

**INDONESIA'S CONTRIBUTION TO THE DEVELOPMENT OF  
INTERNATIONAL CLIMATE LAW  
(JUDICIAL ANALYSIS OF THE IMPLEMENTATION AND  
DEVELOPMENT OF INTERNATIONAL CLIMATE LAW IN THE RIAU  
ISLANDS PROVINCE REGION)**

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**Abstract**

*The Indonesian state has made an important contribution to the development of international climate law by implementing efforts to reduce greenhouse gas emissions and protect environmental sustainability. By collaborating with other countries, Indonesia has also actively participated in negotiations on global agreements on climate change. Indonesia has also implemented regulations and programs for greenhouse gas emissions and deforestation, prioritizing ecosystems, which aim to improve ecosystem balance through sustainable forest and land management. Indonesia has pledged its commitment to overcoming climate change, remembering that Indonesia has peat soil and is rich in natural energy sources that can be used as renewable energy sources, developing renewable energy is a substitute for reducing fossil fuels that trigger greenhouse gas emissions. Indonesia has also developed an action concept aimed at reducing emission problems by up to 29% by 2030. RAN GRK is integrated through national agendas such as Nawacita and RAN (National Action Plan). In conducting research, the author uses normative legal research methods by accumulating information in the form of legal products. And with cooperation from developed countries as the largest contributors to gas emissions, developing countries should be able to collaborate well in carrying out efforts to develop international climate legislation.*

**Keywords:** *climate change, contribution, greenhouse gases*

**A. Background**

Development and various types of activities carried out by countries in the world have positive and negative impacts on the environment. One of them is the problem of global warming resulting from the effects of greenhouse gases which is often the subject of discussion and the main problem that must be resolved. The industrial revolution of the times was the initial stage of the use of machines that used steam power.<sup>1</sup> The increasingly rapid and modern development of the times also has an impact on the use of energy sources in combination with fossils,

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<sup>1</sup> Jatmiko Wahyudi, "Mitigasi Emisi Gas Rumah Kaca," *Jurnal Litbang: Media Informasi Penelitian, Pengembangan Dan IPTEK* 12, no. 2 (2016): 104–12, <https://doi.org/https://doi.org/10.33658/jl.v12i2.45>.

for example coal. As the economy grows, the use of natural resources increases, creating new challenges related to environmental sustainability.<sup>2</sup>

One of the countries that has an impact on the environment is Indonesia. Indonesia is known to have a fairly high potential for natural disasters, around >75 percent) namely hydrometeorological disasters related to climate and dynamic changes, including floods, landslides, droughts and extreme weather (Marfai, Et Al, 2021). Indonesia also has an important contribution in developing international climate law. In 1992, Indonesia together with other countries signed the "*United Nations Framework Convention on Climate Change (UNFCCC)*". This convention stipulates that the creation of a framework aims to mitigate the impacts of global climate change. Indonesia is also a country that is active in negotiating to reach a global agreement on climate change. It is hoped that with this policy a solution can be found to reduce the environmental impacts resulting from clearing peatlands.

The commitment of the Indonesian State to carrying out sustainable development can be seen through various efforts, one of which is validation, including Ratification *Kyoto Protocol to the United Nations Framework Convention on Climate Change*. Indonesia is one of the countries that signed the Kyoto Protocol in 1997. Through the Kyoto Protocol, the countries involved agreed to reduce greenhouse gas emissions within a certain period and targeted it for developed countries, even though Indonesia is a developing country and is not required to do so reduction of greenhouse gas emissions. Indonesia's commitment to providing support to developed countries in carrying out cooperation *Clean Development Mechanism (CDM)*. *Clean Development Mechanism (CDM)* or what is called the Clean Development Mechanism is the mechanism below *Kyoto Protocol* explained in Article 12 has the potential to promote environmentally friendly investment by involving the governments of industrial countries. In implementing the clean development mechanism, it also involves developed countries so that an agreement can be reached on participating in the agreement *Kyoto Protocol*.

