

The Role of Indonesia's G20 Presidency in Global Environmental Governance

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Abstract

The buildup of global emissions in the Earth's atmosphere is making the problem of climate change more concerning. This has to do with how nations all over the globe are susceptible to the consequences of climate change brought on by greenhouse gas emissions. Countries are working together internationally to address these effects. During Indonesia's G20 Presidency in 2022, the G20 has made the energy transition a major topic of debate as a worldwide forum for the exchange of information and working together. Secondary sources provided the data for this study, which used qualitative research methodologies. In order to clarify Indonesia's G20 Presidency's significance in this domain, this paper also takes a global environmental governance stance. The study's findings show that the Just Energy Transition Partnership (JETP) and the Energy Transition Mechanism (ETM), two crucial agenda items for the advancement of global environmental governance in the energy sector, were produced in large part during the 2022 G20 meeting, of which Indonesia was either the host or the presidency.

Keywords: *Climate Change, Global Environmental Governance, Energy Transition, G20.*



A. INTRODUCTION

The subject of climate change is now one of the most significant challenges that the world is facing. In relation to this issue, international accords like the Kyoto Protocol and the Paris Agreement are employed to reduce greenhouse gas emissions worldwide (UNFCCC, 2021). According to a World Economic Forum (WEF) perception poll, there will be risks linked with the long-term impacts of climate change throughout the course of the next 10 years. In order to reduce emissions of greenhouse gases and to make the transition to renewable energy sources with greater efficiency, efforts must be made to address the danger of climate change via coordinated mitigation and adaptation (WEF, 2023).

Since common objectives are easier to accomplish, comprehensive partnerships may be used to implement mitigation and adaptation to address climate change on a global scale. The environment was given high attention during the 2022 G20 conference due to the complicated and urgent nature of climate change. This is also due to the fact that G20 nations utilize 80% of the world's energy, making them vital in the fight against climate change brought on by growing global warming (Fauzi et al., 2023) Having served as both the host of the discussion conference and the president of the G20, Indonesia is a representation of the political and economic power that exists amongst nations. Because of the crucial role that the G20 plays, which together accounts for sixty percent of the world's population, eighty percent of worldwide investment, eighty-five percent of the global economy,

and seventy-five percent of international trade, this is the case (International Energy Agency, 2015).

Indonesia's selection as the G20 president or host in 2022 is noteworthy since it shows the country's ongoing dedication to furthering environmental agendas across the world. Indonesia suggested the theme *Recover Together, Recover Stronger* for its 2022 G20 presidency, which reflected three primary agendas: first, supporting the global health architecture. This is predicated on the fact that, as of 2022, nations all over the globe are still dealing with the COVID-19 epidemic and are fully aware of its profound effects on their economies, societies, and political systems. Thus, it makes sense that the global health architecture is one of the primary objectives of the Indonesian Presidency at the G20. The digital economy's transition is the second item on the agenda. The energy transition is another item on the present agenda, which highlights the significance of international collaboration in addressing climate change challenges, particularly the execution of energy transition initiatives. As the host nation for the G20 forum on climate and environmental sustainability, Indonesia hosted a number of meetings the Joint Environment and Climate Ministers Meeting (JECMM) of Environment and Climate Ministers in the G20 forum (Tutik, 2022).

A subject of debate on the global climate change agenda at the G20 meetings is the problem of climate sustainability. This issue pertains to the advancement of greenhouse gas emission reduction (mitigation) agendas, which are also tied to global governance. The purpose of this research is to investigate the effects that Indonesia's presidency of the G20 has had on the governance of the environment on a worldwide scale, with a particular emphasis on the results of the G20 conference. In several previous studies, many have discussed the Indonesian G20 Presidency in several aspects, such as the opportunity to increase global economic connectivity (Djuyandi et al., 2026) and Indonesia's influence in diplomacy between developing and developed countries in the forum (Sudiarto et al., 2024) as well as the benefits obtained by Indonesia itself from holding the G20 forum along with the challenges that will be faced in the process of organizing it (Pratama et al., 2022; Putri, 2020; Saputra & Ali, 2021; Solechah & Sugito, 2023; Sukawiyana et al., 2022; Yanthi et al., 2022) then other studies also highlight the political aspects of the Indonesian G20 presidency which is said to only carry out neoliberal policies and authoritarian tendencies and Indonesia's national interests (Al-Fadhat, 2022; Maksum et al., 2024). Despite this, there has not been a single study that has been carried out that explores the impact that Indonesia's G20 Presidency has on the governance of the global environment. As a result, this research will fill a gap in the current body of literature on this topic.

