology is macroeconomic modeling. A macroeconomic cost-benefit analysis aids in finding the optimum solution on how to distribute climate change benefits and burdens within society and over time. Based on the optimal temperature for GDP measured on the pillars of agriculture, industry, and service sector productivity, the optimal temperature condition for economic productivity can be derived per country.

Contemporary GDP measurements serve as a basis for estimations about the productivity of the agriculture, industry, and service sectors around the world. Based on the cardinal temperatures for the agriculture, industry, and service sectors productivity, the average temperature per country around the world, as well as climate projections for the year 2100 under the business-as-usual path, this project reveals, for the very first time, climate winners and losers around the world.

Based on the literature about productivity, the peak temperature condition for the productivity of a country can be derived. Under the assumption of climate change, the model estimates the expected macroeconomic gains and losses of global warming around the world. Based on the mean temperature differences around the world, GDP composition, country peculiarities, as well as the peak temperature for productivity per GDP sector, the optimum temperature for productivity was calculated, and the countries' relation to that peak performance by temperature spectrum. The model outlined which countries still have time ahead before reaching peak conditions by climate conditions, and which countries will have surpassed peak climate temperature conditions soon. Overall and simply seen from a narrow-minded GDP perspective, the world will macroeconomically benefit more from climate change until 2100 than lose. Winning and losing from a warming earth are significantly positively correlated with the Paris COP 21 emissions country percentage of greenhouse gas (GHG) for ratification, leading to the conclusion that the countries that have the longest time horizon regarding a warming earth also lack motivation to mitigate global climate change based on the short-term benefits. Additional research could include sector-specific estimations and risk level variances around the world.

5. RESULTS

Given data of the average temperature per country around the world as well as climate projections of the year 2100 under a business-as-usual path, the world is found to macro-economically benefit from climate change more until 2100 than it loses (Puaschunder, 2016a, 2016b, 2016c, 2016d). Figure A.1 (see Appendix) holds climate change winners (green and yellow) and losers (orange and red). These overall gains are distributed highly unequally around the world.

Green countries are those that have the most time ahead until reaching the optimal temperature for GDP production by climate, yellow countries have some time ahead. Orange and red countries will have run out of time by 2100 for GDP productivity by temperature. Winning and losing from a warming earth are significantly positively correlated with self-reported CO2 emissions, leading to the conclusion that the countries with the longest time horizon regarding a warming earth lack motivation to mitigate global climate change. Detected climate-induced migration streams and financial flows manifest that different parts of the Earth are affected differently by a warming Earth.

Based on a 187-country-strong dataset, a significantly positive inflow of migrants was found into the climate change winner countries (Puaschunder, 2020a). A statistically significant correlation highlights a positive foreign direct investment (FDI) inflow into the territories that have more time ahead towards temporal peak conditions for GDP production (Puaschunder, 2020b). No significant remittances flow to climate change loser countries are found. The results underline the need to redistribute the gains from climate change to offset losses incurred from global warming and demand for recognition of climate refugees under the Geneva Convention.

Having found that there are gains from a warming earth, demand to transfer benefits into areas of the world that will be primarily losing from climate change (Chichilnisky, 1996; Rolle, 2016; Chichilnisky et al., 1998; Chichilnisky & Heal, 2000). Having shed light on the gains of a warming earth allows for the redistribution of climate change benefits to those areas of the world that will be losing out from a warming earth. In the implementation, climate change bonds but also taxation strategies are recommended (Chichilnisky, 1996; Rolle, 2016).

To avoid governmental expenditure on climate change hindering economic growth (Chichilnisky, 2007, 2010; Rolle, 2016); the Climate in the 21st Century idea offers a new way of funding climate change mitigation and adaptation policies but also the transition to renewable energy through broad-based climate stability bonds-and-taxation mix that also involve future generations (Puaschunder, 2020b).

To finance climate change abatement, a climate bonds financing mix could subsidize the current world industry for transitioning to green solutions. Sharing the costs of climate stabilization between and across generations is a Pareto-optimal strategy to immediately instigate climate action without curbing today's economic growth potential (Chichilnisky et al., 1998; Chichilnisky & Heal, 2000; Chichilnisky & Sheeran, 2018).

6. DISCUSSION

As for redistributing the gains of a warming globe to offset for losses incurred by global warming, a climate change bonds-and-tax finance strategy is proposed to bear the burden of climate change in a right, just and fair way within society, around the globe and over time (Puaschunder, 2017a, 2017b, 2018a).

In climate change winner countries weighed by GDP per capita (Figure A.2, Appendix, green and yellow), taxation should become the main climate stability financialization strategy. Foremost, the industries winning from a warming climate should be taxed. Regarding concrete climate taxation strategies, a carbon tax on top of the existing tax system should be used to reduce the burden of climate change and encourage economic growth through subsidies. Within a country, high- and low-income households should face the same burden of climate stabilization adjusted for their disposable income. Finding the optimum balance between consumption tax adjusted for disposable income through a progressive tax scheme will foster tax compliance in the sustainability domain.