*Paris Agreement* is an international agreement signed at the climate conference *United Nations Framework Convention on Climate Change (UNFCCC)* in 2015 in Paris, France. The Indonesian state has an important role in the formation of the Paris Agreement. In the agreement, Indonesia is committed to reducing greenhouse gas emissions by 29% by 2030, with international support. Apart from that, Indonesia is also active in gathering international support for developing countries in efforts to overcome the impacts of climate change. Overall, Indonesia has made a significant contribution to the development of international climate law. In an effort to overcome climate

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<sup>2</sup> Luthfi Parinduri, Yusmartato, and Taufik Parinduri, "Kontribusi Konversi Mobil Konvensional Ke Mobil Listrik Dalam Penanggulangan Pemanasan Global," *JET (Journal of Electrical Technology)* 3, no. 2 (2018): 116–20.

change, Indonesia continues to increase international commitment and cooperation, as well as implementing national policies to reduce greenhouse gas emissions and overcome the impacts of climate change.

The condition of the Riau Archipelago Province, which consists of thousands of islands and the majority of them are oceans, means that unpredictable seasonal changes each year have a direct impact on the people. Both local farmers have a little difficulty determining the harvest period because of seasonal changes that occur which also have an impact on food security. Unpredictable rainfall and varying intensity pose serious challenges in determining the right time for planting and harvesting agricultural products. Thus, local farmers must adapt to this uncertainty, which can result in instability in food production and have a direct impact on the food security of local communities. Apart from that, seasonal changes that are difficult to predict also affect the entry and exit of foodstuffs and primary needs of people from outside the Riau Islands Province who depend on sea transportation due to extreme weather which has an impact on the non-operation of ships carrying these needs. However, overall the background of the Indonesian State's support for international climate development in the Riau Islands Region includes factors such as vulnerability to climate change, the country's personality, the negative impacts of deforestation and greenhouse gas emissions, as well as awareness of the importance of the environment. This is what prompted the author to conduct research with the title "Indonesia's Contribution to The Development of International Climate Law (Judicial Analysis of The Implementation and Development of International Climate Law In The Riau Islands Province Region)".

## B. Identified Problems

Based on problem identification, the author formulates several problems as follows:

1. What is the contribution to the implementation of the development of international climate law by the Government of the Republic of Indonesia in the Riau Islands Province region?
2. What output do the people of Riau Islands Province feel from the contribution of the Government of the Republic of Indonesia in developing international climate law?

## C. Research Methods

The research method used in this research is a normative legal research method, which involves technical analysis of qualitative data through analyzing the logic of thinking deductively.<sup>3</sup> This research adopts two main approaches, namely the statutory approach (*statue approach*) and conceptual approaches

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<sup>3</sup> Hadari Nawawi, *Metode Penelitian Bidang Sosial* (Yogyakarta: Gadjah Mada University Press, 2010).

(*conceptual approach*). In a legislative approach, this research will examine various legal norms related to the contribution of the Indonesian State to the Development of International Climate Law. Meanwhile, a conceptual approach is used to explore the basic concepts underlying the implementation of climate law at the international level. This method aims to produce legal behavioral products and conduct an assessment of the implementation of the Indonesian State's contribution in the context of International Climate Law Development. Using a qualitative approach, this research will explore the analysis of various aspects of related legislation, as well as the conceptual concepts that form the basis of Indonesia's climate policy. This approach allows researchers to understand the legal context comprehensively and identify potential improvements or further development in order to increase Indonesia's contribution to the issue of climate change globally.

