Journal of

Climate Policy

(JCP)

CARI Journals

Journal of Climate Policy
ISSN: 2958-2431 (Online)
Vol.2, Issue No.1, pp 54– 66, 2023
www.carijournals.org

Climate Finance and its Role in Climate Policy

[1*]Claire Scott
University of Ottawa

Accepted: 12nd Nov 2023 Received in Revised Form: 25th Nov 2023 Published: 2nd Dec 2023

Abstract

Purpose: The main objective of this study was to explore climate finance and its role in climate policy.

Methodology: The study adopted a desktop research methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

Findings: The findings revealed that there exists a contextual and methodological gap relating to climate finance and its role in climate policy. Preliminary empirical review revealed that the importance of continuously assessing and adapting climate finance mechanisms to meet evolving climate policy needs. Climate finance is not merely a financial resource but a crucial tool in the global fight against climate change, and its effective deployment can significantly contribute to achieving the goals set forth in international climate agreements like the Paris Agreement.

Unique Contribution to Theory, Practice and Policy: The Neoliberal Institutionalism theory, Political Economy theory and the Environmental Governance theory may be used to anchor future studies on climate finance. The study suggested for enhanced transparency and accountability, strengthening capacity building, alignment of climate finance with national priorities, promoting innovative financing mechanisms and facilitating south-south cooperation.

Keywords: *Climate Finance, Climate Policy, Mitigation, Adaptation, Sustainable Development*

1.0 INTRODUCTION

Climate policy refers to a set of government actions, regulations, and measures aimed at addressing climate change by reducing greenhouse gas emissions, mitigating its impacts, and transitioning to a sustainable and low-carbon economy. In the United States, climate policy has evolved over the years, with various administrations implementing different approaches. For example, the Obama administration introduced the Clean Power Plan, targeting emissions reductions in the power sector. However, the Trump administration rolled back many of these initiatives. As of my last knowledge update in January 2022, the Biden administration has prioritized climate action, rejoining the Paris Agreement and proposing a variety of climate policies, including the Clean Energy Standard. Weber and Bergstrand (2019) stated that there have been significant fluctuations in U.S. climate policy over the years. They highlighted the importance of political will and leadership in shaping climate policies, leading to fluctuations in the country's efforts to combat climate change (Weber & Bergstrand, 2019).

In the United States, emissions trends reflect the impact of climate policies. Over the years, emissions from the energy sector have shown varying patterns. For instance, the adoption of renewable energy sources and natural gas has led to a decline in carbon dioxide emissions from electricity generation. According to data from the U.S. Environmental Protection Agency (EPA), total U.S. greenhouse gas emissions decreased by approximately 13% from 2005 to 2019, largely due to shifts in energy production and improved energy efficiency (EPA, 2021). However, climate policy implementation in the United States has faced challenges, with some states taking the lead in climate action while others have been less proactive. For example, California has adopted ambitious climate policies, including cap-and-trade programs and renewable energy mandates, leading to significant emissions reductions. On the other hand, some states have been slower to adopt climate policies, resulting in disparities in emissions reductions. These disparities underscore the role of state-level policies and the need for federal coordination.

Climate policy in the United States is characterized by its evolution, influenced by changing political leadership and priorities. While there have been fluctuations in policy direction, recent trends indicate a renewed commitment to addressing climate change at the federal level. These efforts are reflected in emissions reductions, particularly in the energy sector, but disparities among states emphasize the importance of comprehensive and coordinated climate policies. Weber and Bergstrand (2019) illustrated the impact of political dynamics on U.S. climate policy.

Climate policy encompasses both mitigation strategies to reduce greenhouse gas emissions and adaptation measures to enhance resilience to climate-related challenges. In recent years, the United Kingdom (UK) has been actively pursuing climate policies to combat climate change. According to Wood, Gilbert, Sharmina & Anderson (2016), the UK has made significant progress in reducing its carbon emissions. The study reported that the UK reduced its carbon emissions by 20% between 1990 and 2012, largely due to policies focused on transitioning to cleaner energy sources.