Governments in global warming loser countries, weighed by GDP per capita (Figure A.2, Appendix, orange and red), should receive tax transfers in the present from the winning countries. The climate change loser countries should also borrow through loans or the issuance of bonds to be paid back by future generations. Taxing future generations is justified as future generations avoid the higher costs of climate change, long-term damages, and environmentally irreversible lock-ins. Overall, this tax-and-transfer mitigation policy thus appears as a Pareto-improving fair solution across the world and among different generations.

Tax-and-bonds transfers could be used to incentivize industry actors to choose clean energy. The revenues raised from taxation and bonds would thereby be allocated to subsidize corporations choosing clean energy. This market incentive could shift the general race-to-the-bottom regarding price-cutting behavior and choosing dirty, cheap energy to a race-to-the-top hunt for subsidies for going into clean energy and production.

Concluding, climate change-winning countries are advised to use taxation of the gains in sectors to raise revenues to offset the losses incurred by climate change. Climate change losers should issue bonds to be paid back by taxing future generations. Climate justice within a country should also pay tribute to the fact that low- and high-income households share the same burden proportional to their disposable income, for instance, enabled through progressive carbon taxation. Those who caused climate change could be required to bear a higher cost through a carbon tax in combination with retroactive billing through a corporate inheritance tax to reap benefits from past wealth accumulation that contributed to global warming.

7. POLICY CASE: THE GREEN NEW DEAL

7.1. Historical foundation

The New Deal was historically a bond financing strategy of the US during the years 1932 to 1939. In total, around 15 to 35 billion USD were spent on a series of development programs that funded public work projects, financial reform and regulation efforts on economic development. US President Franklin D. Roosevelt's overarching goal of the project was to relieve, reform, and recover from the Great Depression.

The newly enacted Green New Deal advocates for a co-use of carbon tax and green bonds to stimulate economic growth (Biju et al., 2024). Based on the foundations of modern monetary theory, the Green New Deal aims to revitalize the economy through a transition to renewable energy and sustainable growth. The Green New Deal serves as a market solution to implement global environmental governance as "the sum of the many ways individuals and institutions, public and private, manage their common affairs" (Puaschunder, 2020b). The Green New Deal thereby combines Roosevelt's economic approach with modern ideas such as renewable energy and resource efficiency.

7.2. Framework

The Green New Deal group has operated within the framework of the UNEP since 2008 to create jobs in green industries, thus boosting the world economy and curbing climate change at the same time. In 2019, over 600 organizations submitted a letter to Congress declaring support for policies to reduce GHG emissions. This includes ending fossil fuel extraction and subsidies, transitioning to 100% clean renewable energy by 2035, expanding public transportation, and strict emission reductions rather than reliance on carbon emission trading.

Since 2019, Senator Edward Markey and Representative Alexandria Ocasio-Cortez have pushed for transitioning the US to use 100% renewable, zero-emission energy sources, including investment into electric cars and high-speed rail systems, and implementing the social cost of carbon that has been part of Obama administration's plans for addressing climate change within 10 years. Besides increasing state-sponsored jobs, this Green New Deal is also aimed at improving vulnerable communities via universal health care, increased minimum wages, and preventing monopolies. A 10-year national mobilization targets at work security and working conditions by high-quality health care, affordable housing, economic security, access to clean water, air, healthy food and nature, education, clean, renewable, zero-emission energy, repairing of infrastructure, energy efficient smart power grids, upgraded living conditions, pollution elimination, clean manufacturing and positive work collaborations.

In January 2019, a letter signed by 626 organizations in support of a Green New Deal was sent to all members of Congress. It called for measures such as an expansion of the Clean Air Act, a ban on crude oil exports and fossil fuel subsidies and leasing, and a phase-out of all gasoline-powered vehicles by 2040. The letter also opposed market-based mechanisms and technology options such as carbon and emissions trading and offsets. Various proposals for a Green New Deal have been made internationally, for instance in Australia, Canada, and Europe.

7.3. Economic foundations

Economic theories that back the Green New Deal include Keynes' (1936) spending multiplier effect, which captures the ratio of a change in national income to any autonomous change in spending, such

as private investment spending, consumer spending, government spending, or spending by foreigners on the country's exports that causes it.

Stiglitz (2019) famously advocated for the Green New Deal by saying, "It is better to leave a legacy of financial debts, which our children can somehow manage, than to hand down a possibly unmanageable environmental disaster".

Also, Sachs (2014) supports the idea of financial overspending for the sake of avoiding irreversible tipping points and environmental lock-ins. Money will always be there and is fungible, whereas environmental resources are depletable and irreplaceably destroyable.

8. GLOBAL ENVIRONMENTAL GOVERNANCE IMPLEMENTATION

Global environmental governance features different means ranging from formal institutions (major global conferences and treaties), legal regimes, informal arrangements, intergovernmental relationships, nongovernmental organizations, global capital markets, and multinational corporations (Puaschunder, 2020b).