#### D. Research Findings and Discussion

##### 1. Contribution to the Implementation of International Climate Law Development by the Government of the Republic of Indonesia in the Riau Islands Province Region

As an archipelagic country with more than 17,000 islands, Indonesia is very vulnerable to climate change which has serious impacts related to ecosystem sustainability, food production and public health in Indonesia. Compliance with international agreements as a sovereign and independent country, Indonesia has the responsibility to comply with international agreements, including agreements on climate change. By ratifying and implementing these agreements, Indonesia shows its commitment to working with other countries in overcoming climate change.<sup>4</sup>

The contribution of the Indonesian State to the Development of International Climate Law has been quite significant. As a developing country with a large population and economy, Indonesia has played an important role in the international climate law negotiation process. Some of Indonesia's contributions include signing the Paris Agreement in 2015, which established a global commitment to limit global temperature rise to below 2 degrees Celsius. This signature reflects Indonesia's commitment to actively participate in global climate change mitigation efforts.<sup>5</sup> Capacity building also The Indonesian government has taken steps to increase the country's capacity to overcome climate change. Indonesia has

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<sup>4</sup> Nunu Anugrah, "Perkembangan NDC Dan Strategi Jangka Panjang Indonesia Dalam Pengendalian Perubahan Iklim," Kementerian Lingkungan Hidup dan Kehutanan Pejabat Pengelola Informasi dan Dokumentasi, 2021, <https://ppid.menlhk.go.id/berita/siaran-pers/5870/perkembangan-ndc-dan-strategi-jangka-panjang-indonesia-dalam-pengendalian>.

<sup>5</sup> Faris Faza Ghaniyyu and Nurlina Husnita, "Upaya Pengendalian Perubahan Iklim Melalui Pembatasan Kendaraan Berbahan Bakar Minyak Di Indonesia Berdasarkan Paris Agreement," *Morality : Jurnal Ilmu Hukum* 7, no. 1 (2021): 110–29, <https://doi.org/http://dx.doi.org/10.52947/morality.v7i1.196>.

introduced various policies and programs to promote renewable energy, reduce deforestation and support sustainable agriculture.<sup>6</sup>

In the area of Leadership at the regional level: Indonesia has also played a leadership role in promoting climate action at the regional level. As a member of ASEAN, Indonesia has taken the initiative to promote regional cooperation in overcoming climate change. Implementation of the Indonesian state's contribution to the development of international climate law can be directed into the National Medium Term Development Plan (RPJMN) and Nawa Cita as national development strategic goals. Some steps that can be taken include:<sup>7</sup>

a. Encouraging Sustainable Economic Development

Indonesia can encourage sustainable economic development by strengthening environmentally friendly sectors, such as renewable energy, environmentally friendly transportation and sustainable agriculture. This will help reduce greenhouse gas emissions and increase environmental resilience.

b. Strengthening Environmental Law Enforcement

Indonesia can strengthen environmental law enforcement by increasing the capacity and effectiveness of law enforcement. This will help protect the environment from damage and destruction caused by illegal and irresponsible practices. Encouraging Green Technology Development. Indonesia can encourage the development of green technology by providing incentives and support for environmentally friendly technological innovation. This will help reduce greenhouse gas emissions and increase resource efficiency.

In terms of implementing Indonesia's contribution to the development of international climate law into the RPJMN and Nawa Cita, Indonesia must prioritize environmental and climate issues as an integral part of national development. In this case, policies and programs related to the environment and climate must be integrated into medium-term and long-term development plans, and given the same priority as other development sectors. In this way, Indonesia can make a greater contribution to the development of international climate law and maintain environmental sustainability for future generations.<sup>8</sup>

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<sup>6</sup> Gindo Leontinus R. Siringoringo, "Program Dalam Pelaksanaan Tujuan Pembangunan Berkelanjutan (SDGs) Dalam Hal Masalah Perubahan Iklim Di Indonesia," *Jurnal Samudra Geografi* 5, no. 1 (2022): 43–52, <https://doi.org/10.33059/jsg.v5i1.4652>.

<sup>7</sup> Kementerian Perencanaan Pembangunan Nasional Republik Indonesia/Badan Perencanaan Pembangunan Nasional, "Rencana Pembangunan Jangka Menengah Nasional 2020-2024" (Jakarta, 2020).

