**Fossil Fuel Transition and the Principle of Intergenerational Justice in Ecological Jurisprudence: A Case Study of Uruguay**

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**Abstract**

The transition from fossil fuels to renewable energy sources is a critical challenge in contemporary environmental and social discourse. In the context of ecological jurisprudence, intergenerational justice serves as a foundational principle for addressing the rights of future generations concerning environmental sustainability. This paper examines the role of intergenerational justice in the fossil fuel transition, with a focus on Uruguay's unique approach. Uruguay has demonstrated significant strides in the development of renewable energy, positioning it as a model for other nations. By exploring how Uruguay’s policies align with ecological jurisprudence and intergenerational justice, this study aims to assess the practical implementation of these concepts and provide insights into sustainable energy transitions that respect both present and future generations. Paris Agreement on climate change are very specific on the need to reduce greenhouse gas emissions (GHGs), and transition to sustainable and renewable energy sources is the legal framework for this research. This paper argues that while the debate continues to rage on the challenges and opportunities associated with the transition from the consumption of fossil-fuel-based energy sources to renewable energy sources, the possibility of the said transition has been exemplified in Uruguay. The campaign for a transition from the unsustainable use and reliance on fossil fuel energy sources has moved from the realm of speculative possibility to reality. The principle of intergenerational justice underscores the jurisprudential framework that provides a theoretical justification for the sustainable and responsible use of natural resources and exploitation of the environment by current generations in anticipation of the environmental rights of future generations and their survival. This principle calls for actions that protect the rights and well-being of future generations, while emphasizing the need for sustainable practices in energy transition. The requirement of the sustainable and responsible engagement of the environment by current generations in expectation of guaranteeing the ecological rights of generations yet-unborn is a responsibility and a duty imposed on the current generation by nature. Through an analysis of local and global frameworks, this paper advocates for stronger regulatory enforcement, the conscientious transition to renewable and green energy sources, and the intensification of collaborative engagements. It also highlights the importance of community engagement, environmental education, and international collaboration in addressing these challenges. Ultimately, the paper proposes that integrating intergenerational justice into environmental policy and law can ensure a healthier and more sustainable future, where the rights of both current and future generations are safeguarded. This research was conducted using qualitative research method.

**Keywords:** Fossil fuel transition, intergenerational justice, environmental jurisprudence, sustainable energy, renewable energy, green energy, ecological justice, ecological debt, public trust doctrine.

**1.0 ⁠Introduction**

The shift from fossil fuels to sustainable energy sources is increasingly seen not only as an environmental imperative but as a moral obligation framed within the principle of intergenerational justice. Intergenerational justice, rooted in ecological jurisprudence, is the ethical concept that current generations have a responsibility to protect the environment for future generations. This principle, as emphasized by environmental philosophers, asserts that the degradation of natural resources today compromises the well-being and rights of future generations according Gardiner (2011). Broome (2010) maintained that scholars argue that a fossil-fuel-dependent economy significantly contributes to climate change, imposing potentially irreversible damage on ecosystems and societies, thus raising serious ethical questions about the long-term impacts of current energy practices.

Given the accelerating and exacerbated effects of climate change, there is growing support in legal and environmental fields for a transition to sustainable energy sources that align with principles of ecological responsibility. As legal theorist Christopher Stone argues, ecological jurisprudence offers a framework to consider nature and future generations as legitimate stakeholders in decision-making (Stone, 2016). This approach, embedded in legal policies, can support measures that prioritize renewable energy investments and advocate for strict regulations on fossil fuel extraction. Therefore, examining the fossil fuel transition through the lens of intergenerational justice not only strengthens ecological jurisprudence but also pushes for a more sustainable and ethically sound legal framework.

**2.0Methodology**

This research utilizes a qualitative approach, employing a combination of documentary analysis and case study methodology. Data will be gathered from governmental reports, policy documents, legal texts, and academic literature on Uruguay’s energy policies. Comparative analysis will be used to examine Uruguay's energy transition in relation to other countries that have pursued similar policies. Interviews with experts in ecological jurisprudence and environmental law will further supplement the analysis. The study will also consider the impacts of Uruguay's energy policies on both the current population and future generations.