1) Fiscal policies: The public sector and governing institutions play a central role in overcoming freerider problems and initiating market opportunities associated with externalities like climate change. Mitigation and adaptation policies and disaster risk prevention, and recovery may be supported by fiscal policy. Proposed financing tools include (long) maturity bonds, such as discussed in Sachs (2014), Orlov et al. (2018), and Braga et al. (2020).

2) Carbon tax: To peg emissions to tax payments appears simple and fair. Around the globe, about 14% of CO2 emissions are subject to taxation. But most of these taxation efforts are only a few cents or dollars per CO2 ton of emissions. Climate effects are only predicted for around 40 USD and are increasingly doubling the taxation after an introductory phase, successively. So far, Sweden has been quite successful with this. Since 1991, the CO2 tax has been raised to 130 USD, and carbon emissions dropped by about one-fourth while the economy could still grow.

3) Monetary and credit policies: The importance of monetary policy in support of climate policy is visible in inflation targeting as a proper policy. Yet, adaptation, the provision of climate disasters, and the recovery are often producing bottlenecks, causing higher inflation rates. So, targeting the inflation rate to move down inflation rates does not seem to be the appropriate policy if one has negative shocks on the supply side.

4) Insurance policies: Some researchers stress the importance of preventive actions and of policy buffers, designed to enhance resilience to shocks. Furthermore, the ease of borrowing constraints, greater reserves, and reserve fund accumulation are suggested. Low-income countries and regions have limited access to issuing climate bonds and exercise little borrowing power. Besides tax increases, risk pooling through self-insurance or some collective insurance schemes, grants from donors, and the buildup of financial buffers and disaster funds for contingencies are recommended.

5) Central banks: Departing from their central focus on monetary and economic stability (e.g., legal tender and setting the interest rate to achieve market stabilization), central banks have recently gained interest in aiding the financialization of climate change mitigation and adaptation.

6) Emissions trading: Around the globe, emissions trading covered around 20% of the global CO2 emissions in about 40 countries of the world and over 20 cities, municipalities, and provinces of the world, ranging from China to the EU.

7) Green bonds: Solar power and wind turbines, eco-friendly infrastructure, and more research and development (R&D) in clean energy and green technology are all investments in climate change. Addressing market changes and the financialization of climate justice are estimated to comprise 5–7% of the contemporary world's GDP, accounting for 5–6 billion USD. Green bonds could fund all these endeavors.

Environmental pricing reform is the process of adjusting market prices to include environmental costs and benefits. A negative externality exists where a market price omits environmental costs. Then, rational (self-interested) economic decisions can lead to environmental harm, as well as to economic distortions and inefficiencies. Environmental pricing reform can be a market-based or economic instrument for environmental protection. Examples include green tax-shifting (ecotaxation), tradeable pollution permits, or the creation of markets for ecological services. "Ecological fiscal reform" differs in more narrowly dealing with fiscal (i.e., tax) policies as opposed to using non-fiscal regulations to achieve the government's environmental goals.

Absorbing CO2 and forestation: As a carbon-negative market solution, CO2 can be absorbed from the atmosphere. Examples of this are carbon-absorbing forests, green rooftops in cities, carbon-negative clothing through fungus-wear, but also the absorption of CO2 from the atmosphere by machinery and windmills, as well as premiums to stop deforestation. Another ground-breaking innovation could be decentralized energy grids that are run on blockchain approaches. Thereby, single households could generate energy, for instance, via solar panels on the rooftop or isolated heating devices. Immediately, as the energy is generated, the individual household could either use the energy or distribute energy to close neighbors in a grid. This point-to-point solution between closer distributors and decentralized energy sharing could revolutionize the dependency on a few energy providers.

Behavioral changes: In the most recent decades, affluent people in high-income countries have defined environmental conscientiousness as a luxury good. High-end consumers around the world have proven interest in goods that do not cause CO2 emissions. They travel and shop environmentally conscientious with respect for the wider community and are investing in funding social and environmental causes in their local communities. Behavioral insight, hence the behavioral economics application to global governance, proves in many powerful laboratory and field experiments the power of behavioral nudges and winks on consumer choices with less monetary incentives. Nudges, the behavioral means to change people's choices based on their emotions, status, and other environmental and social conditions, have proven to be powerful and easily implementable sources to educate and change people's behavior without direct enforcement (Puaschunder, 2020a, 2021).

Sustainable tourism is the concept of visiting somewhere as a tourist and trying to make a positive impact on the environment, society, and economy. Tourism can involve primary transportation to the general location, local transportation, accommodations, entertainment, recreation, nourishment, and shopping. It can be related to travel for leisure, business, and visiting friends and relatives. There is now a broad consensus that tourism development should be sustainable.

Innovation efforts and financialization: Technological innovations are usually a result of a mix of private and public activities. The public sector can set frameworks and incentives to support inventions through R&D and de-risk innovation through public support and subsidies, and setting incentives. Public actions, such as taxes and subsidies, could enable the transition to a low-carbon economy and contribute to a faster transformation of the energy system toward less carbon-based energy provisions.