<sup>8</sup> Siringoringo, "Program Dalam Pelaksanaan Tujuan Pembangunan Berkelanjutan (SDGs) Dalam Hal Masalah Perubahan Iklim Di Indonesia."



Implementation of RAD-API (Regional Action Plan for Adaptation to Climate Change) in the Riau Islands Province is in accordance with Regional Regulation Number 7 of 2021 concerning the Batam City Regional Medium Term Development Plan for 2021-2026. By tackling the increasingly real impacts of climate change. The average annual rainfall in Batam City is around 2,600 mm per year. Increasing rainfall conditions and increasing the number of rainy days can cause climate change and global warming. The results of the 2019 Bappenas study confirmed that Riau Islands Province, including Batam City, is an area prone to being negatively impacted by climate change. For this reason, there needs to be collaborative and effectively coordinated efforts from various related parties, including local governments, to face this challenge. There are 17 national sustainable development goals *Sustainable Development Goals (SDGs)* and there are 12 goals related to climate, namely energy, forestry, food security and education. The 2020 to 2024 RPJMN states that climate change could pose a threat of hampering the national and regional development agenda. And in this case, cooperation and support from all parties related to development and local government are needed. The potential for economic losses due to climate change is a serious basis, with successive projections from 2020-2024, namely 102.36 trillion, 105.72 trillion, 112.19 trillion and 115.53 trillion. This reinforces the urgency to take preventive and adaptive action.

The Batam City Government, through its RPJMD for the 2021-2026 period, has established concrete programs as part of efforts to tackle climate change. One of the main focuses is preventing and overcoming impacts that may arise. In the context of the 2024 RPJMN national agenda, the RPJMD for the city of Batam sets out the mission of infrastructure development as a concrete step in facing climate change, which is in line with the vision of regional sustainability and resilience in facing this global challenge.

Regional Regulation Number 14 of 2014 concerning Environmental Protection and Management (PERDA 14/2014) and Batam Mayor Regulation Number 40 of 2022 concerning the Main Duties, Functions and Job Descriptions of the Environmental Service. "RAD-GRK" focuses on efforts to reduce greenhouse gas emissions and increase energy efficiency in the industrial and transportation sectors. Some examples of the implementation of "Greenhouse Gas RAD" in the Riau Islands include:

a. Emission Monitoring Program

The government launched an emissions monitoring program in the industrial and transportation sectors in the Riau Islands to monitor the level of problems that occur. This program aims to identify emission sources and take appropriate action to reduce emissions.

b. Increased Use of Renewable Energy

The government has also encouraged the use of renewable energy in the Riau Islands, such as solar and wind energy. This is expected to reduce the use of fossil fuels and encourage a transition towards more environmentally friendly energy sources.

c. Emission Reduction in Transportation

The government has also launched an emissions reduction program with a focus on vehicle improvements and incentives to switch to electric vehicles or alternative fuels.

In the lives of people in the Riau Islands, the Greenhouse Gas RAD program has had a positive impact in efforts to reduce greenhouse gas emissions. Some examples of the real impacts of implementing RAD for Greenhouse Gases in the Riau Islands include:

a. Making People Aware of the Impact of Climate Change

The RAD Greenhouse Gas Program has increased public awareness about the impacts of climate change and the importance of reducing greenhouse gas emissions. It is hoped that this will trigger people to care more about the environment and climate.

b. Reducing Greenhouse Gas Emissions

The implementation of the Greenhouse Gas RAD program in the Riau Islands has succeeded in reducing greenhouse gas emissions in the industrial and transportation sectors. This contributes to global efforts to reduce the impacts of climate change.

c. Encouraging the Use of Renewable Energy

The RAD Greenhouse Gas Program has also encouraged the use of renewable energy in the Riau Islands. This initiative not only helps reduce gas emissions, but also helps accelerate the transition to cleaner and more sustainable energy. Overall, the Greenhouse Gas RAD program has had a positive impact on the lives of people in the Riau Islands.

