sdmimd
Shri Dharmasthala Manjunatheshwara Institute for Management Development, Mysuru, India
9th International Conference on
Economic Growth and Sustainable Development- Emerging Trends– November 21-22, 2024

A Systematic Review of Scopus Database on the Climate Finance Strategies for Private Sector Engagement in Climate Mitigation and Adaptation

Sibani Jena
Research Scholar,
sibanijena843@gmail.com

Velmurugan P.S
Associate Professor,
School of Commerce and Management,
Central University of Tamil Nadu,
Thiruvarur
velmuruganps@yahoo.com

Abstract

Climate finance is vital in addressing the many aspects of climate change, encompasses raising and directing money towards both mitigation and adaptation interventions. In this regard, the private sector emerges as a pivotal player who not only provides funds but also brings innovation and knowledge that promote transformative changes. This systematic review investigates the critical roles played by private entities in climate finance by analysing scholarly works done between 2010 and 2023. The rise in scholarly interest over recent years demonstrates growing recognition of the role of the private sector. Numerous publishers have joined this debate to highlight several angles to private sector engagement. Key findings emphasize that financing must be grounded on real life demands, maximize advantages to sustainable development, explore new ways for financing development among others. Future studies should concentrate on policy changes as well as understanding how communities are affected by these changing dynamics of climate finance. This review uses stringent selection criteria to focus attention on the urgent need for balancing climate mitigation with adaptation measures in vulnerable areas. This synthesis will help stakeholders harness their power effectively and build a more resilient future against global warming through efficient mobilization of private funding sources.

Keywords: Climate finance, private sector, mitigation, adaptation and systematic review

ISBN code 978-93-83302-74-1

Introduction

Climate change means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods (UNFCCC). Climate finance (CF) refers to local, national, and even international money derived from public, private, and alternative sources to combat climate change mitigation and adaptation efforts. The finance uses climate change related activities, and sometimes specialists use it as 'green finance' or 'sustainability finance' or 'low-carbon finance (Hariharan R et.al 2022). According to recent studies, the private sector is crucial in advancing climate action, and creative financing methods are required to raise private capital (Carfora & Scandurra, 2019; Adhikari & Chalkasra, 2021). It is critical to comprehend the tactics and approaches that can successfully involve the private sector in climate mitigation and adaptation initiatives as the effects of climate change worsen. (Chalkasra & Adhikari, 2021). Through an analysis of the Scopus database, this systematic paper seeks to review the body of literature on climate finance strategies for private sector involvement in climate mitigation and adaptation.

According to a review of the literature on climate finance, donor and public financial institutions are actively looking into ways to work with the private sector to provide more funding for climate action, especially for adaptation (Adhikari & Chalkasra, 2021). However, little is known about the specific tactics and approaches that can be successful in raising private capital, as well as the factors that drive private sector actors to invest in climate-related projects (Adhikari & Chalkasra, 2021).

The literature has emphasized the need for more research on the abilities of various actors to carry out this role as well as the significance of comprehending the role that various actor, including academia, play in supporting the monitoring and evaluation of climate adaptation measures. res. Additionally, it is imperative to tackle the obstacles and facilitators of private sector involvement (Tuyon et al., 2022) (Petzold et al., 2023). A thorough examination of the Scopus database on this subject can reveal important information about the state of the field, point out important themes and trends, and indicate any gaps and potential future research areas.

Through a better understanding of climate finance strategies, this review can help develop more effective policies and programs to mobilize private capital for climate action, as well as involve the private sector in climate mitigation and adaptation.

Methodology

Search Strategy

A systematic literature search was conducted utilizing the Scopus database, which is prominent for its comprehensive coverage of scholarly publications across various disciplines. The search strategy involved the rigorous selection of keywords to ensure the retrieval of relevant studies. Specifically, the following keywords were employed: “Climate finance” AND “private sector” AND “climate adaptation” OR “climate mitigation”. These keywords were deliberately chosen to comprehend the extent of literature connected to adaptation and mitigation efforts taken by the private sector to reduce the climate change.

Inclusion criteria

The inclusion criteria were meticulously designed to facilitate the selection of high-quality research articles that align with the objectives of this systematic review. Articles were included it they met the following criteria.

ISBN code 978-93-83302-74-1

Language - Limited to articles published in the English language to ensure consistency and accessibility for the reviewing team.

Focus – Restricted to studies explicitly addressing the involvement of the private sector in climate finance activities related to adaptation and/or mitigation efforts.

Content – confined to full length research articles which typically offer in depth analyses and empirical findings.

Publication Year – Articles published from 2010 onwards were considered, reflecting the contemporary landscape of climate finance discourse and practices.

Exclusion criteria

To maintain the rigor and relevance of the review, articles were excluded if they fell under the following categories –

Language – non-English articles were excluded to uphold uniformity and facilitate comprehensive evaluation by the reviewing team.

Focus- review papers, systematic literature reviews, and working papers were excluded to ensure the inclusion of primary research contributions and avoid redundancy in the synthesis of existing knowledge.