Intergenerational conscientiousness: To stabilize the climate, the current generations face high taxes and expenses. Future generations benefit from these investments for the future. With the right financialization strategy, these costs can be borne by future generations after the climate has been stabilized and is favorable for humankind to come (Puaschunder, 2018b, 2019a, 2019b). Green bonds would be able to enact this intergenerationally harmonious solution. These financialization strategies are common in the public sector, for instance, the New York water distribution is built on this principle. With financial means that raised money via bonds, lakes could be built in the mountains near New York. Now, when water is consumed, the consumers pay off previous expenses.

Engaging portfolio managers: In an integrated economy, oil price fluctuations are causing disturbance in many industries. Portfolio and hedge fund managers strive to reduce risks to the overall portfolio in the short and long run. Renewable energy appears to be a crisis-stable market option as for is chosen in a quasi-religious act based on values and not on profit motives. Investment options based on renewable energy can reduce the risks and political dependencies on commodities associated with non-renewables.

The implementation of a diversified taxation scheme could include the establishment of a progressive carbon tax by designing a tax regime that rises with emissions produced. This kind of tax regime should adjust for disposable income and offer tax credits, rebates, or exemptions for low-income households to avoid regressive impacts. For instance, the British Columbia carbon tax model uses this kind of disparate impact adjustment to control for marginalized income groups' financial constraints. Taxes should be phased in gradually and starting with a lower tax rate and increasing over time to allow industries and households to adapt. As a next step, a progressive income and corporate tax should be introduced to reap wealthier individuals and corporations with higher spending propensities. For instance, a corporate inheritance tax could be modeled on the German Corporate Inheritance Tax that makes corporations pay at leadership junction points to pay off for past economic activities. Lastly, a targeted consumption tax could selectively bill the consumption of carbon-intensive goods (e.g., gasoline, non-recyclable products, and beef). The price variation would implicitly nudge people towards green alternatives. The tax revenue could be used to subsidize sustainable goods production and consumption. For instance, using tax revenues for subsidies, rebates for low-income groups, as well as investment into green infrastructure, could directly target change to use renewable energy sources and retrofitting homes. Price signals tend to change people's behavior effectively and could become a powerful tool to steer positive change fast and broad-based.

In the implementation of climate bonds, the government-led green bond issuance could be launched as part of a central bank sovereign green bond aimed at funding green investments, such as renewable energy, sustainable transport, climate risk mitigation, climate adaptation, sustainable tourism, and even the arts. Examples would be the EU Green Bonds in the wake of the Next Generation EU, as well as the New European Bauhaus ideas. The state should tie bond funds directly to measurable climate goals, such as the installation of solar panels in relation to conventional electricity consumption sources, tons of CO2 emissions reduced, etc. To ensure monitoring, evaluation, and accountability, a climate bond certification system should be installed that creates strict standards to avoid greenwashing. Third-party verification of bond project outcomes, but also international harmonization and oversight by global governance bodies, are potential implementation routes. An international climate bond pool could help climate change winner countries contribute to bonds in a structured way, while the redistribution to global warming loser countries is harmonized and fair via all participants. Climate change winning countries would contribute with tax and transfer payments, while the recipient countries would benefit from transfer payments to offset losses due to climate change impacts and global warming damages. Shifting between climate loser and winner countries would allow for setting the right incentives to lower carbon emissions and be compliant with global sustainability goals. This kind of solution is similar to the Green Climate Fund of the UNFCCC (Elmassri et al., 2022). Lifting this idea to the long-term level, intergenerational bond strategies could encourage sustainability goals pursued over 20–50 years with a long-term maturity. Thereby, future generations repay a debt that was incurred in previous generations instead of inheriting a stable and favorable climate. This aligns the costs with the beneficiaries of today's investments. An example would be the New York City watershed project financing.

Specific steps for policymakers to be taken on multiple dimensions: On the global level, international treaties can require certain countries or industries to contribute to global funds aimed at the redistribution of some of the expected economic gains from climate change to territories or industries that are losing out from global warming. At the national level, passing laws mandating progressive carbon taxes and green bond issuance can aid policymaking towards sustainability. Financial incentives can offer tax reductions or interest subsidies for corporations and individuals to invest in green bonds. Public engagement can comprise education campaigns on how climate taxation and bonds benefit contemporary society, but also future generations. Behavioral nudges introduce subliminal ways to get people to change their behavior towards sustainability. Examples

include smart meters, green labels, and choice architectures to encourage low-carbon consumption choices. Monitoring and evaluation are enacted by transparency and mandated annual reporting, auditing, and public disclosure of how climate tax revenues and bond proceeds are used.

As for political barriers to global taxation and redistribution challenges, first of all, there are sovereignty concerns. Many nations may simply resist supranational mechanisms like global taxes, viewing them as an infringement on national sovereignty. For implementing such an important and large-scale endeavor as climate bonds and carbon taxation, countries need political will and democratic consensus. Countries with strong economies and relatively low climate risk and the prospect of economic gain from global warming may lack incentives to participate in redistribution efforts. Rising nationalist movements, trade wars, and political sentiment to invest in security and defense nowadays push cooperative global agendas on common climate policies aside or even counterbalance previous efforts and accomplishments.