**3.0Theoretical and Legal Frameworks for Sustainable Energy Transition**

This study is grounded in the principles of ecological jurisprudence, which asserts that the natural environment holds intrinsic rights and must be protected through legal and ethical frameworks. The concept of intergenerational justice, as articulated by environmental philosophers and legal theorists, underscores the need for fairness in the distribution of environmental resources between current and future generations. These principles are central to addressing the ethical dimensions of climate change and environmental policy. The theoretical framework integrates these two concepts to analyze how Uruguay’s transition to renewable energy reflects a commitment to both ecological sustainability and intergenerational equity.

Legal frameworks that promote sustainable energy are essential for implementing intergenerational justice within the context of ecological jurisprudence. International agreements, such as the Paris Agreement, seek to unite global efforts to limit global warming, though their effectiveness depends on the commitment of individual nations to reduce carbon emissions (Rajamin, 2016). Articles 2, 3, and 4 of the Paris Agreement on climate change are very specific on the need to reduce greenhouse gas emissions (GHGs), and transition to sustainable and renewable energy sources (Paris Agreement 2015 on climate change, Article 2,3. and 4). Lavanya Rajamani, an expert in international environmental law, emphasizes that while these agreements are significant, they lack binding mechanisms that could enforce compliance, which weakens their ability to safeguard the rights of future generations (Rajamin, 2016). In the absence of enforceable international standards, local and national laws play a critical role in advancing the principle of intergenerational justice by promoting clean energy policies and setting limits on fossil fuel emissions. In this regard, the Nigerian Environmental Impact Assessment Act provides that an environmental impact assessment shall be conducted for any petroleum operations that are likely to have significant impact on the environment. These include extraction, exploration and production of crude oil, construction of pipelines and other infrastructure, drilling and completion of oil wells, and transportation of crude oil (S 2 of the ELA ACT). The Petroleum Industry

**4.0Literature Review**

The literature on ecological jurisprudence has evolved significantly in recent decades. Scholars like Cormac Cullinan (2011) and David Boyd (2012) have emphasized the need for legal systems to recognize the rights of nature and future generations. Intergenerational justice has been extensively discussed by theorists such as Brian Barry (2001) and John Rawls (1971), who have explored the moral and political obligations that current generations have towards future ones, especially in the context of environmental preservation. Literature on Uruguay’s energy transition highlights the country’s remarkable progress in renewable energy, with studies by Frida Nunez (2017) and the International Renewable Energy Agency (IRENA, 2020) documenting Uruguay’s shift from fossil fuels to wind, solar, and biomass energy. Additionally, there is a growing body of work examining the implications of legal and policy frameworks that integrate ecological jurisprudence in environmental governance, particularly within Latin America.

Fossil fuel consumption has historically driven economic growth but has also accumulated what some scholars call an "ecological debt," which places a burden on future generations (Barry and Eckersley, 2005). This ecological debt is occasioned by the phenomena of greenhouse gas emissions, environmental pollution, loss of biodiversity, and climate change, and all these have long-lasting impacts on the environment. According to Klaus Bosselmann, the principle of intergenerational equity demands that contemporary societies *acknowledge* and *mitigate* this debt, particularly through policies that reduce dependency on non-renewable resources (Bosselman, 2016). As Bosselmann (2016) argues, failing to address the ecological debt perpetuates a form of ecological injustice where future generations are deprived of their right to a safe and healthy environment, which is one of the key tenets of ecological jurisprudence.

Ecological debt also raises legal questions about whether governments and corporations should be held accountable for all forms of environmental injustices

meted on future generations. The concept of the "public trust doctrine" has emerged as a legal tool to address these questions. According to this doctrine, natural resources are held in trust for public benefit, and this extends to future generations as beneficiaries (Wood, 2014). Wood, an advocate of the public trust doctrine, argues that this approach could empower judicial systems to enforce stricter environmental protections and fossil fuel restrictions, creating a legal mechanism for intergenerational justice. Barry (2001) explores the role of international law and policy frameworks, including the Paris Agreement, in facilitating the global transition to renewable energy, focusing on intergenerational justice and ecological jurisprudence. Macmahon and Markham (2022) further explained that the ethical and legal implications of fossil fuel divestment, linking the concept of intergenerational justice to the global shift towards renewable energy, with specific references to Uruguay’s energy transition as a case study.