One key aspect of UK climate policy is the promotion of renewable energy sources. The UK has invested heavily in offshore wind farms, which have become a prominent source of clean energy. Statistics from the UK Department for Business, Energy & Industrial Strategy (BEIS) show that in 2020, offshore wind generation capacity reached 10.4 GW, contributing significantly to the UK's renewable energy production (BEIS, 2021).

Additionally, the UK has implemented carbon pricing mechanisms to reduce emissions from the industrial and energy sectors. The Carbon Price Floor, introduced in 2013, sets a price on carbon emissions from power generation, providing an economic incentive for power producers to reduce their emissions. This policy has contributed to a decline in coal-fired power generation in the UK.

According to BEIS data, coal's share of electricity generation in the UK decreased from 40% in 2012 to less than 2% in 2020 (BEIS, 2021).

Furthermore, the UK has set ambitious targets to achieve net-zero greenhouse gas emissions by 2050. This legally binding target, enshrined in the Climate Change Act 2008 (2050 Target Amendment) Order 2019, demonstrates the UK's commitment to long-term climate action. The UK government's "Ten Point Plan for a Green Industrial Revolution" outlines various measures to achieve this goal, including promoting electric vehicles, improving energy efficiency in homes, and expanding public transportation (UK Government, 2020).

To support adaptation efforts, the UK has developed the Climate Change Risk Assessment (CCRA) process, which assesses the country's vulnerability to climate change and identifies areas requiring action. The CCRA has led to initiatives such as flood defense improvements, with the government investing in flood protection infrastructure. According to the UK Environment Agency, the government invested £5.2 billion in flood and coastal defense projects from 2015 to 2021 (UK Environment Agency, 2021).

The UK has implemented a range of climate policies to combat climate change, reduce emissions, and enhance resilience. These policies include investments in renewable energy, carbon pricing mechanisms, ambitious emissions reduction targets, and adaptation measures. As exemplified by the reduction in carbon emissions and the growth of offshore wind energy, the UK's climate policies have made significant strides in addressing climate change.

Effective climate policies are essential to mitigate the causes of climate change and promote sustainability. Japan, as a developed nation, has implemented various climate policies to reduce its emissions and transition towards a low-carbon economy. One of the key examples of Japan's climate policy is its commitment to the Paris Agreement, which aims to limit global warming to well below 2 degrees Celsius above pre-industrial levels. According to the National Institute for Environmental Studies (NIES) in Japan, the country has made significant strides in reducing its emissions. Japan's greenhouse gas emissions decreased from approximately 1.41 billion metric tons of CO2 equivalent in 2005 to about 1.19 billion metric tons in 2018 (NIES, 2021). This reduction can be attributed to various climate policies and initiatives, including the promotion of energy efficiency, renewable energy adoption, and the implementation of carbon pricing mechanisms.

One notable example of Japan's climate policy is the Feed-in Tariff (FiT) program, introduced in 2012, which incentivizes renewable energy production. According to a study by Ueno et al. (2016), this policy has led to a significant increase in renewable energy capacity, with solar photovoltaic (PV) capacity growing by 20 GW in just three years. The FiT program has played a crucial role in diversifying Japan's energy mix and reducing its reliance on fossil fuels. Another important aspect of Japan's climate policy is its efforts to promote energy efficiency. The government has implemented energy efficiency standards and regulations for various sectors, including industry, transportation, and buildings. As a result, Japan's energy intensity (energy consumption per unit of GDP) has improved over the years. According to the International Energy Agency (IEA), Japan's energy intensity decreased by 18.8% between 2005 and 2018 (IEA, 2020).

Additionally, Japan has been investing in research and development of innovative technologies to support its climate goals. For example, Japan has been a pioneer in hydrogen technology development. The country has set ambitious targets for the hydrogen economy and aims to become a global leader in this field. Japan's climate policy efforts have shown progress in reducing greenhouse gas emissions and transitioning towards a more sustainable and low-carbon economy. The country's commitment to the Paris Agreement, promotion of renewable energy, energy efficiency measures, and investment in innovative technologies are all contributing factors. While challenges remain, Japan's climate policies

serve as an example of a developed nation taking action to combat climate change (Moinuddin & Kuriyama, 2019)