Possible solutions comprise voluntary coalition frameworks such as the UNFCCC, which allow countries to opt in and create climate goals based on their starting ground and position. Soft power and incentives account for the strongest climate justice participation potentials, featuring debt forgiveness plans based on climate goals attainment, trade access, or climate tech transfer schemes. Framework redistribution as an economic opportunity presents climate justice as sustainable market development, with means such as investing in green infrastructure and opening new markets for trade and development.

Economic limitations of tax-and-bond strategies include a market distortion effect as carbon taxes can raise costs of production, potentially triggering inflation or hurting competitiveness. Disparate impact analysis may reveal that marginalized communities may be disproportionately hit hard by any consumption tax unless there is a way to offset costs in a targeted way for them. Debt burdens through bonds may backfire if they become too systemic and widespread, so that the uncertainty and constraints created outweigh the overall benefits over time.

Possible solutions include revenue recycling by reinvesting tax revenues in rebates or subsidies for low-income groups to neutralize regressive effects, e.g., as done in Canada's carbon tax rebate model. Phase-in strategies introduce taxes gradually, which allows industries and consumers time to adapt as well as the implementation bodies to modify the plan accordingly. Dual financing approaches use a blend of progressive taxes targeting wealth and emissions, as well as green bonds to balance short-term with long-term impacts.

Enforcement and accountability challenges comprise a lack of global enforcement mechanisms in international finance and carbon pricing, which lack robust oversight. Greenwashing risks are emerging as pressure for ESG concerns is rising and implemented on a governmental basis (Akomea-Frimpong et al., 2022; Askarany & Xin, 2024; Bruno et al., 2024; Rao & Juma, 2024). Greenwashing is the mislabeled initiative for green concerns that has no real impact.

Possible solutions include independent monitoring and global oversight strengthened by institutional support for verification, accounting, and control. Mandatory ESG disclosure standards push for legally binding sustainability reporting and third-party audits. Most recently, blockchain-based transparency tools use decentralized ledgers for tracking carbon credits and green bond use of proceeds as one of the most innovative extensions in this field.

Behavioral and cultural resistance challenges are to ingrain new habits and transform lifestyles. Equity concerns are raised as behavioral policies can be paternalistic and culturally insensitive when it comes to disparate impact attention and the subliminal effect of some of these policies. Context-sensitive nudges tailor behavioral tools to local cultures and values. Education and participation combine to nudge with civic engagement programs that foster climate conservation awareness, enhanced by community ownership and positive group norms.

9. CONCLUSION

Overall, this paper presented a novel approach to global climate governance by proposing the redistribution of climate change gains and losses through a combined bonds-and-taxation strategy. Using macroeconomic modeling, the study identified "climate winners", countries benefiting economically from global warming, and "climate losers", those suffering losses. It demonstrated that while global GDP might experience a net gain by 2100 under a business-as-usual scenario, the benefits and burdens are distributed highly unequally. The article introduced the ethical concept of a "climatorial imperative", drawing on Rawlsian and Kantian ethics to argue for a fair redistribution system. Furthermore, the paper proposed a Behavioral Green New Deal framework, utilizing behavioral economics to steer societal transformation toward sustainability through nudges, progressive taxation, green bonds, and corporate responsibility initiatives.

The findings have significant implications for climate policy, economic governance, and intergenerational justice. They suggest that redistributive financial strategies, such as progressive carbon taxes and climate bonds, could correct the economic imbalances caused by climate change while incentivizing sustainable behavior across societies and industries. The Behavioral Green New Deal approach also opens new avenues for integrating psychological insights into environmental policy, offering more feasible and publicly acceptable mechanisms for achieving climate goals. Additionally, the proposed redistribution models could serve as a foundation for international agreements that more fairly allocate climate-related benefits and responsibilities across nations.

The research is primarily based on macroeconomic models using current GDP and temperature projections, which inherently simplify complex socio-environmental dynamics. Sector-specific differences within countries, political feasibility, and real-world behavioral responses to taxes and bonds are not fully modeled. The economic forecasts also rely on assumptions about future emissions, growth patterns, and mitigation efforts that may not materialize as expected. Furthermore, while the ethical framework is well-developed, practical implementation challenges, such as political resistance, enforcement mechanisms, and global governance structures, are acknowledged but not deeply operationalized.

Future research should refine temperature-economic productivity models by incorporating more granular sectoral and regional data, including the variances introduced by different climate zones and seasonal patterns. Studies could also explore the effects of redistribution strategies on commodity prices, migration patterns, and social stability. Behavioral experiments are recommended to test the effectiveness of proposed nudges and financial incentives across different cultures. Moreover, investigations into decentralized finance solutions, such as blockchain-based green bonds, could further operationalize intergenerational equity mechanisms. Lastly, comparative studies evaluating real-world applications of climate justice transfers (e.g., the Green Climate Fund or national green bonds initiatives) could provide practical insights into the feasibility and effectiveness of such models.

