Proceedings of the 1st International Conference on Public Administration and Social Science (ICoPASS 2024) Universitas Sultan Ageng Tirtayasa
Theme: Innovation and Adaption Policy: Climate Action

Institutional and Political Capacity in Climate Change: A Literature Review

Sukendar[1*], Ahmad Sururi[2]
[1]Universitas Serang Raya, Indonesia
[2]Universitas Sultan Ageng Tirtayasa, Serang Banten, Indonesia
Corresponding author email*: kendar73@yahoo.com

Received November 13, 2024; Aceppted December 24, 2024; Published March 15, 2025

Abstract – Climate change has become a global challenge that requires strong policy responses and cross-institutional coordination. Institutional capacity and political factors play an important role in determining the effectiveness of climate change policies. This article aims to explore how institutional capacity and political dynamics affect climate change policy implementation based on a literature review. Through a systematic literature review (SLR) approach, this research analyses various theories, concepts, and empirical studies that have been conducted previously. The review shows that countries with strong institutions and high political stability are better able to adopt ambitious and sustainable climate change policies. However, challenges such as political inequality, economic resistance, and governance weaknesses remain major obstacles.

***Keywords**: Institutional capacity, politics, climate change, climate policy, environmental governance*

1. INTRODUCTION

Climate change is one of the greatest global challenges of the 21st century with significant impacts on the environment, economy and human well-being. The report of the Intergovernmental Panel on Climate Change (The Intergovernmental Panel on Climate Change (IPCC), 2021) confirmed that rising global temperatures, increased frequency of natural disasters, and changes in extreme weather patterns are the consequences of increasing greenhouse gas emissions. To face these challenges, a strong policy response and an institutional system capable of supporting the effective implementation of climate change mitigation and adaptation policies are required.

In the context of climate change governance, institutional capacity plays an important role in ensuring that policies are not only scientifically based, but can also be implemented efficiently and sustainability (Gupta et al., 2016). Institutional capacity refers to the ability of government and non-government institutions to develop, coordinate and execute climate change policies. This includes legal and regulatory aspects, resource allocation, inter-agency coordination, and the involvement of non-governmental actors such as the private sector and civil society (Jordan et al., 2015).

In addition to institutional factors, political dynamics also have a major influence on climate change policy. Political decisions are often influenced by various interests, including fossil energy-based industries, environmental advocacy groups, and international pressure (Keohane & Victor, 2016). Some countries have shown progressive political leadership in addressing climate change, such as the European Union with its European Green Deal policy. However, on the other hand, there are countries that still face political constraints in setting ambitious mitigation targets due to economic pressures and domestic political interests (Stokes, 2020).

Despite the central role of institutional and political capacity in climate change, there are still many challenges in implementing climate policies in many countries. Policy fragmentation, weak inter-agency coordination, limited resources, and political interests that conflict with environmental goals are some of the main obstacles (Biermann et al., 2009). Therefore, an in-depth understanding of the relationship between institutional capacity and political dynamics in climate change is increasingly important to design more effective strategies to deal with this global challenge.

Climate change is a global phenomenon that requires structured policy interventions based on strong institutional capacity. International organisations such as the Intergovernmental Panel on Climate Change (IPCC) have asserted that climate change mitigation and adaptation depend not only

on technological advances, but also on the effectiveness of a country's governance and institutional capacity. (IPCC, 2021).

However, climate change policy implementation often faces political and institutional barriers, especially in developing countries with limited resources and weak governance structures (Biermann et al., 2009). Therefore, this study aims to systematically review the literature that addresses institutional and political capacity in the context of climate change and the factors that influence it.

Climate change has become one of the biggest global challenges of this century, with imHowever, climate change policy implementation often faces political and institutional barriers, especially in developing countries with limited resources and weak governance structures (Biermann et al., 2009). There for pacts spanning multiple sectors, including economics, health and environmental sustainability. Responses to climate change depend not only on technical and scientific policies, but also on institutional capacity and political dynamics at local, national and international levels. Institutional capacity in dealing with climate change refers to the ability of an institution-both governmental and non-governmental-to effectively design, implement and evaluate climate change adaptation and mitigation policies. Meanwhile, political factors, including actors' interests, power distribution, and political agendas, strongly influence how climate policies are developed and implemented.