In the same vein, Galarraga and Ruiz (2020) posit that the pressing environmental and ethical challenges presented by waste management issues, fossil fuel dependence, and the urgent need for energy transition reflect a global call for more sustainable practices that honor intergenerational justice. Intergenerational justice, a principle that demands a sustainable legacy for future generations, underscores the need to transition from fossil fuels to renewable energy sources and to establish equitable Local and international frameworks, such as Nigeria’s environmental policies and international conventions like the Basel Convention, illustrate the importance of regulatory measures, although they also highlight the difficulties in enforcement and accountability (Sachs and Mazzucato, 2021). Sachs and Mazzucato posit the legal mechanisms necessary to achieve intergenerational justice in energy transitions, providing a theoretical framework and practical examples, including references to Uruguay’s energy shift.

By prioritizing sustainability, local community engagement, and international cooperation, governments and organizations can address these pervasive environmental challenges, laying the groundwork for a healthier, more equitable world. Hitherto, Pacheco and Zarate (2021) infer that the essence, the convergence of environmental degradation, economic inequality, and public health risks tied to fossil fuel reliance demands a holistic approach that includes stronger policies, community empowerment, and ethical accountability to future generations. Pacheco and Zarate also interpolated that the ethical and legal implications of fossil fuel divestment, linking the concept of intergenerational justice to the global shift towards renewable energy, with specific references to Uruguay’s energy transition as a case study. This paradigm resonates with Nigeria and other countries as they work toward these goals, the integration of intergenerational justice within ecological jurisprudence offers a guiding framework that upholds the rights of both current and future generations to a safe, sustainable environment.

Boyd (2012) postulated that the urgent need to transition away from fossil fuels is not only a moral imperative, but also a legal and ethical obligation rooted in the principle of intergenerational justice. The remarkable example of Uruguay's green energy transition demonstrates that a rapid and equitable shift towards renewable energy sources is possible, even for small countries with limited resources. Speaking of on Uruguay's experience, Cullinan (2011) highlights the importance of policy coherence, institutional capacity, and community engagement in driving a successful energy transition. By prioritizing the well-being of present and future generations, Uruguay has not only reduced its carbon footprint but also created a more sustainable and equitable society. Cullinan specifically examines Uruguay’s policies, strategies, and implications for sustainable development, shedding light on how the country’s energy transition aligns with the principles of ecological jurisprudence and intergenerational justice.

More so, Falkner (2022) corroborated further, asserting as the world grapples with the existential threat of climate change, the principle of intergenerational justice must guide our ecological jurisprudence. Falkner reiterated that the role of renewable energy in achieving sustainable development goals in Latin America, providing specific insights into Uruguay’s progress and alignment with the principles of intergenerational justice. This requires recognizing the inherent rights of future generations to a healthy and thriving planet, and taking immediate action to reduce our reliance on fossil fuels. The Uruguay example shows us that a better future is possible, but it requires courage, cooperation, and a commitment to justice for all generations. **⁠**To address the interconnected issues of fossil fuel dependence, and intergenerational justice, a multi-faceted approach is essential.   
Rawls (1971) emphasized the need for governments to develop stricter environmental regulations that address industrial pollution control, and emissions from fossil fuels. Regulatory bodies must also ensure consistent enforcement to hold corporations and individuals accountable. Improved oversight and punitive measures for environmental violations can deter irresponsible waste disposal and pollution practices. Rawls (1971) concurred that the role of ecological jurisprudence in South American legal systems, with a detailed comparative study on how Argentina, Brazil, and Uruguay integrate ecological justice into their climate and energy policies.