Accessibility- articles for which full text access was unavailable were omitted from consideration to uphold the integrity of the review process and enable through examination of the selected literature.

Table. 1. Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Language	English	Non-English
Focus	Private sector involvement in climate finance for adaptation and/or mitigation	Review papers, systematic literature reviews, working papers, books
Content	Full length research articles	-
Publication Year	2010 onwards	-
Accessibility	-	Articles without full text access

The study selection process

The systematic review study selection process began with a large-scale Scopus database search that initially produced 1,152 articles on the research topic. To maintain dataset integrity, duplicate articles were painstakingly identified and deleted resulting in the removal of 10 duplicates. After this stage, a systematic excluding process was implemented to further refine the data. Books (223) were not considered because of their different formats and interests from scholarly journal articles. Likewise, conference papers (23), data papers (1), review papers (82), and editorials/notes (54) were all excluded because they did not meet our predefined criteria for inclusion in the review. In addition, two non-English articles were removed from the set so as to keep language uniform across literature chosen. This refinement continued with a thorough screening of article titles where 523 articles having titles inconsistent with the purposes of this research were excluded. By scrutinizing abstracts of remaining articles for relevance to the subject matter under discussion, a further 200 articles based on abstract screening alone were discarded thereby refining more.

ISBN code 978-93-83302-74-1

After selecting articles one publication was left out of the dataset because full text access was unavailable. This rigorous selection process guaranteed that only articles meeting criteria were included in the review boosting the credibility and accuracy of the synthesized results.

Following this approach the final dataset was thoughtfully curated to encompass the pertinent and appropriate literature for further examination and synthesis. By including peer reviewed studies released in English between January 1 2010 and December 31 2023 we aimed to ensure that the chosen articles offer current and rigorous evidence, on interventions and initiatives concerning climate finance and private sector involvement. The resulting dataset forms a base, for the review enabling a thorough exploration of research questions and objectives while upholding transparency and rigor principles as outlined in the PRISMA guidelines (PRISMA; Liberati et al., 2009).