Future research may address the redistribution of climate change gains and losses, temperature range variations' economic impact, commodity price estimates based on scarcity, and economic peak temperature for production re-estimates. Temperature range estimates should be refined and connected to economic output. Does the economic output of countries with a vast temperature range based on latitude and altitude differ from countries with cyclical temperature changes? Contemporary attention to global warming is assumed to affect commodity and beverage prices hyperbolically at extinction.

With the novel COVID-19 spreading around the world from the beginning of 2020 on, calls are made that the medicine of the future should prevent diseases instead of just treating their consequences. In the novel COVID-19 crisis, prevention and general, holistic medicine determine whether COVID-19 puts patients on a severe or just mild symptom trajectory. Obesity, but also the general status of the immune system, are decisive in whether COVID-19 becomes a danger for the individual. The COVID-19 crisis is, therefore, an important accelerator for necessary, fundamental changes in the health system, which also results in ecological impacts, as a healthy diet is usually less carbon-intensive.

REFERENCES

Akomea-Frimpong, I., Asogwa, I. E., & Tenakwah, E. J. (2022). Systematic review of sustainable corporate governance of SMEs: Conceptualisation and propositions. *Corporate Ownership & Control, 19*(3), 74–91. https://doi.org/10.22495/cocv19i3art5

Askarany, D., & Xin, Y. (2024). ESG ratings and stock price volatility: An empirical analysis amidst the COVID-19 pandemic. *Corporate Ownership & Control, 21*(2), 132–150. https://doi.org/10.22495/cocv21i2art11

Asogwa, I. E., Varua, M. E., & Tenakwah, E. S. (2022). Examining the relationship between sustainability reporting processes and organizational learning and change. *Corporate Ownership & Control, 20*(1), 145–161. https://doi.org/10.22495/cocv20i1art14

Biju, A. V. N., Alora, A., Sasidharan, A., & Kallany, A. (2024). Investigating the factors determining green bond issuance in emerging markets: Emphasizing the direct and moderating role of board characteristics and ESG performance. *Corporate Ownership & Control, 21*(4), 60–74. https://doi.org/10.22495/cocv21i4art6

Bonaparte, I. (2024). Environmental, social, and governance controversies and earnings quality. *Corporate Ownership & Control, 21*(4), 89–105. https://doi.org/10.22495/cocv21i4art8

Boyle, A. D., Leggat, G., Morikawa, L., Pappas, Y., & Stephens, J. (2021). Green New Deal proposals: Comparing emerging transformational climate policies at multiple scales. *Energy Research & Social Science, 81*, Article 102259. https://doi.org/10.1016/j.erss.2021.102259

Braga, J. P., Fischermann, T., & Semmler, W. (2020). Ökonomie und Klimapolitik: So könnte es gehen [Economics and climate policy: This is how it could work]. *Die Zeit*, *11*. https://www.zeit.de/2020/11/europaeischer-green-deal-emissionshandel-wirtschaft-klimaschutz

Bruno, E., Iacoviello, G., & Casella, R. (2024). Banks and ESG pillars score: Does cybersecurity policy matter? [Special issue]. *Corporate Ownership & Control, 21*(3), 8–17. https://doi.org/10.22495/cocv21i3siart1

Burke, M., Hsiang, S. M., & Miguel, E. (2015). Global non-linear effect of temperature on economic production. *Nature, 527*(7577), 235–239. https://doi.org/10.1038/nature15725

Chichilnisky, G. (1996). *Development and global finance: The case for an international bank for environmental settlements*. United Nations Development Programme, Office of Development Studies. https://doi.org/10.2139/ssrn.1375218

Chichilnisky, G. (2007). *The economics of global environment: Catastrophic risks in theory and policy*. Springer International.

Chichilnisky, G. (2010). *The economics of climate change*. Edward Elgar.

Chichilnisky, G., & Bal, P. (2019). *Reversing climate change: How carbon removals can resolve climate change and fix the economy*. World Scientific Publishing.

Chichilnisky, G., & Heal, G. (2000). *Environmental markets: Equity and efficiency*. Columbia University Press. https://doi.org/10.7312/chic11588

Chichilnisky, G., & Sheeran, K. (2018). *Handbook on the economics of climate change*. Edward Elgar.

Chichilnisky, G., Heal, G., & Vercelli, A. (1998). *Sustainability: Dynamics and uncertainty*. Springer Dordrecht. https://doi.org/10.1007/978-94-011-4892-4

Elmassri, M., Yusuf, A., Allah, A. K., Al Shamsi, M., Kaniyamparambil, R., & Al Ahbabi, S. M. (2022). The quality of corporate reporting: The United Nations sustainable development goals. *Corporate Ownership & Control, 19*(3), 158–167. https://doi.org/10.22495/cocv19i3art12

Intergovernmental Panel on Climate Change (IPCC). (2021). *Climate change 2021: The physical science basis*. https://www.ipcc.ch/report/ar6/wg1/

Kahn, M. E., Mohaddes, K., Ng, R. N. C., Pesaran, M. H., Raissi, M., & Yang, J.-C. (2019). Long-term macroeconomic effects of climate change: A cross-country analysis. *IMF Working Papers, 2019*(215). https://doi.org/10.5089/9781513514598.001

Kaldor, N. (1961). Capital accumulation and economic growth. In F. A. Lutz & D. C. Hague (Eds.), *The theory of capital* (pp. 177–222). Palgrave Macmillan. https://doi.org/10.1007/978-1-349-08452-4_10

Kant, I. (1997). *Grounding for the metaphysics of morals* (M. Gregor, Trans.). Cambridge University Press. (Original work published 1783). https://cpb-us-w2.wpmucdn.com/blog.nus.edu.sg/dist/c/1868/files/2012/12/Kant-Groundwork-ng0pby.pdf

Keynes, J. M. (1936). *The general theory of employment, interest and money*. Macmillan.