Also, adding to the template is Jenkins and Sovacool (2020), they opined that to reduce reliance on fossil fuels and promote intergenerational justice, governments should prioritize renewable energy sources such as solar, wind, biomass, and hydroelectric power. Vazquez and Prado (2020) illuminated that providing incentives for renewable energy investments, including tax credits and grants for both industries and households, can accelerate the adoption of clean energy. A phased reduction of fossil fuel subsidies will also facilitate a gradual transition to sustainable energy. In Nigerian for instance, the removal of fuel subsidy has led to diversification of energy sources such as Compressed Natural Gas (CNG), use of electric vehicles for transportation, etc.

Furthermore, Hass and Ochoa (2023) maintained raising public awareness through environmental education programmes is essential to foster a culture of sustainability. By educating communities about the importance of transitioning to renewable energy, local populations can be empowered to participate in environmental protection. Community engagement initiatives should involve residents in decision-making processes, enabling them to advocate for and contribute to sustainable practices. In the same vein, Schroeder and Pydge (2023) stipulated that governments should consider integrating the public trust doctrine into environmental law, establishing natural resources such as water, air, and soil as public assets that must be protected for current and future generations. Also, of eminence is International renewable energy agency (IRENA) (2000) focuses on energy justice, with significant attention given to Latin American countries like Uruguay, and discusses the challenges and opportunities in achieving just energy transitions while respecting the rights of future generations. Nunez (2017) aver that the social justice dimensions of energy transitions in Latin America, including the case of Uruguay, and assess how policies can be designed to ensure fairness between present and future generations. Jenkins and Sovacool (2020) further highlighted that the legal frameworks surrounding renewable energy development in Latin America, particularly focusing on how intergenerational justice is integrated into national laws and policies, with a focus on Uruguay’s energy transition.

By doing so, states would take on a fiduciary responsibility to manage these resources sustainably, ensuring that they are preserved for the long-term benefit of society. It is further recommended that international cooperation is crucial for addressing the transboundary nature of environmental issues, especially for countries affected by and fossil fuel exports. International partnerships should also focus on sharing technologies and best practices in renewable energy. Developing green economy initiatives that support eco-friendly industries and sustainable job creation can help address economic and environmental challenges simultaneously. Governments should create incentives for industries involved in renewable energy to stimulate job growth in sectors that contribute positively to the environment. This approach can also help to alleviate economic inequality in marginalized communities by providing new economic opportunities.

*Act (PIA) 2021*, *National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007* and the *Upstream Petroleum Environmental Regulations 2022* have various and comprehensive provisions that deal with issues of environmental degradation, climate change, and environmental pollution. Accordingly, the *Upstream Petroleum Environmental Regulations 2022* mandates that any company that plans to engage in exploration, exploitation and/or production of petroleum in Nigeria must prepare an Environmental Risk Register (ERR) to enable the regulatory agencies and the company to understand the risks posed by the proposed project to the people and the environment where the project is to be sited (Upstream Petroleum Environmental Regulations, 2022)

Section 2 of the Act is very detailed on the categories of activities that will require the securing of an Environmental Risk Register (ERR) including seismic operations, oil and gas development activities, development well drilling, construction or modification of oil and gas facilities, laying of crude oil and gas delivery lines, flowlines, pipelines, dredging activities, etc. A necessary and important component of an Environmental Risk Register is the *Environmental Management Plan.* Section 6(iv) of the *Upstream Petroleum Environmental Regulations 2022* thus provides:

Final Environmental Risk Register shall be prepared, with a detailed Environmental Management Plan (EMP) and an approval obtained at the end of the Detailed Engineering Design. The EMP shall form the environmental basis for project implementation. A pre-condition for the final approval of the ERR is the payment of a financial contribution to an Environmental Remediation Fund, in line with Section 103(1) of the PIA 2021.