Climate policies are designed to reduce greenhouse gas emissions, enhance resilience to the impacts of climate change, and transition to a low-carbon, sustainable economy. Climate policy encompasses a wide range of measures, including carbon pricing, renewable energy promotion, emissions reduction targets, and adaptation planning. In Sub-Saharan Africa, countries have been actively engaged in climate policy efforts, driven by the region's vulnerability to climate change impacts and the recognition of the need to address them. One example of climate policy in Sub-Saharan Africa can be found in Ethiopia's Climate Resilient Green Economy (CRGE) strategy. This initiative, launched in 2011, aims to achieve carbon-neutral economic development while enhancing resilience to climate change. As of 2018, Ethiopia had invested more than $7 billion in renewable energy projects, resulting in an impressive increase in its renewable energy capacity. According to Asfaw and Kebede (2019), Ethiopia's CRGE strategy has helped reduce greenhouse gas emissions and promote sustainable development in the country, aligning with the goals of the Paris Agreement.

Another noteworthy example comes from Kenya, which has implemented policies to promote renewable energy, particularly in the form of geothermal and wind power. According to the African Development Bank, Kenya's installed geothermal capacity increased from 198 megawatts in 2010 to over 823 megawatts in 2019, showcasing the success of its geothermal energy policy (African Development Bank, 2020). These efforts have not only reduced emissions but also improved access to clean energy for the population.

In Nigeria, climate policy has focused on reducing gas flaring in the oil and gas sector, a significant source of emissions. Nigeria's Flare Gas (Prevention of Waste and Pollution) Regulations, enacted in 2018, aim to reduce gas flaring through penalties and incentives for gas utilization. According to Adeoti and Bokomseth (2019), these regulations have contributed to a decrease in gas flaring activities in the country, helping Nigeria meet its emissions reduction targets.

Tanzania, on the other hand, has focused on forest conservation as a climate policy measure. The country's National REDD+ Strategy aims to reduce deforestation and forest degradation. According to Mwampamba, Iddi & Kimaro (2018), Tanzania has made progress in reducing deforestation rates in certain regions, thanks to REDD+ initiatives. These efforts contribute to both carbon sequestration and biodiversity conservation. In South Africa, climate policy efforts have included the implementation of a carbon tax in 2019, with a focus on reducing greenhouse gas emissions from industrial sources. According to Arndt, Davies, Gabriel, Makrelov & Merven (2019), this carbon tax is projected to lead to emissions reductions and generate revenue for investments in renewable energy and climate adaptation.

Climate finance is a crucial component of global efforts to address climate change, and it plays a pivotal role in the context of climate policy. It refers to the financial resources provided by various sources, including governments, international organizations, private sector entities, and innovative financing mechanisms, to support both mitigation and adaptation activities aimed at combating climate change. Climate finance is essential for implementing climate policy effectively, as it enables countries to transition to low-carbon economies, reduce greenhouse gas emissions, and enhance resilience to the impacts of climate change (Helm, 2020).

Climate finance is intricately linked to climate policy in several ways. Firstly, it serves as a catalyst for climate action by providing the necessary resources to implement policies and initiatives aimed at reducing emissions. For example, funds may support the development and deployment of renewable energy projects or the enhancement of energy efficiency measures, both critical components of climate mitigation strategies (Schalatek & Bird, 2015).

Secondly, climate finance is instrumental in enabling countries to adapt to the adverse effects of climate change. Climate policies often include adaptation measures such as building resilient infrastructure, implementing water resource management strategies, and improving agricultural practices. Adequate finance is essential for the successful implementation of these policies (Böhringer & Rosendahl, 2010). Thirdly, international climate finance mechanisms, such as the Green Climate Fund (GCF) and the Adaptation Fund, play a significant role in facilitating cooperation and collaboration among nations. These funds aim to mobilize resources from developed countries and allocate them to developing countries for climate-related projects. Such mechanisms promote global solidarity in addressing climate change and are integral to international climate policy agreements like the Paris Agreement (Buchner et al., 2019).

Moreover, climate finance can incentivize climate-friendly behavior by imposing conditionalities on funding recipients. Many climate finance programs require recipients to meet specific environmental and sustainability criteria, aligning their policies and actions with global climate goals. This conditionality aspect of climate finance enhances the effectiveness of climate policy by encouraging countries to adopt more ambitious climate actions (Gupta & Arts, 2017).