Strong institutions and responsiveness to climate change require inter-stakeholder coordination, technical capacity, adequate resources and adaptive regulatory frameworks. However, in many countries, institutional weaknesses, political imbalances and economic interests are often the main obstacles to adopting ambitious and effective climate change policies. Therefore, understanding institutional and political capacity in climate change is crucial to identifying the best strategies to meet this challenge.

Various previous studies have examined the relationship between institutional capacity, politics, and climate change policy. Some of the key relevant studies include: (Ostrom, 2020) in her study on collective governance emphasised that the success of climate change mitigation depends heavily on institutional mechanisms that enable coordination and participation of various actors. In line with this research, (Biermann et al., 2009) developed the concept of earth system governance, which highlights the need for global governance reform to more effectively address the challenges of climate change.

Furthermore, (Jänicke, 2005) proposes the concept of capacity building for environmental policy, which suggests that high institutional capacity, including the existence of stable environmental policies and inter-stakeholder coordination, can increase the effectiveness of climate change policies, while low institutional capacity can increase the effectiveness of climate change policies (Duit et al., 2010) examines how a country's institutional capacity affects its success in responding to climate change. The study shows that countries with more democratic institutions and effective decentralisation tend to be more successful in implementing climate policies.

Taking into account theory and previous research findings, it is important to develop strategies that strengthen institutional capacity and understand the political dynamics that influence climate change policies. Without strong governance and supportive political approaches, climate change policies are likely to face obstacles in implementation and long-term sustainability.

2. METHDOLOGY

This research used a Systematic Literature Review (SLR) approach to analyse academic literature related to institutional and political capacity in climate change. This method includes:

1. Literature Identification: Searches were conducted in academic databases such as Scopus, Google Scholar, and ScienceDirect. Keywords used: institutional capacity and climate change policy, political factors in climate governance, climate change governance capacity, and environmental politics.
2. Inclusion and Exclusion Criteria: Inclusion: English and Indonesian articles published in reputable journals between 2000 and 2024. Exclusion: Articles that were irrelevant, duplicated, or not available in full access.
3. Analysis and Categorisation:
   Literature was categorised based on key theories, research approaches, and empirical results.

3. RESULT AND DISCUSSION

3.1. Institutional Capacity in Climate Change

Institutional capacity refers to the ability of an institution to develop, implement and evaluate climate policies (Gupta et al., 2016). Based on the literature review, institutional capacity can be categorised into three main aspects: first, institutional and regulatory structures. It is argued (Jordan et al., 2015) that countries with clear environmental regulations and efficient bureaucratic systems are more likely to succeed in climate policy implementation. Meanwhile, a study by (Jänicke, 2005) shows that high institutional capacity increases the chances of environmental policy (Duit et al., 2010) success through regulatory stability and legal compliance.

The second is Administrative Resources and Capacity. In this case the lack of financial and technical resources is often an obstacle in implementing climate change policies (Duit et al., 2010) and developing countries tend to have lower institutional capacity than developed countries due to limited funds and experts (Krause, 2011). The third is inter-stakeholder coordination. This can be seen from the success of climate policy depends on cooperation between the government, private sector, civil society, and international organisations (Ostrom, 2020) and the multi-level governance (MLG) model developed by (Hooghe & Marks, 2003) which emphasises the importance of coordination between levels of government in the implementation of climate change policies.

3.2. Political Factors in Climate Change Policy

Political dynamics play a significant role in determining how climate change policies are made and implemented. The literature shows that political factors that influence climate policy include first, political stability and government commitment. Countries with stable political systems and pro-environmental leadership are more likely to implement progressive climate policies (Keohane & Victor, 2016) and countries with political instability often experience inconsistent policy changes and low enforcement of environmental laws (Carter, 2018).

In addition, the influence of lobbying and economic interests plays a very important role. Fossil fuel-based industries often have strong political influence, which can hinder climate change policies (Meckling et al., 2015) and as (Stokes, 2020) study shows, industry lobbying can weaken environmental regulations through pressure on policymakers. Furthermore, the role of public participation and community support through the level of public involvement in environmental policies affects the successful implementation of climate change policies (Dryzek & Stevenson, 2011) and support Countries with high levels of public awareness of climate change tend to have more ambitious and effective policies.

3.3. Institutional Capacity on Climate Change: Key Pillars

The analysis shows that institutional capacity in climate change consists of three main pillars: (1) Institutional Structure and Stability, (2) Administrative Resources and Capacity, and (3) Multi-Stakeholder Coordination.