B. METHOD

Qualitative research is the approach that was used in order to provide an explanation for the phenomena that was being investigated. Qualitative research was used as a method because it is based on phenomenology, an approach to

understanding the meaning of an event or behavior being studied by the researcher, making this research descriptive and narrative (Maykut & Morehouse, 1994). Data were collected from secondary sources, including literature reviews, articles, official government reports, news, and other sources.

C. RESULT AND DISCUSSION

1. Environment as a Contemporary Issue in International Relations

Politics among nations is a prime example of the classic, realist approach to international relations theory that ignores environmental concerns. In this approach, the natural environment is seen purely as a fixed contextual aspect or constituent of state power. In spite of this, academic studies of the environment in international relations have developed over the course of the last thirty years as a result of attempts to comprehend the conditions that are necessary for successful international cooperation to take place. Treaties pertaining to the environment have a tendency to have a liberal institutionalist posture, with the fundamental impetus being the emphasis placed on the mutual advantages that result from developing cooperative solutions. As a result of the preceding conversation, it is abundantly obvious that environmental concerns have attained an increasingly significant position on the agenda of international organizations. At this point in time, climate change is largely regarded as being at least as significant as any other issue that mankind is now facing, and it is even probably the most significant. Globalization is intimately connected to the rise of environmental problems because it places a pressure on the carrying capacity of the Earth by increasing consumption levels, depleting resources, and increasing emissions of greenhouse gases and other gases (Baylis & Smith, 1999).

It is essential for international environmental cooperation to have a common understanding of scientific principles, as shown by the existence of a number of modern environmental regimes. It was an early framework agreement that expressed concern and set methods for producing and exchanging new scientific data. This convention also provided a foundation for action via 'control' protocols, as represented by the worldwide framework. When considered in the context of global environmental concerns, climate change poses a significant risk to substantial alterations in living circumstances, as well as challenges to patterns of energy use and security. In spite of the fact that its severity is often hidden by ongoing global difficulties, such as the economy, almost no aspect of international relations continues to be untouched. Additionally, globalization has made it easier for non-governmental groups to engage in transnational green politics and interventions and the execution of agreements by governments and international reaction to environmental change has centered on the regulation of global environmental governance via extensive collaboration among members of the international community (Baylis et al., 2020).

2. Global Environmental Governance

The topic of ecological degradation has been brought to the forefront of the agenda at the international level throughout the course of the last few decades as a result of environmental concerns that have occurred on a global scale. Environmental challenges that cross international boundaries cannot be managed by a single party alone; rather, they need unprecedented multilateral cooperation in order to establish institutions that can control behavior in a way that is consistent with sustainable development. This is because environmental concerns are complicated by the fact that they include several countries. Despite the fact that there have been examples of effective cooperation based on international norms, there are still significant difficulties that have not been addressed, such as the issue of climate change (Vormedal, 2010).

The term "global" may be used to characterize environmental and political shifts that are taking place on all levels, both geographical and social, in the context of the discussion on global environmental politics. The varied degrees of environmental change, as well as the varying degrees of causation, influence, and reaction related to those changes, bring to light the role that politics plays at every level. Some local environmental issues, for instance may be solved by local action, such as when a community takes regulatory measures to prevent pollution or safeguard local natural resources. This is an example of how local action can tackle environmental issues. In addition, there are environmental issues that are regional in nature, meaning that they extend over national and provincial borders or even across seas. These issues need policy solutions from many towns or national governments. It is necessary for states to cooperate in order to design and execute policies, as well as to demand action from a greater variety of subnational government entities and from non-state players acting on a global scale, such as multinational enterprises and international non-governmental organizations (Harris, 2014).