Ktit, M., & Khalaf, B. A. (2024). Corporate governance, corporate social responsibility, and dividends in Europe. *Corporate Ownership & Control, 21*(1), 39–46. https://doi.org/10.22495/cocv21i1art4

Lobe, S., & Halbritter, G. (2023). Finding value in sustainable and responsible investments. *Corporate Ownership & Control, 20*(4), 84–96. https://doi.org/10.22495/cocv20i4art6

Mazzucato, M. (2013). *The entrepreneurial state: Debunking public vs. private sector myths*. Anthem Press. http://digamo.free.fr/mazzucato.pdf

Nagalingam, N., De Silva, L. M. H., Weerasinghe, R. M., Pathirana, T. D., Rajapaksha, C. M., Perera, K. R., & Kaneshwaren, S. (2022). Corporate social responsibility and financial performance: A study of the tourism industry in Sri Lanka. *Corporate Ownership & Control, 19*(4), 103–110. https://doi.org/10.22495/cocv19i4art9

Orlov, S., Rovenskaya, E., Puaschunder, J. M., & Semmler, W. (2018). *Green bonds, transition to a low-carbon economy, and intergenerational fairness: Evidence from an extended DICE model* (International Institute for Applied Systems Analysis Working Paper No. WP-18-001). IIASA. https://doi.org/10.2139/ssrn.3086483

Pisano, S., D'Amore, G., Landriani, L., & Lepore, L. (2022). Can a corporate social responsibility committee be utilized to enhance the effectiveness of independent directors? *Corporate Ownership & Control, 20*(1), 201–213. https://doi.org/10.22495/cocv20i1art18

Puaschunder, J. M. (2016a). Intergenerational climate change burden sharing: An economics of climate stability research agenda proposal. *Global Journal of Management and Business Research: Economics and Commerce*, *16*(3), 31–38. https://doi.org/10.2139/ssrn.2740178

Puaschunder, J. M. (2016b). Mapping climate justice. In the *Proceedings of the 2016 Young Scientists Summer Program Conference*. International Institute for Applied Systems Analysis (IIASA). https://doi.org/10.2139/ssrn.2819947

Puaschunder, J. M. (2016c). On eternal equity in the fin-de-millénaire: Rethinking capitalism for intergenerational justice. *Journal of Leadership, Accountability and Ethics*, *13*(2), 11–24. https://articlegateway.com /index.php/JLAE/article/view/1913

Puaschunder, J. M. (2016d). The call for global responsible intergenerational leadership in the corporate world: The quest for an integration of intergenerational equity in contemporary corporate social responsibility (CSR) models. In D. Jamali (Ed.), *Comparative perspectives in global corporate social responsibility* (pp. 275–288). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-5225-0720-8.ch014

Puaschunder, J. M. (2017a). Mapping climate in the twenty-first century. *Development, 59*, 211–216. https://doi.org/10.1057/s41301-017-0110-0

Puaschunder, J. M. (2017b). The climatorial imperative. *Agriculture Research and Technology*. https://juniperpublishers.com/artoaj/ARTOAJ.MS.ID.555719.php

Puaschunder, J. M. (2018a). Climate in the 21st century: A macroeconomic model of fair global warming benefits distribution to grant climate justice around the world and over time. In S. Omar (Ed.), the *Proceedings of the 8th International RAIS Conference on Social Sciences and Humanities* (pp. 205–243). Scientia Moralitas Research Institute. https://doi.org/10.2139/ssrn.2964385

Puaschunder, J. M. (2018b). *Intergenerational responsibility in the 21st century*. Vernon Press.

Puaschunder, J. M. (2019a). *Corporate and financial intergenerational leadership*. Cambridge Scholars Publishing.

Puaschunder, J. M. (2019b). *Intergenerational equity: Corporate and financial leadership*. Edward Elgar. https://doi.org/10.4337/9781788978835

Puaschunder, J. M. (2020a). *Behavioral economics and finance leadership*: *Nudging and winking to make better choices*. Springer Cham. https://doi.org/10.1007/978-3-030-54330-

Puaschunder, J. M. (2020b). *Governance & climate justice: Global south & developing nations*. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-63281-0

Puaschunder, J. M. (2021). *Verhaltensökonomie und Verhaltensfinanzökonomie: Ein Vergleich europäischer und nordamerikanischer Modelle* [Behavioral economics and behavioral finance: A comparison of European and North American models]. Springer Gabler. https://doi.org/10.1007/978-3-658-32474-2

Puaschunder, J. M. (2022). *Ethics of inclusion: The cases of health, economics, education, digitalization and the environment in the post-COVID-19 era*. Ethics International Press, Inc.