Institutional Structure and Stability

Institutional stability and effectiveness determine the success of climate change policies. Countries with strong institutional systems tend to have more consistent and long-term orientated climate policies (Jordan et al., 2015). In contrast, countries with weak institutional systems often experience inconsistent policy changes due to changes in government or political influence (Duit et al., 2010). Case Study: The European Union as an example of strong institutions in climate policy has the European Green Deal, which consistently steers its member states in the clean energy transition (Kronsell, 2015). Brazil and Indonesia, which have weaker environmental institutions, often experience inconsistent policy changes due to political and economic pressures, especially in deforestation policies (Meyfroidt et al., 2018).

Resources and Administrative Capacity

Human and financial resources are key aspects of effective institutional capacity. Developing countries tend to have limitations in both of these aspects, hindering the implementation of reform policies.

Multi-Stakeholder Coordination

The Multi-Level Governance (MLG) approach shows that effective climate policy does not only depend on the central government, but also involves other actors such as local governments, the private sector, and civil society (Hooghe & Marks, 2003). Countries with good institutional coordination have more success in achieving climate change mitigation and adaptation targets (Ostrom, 2020). Lack of coordination between levels of government and the private sector can lead to overlapping and ineffective policies (Meckling et al., 2015).

3.4. Challenges in Institutional Capacity for Climate Change

Although institutional capacity plays an important role, various challenges are still faced in implementing climate change policies. Such as Policy Fragmentation which is one of the main obstacles in strengthening institutional capacity. Many countries have climate policies that are not well integrated between institutions, leading to overlaps and inefficiencies in implementation (Biermann et al., 2009). This can be seen in many developing countries, where policies related to energy, environment and climate change are managed by different ministries without effective coordination (Jordan et al., 2015) and the European Union managed to overcome this challenge by creating a common policy framework that integrates all climate policies under one main strategy.

Then Political and Economic Influences where climate change policies often face political resistance, especially from interest groups with links to fossil fuel-based industries (Keohane & Victor, 2016). A study by Stokes (2020) found that the fossil fuel industry in the United States actively lobbies to weaken environmental regulations to protect its economic interests. In some developing countries, economic interests often take precedence over environmental policies, leading to less effective climate change policies.

Lack of Public Participation in climate change policy decision-making remains low in many countries. This hampers the effectiveness of policy implementation due to low levels of compliance and support from the public (Dryzek et al., 2013). In Europe, the level of public awareness of climate change is higher, so the policies made get more support. In developing countries, low levels of public education and engagement are often barriers to environmental policy implementation.

3.5. Strategies for Strengthening Institutional Capacity in Climate Change

Based on the challenges found, several strategies can be applied to strengthen institutional capacity in climate change policy, namely Policy Integration and Inter-Agency Coordination by Establishing a central institution that coordinates all climate change policies to avoid regulatory fragmentation. And increasing cooperation between the central government, local governments, and the private sector in the implementation of climate policies.

Then increase resources and administrative capacity through increased investment in human resources with training for bureaucrats and policy makers related to climate change issues and strengthen funding mechanisms, including through international funding schemes such as the Green Climate Fund (GCF). And Improving Transparency and Public Participation through involving the public in the decision-making process to increase policy legitimacy and developing mechanisms for public consultation and education on climate change.

4. CONCLUSIONS

The literature review shows that strong institutional capacity and stable political support are key factors in effective climate change policy implementation. Countries with good governance systems, strong coordination among stakeholders, and pro-environment political leadership are better able to adopt ambitious climate policies. However, challenges such as political inequality, industry lobbying and resource constraints are still obstacles that need to be overcome. Therefore, policy recommendations that can be considered include:

a) Institutional strengthening and clearer regulations to improve climate policy effectiveness.
b) Improved multi-level governance coordination to strengthen cooperation between the central government, local governments, and the private sector.
c) Increase public awareness and participation in environmental decision-making.

Further research is needed to examine how institutional reforms can improve the effectiveness of climate change policies, especially in developing countries. The analysis shows that institutional capacity plays a crucial role in the success of climate change policies. Countries with strong institutions, stable regulations, and good coordination among stakeholders are better able to face climate change challenges. However, barriers such as policy fragmentation, political and economic influences, and low public participation are still major challenges.