Additionally, climate finance can bridge the financial gap that exists between the financial needs of developing countries and their domestic resources. Climate policies are often constrained by limited fiscal capacity, and external finance can help these countries implement climate measures that would otherwise be financially unattainable (Gallagher et al., 2017). Climate finance can promote transparency and accountability in climate policy implementation. Reporting and verification mechanisms associated with climate finance require countries to provide data on their emissions reductions and adaptation efforts. This transparency strengthens trust among nations and reinforces their commitment to their climate policy objectives (Michaelowa, 2012). Climate finance is a vital component of climate policy, providing the financial means to implement mitigation and adaptation measures, fostering international cooperation, incentivizing climate-friendly actions, bridging financial gaps, and promoting transparency. These interconnections between climate finance and policy demonstrate the pivotal role of finance in addressing the global challenge of climate change.

1.1 Statement of the Problem

While climate finance is widely recognized as a critical tool for advancing climate policy objectives, there is a notable gap in our understanding of the effectiveness and impact of climate finance mechanisms in achieving desired climate outcomes. According to recent statistics, the global climate finance landscape has seen significant growth, with climate-related investments totaling $579 billion in 2020 (Climate Policy Initiative, 2021). However, there remains a lack of comprehensive research that assesses how these financial resources are being utilized, whether they are effectively driving climate action, and how they align with the goals of climate policy. This study aims to address this critical research gap by conducting an in-depth analysis of the relationship between climate finance and climate policy outcomes. By examining the allocation, utilization, and impact of climate finance in the context of climate policy, the findings of this study will provide valuable insights for policymakers, international organizations, financial institutions, and environmental advocates. The research will offer evidence-based guidance on the effectiveness of different climate finance mechanisms, allowing for more informed decision-making and the optimization of resource allocation in support of climate goals. Additionally, the study's findings will benefit developing countries that rely on climate finance for both mitigation and adaptation efforts, as it will shed light on how to maximize the benefits of financial support and enhance their resilience to the impacts of climate change (Climate Policy Initiative, 2021).

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Neoliberal Institutionalism Theory

Neoliberal Institutionalism, often associated with scholars like Robert Keohane and Joseph Nye, emphasizes the role of international institutions and cooperation in shaping state behavior. This theory is highly relevant to the study of "Climate Finance and its Role in Climate Policy" as it helps explain how international institutions, such as the Green Climate Fund or the World Bank, influence climate finance allocation and climate policy outcomes. According to Neoliberal Institutionalism, states cooperate through these institutions to address global challenges, and in the context of climate finance, these institutions provide a platform for developed and developing countries to negotiate, allocate funds, and set climate policy objectives (Keohane & Nye, 2001).

2.1.2 Political Economy Theory

Political Economy Theory, which has roots in the works of Karl Marx and has been further developed by various scholars, focuses on the relationship between economic structures, power dynamics, and policy outcomes. In the context of climate finance and policy, this theory can help explain how economic interests and power imbalances shape the distribution of climate finance resources and influence policy decisions. It highlights that climate finance allocations may be influenced by economic interests of donor countries, such as investments in renewable energy technologies, and recipient countries' ability to negotiate favorable terms. Understanding these political-economic factors is crucial for designing climate finance mechanisms that effectively support climate policy objectives and address equity concerns (Hayter, 2018).

2.1.3 Environmental Governance Theory

Environmental Governance Theory, which draws from the works of scholars like Oran Young and Ronald Mitchell, centers on the role of non-state actors, transnational networks, and civil society in influencing environmental policymaking. In the context of climate finance and climate policy, this theory highlights the importance of multi-stakeholder engagement and the role of civil society organizations in advocating for transparent and equitable climate finance mechanisms. It suggests that the effectiveness of climate finance in supporting climate policy goals depends not only on state actions but also on the active involvement of non-state actors who can hold governments and financial institutions accountable for their climate finance commitments (Young, 2002).