Rao, S. S., & Juma, N. (2024). An exploration of ESG activities and firm performance of global companies during the COVID-19 pandemic. *Corporate Ownership & Control, 21*(4), 15–27. https://doi.org/10.22495/cocv21i4art2

Rao, S. S., Nathan, S., & Juma, N. (2022). Choice and impact of sustainability assurance standards on firm value. *Corporate Ownership & Control, 19*(2), 127–142. https://doi.org/10.22495/cocv19i2art11

Rawls, J. (1971). *A theory of justice*. Harvard University Press. https://doi.org/10.4159/9780674042605

Rolle, M. (2016). Reversing climate change: Interview with Graciela Chichilnisky. *Global Policy*. https://www.globalpolicyjournal.com/blog/01/09/2016/reversing-climate-change-interview-graciela-chichilnisky

Sachs, J. D. (2014). Climate change and intergenerational well-being. In L. Bernard & W. Semmler (Eds.), *The Oxford handbook of the macroeconomics of global warming* (pp. 248–259). Oxford University Press. https://www.jeffsachs.org/bookchapters/ft2gfd3h7zx5p54mrj67lkcsntn65r

Sachs, J. D. (2021). *Climate finance for low-income nations* (UN COP26 Briefing).

Semmler, W., Braga, J. P., Lichtenberger, A., Toure, M., & Hayde, E. (2021). *Fiscal policies for low-carbon economy*. The World Bank. https://documents1.worldbank.org/curated/en/998821623308445356/pdf/Fiscal-Policies-for-a-Low-Carbon-Economy.pdf

Stiglitz, J. [@stiglitzian]. (2019, January 7). Stiglitz: "If the challenges of climate change are not met today, huge burdens will be imposed on the next generation. […]. X.com. https://x.com/stiglitzian/status /1082369686833152002

Tomek, R. S., Richter, R., Lakonig, P. S., Bonelli, R. M., Hosang, M., Michalsen, A., Probst, T., Puaschunder, J. M., Rohrbach, W., Schuchardt, E., & Vormann, J. (2020). *Salzburg Deklaration [Salzburg Declaration]: Outcome of the Conference 'System Change?! The Chance of Transformation of the Healthcare Sector: Analysis and Chance withing the Coronavirus Crisis'*. https://doi.org/10.2139/ssrn.3712445

United Nations Environment Programme (UNEP). (2009, March). *Global green new deal*: *Policy brief*. https://wedocs.unep.org/bitstream/handle/20.500.11822/7903/A_Global_Green_New_Deal_Policy_Brief.pdf?sequence=3&amp%3BisAllowed=

Velte, P. (2022). Corporate social responsibility performance, reporting and generalized methods of moments (GMM): A structured review of corporate governance determinants and firms' financial consequences. *Corporate Ownership & Control, 19*(2), 8–27. https://doi.org/10.22495/cocv19i2art1

APPENDIX

Figure A.1. Climate change winners and losers around the world

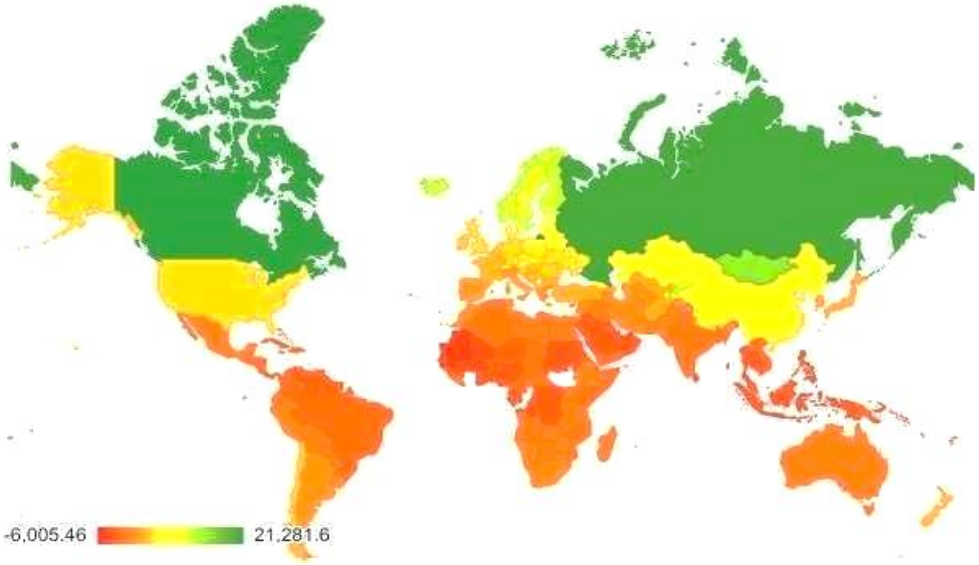

Figure A.2. Climate change tax-and-bonds transfers strategies around the world