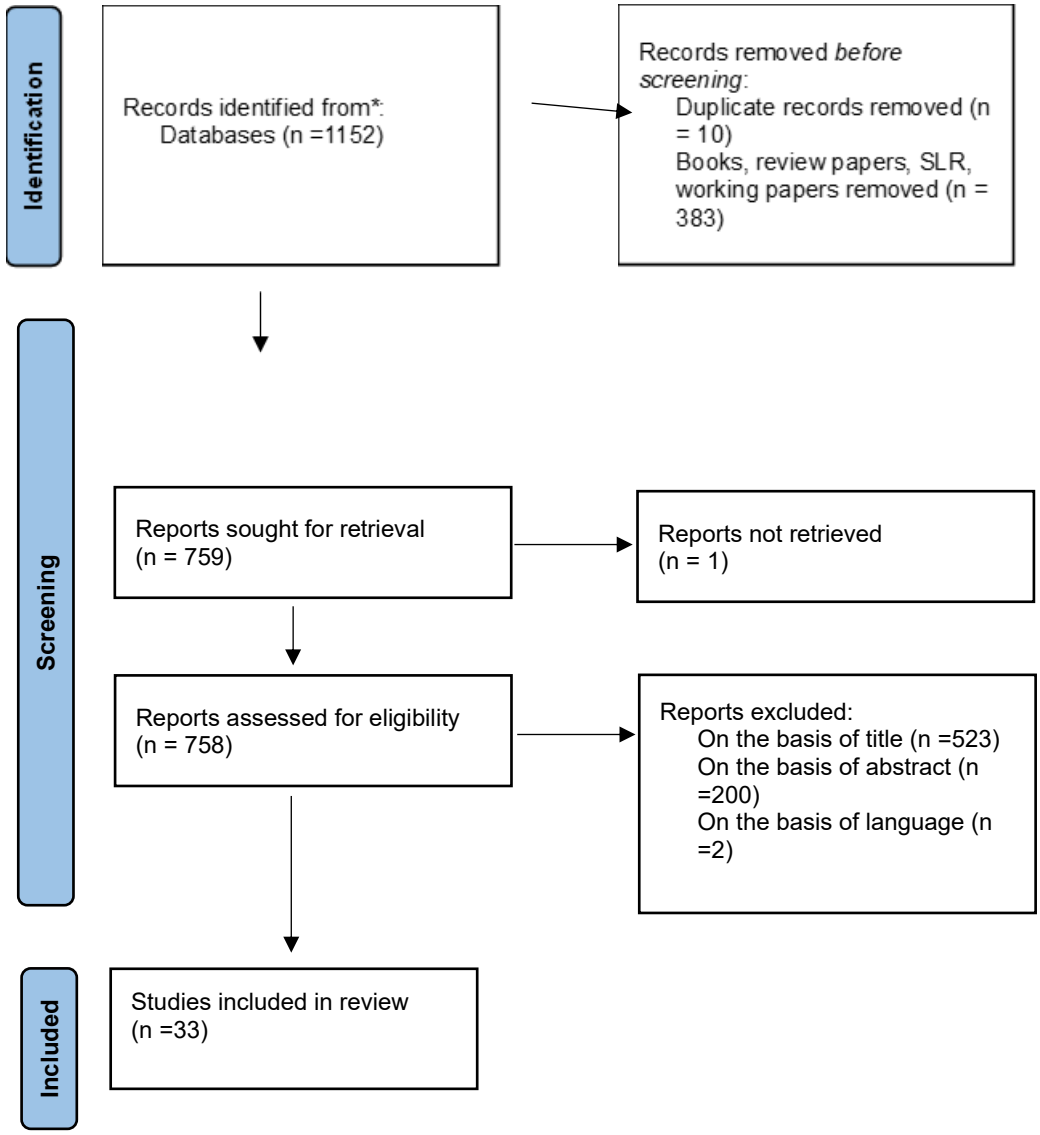

Fig.1. The PRISMA flow diagram

Table. 2. Complied in Excel using Scopus Database

Result and Interpretation

Year-Wise Analysis

The author has categorized the articles based on the year of publication. –

Row Labels	Count of Title
2011	1
2013	1
2014	1
2015	2
2016	6
2017	1
2019	1
2020	5
2021	4
2022	5
2023	6
(blank)	
Grand Total	**33**

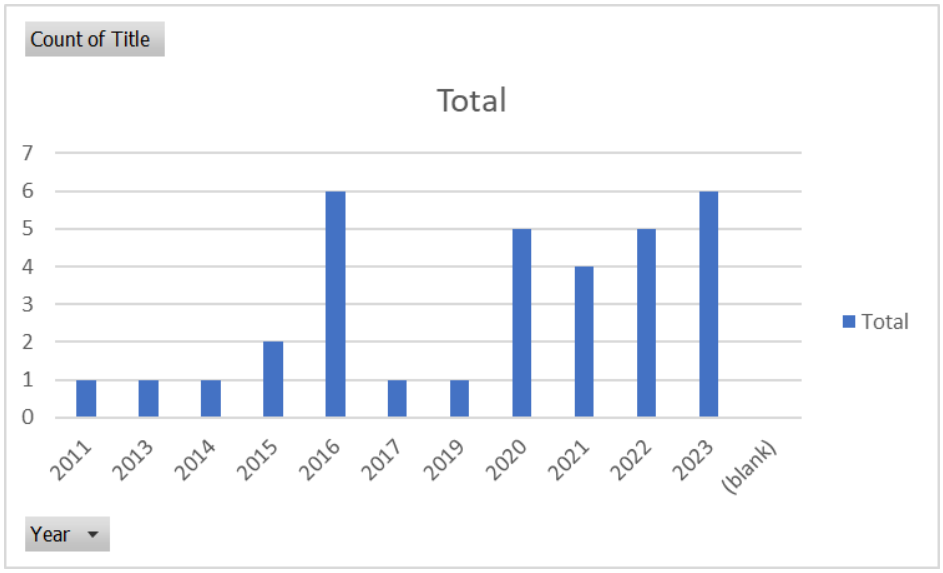

Fig.2. Compiled from Excel using Scopus Database by author

The database covers the years 2011 to 2023 and contains variations in research output and scholarly work for the field of study. Only one title was found in each of the years 2011, 2013, 2014, 2017, and 2019, revealing relatively lower research outputs during these years. However, later on, especially in 2016, 2020, and 2023, we observed a visible increase in research activity, resulting in the discovery of six titles annually. These peaks also coincide with times of greater academic interest and engagement with the topic at hand. The systematic analysis reveals a clear increasing trend from 2015 to 2020, followed by another leap in 2022, where there were five to eight papers written per year. By and large,

it would be most useful for understanding how research has evolved and where it is heading over the time considered.

Journal- Wise Analysis

Next, the authors have examined the journals in which the selected articles are published and the results are shown below –

Table. 3. Complied in Excel using Scopus Database by author

Row Labels	Count of Title
Cell Press	1
Cogitatio Press	1
Elsevier B.V.	1
Elsevier Ltd	4
Horizon Research Publishing	1
MDPI	5
MDPI AG	1
Multidisciplinary Digital Publishing Institute (MDPI)	1
National Climate Center	1
Oxford University Press	1
Routledge	1
SAGE Publications Inc.	1
Springer Netherlands	2
Springer Science and Business Media B.V.	1
Taylor and Francis Ltd.	7
Web Portal Ubiquity Press	1
World Scientific Publishing Co. Pte Ltd	1
(blank)	2
Grand Total	**33**