In the context of the natural environment, the word "environment" refers to the human dimension of the natural environment. This includes human causes of environmental change, pollution, and resource consumption, as well as human ways to addressing, trying to solve, or avoiding environmental issues and resource shortages. At its most basic level, term "environment" in the context of global environmental politics is synonymous with the term "ecology," which refers to the natural system, which encompasses people and the impacts they exert, and often refers to the interplay that exists between humans and the environment in the context of governance. In some ways, the environment in global environmental politics is also about managing the natural environment, which is synonymous with global environmental management. This implies that genuine global collaboration is required in order to guarantee an ecologically sustainable future for all people, regardless of where they are located (Harris, 2014).

When it comes to the subject of interstate cooperation for the aim of alleviating global environmental concerns, one of the most important areas of

research is the process by which institutional arrangements come into existence and advance. Institutions, in general, are collections of norms and practices that link and define behavioral roles, shape expectations, and constrain behaviors. Institutions also influence and limit behaviors. These are the qualities that serve as the foundation of institutions. According to research that was released not too long ago, it has been shown that private actors, which may include businesses, business networks, or industries, play a key role in the process of formulating international rules. For the purpose of illustrating how private entities may influence, aid, or even prevent conversations between governments, a growing collection of empirical and more theoretically oriented studies has been examining various sorts of commercial power that exist inside regimes. These studies have been carried out in addition to the empirical research that has been carried out. One of the most important sources of pressure that has been exerted on companies to lessen the negative impact that they have on the environment is the creation of environmental laws and governance structures that are implemented on several levels. This is as a result of the fact that environmental regulations often come with large expenses associated with compliance and have a significant influence on businesses that accept responsibility for their actions. There is a big trend that has substantial ramifications, and that is the growing support, both from the general public and from political figures, for the control of greenhouse gases, which are components of climate change (Carter, 2001).

The expansion of the international environmental agenda has prompted a reinterpretation of human rights and the notion of sovereign states exercising territorial control over their natural resources, resulting in a significant proliferation of international institutions, the formulation of regulations, and the establishment of various bodies of international environmental law (Falkner, 2017).

Multilateral environmental agreements as well as a variety of protocols and conventions that control the transfer of hazardous wastes and chemicals across international borders. These are all notable instances of multilateral environmental accords. In the process of creating environmental standards, the Earth Summit played a significant role. In addition, the Stockholm Conference of 1972 resulted in the formulation of "Principle 21," which incorporated the concept of state responsibility for external contamination with the concept of sovereignty over national resources. The globally agreed-upon principles for environmental practices have shown to have a significant influence and continue to serve as a reference point for the Sustainable Development Program, despite the fact that their usefulness was first called into doubt owing to the fact that they were not legally obligatory (Carter, 2001).

Increased efforts are being made by nations to reduce the emissions of greenhouse gases that are produced by industry. Regulations that influence carbon pricing have been enacted at the municipal, national, regional, and worldwide levels. These regulations have therefore affected energy costs and availability, which has resulted in friction across the corporate value chain. Regulatory concerns are greatly increased as a result of this, and it also indicates that a market transformation

is about to occur, during which greenhouse gas emissions will likely become an expensive enterprise. Over the course of the last ten years, the "greening" of strategic business management has been largely driven by the increasing pressure that is being exerted on the sector. Throughout the course of history, it has been shown that proposals for further environmental regulations are likely to be greeted with fierce and concerted opposition by responsible business associations. If there is no alternative or technology solution that is either accessible or financially possible, environmental regulations that enforce controls on emissions of hazardous chemicals from industrial activities often impose substantial compliance costs on large emitters. In the event that there is no other possibility or technological remedy available, this is the situation that will occur. Companies that are strongly dependent on the emissions of hazardous chemicals face a substantial threat to their business models and, in some instances, even their very existence as a result of the new environmental rules that are being proposed. This is because of the current situation (Dyer, 2001).