Section 103(1) of the PIA contemplates that oil companies under a license or a lease who want to embark on sundry petroleum/oil operations shall pay a stipulated amount of money to the Environmental Remediation Fund. This Fund serves as a buffer in the event that the environment is negatively impacted on by their activities. The companies are to move in accordance with the template contained in their ERR and EMP to remediate the negative impact on the environment occasioned by their activities. The law provides that in the event of default by the company involved to remediate the negative impact(s) on the environment, the relevant regulatory agency shall apply the funds in the Fund for the remediation of the environmental defect(s) caused by the company. Section 103(1) of the Petroleum Industry Act, 2021 therefore provides that:

As a condition for the grant of a license or lease and prior to the approval of the environmental management plan by the Commission or Authority, a lecensee or lessee shall pay a prescribed financial contribution to an environmental remediation fund established by the Commission or Authority, as the case may be, for the rehabilitation or management of negative environmental impacts with respect to the license or lease.

As a matter of fact, part 11 of the *Upstream Petroleum Environmental Regulations 2022* deals specifically with the issue of climate change. It is the case that Nigeria has acknowledged that activities of oil multinational cooperations (oil MNCs) and/or international oil companies (IOCs) have a deleterious effect on the environment, thereby leading to climate change. In order to mitigate this hazardous effects of fossil-fuel-based energy sources, the Nigerian legal regulatory legal framework was put in place. Therefore, there shall be a mandatory monitoring, estimation of volume and reporting of Green House Gases (GHGs) emissions from all oil and gas operations in the Nigerian Upstream Petroleum Industry (S. 116 of the Upstream Petroleum Environmental Regulations 2022). These legal regulatory frameworks are steps taken both by the international community and by the Nigerian state at the domestic level to guarantee intergenerational justice.

As the urgency of climate change mitigation becomes more apparent, the ethical obligation to transition away from fossil fuels grows stronger. The principle of intergenerational justice, central to ecological jurisprudence, challenges current generations to recognize the impact of their environmental actions on future societies. Through the adoption of policies that reflect ecological responsibility, such as renewable energy mandates and the public trust doctrine, societies can work towards addressing the ecological debt left by current generations through fossil fuel dependency. Ultimately, by framing the fossil fuel transition within the context of intergenerational justice, environmental law can evolve to reflect humanity’s responsibility to both the planet and the generations yet to come.

**5.0 Results and Discussion**

Uruguay’s energy transition has been characterized by a rapid shift from reliance on fossil fuels to a diverse mix of renewable energy sources, including wind, solar, and hydroelectric power. The country’s legal frameworks, such as the Renewable Energy Law of 2015, demonstrate a commitment to long-term sustainability and intergenerational justice. Uruguay's model emphasizes the importance of environmental sustainability for future generations, aligning with the principles of ecological jurisprudence by recognizing the right to a healthy environment. This approach has led to a significant reduction in carbon emissions and an increase in energy independence. Moreover, Delmas and Montes-Sancho (2010) inferred the country has involved a broad range of stakeholders, from government entities to private sector actors and civil society, in the transition process, ensuring that the benefits of renewable energy are equitably distributed. Uruguay’s energy policies have also been designed to promote transparency, accountability, and social participation, reinforcing the notion of intergenerational justice by considering the needs of future generations.

Clapp (2001) opined that Uruguay, officially known as the Oriental Republic of Uruguay, has a rich and diverse history spanning over 4,000 years. The first inhabitants of Uruguay were the Charrúa and Guarani indigenous peoples. They lived in the region for thousands of years, developing a rich cultural heritage. Brown (1989) asserted that in 1516, the Spanish arrived in Uruguay, and the region became a Spanish colony. The Spanish established the city of Colonia del Sacramento in 1680, which became a strategic trading post. In 1776, Uruguay was annexed by Portugal, and it became part of the Portuguese Empire. During this period, the city of Montevideo was founded in 1726. Uruguay declared its independence from Portugal and Spain in 1828, after a long struggle that was led by José Gervasio Artigas. José Gervasio Artigas has remained a national hero in Uruguay till this day.