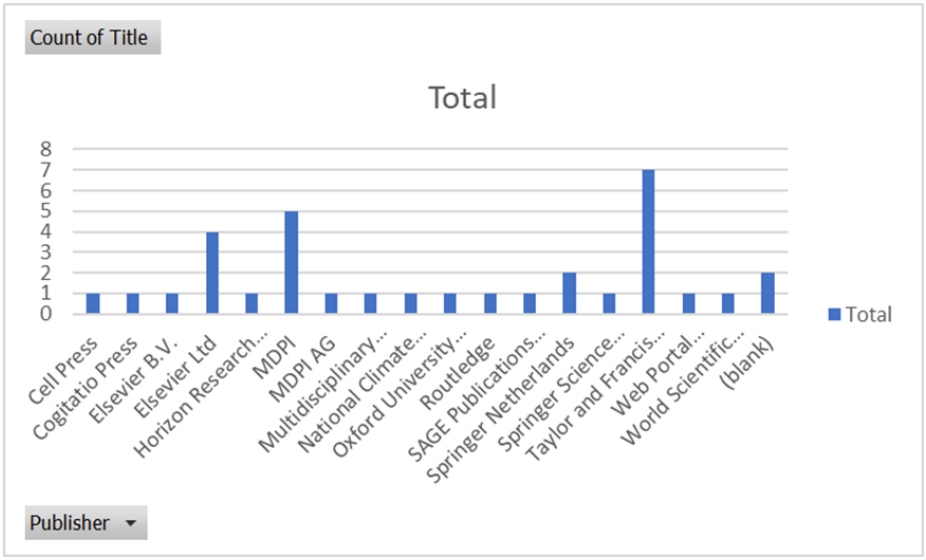

Fig. 3. Complied in excel using Scopus Database by author

The distribution of papers among various publishers reflects the diverse landscape of scholarly dissemination within the research domain. Among the 33 journals surveyed, significant contributions are noted from Taylor and Francis Ltd., which has published 7 papers, constituting the highest share. Elsevier Ltd. follows with 4 papers, while MDPI and Springer Netherlands each have contributed 5 and 2 papers, respectively. Additionally, several publishers, including Cell Press, Cogitatio Press, and Horizon Research Publishing, have each published 1 paper, highlighting their individual contributions to the literature. Notably, a majority of the journals, totalling 84.44% of the total papers, are indexed in Scopus, indicating the prevalence of reputable and indexed sources in disseminating research findings within the academic community. This diverse distribution underscores the varied avenues through which research findings are disseminated, contributing to the richness and depth of scholarly discourse in the field.

Title-Wise Analysis

Table. 4. Complied in word using Scopus Database by author

The author has organized the selected article according to the citation.

SL No.	Title	No. of citation
1	Rebalancing climate finance: Analysing multilateral development banks' allocation practices	3
2	Investment suitability and path dependency perpetuate inequity in international mitigation finance toward developing countries	1
3	Does Climate Finance Support Institutional Adaptive Capacity in Caribbean Small Island and Developing States? An Analysis of the Green Climate Fund Readiness Grants	0
4	The Green Climate Fund and private sector climate finance in the Global South	1
5	A Relationship between Climate Finance and Climate Risk: Evidence from the South Asian Region	1
6	India's low carbon value chain, green debt, and global climate finance architecture	2
7	Perception of Climate Finance: An Empirical Approach	1
8	Climate Finance Effectiveness: A Comparative Analysis of Geothermal Development in Indonesia and the Philippines	4
9	Stretching or conforming? Financing urban climate change adaptation in Copenhagen	0
10	Aligning climate and sustainable development finance through an SDG lens. The role of development assistance in implementing the Paris Agreement	40
11	Post-2025 climate finance target: how much more and how much better?	9
12	Mobilizing private adaptation finance: lessons learned from the Green Climate Fund	10
13	Climate adaptation finance in world bank economic development programs: The challenges of systemic transformation via “scaling up”	1
14	Financing climate change adaptation: International initiatives	10
15	Crisis capitalism and climate finance: the framing, monetizing, and orchestration of resilience-amidst-crisis	8
16	Mitigating energy poverty: Mobilizing climate finance to manage the energy trilemma in Indonesia	49

ISBN code 978-93-83302-74-1

17	The Role of public interventions in inducing private climate finance: An empirical analysis of the solar energy sector	20
18	Understanding private-sector engagement in sustainable urban development and delivering the climate agenda in northwestern Europe—a case study of London and Copenhagen	14
19	Do multilateral development bank trust funds allocate climate finance efficiently?	10
20	Resilience through interlinkage: the green climate fund and climate finance governance	40
21	Blind spots in climate finance for innovation	9
22	What is adaptation to climate change? Epistemic ambiguity in the climate finance system	35
23	Justice and climate finance: Differentiating responsibility in the Green Climate Fund	16
24	Who determines transformational change in development and climate finance?	49
25	Voluntary international climate finance under the post-Kyoto framework: The strategic consequences of different modes of funding	6
26	A new framework for integrated climate finance and inclusive responses to sustainable development in Malaysia	7
27	Allocating climate mitigation finance: a comparative analysis of five major green donors	16
28	Mitigation incentives with climate finance and treaty options	4
29	Where are the gaps in climate finance?	33
30	Development Aid and Climate Finance	26
31	Economic costs of climate change and climate finance with a focus on Africa	7
32	An analysis of the causes of the mitigation bias in international climate finance	32
33	Beyond climate finance: From accountability to productivity in addressing the climate challenge	22
	Total	486

This table presents the titles of selected papers along with their respective citation counts. The titles encompass a range of topics related to climate finance, spanning from the allocation practices of multilateral development banks to the challenges and opportunities associated with mobilizing private adaptation finance. Noteworthy papers include "Aligning climate and sustainable development finance through an SDG lens" with 40 citations, indicating its significant impact within the scholarly community, and "Mitigating energy poverty: Mobilizing climate finance to manage the energy trilemma in Indonesia" with 49 citations, signifying its high level of recognition and influence. Additionally, the table provides a cumulative total of 486 citations across all selected papers, underscoring the collective contribution of these studies to the discourse on climate finance and its implications for addressing climate change challenges.