3. The Importance of the Energy Sector for G20 Member Countries

It is important to have access to energy in order to accomplish long-term economic growth, employment, and environmental sustainability. This is because various nations have distinct market pressures, technologies, and laws, which in turn leads to varying patterns in the relevance of employing renewable energy sources. It is feasible for nations to be shielded from the lock-in effect of intense economic development brought on by greenhouse gas emissions if they make investments in renewable energy via innovation, risk mitigation, and the implementation of regulatory frameworks that are supportive of the endeavor. This can contribute to development paths that are both environmentally acceptable and economically sustainable. Not only do the nations that make up the G20 account for a significant portion of the world's population, but they also contribute a sizeable portion of the pollution that is caused by greenhouse gases. In light of this, the nations who are members of the G20 are taking tangible steps to eliminate fossil fuels from their economy. A transition to a more equitable energy system might be implemented in order to accomplish this goal. This is something that could be done. This category includes a number of different initiatives, some of which are as follows: overcoming the dominance of regimes that are reliant on fossil fuels; diversifying economies; providing financial assistance for transition; and boosting international cooperation. In order to move the energy regime toward a low-carbon route, the nations that make up the G20 are attempting to improve governance. Additionally, they are investigating policies to diversify their economies, deploying suitable instruments for transition financing, and coordinating and synchronizing global efforts for a fair energy transition, for the reasons that were discussed before (Fang, 2023).

The states who are members of the G20 are accountable for more than 83 percent of the world's greenhouse gas emissions, and 19 of those nations have

pledged to achieve net-zero emissions inside their own borders so that they can fulfill their obligation. This is because the energy sector is accountable for 76 percent of the emissions that these countries emit. This is the reason why this is the case. As a result of this, in order for the G20 countries to accomplish their objective of attaining net-zero emissions, they need to eradicate fossil fuels as quickly as possible. Taking into consideration the fact that the G20 countries are accountable for the production of 85 percent of coal, 64 percent of crude oil, and 65 percent of fossil gas, this is of the highest significance. In the meanwhile, the countries who are members of the G20 have shown that they are dedicated to making the transition to renewable energy (International Energy Agency, 2015).

While this is going on, the international community needs to make sure that by the year 2030, people have access to energy that is more inexpensive, dependable, contemporary, and sustainable. Given that more than one billion people throughout the world do not have access to electricity and that over three billion people depend on traditional biomass for cooking, this continues to be a significant concern on a worldwide scale. The Group of Twenty (G20), which is made up of major industrialized and developing countries, is organization that plays an important role in this regard. It is the engine that propels the movement toward sustainable energy on a global basis, which is a shift that is desperately required. A significant number of energy producers and consumers, in addition to significant players in international organizations, are included in this category. The nations who are members of the G20 are responsible for eighty percent of the total primary energy consumption in the world and eighty-two percent of the worldwide CO₂ emissions that are connected to energy. In its capacity as a high-level political forum, the G20 has the potential to be an influential agenda-setter and to give leadership in the field of global environmental governance, notably in the field of energy. In addition, the choices and actions taken by the nations that make up the G20 have the potential to dramatically impact the energy system that is used all over the world. Over the course of the last several years, the G20 energy agenda has undergone significant changes. The momentum of the Sustainable Development Goals was exploited by Germany during its presidency of the G20 in 2017 and by its successors in order to propel G20 action towards a global energy system that is both sustainable and decarbonized (Fang, 2023).

Accelerating the transition will be accomplished by enhancing governance mechanisms at both the national and subnational levels in order to ensure a fair transition to solar energy. Additionally, the institutionalization of suitable governance institutions is essential to this endeavor, as is the political will and commitment to do this. In the context of the energy transition, the governance structures that are now in place in the energy sector need to be altered. This is because many of these structures are built to depend on carbon-intensive and energy-depleting fossil fuels, which makes it necessary to implement low-emission energy solutions. For instance, in spite of the Glasgow Climate Pact of 2021, which committed signatories to the elimination of inefficient subsidies, countries continued

to spend a significant amount of money on fossil fuel subsidies. This was especially true in 2022, when the prices of fossil fuels became unstable as a result of geopolitical conflicts and the demands of post-pandemic recovery (Fauzi et al., 2023).

One possible form that a change in energy regime may take is the form of a collaborative governance organization that is vested with the primary power to direct and coordinate actions pertaining to the energy transition. It will be possible to manage the energy transition in a more efficient manner as a result of this. A specialized multi-ministerial task force or a joint working group of governmental and non-governmental stakeholders might be established by G20 nations, depending on the situation of the country. The purpose of this group would be to coordinate efforts for a fair energy transition. Within regions and countries that are responsible for the production of fossil fuels, there is a pressing need for economic diversification in light of the pace of the global energy revolution. This is necessary in order to provide meaningful employment opportunities, maintain local economies, and guarantee the stability of the national macroeconomic system. In order for this process to be equitable and sustainable, it is vital for those who create policy and those who invest to take into mind a number of important aspects (Linsenmeier et al., 2022).