Suberu (2010) corroborated above thus, Uruguay experienced a series of civil wars and political instability during the 19th century. The country was divided between the Blancos (Whites) and the Colorados (Reds), two rival political parties. During the late 19th and early 20th centuries, Uruguay underwent significant modernization and immigration. This experience invariably correspond with many Europeans, particularly Italians and Spanish, who arrived in the country, contributing to its cultural and economic development. Uruguay experienced a military dictatorship from 1973 to 1985. During this period, the country suffered human rights abuses, censorship, and economic stagnation. Uruguay transitioned back to democracy in 1985, with the election of President Julio María Sanguinetti. Since then, the country has continued to develop its economy, politics, and culture, becoming one of the most stable and prosperous countries in South America. Uruguay's history has shaped its unique identity and contributed to its development into the thriving country it is today. In recent times Uruguay has demonstrated uncommon leadership in its steady and speedy transition from massive reliance on fossil-fuel-based energy sources to green energy sources.

Uruguay's remarkable transition to green energy is a model for global energy reform. United Nation Environmental Programme (2011) demonstrate a series of template indicating country's journey began in the 2000s, when it was heavily reliant on imported oil, which exposed it to volatile global markets. To address this, Uruguay's government, led by a physicist Ramón Méndez Galain, implemented a revolutionary shift in its energy policy. He adopted coordinated strategies. Uruguay invested heavily in renewable energy sources, particularly wind, hydro, and biomass. Today, renewable energies constitute 98% of the country's electricity mix, with 50% hydropower, 30% wind, 15% biomass, and 3% solar. Also private companies played a crucial role in Uruguay's energy transition. For example, Ventus, an Uruguayan company specialized in wind energy, successfully exported its services to other countries in the region. The Uruguayan government provided fiscal incentives and support for green energy projects. The Green Hydrogen Sectoral Fund, for example, funded the country's inaugural green hydrogen pilot project, 'H24U'. Uruguay's green energy transition has been highly successful, with the country generating 63% of its primary energy supply from green energy sources. The government aims to achieve carbon neutrality by 2050 and is actively promoting the development of a hydrogen economy. The country is also exploring new opportunities, such as producing e-fuels from green hydrogen and developing a green methanol industry. With its remarkable progress in green energy, Uruguay serves as a model for other countries to follow in their transition to a more sustainable energy future.

**⁠**An Explication of the Principle of Intergenerational Justice

The principle of intergenerational justice is a legal, moral and philosophical framework that argues for the fair treatment of future generations by the current generation. This principle asserts that the actions and decisions made today should not jeopardize the environmental health, and overall well-being of future populations by irresponsible use and plundering of natural resources by the current generation. Rooted in ethical, ecological, and legal theories, intergenerational justice examines the obligations of present societies to avoid harmful impacts on the environment and to safeguard resources for those who will live in the future.

One of the core tenets of intergenerational justice is the idea that all generations possess an equal moral standing, implying that future generations have the same right to a healthy environment as the current generation. As philosopher John Rawls articulates in his "just savings principle," each generation has a duty to preserve certain conditions that make life viable and fulfilling for those who follow ((Rawls, 1971). This concept has gained prominence in the context of environmental crises, where the extraction and consumption of non-renewable resources - such as fossil fuels - pose threats to the sustainability of ecosystems. Stephen Gardiner, a philosopher focused on ethics and climate change, argues that ignoring the needs of future generations in policy-decisions results in a "moral corruption," where short-term interests override the ethical obligation to protect future well-being (Gardner, 2011) .

Legal scholars have begun to incorporate the principle of intergenerational justice into environmental law through frameworks like the *public trust doctrine*. This doctrine, as articulated by environmental law scholar Mary Christina Wood, maintains that natural resources, including air, water, and land, should be held in trust by the government for the benefit of both present and future generations (Wood 112). By framing nature as a trust, the doctrine emphasizes that current generations have a fiduciary responsibility to manage these resources sustainably, thus protecting them for future use. This concept is central to ecological jurisprudence, which seeks to extend rights and protections to ecosystems and considers future generations as stakeholders in legal and policy decisions.