Theme Based Analysis

Private Sector Engagement and Challenges

In climate finance, engaging the private sector is essential but often not successful. Papers indicate that private sector interest in Green Climate Fund (GCF) projects is low and there are significant trade-

offs between private initiatives and GCF principles (Kalinowski, 2023). Moreover, variability in private sector engagement is also noted with city leadership playing an important role in participation levels in sustainability efforts (Alkhani, 2020). Additionally, this indicates that market failures restrict private sector participation for adaptation projects and calls for focused approaches (Stoll et al., 2022). The GCF's problems with its governance and capitalization serve to highlight the importance of Effective Non-Party stakeholder engagement as well (Bowman et al., 2019). Copenhagen's model for unfunded innovation adds to the required private sector input for urban climate resilience policies (Ibrahim et al., 2016).

Funding Dynamics and Biases

The study of the funding dynamics indicates that there is adjustment bias in climate finance with adaptation funds being underfunded substantially (Abadie et al., 2013). Merely increasing the targets for climate finance on its own is not useful because the targets are ill defined and add little transparency (Pauw et al., 2022). Developing nations with carbon sinks do and should receive larger amounts of mitigation finance and are therefore in line with donor distribution with the needs worldwide (Heuson et al., 2015). However, even if the gap continues to close, the amount of climate related assistance directed towards the mitigation of climate change is more than that directed towards adaptation strategies (Warren, 2020), suggesting that, if this imbalance is addressed, future financing can contribute to healthier sustainable development.

Adaptation and Resilience

At the national level, adaptation support contributes significantly to improving resilience, especially in the least developed countries (Eyckmans et al., 2014). It is acknowledged that the GCF Readiness Grants have benefits for adaptation mainstreaming and developing capacity, but such advances are still limited regarding structural reforms (Corrocher & Cappa, 2020). The economic development afforded by Africa and the large yearly costs for adaptation highlight the great need for adaptation approaches (Rickman et al., 2023).

Political and Structural Challenges

The finding by respondents that the majority demonstrates a weakness towards the understanding of climate policies encourages a worry about the overall balance of the perception of climate finance (Arumugam et al., 2022). Questions related to ownership create barriers to successful change in climate finance, therefore wide-ranging perspectives on transformation will be necessary to enhance appropriate financing attempts (Winkler & Dubash, 2016). Different modes of mobilization and their impact on the national strategies to mitigate paper are understated in this paper (Mekonnen, 2014). Moreover, the impact of political will and energy shocks on effectiveness of climate finance for geothermal energy development in Indonesia and Philippines is significant (Masud et al., 2023).

Global and Regional Disparities

In addition to climate risk concentration issues, the region’s climate finance and climate change vulnerability depict deficits (Ricci, 2023). It is also pointed out that the demand for higher climate finance for innovation in the developing countries especially for tackling complex issues such as industrial decarbonization is still unfulfilled(Whittaker & Jespersen, 2022) . In addition, unfair wind

ISBN code 978-93-83302-74-1

and solar finance distribution within developing countries caused low-income countries to attract far less private and public finance (Rickman et al., 2023).

Innovation and Technology in Climate Finance

As such, it would be incorrect to suggest that private finance is not encouraged by public finance in the renewable energy sector as it does indicate the success of specific financial policies (Fankhauser et al., 2016). The example of Malaysia illustrates that it is possible to achieve integrated climate finance strategy without compromising on sustainable development goals (Ibrahim et al., 2016). This theme also highlights the opportunities which exist for new financial mechanisms and new technologies in transforming climate finance.

Future Agenda

Enhancing Alignment of Priorities

Improving alignment of priorities. The most important in future research is improving alignment of priorities between the donor funding and the countries receiving funds. It includes enhancing stronger coordination mechanisms, fostering dialogue between the stakeholders, and developing better knowledge of the development context of the recipient countries (Gabriela Ileana Iacobuta, 2022). In addition, there should be efforts to make the allocation of climate finance between mitigation and adaptation projects more balanced; there should be advocacy of a larger allocation of funds to adaptation, especially in the most vulnerable countries and addressing the issues of access to climate finance (Katharina Michaelowa, 2020).