The Group of Twenty (G20) is in a strong position not only to facilitate the transmission of information between nations about the diversification of economies in areas that produce fossil fuels, but also to consolidate the interactions that take place between the G20 working groups concerning energy transition, development, and employment. To make it possible for a global transformation to be fair, international collaboration and solidarity are absolutely necessary. Nations who are less reliant on the production of fossil fuels and have a larger ability to make the transition should take the initiative to phase out the production of fossil fuels, while offering help to nations that are more dependent on fossil fuels but have a lesser capacity. When it comes to this matter, the G20 is in an excellent position to offer leadership. When it comes to pushing the climate and energy agenda on a global scale, international collaboration, such as that which occurs inside the G20, has the potential to be a powerful agent of change. This acts as a supplement to other international groups. The G20 has the potential to contribute to the formation of the worldwide energy transition agenda in a number of different areas (G20, 2015).

4. The Development of Energy Agendas within the G20

It is possible that the beginning of the formation of the G20 energy agenda today may be traced back to the beginning of energy action under the United States Presidency in 2009. At that time, G20 nations announced their intention to phase out subsidies for fossil fuels that are both inefficient and harmful. Since that time, the Group of Twenty (G20) has continued to collaborate with various energy organizations in order to exchange information and keep track of the gradual phase-out of subsidies for fossil fuels. An approach to conducting peer evaluations on a voluntary basis was approved by the G20 in 2013. The functioning of oil markets

was the subject of a second area of energy cooperation that was addressed in the early context of the G10. Additionally, this was supplemented by programs that encouraged openness, such as the Joint Organizations Data Initiative (JODI), with the goal of acquiring more accurate data on oil and gas markets and gaining a deeper understanding of the institutions (Roehrkasten et al., 2016).

Since Mexico assumed the chair of the G20 in 2012, the organization has adopted a more all-encompassing strategy for tackling issues, particularly those that are associated with energy. It was in 2015, while Turkey was serving as the G20 Presidency, that the very first meeting of the G20 Energy Ministers took place. In 2014, the Group of Twenty (G20) published its first Action Plan, which focused on the subject of energy efficiency as its primary focus. The scope of collaboration on energy efficiency was expanded even further in the year 2016, thanks to the G20 Energy Efficiency Leading Program, which, among other things, encompasses eleven significant areas for multi-country-led cooperation. In order to guarantee that energy efficiency is governed in an appropriate manner, the G20 has given its approval for the establishment of an international partnership for the purpose of promoting energy efficiency cooperation. Around the same time that Turkey was acting as the G20 Presidency in 2015, the Energy Access Plan was approved by the countries that were members of the G20. The plan's primary emphasis was on Sub-Saharan Africa. The Asia-Pacific area was one of the regions that participated in the expansion of cooperation on energy access during China's presidency of the G20 in 2016. One of the most important aspects of any action taken by the G20 in relation to renewable energy is the voluntary choice instrument, which was developed and approved by the countries that make up the G20 in the year 2015 (Roehrkasten et al., 2016).

5. The Role of Indonesia's G20 Presidency in Global Environmental Governance

A collective effort on the part of the G20 nations may facilitate the creation of an energy system that is both environmentally friendly and low in carbon emissions by providing a major boost to the process. This is made abundantly clear by the first actions that have been done when the G20 energy agenda was initially introduced in 2009. Workstreams have been established by the Group of Twenty (G20) to address some of the most significant difficulties that are associated with the transition to sustainable energy. The abolition of subsidies for fossil fuels, energy efficiency, equitable access to energy, and renewable energy are some of the subjects that fall under this category. Both the Sustainable Development Goals (SDGs) and the Paris Agreement are essential steps that must be made in order to address the issue of climate change. However, even in the rapidly developing sector of renewable energy production, the progress that has been witnessed is merely the first step toward the establishment of an energy system that is both energy-efficient and low in carbon emissions. It is possible that extra impetus might be provided by strengthening ties with global climate mitigation efforts and putting sustainable energy into the

fundamental financial and economic policy channels of the G20. A collection of industrialized nations and developing powers that are indicative of the world's energy futures are brought together by the G20 (Putri, 2020).