Intergenerational justice also raises questions about the cumulative environmental debt created by unsustainable exploitation of natural resources. Fossil fuel use, for instance, contributes significantly to global warming, a process with long-lasting impacts that will extend across generations. As climate change accelerates, its corollaries such as rising sea levels, extreme weather, and biodiversity loss, will predominantly affect future generations. Klaus Bosselmann argues that the principle of intergenerational justice demands acknowledgment of this ecological debt, advocating for laws and policies that limit environmentally harmful practices in favor of sustainable alternatives, according to Bosselmann, (2016). The concept of ecological debt canvasses the view that the irresponsible and unsustainable exploitation of the environment and the resources embedded therein is creating a debt incurred by the current societies. This is a debt that the debtor is the current generation and the creditor is the future generations. The onus, then, falls on the debtor-generation to take appropriate steps for the redemption of this ecological debt. In sum, the principle of intergenerational justice calls for a shift in ethical thinking and legal frameworks, encouraging societies to consider the long-term impacts of their current decisions. By aligning policies with this principle, current generations can uphold their moral obligations to future generations, thereby promoting a more sustainable and just future for all.

The Paris Agreement on Climate Change

The Paris Agreement on Climate Change is a landmark international treaty adopted on the 12th of December, 2015, aiming to mitigate global warming by limiting the increase in global average temperatures to well below 2°C (which is still above pre-industrial levels), and pursuing efforts to limit it to 1.5°C. The agreement is a document that was adopted by 196 parties at the 21st session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC). The COP is the highest decision-making body of the UNFCCC, and it meets yearly to implement and review the provisions of the Convention.

One of the prominent features of the Paris Agreement on Climate Change includes the Nationally Determined Contributions (NDC). This is the target that every member state to the agreement gives itself in terms of its aspiration/ambition to reduce greenhouse gases emissions. Another important feature of the Paris Agreement is climate financing. This is the provision that requires developed countries to raise the sum of $100,000,000.00 (one hundred billion dollars) annually to support developing and least developed countries in the fight against climate change. Since the agreement was signed, the $100,000,000.00 target has never been met. As a matter of fact, during Donald Trump’s presidency in the United States, he signed an executive order, which action led to the withdrawal of America from the Paris Agreement. However, America returned as a party to the Agreement when Joe Biden assumed as President of the country.

Since the coming into existence of the Paris Agreement on Climate Change, it has faced a number of challenges ranging from lack of transparency in the handling of climate finances, stringent conditionalities to access climate finances, inadequate acceptance of the philosophy and objectives of the agreement, etc. However, the Paris Agreement has met with increased advocacy on the need to mitigate climate change by transitioning from fossil-fuel-based energy sources to green energy sources. Many cities and companies have set their own climate targets, and some have committed to net-zero emissions. One country that has attained significant progress in massive reduction of greenhouse gases emission is Uruguay.

⁠Energy Transition and Intergenerational Justice

The transition from fossil fuels to sustainable energy sources is not only a matter of environmental sustainability but also an ethical imperative rooted in the principle of intergenerational justice. Intergenerational justice, as has already been explained, insists that the current generation has a duty to protect the rights and well-being of future generations, particularly regarding the preservation of environmental resources. Philosopher Hans Jonas, in his work *The Imperative of Responsibility*, argues that contemporary actions should be guided by a “principle of responsibility” toward the future, especially in matters that could cause irreversible harm to the environment and future generations (Jonas, 1984). In the context of energy policy, this principle calls for a transition from fossil fuels to renewable energy sources as a way to honor the rights of those who will inhabit the planet in the future.

Environmental degradation caused by fossil fuel extraction and combustion has profound and lasting effects, particularly concerning climate change and biodiversity loss. The Intergovernmental Panel on Climate Change (IPCC) warns that unless substantial emissions reductions are achieved, global warming will result in severe impacts, including extreme weather events, rising sea levels, and loss of habitats (IPCC, 2022). In this context, philosopher Bryan Norton emphasizes the concept of “weak sustainability,” arguing that resources and environmental quality must be maintained at levels that do not compromise future generations’ ability to meet their own needs (Norton, 2005). This perspective suggests that maintaining a fossil-fuel-based energy system is incompatible with intergenerational justice, as it imposes environmental risks on future societies without their consent or compensation.