Maximizing Co-Benefits and Synergies

In the future, there should be more research into maximizing the benefits and synergies of climate action with global sustainable development, by identifying and promoting those projects which benefit climate mitigation/adaptation and sustainable measures (STELLA WHITTAKER, 2022). During further discussions at the national, regional, and international levels that aim at addressing the mentioned issues and gaps, there should be more attention paid to the necessary policy and institutional reforms at the national, regional, and international levels, which involves the improvement of the existing mechanisms of climate finance allocation, transparency, and accountability. (Katharina Michaelowa, 2020).

Exploring Innovative Financing Mechanisms

Given the importance of private sector engagement in climate finance and sustainable development, there is a need to explore innovative financing mechanisms. This may potentially involve other options such as climate-pooled or blended financing to leverage private capital for climate projects (STELLA WHITTAKER, 2022). Since different urban contexts may vary in terms of private-sector engagement, governance frameworks, and sustainability outcomes, it would be beneficial to conduct comparative research. Moreover, to evaluate the effectiveness of policy instruments and incentives, it is also important to conduct longitudinal studies and track the dynamics of private-sector involvement over time (Alkhani, 2020).

Policy and Institutional Reforms

Policy and Institutional Reforms: The whole future activity must contain a priority to advocate for policy and institutional reforms to overcome the understand gaps and challenges. These reforms should include several actions. On the one hand, it aims at strengthening mechanisms in the field of allocating climate finance. On the other hand, the activity must be focused on increasing financial

transparency, control, and responsibility. Third, it should aim to improve and enhance the efficiency to different mechanisms interaction processes (Katharina Michaelowa, 2020). Besides, any future work on these problems should include searching for ways of an increase of cooperation effectiveness and formulating ways of other levels on an urban scale of sustainable urban development and climate financing (Alkhani, 2020).

Understanding Spillover Effects and Interactions

The complete understanding of the climate finance processes, and the dynamics involves understanding different types of spillover effects, interactions, and peculiarities of different publics and private financing mechanisms. Besides, it is extremely important to know if there is a positive correlation. The most important here is to clearly understand how public climate finance financing affects and interacts, or rather, influences private financing, aimed at decarbonization in very concrete pockets (Lina Xie, 2023) . Besides, the examination of the financing activities of other public financial institutions apart from those, which are classified as multilateral development banks, can provide a better understanding of general funding allocation practices (Lina Xie, 2023).

Future Suggestion

Future research could focus on a case study on the Green Climate Fund (GCF) could be useful to understand private sector project characteristics — investigating investments made by different firms in terms of patterns of deployment, choice among technologies and geography. This would also help in establishing best practices as well the challenges on how to align private sector projects with GCF´s climate goals. Moreover, the study looks at what trade-offs were made in relation to mobilizing private finance and alignment with GCF objectives. For instance, research may examine the tension between profitability and sustainability, thereby highlighting potential trade-offs that could undermine long-term GCF climate objectives.

Country ownership is also a relevant issue to further explore in private sector-led GCF projects. Research may explore whether these projects reflect what countries want and value in relation to development-subjects or are somewhat externally driven and environmentally adjusted top down yet not locally grounded. In addition, there are studies that can help determine how the debt burden of developing countries debt burden might change as a result from private climate finance when loans were one of those financing mechanisms. This would be a line of enquiry which consider whether private finance companies underlying debt problems and thus jeopardise long-term sustainability goals.

More empirical research is also needed to evaluate the GCF implemented private sector projects and provide tangible lessons of success and failure. Furthermore, this research may also lead to address the potential of private sector investment in bridging between existing climate actions and international goals by looking at the way these companies' reducing emissions, increase renewable energy consumption and adopt some other means for climate mitigation. The pros and cons of the Private sector in Urban Endowment Projects, such as whether profit-making can ever be aligned with meeting the interests of city residents— as an inquiry would also add greatly to a sustainable urban development conversation.

New methods are needed to assess the sustainability effects of private sector engagement. The next step for research will be to specify metrics that adequately measure environmental, economic and social outcomes from hybrid projects so impacts can be better assessed. But there is another priority area you should be looking at too — the efficiency of climate adaptation funding. Research might

ISBN code 978-93-83302-74-1

evaluate whether such funds effectively reach vulnerable communities to help them build climate resilience in a timely fashion

Finally, a persistent issue in climate finance for all is building the capacity of countries with weak institutions. And this means that research might focus on how investments around capacity building is reaping benefits in governance and technical skills a decade down the line. It would be very valuable for national-level climate finance practitioners to clarify whether these efforts allow countries to independently take on and manage their climate risks, since this reflects the extent to which international climate finance is actually effective in building institutional capacity.

Conclusion

The paper presents a working research paper, which is the search for common trends and possible biases in the existing research. The research focuses on the private sector's role in climate finance in 2010 – 2023. The main idea behind it is that with the rise of various studies and their synthesis, it becomes clear that the private sector is indispensable and its role in climate change mitigation and adaptation is well-recognized.

This paper shows that this tendency has been increasing, thus indicating the paradigm shift in the understanding of climate finance. In addition, this paper can also serve as a source of information on publication trends and the areas of the private sector's involvement studied.