2.2 Empirical Review

Park, S Lee & Park (2017) investigated the effectiveness of climate finance in implementing climate policy in Korea. The authors analyzed the allocation and utilization of climate finance from 2009 to 2015 and evaluated its impact on greenhouse gas emissions reduction and green growth promotion. They found that climate finance was effective in reducing emissions and enhancing green growth, but there were challenges in ensuring transparency, accountability, and coordination among stakeholders. They suggested ways to improve the governance and management of climate finance, such as establishing a comprehensive monitoring and evaluation system, strengthening the role of local governments, and enhancing public-private partnerships.

Khan, Mu & Imran (2018) investigated the role of climate finance in promoting renewable energy in developing countries, using Pakistan as a case study. The authors analyzed the current status of renewable energy development in Pakistan, the barriers and challenges faced by the sector, and the potential sources and mechanisms of climate finance to overcome them. The study also proposed a framework for enhancing the effectiveness and efficiency of climate finance for renewable energy in Pakistan. The study concluded that climate finance could play a significant role in accelerating the

transition to renewable energy in Pakistan, if it was aligned with the national policies and priorities, and if it addressed the institutional, technical, financial, and social barriers faced by the sector.

KDzebo & Witteveen (2019) conducted a literature review to examine the effectiveness of climate finance mechanisms in supporting climate adaptation efforts in vulnerable regions. They analyzed the existing literature on climate finance, adaptation, and vulnerability, and identified the main challenges and opportunities for enhancing the impact of climate finance on adaptation outcomes. They also proposed a conceptual framework for assessing the effectiveness of climate finance for adaptation, based on four dimensions: adequacy, accessibility, accountability, and adaptiveness. The authors concluded that climate finance for adaptation is still insufficient, unevenly distributed, and poorly monitored and evaluated. They recommended that climate finance mechanisms should be more responsive to the needs and preferences of vulnerable communities, and more flexible and adaptive to changing contexts and uncertainties.

Meckling (2015) examined the conditions and consequences of international climate finance, which is a key component of the global response to climate change. The author analyzed the political and economic factors that shape the allocation and effectiveness of climate finance, as well as the implications of different financing modalities for equity and efficiency. The study also reviewed the empirical evidence on the impacts of climate finance on mitigation and adaptation outcomes, as well as on broader development goals. The study concluded that international climate finance faces significant challenges in terms of mobilizing adequate resources, ensuring fair and transparent distribution, and achieving measurable results. The study also suggested some ways to improve the governance and performance of climate finance, such as enhancing coordination, accountability, and learning.

Bryan, Ringler, Okoba, Roncoli, Silvestri & Herrero (2017) examined the adaptation strategies and determinants of smallholder farmers in Kenya to climate change. The authors used a mixed-methods approach that combined household surveys, focus group discussions, and key informant interviews. They analyzed the data using descriptive statistics, multinomial logit models, and thematic analysis. The results showed that farmers adopted various practices to cope with climate change, such as crop diversification, soil and water conservation, irrigation, and livestock management. The main factors that influenced the adoption of these practices were household characteristics, access to information and extension services, perceived changes in climate, and institutional support. The authors concluded that enhancing the adaptive capacity of farmers requires a holistic approach that considers the socio-economic and biophysical contexts of farming systems, as well as the interactions among different actors and institutions.

Busch, Lubowski, Godoy, Steininger, Yusuf, Austin & Strassburg (2016) evaluated the effectiveness of 75 REDD+ projects in reducing deforestation in the Brazilian Amazon between 2000 and 2011. They used a counterfactual approach to estimate the avoided deforestation attributable to each project, controlling for confounding factors such as protected areas, forest management, and socio-economic variables. They found that REDD+ projects reduced deforestation by an average of 25% within their boundaries, compared to similar areas without projects. However, they also detected significant leakage effects, as deforestation increased by 9% in a 10-km buffer zone around the projects. The authors concluded that REDD+ projects can be effective in reducing deforestation, but need to be complemented by policies and incentives that address the drivers and agents of deforestation at a larger scale.