The legal implications of intergenerational justice are also being explored in international and national courts. The landmark case *Juliana v. United States*, filed by a group of young plaintiffs, argues that the U.S. government has failed to protect the environment and public health by supporting fossil fuel industries. This failure, they claim, violates their constitutional rights to life, liberty, and property under the public trust doctrine (No. 6:15-cv-01517-TC (D. Or. 20150). The public trust doctrine, which holds that certain resources are preserved for public use, provides a compelling legal foundation for intergenerational justice by arguing that the state has a fiduciary duty to manage resources in a way that protects the interests of future generations. Cases like *Juliana’s* highlight the growing legal recognition of intergenerational rights and the accountability of governments in managing environmental resources sustainably. Transitioning to renewable energy is also crucial for promoting economic justice across generations. Fossil fuel industries, while economically beneficial in the short term, incur significant costs related to environmental degradation, public health, and climate resilience, biodiversity loss, extreme weather conditions, etc. Environmental economist Nicholas Stern argues that the costs of climate inaction, driven by reliance on fossil fuels, will far exceed the costs of transitioning to a low-carbon economy (Stern, 2007)

Renewable energy, by contrast, not only mitigates environmental harm but also fosters job creation in growing sectors, from solar and wind energy to energy efficiency and battery technology. These green industries offer a path toward a more sustainable and equitable economy that provides long-term economic benefits for future generations, supporting the principles of intergenerational justice. Additionally, the ethical commitment to intergenerational justice provides a basis for international collaboration on climate issues. The Paris Agreement, while voluntary, represents a global commitment to limit global warming to below 2 degrees Celsius, with an aspirational objective of 1.5 degrees Celsius. Environmental law scholar Edith Brown Weiss canvasses the view that such international agreements embody intergenerational justice by framing climate change as a shared responsibility across generations and borders ((Peel, Jacqueline Osofsky, 2015). This collaborative approach aligns with the principles of sustainable development, aiming to secure a stable climate, and healthy ecosystems for future generations. However, Weiss also reminds that these agreements lack enforceability, suggesting the need for stronger, binding commitments that ensure a real transition from fossil fuels (Nnorom, 2015). The transition from fossil fuels to sustainable energy sources is a crucial aspect of intergenerational justice, demanding that current generations take responsibility for the environmental legacy that they shall leave behind. By addressing the ethical, legal, economic, and international dimensions of energy policy, societies can work toward a sustainable future that respects the rights and interests of future generations. This commitment to renewable energy and reduced carbon emissions reflects an acknowledgment of shared responsibility and the necessity of safeguarding the planet for ourselves and generations to come.

**Conclusion and Recommendations**

Uruguay’s transition to renewable energy demonstrates a practical application of ecological jurisprudence and intergenerational justice. The country’s policies provide valuable insights into how legal and ethical principles can guide sustainable energy transitions while ensuring the protection of resources for future generations. As the world grapples with the challenges of climate change and environmental degradation, Uruguay’s approach offers a compelling case for integrating justice across generations into environmental governance. The lessons learned from Uruguay’s experience could be pivotal in shaping global efforts to address climate change and secure a sustainable future for all.

- Other nations should follow Uruguay’s example by integrating ecological jurisprudence into their legal frameworks, ensuring that the rights of future generations are considered in energy and environmental policies.

- Policy measures should include long-term sustainability goals that prioritize the well-being of future generations. Governments should create clear legal and financial incentives for the development of renewable energy technologies.

- Raising awareness about the ethical and legal dimensions of intergenerational justice is essential for building public support for sustainable energy transitions. Educational initiatives should focus on the importance of environmental protection and sustainability for future generations.

- Uruguay’s success in renewable energy could serve as a model for other Latin American countries, encouraging regional cooperation in the development and deployment of renewable energy technologies.

-. Governments should implement robust monitoring mechanisms to track progress on energy transition goals, ensuring that policies remain aligned with intergenerational justice principles.

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