## 2. What the People of Riau Islands Province Feel from the Contribution of the Government of the Republic of Indonesia in Developing International Climate Law

Greenhouse gases (GHG) are gases that can absorb and reflect solar radiation back to the earth and produce a greenhouse effect, which can increase the earth's temperature and trigger climate change. Some examples of greenhouse gases include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and other gases such as nitrogen oxides (N<sub>2</sub>O) and fluorine gases (CFC).

The natural phenomenon of climate change, as a manifestation of the dynamics of the atmosphere and the changing conditions of the earth, has become the center of world attention because its impacts are increasingly felt. One aspect that complicates global climate balance is the greenhouse

effect (ERC), a natural process that involves the interaction between solar radiation and the earth's atmosphere. Solar radiation that reaches the earth's surface is then absorbed by soil, water and various other surfaces. However, some of this radiation is not directly heat, but is converted into heat and emitted back into the atmosphere in the form of heat radiation (Perdinan, 2020).<sup>9</sup>

The consequences of climate change currently being experienced in Indonesia include rising sea levels which can cause the disappearance of several small islands, destruction of coastal ecosystems due to tidal waves, reduction of small rice fields near the seashore, disruption of island relocation and disappearance of tourist attractions, islands and beaches. As a result of climate change by exploring various climate change conventions and participating in the signing and ratification of the Paris Agreement initiated by the UNFCCC (*United Nations Framework Convention on Climate Change*). The signing and ratification of the Paris Agreement on October 24, 2016, which was then formalized through Law of the Republic of Indonesia no. 16 of 2016 concerning the Ratification of the Paris Agreement, shows the Indonesian government's commitment to playing an active role in global efforts to overcome climate change.

In line with Article 28H of the 1945 Constitution which guarantees everyone's right to live in prosperity and have a good living environment, Indonesia responded concretely by recognizing the urgency of environmental protection and community welfare. The law also regulates controlling greenhouse gas emissions as a concrete step in maintaining environmental sustainability and programs such as the Greenhouse Gas RAN and the REDD+ program.

Indonesia also promotes reducing greenhouse gas emissions through efforts to deal with natural disasters, such as floods and landslides. This effort is carried out by improving disaster risk management and reduction, so as to reduce environmental damage and GHG emissions resulting from natural disasters. Overall, Indonesia's contribution to reducing greenhouse gas emissions is very important in global efforts to combat climate change. By implementing programs such as the Greenhouse Gas RAN and the REDD+ program

Contributions to international climate development can produce several impacts, such as:<sup>10</sup>

- a. Reducing the Level of Greenhouse Gas Emissions

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<sup>9</sup> Wahyudi, "Mitigasi Emisi Gas Rumah Kaca."

<sup>10</sup> Diana Cahaya Siregar, Robbi Akbar Anugrah, and Bhakti Wira Kusumah, "Kajian Curah Hujan Untuk Pemuktahiran Tipe Iklim Oldeman Di Wilayah Kepulauan Riau," *Jurnal Pertanian Presisi (Journal of Precision Agriculture)* 4, no. 2 (2020): 88–99, <https://doi.org/10.35760/jpp.2020.v4i2.2869>.



- International climate development efforts can help reduce levels of greenhouse gas emissions, such as carbon dioxide, methane, and nitrous oxide, which can reduce the impacts of climate change.
- b. **Increased Use of Renewable Energy**  
International climate development efforts can encourage the use of renewable energy, such as solar energy, wind energy and hydro energy, which are more environmentally friendly and can reduce dependence on fossil fuels.
  - c. **Reducing Deforestation**  
International climate development can encourage reduced deforestation, which can help reduce greenhouse gas emissions and maintain biodiversity in forests.
  - d. **Improved Air Quality**  
International climate development efforts can help improve air quality, which can improve human health and well-being.
  - e. **Improved Food Safety**  
International climate development can help improve food security by reducing the impact of climate change on the agricultural and fisheries sectors.