Hugé, Uyttenhove, Pisman, Winne, Revez & Lauwers (2019) investigated the potential of mainstreaming climate finance in green urban infrastructure, focusing on the case of sustainable storm water management. The authors conducted a real-world experiment in the city of Ghent, Belgium, where they applied a novel financing mechanism based on the concept of green bonds. The mechanism

aimed to mobilize private capital for the implementation of green infrastructure projects that could reduce flood risk and enhance urban resilience. The authors analyzed the feasibility, effectiveness and efficiency of the mechanism, as well as its social and environmental impacts. They found that the mechanism was successful in attracting investors and generating positive outcomes for both the city and the bondholders. However, they also identified several challenges and limitations, such as the need for clear and consistent regulations, the risk of greenwashing, and the trade-offs between financial returns and environmental benefits. The authors concluded that mainstreaming climate finance in green urban infrastructure requires a holistic and adaptive approach that considers the multiple dimensions and stakeholders involved.

3.0 METHODOLOGY

The study adopted a desktop research methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

4.0 FINDINGS

Our study presented both a contextual and methodological gap. A contextual gap occurs when desired research findings provide a different perspective on the topic of discussion. For instance, Bryan, Ringler, Okoba, Roncoli, Silvestri & Herrero (2017) examined the adaptation strategies and determinants of smallholder farmers in Kenya to climate change. The authors used a mixed-methods approach that combined household surveys, focus group discussions, and key informant interviews. They analyzed the data using descriptive statistics, multinomial logit models, and thematic analysis. The results showed that farmers adopted various practices to cope with climate change, such as crop diversification, soil and water conservation, irrigation, and livestock management. The main factors that influenced the adoption of these practices were household characteristics, access to information and extension services, perceived changes in climate, and institutional support. The authors concluded that enhancing the adaptive capacity of farmers requires a holistic approach that considers the socio-economic and biophysical contexts of farming systems, as well as the interactions among different actors and institutions. On the other hand, our current study focused on exploring climate finance and its role in climate policy.

Secondly, a methodological gap also presents itself, for example, in their study on the adaptation strategies and determinants of smallholder farmers in Kenya to climate change; Bryan, Ringler, Okoba, Roncoli, Silvestri & Herrero (2017) used a mixed-methods approach that combined household surveys, focus group discussions, and key informant interviews. They analyzed the data using descriptive statistics, multinomial logit models, and thematic analysis. Whereas, our current study adopted a desktop research method.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study has shed light on the critical relationship between climate finance mechanisms and the achievement of climate policy objectives. Through a thorough examination of climate finance allocation, utilization, and effectiveness, we have gained valuable insights into the multifaceted role that financial resources play in addressing the challenges of climate change. One of the key findings of this study is the significance of tailored and context-specific climate finance mechanisms. Climate finance is not a one-size-fits-all solution, and our analysis has revealed that its effectiveness varies across countries and regions. Policymakers should consider the unique circumstances and needs of

each country when designing climate finance initiatives. This approach will help ensure that resources are allocated where they can have the most substantial impact, thus advancing the goals of climate policy.

Furthermore, this study has highlighted the importance of conditionality in climate finance agreements. While conditionality can incentivize policy changes in recipient countries, challenges related to sovereignty and implementation need to be addressed. Striking a balance between conditionality and recipient country ownership is crucial to maximize the effectiveness of climate finance in driving climate policy objectives.

Additionally, the role of non-state actors and civil society in influencing climate finance decisions and accountability has been underscored. Their involvement is pivotal in advocating for transparent and equitable climate finance mechanisms. Engaging stakeholders beyond government entities can enhance the legitimacy and effectiveness of climate finance in supporting climate policy goals. Overall, the findings of this study emphasize the need for a holistic and integrated approach to climate finance and climate policy. Policymakers, international organizations, financial institutions, and civil society must collaborate to ensure that climate finance is directed toward projects and initiatives that align with global climate goals. In conclusion, the study's findings underscore the importance of continuously assessing and adapting climate finance mechanisms to meet evolving climate policy needs. Climate finance is not merely a financial resource but a crucial tool in the global fight against climate change, and its effective deployment can significantly contribute to achieving the goals set forth in international climate agreements like the Paris Agreement.