To improve institutional capacity in climate change, strategies such as strengthening policy coordination, increasing human and financial resources, and increasing transparency and public participation are needed. The implementation of these strategies is expected to increase the effectiveness of climate policies in the long run.

REFERENCES

Biermann, F., Pattberg, P., van Asselt, H., & Zelli, F. (2009). The fragmentation of global governance architectures: A framework for analysis. Global Environmental Politics, 9(4), 14–40. https://doi.org/10.1162/glep.2009.9.4.14

Carter, N. (2018). The Politics of the Environment. Cambridge University Press. https://doi.org/https://doi.org/10.1017/9781108642163

Dryzek, J. S., & Stevenson, H. (2011). Global democracy and earth system governance. Ecological Economics, 70(11), 1865–1874. https://doi.org/10.1016/j.ecolecon.2011.01.021

Duit, A., Galaz, V., Eckerberg', K., & Ebbeson, J. (2010). Introduction Governance, complexity, and resilience. Global Environmental Change, 20(3), 363–368. https://doi.org/https://doi.org/10.1016/j.gloenvcha.2010.04.006

Gupta, J., Bergsma, E., Termeer, C. J. A. M., Biesbroek, G. R., van den Brink, M., Jong, P., Klostermann, J. E. M., Meijerink, S., & Nooteboom, S. (2016). The adaptive capacity of institutions in the spatial planning, water, agriculture and nature sectors in the Netherlands. Mitigation and Adaptation Strategies for Global Change, 21(6), 883–903. https://doi.org/10.1007/s11027-014-9630-z

Hooghe, L., & Marks, G. (2003). Unraveling the central state, but how? Types of multi-level governance. American Political Science Review, 97(2), 233–243. https://doi.org/10.1017/S0003055403000649

Jänicke, M. (2005). Governing Environmental Flows: The Need to Reinvent the Nation State. International Conference "Governing Environmental Flows – Reinventing the State in Global Modernity", June 13-14 – Wageningen, The Netherlands. www.fu-berlin.de/ffu/

Jordan, A. J., Huitema, D., Hildén, M., Van Asselt, H., Rayner, T. J., Schoenefeld, J. J., Tosun, J., Forster, J., & Boasson, E. L. (2015). Emergence of polycentric climate governance and its future prospects. Nature Climate Change, 5(11), 977–982. https://doi.org/10.1038/nclimate2725

Keohane, R. O., & Victor, D. G. (2016). Cooperation and discord in global climate policy. Nature Climate Change, 6(6), 570–575. https://doi.org/10.1038/nclimate2937

Krause, R. M. (2011). Policy Innovation, Intergovernmental Relations, and the Adoptions of Climate Protection Initiatives. Journal of Urban Affairs, 33(1), 45–60. https://doi.org/https://doi.org/10.1111/j.1467-9906.2010.00510.x

Kronsell, A. (2015). Karin Bäckstrand and Annica Kronsell (2015) ' The Green State Revisited ' in Bäckstrand and Kronsell (eds) (2015) Rethinking the Green State . Environmental governance towards climate ... (Issue June).

Meckling, J., Kelsey, N., Biber, E., & Zysman, J. (2015). Winning coalitions for climate policy. Science, 349(6253), 1170–1171. https://doi.org/10.1126/science.aab1336

Meyfroidt, P., Roy Chowdhury, R., de Bremond, A., Ellis, E. C., Erb, K. H., Filatova, T., Garrett, R. D., Grove, J. M., Heinimann, A., Kuemmerle, T., Kull, C. A., Lambin, E. F., Landon, Y., le Polain de Waroux, Y., Messerli, P., Müller, D., Nielsen, J., Peterson, G. D., Rodriguez García, V., … Verburg, P. H. (2018). Middle-range theories of land system change. Global Environmental Change, 53(November), 52–67. https://doi.org/10.1016/j.gloenvcha.2018.08.006

Ostrom, E. (2020). Beyond markets and states: Polycentric governance of complex economic systems. Shaping Entrepreneurship Research: Made, as Well as Found, 100(June), 353–392.

Stokes, L. C. (2020). Short Circuiting Policy: Interest Groups and the Battle Over Clean Energy and Climate Policy in the American States. Oxford University Press. https://doi.org/https://doi.org/10.1093/oso/9780190074258.001.0001

The Intergovernmental Panel on Climate Change (IPCC). (2021). The Intergovernmental Panel on Climate Change.