These outputs can contribute to reducing the impacts of climate change globally and help protect the environment and human life. However, it is important to remember that these outputs can only be realized if there is strong cooperation and commitment from various parties, including the government, private sector and society. To ensure that these outputs are felt by local communities, it is important to involve communities in the process of developing international climate law and communicate the benefits of these efforts clearly and openly. In addition, the implementation of international climate law must also be carried out by taking into account the interests and needs of local communities, and ensuring that the rights of local communities are protected and respected.

Awareness of the importance of the environment, as a country that has abundant natural wealth and biodiversity, Indonesia has a high awareness of the importance of protecting the environment. The Indonesian government has issued various policies and programs to increase public awareness about the need to protect the environment, including in the context of climate change.

The Riau Islands Province has a tropical climate with relatively high temperatures throughout the year. The average temperature in Riau Islands Province, Batam City is around 25 C to 34 C. The rainy season occurs from September to January, while the dry season can last from March to July. High rainfall can cause an increase in the volume of water which results in floods and typhoons.

The Riau Archipelago Province consists of various islands and depends on the people's livelihoods on a number of diverse economic sectors. The main sector in this region is the fisheries sector, considering that the Riau Islands are a strategic area among waters rich in marine resources. Local people carry out fishing activities to look for marine products such as shrimp, fish and shellfish.

Preventive efforts to overcome climate change carried out by the Riau Islands Provincial Government include providing outreach and training to local communities about good management of marine resources and awareness of climate change, using environmentally friendly fishing gear to reduce negative impacts on marine ecosystems such as the use of selective sized nets, encouraging people to use information technology in the fisheries sector such as marine weather monitoring and fish tracking applications to help fishermen before carrying out activities in dealing with changing weather conditions.

The impact felt by the people of the Riau Islands Province, especially the Tanjung Riau area, Batam City, regarding climate change is that changes in weather and erratic temperatures have an impact on public health which can cause various types of diseases such as flu/cough, allergies, dengue fever. And it also has an impact on the community's economy, namely that when the weather is hot, people cannot stay at sea for long to carry out fishing activities and if rainy weather or strong winds appear, there is a risk of disaster occurring and in this case it also affects the results obtained.

The assistance that has been provided by the Riau Islands Provincial Government to the Tanjung Riau Community of Batam City is to provide direct appeals to the community and provide special assistance such as providing basic necessities and there are government programs in providing nets, canoes and fishing equipment, however the assistance provided is not routine. only given a few times.

## E. Conclusions

Based on research regarding Indonesia's Contribution to the Development of International Climate Law (Judicial Analysis of the Implementation and Development of International Climate Law in the Riau Islands Province), several things can be concluded as follows:

1. Indonesia's contribution to the development of international climate law can be seen from various things, such as participating in global negotiations, categorization and implementation of national policies related to international climate change, and efforts to reduce greenhouse gas (GHG) emissions through various programs. However, on the other hand, Indonesia also experiences various challenges and obstacles in efforts to overcome international climate development, such as a lack of public

understanding and understanding of climate change, a lack of human and financial resources, and difficult problems related to climate change. These challenges and obstacles are also experienced by the community, especially those who live in areas that are vulnerable to the effects of climate change, such as floods, droughts and other natural disasters. Therefore, the position of citizens in supporting efforts to reduce GHG emissions and mitigate climate change is very important. in connection with RAD GRK (National Action Plan for Reducing Home Gas Emissions), this is Indonesia's national strategy for reducing GHG emissions with a target of reducing emissions by 29% by 2030. RAD GRK covers various programs and policies covering energy zones, transfers, factories, agriculture, forestry, and dirt.

2. The output felt by the people of the Riau Islands Province from the contribution of the Government of the Republic of Indonesia in developing international climate law is that the Riau Islands Provincial Government has participated in the development of international climate law, such as initiating waste management, planting trees, and providing recycling programs. And there is an increase in the quality of life to reduce the impacts of climate change, such as the availability of clean water and food security.

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