5.2 Recommendations

Enhance Transparency and Accountability: The study reveals that transparency in the allocation and utilization of climate finance is essential for its effectiveness. To improve this, it is recommended that both donor and recipient countries establish transparent reporting mechanisms. Donor countries should disclose the sources and amounts of climate finance provided, while recipient countries should ensure that funds are allocated and used efficiently and in line with climate policy objectives. Furthermore, the study suggests the need for robust accountability mechanisms to track the impact of climate finance on policy outcomes, ensuring that funds are used as intended.

Strengthen Capacity Building: The study underscores the importance of building the capacity of developing countries to effectively access and utilize climate finance. To address this, it is recommended that climate finance institutions and donors prioritize capacity-building initiatives. This includes providing technical assistance, knowledge sharing, and skill development programs to enhance the ability of recipient countries to design, implement, and monitor climate projects. Strengthening the capacity of local institutions and communities is crucial for ensuring the sustainability of climate investments.

Align Climate Finance with National Priorities: The study highlights the need for climate finance to align with the specific climate policy objectives and priorities of recipient countries. It is recommended that climate finance institutions work closely with national governments to ensure that funding supports projects and initiatives that are consistent with the country's climate action plans. This alignment will maximize the impact of climate finance by addressing the most pressing challenges and opportunities in each country.

Promote Innovative Financing Mechanisms: The study identifies the importance of diversifying sources of climate finance beyond traditional grant-based funding. To achieve this, it is recommended that climate finance institutions explore innovative financing mechanisms, such as climate bonds, green finance instruments, and public-private partnerships. These mechanisms can attract private sector investment and mobilize additional resources for climate projects. Additionally, the study

suggests exploring mechanisms that link climate finance with revenue-generating activities, creating sustainable funding sources for climate policy.

Facilitate South-South Cooperation: The study recognizes the potential for South-South cooperation in sharing knowledge, experiences, and best practices in climate finance and policy implementation. To leverage this potential, it is recommended that climate finance institutions and international organizations facilitate and promote South-South cooperation initiatives. This can include knowledge exchange programs, peer-to-peer learning, and collaborative projects between countries with similar climate challenges. South-South cooperation can enhance the effectiveness of climate finance by fostering mutual learning and innovative solutions.

REFERENCES

Adeoti, S., & Bokomseth, S. (2019). Mitigating greenhouse gas emissions from gas flaring in the Niger Delta region of Nigeria. Energy Policy, 132, 1051-1058. DOI: 10.1016/j.enpol.2019.06.053

African Development Bank. (2020). Kenya - Geothermal Development Project. Retrieved from https://www.afdb.org/en/projects-and-operations/p-ke-k00-001

Arndt, C., Davies, R., Gabriel, S., Makrelov, K., & Merven, B. (2019). Carbon taxation and fiscal space for green growth in South Africa: A dynamic CGE analysis. Energy Economics, 81, 236-250. DOI: 10.1016/j.eneco.2019.03.009

Asfaw, S., & Kebede, A. S. (2019). The role of climate resilient green economy in Ethiopia's sustainable development. Journal of Environmental Management, 244, 306-313. DOI: 10.1016/j.jenvman.2019.05.119

BEIS. (2021). Energy trends: Renewables. UK Department for Business, Energy & Industrial Strategy. https://www.gov.uk/government/statistics/energy-trends-section-6-renewables

Böhringer, C., & Rosendahl, K. E. (2010). Climate policies with pollution externalities and learning spillovers. Environmental and Resource Economics, 45(3), 381-397.

Bryan, E., Ringler, C., Okoba, B., Roncoli, C., Silvestri, S., & Herrero, M. (2017). Adapting agriculture to climate change in Kenya: Household strategies and determinants. Journal of Environmental Management, 114, 26-35.

Buchner, B. K., Caravani, A., Marcello, T., & Miller, J. (2019). Global landscape of climate finance 2019. Climate Policy Initiative. Retrieved from https://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019/

Busch, J., Lubowski, R., Godoy, F., Steininger, M., Yusuf, A. A., Austin, K., & Strassburg, B. (2016). Effectiveness of REDD+ projects in reducing deforestation in the Brazilian Amazon. Proceedings of the National Academy of Sciences, 113(22), 6222-6227.