If we look at the big picture, the future agenda laid out by this paper can serve as a tracer for climate finance itself. The report provides a guideline for priority setting by increasing alignment, for maximizing co-benefits and synergies, for new financial instruments and mechanisms, for taking stock and adapting, and for better understanding of spillovers and externalities which can break new ground.

In a nutshell, this paper is a call for action for all those who are complaining and wrestling with the climate change to act collectively and utilize the transformative power of the private sector in stepping with the times. Overall, the insights gained from the systematic review not only allow us to turn every adversity we face into a common bond but also make us able to move forward with partnerships and mobilization efforts at greater speed.

Reference

Heuson, C., Peters, W., Schwarze, R., & Topp, A. K. (2015). Voluntary international climate finance under the post-Kyoto framework: The strategic consequences of different modes of funding. *Climate Change Economics*, *6*(03), 1550013.

Ibrahim, K., Shabudin, A. F. A., Chacko Koshy, K., & Asrar, G. R. (2016). A new framework for integrated climate finance and inclusive responses to sustainable development in Malaysia. *Geomatics, Natural Hazards and Risk*, *7*(6), 1754-1768.

Halimanjaya, A. (2016). Allocating climate mitigation finance: A comparative analysis of five major green donors. *Journal of Sustainable Finance & Investment*, *6*(3), 161-185.

Strand, J. (2016). Mitigation incentives with climate finance and treaty options. *Energy Economics*, *57*, 166-174.

Fankhauser, S., Sahni, A., Savvas, A., & Ward, J. (2016). Where are the gaps in climate finance?. *Climate and Development*, *8*(3), 203-206.

Eyckmans, J., Fankhauser, S., & Kverndokk, S. (2016). Development aid and climate finance. *Environmental and resource economics*, *63*, 429-450.

ISBN code 978-93-83302-74-1

Mekonnen, A. (2014). Economic costs of climate change and climate finance with a focus on Africa. *Journal of African Economies*, *23*(suppl_2), ii50-ii82.

Abadie, L. M., Galarraga, I., & Rübbelke, D. (2013). An analysis of the causes of the mitigation bias in international climate finance. *Mitigation and Adaptation Strategies for Global Change*, *18*, 943-955.

Zadek, S. (2016). Beyond climate fi nance: from accountability to productivity in addressing the climate challenge. In *International Climate Finance* (pp. 212-226). Routledge.

Corrocher, N., & Cappa, E. (2020). The Role of public interventions in inducing private climate finance: An empirical analysis of the solar energy sector. *Energy Policy*, *147*, 111787.

Alkhani, R. (2020). Understanding private-sector engagement in sustainable urban development and delivering the climate agenda in northwestern Europe—A case study of London and Copenhagen. *Sustainability*, *12*(20), 8431.

Michaelowa, K., Michaelowa, A., Reinsberg, B., & Shishlov, I. (2020). Do multilateral development bank trust funds allocate climate finance efficiently?. *Sustainability*, *12*(14), 5529.

Bowman, M., & Minas, S. (2019). Resilience through interlinkage: the green climate fund and climate finance governance. *Climate policy*, *19*(3), 342-353.

Warren, P. (2020). Blind spots in climate finance for innovation. *Advances in climate change research*, *11*(1), 60-64.

Hall, N. (2017). What is adaptation to climate change? Epistemic ambiguity in the climate finance system. *International Environmental Agreements: Politics, Law and Economics*, *17*, 37-53.

Vanderheiden, S. (2015). Justice and climate finance: differentiating responsibility in the Green Climate Fund. *The International Spectator*, *50*(1), 31-45.

Winkler, H., & Dubash, N. K. (2016). Who determines transformational change in development and climate finance?. *Climate Policy*, *16*(6), 783-791.

Rickman, J., Kothari, S., Larosa, F., & Ameli, N. (2023). Investment suitability and path dependency perpetuate inequity in international mitigation finance toward developing countries. *One Earth*, *6*(10), 1304-1314.

Ricci, L., & Mangenot, M. (2023). Does Climate Finance Support Institutional Adaptive Capacity in Caribbean Small Island and Developing States? An Analysis of the Green Climate Fund Readiness Grants.

Kalinowski, T. (2023). The Green Climate Fund and private sector climate finance in the Global South. *Climate Policy*, 1-16.

Masud, M. A. K., Sahara, J., & Kabir, M. H. (2023). A Relationship between Climate Finance and Climate Risk: Evidence from the South Asian Region. *Climate*, *11*(6), 119.

Damodaran, A., & van den Heuvel, O. (2023). India's low carbon value chain, green debt and global climate finance architecture. *IIMB Management Review*.

Hariharan, R., Arumugam, S. K., & Seranmadevi, R. (2022). Perception of climate finance: An empirical approach. *Environment and Ecology Research*, *10*(2), 284-293.

ISBN code 978-93-83302-74-1

Chelminski, K. (2022). Climate Finance Effectiveness: A Comparative Analysis of Geothermal Development in Indonesia and the Philippines. *The Journal of Environment & Development*, *31*(2), 139-167.