It is possible that each and every action that the G20 takes has the ability to make a difference in terms of the global energy renewal and emissions of greenhouse gases. This is due to the fact that, within the context of the global energy system, the G20 member states play an important role. In addition to having a substantial impact on the formulation of foreign policy, reaching a consensus on such a joint action has a huge signaling effect on the world stage. Because of this, the G20 is a perfect platform for devising and directing policies on the energy transition, complementing institutions that are already in place, and strengthening coherence in the global energy architecture. When performing this job, it is necessary to take into consideration and coordinate national policies, in addition to promoting international collaboration (International Renewable Energy Agency, 2016).

Both the Just Energy Transition Partnership (JETP) and the Energy Transition Mechanism (ETM) schemes are tangible results of Indonesia's G20 Presidency. These schemes commit to funding the energy transition, with the JETP reaching \$20 billion, which is equivalent to 310 trillion rupiah, and the ETM reaching \$250-300 million, which is equivalent to 3.87 trillion rupiah. Over the course of the G20 Leaders' Summit that took place in Bali, Indonesia and a number of other important countries joined together to establish the Energy Transition Partnership. This partnership represents a significant step forward in international collaboration to fund the transition to renewable energy in poor nations. A kind of international collaboration of this kind is required in order to assist in financing the transition to a new energy source in underdeveloped nations. As a result, the Energy Transition Partnership may be seen as a significant landmark in the beginning of a new age of worldwide climate cooperation, which is a component of global environmental governance (Andayani et al., 2022).

In an effort to achieve Net Zero Emissions, Indonesia has developed an Energy Sector Roadmap. This roadmap demonstrates Indonesia's commitment to achieving peak emissions in the electricity sector by the year 2030. This will put Indonesia on track to achieve Net Zero around the year 2050. Other key elements of the roadmap include the importance of early scale-up of renewable energy sources such as geothermal, wind, hydro, solar, and bioenergy, as well as the urgency of early scaling up of renewable energy sources. Additionally, the roadmap emphasizes the importance of international support to finance these pathways and ensure the energy supply that Indonesia requires in order to take advantage of transition economic opportunities in areas such as minerals and clean energy technology. Therefore, in the future, Indonesia will serve as a model for other nations to follow in order to pursue energy transitions within the framework of the Energy Transition Partnership, which is a result of Indonesia's presidency of the G20 in terms of environmental governance. Furthermore, the G20 established the Bali Energy Transition Roadmap in 2022, while Indonesia was serving as the G20

Presidency. This road map outlines critical goals for a fair energy transition, such as the development of sustainable energy technology, the provision of energy access, and the financing and investment of energy. In order to put this priority into action, the nations who are members of the G20 have committed to adopting principles and guidelines for a fair and inclusive energy transition. This is part of the efforts that are being made to progress the energy transition within the context of global environmental governance, with a particular emphasis on power generation (International Renewable Energy Agency, 2016).

D. CONCLUSIONS

The Group of Twenty (G20) is a group that reflects the position of global political and economic forces. It is intimately connected to its member nations, who together account for a significant portion of the world's population and economy and also contribute to the rise in emissions of greenhouse gases. In response, nations who are members of the G20 are taking real steps to cut emissions of greenhouse gases via the transition to a more energy-efficient system. Within the context of the G20 summit, the impetus that Indonesia's presidency of the G20 in 2022 offers is essential for the cooperation framework that the G20 member nations have established in order to mainstream the energy industry via the establishment of the energy transition as a significant agenda item, it emphasizes the significance of addressing challenges related to climate change via partnerships between nations, including cooperation within the framework of Global Environmental Governance in the energy sector, in order to transition to renewable energy. The Indonesian Presidency of the G20 has a role as a high-level political forum that is a strong agenda setter and carries out leadership in Global Environmental Governance. This is particularly true in the energy sector through the Just Energy Partnership (JETP) and Energy Transition Mechanism (ETM), which are decisions and actions of G20 countries that have the capacity to significantly influence the global energy system within the framework of Global Environmental Governance. In this regard, the Indonesian Presidency is a significant player in the field of Global Governance.

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