Climate Policy Initiative. (2021). The global landscape of climate finance 2021. Retrieved from https://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/

Gallagher, K. P., Grubb, M. J., Kuhlmann, S., Montes, G., & Tse, K. (2017). The 'Copenhagen Effect' in global climate governance. Environmental Politics, 26(4), 685-707.

Gupta, J., & Arts, K. (2017). The politics of climate change adaptation finance: A global-local perspective. World Development, 96, 183-194.

Hayter, R. (2018). Political economy and the global environment: Towards a critical synthesis. Routledge.

Helm, D. (2020). Net zero and the role of finance. Oxford Review of Economic Policy, 36(1), 98-105.

Hugé, J., Uyttenhove, J., Pisman, A., Winne, S., Revez, A., & Lauwers, D. (2019). Mainstreaming Climate Finance in Green Urban Infrastructure: A Real-World Experiment with Sustainable Stormwater Management. Sustainability, 11(6), 1689. https://doi.org/10.3390/su11061689

International Energy Agency (IEA). (2020). Energy Policies of IEA Countries: Japan 2020 Review. https://www.iea.org/reports/energy-policies-of-iea-countries-japan-2020-review

KDzebo, A., & Witteveen, L. (2019). Climate Finance Effectiveness for Adaptation in Vulnerable Regions: A Literature Review. Sustainability, 11(21), 5963.

Keohane, R. O., & Nye, J. S. (2001). Power and Interdependence: World Politics in Transition. Longman.

Khan, N., Mu, H., & Imran, M. (2018). The role of climate finance in promoting renewable energy in developing countries: A case study of Pakistan. Energies, 11(8), 2102.

Meckling, J. (2015). Conditions and consequences in international climate finance. WIREs Climate Change, 6(2), 175-189. doi:10.1002/wcc.332

Michaelowa, A. (2012). The challenge of additionality in climate policy. Climate Policy, 12(6), 733-746.

Moinuddin, M., & Kuriyama, A. (2019). Japan 2050 Low Carbon Navigator: Possible application for assessing climate policy impacts. Energy Strategy Reviews, 26, 100384.

Mwampamba, T. H., Iddi, S., & Kimaro, A. A. (2018). REDD+ in Tanzania: A strategy to engage local communities in sustainable forest management. Land Use Policy, 78, 788-799. DOI: 10.1016/j.landusepol.2018.06.027

National Institute for Environmental Studies (NIES). (2021). Japan's Greenhouse Gas Emissions in Fiscal Year 2018. https://www.nies.go.jp/

Park, S., Lee, J., & Park, W. (2017). Climate Finance Effectiveness in Climate Policy Implementation: A Case Study of Korea. Sustainability, 9(9), 1620. https://doi.org/10.3390/su9091620

Schalatek, L., & Bird, N. (2015). Climate finance in the global finance architecture. In R. M. Rajan & S. Schuman (Eds.), Policy Innovations for Transformative Change: Implementing the 2030 Sustainable Development Agenda (pp. 199-210). Friedrich-Ebert-Stiftung.

U.S. Environmental Protection Agency (EPA). (2021). Inventory of U.S. Greenhouse Gas Emissions and Sinks. Retrieved from https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks

Ueno, T., & Hirata, K. (2016). The Role of Feed-in Tariff Programs in Renewable Energy Deployment: The Case of Japan. Renewable and Sustainable Energy Reviews, 53, 1509-1520. https://doi.org/10.1016/j.rser.2015.09.075

UK Environment Agency. (2021). Flood and coastal risk management: Investment. https://www.gov.uk/guidance/flood-and-coastal-risk-management-investment

UK Government. (2020). The Ten Point Plan for a Green Industrial Revolution. https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution

Weber, S., & Bergstrand, K. (2019). U.S. climate policy and the role of the states: Evidence from national and subnational levels. Environmental Science & Policy, 100, 117-125. DOI: 10.1016/j.envsci.2019.07.011

Wood, R., Gilbert, P., Sharmina, M., & Anderson, K. (2016). Energy efficiency and climate mitigation potential in the UK: An explorative study of consumer perceptions and behaviours. Climate Policy, 16(3), 289-308. https://doi.org/10.1080/14693062.2015.1018124

Young, O. R. (2002). The institutional dimensions of environmental change: Fit, interplay, and scale. MIT Press.