Whittaker, S., & Jespersen, K. (2022). Stretching or conforming? Financing urban climate change adaptation in Copenhagen. *Buildings and Cities*, *3*(1).

Iacobuţă, G. I., Brandi, C., Dzebo, A., & Duron, S. D. E. (2022). Aligning climate and sustainable development finance through an SDG lens. The role of development assistance in implementing the Paris Agreement. *Global Environmental Change*, *74*, 102509.

Pauw, W. P., Moslener, U., Zamarioli, L. H., Amerasinghe, N., Atela, J., Affana, J. P. B., ... & Weikmans, R. (2022). Post-2025 climate finance target: how much more and how much better?. *Climate Policy*, *22*(9-10), 1241-1251.

Stoll, P. P., Pauw, W. P., Tohme, F., & Gruening, C. (2021). Mobilizing private adaptation finance: lessons learned from the Green Climate Fund. *Climatic Change*, *167*(3-4), 45.

Eisenstadt, T. A., Olawole, I., & Toman, M. A. (2021). Climate Adaptation Finance in World Bank Economic Development Programs: The Challenges of Systemic Transformation via "Scaling Up". *Sustainability*, *13*(19), 10553.

Timilsina, G. R. (2021). Financing climate change adaptation: International initiatives. *Sustainability*, *13*(12), 6515.

Long, J. (2021). Crisis capitalism and climate finance: The framing, monetizing, and orchestration of resilience-amidst-crisis. *Politics and Governance*, *9*(2), 51-63.

Setyowati, A. B. (2020). Mitigating energy poverty: Mobilizing climate finance to manage the energy trilemma in Indonesia. *Sustainability*, *12*(4), 1603.

Scott, C. (2023). Climate Finance and its Role in Climate Policy. Journal of Climate Policy. https://doi.org/10.47941/jcp.1550.

Ravindranath, N. (2007). Mitigation and adaptation synergy in forest sector. Mitigation and Adaptation Strategies for Global Change, 12, 843-853. https://doi.org/10.1007/S11027-007-9102-9.

). Adaptation and mitigation as complementary tools for reducing the risk of climate impacts. Mitigation and Adaptation Strategies for Global Change, 12, 727-739. https://doi.org/10.1007/S11027-007-9096-3

Hong, H., Karolyi, G., & Scheinkman, J. (2020). Climate Finance. The Review of Financial Studies. https://doi.org/10.1093/rfs/hhz146.

Liberati, A., Altman, D., Tetzlaff, J., Mulrow, C., Gøtzsche, P., Ioannidis, J., Clarke, M., Clarke, M., Devereaux, P., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. Journal of clinical epidemiology, 62 10, e1-34. https://doi.org/10.1016/j.jclinepi.2009.06.006.

Greta, Angjeli., Jona, Marashi., Anastas, Angjeli. (2022). Public debt after the covid-19. International Journal of Ecosystems and Ecology Science (IJEES), 12(4):357-360. doi: 10.31407/ijees12.444.

M., Ayhan, Kose., Franziska, Ohnsorge., Naotaka, Sugawara. (2021). A Mountain of Debt. Social Science Research Network, doi: 10.1596/1813-9450-9800.

ISBN code 978-93-83302-74-1

Funder, M., et al., 2020. Integrating climate change adaptation and development. Addressing resilience in Denmark's development policy. DIIS Danish Institute for International Studies, Copenhagen.

Bouyé, M., & Harmeling, S. (2018). Connecting the dots: Elements for a joined-up implementation of the 2030 Agenda and Paris Agreement.

LSE, "What is climate finance?" Grantham Research Institute Pm Climate Change and the Environment, https://www.lse.ac.uk/granthaminstitute/explainers/what-is -climate-finance-and-where-will-it-come-from/ (accessed Jul. 02, 2020)

Carfora, A., & Scandurra, G. (2019). The impact of climate funds on economic growth and their role in substituting fossil energy sources. *Energy Policy*, *129*, 182–192. https://doi.org/10.1016/J.ENPOL.2019.02.023

Adhikari, B., & Safaee Chalkasra, L. S. (2021). Mobilizing private sector investment for climate action: enhancing ambition and scaling up implementation. Journal of Sustainable Finance and Investment, 1–18. https://doi.org/10.1080/20430795.2021.1917929

Petzold, J., Hawxwell, T., Jantke, K., Gonçalves Gresse, E., Mirbach, C., Ajibade, I., Bhadwal, S., Bowen, K., Fischer, A. P., Joe, E. T., Kirchhoff, C. J., Mach, K. J., Reckien, D., Segnon, A. C., Singh, C., Ulibarri, N., Campbell, D., Cremin, E., Färber, L., … Garschagen, M. (2023). A global assessment of actors and their roles in climate change adaptation. Nature Climate Change. https://doi.org/10.1038/s41558-023-01824-z

Tuyon, J., Onyia, O. P., Ahmi, A., & Huang, C.-H. (2022). Sustainable financial services: reflection and future perspectives. Journal of Financial Services Marketing, 1–27. https://doi.org/10.1057/s41264-022-00187-4

ISBN code 978-93-83302-74-1